United Nations Educational, Scientific and Cultural Organization

UNESCO INSTITUTE for STATISTICS

# HUMAN RESOURCES IN R&D

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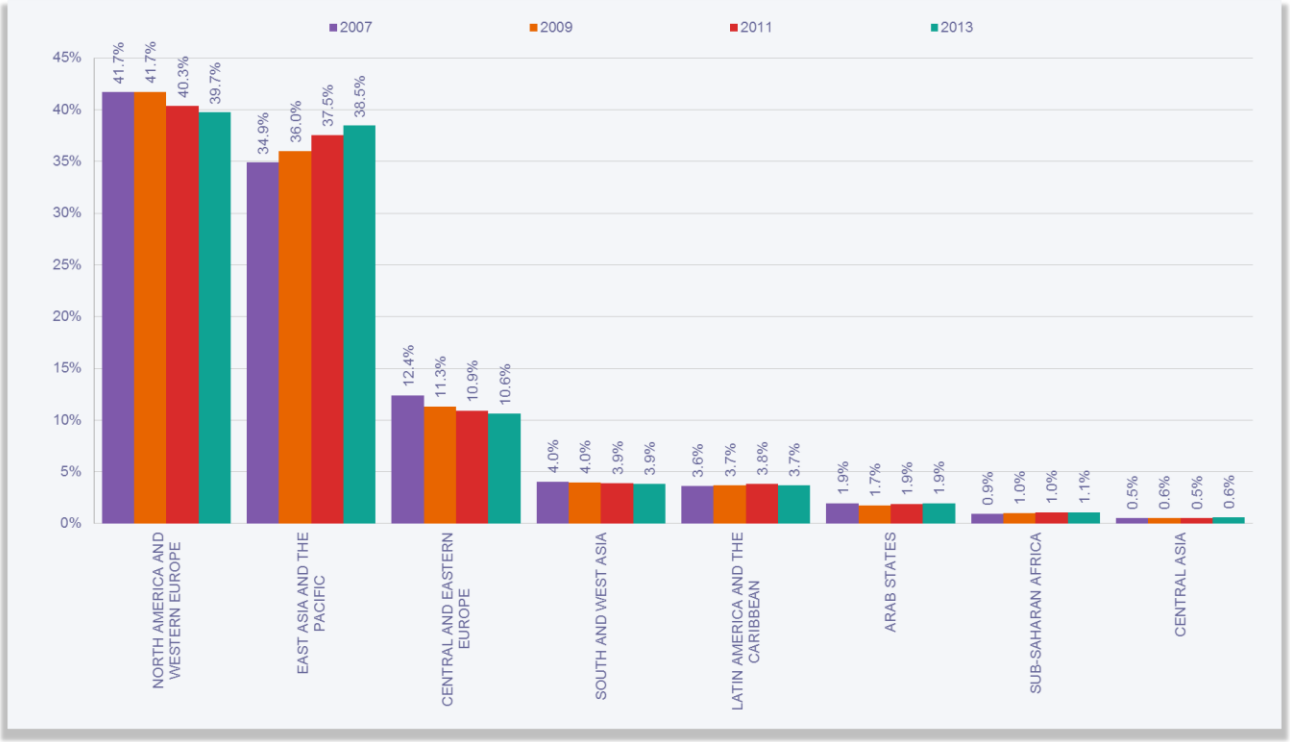
This fact sheet presents the latest UIS R&D data available as of October 2015.

## REGIONAL DENSITY OF RESEARCHERS AND THEIR FIELD OF EMPLOYMENT

In the drive to strengthen knowledge-based societies, policymakers are looking to ensure that their countries have an adequate supply of researchers. This fact sheet provides a global overview of countries with the highest concentration of researchers as well as a breakdown by region.

**Figure 1** presents the distribution of researchers in the world by regions in 2007, 2009, 2011 and 2013. Researchers are professionals engaged in the conception or creation of new knowledge, products, processes, methods and systems, as well as in the management of the projects concerned (Frascati Manual, 2002).

