



Safe Use of Nuclear Technology The Role of the IAEA Safety Standards



What do I need to know?

Radiation and radioactive sources have many beneficial applications, ranging from power generation to uses in medicine, industry and agriculture. These uses require regulation to ensure prevention of potential radiation risks to workers, patients, the public and the environment.

The prime responsibility for safety rests with the person or organization responsible for activities

involving nuclear technology. Regulating safety is a national responsibility. The IAEA safety standards help countries in these endeavours.

The IAEA safety standards reflect an international consensus on what constitutes a high level of safety for protecting people and the environment from harmful effects of ionizing radiation. The safety standards cover all nuclear and radiation applications utilized for peaceful purposes.



Why are there IAEA safety standards and what is their scope?

The IAEA safety standards have a status derived from the IAEA's Statute, which authorizes the IAEA "to establish or adopt, in consultation and, where appropriate, in collaboration with the competent organs of the United Nations and with the specialized agencies concerned, standards of safety for protection of health and minimization of danger to life and property ... and to provide for the application of these standards".

The IAEA safety standards include guidance and requirements for the medical uses of radiation, the operation of nuclear facilities, the production, transport and use of radioactive material, and the management of radioactive waste.

Structure of the IAEA safety standards

The IAEA safety standards comprise Safety Fundamentals, Safety Requirements and Safety Guides.

The Safety Fundamentals is the primary publication in the IAEA Safety Standards Series and establishes the fundamental safety objective and the ten principles of protection and safety. The publication is drafted in language that is understandable to the non-specialist reader. It conveys the basis and rationale for the safety standards for those at senior levels in government and regulatory bodies.

The Safety Requirements publications establish the requirements that must be met to ensure the protection of people and the environment, both now and in the future. The requirements are



governed by the objective and principles of the Safety Fundamentals. The format and style of the requirements facilitate their use by Member States for the establishment, in a harmonized manner, of their national regulatory framework.

The Safety Guides provide recommendations and guidance on how to comply with the safety requirements, indicating an international consensus on the measures recommended. The Safety Guides present international good practices, and increasingly best practices, to help users achieve high levels of safety.

The IAEA Safety Glossary defines and explains technical terms used in the IAEA safety standards and other safety related IAEA publications, and provides information on their usage.

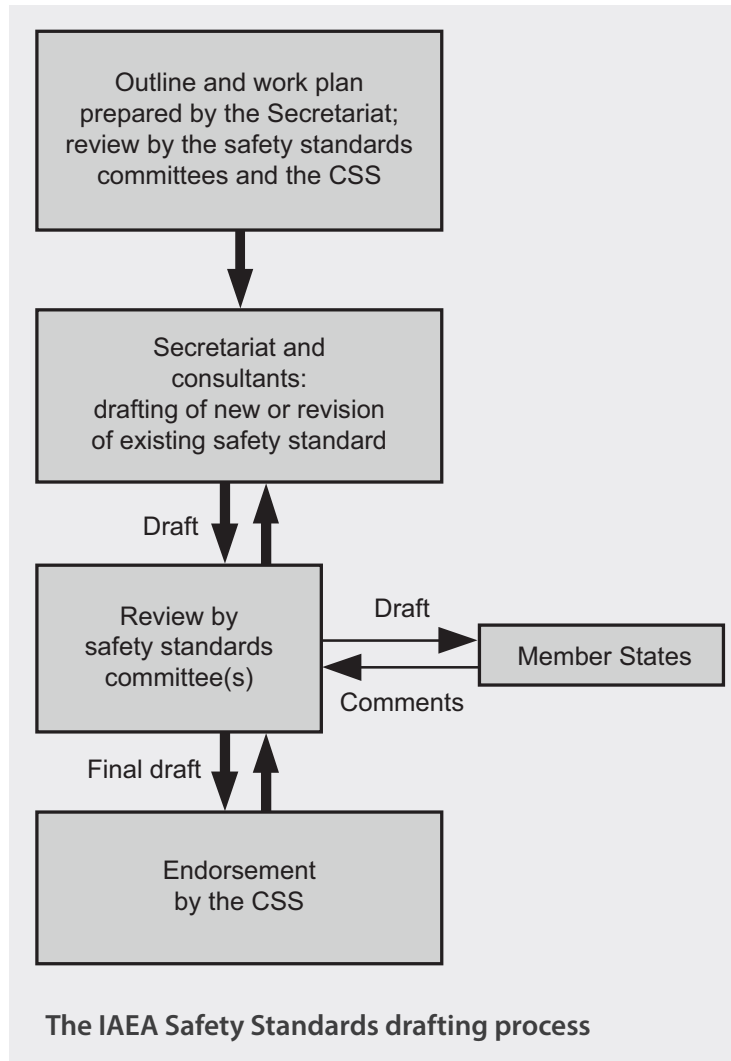
How are the safety standards developed?

