

GLOSSARY FOR IMPACT RAPPORT

Terms from health, natural and technical sciences

Term	Definition
Biochemistry	The study of chemical processes within and related to living organisms.
Biology	A natural science concerned with the study of life and living organisms.
Biomedicine	An interdisciplinary research area between biology and medicine. Biomedicine focuses on developing new forms and treatment by analyzing why and how diseases develop.
Biophysics	An interdisciplinary science applying the approaches and methods of physics to study biological phenomena and mechanisms.
Biotechnology	A discipline in which living organisms, cells or cellular components are used to develop new products and technologies.
Cardiac	Relating to the heart (e.g. "cardiac arrest" means failure of the heart to contract correctly).
Cardiovascular system	Organ system which transports the blood around the body. Includes the heart, the blood vessels and the blood.
Cell biology	A branch of biology studying the structure and function of cells.
Chemistry, analytical	A branch of chemistry focusing on analyzing samples in order to determine their chemical composition.
Chemistry, medicinal	A branch of chemistry focusing on design and synthesis of pharmaceuticals.
Clinical research	Research taking place in the clinic and including patients (in contrast to laboratory research based on e.g. animal models or cell cultures).
Dermatology	A branch of medicine focusing on disorders of the skin, nails and hair.
Developmental biology	A branch of biology studying how plants and animals develop and grow, e.g. studies of human fetus development and in vitro fertilization.
Dietetics	The study of human nutrition.
Endocrinology	A branch of medicine dealing with study of the body's hormones and hormone-secreting glands, as well as disorders associated with glands and hormones, for example diabetes.
Environmental health	A branch of medical science focusing on how factors in the environment influence health, e.g. the effect of chemicals, radiation or the social and cultural environment on health.
Experimental medicine	A term often used to describe studies of new pharmaceuticals and treatment methods that are in the early phases of development, e.g. in vitro studies, animal studies or small-scale clinical trials.
Gastroenterology	A branch of medicine focusing on the digestive tract and its disorders.
General medicine	Medical specialty focusing on the prevention, diagnosis and treatment of diseases in adults.
Genetics	The study of genes, genetic variation and heredity in living organisms.
Geriatrics	A medical specialty focusing on health care of elderly people.
Gerontology	The study of aging, e.g. studies of biological aging processes or physical and social changes in people as they age.
Gynecology	A medical specialty focusing on diseases of the female reproductive organs (i.e. the vagina, cervix, uterus and ovaries), and the breasts.
Hematology	A branch of medicine dealing with blood and disorders of the blood.
Hepatology	A branch of medicine studying the liver and associated diseases.
Immunology	A branch of medicine focusing on the immune system and its diseases.
Infectious disease	A disease caused by infection with a disease-causing agent, e.g. bacteria, virus or parasites.
Internal medicine	Medical specialty focusing on the prevention, diagnosis and treatment of diseases in the internal organs of adults, e.g. the lungs, heart, kidneys etc.
Medical device	An instrument, appliance, software, material or product intended to be used for prevention, diagnosis, monitoring, treatment of diseases, injuries or handicaps.
Medical imaging	Techniques that create visual representations of the interior of the body, e.g. x-rays, ultrasound and magnetic resonance (MR) imaging.

Metabolism	Biochemical processes within the cells of living organisms, e.g. the processes by which food is converted to energy or to building blocks for complex chemical molecules.
Microbiology	The study of microscopic organisms such as bacteria, virus, fungi or parasites.
Molecular biology	A branch of biology focusing on molecules, e.g. proteins, DNA, RNA or carbohydrates. For example, molecular biology studies the processes by which RNA and proteins are synthesized within the cell.
Nanotechnology	An interdisciplinary science working with objects that are 0.1-100 nanometers (a nanometer is 0.000000001 m). Nanotechnology draws on elements from both physics, chemistry and biology and focuses on e.g. the production of medicine, vaccines and components used in the computer industry.
Nephrology	A branch of medicine focusing on the kidneys and their diseases.
Neurology	A branch of medicine focusing on the nervous system, ie. the brain, the spinal cord and the peripheral nerves, and related disorders.
Neurosciences	A branch of biology studying the nervous system, i.e. the brain, spinal cord and the peripheral nerves.
Nuclear medicine	A medical specialty which applies radioactive substances to diagnose and treat disease.
Nutrition	The process by which nutrients (carbohydrates, lipids, proteins, vitamins, minerals and water) are obtained and used by the body.
Obstetrics	A medical specialty focusing on pregnancy, childbirth and the period shortly after birth.
Occupational health	A field of medicine dealing with all aspects of health and safety in the workplace.
Oncology	A branch of medicine dealing with cancer. Cancer is a disease characterized by uncontrolled growth of abnormal cells with the potential to invade surrounding organs of the body.
Ophthalmology	A branch of medicine dealing with diseases of the eyeball.
Pathology	The study of diseases and disease processes. The term may also be used more narrowly to describe a medical specialty focusing on diagnosing disease through analysis of tissue, cell and body fluid samples.
Pediatrics	A medical specialty dealing with the medical care of infants, children and adolescents.
Peripheral vascular disease	A disease where blood vessels outside of the heart and brain become narrow or blocked. If the blood vessels clot completely, this can cause tissue damage and loss of organs or limbs.
Pharmaceuticals	A drug used to diagnose, treat or prevent disease.
Pharmacology	The study of pharmaceuticals and their composition, properties, metabolism, mechanisms and effects.
Physics	A natural science involving the study of matter and its behavior through space and time, energy and forces. The main objective of physics is to understand how the universe behaves.
Physics, Condensed Matter	A branch of physics focusing on physical properties of matter in solid or liquid forms. Covers areas such as electromagnetism and quantum mechanics.
Physiology	The scientific study of the normal function of living organisms.
Psychiatry	A medical specialty dealing with mental disorders.
Public health	A branch of health science focusing on preventing disease and promoting health at the population level.
Radiology	A medical specialty using medical imaging techniques such as x-ray and ultrasound to diagnose and treat disease.
Reproductive biology	A branch of biology focusing on the reproductive system, i.e. the organs allowing humans or animals to sexually reproduce.
Respiratory system	The organ system which allows humans or animals to breathe. In humans, the respiratory system includes the nose, pharynx, larynx, trachea, bronchi and lungs.
Rheumatology	A medical specialty focusing on rheumatic diseases. Rheumatic diseases are a heterogenous group of illnesses typically affecting joints or connective tissue and often causing chronic pain, such as arthritis.
Sport sciences	A discipline studying how the human body works during exercise and how sport and physical activity can prevent disease and promote health.

