

## ***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***

113 Tran Duy Hung, Trung Hoa Ward, Cau Giay District, Hanoi.

## ***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:

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

## ***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/>