Developing Research Careers In and Beyond Europe: Enabling – Observing – Guiding and Going Global

A Report by the ESF Member Organisation Forum ‘European Alliance on Research Career Development’ (EARCD)
European Science Foundation (ESF)

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- Development of best practices and exchange of practices on science management, to benefit all European organisations and especially newly established research organisations.
- Harmonisation of coordination by MOs of national programmes and policies in a European context.

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Executive Summary

The EARCD – rationale, background, aims

Core prerequisites for realising a successful and competitive European Research Area include a critical mass of skilled researchers and diversity of research groups. This is the rationale of the ESF Member Organisation Forum ‘European Alliance on Research Career Development’ (EARCD), launched in February 2011. In line with chapter 2 ‘Promoting European Research Careers’ of the EUROHORCs and ESF Vision on a Globally Competitive ERA and their Road Map for Actions, the EARCD aims to adopt a common strategy to ensure the attractiveness of research careers and thereby to create and improve European-level and coordinated national policies and programmes for different career stages and career paths. It builds on the results of the previous ESF Member Organisation Forum on Research Careers, published in the report Research Careers in Europe – Landscape and Horizons.

The EARCD membership comprises 21 research funding and research performing organisations from 19 countries. In addition, representatives from seven international organisations regularly attend meetings as observers and contribute to the progress of the forum. The EARCD complements the work of other initiatives such as the ERA Steering Group on Human Resources and Mobility.

The subsequent findings, recommendations and projected next steps are derived from a number of activities, the results of which are laid out in the report below, specifically:

- A comprehensive survey of member organisations which addressed all of the Forum’s focus areas;
- A pilot project studying the prerequisites for a

'Summary of key recommendations

- Enabling: creating a European Researcher Development Framework
- Observing: setting up an International Platform for Researcher Career Tracking and Monitoring
- Guiding: establishing guidelines to acknowledge new concepts of researcher mobility (international, intersectoral, interdisciplinary, virtual)
- Going Global: working towards a Global Forum for Research Career Development

European Professional Development Framework for Researchers’ in six countries representing different parts of Europe;

- A joint ESF-FNR international conference on ‘How to Track Researchers’ Careers’;
- An expert hearing on ‘New Concepts of Mobility and Their Acknowledgement, Including Combined Part-Time Positions’.
Key recommendations

• **Enabling:** Researchers’ careers are increasingly diverse. Thus, researchers need to develop a wide range of skills in order to master complex situations. We see an urgent need to offer them a framework which helps them to validate their already acquired skills and to identify needs for improvement. We therefore recommend creating a European Researchers’ Professional Development Framework. The European Commission should consider investing in making available a pan-European Researcher Development Framework (RDF). As a first step, the European Commission should provide funding to support a wider independent trial of the UK’s Vitae RDF at European/institution/national level.

• **Observing:** Research organisations are accountable vis-à-vis their researchers and society at large to show that their programmes achieve the desired impact and that scarce resources are well spent. Tracking and monitoring researchers’ careers are important elements in this respect. We are convinced that in the long run a European Research Career Observatory will be essential to create transparency regarding the challenges, bottlenecks and opportunities of research careers and to help research organisations to better tailor their policies and activities to researchers’ needs. As an initial means we will launch a joint International Platform for Research Career Tracking and Monitoring with the aim of providing orientation on how to set up surveys, studies and/or career tracking systems based on international good practice.

• **Guiding:** Recognising the increasing diversification of careers, research organisations need to revisit their policies towards both mobility and appraising researchers’ achievements. We suggest new concepts of mobility and their acknowledgment including combined part-time positions as a means to support different forms of mobility. In order to better assess researchers’ individual career portfolios and mobility patterns we will work out a guideline for peer review and evaluation in interaction with the ESF’s Member Organisation Fora on Evaluation and on Peer Review.

• **Going Global:** Globalisation makes interdependencies grow in all fields of life and the grand challenges of humankind are not limited to single countries or continents. Insular European approaches are no longer timely, especially when research careers are concerned. Hence, we plan to work towards a Global Forum for Research Career Development. As a first step we will organise an EARCD dissemination conference inviting representatives from partner countries in Europe that are not yet involved in the current forum as well as from G20 partners. We will thereby seek to achieve wide recognition of our results and recommendations, to identify common issues and discuss topics that we have not yet been able to address, such as making research careers more transparent and predictable.
1. Setting the Scene: Why focus on ‘research careers in and beyond Europe’?

1.1 EARCD: membership and mission

The European Alliance on Research Career Development is a strategic forum that brings together experts from 21 national research funding organisations and non-university research performing organisations (see Figure 1). It interacts closely with European level organisations, in particular the ERA Steering Group on Human Resources and Mobility (ERA SGHRM), the European Research Council (ERC), the League of European Research Universities (LERU), the European University Association (EUA), and All European Academies (ALLEA). The group has a long-standing track record of collaborating on the development and implementation of research career strategies built on mutual trust.

Initially, the forum was chaired by Professor Nurk Yetis, Scientific and Technological Research Council of Turkey. She was succeeded by Dr Iain Cameron, Research Councils UK. Working groups have been chaired by Ms Ulrike Kohl, National Research Fund of Luxembourg, together with Dr Maria Starborg, Swedish Research Council (working group on Professional Skills Development), Dr Hans Borchgrevink, Research Council of Norway (working group on Mobility). The EARCD has been coordinated and advised by Ms Laura Marin, European Science Foundation, and Dr Beate Scholz, Scholz – consulting training coaching.

1.2 Results, input and tasks from the previous ESF Member Organisation Forum on Research Careers

The European Alliance on Research Career Development builds on the results and outcomes of the previous ESF Member Organisation Forum on Research Careers that operated between November 2007 and April 2010. Its findings and recommendations were published in January 2010 in the report Research Careers in Europe – Landscape and Horizons. The forum developed an implementation plan to form the backbone of its future activities. In particular, it recommended a set of joint actions to be taken, namely:

- improving the attractiveness and competitiveness

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1. The list of EARCD members is included in Annex 1.


of European research careers by:
- structuring of research careers;
- providing "equal playing fields" for researchers of all backgrounds (especially women);
- supporting the development of “portfolio careers”;
- developing and implementing European policies for research career development.

The Research Careers Forum also identified needs for further actions, specifically:
- Providing orientation and enhancing the predictability of research careers for researchers wishing to work in Europe;
- Avoiding inherent or hidden biases in the peer review system, creating obstacles for the career advancement of researchers having left the (European) academic research system, e.g., for family reasons, to work in industry or to go abroad as well as for researchers with especially risk-taking and innovative approaches;
- Allowing for researchers’ continuous professional development, given that research careers nowadays “tend to be less path-dependent & to develop more and more into ‘portfolio careers’”;
- Acknowledging that “all obstacles and bottlenecks identified during a research career affect the careers of women scientists more severely than those of men” and thus integrating this issue as a cross-cutting topic in all aspects under consideration by the European Alliance on Research Career Development.

4. European Science Foundation Member Organisation Forum on Research Careers: Research Careers in Europe – Landscape and Horizons, Strasbourg 2010, p. 12.
5. Ibid., p. 4.
1.3 Role and responsibility of research organisations in developing research careers in and beyond Europe

The EARCD has operated in line with chapter 2 ‘Promoting European Research Careers’ of the EUROHORCs and ESF Vision on a Globally Competitive ERA and their Road Map for Actions and the tasks as defined by the Member Organisation Forum on Research Careers. Yet, one may ask why developing research careers is a topic of continuous importance and needs persistent commitment, in competition with other topics ranking high on the science policy agenda, such as research infrastructures, open access to research results or grand challenges: research careers should matter simply because research organisations are there to ensure and promote the quality of research. How could they achieve this goal any better than by creating conditions for researchers that make a research career attractive and compatible with researchers’ individual life plans and talents? Even the best research infrastructures would be useless, if there were no highly skilled researchers to operate them.

However, rapid changes in increasingly dynamic research systems together with the growing diversity of researchers’ careers raise questions and create insecurities that research policy makers and research organisations at national and European level have to respond to:

- We expect researchers to act responsibly and accountably in respect of the highest scientific and ethical standards and at the same time to develop a high level of creativity. Therefore, we need to ask what can research organisations do in order to enable individual careers and train researchers “to become creative, critical and autonomous intellectual risk takers”? 6
- Society expects a high level of responsibility, accountability and creativity not just from researchers, but also from research organisations, especially in times of scarce resources and concurrent societal and political demands on how these resources should be spent. Therefore, research funding and research performing organisations need to observe the results of their activities in terms of outputs, e.g., the career choices of the researchers they have trained, and outcomes in terms of these researchers’ contributions to society and the economy.

