

WORKING LANGUAGE

The working language of the Forum will be English.

REGISTRATION FEE

No registration fee is charged to participants.

CONFERENCE WEB PAGE

Detailed information on administrative procedures including participation and registration is provided on the Forum web site:

<http://www-pub.iaea.org/iaeameetings/46089/Scientific-Forum-Radioactive-Waste-Meeting-the-Challenge-Science-and-Technology-for-Safe-and-Sustainable-Solutions>



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RADIOACTIVE WASTE: MEETING THE CHALLENGE

**Science and Technology for
Safe and Sustainable Solutions**

**23–24 September 2014,
Vienna International Centre,
Austria**

Boardroom D, C Building, 4th Floor

BACKGROUND

Nuclear technologies benefit people everywhere. Radioactive sources are used to sterilize food and medical instruments, to develop crops that better resist diseases and harsh conditions, and to diagnose and treat patients, as well as in a wide range of industrial applications. Research reactors are used in science and for producing radioisotopes. Today, 30 countries use nuclear power in energy production and about the same number are considering introducing it into their energy mix. Many countries offer fuel cycle services, ranging from uranium mining to nuclear fuel fabrication to spent fuel reprocessing.

These various uses of nuclear technologies generate waste like many other processes. The waste will be radioactive for a few hours or days to thousands and even hundreds of thousands of years. To ensure that it poses no risk to people or the environment now and in the future all countries using nuclear technologies have the responsibility to manage it safely, using robust and sustainable approaches.

The 2014 IAEA Scientific Forum, Radioactive Waste: Meeting the Challenge – Science and Technology for Safe and Sustainable Solutions, will highlight technologies used to safely manage radioactive waste. It will address the management of radioactive waste and spent nuclear fuel from nuclear power plants and research reactors, as well as from other uses. To share knowledge and experience among all Member States experts will present and discuss in an interactive format current solutions and challenges. IAEA support to Member States to develop and implement safe, sustainable and viable waste management solutions will also be highlighted.

SESSION 1

THE START OF THE JOURNEY

Session 1 will briefly describe the peaceful uses of nuclear technologies, the radioactive waste that they generate and the organization of such wastes according to different classes. It will emphasize that managing such waste requires an integrated approach, from generation to disposal that is adequately funded. Safety, security and safeguards aspects must be considered during this part of the journey.

SESSION 2

ALONG THE JOURNEY

Session 2 will highlight the steps required to manage radioactive waste before its disposal. The focus will be on technologies and applications used to characterize and treat waste, and conditioning processes used to convert it into a form suitable for storage, transport and, ultimately, disposal. The session will describe available storage options and technologies, and will discuss the safety aspects related to the predisposal management of radioactive waste.

SESSION 3

DESTINATION

Session 3 will illustrate disposal solutions for radioactive waste that must remain under regulatory control. Concepts for disposal being implemented or developed around the world will be outlined and the safety of disposal will be addressed. In particular, some of the scientific and technological developments that provide confidence in the feasibility and safety of deep geological disposal of high level radioactive waste and spent nuclear fuel will be described.

SESSION 4

THE PATH AHEAD

Session 4 will focus on how evolving nuclear technologies, such as better use of nuclear fuel, innovative fuels, and advanced reactors and fuel cycles, could affect future waste management. Public perceptions of science, technology and risk and their influence on managing waste will also be addressed.

CLOSING SESSION

The session will conclude by revisiting the main messages from the Scientific Forum, and by highlighting some of the support the IAEA can provide Member States to meet the challenge for implementing safe and sustainable radioactive waste management solutions.