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# THE GENDER GAP IN SCIENCE

**STATUS  
AND  
TRENDS**

*February 2024*

# Share of women researchers

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Overall, women account for a minority of the world's researchers [i]: approximately 1 in 3 researchers are women.

Despite the growing demand for cross-nationally comparable statistics on women in science, national data and their use in policymaking often remain limited. Over the past decade (2012 to 2021), 130 countries [ii] reported the share of women researchers in national science, technology and innovation systems. This fact sheet presents global and regional profiles, building on a time series that UNESCO's Institute for Statistics (UIS) has been gathering since 1996.

Taking into account all the data gathered by the UIS since 1996, representing 147 countries reporting on female researchers or research and development personnel in headcounts or full-time equivalents [iii], the percentage of women researchers globally is 31.7% in 2021 up from 30.0% from the last UIS reporting with data up to 2017.

Looking only at the data from the 95 countries that have reported on the number of female researchers in headcounts between 2018 and 2021, the global value is 33.7%. This is up from 33.3% calculated in the same way for the 107 countries reporting data over the period from 2015 to 2018 [iv].

[i] Researchers are professionals engaged in the conception or creation of new knowledge. They conduct research and improve or develop concepts, theories, models, techniques instrumentation, software or operational methods, in the framework of R&D projects (Frascati Manual, 2015).

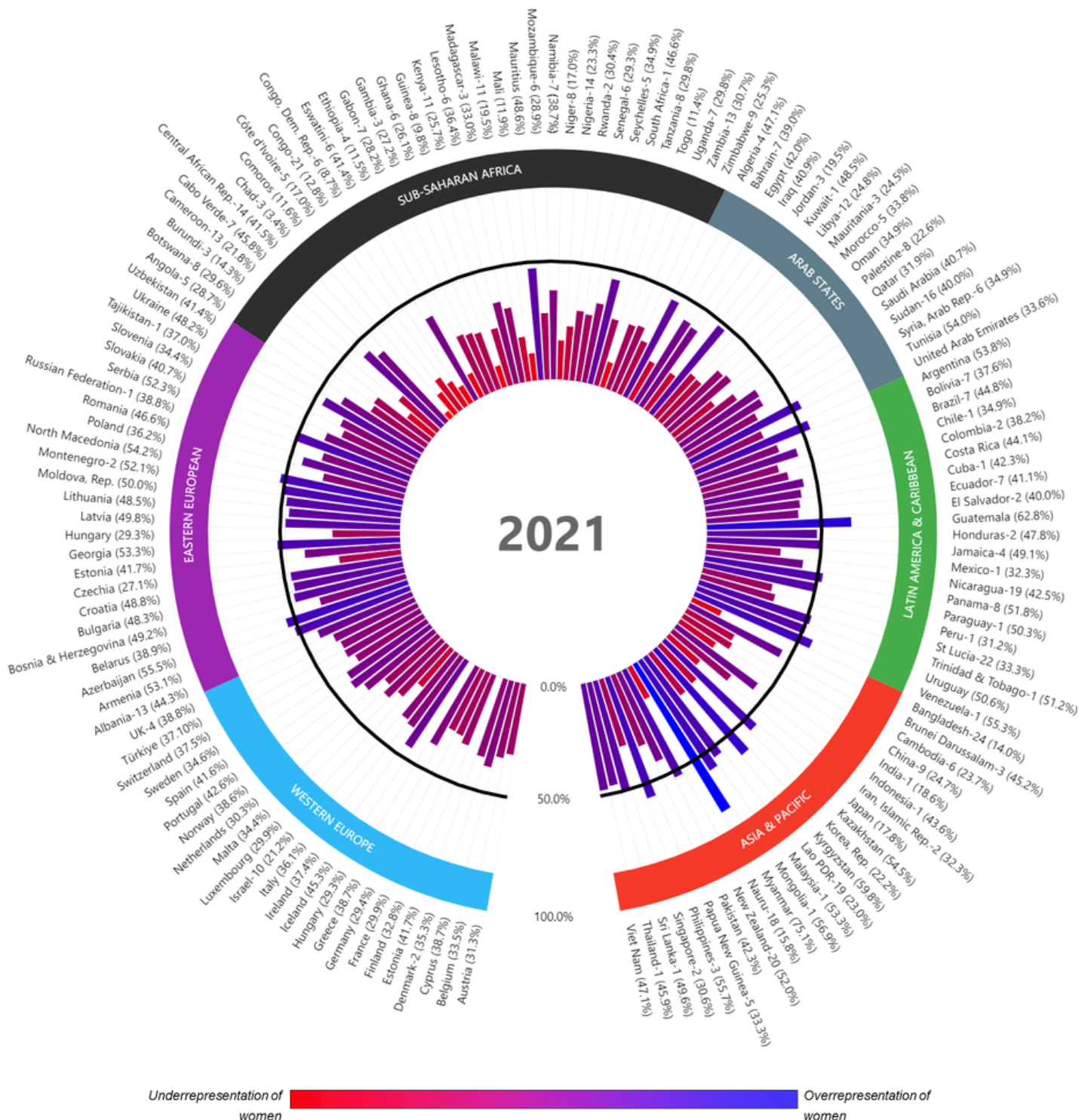
[ii] Between 2012 and 2021, 127 countries reported standardized data for at least one year on the share of female researchers in head counts; an additional two countries (China and Israel) reported data for all R&D personnel and one country (India) reported data in full-time equivalents.