1.4 Modus operandi and activities of the EARCD

In order to tackle these questions the EARCD set up three working groups during its launch conference in Brussels on 9 and 10 February 2011:

1. Research career structure & career tracking

The goals of this working group were twofold:
- Contributing to the development and endorsement of the European Framework for Research Careers in interaction with the European Commission;
- Bringing the issue of Research Career Tracking and Monitoring onto the research policy agenda in Europe by conducting an international workshop in February 2012.

2. Professional skills development

The working group’s aim was to agree on a pan-European Professional Development Framework for Researchers and joint tool for researchers’ continuous professional development by means of conducting a feasibility study and thereby validating the UK’s Vitae Researcher Development Framework.

3. Mobility

The primary objective of this working group was to develop a policy recommendation on New Concepts of Mobility, especially in view of acknowledging portfolio careers in peer review and supporting intersectoral mobility, including combined part-time positions.

During the launch conference the members agreed on an evidence-based policy approach. Consequently, the findings, recommendations and projected next steps of the EARCD result from the subsequent activities and publications:

- A comprehensive Survey of Member Organisations carried out between May and January 2012, which addressed all of the Forum’s focus areas;


• A pilot project studying the prerequisites for a Pan-European Professional Development Framework for Researchers in six countries representing different parts of Europe, conducted in autumn 2011;

• A joint ESF-FNR international conference on How to Track Researchers’ Careers, held in Luxembourg on 9 and 10 February 2012;

• An expert hearing on New Concepts of Mobility and Their Acknowledgement, Including Combined Part-Time Positions, held in London on 29 May 2012;

• A policy document on New concepts of researcher mobility and ways to acknowledge them – including combined/part-time positions, to be published in January 2013;

• Four working meetings of all forum members and observers (Brussels, February 2011; Istanbul, April 2011; Strasbourg, November 2011; London, May 2012).

1.5 Interactions and achievements to date

The forum has actively sought to engage with other organisations such as the European Research Council (ERC), the League of European Research Universities (LERU), the European University Association (EUA) and All European Academies (ALLEA) through invitations to join its meetings. In addition, the membership was aware of the need to fruitfully interact and thus to avoid any actual or perceived duplication of effort with related work such as that undertaken by DG Research and Innovation. Cross-membership of two members with the ERA SGHRM and of another member with the European Commission’s Expert Group on the Research Profession enabled reciprocal awareness of relevant actions and formal updates of the forum’s work were provided through letters to the Chair of the ERA SGHRM.

The work of the EARCD has previously impacted on the European Commission, with respect to the European Framework on Research Careers, agreeing joint support for the European Framework and the skills strategy of the OECD. By greater sharing of its agenda and coordinating its activities with those of the Commission (the ERA SGHRM) an effective division of labour was agreed during 2011. For example, the forum addressed the skills development and career tracking of researchers, while the Commission has addressed the European Framework, the portability of grants and the HR Strategy for Researchers.

Those recent reports produced by the ERA SGHRM which are particularly relevant to the work of the forum are listed in the following table alongside the reports produced by the EARCD itself. Together these reports provide a substantial picture of research careers in Europe. In some instances both the forum and the ERA SGHRM addressed related issues. An example is Researcher Development where the forum reported on a pilot study looking at the potential applicability of the Vitae Researcher Development Framework in six countries outside the UK whereas the ERA SGHRM working group addresses the question of “How are we making researchers more employable?”. In the latter report the provision for researcher development in a number of countries has been presented using a matrix of the four domains and the four career stages of the European Framework for Research Careers.

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11. See EARCD’s letter of endorsement (Annex 3).

### Table 1. Recent and anticipated reports produced by the EARCD and the ERA SGHRM

<table>
<thead>
<tr>
<th>EARCD</th>
<th>ERA-SGHRM</th>
</tr>
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<tr>
<td>How to track Researchers’ Careers – Joint ESF–FNR Workshop Report&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Working Group on ‘Human Resources issues, including the HRS4R1 and other examples of good practice not directly linked to the Charter &amp; Code’ Final Report (May 2012)&lt;sup&gt;b&lt;/sup&gt;</td>
</tr>
<tr>
<td>A pan-European professional development framework for researchers – A feasibility study by the ESF Member Organisation Forum European Alliance on Research Career Development (August 2012)&lt;sup&gt;c&lt;/sup&gt;</td>
<td>Working Group on Skills ‘Professional development of Researchers - Provisions for the Future’&lt;sup&gt;d&lt;/sup&gt;</td>
</tr>
<tr>
<td>New concepts of researcher mobility and ways to acknowledge them – including combined/part-time positions (upcoming January 2013)</td>
<td>Access to and portability of grants (May 2012)&lt;sup&gt;e&lt;/sup&gt;</td>
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<td></td>
<td>Excellence, Equality and Entrepreneurialism Building Sustainable Research Careers in the European Research Area by the Expert Group on the Research Profession (July 2012)&lt;sup&gt;f&lt;/sup&gt;</td>
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</table>

<sup>a</sup> Available at: http://www.esf.org/activities/mo-fora/esf-member-organisation-forum-on-european-alliance-on-research-career-development.html


<sup>d</sup> Published at: http://ec.europa.eu/euraxess/pdf/research_policies/Professional_Development_of_Researchers_Provisions_for_the_Fut.pdf

<sup>e</sup> http://ec.europa.eu/euraxess/pdf/research_policies/access_to_and_portability_of_grants_may_2012.pdf


Further relevant policy documents relating to research careers can be found on the EU EURAXESS website under Jobs – Research Policies.<sup>13</sup>
2. Results, Recommendations and Ways Forward

As one of the milestones of their activities EARCD members agreed to conduct a survey of ESF member organisations with the aim of investigating the respective organisations’ policies and promising practices referring to the focus areas of the forum. During the survey phase, lasting from mid-May until the end of July 2011, 20 replies from research organisations were received, representing 17 different European countries. Each of the subsequent chapters will start by providing background information on the topic and by presenting a summary of the respective findings from the survey as well as of the EARCD’s respective working group’s activities. We will then list the forum’s recommendations and describe the envisaged next steps.

2.1 Enabling: developing a European Researcher Development Framework

Why continuous professional development?

The previous ESF Member Organisation Forum on Research Careers formulated a Joint European Skills Statement providing orientation to its member organisations on which skills to provide to researchers during their doctoral and postdoctoral qualification. The EARCD has recognised the need to move beyond by focusing on continuous professional development opportunities for researchers at all stages of their career. Therefore, a working group on skills development of researchers was created, with the purpose of better defining researchers’ professional profiles and developing guidance to member organisations for the continuous professional development of researchers. The working group identified the need for a common and structured approach towards researchers’ skills development, which is also asked for by the European Charter for Researchers of 2005: while “particular priority should be given to the organisation of working and training conditions in the early stage of the researchers’ careers”, employers and/or funders of researchers “should draw up (...) a specific career development strategy for researchers at all stages of their career”.

As a starting point the EARCD working group on researchers’ professional skills development managed to formulate an agreed definition of ‘researchers’ professional development’.

**Definition of Researchers’ Professional Development**

Researchers’ professional development is a structured approach to the continuous development of researchers’ knowledge, expertise and attributes at all stages of their career to improve their competency, employability and ability to pursue multiple career paths. This may be achieved by a variety of activities, whether formal and structured, or informal and self-directed.

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14. European Science Foundation Member Organisation Forum ‘European Alliance on Research Career Development’: A survey analysis by the ESF Member Organisation Forum, January 2012.
15. European Science Foundation Member Organisation Forum on Research Careers: Research Careers in Europe – Landscape and Horizons, Strasbourg 2010, p. 47f.
Experience of member organisations in developing researchers’ professional skills

Obviously, the issue of professional skills development is still rather new to research organisations in Europe: in the survey of member organisations, only 8/20 organisations indicated having relevant policies in place; national strategies or programmes are available in only four countries, with the longest tradition in the UK. Research performing organisations seem to be prepared to incorporate professional skills development in their internal staff development policies, whereas research funders are still seeking appropriate ways, e.g., by providing extra funds to their grantees. As concerns the target groups of such policies most organisations address researchers at different career stages with a primary focus on the doctorate candidate (R1 level of the European Framework for Research Careers) level. Essentially, the need for continuous professional skills development seems to be recognised. Yet only a few organisations have policies in place to acknowledge researchers’ professional skills in selection or staff promotion procedures (Figure 2).

