

## INTERNATIONAL MOBILITY OF THE HIGHLY SKILLED

In technological and economic development, human resources play a central role. Knowledge-based societies rely on highly-qualified labour forces. The growing intensity of knowledge means that all countries have a greater need for highly-skilled specialists who are able to access, understand and use knowledge. To make sure and improve the situation of countries in worldwide competition it is essential to support academic exchange and to attract highly-skilled specialists. Additionally, most OECD countries and other developed countries face a special challenge because of a higher need for the highly skilled in societies with shrinking populations. The OECD's *The Global Competition for Talent: Mobility of the Highly Skilled* analyses the mobility of

the highly skilled and the policies of 15 countries that encourage the mobility of human resources in science and technology (HRST) and make themselves attractive for these groups.

Skilled HRST provide knowledge and contribute to innovative activity, thereby increasing economic growth and prosperity. Attracting more HRST can hasten the accumulation of knowledge, stimulate innovation and lead to higher levels of economic activity and prosperity. The loss of skilled people leads to concerns about labour force shortages and brain drain, particularly in developing countries.

Most OECD countries perceive mobility as important in terms of retaining and attracting HRST talent and have policies to assist and encourage mobility. Some make these policies part of an explicit strategy, often accompanied by a specific website (Australia, Austria, Belgium, Czech Republic, Finland, Nether-

**Table 1**

**Mobility strategies**

	Strategy to encourage mobility of HRST	Webpage or organisation providing information to inflows of HRST	Diaspora strategy
Australia	Initiatives in place to promote international research collaboration, including mobility of researchers.	Mobility portal established in conjunction with FEAST (Forum for European-Australian S&T Cooperation) – <a href="http://www.mobility.org.au">www.mobility.org.au</a>	
Austria	Mobility mentioned in Programme of the Austrian Federal Government for the 23rd Legislative Period (2006-2008).	Yes. Primary site is the Researcher's Mobility Portal Austria ( <a href="http://www.researchinaustria.at">www.researchinaustria.at</a> ).	Networks for HRST in North America – ASciNA (Austrian Scientists & Scholars in North America) at <a href="http://www.ascina.at">www.ascina.at</a> and OST (Office of Science and Technology) scientist network at <a href="http://www.ostina.org/content/view/7/26">www.ostina.org/content/view/7/26</a>
Belgium	The relevant federated authorities put emphasis on their own priorities; however, mobility is a focus of policy efforts in each area.	Yes. Primary site is the Researcher's Mobility Portal Belgium ( <a href="http://www.eracareers-belgium.be">www.eracareers-belgium.be</a> ).	Networking events in the United States (Flemish government initiative), in the framework of the European ERA-Link project.
Canada	Mobility is central to a national strategy to make Canada one of the world's top countries for R&D and to build an innovative and competitive economy.		
Czech Republic	The need for mobility support is detailed in many recent documents e.g. Strategy of Economic Growth; National Reform Programme; National Innovation Policy for 2005-2010; National Development Plan of the Czech Republic.	Yes. Primary site is the Researcher's Mobility Portal Czech Republic ( <a href="http://www.eracareers.cz">www.eracareers.cz</a> ).	
Finland	General goal of internationalisation in S&T and higher education.	Yes. Primary site is the Researcher's Mobility Portal Finland (accessed via Academy of Finland website <a href="http://www.aka.fi">www.aka.fi</a> ).	