[iii] Headcounts indicate the total number of persons employed in research and development. The headcount value includes staff employed both full-time and part-time. The full-time equivalent (FTE) of personnel is defined as the ratio of working hours actually spent on research and development during a specific reference period (usually a calendar year) divided by the total number of hours conventionally worked in the same period by an individual or by a group. In other words, one full-time equivalent may be thought of as one person-year.

[iv] UNESCO Science Report, 2021

**FIGURE 01**

**Women as a share of total researchers, 2021 or latest year available**



Notes: The year 2021 is the most recent year of reporting at the time of writing. The colour scale is set relative to gender parity (45% to 55%), with red indicating underrepresentation of women and blue indicating overrepresentation of women. Data in this figure are based on headcounts, except for Congo, India and Israel which are based on full-time equivalents. Data for China and Israel are based on total R&D personnel instead of researchers. Data for Brazil are based on estimations. Source: data from UNESCO Institute for Statistics, January 2024

# Regional differences

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The shares of female researchers for 2021 by region [i] (using data for 2021 or the most recent year available) are:

- **49.6% for Central Asia** (↗ up from 44.7% in 2011)
- **44.4% for Latin America and the Caribbean** (slightly lower than 44.9% in 2011)
- **41.1% for Arab States** (↗ up from 37.7% in 2011)
- **38.7% for Central and Eastern Europe** (↘ down from 40.5% in 2011)
- **33.9% in Western Europe** (↗ up from 31.8% in 2011)
- **31.7% for World** (↗ up from 30.9% in 2011)
- **31.5% for Sub-Saharan Africa** (↗ up from 29.1% in 2011)
- **26.8% for East Asia and the Pacific** (↗ up from 21.1% in 2011)
- **25.9% in South and West Asia** (stable compared to 25.7% in 2011)

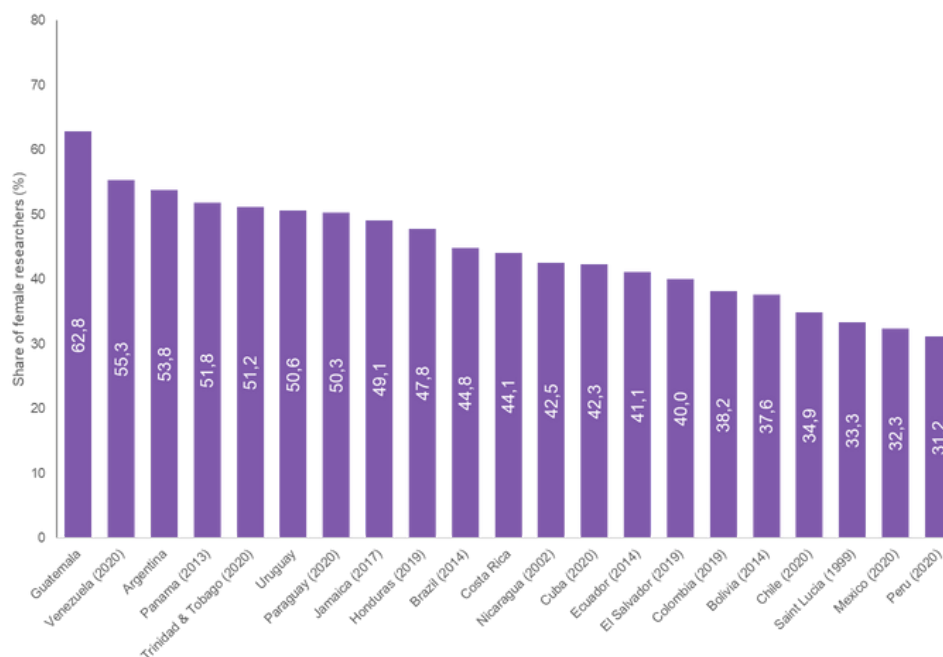
These trends in regional and global averages should however be considered as estimates, as they are produced using data only for the given year or the most recent year available. As such, using data which were produced on two different occasions may not necessarily reflect the real trend.