Trial of a pan-European professional development framework for researchers

Here we present an overview of results and suggestions from the trial. Details have been published in the report *A pan-European professional development framework for researchers – A feasibility study by the ESF Member Organisation Forum European Alliance on Research Career Development*.

Starting point

The Researcher Development Framework (RDF), as developed by Vitae (UK), offered a promising basis to achieving the goal of working out a common European framework for researchers’ professional development. The RDF is a professional development framework for planning, promoting and supporting the professional and career development of researchers. The RDF was developed and validated in a UK context and the question arose about its relevance, usefulness and potential applicability in a wider European context. In order to investigate this question, the ESF, with the support of EUROHORCs, commissioned Vitae to conduct a trial of the RDF in a non-UK context. In autumn 2011, the suitability of the RDF was tested in six European countries (Estonia, France, Germany, Italy, Luxembourg and Norway) with different research/cultural/socioeconomic settings. The pilot study was organised and conducted by Vitae, involving researchers and using the same methodological approach as applied in the UK-based trials.

Results

Overall, the concept of a pan-European professional development framework was well received and indi-
individual researchers could see the personal value in the RDF, irrespective of their level of experience, discipline or research/country context. However, some participants identified that the social and political contexts in some countries would influence the readiness and acceptability of researchers using competency frameworks.

The outcomes from the six focus groups demonstrated the potential applicability of the RDF for researchers across Europe. The RDF presents an opportunity to make a step change in how European researchers are supported in their professional and career development.

As focus group participants noted, the adoption of the Researcher Development Framework across Europe would support the aims of the European Charter and Code, specifically the principles relating to continuous professional development, career development, access to research training and continuous development, and access to careers advice. It would also provide a common language for researchers to talk about their expertise and professional development within evaluation and appraisal systems and to potential employers in all employment sectors. Pan-European access and usage would support the European Research Area by promoting the concept of the ‘European researcher’ and facilitate mobility. However, some countries have a longer journey to travel than others in terms of the cultural and political recognition of the professional development of researchers.

The focus group participants recognised the value of the RDF in providing a comprehensive framework of researchers’ knowledge, skills and attributes, but the very nature of this comprehensiveness impacts on the ease of engagement. More diverse and flexible resources are needed to introduce the RDF to researchers dependent on their experience of self-reflection and professional development. The initial receptiveness of individuals to the RDF improves through facilitated introduction. To do this would require the development of supporting resources for staff with responsibility for training and developing researchers, including supervisors and principal investigators.

The value of the RDF will be enhanced significantly by signposting researchers from the RDF to readily accessible training and development opportunities. Although there is a range of online resources for researchers, particularly through the Vitae website, researchers will also want to access concrete training and development activities within their institution or country. Professional development provision for researchers is generally improving, particularly for doctoral candidates. However, some countries have less developed provision for researchers than others.

This project has been an important first step in identifying the potential opportunity of creating a pan-European professional development framework. The focus groups revealed:

- considerable interest from the participating researchers;
- that the readiness of research systems to use professional development frameworks varies by country;
- ways in which the RDF can be further developed and supported for pan-European use.

Suggestions

1. Explore the potential to undertake a large-scale independent trial of the RDF across Europe by making the RDF professional development framework available to larger numbers of researchers and in more countries, funded by the European Commission.

2. ESF member organisations and research organisations should explore in more depth the interest in and readiness of individual country contexts to adopt and use a professional development framework for researchers.

3. Initiate discussions with the European Commission on the availability of funding to develop the RDF into a pan-European version of the RDF, including additional resources, FAQs and guidance for a European audience.

4. Vitae is currently developing a web-based interactive Professional Development Planner that will be available by licence to UK institutions. Additional financial investment and licensing would be required to extend this capability across Europe to other countries within Europe so as to reflect local research systems and legislation.

EARCD’s conclusions and recommendations based on the trial

The trial made apparent some general deficiencies in the European systems with regard to skills and career development of researchers. There are big differences between countries in their overall awareness and readiness to engage and invest in the general development and career development of researchers. Furthermore, there is a real demand...
among researchers for a more structured approach towards researchers' professional development and active career planning.

Without claiming representativeness, the testing of the RDF in different European settings gave encouraging results in overcoming some of the identified deficiencies and in progressing towards a shared understanding of the skills and attributes that characterise modern researchers. Furthermore, the RDF proved to be a solid basis for making researchers reflect on their skills and attributes and on their career aspirations in general. It provides an important potential to support the professional development of researchers in any national or institutional environment.

Based on the results of the study, the EARCD has formulated recommendations on how to achieve greater efficiency in researchers' skills development at different levels, from an overarching to an individual perspective:

Recommendation 1 (overall)
Concerted efforts must be made by policy makers, governments, funders and research performing organisations to promote the concept and importance of researchers’ professional development targeted at all levels of the hierarchy of research management, from political leaders, heads of research organisations, academics to the researchers themselves. The creation of a European Researcher Development Framework would provide a single European language describing researchers' skills and attributes and thereby facilitate mobility. A European Researcher Development Framework would contribute to the concept of the European researcher and to the build-up of the ERA, and meet the objectives of the European Charter for researchers. A European Researcher Development Framework could be implemented by already existing channels at a European level such as the EURAXESS.

Recommendation 2 (EU level)
The European Commission should consider investing in making available a pan-European Researcher Development Framework to promote the importance of the professional development of European researchers, to guide them in their reflections on their skills and attributes, their developmental needs and on their role as a researcher in general.

Recommendation 3
As a first step, the European Commission should provide funding to support a wider independent trial of the RDF at European/institution/national level that includes research performing organisation directors, human resources specialists, etc. as well as researchers and consider any possible country/institution-specific constraints towards researchers’ professional development (e.g., national legislative barriers, etc.).

Recommendation 4 (national and institution level)
Governments, research funders and research performing organisations should work together to offer researchers at all career levels adequate training and development means to actively expand their profile and progress in their career. Numerous countries/institutions do not have appropriate supporting structures regarding researchers’ development, i.e., adequate training opportunities, career advice services, etc.

Recommendation 5 (individual researcher)
Researchers across Europe should take responsibility for their own professional development and reflect how to improve their own career possibilities by using, for example, a tool like the suggested European Research Development Framework for a more in-depth analysis of their own competences and expertise as a researcher and their specific career development needs.

Envisaged next steps
The EARCD sees the need for activities at two levels:
1. We recommend developing a European Researchers’ Professional Development Framework. The European Commission should consider investing in making available a pan-European Researcher Development Framework (RDF). As a first step, the European Commission should provide funding to support a wider independent trial of the UK’s Vitae RDF at European/institution/national level. The EARCD will therefore address the European Commission in order for this trial to be realised as soon as possible;
2. Research organisations have only just begun to implement policies on researchers’ professional development. Hence, we see the need for structured and coherent approaches both in research funding and research performing institutions. The EARCD will thus complete its efforts to work out a Guide for research funders and research organisations to set up a concept for researchers’ professional development, including recommendations and examples of good practice.
2.2 Observing: creating an International Platform for Research Career Tracking and Monitoring

Achieving transparency and understanding structures

The EARCD supports the European Framework of Research Careers with the goal of providing guidance to researchers and making research careers in Europe more transparent. Creating transparency and understanding the structures of research careers are also the major aims why the forum has embarked on tracking and monitoring research careers. On the research organisations’ side, another motivation for career tracking and monitoring is to observe the results of their funding and career development activities. As a starting point the EARCD conducted a mapping exercise of existing career tracking approaches. It also dedicated part of the member organisation survey to this topic with the immediate objective of serving as preparatory analysis for the international workshop on career tracking in Luxembourg in February 2012, co-hosted by the European Science Foundation and the National Research Fund of Luxembourg.

The recently published TRACKIT report by the European University Association underlines the “growing interest in tracking and also an increasing number of tracking initiatives both at national and institutional level”. The survey of 31 European countries focused on tracking initiatives referring to undergraduate and graduate students. It also points to an important gap that the EARCD has sought to overcome by providing an agreed definition of what is to be understood by career tracking: “While there is no common understanding of what tracking actually is, the study proposes a description deduced from the common practice, which should allow distinguishing tracking from other types of data collection or research projects”.

