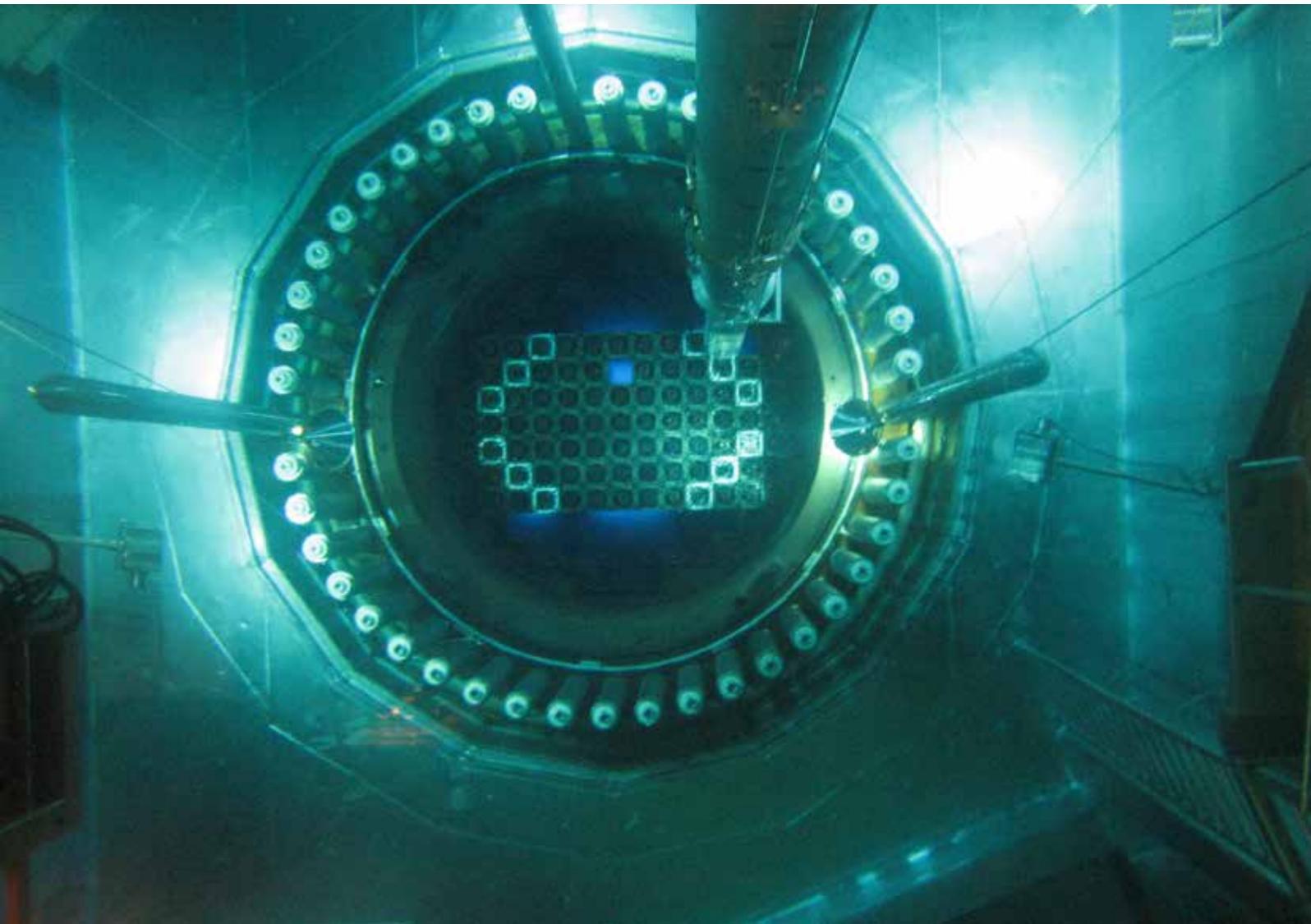




Authority for Nuclear Safety and  
Radiation Protection

# The Authority for Nuclear Safety and Radiation Protection (ANVS) **Continuous safety improvement**



# Continuous safety improvement

The Authority for Nuclear Safety and Radiation Protection (ANVS) ensures that the highest standards of nuclear safety and radiation protection are met in the Netherlands. The ANVS performs that role by laying down rules, issuing licences, ensuring that licence-holders abide by the conditions and, if the need arises, taking enforcement action. The ANVS was formed in 2015 by bringing together the knowledge and expertise necessary to perform those activities at a high level. The ANVS has become an independent administrative authority (“zbo” in Dutch) on August 1, 2017. This enables decisions to be made independently. The ANVS is answerable to the Minister of Infrastructure and the Environment.