[i] There is no regional value for North America because Canada and the USA do not report internationally comparable data on the share of female researchers.

## FIGURE 02

### Participation of female researchers in Latin America and the Caribbean

Female researchers as a percentage of total researchers (HC), 2021 or latest year available

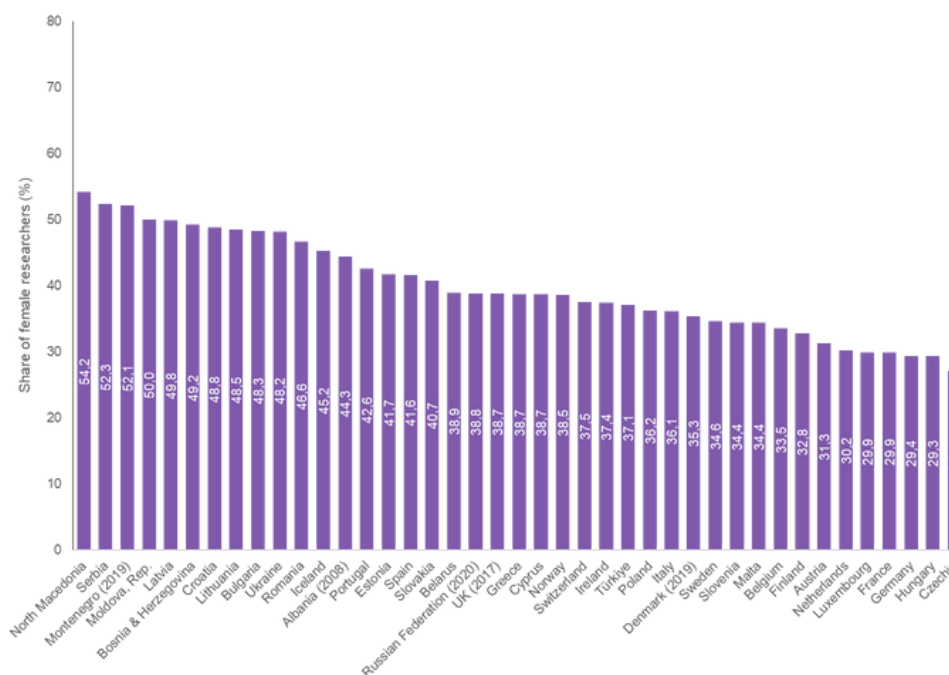


Notes: Since 1996, 16 of 22 countries in Latin America and 4 of 13 countries in the Caribbean have reported the share of female researchers. Data source: UNESCO Institute for Statistics, January 2024

## FIGURE 03

### Participation of female researchers in Europe

Female researchers as a percentage of total researchers (HC), 2021 or latest year available



Notes: Since 1996, 41 of the 42 countries in Europe reported the share of female researchers. Data source: UNESCO Institute for Statistics, January 2024

## FIGURE 04

### Participation of female researchers in Africa

Female researchers as a percentage of total researchers (HC), 2021 or latest year available