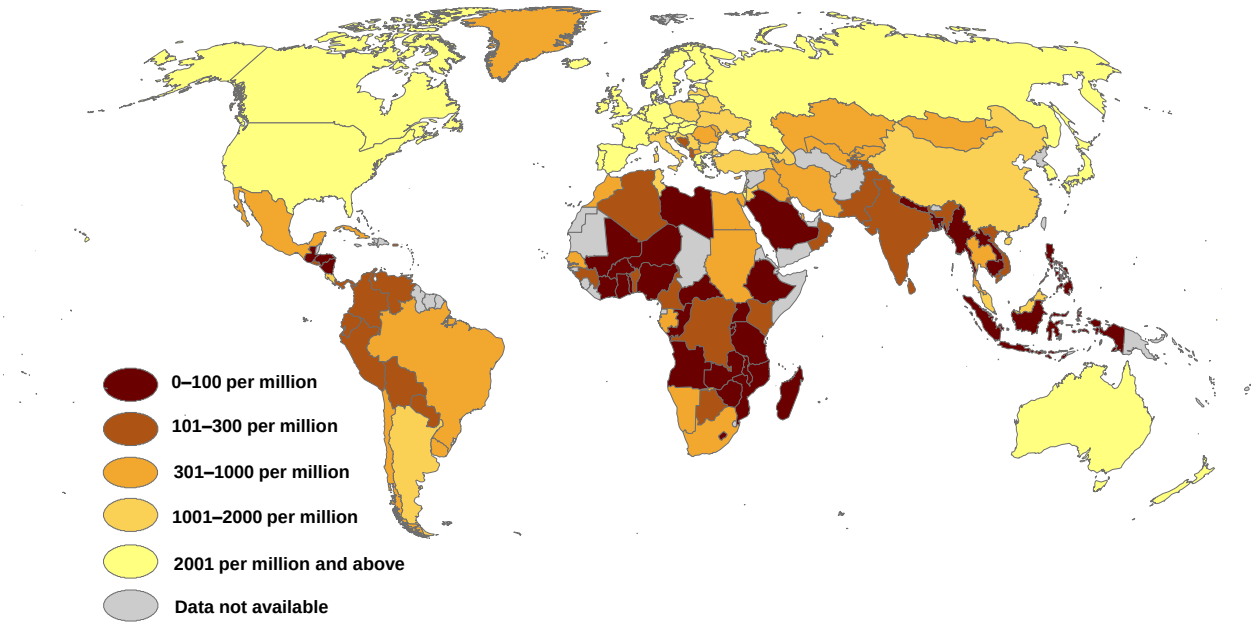
**FIGURE 1. WHERE ARE RESEARCHERS LOCATED?**
Shares of world researchers by principal regions, 2007, 2009, 2011 and 2013




*Source: UNESCO Institute for Statistics estimates, August 2015*

**Figures 2** and **3** illustrate the distribution of researchers per 1 million inhabitants. The data are expressed in full-time equivalents (FTE), which are a measure of the actual volume of human resources devoted to research and development (R&D). It is important to note when interpreting the data that headcounts (HC) were used for countries where FTE figures were not available.

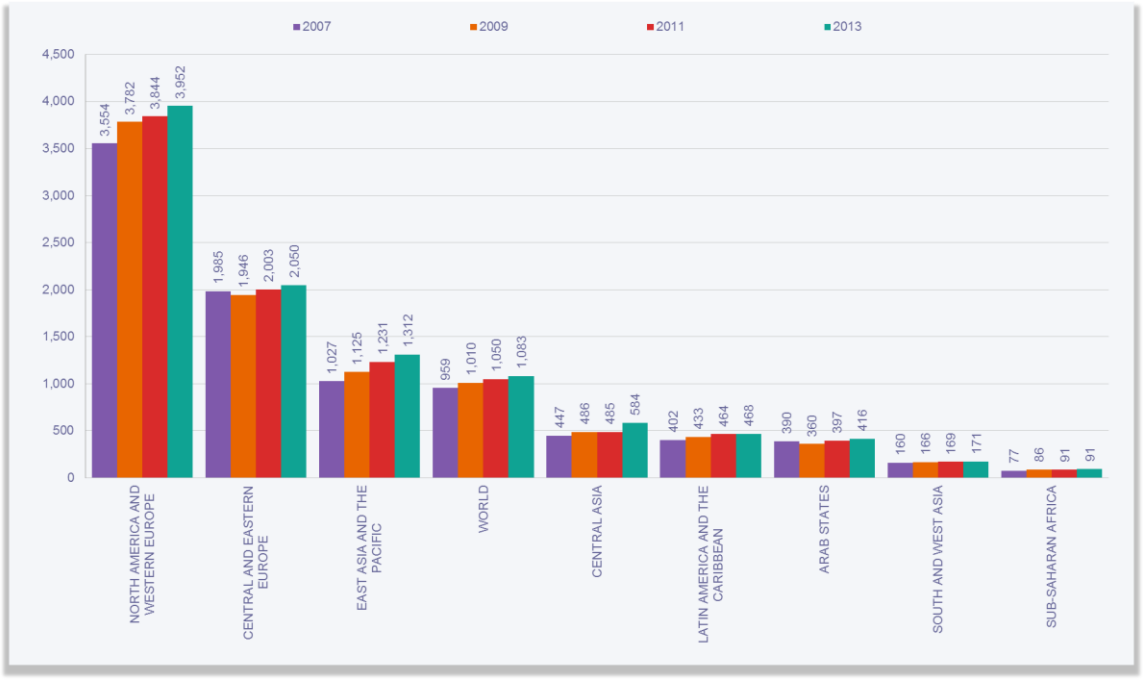
**FIGURE 2. HOW MANY RESEARCHERS ARE THERE?**
Researchers per million inhabitants, 2013 or latest year available




