

SCIENTIFIC FORUM

NUCLEAR SCIENCE FOR DEVELOPMENT

17-18 SEPTEMBER



ATOMS4FOOD

**BETTER AGRICULTURE
FOR BETTER LIFE**

2024



VIENNA INTERNATIONAL CENTRE
Board Room D / C Building / 4th Floor

#ScientificForum
#Atoms4Food

IAEA.ORG

CONFERENCE SECRETARIAT

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LANGUAGE

The working language of the Forum will be English.

CONFERENCE WEB PAGE

Detailed information on administrative procedures,
including participation and registration, is provided
on the Forum web page:
www.iaea.org/scientific-forum

BACKGROUND

Global agrifood systems must address food security and environmental impact. With 828 million people hungry and over 3.1 billion lacking healthy diets, urgent transformation is needed. Agrifood systems account for 30 per cent of global greenhouse gas emissions, highlighting the need for sustainable practices.

An integrated approach is crucial, focusing on climate action, food security and sustainable production. This includes equitable access to resources, gender-responsive and youth-inclusive policies, investing in agricultural training and technologies, and mobilizing climate finance.

Nuclear science and technology innovations are essential in enhancing crop improvement, animal production, disease and pest management, precision agriculture, food safety and nutrition. For 60 years, the International Atomic Energy Agency (IAEA) in cooperation with the Food and Agriculture Organization of the United Nations (FAO) have applied nuclear techniques to improve food security and safety.

Launched in October 2023, Atoms4Food is a joint IAEA and FAO initiative to boost food security using nuclear science and technology. This initiative enhances agricultural productivity, reduces food losses and waste, ensures food safety, improves nutrition and adapts to climate challenges, offering tailored solutions for Member States.

The Scientific Forum 2024 will showcase nuclear science and technology innovations for sustainable farming, partnership building and resource mobilization. The forum will highlight nuclear technology's role in agrifood systems transformation, facilitate best practice exchanges, discuss sustainable adoption of R&D results, and explore innovative financing and partnerships.

OPENING SESSION

IAEA Director General Rafael Mariano Grossi will open the Scientific Forum 2024 with high-level speakers and a keynote speaker. They will explore how nuclear science and technology innovations under the framework of Atoms4Food can enhance sustainable agrifood systems, improve food security, and address climate challenges. Discussions will focus on the role of nuclear science and technology in transforming agriculture and achieving sustainable development goals.

SESSION 1

Addressing Food Insecurity and Malnutrition with Nuclear Science

This session explores cutting-edge innovations using nuclear and isotope techniques in agriculture and food production. These technologies enhance crop improvement, animal production, disease and pest management, and precision agriculture, bolstering resilience against climate change and improving food security and nutrition.

In the first panel, discussions will focus on how nuclear and radiological techniques enhance agricultural productivity through crop improvement, animal production, including sustainable animal feed, animal reproduction and precision agriculture.

In the second panel, experts will examine how these technologies improve plant, animal and human health, food safety and human nutrition, and support for international trade.

SESSION 2

Bolstering Interconnectedness of Agricultural Practices with Environmental Conservation and Socioeconomic Equity

This session will explore how nuclear science

and technology solutions can promote equitable access to resources and enhance rural livelihoods. Emphasizing an integrated approach, it will highlight gender-responsive and youth-inclusive policies, climate action, food security and sustainable production. The session will also showcase country best practices and success stories from both developing and developed countries.

SESSION 3

Fostering Partnership Building and Mobilizing Resources

This session will explore how partnering with diverse stakeholders can ensure the long term sustainability of the Atoms4Food initiative. By pooling expertise, resources and collaborative efforts of national and international networks, complex challenges in sustainable agricultural production and rural development can be effectively addressed.

Speakers will discuss scaling up efforts through various forms of finance from public, philanthropic and private sectors, leveraging blended instruments, public-private partnerships and international financing institutions. The session will highlight how these efforts can drive innovation and catalyse investment across the agricultural sector for widespread technology diffusion.

CLOSING SESSION

The Way Forward

This panel will summarize key findings and draw conclusions of the Scientific Forum. Panellists will outline strategic actions to ensure the long term sustainability and impact of the initiative, fostering international collaboration and resource mobilization.