

0.a. Goal

Goal 9: Build resilient infrastructure, promote inclusive and sustainable industrialization, enhance innovation

0.b. Target

Objective 9.4: Strengthen scientific research, improve the technological capacity of industries; encourage invention and innovation; by 2030 significantly increase the proportion of people working in the field of research and development; increase investment in research and development (global 9.5 target)

0.c. Indicator

Indicator 9.4.2. Number of staff in scientific research and technology development

0.e. Metadata update

June 2021

1.a. Organisation

Ministry of Science and Technology

1.f. Contact mail

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1.g. Contact email

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2.a. Definition and concepts

Scientific research and technology development officer is a person with a college degree or higher who directly participates in and spends at least 10% of their time in scientific research and technology development activities in different regions. the following operation:

- Scientific research organization, scientific research and technology development organization organized in the form of academies, institutes, centers, laboratories, research stations, monitoring stations, testing stations and other forms;
- Higher education institutions organized in accordance with the Law on Higher Education and the Law on Vocational Education;

- Science and technology service organizations organized in the form of centers, offices, laboratories and other forms;
- Other administrative agencies and non-business units;
- Enterprise.

Number of full-time equivalent researchers (FTE) is the number of staff with college degree or higher directly involved in scientific research and technological development. to full-time equivalent based on the use of time spent on research and development during the statistical year.

An FTE is a person who uses all (100%) of his or her time on research and development for 1 year.

Thus, the number of people who spend only part of their time on scientific research and technological development must be converted to the number of people who spend all their time on research and development.

To calculate the number of redemptions, it is necessary to know the number of people who spend part of their time and the percentage of time that each person spends on research and development. If a person spends 30% of his time on research and development and spends the rest of the time on other activities (such as teaching, administrative management at universities; instructing students) that person is only considered. is equivalent to 0.3 FTE. Similarly, if a scientific research and technological development officer is employed full-time but only works for 6 months for a scientific research and technological development unit, this officer is only counted as 0.5 FTE. .

To calculate the number of FTEs, it is necessary to determine the coefficient of time use for scientific research and technological development of each group of people engaged in scientific research and technological development.

2.b. Unit of measure

Number of people

2.c. Classifications

Not applicable

3.a. Data sources

Investigate scientific research and technology development.

3.b. Data collection method

This is a comprehensive survey combined with a sampling survey under the National Statistical Survey Program for the purpose of collecting information on scientific research and technology development for assessment and strategic policy formulation. science and technology strategy.

- Subject, investigation unit:

+ Science and technology organizations: Scientific and technological research and development organizations; Higher education institutions include (Universities, universities, institutes, colleges); Scientific and technological service organization.

- + S&T administrative and state management agencies, other non-business units engaged in scientific research and technological development.
- + Scientific research and technology development organizations under the Vietnam Union of Science and Technology Associations and other professional associations.
- + Enterprises engaged in scientific research and technological development.

3.c. Data collection calendar

- Survey period and time: Cycle of 2 years, July 1 (conducted in years with numbers ending in 0, 2, 4, 6, 8).

3.d. Data release calendar

Year.

3.e. Data providers

Ministry of Science and Technology

3.f. Data compilers

Ministry of Science and Technology

4.a. Rationale

This indicator is a direct measure of the number of R&D staff per 1 million population.

4.c. Method of computation

Method of computation

Công thức tính:

$$\begin{array}{ccccccc}
 \text{Số người} & & \text{Số người hoạt} & & \text{Số người} & & \text{Số người hoạt} \\
 \text{hoạt động} & & \text{động nghiên cứu} & & \text{hoạt động} & & \text{động nghiên} \\
 \text{nghiên cứu} & & \text{khoa học và} & & \text{nghiên cứu} & & \text{cứu khoa học} \\
 \text{khoa học và} & = & \text{phát triển công} & + & \text{khoa học và} & + & \text{cứu khoa học} \\
 \text{phát} & & \text{nghệ khu vực tổ} & & \text{phát} & & \text{và phát} \\
 \text{triển công} & & \text{chức nghiên cứu} & & \text{triển công} & & \text{triển công} \\
 \text{nghệ (FTE)} & & \text{khoa học và} & & \text{nghệ khu vực} & & \text{nghệ khu vực} \\
 & & \text{phát triển công} & & \text{đại học} \times \text{hệ} & & \text{doanh nghiệp} \times \\
 & & \text{nghệ} \times \text{hệ số} & & \text{số quy đổi} & & \text{hệ số quy đổi} \\
 & & \text{quy đổi} & & & & \\
 & & & & & & \text{(tương tự,} \\
 & & & & & & \text{theo khu} \\
 & & & & & & \text{vực hoạt} \\
 & & & & & & \text{động),....}
 \end{array}$$

5. Data availability and disaggregation

Data is available every 2 years in 2013; 2015 and 2017

(Published source: National report in 2020 on 5-year progress towards implementation of sustainable development goals. Data from Ministry of Science and Technology and General Statistics Office)

6. Comparability/deviation from international standards

This indicator corresponds to the global sustainable development target 9.5.2: Researchers (in full-time equivalent) per million inhabitants. However, the Vietnamese indicator only specifies the number of people doing scientific research and technological development, but not according to the global standard, the number of full-time scientific research and technological development people is over 1 million. people.

7. References and Documentation

- Circular No. 03/2019/TT-BKHDT dated January 22, 2019 stipulating the set of statistical indicators for sustainable development of Vietnam;
- Circular No. 15/2018/TT-BKHHCN dated November 15, 2018 of the Ministry of Science and Technology stipulating the regime of statistical reporting of the Science and Technology sector;
- National report in 2020 on 5-year progress towards implementation of sustainable development goals;
- <https://unstats.un.org/sdgs/metadata/>