**Notes:** The data presented in this map are based on FTE. However, HC is used for the following countries as data by FTE were not available: Armenia; Azerbaijan; Bangladesh; Belarus; Benin; Burundi; Cameroon; Central African Republic; Cuba; Democratic Republic of the Congo; El Salvador; Gabon; Guinea; Honduras; Kyrgyzstan; Libya; Mongolia; Namibia; Nauru; Peru; Saint Lucia; Saint Vincent and the Grenadines; Saudi Arabia; Sudan; Tajikistan; Trinidad and Tobago; and US Virgin Islands. This should be taken into consideration when interpreting the data.

*Source: UNESCO Institute for Statistics, October 2015*

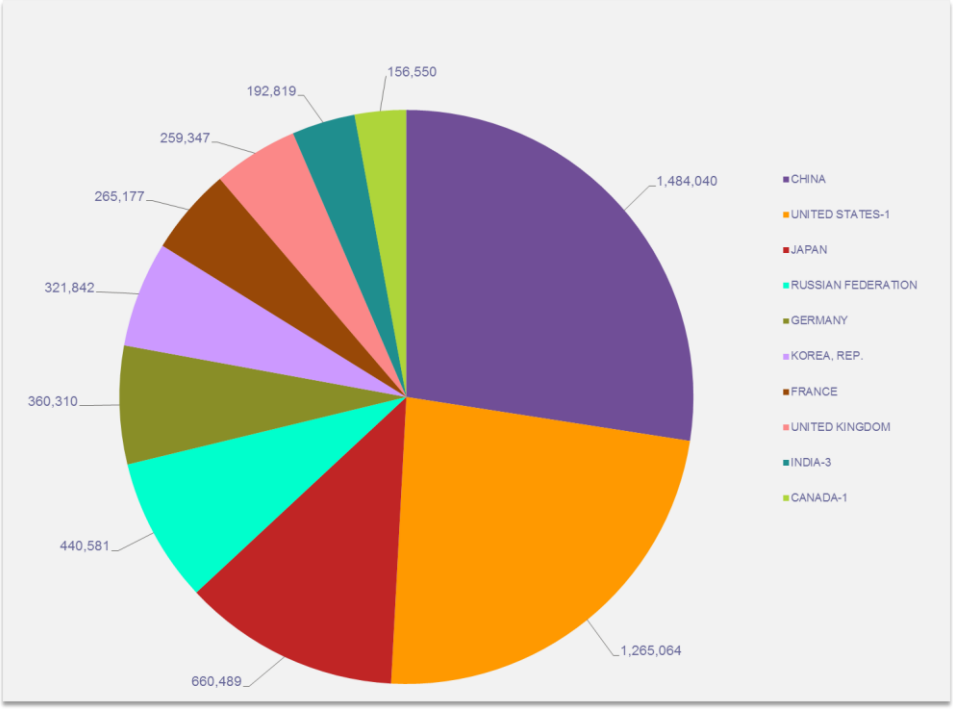
**FIGURE 3. HOW MANY RESEARCHERS ARE THERE?**
Researchers per 1 million inhabitants by region, 2007, 2009, 2011 and 2013