The IAEA safety standards are developed by means of an open and transparent process for gathering, synthesizing and integrating the knowledge and experience gained from the actual use of nuclear energy technologies and from the application of the safety standards, including knowledge of emerging trends and issues of regulatory importance.

Draft safety standards are reviewed by five Safety Standards Committees and are made available on the IAEA web site for Member States to provide comments. Safety standards are then endorsed by the Commission on Safety Standards (CSS), which oversees the entire safety standards programme.

The five Safety Standards Committees cover nuclear safety (NUSSC), radiation safety (RASSC), the safety of radioactive waste (WASSC), the safe transport of radioactive material (TRANSSC), and emergency preparedness and response (EPRaSC).

The CSS and each committee comprise nominated experts and officials from Member States and representatives from international organizations.



Safety Fundamentals and Safety Requirements are subject to approval by the IAEA Board of Governors.

Application of the safety standards

The IAEA safety standards are not legally binding on Member States but may be adopted by them, at their own discretion, for use in national regulations in respect of their own activities. The Standards are, however, binding on the IAEA in relation to its own operations and on States in relation to operations assisted by the IAEA.

The IAEA safety standards also form the basis for all of the IAEA safety services, such as the Integrated Regulatory Review Service and the Operational



Safety Review Team, and they underlie educational and training services to build up national competencies and capabilities.

The Convention on Nuclear Safety and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management contain requirements similar to those in the standards, and make them binding on Contracting Parties. The safety standards, supplemented by these international conventions, industry standards and detailed national requirements, establish a consistent basis for protecting people and the environment.

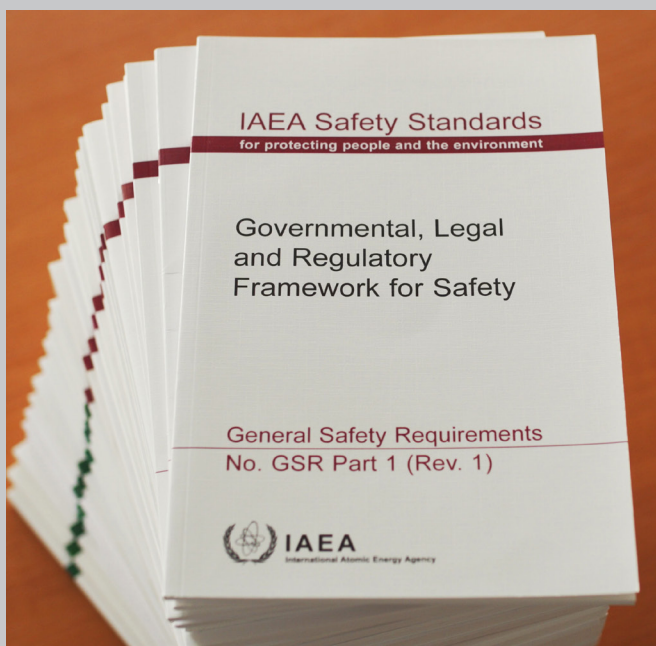
Other users of the IAEA safety standards are co-sponsoring organizations and industries that design, construct and operate nuclear facilities, or industries engaged in uses of radiation and radioactive sources.



More information can be found on the IAEA safety standards webpage at <https://www.iaea.org/resources/safety-standards>. It includes links to all the IAEA safety standards in English, as well as to those available in Arabic, Chinese, French, Russian and Spanish.

It also provides general information on the IAEA safety standards and the processes for their establishment and approval. A status list is also provided and updated regularly. It provides information on published safety standards and the status of those under development.

The Nuclear Safety and Security Online User Interface allows users to navigate and search the content of the publications in the IAEA Safety Standards Series and the IAEA Nuclear Security Series (<https://nucleus-apps.iaea.org/nss-oui/>).



IAEA Factsheets are produced by the Office of Public Information and Communication

Editor: Aabha Dixit • Design and Layout: Ritu Kenn

For more information on the IAEA and its work, visit www.iaea.org

or follow us on     

or read the IAEA's flagship publication, the IAEA Bulletin, at www.iaea.org/bulletin

IAEA, Vienna International Centre, PO Box 100, 1400 Vienna, Austria

Email: info@iaea.org • Telephone: +43 (1) 2600-0 • Facsimile +43 (1) 2600-7