(Table 1 continued)

	Strategy to encourage mobility of HRST	Webpage or organisation providing information to inflows of HRST	Diaspora strategy
Japan	Yes. "Strategic Promotion of the International Activity of Science and Technology" – Ministry of Education, Culture, Sports, Science and Technology (MEXT). High priority on strengthening collaboration with Asian countries and internationalising universities.	No central website.	
Korea	Enhancing international mobility of researchers in two categories: Korean natives who go abroad for study and research; and the inflow of foreign researchers.	No central website, but individual websites for each programme.	Web portal has been established for knowledge exchange among Korean researchers worldwide. Also distinguished scientists residing abroad are invited to visit Korea and establish networks with domestic researchers.
Netherlands	Ministry of Education, Culture and Research encourages mobility of researchers. Policy executed by Netherlands Organisation for Scientific Research (NWO).	Yes. Researcher's Mobility Portal: the Netherlands ( <a href="http://www.eracareers.nl">www.eracareers.nl</a> ). Also NWO website ( <a href="http://www.nwo.nl">www.nwo.nl</a> ).	
New Zealand	Ministry of Research, Science and Technology currently developing a strategy to ensure New Zealand continues to attract, retain and develop top-performing people and teams in research, science and technology.		
Norway	No specific strategy, but the government assigns high priority to internationalisation of Norwegian research and invests large resources in international research programmes, in which mobility is a central measure.	Yes. Primary site is the Researcher's Mobility Portal Norway ( <a href="http://www.eracareers.no">www.eracareers.no</a> ).	
South Africa	Various mechanisms exist to encourage inward and outward mobility of researchers, doctoral students and HRST, mostly managed by the National Research Foundation (NRF).	NRF website (particularly the link to the South African Research Chairs Initiative) provides information on inflows of HRST ( <a href="http://www.nrf.ac.za/sarchi/">www.nrf.ac.za/sarchi/</a> ).	Platforms such as the African Union – African Diaspora Ministerial Conferences are used. Also, the Department of Science and Technology holds "South Africa Days" in several destinations abroad where there is South African talent.
Switzerland	No explicit strategy.	Yes. Portal for science, research and innovation in Switzerland ( <a href="http://www.myscience.ch">www.myscience.ch</a> ).	SwissTalents database of Swiss scientists and scientists with a strong link to Switzerland ( <a href="http://www.swisstalents.org">www.swisstalents.org</a> ). Also <a href="http://www.myscience.ch">www.myscience.ch</a> .
United Kingdom	Yes. International mobility of students and researchers is embedded in "A Strategy for International Engagement in Research and Development", published by the Global Science and Innovation Forum (GSIF). See <a href="http://www.berr.gov.uk/files/file34726.pdf">www.berr.gov.uk/files/file34726.pdf</a> .	Yes. Primary site is Network UK – the researcher's mobility portal ( <a href="http://www.britishcouncil.org/eu/mobility">www.britishcouncil.org/eu/mobility</a> ).	The GSIF Strategy for International Engagement in Research and Development recognises that the United Kingdom should encourage and promote an alumni network of researchers who have been working in the United Kingdom. A new International Fellowships Scheme, with linked alumni engagement and operated in partnership by the Royal Society, British Academy, Royal Academy of Engineering and Research Councils UK, will be launched in 2008/09.
European Commission	Yes. See European Commission COM(2001)331 (20/6/2001). Aim of strategy is to develop an open, trans-European labour market for researchers.	Yes. Primary site is the European Researcher's Mobility Portal. <sup>a)</sup>	The European Commission has proposed to network all EU researchers working abroad, beginning with the United States ( <a href="http://cordis.europa.eu/eralink/">http://cordis.europa.eu/eralink/</a> ), followed by other countries, such as Japan.

<sup>a)</sup> From June 2008, the principal website is the EURAXESS portal ([http://ec.europa.eu/eracareers/index\\_en.cfm](http://ec.europa.eu/eracareers/index_en.cfm)).

Source: OECD (2008).

lands, Norway, South Africa, Switzerland, United Kingdom, European Commission); others have no overall strategy. The members of the European Union appear to gain valuable leverage from EU initiatives, i.e., each country has a mobility portal that is linked to the wider European Researcher's Mobility Portal, which provides a wealth of information.