*Source: UNESCO Institute for Statistics estimates, August 2015*

**Figure 4** shows the world's leading countries (top 10) in terms of the number of researchers.

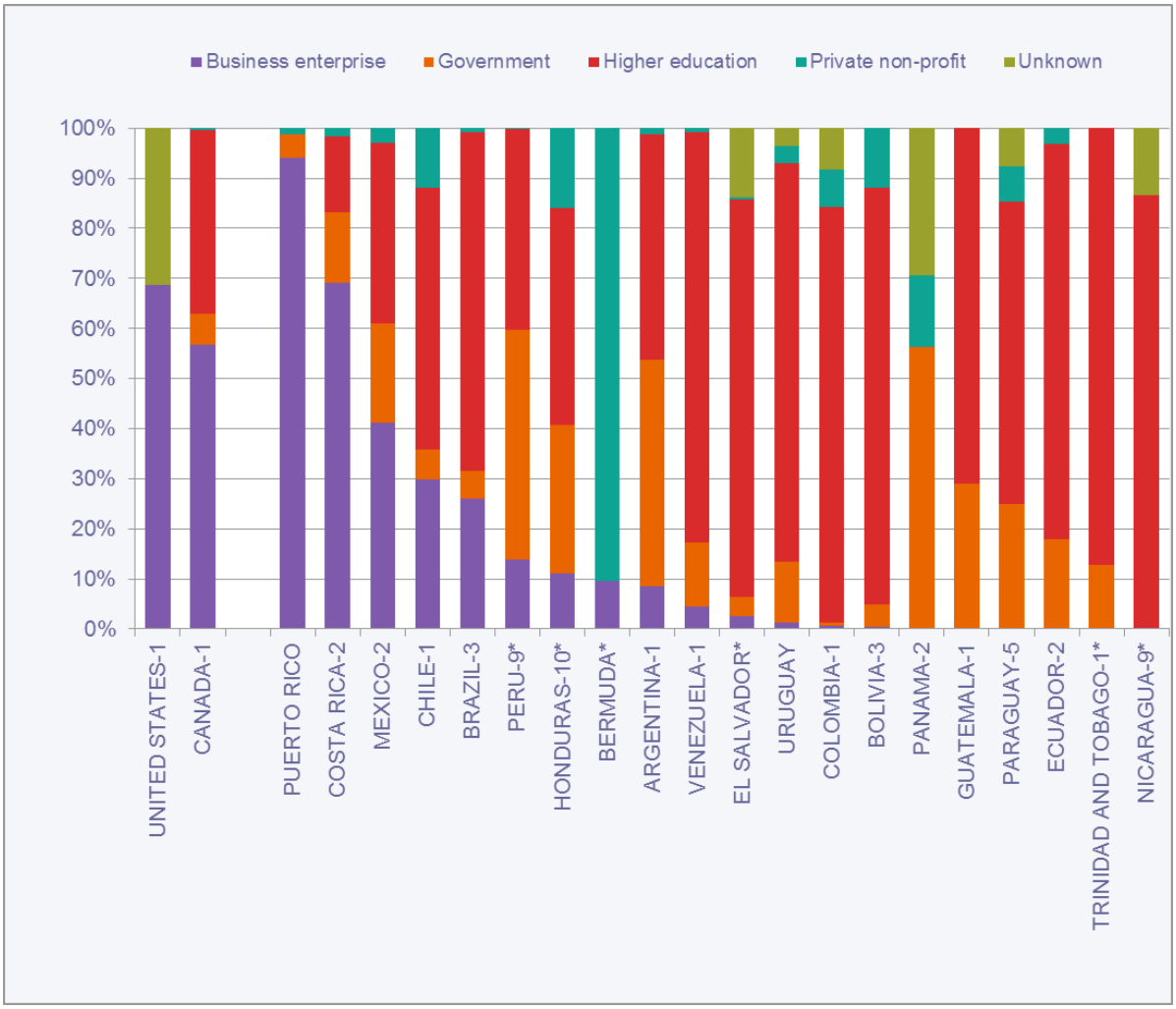
**FIGURE 4. WHICH COUNTRIES HOST THE GREATEST NUMBER OF RESEARCHERS?**
Number of researchers, 2013 or latest year available




**Notes:** -1 = 2012**;** Data are based on FTE
*Source: UNESCO Institute for Statistics, October 2015*

**Figures 5, 6** and **7** illustrate the percentage of researchers by sector of employment expressed in FTE (or HC where data by FTE were unavailable). One FTE may be thought of as one person-year. Thus, a person who normally spends 30% of their time on R&D and the rest on other activities (such as teaching, university administration and student counseling) would be denoted as a 0.3 FTE. Similarly, if a full-time R&D worker is employed at an R&D unit for only six months, this results in an FTE of 0.5.