Survey findings

EARCD member organisations believe that by tracking research careers they will, for instance, be in a better position to analyse the impact of research career development schemes, to meet accountability requirements vis-à-vis their sponsors and main stakeholders and to achieve strategic knowledge that may be used for policy planning and programme development.

Considering the organisations’ experience with respect to career tracking we find a mixed picture: 12 organisations have gained experience, eight have not (yet) or did not provide a clear answer. Obviously, there was up to this point no distinct understanding of what is precisely meant by ‘career tracking’: some organisations have a focus on ongoing monitoring of researchers at certain career stages or in specific disciplines. Others have developed national cohort studies to follow up on researchers’ careers at regular intervals or conduct programme evaluation surveys and thereby track the careers of their alumni. Thus, we see the need to provide a definition of what is to be understood by career tracking. In categorising the different types of surveys we were able to derive a typology alongside the subsequent criteria: researchers’ career stages (e.g., doctorate holders, senior researchers), level of analysis (national or organisational level), types of studies (e.g., programme evaluation, monitoring), methodology (e.g., survey, database analysis).

The introduction of systematic career tracking of researchers seems to be largely work in progress. Slightly more than half of the organisations (11/20) plan to introduce such systems, three do not and six did not provide a clear answer. It is, however, interesting to see that several organisations or countries that consider introducing career tracking seem to move broadly in the same direction, i.e., career tracking as a tool to measure the impact and success of funding or qualification schemes in view of accountability requirements.

Given the great interest of research organisations for EARCD’s career tracking conference, it would be interesting to survey whether the motivation to set up career tracking and monitoring mechanisms has since increased.

Results, conclusions and recommendations from the career tracking conference

The workshop How to track Researchers’ Careers on 9–10 February 2012 in Luxembourg brought together some 100 participants from national and international funding organisations as well as research institutions and universities from over 20 countries.

As a result of a survey among ESF members carried out in 2011, the variety of concepts and practices as to tracking of researchers’ careers became apparent. In fact, among ESF member organisations, numerous funding schemes exist, designed to support individual researchers in their various career stages. Currently, only a few funders and member states have ongoing career tracking studies in place, although these are obviously delivering very precious information about career trajectories of researchers.

The main aim of the Luxembourg workshop was, thus, to bring the issue of ‘career tracking’ onto the science policy agenda in Europe by asking why and for whom career tracking is important and how it should be carried out. Related objectives were to develop a common understanding of ‘career tracking of researchers’ and to develop a typology of career tracking approaches.

The following four categories of career tracking studies were identified, with examples for each category included in the workshop report:

- International initiative: the OECD CDH Project;
- Nation- or region-wide initiatives: US, UK, Germany, Flanders;
- Institutional initiatives, including alumni-based surveys: Wellcome Trust; CIFRE fellowships; European University Institute; Alexander von Humboldt Foundation;
- National/regional register data: Flanders, Denmark, Norway.

The main purposes of career tracking can be summarised as follows:

- Tracking the quality of research training and skills: By following up doctoral graduates and surveying them after graduation, tracking studies assess the suitability of funding and the quality of training and working conditions offered during the doctoral phase and explore whether the quality of doctoral training was appropriate to researchers for the best career opportunities in or outside academia.

- Tracking to find out where researchers move in their careers: A major reason for carrying out career tracking studies is to provide information on career movements and understand international and intersectoral mobility as well as employment patterns of researchers throughout their careers.

- Tracking for accountability: Career tracking of doctorate holders is motivated by the need for accountability vis-à-vis the funders of doctoral education, i.e., in most cases taxpayers. Career tracking studies indirectly measure impact, for example by informing about occupational patterns of researchers, not only in academia. Moreover, career tracking may be used as a strategic planning tool to monitor and improve the efficiency of grant schemes or doctoral education programmes as well as career development strategies.
Developing Research Careers In and Beyond Europe

There is a trend to opt for developing indicator-based follow-up of researchers, relying principally on research outputs. Compared to an indicator-based approach, career tracking delivers complementary information on researchers’ pathways and allows moves in and out of academia and in and out of research to be analysed. By monitoring careers over time, tracking studies serve to provide different insights into the actual contribution of researchers to the economy and society. They also provide guidance for current researchers engaging in a doctorate to build their future careers.

Career tracking helps to identify structural problems

Besides the monitoring of programmes, the (national, regional or institutional) follow-up of researchers (for example through regular surveys) allows the detection of structural problems in the research system. To efficiently address any systemic weaknesses, tracking studies should actively involve stakeholders. An informed dialogue and involvement of researchers and institutional and political decision makers through an exchange based on an open dialogue proves to be most efficient (as is the case, for example, for the UK Vitae study “What do researchers do?”).

Setting up career tracking studies: choosing the right dimension, resources and outsourcing

Since career tracking studies are expensive and often long-term initiatives, they must be well planned. If carried out in a single institution, a balanced approach between building up institutional competence (including statistical know-how) and outsourcing is needed, in order to take full advantage of the study. In addition, if the study is outsourced to an external consultant, the commissioning and communication with the external consultant has to be organised and followed up internally. A realistic plan with budgetary and staff resources should be made before starting the study. The ESF Member Organisation Forum on Research Evaluation has had close exchanges with the EARCD and they have developed recommendations for member organisations concerning the dimension, resources and outsourcing of career tracking studies.

Terminology concerns

In its first ESF MO Forum on Research Careers, ESF illustrated research careers in the form of a tree. They might as well be represented as a patchwork. In order to structure career information, Europe

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Key Conclusions and Recommendations

Developing information on PhD holders and research careers avoiding duplication

Career tracking studies may provide data on PhD holders and researchers in their various career stages that improve our knowledge about research careers. They can very usefully complement official statistics, register data or data files on PhD holders. Europe lacks structured information on doctorates and research careers. There are examples of good practice such as the UK Higher Education Statistical Agency centralising information on PhDs in the UK, or the Scandinavian countries’ register data. It should be a high priority for Europe to improve statistics and information on PhD holders and researchers at the various stages of their research careers. Complementing basic statistical data on PhD holders and researchers by tracking studies or career surveys might be a very useful approach to obtain quantitative and qualitative information on research training, employment patterns, discipline-specific careers, life events and their impact on researchers’ careers, etc. Some ongoing tracking studies are organised in a way where they regroup institutions under a centralised approach. This is the case in the UK, Germany and Flanders. It allows economies of scale, with institutions collecting the data which are centrally treated. Depending on the purpose of the career tracking studies, this might be a very sensitive approach. However, if the purpose is mainly the follow-up of fellows of a given funding scheme, a centralised nationwide approach might not be the best. Therefore, the purpose and scope of the study, the already existing statistical or institutional data, the available resources and the time period of the study should be well defined in advance in order to make the appropriate choice before starting a tracking study. Duplication of efforts should be avoided by any means. Wherever possible, initiatives of a similar nature should be regrouped or organised in a coordinated manner.

Complementarity of tracking studies and programme evaluations

PhD and individual career programmes are expensive and their outcome should be monitored. The EARCD suggests that, in the case of long-term support schemes to individual researchers, tracking studies can be very useful additions to (or part of) periodic programme assessments because they not only inform about programme performance, but their scope is mainly on the quality and efficiency of funding in terms of the researchers’ professional development.
has introduced a framework of four major career stages, R1–R4. These of course only show a much reduced picture of the reality and do not represent the broad range of nonlinear career pathways. There is a need to develop a common terminology for research careers as well as for career tracking studies, as terminology is key and subject to different interpretation and preconceptions.

**Methodological awareness**

Before starting a career tracking study, a benchmarking of existing initiatives should be done. The purposes of the study and the intended objectives have to be clearly defined, as this will set the framework for the methods and resources needed. The workshop on career tracking has identified several initiatives of different nature and purposes. Openness to new methodologies (e.g., life history research, identity studies) and tools (e.g., CV depositories, social media) are important, as they may bring very different and new approaches to the analyses of research careers. Comparability should be envisaged, but not necessarily comparability of studies as such, given that the respective target audience and purposes might differ. Full account should be given to informed methodological decisions before starting the study (for example, for how long will researchers be tracked and at what intervals? Should everybody be tracked or only specific cohorts? If a longitudinal approach is chosen, how is panel mortality addressed, etc.).

