

National Research Council (United States)

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The **National Research Council (NRC)** is an American nonprofit, non-governmental organization. The National Research Council is the research arm of the National Academies of Sciences, Engineering, and Medicine, which includes the National Academy of Sciences (NAS), the National Academy of Engineering (NAE), and the National Academy of Medicine (NAM).

National Research Council	
Formation	1916
Type	NGO
Website	http://www.nationalacademies.org/nrc/

The National Research Council produces reports that shape policies, inform public opinion, and advance the pursuit of science, engineering, and medicine. It is the research arm, but not member of the National Academies of Sciences, Engineering, and Medicine, unlike the National Academy of Sciences, the National Academy of Engineering, and the National Academy of Medicine.^[1]

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History

On June 19, 1916, then US President Woodrow Wilson requested that the National Academy of Sciences, under its congressional charter, organize the National Research Council. The purpose of the Council (originally called the National Research Foundation) was in part to foster and encourage "the increased use of scientific research in the development of American industries ... the employment of scientific methods in strengthening the national defense ... and such other applications of science as will promote the national security and welfare."^[2]

At the time, the Academy's effort to support national defense readiness, the Committee on Nitric Acid Supply, was approved by Secretary of War Newton D. Baker. Nitric acid was the substance basic in the making of propellants such as cordite, high explosives, dyes, fertilizers, and other products but availability was limited due to World War I. The NRC, through its committee, recommended importing Chilean saltpeter and the construction of four new ordinance plants. These recommendations were accepted by the War Department in June 1917, although the plants were not completed prior to the end of the war.^[2] In 1918, Wilson formalized the NRC's existence under Executive Order 2859.^{[3][4][5]} During World War I the United States was at war, the NRC operated as the Department of

Science and Research of the Council of National Defense as well as the Science and Research Division of the United States Army Signal Corps.^[6] When war was first declared, the Council had organized committees on antisubmarine and gas warfare.^[7]

On June 1, 1917, the council convened a meeting of scientific representatives of the United Kingdom and France with interested parties from the U.S. on the subject of submarine detection.^{[8][9]} Another meeting with the British and French was held in Paris in October 1918, at which more details of their work was disclosed. As a result of these meetings, the NRC recommended that scientists be brought together to work on the problems associated with submarine detection. Due to the success of council-directed research in producing a sound-based method of detecting submarines, as well as other military innovations, the NRC was retained at the end of the war, though it was gradually decoupled from the military.

In 1964, the NAS organized the National Academy of Engineering and in 1970 the Institute of Medicine.^[10]

NRC's Articles of Organization were changed only three times: in 1956, January 1993, and July 2015.^[11]

Overview

The National Research Council performs its studies and workshops through seven major divisions; Division of Behavioral and Social Sciences and Education, Division of Earth and Life Studies, Division of Engineering and Physical Sciences, Health and Medicine Division, Policy and Global Affairs Division, Transportation Research Board, and the Gulf Research Program.^[12]

The NRC is currently administered jointly by the National Academy of Sciences (NAS), the National Academy of Engineering (NAE), and the National Academy of Medicine (NAM), and its work is overseen by a Governing Board and an Executive Committee. NRC volunteers are drawn from the councils of the NAS, NAE, and NAM, as well as the wider scientific population. The members of its committees are chosen for their special competences and with regard for appropriate balance and serve *pro bono*. All NRC reports go through an extensive external review facilitated by the NRC internal Report Review Committee (also consisting of members from the NAS, NAE, and NAM). The current president of the NRC is Ralph J. Cicerone.^[13]

Notable Reports

Reports on climate change

In 2001, the NRC published the report *Climate Change Science: An Analysis of Some Key Questions*, which emphasized the fact that national policy decisions made now and in the long-term future will influence the extent of any damage suffered by vulnerable human populations and ecosystems later in this century. The report endorsed findings of the Intergovernmental Panel on Climate Change (IPCC) as representing the views of the scientific community:

The changes observed over the last several decades are likely mostly due to human activities, but we cannot rule out that some significant part of these changes is also a reflection of natural variability. Human-induced warming and associated sea level rise are expected to continue through the 21st century... The IPCC's conclusion that most of the observed warming of the last 50 years is likely to have been due to the increase in greenhouse gas concentrations accurately reflects the current thinking of the scientific community on this issue.^[14]

In 2013, the NRC published the report *Abrupt Impacts of Climate Change: Anticipating Surprises*, which provided an updated look at the issue of abrupt climate change and its potential impacts. This study differed from previous treatments of abrupt changes by focusing on abrupt climate changes and also abrupt climate impacts that have the potential to severely affect the physical climate system, natural systems, or human systems, often affecting multiple interconnected areas of concern.^[15]

Report on sexual assault

In 2013, the NRC published the report *Estimating the Incidence of Rape and Sexual Assault*,^[16] which pointed out that approximately 80 percent of sexual assaults go unreported to law enforcement. The report recommends that the National Crime Victimization Survey adopt new approaches to interviews of rape victims, including changing the wording of questions.

In an article about the report, Amber Stevenson, clinical supervisor and therapist at the Nashville Sexual Assault Center, said that victim-blaming was the main issue preventing victims from coming forward:

As long as we as a community continue to make victim-blaming statements, such as, "She put herself in this situation," ... "She didn't fight back, she must have wanted it," we will continue to see rapes go unreported ... We have to stop blaming the victim. The conversation needs to shift to the person who chose to rape.^[17]

Alternatives for Managing the Nation's Complex Contaminated Groundwater Sites

According to the NRC publication *Alternatives for Managing the Nation's Complex Contaminated Groundwater Sites* there are "at least 126,000 sites across the U.S. still have contaminated groundwater, and their closure is expected to cost at least \$110 billion to \$127 billion. About 10 percent of these sites are considered "complex," meaning restoration is unlikely to be achieved in the next 50 to 100 years due to technological limitations. At sites where contaminant concentrations have plateaued at levels above cleanup goals despite active efforts, the report recommends evaluating whether the sites should transition to long-term management, where risks would be monitored and harmful exposures prevented, but at reduced costs."^[18]

Integrated Risk Information System (IRIS)

In cases where assessments by the Integrated Risk Information System (IRIS), a program within the EPA, are complex and involve regulatory policies, the EPA requests that the NRC undertake an independent scientific review of their reports.^{[19][20][21][22]} IRIS "is responsible for developing toxicologic assessments of environmental contaminants",^[19] and its scientific reports are "used by the EPA and states to draft regulations to rid air, water or soil of toxic chemicals."^[22]

See also

- National Academies Press
- United States National Research Council Rankings

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Further reading

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