“Continuous safety improvement” is the guiding principle of the ANVS. The ANVS ensures that operators of nuclear facilities and companies that work with ionising radiation comply with the latest national and international legislation and regulations on safety and security. The ANVS plays a similar role in relation to the shipment of nuclear and radioactive materials.

Primary responsibility for managing safety risks lies with the licensee. The ANVS intervenes wherever safety standards are not adhered to.

The ANVS ensures that licensees implement timely, reasonable and practical measures to improve nuclear safety. With a view to maintaining the highest standards of nuclear safety and radiation protection, the Netherlands has ties with relevant national and international organisations and stays abreast of developments in the field.

## ANVS's fields of activity

The ANVS has five fields of activity:

1. Nuclear safety
2. Radiation protection
3. Emergency preparedness and response to radiation incidents and nuclear accidents
4. Security and safeguards (fulfilment of non-proliferation obligations)
5. Policy preparation and the implementation of waste policy

## Nuclear safety

In the field of nuclear safety, the ANVS works to ensure that the operation of nuclear facilities is governed by appropriate conditions and that licensees abide by those conditions. The ultimate aim of the ANVS's activities in this area is to realise the best possible protection for workers, local residents and the environment against the risks associated with nuclear facilities. Such facilities are used for nuclear power generation, for research, for the production of isotopes for medical and industrial applications, for the enrichment or storage of fissionable materials and for the collection, processing and storage of radioactive waste.

In order to demonstrate that their facilities are safe, operators are obliged to produce and maintain detailed safety analyses. The ANVS reviews operators' analyses in the light of the latest national and international insights regarding nuclear safety and environmental protection.

## Radiation protection

The aim of the ANVS's radiation protection activities is to make sure that humans and the environment receive the best possible protection against the potentially harmful effects of exposure to ionising radiation. In pursuit of that aim, the ANVS works closely with various other organisations, including the Ministry of Health, Welfare and Sport and the Ministry of Social Affairs and Employment, which are involved in protecting patients and workers respectively. Exposure to ionising radiation (popularly known as 'radiation') can result from the use of X-rays and radioactive

materials in medical research or treatment. Radiation can also come from radioactive materials and/or fissionable materials used in industry and in research. Relevant activities include the production of medical isotopes for health care, the shipment of radioactive materials and fissionable materials and the processing of radioactive waste. There are natural sources of ionising radiation as well, such as the radioactive elements radon and thoron.

During the licensing process, the ANVS checks for compliance with the basic principles of radiation protection. These basic principles are justification, optimisation and dose limits. Here, checks are made to determine whether the advantages outweigh the disadvantages, or whether the best possible protection is achieved at a reasonable cost and effort, and that the dose limits are not exceeded. On inspection, an assessment can then be made to determine whether these principles have actually been adhered to, as specified in the licence.

#### **Emergency preparedness and response**

Working with its partners, the ANVS ensures that the Netherlands is as well prepared as possible for any emergencies involving nuclear safety and radiation protection. Through participation in various national and international networks, the ANVS makes sure that information is exchanged in the event of a radiation incident with cross-border implications.

#### **Security and safeguards**

The ANVS oversees the security of nuclear facilities and radioactive materials. The task involves combating the sabotage of processes and the theft of information, materials and equipment at nuclear facilities, as well as during the shipment and use of radioactive materials. There is a major focus on the potential impact of cybercrime.

In the field of safeguards, the ANVS checks to ensure that nuclear energy, nuclear materials and associated information are not being used for non-peaceful purposes. In that context, the International Atomic Energy Agency (IAEA) and Euratom play important roles in terms of oversight and control.

Together with various ministries, the ANVS is involved in defining, establishing and enforcing measures to secure nuclear materials and information. Various national and international agreements are in place to prevent the proliferation of certain types of nuclear material and knowledge that could be used for non-peaceful purposes.