**An international platform promoting career tracking and career surveys**

To conclude, the EARCD recommends a joint initiative promoting career tracking studies as well as career surveys and statistical information on research careers across Europe and beyond, linking them through a platform that regroups existing studies and new studies to be set up. Such a platform could integrate a broad range of information and publications on research careers, building a documentation and discussion forum. New approaches such as CV databases could be taken into account. The workshop has only been able to assemble some information on ongoing and past studies as well as practical guidance on why, for whom and how career tracking can be useful. A joint international initiative should be envisaged as an initial step to set up a platform and regular meetings of experts working in the field of career tracking studies and career surveys. Several institutions have expressed their wish to participate in such an initiative. Support would be needed for the implementation of a (virtual) structure. After an initial implementation phase, the joint platform might be continued by the input of ongoing studies taking advantage of the knowledge exchange.

**In the long run a European Research Career Observatory will be essential to create transparency regarding the challenges, bottlenecks and opportunities of research careers and to help research organisations to better tailor their policies and activities to researchers’ needs. As an initial means we will launch a joint International Platform for Research Career Tracking and Monitoring with the aim of providing orientation on how to set up surveys, studies and/or career tracking systems based on international good practice.**

The timeliness of this endeavour is underlined by the recently published report of the European Commission’s Expert Group on the Research Profession. The report stipulates “the establishment of a European Monitoring System for the Research Profession with a view to overcoming the current fragmentation and lack of information, data and statistics on the research profession in Europe, thus creating a sound base for policy. (…) The Monitoring System should provide:

- a set of common standards to be applied at both European and national level in order to achieve consistency, especially in terms of break-down by discipline, sector, nationality, gender, type of position, remuneration
- an information system to measure and track the mobility of researchers (geographical, inter-sectoral) and their career paths, taking into account gender.”

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27. For methodological concerns in view of comparability, the OECD CDH project’s basic methodology should be taken into account: [www.oecd.org/sti/cdh](http://www.oecd.org/sti/cdh).


2.3 Guiding: suggesting new concepts of mobility and their acknowledgement

The EARCD based its activities in this area on the recommendation of the previous ESF Member Organisation Forum on Research Careers to provide ‘equal playing fields’ for researchers of all backgrounds through a new ‘scientific quality’ approach and to allow for a concept of inclusiveness. This need arises especially with respect to researchers having left the (European) academic research system, e.g., for family reasons, to work in industry or to go abroad, as well as for researchers with especially risk-taking and innovative approaches. Meanwhile, it has been widely accepted that mobility of researchers does not always imply physical or geographic mobility and that mobility of all types should not be seen as an end in itself, but rather as an instrument to enhance the quality of research and researchers’ career trajectories.

In line with its evidence-based policy approach the EARCD has derived the conclusions and recommendations and suggested next steps in its policy document New concepts of researcher mobility and ways to acknowledge them – including combined part-time positions from the results of the member organisation survey as well as from the input received at an expert hearing, held in London on 29 May 2012.

Member organisations’ strategies in dealing with different forms of mobility and portfolio careers

Intersectoral mobility

The EARCD addresses the issue of mobility in a broad sense, i.e., international, intersectoral, ‘virtual’ and interdisciplinary mobility. In view of intersectoral mobility it is the EARCD’s aim to formulate evidence-based recommendations on how the mobility of researchers between the public and the private research sectors could be improved. With this survey we therefore wanted to highlight obstacles to intersectoral mobility, to pinpoint policies or programmes to stimulate mobility between academia and industry and, eventually, to gain information on combined part-time positions or grants at universities or research institutes to researchers from industry – or vice versa.

Research organisations in Europe, overall, seem to be quite conscious of the main reasons inhibiting intersectoral mobility. The following barriers were mentioned by several organisations: lack of acceptance on the side of the research organisation; differences in merit systems; different salary levels or incentives; lack of interest/awareness of industry; different research cultures; lack of publications as a result of working in the private sector; few research activities in the private sector; lack of interest in doctorate holders; limited awareness of researchers regarding career opportunities outside academia. Obviously, a large majority of organisations (16/20) have taken initiatives to foster intersectoral collaborations, with a certain focus on the doctoral candidate (R1) stage. However, seven organisations have comprehensive approaches in place, addressing all stages of a research career.

In analysing the details of policies or programmes to stimulate cooperation between the different sectors we find a distinct geographic distribution of policies and programmes: whereas northern European countries focus on doctoral training (industrial PhD programmes), the primarily German speaking countries rely on broader approaches to support technology transfer and southern European countries refer rather to national legislations or ministerial programmes to foster intersectoral mobility and cooperation. Combined academia-industry positions are still rather scarce (8/20 organisations gave positive replies) and have, perhaps with the exception of Norway, only recently been introduced.

Peer review and portfolio careers

In view of increasingly diversified careers the EARCD also seeks to investigate if, or to which extent, peer review is taking account of less linear career paths and to provide a guideline to this end. Therefore, the forum wanted to gain evidence on actual peer review policies or procedures in view of career breaks. In addition, we wished to find out details about the respective organisations’ or countries’ policy in dealing with different types of mobility in peer review.

A considerable majority of 14/20 organisations indicates that they acknowledge career breaks.

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31. European Science Foundation Member Organisation Forum on Research Careers: Research Careers in Europe – Landscape and Horizons, Strasbourg 2010, p. 4.
33. The presentations by the invited experts can be viewed at: http://www.esf.org/activities/mo-fora/esf-member-organisation-forum-on-european-alliance-on-research-career-development/3rd-workshop-of-the-esf-mo-forum-on-research-careers-development.html.
Altogether, we find that research organisations in Europe give particularly strong weight to family reasons and health issues when it comes to acknowledging career breaks in peer review: all organisations that recognize career breaks consider parental leaves. In the light of ageing populations it is, however, notable that only nine organisations in addition take note of elder care. The subsequent classification describes research organisations’ procedures in dealing with career breaks, namely: pragmatic approaches based on case by case decisions vs formalised authorisation procedures, guidelines to reviewers, extension of eligibility windows or project durations, return grants.

When it comes to the consideration of mobility in peer review we see quite a mixed picture. In total, 11/20 organisations acknowledge mobility; all of them consider international mobility. Intersectoral mobility and virtual mobility, which is documented through international research collaborations and related publications, are of considerably lower importance (seven organisations each). Notably, the preparedness of researchers to embark on new interdisciplinary topics is less valued by research organisations (one reply) (Figure 4).

Conclusions and recommendations from the policy paper on New concepts of researcher mobility and ways to acknowledge them - including combined/part-time positions

Researcher mobility should no longer be associated with physical and geographical mobility only.

Mobility is not a goal in itself, but rather a means for international research collaboration across fields and sectors. Long-term physical mobility may be needed for the education and build-up of researchers from less favourable scientific environments, but is hardly necessary to set up collaboration between frontline labs. Combined part-time positions, including part-time ERA Chairs, may be established to counteract brain drain and link the emerging research institution to frontline institutions for future continuous collaboration.

The internet opens possibilities for virtual mobility and the establishing of virtual multidisciplinary network research centres. Centres of Excellence no longer need to be established as one physical geographical location. Virtual network centres and databases and registries accessible by eScience may combine excellent and synergetic research groups across the world without physical mobility. Flexible opportunities should be encouraged, stimulating a more effective use of human and financial resources in research, in line with the core idea of ERA.

Scope

Research quality is associated with international research collaboration, ‘critical mass’, frontline infrastructure and competition for funding. We suggest new concepts of researcher mobility including combined/part-time positions that may meet researchers’ individual needs, foster scientific excellence, facilitate knowledge transfer across disciplines, sectors and countries and even counteract brain drain from less attractive areas. We also recommend novel approaches to acknowledging these new concepts of researcher mobility in peer review, staff appraisal or other forms of researcher assessment.

Figure 4. Types of mobility that are considered, N=28 (several answers were possible*)

* European Science Foundation Member Organisation Forum ‘European Alliance on Research Career Development’: A survey analysis by the ESF Member Organisation Forum, January 2012, Figure 17, p. 44.
Types of mobility, related challenges and recommendations

Overall, we stipulate that no matter what type of mobility we consider researcher mobility should never be seen as an end in itself. What we should rather focus on is the value of the outcomes of any form of mobility.

• International mobility:
  Physical mobility across countries
  Challenges:
  We see the need to smooth immigration and work permit procedures for incoming researchers and to make work permits, grants, social benefits and (supplementary) pension rights portable across borders for researchers and their families, including researchers from 3rd countries, outside Europe.
  Recommendations:
  Above all, physical mobility has to be seen as a means to foster international collaboration. Given the increasing variety of researchers’ careers and the demand for balancing life and work we advocate to allow for more flexible forms of physical mobility, e.g., by:
  – means of short-term stays or split stays over a certain time period;
  – integrating international mobility in national grants;
  – offering combined/part-time positions on time bank terms;
  – acknowledging physical mobility based on documented stays abroad or signs of collaboration and participation.

