

Working to Protect People,
Society and the Environment

The Global Nuclear Safety and Security Network (GNSSN)



Nuclear Safety and Security Programme



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General:

The IAEA Global Nuclear Safety and Security Network (GNSSN) is a key element of the Global Nuclear Safety and Security Framework (GNSSF) focused on sharing information and knowledge among the global nuclear community.

international instruments and codes of conduct help to ensure the wide application of safety practices within the Member State. At the framework's core, the IAEA safety standards are of paramount importance. They consist of three levels: safety fundamentals, safety requirements and safety guides to support the harmonization

resources, such as internationally accessible information and data sources, and publically accessible as well as member restricted data.

However, the GNSSN is not only a comprehensive information resource, it has also been successfully adopted as an active working platform to facilitate global meetings, multi-member discussions and user feedback. Two examples are the Regulatory Cooperation Forum (RCF) and the Technical and Scientific Support Organization Forum (TSOF). Both forums are part of the GNSSN and users can benefit from the wide array of information and data sources available to support their activities.

The main members of the GNSSN are the providers of information and network operators, and the process owners themselves.

The network rests on the principle that process owners:

- Are ultimately responsible for content and quality;
- Recognize that they are part of a broader community of networks;
- Make continuous efforts to render the network visible and conducive to international cooperation;
- Strive for common solutions, using best practices and advanced technologies, and for optimal use of resources;
- Adhere to agreed commitments;
- Work on sustainability and the continuous improvement of the GNSSN.



FIG. 1. The framework of instruments and resources for achieving and maintaining a high level of safety and security worldwide.

Global nuclear safety and security, as defined here, is “the institutional, legal and technical framework for ensuring the safety of nuclear installations throughout the world. The objective of this [framework] is to lead to a world where all nuclear installations are operating safely” (Strengthening the Global Nuclear Safety Regime, INSAG Series No. 21).

As illustrated, the foundation of the GNSSF is grounded on a strong legal, regulatory and enforcement framework, empowered by national legislation and regulations, maintained by operators and licensees, based upon organizations with sufficient numbers of educated and trained personnel, and combined with institutional, organizational, technical and research capacity building. At the uppermost level, the GNSSF requires widespread commitment and subscription to legally binding and non-binding conventions to maintain a high level of safety by setting international benchmarks for Member States to build upon. Additionally,

of national and international safety practices. IAEA peer reviews and advisory services are also a central source for learning from the best practices of others, and for enhancing the utilization and harmonization of the IAEA safety standards.

The GNSSN connects all elements of this framework by facilitating the exchange of all facets of operating experience and regulatory practices, and further implements the concept of the GNSSF as outlined in INSAG Series No. 21 and re-confirmed in a communication from the International Nuclear Safety Group (INSAG) to the IAEA Board of Governors in July 2011.

The network:

The aim of the GNSSN platform is to make information resources visible and available via Internet access (<http://gnssn.iaea.org/default.aspx>) to all affiliated safety and security related networks. The GNSSN is a set of existing networks or a ‘network of networks’, providing information

The basic structure of the GNSSN is illustrated.

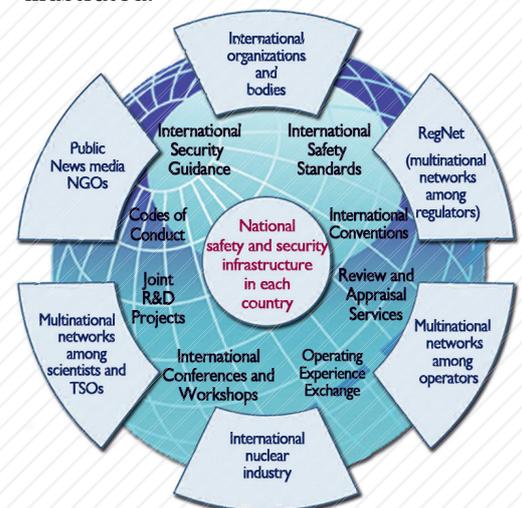


FIG. 2. The basic structure of the GNSSN.