Some countries have specific strategies to maintain contact with their diaspora. They focus more on initial retention and re-attraction. Thus, in 2001 the Office of Science and Technology at the Austrian Embassy in Washington, D.C., set out to establish a network for Austrian expatriate researchers, the OST Scientist Network. The network serves as a foundation for a broader understanding of the needs of Austrian researchers in North America and provides a basis for recognising those needs in the Austrian scientific landscape. It advises on government-related matters and keeps members informed about science and technology policy issues. Additionally, it supplies news on new developments in Austrian and European research (see Table 1).

To support the inflow of the highly skilled, seven of the 15 analysed countries offer mobility opportuni-

ties via their general high-skill migration policies. These are Australia, Canada, Czech Republic, Netherlands, New Zealand, Norway and Switzerland. In addition, almost all have targeted policies to assist HRST inflows, ranging from special visas to facilitated procedures that reduce delays or waive certain requirements. The Scientific Visa procedure adopted by European Commission Directive 2005/71 has been transposed into domestic legislation by Austria, Belgium, Czech Republic and the Netherlands (see Table 2).

Additionally, most of the countries provide economic incentives for inflows of HRST. The approaches vary widely, from a large number of policies across a number of policy categories to just a few programmes in selected categories. A special case is the Czech Republic, where no policies explicitly offer economic incentives to inflows of HRST. Australia's policy is focused on fellowships, while Finland and Switzerland have concentrated their efforts on only a few programmes that offer economic incentives. For Switzerland this is likely due to the attractive salaries and other conditions that are already successful in attracting researchers and other HRST to the country. Korea and New Zealand offer the broadest range of programmes: fellowships, grants,

Table 2

## Immigration policy to facilitate inflows of HRST and economic incentives for inflows of HRST

	Facilitated procedures for HRST	Special visas for HRST	General highly-skilled migration policy	Fellowships	Grants and project funding	Scholarships and allowances	Tax benefits and subsidies	Other
Australia		Yes – Business Long-Stay Visa, Educational Visa, Visiting Academic Visa	Yes	9				
Austria	Yes	Yes – Scientific Visa (under EC Directive 2005/71)		1	3			
Belgium		Yes – Scientific Visa (under EC Directive 2005/71)		3	3	2		1
Canada	Yes – Canada Chairs applicants exempt from Labour Market Opinion requirement	Yes – Off-campus Work Permit	Yes	1	4			1
Czech Republic	Yes	Yes – Scientific Visa (under EC Directive 2005/71)	Yes					

(Table 2 continued)

	Facilitated procedures for HRST	Special visas for HRST	General highly-skilled migration policy	Fellowships	Grants and project funding	Scholarships and allowances	Tax benefits and subsidies	Other
Finland	Informal arrangement based on co-operation between directorate for immigration and higher education institutions.				1		1	
Japan	Yes	Multiple-entry visa available		4	1	3		1
Korea		Yes – Science Card, IT Card, Gold Card		1	3	2	1	2
Netherlands		Yes – Scientific Visa (under EC Directive 2005/71)	Yes – a fast procedure for highly skilled with no work permit required. Facilitated procedures for family members.		4			
New Zealand	Yes – for occupations on shortage lists		Yes	2	1	1	1	3
Norway	Facilitated procedures for accompanying family members	Yes – work permit for researchers, scholarship holders and lecturers	Yes – skilled worker/specialist work permit quota scheme		3	3		
South Africa		2002 Immigration Act provides for work permits for foreign experts		1	2	1		2
Switzerland			Yes (for non EU-EFTA countries)		1			2
United Kingdom	Yes – no work permit requirements for certain students	Sponsored Researcher work permit category for non-EEA nationals	Yes	4	3	5		6
European Commission		Scientific Visa (EC Directive 2005/71)			2			

Source: OECD (2008).

scholarships, tax benefits and other policies (see Table 2).

N.H.

### Reference

OECD (2008), *The Global Competition for Talent: Mobility of the Highly Skilled*, Paris, pp. 122–144.