Toxicology	The study of poisons and other harmful substances, including the study of side effects of drugs.
Urology	A branch of health science dealing with diseases of the male and female urinary tract and the male reproductive organs.
Virology	The study of viruses, including how viruses can infect cells and cause disease.

Bibliometric terms

Term	Definition
Bibliometrics	The term <i>bibliometrics</i> refers to statistical analysis of written publications, such as books or journal articles. A commonly used bibliometric method is citation analysis, i.e. analysis of the frequency and patterns of citations of selected documents. Bibliometric methods are frequently used to document the scientific impact of specific research papers or groups of researchers.
Leiden Ranking	An annual global ranking of universities according to a selected set of bibliometric indicators (e.g. the <i>Mean Normalized Citation Score</i> and the <i>pp(top10%)</i>). The ranking is performed by the Center for Science and Technology Studies at the Leiden University in the Netherlands. The ranking is based on publication and citation data in the <i>Web of Science</i> database. More information about the ranking is available at http://www.leidenranking.com/ .
Mean normalized citation score (MNCS)	The average number of citations received by a specific group of publications (e.g. the publications from a specific university or funding body), compared with the world average number of citations in the same scientific field and publication year. For example, an MNCS value of 2 means that the publications have been cited twice as much as the world average in the specific field and year.
Mean normalized journal score (MNJS)	The average number of citations received by publications in a specific journal, compared with the average number of citations of all publications in the same scientific field and publication year. For example, an MNJS value of 2 means that the publications in the journal have been cited twice above the world average in the specific field and year.
Multidisciplinary	In bibliometrics, the term "multidisciplinary science" frequently refers to approximately 60 specific journals which are classified as multidisciplinary by the publisher Thomson Reuters, because they publish research papers across a range of disciplines. Publications in these journals are classified as multidisciplinary in the <i>Web of Science</i> database, although the publications are often highly specialized within their field.
pp(top1%)	The proportion of a specific group of publications that, compared with other publications in the same field and in the same year, belong to the top 1% most frequently cited. For example, a pp(top1%) value of 20 means that 20% of the evaluated publications are among the 1% most cited publications in their field in the given year.
pp(top5%)	The proportion of a specific group of publications that, compared with other publications in the same field and in the same year, belong to the top 5% most frequently cited. For example, a pp(top5%) value of 20 means that 20% of the evaluated publications are among the 5% most cited publications in their field in the given year.
pp(top10%)	The proportion of a specific group of publications that, compared with other publications in the same field and in the same year, belong to the top 10% most frequently cited. For example, a pp(top10%) value of 20 means that 20% of the evaluated publications are among the 10% most cited publications in their field in the given year.
Scientific impact	In <i>bibliometrics</i> , the <i>scientific impact</i> of a publication is measured by the citations received by that publication in other research papers. Several indicators to measure scientific impact are available, including <i>pp(top10%)</i> , <i>pp(top1%)</i> , and <i>Mean Normalized Citation Score (MNCS)</i> . The scientific impact of a publication does not necessarily reflect the quality of the publication, but rather the extent to which other researchers have read the publication and found it relevant to build upon in their own work.

Web of Science database

A database of scientific publications maintained by the publisher Thomson Reuters. The database includes many types of publications, e.g. articles, reviews, books, abstracts and conference proceedings. Publications from many different scientific disciplines are included, e.g. natural sciences, medical sciences, technical sciences, social sciences, and arts and humanities. The database contains more than 90 million records dating as far back as 1900. The database provides information on the citation patterns of specific publications, thus making it a useful tool for bibliometric analyses.

Terms related to economics and innovation

Term	Definition
Gross domestic product (GDP)	The total monetary value of all goods and services produced by a country during a specific time period.
European Innovation Scoreboard (previously known as Innovation Union Scoreboard)	An assessment method developed by the European Commission to provide a comparative assessment of the innovation performance of the EU Member States. The scoreboard is based on a set of 25 indicators which capture various dimensions of research and innovation, including e.g. human resources, research systems, public and private investments in research, intellectual property (e.g. patents and trademarks) as well as economic effects of research and innovation. More information about the European Innovation Scoreboard is available here: https://ec.europa.eu/growth/industry/innovation/facts-figures/scoreboards_da
License	The term <i>license</i> is used when a <i>patent</i> owner grants the licensee the right to make, use, sell, and/or import the invention, usually in return for a monetary compensation.
Organization for Economic Cooperation and Development (OECD)	An international organization established in 1961, with 35 member states that are democracies with market economies. The organization works to promote economic growth, prosperity, and sustainable development in its member states and in other countries.
Patent	A set of exclusive rights to exploit the commercial potential of an invention, granted by the state for a limited period of time. The owner of the patent has the right to exclude others from producing, selling or importing the invention in countries covered by the patent. In exchange, the inventor is required to make technical details about the invention publicly available.