• Intersectoral mobility:
  Mobility across academia, industry and public sectors
  Challenges:
  Mobility from academia to industry is today often a one-way issue as lack of high-ranked scientific publications in industry often prevents return to an academic position. Therefore, recognition of merit and achievements should be acknowledged by parameters recognised in both directions. Considering that research organisations in Europe increasingly stimulate intersectoral mobility of researchers as well as public private cooperation we see an urgent need for coherent policies regarding the acknowledgment of intersectoral mobility.
  Recommendations:
  Given the strong emphasis on publications in peer review we encourage researchers working in companies to publish to the widest possible extent in compliance with IPR rules. To this end research organisations should provide guidance on how to set up transfer agreements and contractual regulations enabling publications in private enterprise environments. In case of stated intersectoral mobility in a researcher’s CV, peer review and assessment procedures should give stronger emphasis to research proposals, organisational achievements and acquired professional skills rather than to scientific merits only.

• Interdisciplinary mobility:
  Mobility across research fields
  Challenges:
  In view of existing discrepancies between the claim for inter- or transdisciplinarity in research projects on the one hand and sometimes persisting disciplinary assessment procedures on the other, we see the need for coherent approaches by research organisations in Europe. Issues to be addressed concern:
  – recognition of diverse, nonlinear careers;
  – problems for expert evaluators to judge and acknowledge achievements outside own mainstream field;
  – how to evaluate multidisciplinary versus new borderline concepts and new knowledge created by combining fields;
  – persisting problems to get papers published outside mainstream fields or own former field.
  Recommendations:
  We explicitly welcome the trend towards international interdisciplinary journals in specialised thematic areas. Hence, we see the need by bibliometric approaches to take note of such journals and to incorporate them in relevant indices. In addition, research organisations should give more importance to review panels rather than individual written review as was advocated by the ESF Member Organisation Forum on Peer Review. We especially encourage international panel reviewing in order to avoid predominant national trends and biases.

• Virtual mobility:
  International, interdisciplinary and intersectoral research collaboration acknowledged by outcome parameters (e.g., co-publication, co-patenting) without (need of) physical or interdisciplinary or intersectoral mobility.
  Challenges:
  Recently, the notion ‘virtual mobility’ is more and more in use, albeit the underlying concept might not always be clear. Therefore, it is essential to agree a common definition and to develop a set of indicators on how to measure individual contribution (counteract strategic ‘invited in’ co-authorship).
Recommendations:

In order to achieve a common understanding we suggest the subsequent definition:
What we understand by ‘virtual mobility’ thus refers to cross-border research cooperation based on verifiable signs of collaboration and participation. The source of information should always be independent of the researcher to be considered.

Assessment should be based on elements such as co-publications, co-patenting, cross-border grants, conference papers, organising boards, international peer review panels, appointments based on merit by official third party, e.g., on expert groups.

• Cross-cutting recommendations:
In order to reach the above mentioned goals we suggest:
– providing standardised CVs in publicly available information systems (such as EURORIS) stating different forms of mobility;
– recognising non-academic achievements in peer review, e.g., project management, people management, budget management, acknowledging the European Alliance on Research Careers guidance on researchers’ professional development;
– normalising a researcher’s achievements by normalising the absolute experience to the time actually spent in research (e.g., be aware that the H-Index is usually not normalised).

Combined/part-time researcher positions – types and new concepts
A researcher engaged in two institutions simultaneously will facilitate knowledge transfer between the institutions ‘in person’. Combined, part-time researcher positions will allow mobility and direct knowledge transfer and cooperation and may link institutions, disciplines, countries and sectors (industry/academia/public). If the adjunct position is made on time bank terms, i.e., a part-time position defined by a certain % of full position per year allowing the workload to be flexibly distributed in short or long periods over the year according to need, the two positions may be easily combined in practice and open for short- or long-term mobility.

The Norwegian ‘Professor 2’ combined/part-time position scheme is a well-established example, said to be modelled after a Harvard University/MIT scheme. Full Professor academic merit is required. Typically, employees in industry, hospitals, etc. may have a +20% ‘Professor 2’ position at a university as an add-on to their main position – financed by either party. A full professor also may have a 20% position at another university, either in the same or a different field, i.e., across institutions, disciplines, sectors and countries. The ‘Professor 2’ position may be permanent and linked to a main position (e.g., for consultants in hospitals, the candidates being simultaneously evaluated for both positions). It may also be personal (linked to the person regardless of change of main position), permanent or time limited (e.g., four years), established upon personal invitation, or by open call by the university, in most cases linked to a specific faculty and institute. Several countries have corresponding models.

The scheme has proven effective for knowledge transfer, networking and research collaboration. Flexible time bank based part-time positions attract frontline researchers who want to collaborate, but don’t want to leave their main position or family for a longer period. Norwegian Centres of Excellence (CoEs) typically have flexible part-time ‘time bank’ agreements with foreign frontline researchers, attracting top researchers for long-term collaboration beyond single project duration. This also facilitates researcher exchange and increasing cooperation between the institutions. Corresponding schemes also exist on lower academic levels, but to a lesser degree.

Such schemes should be introduced as part of ordinary employment conditions (not limited to project duration) as well as in scholarships and grants both nationally and in EU instruments (Marie Curie Actions and other European support instruments). Combined/part-time cross-sectoral/ -disciplinary/ -national researcher grants are included in the Commission’s proposal for Horizon2020 (e.g., COM(2011) 809 final 2011/0401(COD) p. 37-38). Combined/part-time positions could be established at all levels in the hierarchy to stimulate ‘double careers’. They are effective initiatives for direct knowledge transfer by bridging institutions, disciplines, sectors and countries, stimulating new knowledge through diverse careers and, as they often include teaching, strengthen the Knowledge Triangle. The scheme might also be suitable for implementation of the COM-proposed ‘ERA Chairs’ (attracting excellent researchers to build scientific quality in low-performing institutions) and to counteract brain drain from less attractive areas by keeping them connected and cooperative.

Other initiatives stimulating researcher mobility and scientific quality
• Establish and finance global common use of frontline research infrastructure to attract researchers worldwide and contribute to scientific excellence.
• Establish and finance open access to (government-
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... tally sponsored) research literature, databases and registries.
• Combined and part-time positions may be attractive for women as they might be easier to combine with family life. This might increase recruitment of women to leading research positions and thus better make use of the potential in both genders, as well as contribute to greater scientific quality and innovation through greater gender diversity. Mobilising the potential of women senior researchers would also be a key element in increasing the number of researchers in Europe. In general, incentives should ensure proper and balanced gender recruitment to research positions and committees – including leading positions.
• Make European research careers attractive for scientists from different fields and from all parts of the world. Europe should develop an integrated strategy for such mobility, including opening up national funding to foreign applicants, ‘money follows researchers’ schemes and facilitation of dual careers (i.e., stimulate spouse employment opportunities by pre-established networking in a variety of surrounding institutions and industries).

Envisaged next steps

In order to better assess researchers’ individual career portfolios and mobility patterns we will work out a guideline for peer review and evaluation in interaction with the ESF’s Member Organisation Fora on Evaluation and on Peer Review. First measures will be to publish a co-authored scientific article on this topic in an international peer-reviewed journal and to conduct a workshop on ‘Mobility and individual’s career acknowledgement in peer review procedures’.

2.4 Going global

Context

“We need to work better with our international partners. That means opening access to our R&D programmes, while ensuring comparable conditions abroad. That also means adopting a common EU front where needed to protect our interests.”

This quote from the European Commission’s Flagship Initiative Innovation Union clearly states the political will of the European Union to think and act beyond Europe in order to widen the partnership, but also to defend own claims. As the research system is an important sub-system of the Innovation Union this statement applies to the realm of research too. In addition to such policy statements we have to acknowledge that research organisations themselves have taken the initiative to exchange, network and collaborate on topics of common interest. The World Conference on Research Integrity in Singapore in July 2010, in which the ESF played a key role, is one such example.

Another example is the emergence of the Global Research Council: “The Global Research Council is a virtual organisation, comprised of the heads of science and engineering funding agencies from around the world, dedicated to promoting the sharing of data and best practices for high-quality collaboration among funding agencies worldwide. The worldwide growth of public support for research has presented an opportunity for countries large and small to work in concert across national borders. Cooperation and collaboration can enhance the quality of science, avoid unnecessary duplication, provide economies of scale, and address issues that can only be solved by working together. Heads of research funding agencies have a responsibility to meet these objectives on behalf of the research community.”