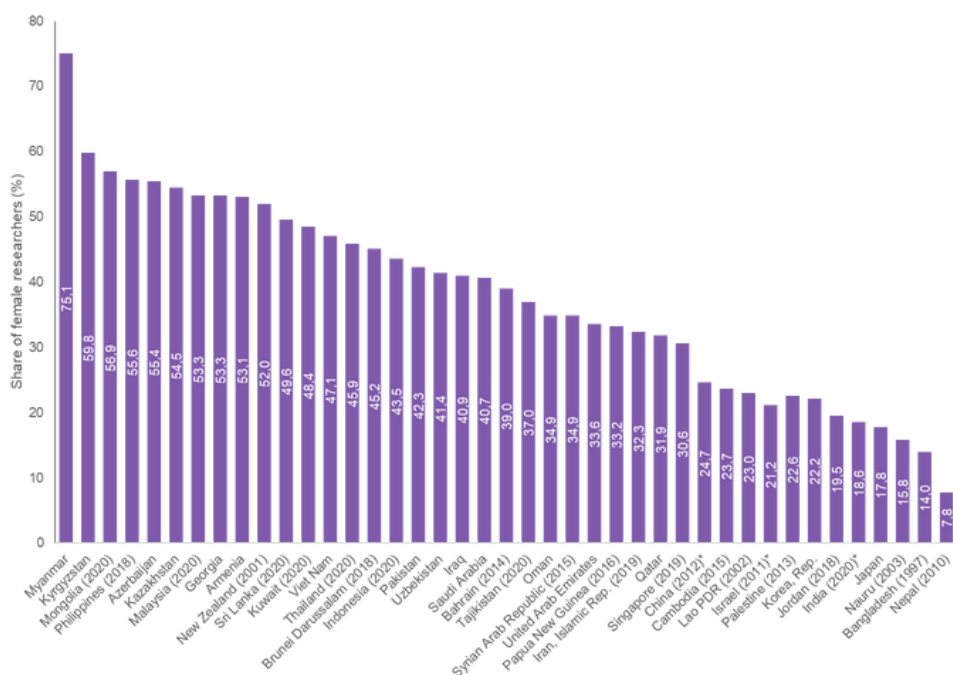


Notes: Values for Congo are based on full-time equivalents (FTE). Since 1996, 44 of the 54 countries in Africa reported the share of female researchers. Data source: UNESCO Institute for Statistics, January 2024

## FIGURE 05

### Participation of female researchers in Asia and the Pacific

Female researchers as a percentage of total researchers (HC), 2021 or latest year available



Notes: Values for India and Israel are based on full-time equivalents; values for China and Israel are based on research and development personnel, a broader category than researchers. Since 1996, 41 of the 64 countries in the Asia-Pacific region reported the share of female researchers. Data source: UNESCO Institute for Statistics, January 2024

