

Rules for Assessment of Research Units in Poland

Historical background

Assessment of research units according to defined measurements has been conducted in Poland since 1997. The first assessment system was based on numerous measurements, such as the number of all scholarly publications and monographs generated by the unit, the number of completed doctorates, and awards, distinctions, accreditations and patents received, as well as the amounts received in external grants or from industry, and the like.

Many of these measurements were abandoned after the first four years. It turned out that this assessment system promoted units that have weak publications or more doctorates than scholarly publications, or which enter into sham arrangements with industry. It was determined that in units employing more than 60 scientific staff, the number of good publications is correlated to the number of citations and grants received. Thus a rule was introduced for assigning points for publications. Based on the Journal Impact Factor ranking for each field published by Journal Citation Reports, journals were divided in four different groups. The top 25% of the best journals were assigned 24 points, and the following groups 18 points, 12 points and 6 points, respectively. Works published in *Nature* and *Science* were awarded 30 points. Publications in journals not included in the Journal Citation Reports list received fewer than 6 points; some fields of inquiry had their own lists of these publications.

While these rules worked well for large units, small units had to be assessed individually. After years of this evaluation system, additional restrictions were introduced: only publications selected by the unit would be assessed (the number of publications may not exceed $2n$, where n is the number of scientific staff). This was an important breakthrough in evaluation of units: finally it ceased to pay off for them to publish in weak journals, including local Polish ones, from outside the Journal Citation Reports list. The weakness of this evaluation system was that deans and directors of units began to assess research teams or even the achievements of individual scientists in a similar way, which led to many absurd results.

Current rules

The rules for assessment of scientific units currently in force are set forth in the Decree of the Minister of Science and Higher Education on Criteria and Procedures for Award and Settlement of Funds for Statutory Activity dated 17 October 2007.

Under this decree, assessment of a scientific unit is conducted once every four years on the basis of information contained in annual surveys completed by the unit according to an established form. A uniform sheet for assessment of research units is used for all fields of inquiry.

The following are considered in the assessment:

1. Scientific activity by the unit, that is
 - a. peer-reviewed publications written by staff of the unit,
 - b. scientific monographs and academic textbooks written by staff of the unit, and
 - c. authority to award academic degrees and titles.
2. Practical applications of research results and development work, that is
 - a. new technologies, materials, products, systems, services and methods,

- b. patents, licences, and protective rights to utility models,
- c. implementation of results of scientific works and development works, and
- d. having laboratories accredited by the Polish Centre for Accreditation.

The assessment is made according to parameters, on the basis of the number of points assigned for specific types of scientific activity by the unit (taking into consideration the practical application of research results and development works). The assessment considers the most significant publications, monographs, practical applications and development works from the past four years, but the number cannot exceed twice the number of persons employed at the unit to conduct scientific research. The number of points varies depending on the rank and type of journal, monograph, international project, or the like. The results of the assessment in specific areas (scientific activity of the unit and practical applications presented) are expressed, with the help of effectiveness factors, as a ratio of the number of points obtained by the unit to the number of persons employed there to conduct research or development work. The final effectiveness indicator is determined by adding up the products of specific effectiveness ratios and the weights assigned to them. The weighting of specific areas of assessment is established by the Minister of Science and Higher Education after obtaining an opinion from the Science Council. The final effectiveness indicator, reflecting the weighting, is the basis for assessment of scientific units and for the classification proposed by the Science Council and established by the Minister of Science and Higher Education.

Research units are assigned to the following classifications:

- first – if the final effectiveness indicator obtained is at least 30% above the average indicator for the group of comparable units,
- second – if it is at least 10% above the average,
- third – if it is at least 90% of the average,
- fourth – if it is at least 70% of the average, and
- fifth – if it is less than 70% of the average.

The **Opinion of the Science Council dated 2 October 2008** recommends:

1. Use of separate evaluation sheets for research units in each of three broad fields of research: life sciences; humanities, social sciences and art; and the exact and technical sciences.
2. A closer connection between the classification of a research unit and its research results, as well as a precise definition of the number of people conducting research, by:
 - a. increasing the number of points for publications in the best journals in the world, indexed in Journal Citation Reports;
 - b. introduction of points for coordination of European research projects;
 - c. no longer assigning points for works and types of activities that are not the result of research, such as textbooks, authority to award academic degrees and titles (except for the humanities and social sciences), anticipated scientific results, or service activity; and
 - d. no longer assigning points for having laboratories accredited by the Polish Centre for Accreditation.

The **draft amendment to the Minister's Decree, dated 7 July 2009**, would introduce the following changes:

1. Use of separate evaluation sheets for research units in each of three fields of research: life sciences; humanities, social sciences and art; and the exact and technical sciences.
2. Assessment of a research unit would be conducted at least once every 5 years, on the basis of achievements during the period under review.
3. Points would be awarded for participation in international projects.
4. Points would no longer be awarded for having laboratories accredited by the Polish Centre for Accreditation.

Contrary to the opinion from the Science Council, points would continue to be awarded for having the authority to award academic degrees and titles, authorship of textbooks, and service activity. Nor would there be any increase in the number of points assigned for publications in journals indexed in Journal Citation Reports.