Conclusions and recommendations

Why go global in developing research careers?
We are faced with global challenges, e.g., climate change, disease, poverty in a multipolar world that is characterised by ever increasing complexity. In our era of globalisation, potentially everybody is

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linked with everybody else. In a “flat world” interdependencies grow in all fields of life. Therefore, insular European approaches are no longer timely. However, we also need to recognise and emphasise the achievements of Europe in education and the qualification of researchers, both at national level and at EU level, which are often referred to by third countries. However, other systems have developed their own approaches to developing and supporting research careers. We thus have to ask: What could we learn from one another? Have other systems developed good practice, which we could adapt or adopt? How could we develop joint approaches to be prepared for future challenges?

Therefore, the primary aim of working towards a Global Forum on Research Career Development is to foster mutual learning, to acknowledge the challenges of other world regions and to incentivise collaboration between the participating organisations for the sake of better research and more attractive research careers. We would also like to take the opportunity to address topics we have not yet been able to give the attention they deserve, for instance how to increase the reliability of research careers, e.g., by means of tenure track or by creating better conditions for researchers on temporary contracts.

Envisaged next step

As a first step we will organise an EARCD dissemination conference inviting representatives from partner countries in Europe that are not yet involved in the current forum as well as from G20 partners. We will thereby seek to achieve wide recognition of our results and recommendations, to identify common issues and discuss topics that we have not yet been able to address, such as making research careers more transparent and predictable.

Annexes
Annex 1. **List of Forum members**

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<th>Country</th>
<th>Organisation</th>
<th>Member</th>
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<td><strong>Austria</strong></td>
<td>Austrian Academy of Sciences (ÖAW)</td>
<td>Barbara Haberl</td>
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<td>Austrian Science Fund (FWF)</td>
<td>Lydia Eva Wysocki</td>
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<td>Barbara Zimmermann</td>
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<td><strong>Belgium</strong></td>
<td>Research Foundation Flanders (FWO)</td>
<td>Olivier Boehme</td>
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<td>Stijn Verleyen</td>
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<td><strong>Czech Republic</strong></td>
<td>Academy of Sciences of the Czech Republic (ASCR)</td>
<td>Miroslav Tuma</td>
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<td><strong>Denmark</strong></td>
<td>Danish National Research Foundation (DNRF)</td>
<td>Vibeke Schroder</td>
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<td><strong>Estonia</strong></td>
<td>Estonian Research Council (ETAG)</td>
<td>Tiina Lot</td>
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<td>Academy of Finland (AKA)</td>
<td>Tiina Petänen</td>
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<td>National Institute for Agronomic Research (INRA)</td>
<td>Gilles Aumont</td>
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<td><strong>Germany</strong></td>
<td>German Research Foundation (DFG)</td>
<td>Anjana Buckow</td>
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<td>Helmholtz Association of German Research Centres (HGF)</td>
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<td><strong>Ireland</strong></td>
<td>Health Research Board (HRB)</td>
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<td>National Research Council (CNR)</td>
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<td>National Research Fund (FNR)</td>
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<td>The Research Council of Norway (RCN)</td>
<td>Hans Borghgrevink</td>
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<td>Slovak Research and Development Agency (APVV)</td>
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<td>Marcel Kullin</td>
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<td>The Scientific and Technological Research Council of Turkey (TUBITAK)</td>
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<td><strong>Observers</strong></td>
<td>All European Academies (ALLEA)</td>
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<td>Foundation for Polish Science</td>
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<td>League of European Research Universities (LERU)</td>
<td>Katrien Maes</td>
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<td>Vitae</td>
<td>Janet Metcalfe</td>
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<td><strong>Forum advisor</strong></td>
<td>Scholz – consulting training coaching</td>
<td>Beate Scholz</td>
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<td><strong>Forum management</strong></td>
<td>European Science Foundation (ESF)</td>
<td>Laura Marin</td>
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Annex 2. List of references

ACKERS, L. Opportunities and Obstacles: Intra-EU Skilled Migration to the UK, Presentation held in London, 12 September 2012


ESF (2012d) New concepts of researcher mobility and ways to acknowledge them - including combined/part-time positions, European Science Foundation Member Organisation Forum: European Alliance on Research Career Development.


Dear Professor Fulvio Esposito,

European Commission Consultation: Towards a European Framework for Research Careers

We are writing with respect to the recent consultation document ‘Towards a European Framework for Research Careers’ issued on 6 October 2010. We would also like to make you aware of the recent and ongoing work of the ESF in this important area of Research Careers in the framework of the EUROHORCs and ESF Vision on a Globally Competitive ERA and their Road Map for Actions1 Action N°2, dedicated to the promotion of European Research Careers and Mobility.

As you will be aware the ESF published the report ‘Research Careers in Europe - Landscape and Horizons’2 in December 2009. This report documented the conclusions and recommendations of the work of the ESF Member Organisation Forum on Research Careers (MO-Forum). Specifically it also addressed the question of career structures and presented a four-stage career structure (referred to as a taxonomy) with accompanying information on issues such as status, recruitment and career perspectives. Following from this earlier work ESF launched a new MO Forum - the ‘European Alliance for Research Careers’ – on 9 February 2011. This forum is chaired by a member of the EUROHORCs (Professor Nüket Yetiş – President of TÜBITAK).

The MO-Forum is currently developing its future work plan you may be interested to note that its provisional objectives are to address the following:

- 1 - Taxonomy with objectives to validate existing taxonomies and to map career tracking surveys
- 2 - Skills with objectives to build on the skills list of Vitae, explore the wider use of the Vitae Researcher Development Framework and develop guidance on provision of professional development opportunities
- 3 – Mobility with objectives on policy recommendations for intersectoral mobility, good practice regarding the scientific visa and peer review and portfolio careers
- We are also planning a survey of ESF Member Organisations in relation to these objectives.

The MO-Forum also sees significant value in continuing its co-operation with the skills working group of the ERA - Steering Group for Human Researchers and Mobility.

Turning to the issue of the Framework for Research Careers:

The ESF is conscious that the work of its MO Forum and that of the European Commission are complementary and that both concern themselves with the careers of researchers and both aim to support mobility between HE and other sectors of the economy. Based on the work of our MO Forum we would like to make the following specific comments on your proposed framework:

1. The purpose of your framework should be clarified and ideally a specific use should be agreed which will influence its development. We do not wish to be prescriptive in this matter but it seems logical that the EC would as first steps wish to consider using its framework to support the differentiation of EU funding opportunities and jobs with the EURAXESS jobs portal. We broadly agree with the benefits of the framework expressed in section 3 of the EC consultation document.

2. Concerning the category of 'Star Researcher' we understand that a number of inputs to your consultation questioned the inclusion of a category for Star Researchers. We too would question the value of including this in a career taxonomy – primarily this is because ‘Star’ researchers can legitimately emerge at different career stages and we are unconvinced that its inclusion adds value.

3. Regarding the categories of ‘New Researcher’ and ‘Recognised Researcher’ – we are concerned that the boundary between these categories does not coincide with graduation of the doctoral candidate. As graduation as a PhD or equivalent is commonly regarded as the qualification for progression to the next stage of a research career and is increasingly seen as a relevant qualification in the wider economy - we believe the full doctoral/PhD period should be in the ‘New Researcher’ category.

4. Related to point 3 we also recognise that this category of ‘New Researcher’ could, in some disciplines, compass researchers whose career does not necessarily involve working towards a doctorate. This is particularly true in certain disciplines such as Law where researchers may move between professional practice and Higher Education.

5. Regarding the terminology of the career categories, we note that the ESF categories and the EC Framework use the term ‘Established Researcher’ but that the meaning and level is different. We suggest that this is at the very least likely to confuse and the MO-Forum suggests that an agreed four category structure would be appropriate along the following lines:

   a. Doctoral candidate or similar level of competence
   b. Associate Researcher (or equivalent terminology)
   c. Established Researcher
   d. Leading Researcher

6. We would also suggest that the preamble to a final structure should make clear reference to the variety of careers open to researchers and we consider that a format such as that contained in our Research Careers in Europe Report (page 18) could be used.

