Inputs to the High-level Political Forum on Sustainable Development (HLPF) in 2024

Inputs from functional commissions of ECOSOC, other intergovernmental bodies and forums to the 2024 HLPF

International Atomic Energy Agency (IAEA)

Impacts of multiple crises on the implementation of SDGs 1, 2, 13, 16 and 17 from the vantage point of your intergovernmental body.

Multiple crises such as global health crises, political instability, natural disasters are bound to exacerbate vulnerabilities and hinder progress already achieved in sustainable development.

From an IAEA standpoint, multiple crises are likely to have a negative impact on the support that the Agency can provide to its Member States by, for instance, slowing down or impeding the transfer of nuclear technologies that could contribute to enhancing agricultural productivity, reducing food losses, ensuring food safety, improving nutrition, generating clean energy, as well as by hampering capacity building efforts due to brain drain and loss of skilled workers.

Three key areas where sustainable, resilient and innovative solutions for achieving the SDGs are being effectively delivered, especially related to the cluster of SDGs under review in 2024, bearing in mind the three dimensions of sustainable development and the interlinkages across the Goals and targets.

-- SDG 2/ Agricultural productivity - use of climate-smart agriculture techniques to increase yields using nuclear science and technology (e.g. cassava production in Africa, with increase from 20 tonnes per hectare to over 70 in Ghana; from 12 to 37 in Burundi; from 15 to 62 in Rwanda, from 10 to 50 in the Central African Republic).

-- SDG 13/ climate adaptation – increasing crop resilience to climate change via the use of a nuclear technique known as mutation breeding to improved varieties of crops (including rice, chickpea, mung bean, lentil and soybean) by strengthening their natural capacity to be more resistant to drought, salinity, high and low temperatures, plant diseases and pests (e.g. Bangladesh and the production of a total of 85 types of different crops varieties in just 4 years - versus the usual 8 to 12 years -, including a new rice variety producing 75% more than the world's average yield per hectare, harvested within 105 to 115 days after sowing, tolerant to temperatures as high as 38 degrees).

-- SDG 13/ climate monitoring - analysis of GHG emissions through nuclear techniques, thus allowing for the identification of the source (e.g. agriculture, livestock production, industrial), thus allowing for informed decision making by countries to achieve their emission reduction goals. In relation to energy, the current global nuclear power fleet has helped to avoid around 1.5 Gt GHG each year and stabilize energy system to allow more penetration of renewable energy. The use of nuclear energy can also help to decarbonize other sectors, including hard-to-abate sector such as industry process, district heating, hydrogen, etc. Agency's milestone approach and relevant infrastructure service have helped nuclear embarking countries successfully launching their first

nuclear programme. The Atoms4NetZero initiative is helping those countries interested in nuclear to tap nuclear energy's potential in their net zero transition pathway.

Three examples of specific actions, policies and measures that are most urgently needed to effectively deliver sustainable, resilient and innovative solutions to eradicate poverty and reinforce the 2030 Agenda, building on interlinkages and transformative pathways for achieving the SDGs.

-- Guarantee access to quality education – promote inclusion of youth, women and disadvantaged communities;

-- Data driven approach – science and research at the basis of informed decision making;

- Leverage partnerships based on complementarities of inputs/solutions and sustainability of results.

Follow-up actions and measures being undertaken by your intergovernmental body or forum to support implementation of the Political Declaration of the SDG Summit.

Establishment of ad-hoc initiatives:

-- Atom4Food

An initiative launched in 2023 as part of the FAO/IAEA partnership to help countries boost food security and tackle growing hunger by supporting countries to use innovative nuclear techniques in enhancing agricultural productivity, reducing food losses, ensuring food safety, improving nutrition, and adapting to the challenges of climate change.

-- Atom4NetZero

Launched at COP27, the initiative aims to release the full potential of nuclear power in addressing climate change and facilitating clean energy transition by providing Member States and other stakeholders with technical expertise and scientific evidence on the potential of nuclear energy to decarbonize electricity production as well as hard-to-abate sectors such as industry and transport.

-- Lise Meitner Programme

Launched in 2023, aims to bridge the gender gap in nuclear sector by providing early- and mid-career women professionals with opportunities to participate in visiting professional programmes to advance their technical and soft skills. To date, two visits by groups of young women professionals have taken place.

-- Maria Sklodowska-Curie Fellowship Programme (MSCFP)

Named after pioneer physicist and twice Nobel Prize laureate Marie Skłodowska-Curie, the MSCFP aims to address gender parity in nuclear sector and inspire and encourage young women to pursue a career in the nuclear field by providing scholarships for Master's programmes and opportunities to pursue an internship facilitated by the IAEA. Since its launch in 2020, 560 students from 121 countries have received a scholarship.

Recommendations and key messages for inclusion into the Ministerial Declaration of the 2024 HLPF.

Emphasise the role of partnerships and of science and technology as enablers towards sustainable development, ensuring inclusivity and comprehensiveness in relation to the possible approaches and solutions to be adopted (e.g. nuclear technologies for food system transformation; nuclear energy to tackle climate mitigation).