

International Conference on the Safety of Radioactive Waste Management, Decommissioning, Environmental Protection and Remediation: Ensuring Safety and Enabling Sustainability



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Safe energy management for sustainable nuclear energy

Many factors contribute to the ability of any society, whether industrialized or developing, to achieve sustainable development, one of the most important is a supply of energy resources that is fully sustainable. Naturally, for a society to attain or try to attain sustainable development, much effort must be devoted not only to discovering sustainable energy resources, but also to increasing the safety of processes utilizing these resources.

Globally, temperatures have increased to about 1.1 degrees Celsius above pre-industrial levels, and the past seven years have been the warmest on record, according to the World Meteorological Organization (WMO). However, warmer temperatures are just the beginning of the story.

The way shown how the IAEA collaborates with governments and researchers around the world to bring climate solutions to fruition and bolster the capacity of communities to tackle the challenges they face. Good data is the basis of sound decisions. Scientists and decision makers rely on IAEA data to measure climate change. The reference materials for greenhouse gases are the global standard and are used to quantify, trace and identify emission sources. Together with the World Meteorological Organization we are working to expand the use of isotope measurements for greenhouse gases across Africa, Asia and the Pacific, Europe, and Latin America and the Caribbean.

In mitigation, nuclear energy has played a central role. Over the past five decades it has avoided the release of more than 70 gigatons of carbon dioxide. Globally, more than 400 reactors still supply the world with about a quarter of its low-carbon energy and today around 30 countries are considering or embarking on new nuclear power programmes. Nuclear energy already plays a crucial role in mitigating climate change and providing energy security. In these pages the International Energy Agency's executive secretary elaborates this point. Nuclear science and technology have for decades been crucial parts of the climate change solution, both in mitigation and adaptation. It is clear the world needs more low-carbon energy and more opportunities to adapt. That means the world needs more nuclear.

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