The GNSSN comprises three layers or rings. In the centre is the national safety and security infrastructure of each Member State. The Member State's infrastructure interacts through the different elements of the GNSSF, the ring around the Member State, with the various nuclear stakeholders, which forms the outer ring. GNSSN elements and activities include most of the complexity constituted by the many possible relations between the three layers.

The Steering Committee of the GNSSN is a standing body of senior governmental officials holding national responsibilities for international cooperation relevant to nuclear safety and security. The role of the Steering Committee includes providing guidance on the approach and strategy for the GNSSN, guiding the development of capacity building in the participating countries and reviewing the progress of planned activities and approving proposed projects.

The GNSSN includes networks of different character. Global and regional networks are distinguished by their geographic outreach while thematic networks cover only a certain field of activities within the nuclear context.

Global networks:

The most prominent example is the International Regulatory Network (RegNet) which is a portal for web-based, international cooperation among nuclear safety and security regulators. RegNet supports sharing of regulatory knowledge, practices and information among national and international users, and is fostering collaboration on all matters related to nuclear safety and security.

Another global network is the Global Safety Assessment Network (GSAN). This network facilitates focused collaboration on safety assessment capacity building in support of global nuclear safety harmonization, especially in expanding and developing nuclear programmes worldwide.

Regional networks:

Member State driven regional knowledge networks with the support of the IAEA facilitate

sustainable regional cooperation, capacity building, including training and education, and infrastructure development in order to establish or maintain the highest possible level of nuclear safety and security.

The following regional networks exist:

- Arab Network of Nuclear Regulators (ANNuR);
- Asian Nuclear Safety Network (ANSN);
- European Nuclear Safety Regulators Group (ENSERG);
- European Technical Safety Organisations Network (ETSON);
- Forum of Nuclear Regulatory Bodies in Africa (FNRBA);
- The Ibero-American Forum of Radiological and Nuclear Regulatory Agencies (FORO).

The ANNuR and FNRBA web sites are hosted within the GNSSN platform. Links are provided for the other web sites.

Thematic networks:

Thematic networks support collaboration for specific sub-areas of safety and security. Examples of thematic networks in the GNSSN are: a network for senior regulators for CANDU-type nuclear power reactors, and the Control of Sources Network (CSN) in the radiation protection area.

The GNSSN provides public access to general information about the networks. It also provides Member States with their own password-secure area for various teams and user group forums to share information with selected group members or among groups. For example, safety review service teams or steering committees can have their own securely shared area to provide team specific workshops or training events or to conduct meetings. Access is controlled through on-line registration and approval. For example, the RCF, established to coordinate support and information for emerging nuclear power countries, is a members-only forum.

Benefits:

- The GNSSN is a unique portal, providing easy access to the IAEA's safety and security publications and information as well as other networks and information sources. Its design is based on the INSAG recommendations.
- The GNSSN supports the global and regional cooperation of regulatory bodies and other stakeholders when exchanging information, knowledge, experiences, best practices and lessons learned.
- By providing a standard format for Member States to maintain their regulatory country information in the National Nuclear Regulatory Portals (NNRP) in RegNet, States can avoid duplicating efforts when submitting data, thus making it easier for them to share knowledge and experiences.
- The GNSSN also improves the work efficiency and effectiveness of forums, review service teams, governing bodies, thematic working groups, projects, meetings and workshops in the nuclear safety and security field by providing SharePoint based collaborative services, such as document sharing, announcements, scheduling, work planning, discussion forums, video conferencing and social networking tools.
- The GNSSN provides access to safety and security information, best practices and operating experience. Through the regional networks hosted by the GNSSN, access to the post-Fukushima initiatives in response to the IAEA Action Plan on Nuclear Safety is provided.
- The GNSSN supports national and regional capacity building efforts by providing training and tutoring activities and courses.

For further information:

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