#### **ANVS's tasks**

In the various fields, the ANVS performs the following tasks:

##### **Policy, legislation and regulation**

The ANVS develops policies for the performance of its own tasks, and advises the Minister on more generic policy. Furthermore, the ANVS advises the Minister on legislation and regulations, and itself draws up rules with a technical or organisational content.

##### **Licensing**

The ANVS oversees and assesses licensing procedures. Providing the applicant meets all applicable legislation and regulations, then the ANVS will issue a licence for the purpose in question. This could involve the use of radiation-emitting equipment, the shipment of radioactive waste, or the establishment or modification of nuclear facilities. The ANVS is also responsible for recording notifications concerning supervised practices. In addition, the ANVS registers and accredits health physicists and radiation practitioners.

##### **Supervision and enforcement**

The ANVS supervises the use of radiation-emitting equipment, the shipment of radioactive materials, the operation of nuclear facilities and conformity with security and safeguard requirements. In appropriate cases, it intervenes to enforce compliance.

##### **Safety assessment**

Nuclear facilities and radioactive sources must always be operated and used safely. The ANVS assesses whether practices are permissible and whether safety is adequately assured.

##### **Emergency response**

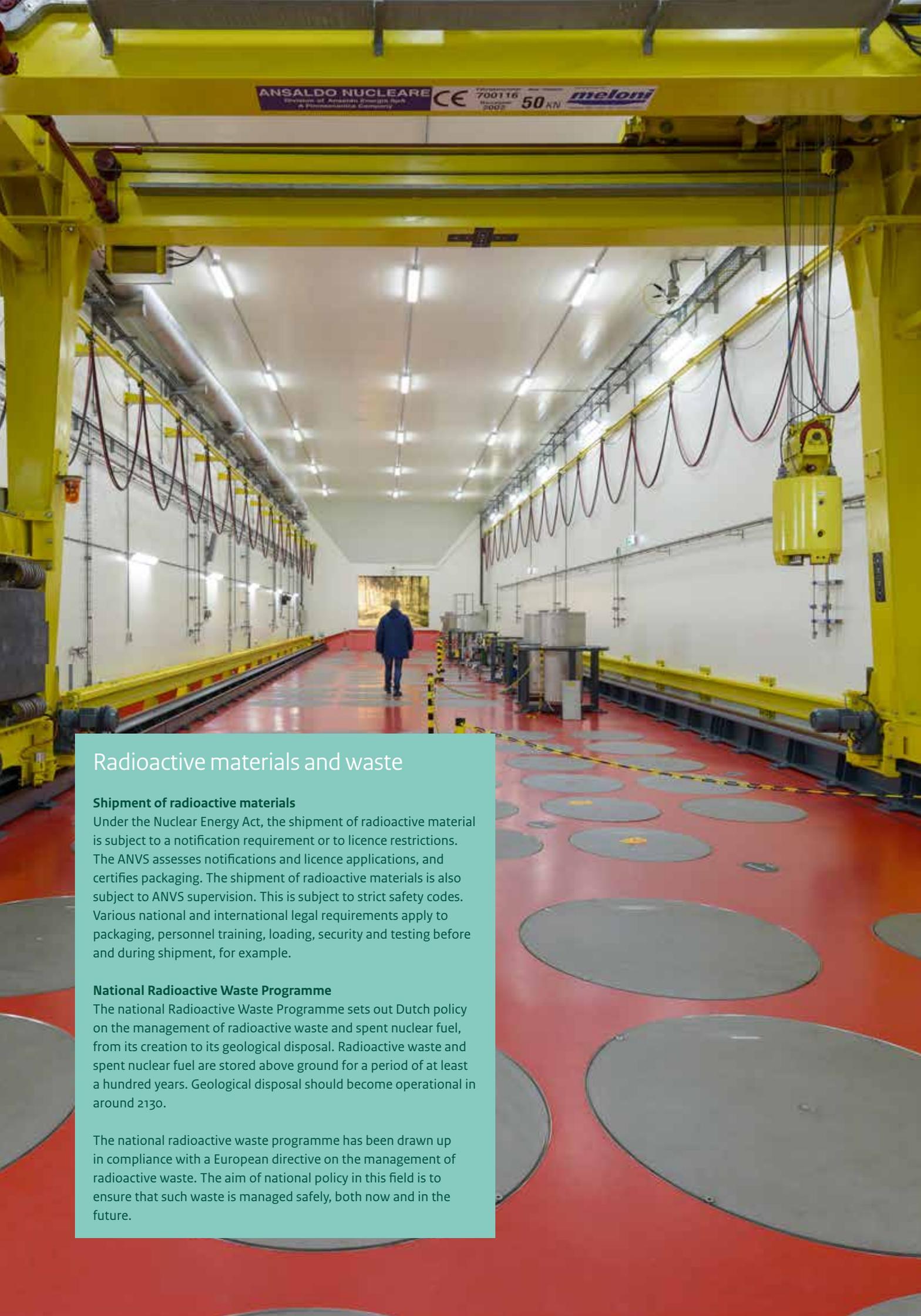
The ANVS manages the nationwide advisory network that provides a situation sketch of radiation safety accidents, and advises on any action that may be required. In the context of emergency preparedness, the ANVS draws up plans and coordinates with the Security Regions, neighbouring countries and other partners. Exercises are regularly held and a round-the-clock standby service is provided.

