

# Underground Research Facilities Network for Geological Disposal

## Terms of Reference



The Underground Research Facilities (URF) Network for Geological Disposal (URF Network) establishes a community of practice and learning for geological disposal. The URF Network provides its members with a platform to assess and share best practices in developing, evaluating and implementing geological disposal solutions for intermediate level waste, high level waste and spent nuclear fuel. Emphasis is placed on the role and use of URFs to support successful disposal program development and implementation.

## Background

The IAEA works with its Member States and multiple partners worldwide to promote the safe, secure and peaceful use of nuclear technologies. The Agency is authorized, among others, as part of its Functions stated in its Statutes:

- To foster the exchange of scientific and technical information on peaceful uses of atomic energy;
- To encourage the exchange of training of scientists and experts in the field of peaceful uses of atomic energy.

Member States operating a nuclear power plant, or planning to establish future use of nuclear power, must implement solutions for the back end management of resulting intermediate level waste, high level waste and spent nuclear fuel. A mined deep geological repository (DGR) offers an internationally accepted solution for safe and sustainable management of such waste.

The URF Network provides its members with a platform to exchange information and to encourage training of professionals, specifically focused on geological disposal. At its inception in 2001, the URF Network focused on the role of URFs in supporting geological disposal developments. After over a decade of operation, the URF Network has reassessed its role to deliver support to Member States needing solutions to the back end management of intermediate level waste, high level waste and spent nuclear fuel. It has also revisited its mode of operation, for instance abolishing the prior practice of distinguishing between the roles and responsibilities of network partners and network participants.

## Scope

The scope of the URF Network is to provide and maintain a:

- Community of practice and learning for geological disposal;
- Platform to assess and share best practices in developing, evaluating and implementing geological disposal solutions;
- Platform which emphasises the role and use of URFs to support successful geological disposal implementation.

Best practices begin with understanding of high-level requirements (safety, security, safeguards, intergenerational equity and sustainability) and the resulting governance needs to achieve successful disposal. URF Network activities focus on methods and technologies to site, design, and license a disposal facility that meets these high-level requirements, as well as prepare for implementation of the disposal facility. This includes consideration of viable approaches in establishing national policies, strategies, and gaining and maintaining project acceptance by relevant stakeholders. Relevant information on construction and operation becomes increasingly important as some URF Network members progress toward commissioning a disposal facility.

## Members

The URF Network is open to accession by organizations with specific responsibilities related to establishing, developing, providing the scientific and technical basis for, and implementing deep geological disposal projects for radioactive waste.

Accession to the URF Network by any such organizations is formalized through a letter of intent addressed to the Director of the IAEA Division of Nuclear Fuel Cycle and Waste Technology, that will be answered by a reply acknowledging receipt as well as anticipation of the active interest and participation in URF Network activities by representatives of this organization.

Upon accession, the organization is considered a member of the URF Network.

The contact person for each organization is informally communicated to the IAEA URF Network Secretary by such organization, and will serve as the information point for all correspondence related to the URF Network, such as meeting announcements.

The contact person in each URF Network member organization is not necessarily expected to attend all URF Network activities. However, the person is expected to forward relevant information about planned URF Network activities inside its organization and strive to identify a suitable representative to participate in such activities, either to provide relevant expertise or to benefit from a specific learning experience. At the URF Network members' discretion, representatives of other organizations can also be proposed for occasionally participating in URF Network activities.

## Secretariat

The IAEA co-ordinates and facilitates the activities of the URF Network and, otherwise, acts as Scientific Secretariat to the URF Network, including maintaining records of its activities and publishing these records on the CONNECT platform. All URF Network activities are implemented consistently with the mechanisms in place at the IAEA to deliver its programme of work – e.g. through the organization of Technical Meetings, Consultancy Meetings or Scientific Visits.

The main responsibility of the Secretariat is to elicit URF Network members' needs and expectations from the URF Network; to organize the implementation of URF Network activities consistently with the Agency's approach to foster international cooperation; and to ensure information relevant to the URF Network is disseminated through the contact points of the URF Network members.

## Member States needs and URF deliverables

URF Network activities should be tailored to meet URF Network member's needs.

Broadly speaking, URF Network member's needs can be tied to the level of maturity of the Member States' national geological disposal programme. It can also be tied to the level of progress from establishing a national strategy to preparing a license application. Maturity and competence may have been established during such a prior process, regardless of whether major setbacks have led a programme to restart at the stage of generic studies. It is thus assumed that URF Network member's needs reflect the context of one of the following levels of programme maturity:

- Advanced DGR development infrastructure established with substantial experience from ongoing and previous generic-studies, siting or license application steps;
- National siting plan established, as well as early stages of national infrastructure development, including some experience with generic studies and early siting studies;
- Absence of national siting plan and no or only limited national infrastructure development.

The URF Network organizes an annual meeting, whose primary purpose is to tailor and plan the URF Network activities to meet timely URF Network members' needs. More specifically, these timely needs are discussed and decided by a steering committee that convenes during the URF Network annual meeting.

The steering committee is comprised of one or several representatives from each member state, as agreed within each member states delegation. It is chaired by the URF Network Chairperson or by the IAEA URF Network secretary. The deliberations of the steering committee are done openly, with all attendees of the annual meeting present.

The actual delivery of the URF Network programme of activities to meet the URF Network members' needs is then subject to discussion with all attendees of the annual meeting. Implementation can be through workshops, meetings, scientific visits and fellowships, and developing information support, for instance, through reports, presentations at international meetings or short articles published online. In the event that the URF Network identifies Member States needs that cannot be readily provided for through the network – e.g. the need of revising a guidance document - the URF Network Secretariat will take such recommendations forward to evaluate other means of delivery.

Implementation of the URF Network activities is only possible with the sustained support of the URF Network members. In this respect, the IAEA Secretariat to the URF Network acts as a coordinator and a catalyst, while the core of the programme is developed and delivered by URF Network members, for URF Network members.

Indeed, under the auspices of the IAEA, some of the URF Network members offer the opportunity for use of nationally developed URFs, associated laboratories, or specific expertise relevant to geological disposal of radioactive waste. This is offered for training purposes, as a basis to support national programme developments, as well as to share and preserve state-of-the-art experience with best practices in the development and implementation of geological disposal.