# Trends

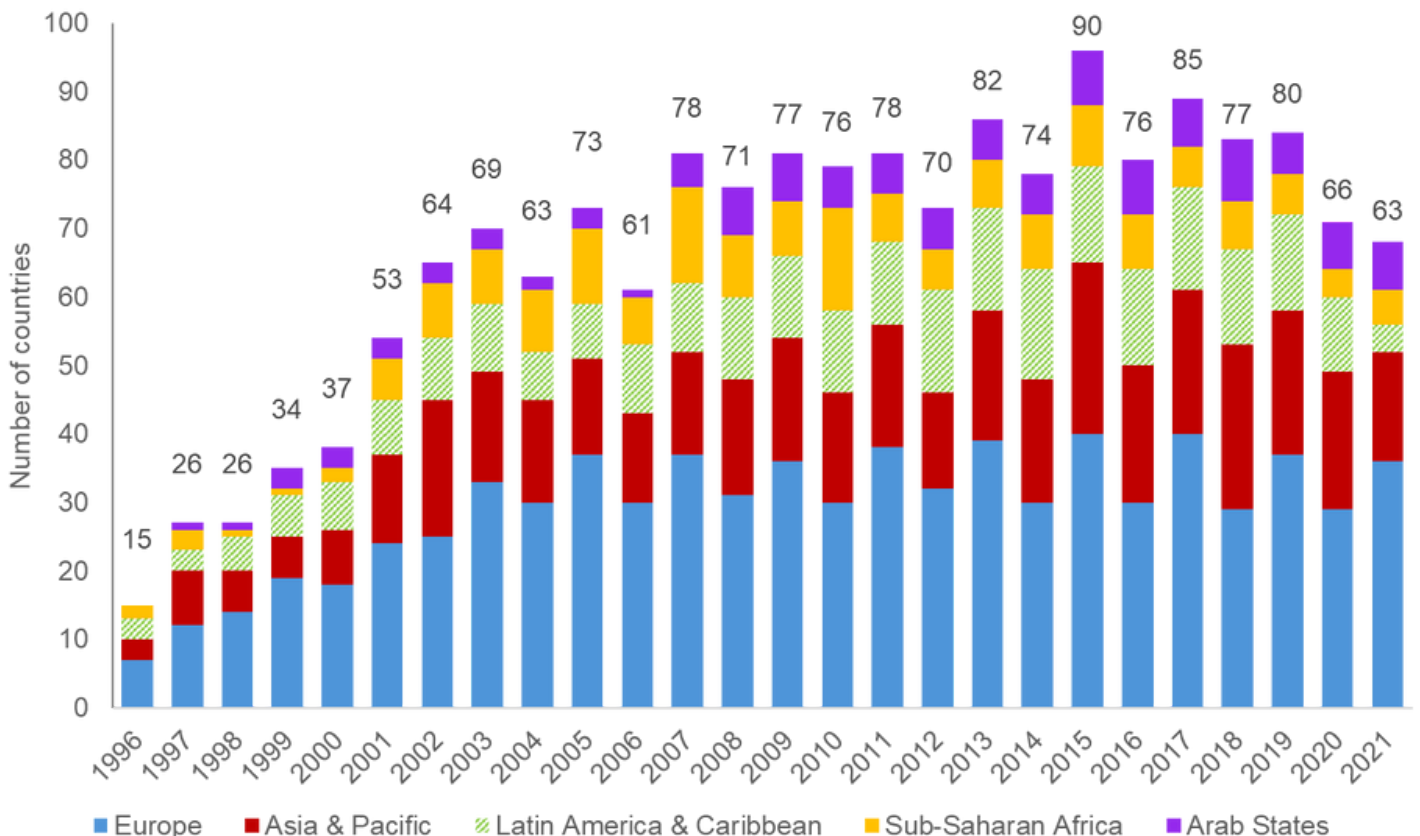
The extent of reporting on the share of female researchers has improved little for more than a decade. Fewer than 90 countries report each year - less than half of all countries. This pattern reflects this situation in overall reporting on scientific workforces, as the majority [i] of countries that report on their scientific workforce at all do report on female representation. Since 1996, 47 countries have never reported on female representation in their scientific workforce.

Sixteen countries completed their first data reports to the UIS timeseries on gender in 2012 or later, namely Bosnia & Herzegovina (2012), Chad (2016), Colombia (2013), Comoros (2021), Democratic Republic of the Congo (2015), Eswatini (2015), Jamaica (2016), Niger (2013), Mauritania (2016), Peru (2014), Papua New Guinea (2016), Zimbabwe (2012) and four Arab States including Bahrain (first reporting in 2014), Qatar (2012), Syria (2015) and the United Arab Emirates (2018).

[i] Among the 135 countries that reported on their total scientific workforce at least once between 2012 and 2021, 97% (131 countries) reported on female representation.

**FIGURE 06**

Number of countries reporting on the share of female researchers in their science systems, 1996–2021



A total of 195 countries have reported on their scientific workforce at least once since 1996, yet only 130 countries have reported on female representation in science since 2012. Nearly half of countries in the Asia-Pacific and Americas did not have data regarding female researchers dating from 2012 or more recently. In total, 98 countries out of 195 countries have not supplied data for the period 2018 to 2021.

There has been little change at the global level over the past decade. This pattern may be due to slow change in female representation in the countries with the most researchers.

However, simply counting the number of people who do research at least a part of their professional time does not convey the full situation for women scientists. Numerical parity is used as a proxy indicator for the larger socio-cultural context in which female researchers operate.

***Please consult the UNESCO Institute for Statistics website [Factors contributing to these trends](#) to access the UIS database.***



***For more information, please contact:***

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