##### **Research**

The ANVS coordinates research in radiation protection and nuclear safety within nuclear facilities, government organisations and companies that work with radiation. It also makes the requisite knowledge available.

##### **Communication and information**

The ANVS communicates transparently, proactively and factually with the public, the Security Regions, local authorities, the business community and the media. It provides information about matters such as licensing procedures, legislation and regulations, and abnormal events in the operation of nuclear facilities. The ANVS monitors the physical environment to meet, as effectively as possible, the information requirements of stakeholders and others with an interest in nuclear safety and radiation protection. The ANVS meets this need by using the website ([www.anvs.nl](http://www.anvs.nl)) as an important means of communication.



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## Radioactive materials and waste

### Shipment of radioactive materials

Under the Nuclear Energy Act, the shipment of radioactive material is subject to a notification requirement or to licence restrictions. The ANVS assesses notifications and licence applications, and certifies packaging. The shipment of radioactive materials is also subject to ANVS supervision. This is subject to strict safety codes. Various national and international legal requirements apply to packaging, personnel training, loading, security and testing before and during shipment, for example.

### National Radioactive Waste Programme

The national Radioactive Waste Programme sets out Dutch policy on the management of radioactive waste and spent nuclear fuel, from its creation to its geological disposal. Radioactive waste and spent nuclear fuel are stored above ground for a period of at least a hundred years. Geological disposal should become operational in around 2130.

The national radioactive waste programme has been drawn up in compliance with a European directive on the management of radioactive waste. The aim of national policy in this field is to ensure that such waste is managed safely, both now and in the future.



### Cooperation

The ANVS works with various national and international governments and bodies.

The ANVS provides information about nuclear safety and radiation protection, both to the public and to local authorities. The Authority works closely with the Security Regions that play a role in emergency preparedness and in radiation incident response.

The ANVS cooperates systematically with the Health Care Inspectorate, the Inspectorate of Social Affairs and Employment, and the Netherlands Food and Consumer Product Safety Authority. Those organisations' activities include supervising the use of ionising radiation in health care, in occupational settings and in food and consumer product safety. In connection with those activities, the ANVS also provides policy support to the Ministry of Health, Welfare and Sport and the Ministry of Social Affairs and Employment.

### RIVM

A number of the ANVS's duties are delegated to the National Institute for Public Health and the Environment (RIVM). For example, the RIVM coordinates part of the emergency response organisation and performs certain radiation protection tasks, such as advising on radiation accidents, performing measurements (in the radiation laboratory) and policy research and support.

### International cooperation

The fields in which the ANVS is active have a strongly international character. At the international level, the Netherlands aims to actively participate in initiatives that contribute to global improvement in radiation protection and nuclear safety. The Netherlands has ratified a number of international treaties. Obligations arising out of IAEA treaties and EU regulations are systematically incorporated into Dutch law.

The ANVS seeks to follow internationally accepted principles, recommendations, practices and agreements wherever possible.

### Contact

The ANVS is immediately adjacent to The Hague Central Station (in the same building as the Ministry of Foreign Affairs).

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**More information?**

For detailed information about ANVS's work  
and the organisation, visit [www.anvs.nl](http://www.anvs.nl).

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