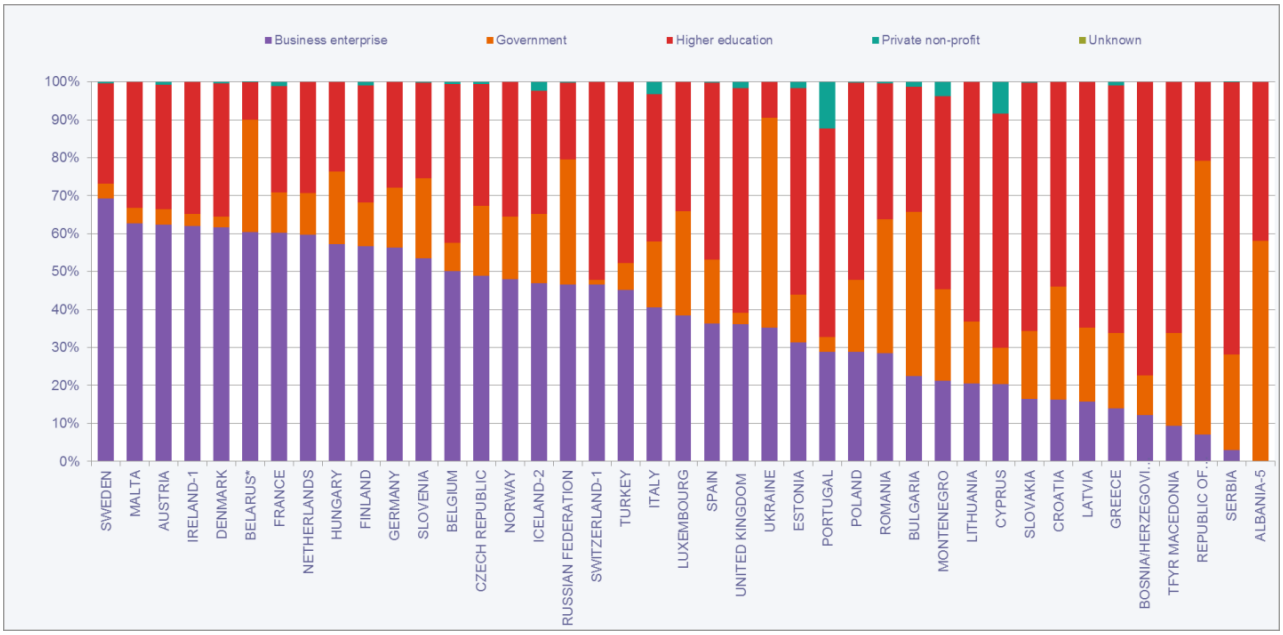
**FIGURE 5. A BREAKDOWN OF RESEARCHERS IN THE AMERICAS**
Percentage of researchers by sector of employment, 2013 or latest year available




**Notes:** -1= 2012, -2 = 2011, -3 = 2010, -4 = 2009, -5 = 2008, -6 = 2007, -8 = 2005, -10 = 2003, -11 = 2002, -13 = 2000, -16 = 1997.
* = based on HC data.