In the light of our comments above we would like to propose that we continue our effective dialogue between the ESF MO-Forum and the European Commission. We suggest that together we should take further steps to integrate our descriptions of the research career structures and to reach a common agreement on the purposes of such a structure. This single approach will have considerable value. We also believe that there are other aspects of Research Careers which would benefit from ongoing dialogue and that alignment of our agendas could make a valuable
contribution to the developing European Research Area. We are aware that there is some common membership between the ESF MO-Forum and the ERA -Steering Group for Human Researchers and Mobility. We are sure that in particular Dr. Iain Cameron (Research Councils UK), Dr. Hans Borchgrevink (Research Council of Norway), Laura Marin (ESF) and Dr. Beate Scholz (Consultant engaged to facilitate the ESF MO-Forum) are prepared to facilitate effective interactions between the MO Forum and the European Commission.

We hope that you find these comments useful and that we can continue to work together for the benefit of researchers, research careers and research in Europe.

Yours sincerely,

Professor Marja Makarow       Professor Nüket Yeti
Chief Executive   President of TÜBITAK
European Science Foundation   Chair of MO Forum
Member of EUROHORCs

cc: Sohail Luka – Secretary to SGHRM
Stefaan Hermanss - Head of Unit Skills
Conor O’Carroll – Chair of SGHRM Working Group on Skills
Peter van der Hijden – Secretary to Working Group on Skills
Dear Professor Esposito,

ESF European Alliance for Research Careers co-operation with the ERA Steering Group on Human Resources and Mobility

Towards a European Framework for Research Careers

Following our previous letter of 14 April 2011, we are pleased to learn from Dr. Iain Cameron and Dr. Hans Borchgrevink, that you have circulated a revised version of the document ‘Towards a European Framework for Research Careers’.

May we compliment you on this document which has taken account of the concerns we expressed in our earlier letter. We agree that it provides a clear reference point for research career structures in Europe and commend the European Commission on its open approach to consultation on the careers framework. We are very pleased that the EC intends to apply the framework to the EURAXESS jobs portal and encourage you to formally announce this so that it can be implemented as soon as possible in order to concretely demonstrate the practical use of the careers framework.

We would also like to suggest that we agree on a joint statement on the taxonomy as this will help to maximise its future visibility. It is important to emphasise that this is a joint taxonomy which is proposed by the EC, and supported by organisations representing the research community.

You may be interested in two activities of the ESF Member Organisation Forum ‘European Alliance on Research Career Development’.

Firstly, a questionnaire has been circulated to ESF Member Organisations which seeks to gain insight into their policies and practices in the focus areas of:

- Research Career Taxonomy
- Research Career Tracking
- Continuous professional skills development
- Intersectoral mobility
- Peer review
Under the first heading we have included a question asking the Member Organisations about the possible uses of a joint taxonomy. We believe the results of the questionnaire will be of interest to you as well as to ESF Member Organisations and we will keep you informed of the outcomes.

Secondly, we are planning to implement a pilot project to explore the wider use in Europe of the Vitae® Researcher Development Framework developed by Vitae® in the UK. It is likely that this project also will make clear and positive reference to the careers framework.

In conclusion, we would encourage you to publish the document ‘Towards a European Research Careers Framework’ formally and widely as a ‘voluntary transparency instrument’ so that it can become established as an effective reference point for Research Careers in Europe. This will also allow organisations such as ESF to make clear reference to it in relation to research careers activities.

Yours sincerely,

Professor Marja Makarow
Chief Executive
European Science Foundation

Professor Nüket Yetiş
President of TÜBİTAK
Chair of MO Forum
Member of EUROHORCs

cc: Sohail Luka, Secretary to SGHRM
Stefaan Hermans, Head of Unit Skills
Conor O’Carroll, Chair of SGHRM Working Group on Skills
Peter van der Hijden, Secretary to Working Group on Skills
Dear Fulvio,

Update on the activities of the ESF Member Organisation Forum ‘European Alliance for Research Career Development’

You will recall that my predecessor Professor Marja Makarow and Professor Nüket Yetis (then MO-Forum Chair) wrote to you on 14 April 2011. The topic at that time was the consultation document ‘Towards a European Framework for Research Careers’ but the letter also included a list of the provisional objectives of the ESF Member Organisation Forum the ‘European Alliance for Research Career Development’ (MO-Forum) which had been launched on 9 February 2011. I thought that you would appreciate an update on the activities of the MO-Forum.

You will be pleased to hear that the MO-Forum has published the results of a survey of ESF members and is on track to produce further significant reports later this year. Indeed the ESF has agreed an extension to the period of the forum until the end of 2012 to facilitate this. It is too early to give you full details of the content of these reports but you and your colleagues on the ERA-SGHRM and at the European Commission may find the following descriptions and timetable helpful.

1. Survey of EARCD members: The Forum conducted a survey of Member Organisations at the end of 2011 with the aim to investigate the respective organisations’ policies and promising practices with reference to the focus areas of the Forum. The results, presented in the report “European Alliance on Research Career Development; A Survey Analysis by the ESF Member Organisation Forum” (a PDF copy accompanies this letter) published on 27 January 2012 http://www.esf.org/activities/mo-fora/esf-member-organisation-forum-on-european-alliance-on-research-career-development.html pointed out that ESF Member Organisations: 1) need to rethink the Mobility concept 2) need to start ‘career tracking’ exercises 3) need to implement the Careers Framework.

2. European Framework for Research Careers: We have endorsed the implementation of the framework in Member Organisations. The MO-Forum survey has shown that ESF Member Organisations are either on route to adopting the framework or have their own framework in place that needs to be synchronised. We will monitor and encourage the on-going developments.
3. Career Tracking: We have successfully carried out an international pioneering workshop “How to track researchers’ careers” on career tracking systems. This was co-sponsored with FNR Luxembourg and held in Luxembourg on 9/10 February 2012. The aim was to provide a forum of learning how to set up a tracking of doctorate holders / and to tackle a mix of theory and practice through presenting career tracking initiatives, their purposes and methodologies as well as their major findings. Currently, we are finalising the conference report that will provide a framework for future career tracking studies. The concluding recommendation in the report advocates a joint initiative to promote career tracking studies across Europe. There is interest in such a platform as a framework and forum for exchange of good practice etc. although it is recognised that such a platform will have resource (including funding) needs.

The report of the workshop will be published in the summer of 2012.

4. Researchers’ Professional Development: Our primary goal is to offer a number of guidelines addressed to research funding and research performing organisations in Europe on how they can implement a consistent policy on Researchers’ Professional Development thereby enhancing researcher’s chances of employment inside and outside academia.

As part of this work stream we have carried out a pilot project, to assess the applicability of a generic framework for the professional development of researchers based on the Vitae Researcher Development Framework (RDF) in six different research/cultural/socio-economic settings across Europe. “The outcomes from the six focus groups demonstrated the potential applicability of the RDF for researchers across Europe. The RDF presents an opportunity to make a step change in how European researchers are supported in their professional and career development.” The final report will include recommendations on how that step change can be achieved.

The findings and concrete recommendations of the pilot project will be published in June in the report “Towards a pan-European professional development framework for researchers - A feasibility study by the ESF Member Organisation Forum European Alliance on Research Career Development”

5. Mobility: The survey of MO-Forum members revealed that international mobility is the only form of mobility that is commonly acknowledged by research organisations in Europe. The Forum will advocate at least four major forms of mobility (geographic, intersectoral, interdisciplinary, virtual) to be recognised at the level of research institutions and the national level as well as the level of the European research system. Not only should the different mobility patterns be acknowledged, but also actively fostered, e.g. through shared part-time positions.

Our forthcoming workshop in May will further explore these different mobility patterns. Thereby, we seek to develop a policy recommendation that will address both the EC and MOs and will especially encourage the recognition of different mobility patterns in peer/merit review or recruitment/staff appraisal procedures.

A paper on ‘New Concepts of Mobility’ will be published in June 2012.

The reports that I have highlighted will contain recommendations which I would suggest the ERA-SGHRM may wish to endorse. Accordingly the MO-Forum Chair will ensure that you and your colleagues at the EC are provided with further updates and copies of these reports as they
become available. I also think that it would be sensible for the Forum Chair to discuss, with you and your EC colleagues, a possible timetable for presentation of these reports to the SGHRM.

This ESF MO-Forum is continuing to have impact and I welcome the continuing dialogue with the ERA-SGHRM facilitated through Dr Iain Cameron (the Forum Chair) and Dr Hans Borchgrevink, both of whom are SGHRM members.

Yours sincerely,

[Signature]

Martin Hynes