*Source: UNESCO Institute for Statistics, October 2015*

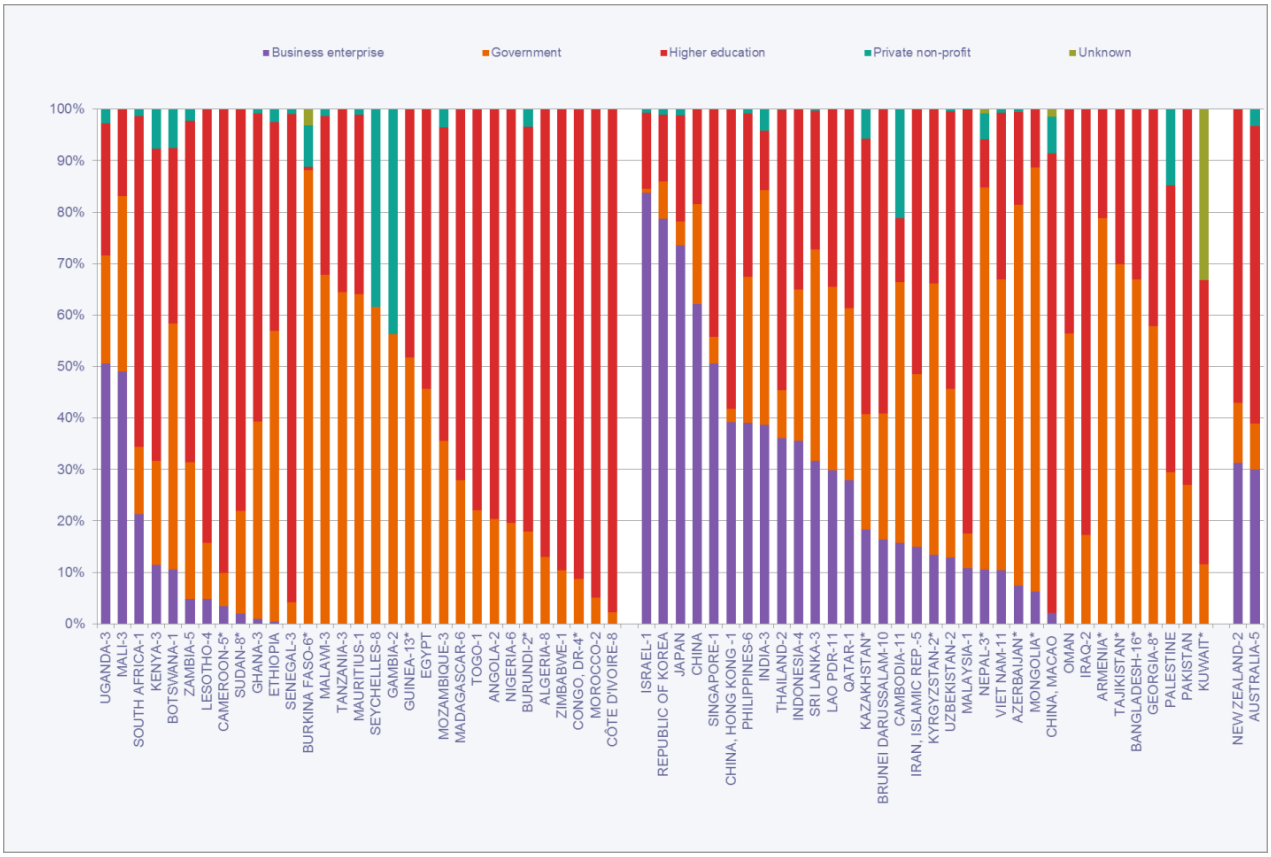
**FIGURE 6. A BREAKDOWN OF RESEARCHERS IN EUROPE**
Percentage of researchers by sector of employment (FTE), 2013 or latest year available




**Notes:** -1= 2012, -2 = 2011, -3 = 2010, -4 = 2009, -5 = 2008, -6 = 2007, -8 = 2005, -10 = 2003, -11 = 2002, -13 = 2000, -16 = 1997.
* = based on HC data.

*Source: UNESCO Institute for Statistics, October 2015*

**FIGURE 7. A BREAKDOWN OF RESEARCHERS IN AFRICA, ASIA AND THE PACIFIC**
Percentage of researchers by sector of employment (FTE), 2013 or latest year available




**Notes:** -1= 2012, -2 = 2011, -3 = 2010, -4 = 2009, -5 = 2008, -6 = 2007, -8 = 2005, -10 = 2003, -11 = 2002, -13 = 2000, -16 = 1997.
* = based on HC data.

*Source: UNESCO Institute for Statistics, October 2015.*

Please consult the UIS website www.uis.unesco.org to access the UIS Data Centre and subscribe to eAlerts on the Institute's latest publications and data releases.

For more information on R&D data, please consult the UNESCO eAtlas of Research and Experimental Development at http://on.unesco.org/RD-map