

IAEA 2018 Scientific Forum

Nuclear Technology for Climate: Mitigation, Monitoring and Adaptation

Opening Session
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Vienna International Centre

HRH Princess Sumaya bint El Hassan

Deputy Director-General of Nuclear Sciences and Applications, Mr Aldo Malavasi;

YE Mr Yafes Osman, Minister of Science and Technology, Bangladesh;

YE Mr Francis Mokoto Hloaele, Minister of Energy and Meteorology, Lesotho;

YE Mr Jianfeng Yu, Chairman of the Board, China National Nuclear Corporation;

YE Mr Bernard Bigot, Director General of the ITER Organization;

Ms Hillary Diane Andales, Winner of the 2017 Breakthrough Junior Challenge;

Ladies and Gentlemen:

I feel very honoured to address this opening session of the 2018 Scientific Forum, and to support in some way this vital 62nd regular session of the IAEA General Conference. As representatives of the member states, with such a wide variety of climatic, geographic, cultural and political realities to guide us, we all have a role to play in sharing our experiences and in learning from our fellow members.

The theme of this Scientific Forum is one that resonates with many in the global scientific community. However, we must do all we can to extend discussion to the spheres of political and civil society. As we struggle to combat climate change, and even to win a fraught war of words in some unexpected arenas, we must make the notion of Nuclear Technology for Climate clear, accessible and palatable for all. We here today are fully aware of the vital role that Nuclear Technology must play in Mitigation, Monitoring and Adaptation. It is our duty to ensure that the wider world may also understand this, and support measures to harness Nuclear Technology in the struggle against Climate Change.

Your efforts here, and beyond this forum, will make a vital contribution to our global endeavours to achieve the Sustainable Development Goals and to truly empower the Paris Agreement. You in this room represent a vital response to human-made challenges with thoughtful human ingenuity.

It is perhaps inevitable that many in our world should feel disappointed and perhaps even despairing of any hope for a future that is worthy of us. But that is not who we are as a human family. Circumstances have conspired to make durable progress, in politics and development, seem occasionally challenging or frustrating. We are determined to do better.

We have urgent questions to respond to such as how to reduce greenhouse gas emissions, and how to anticipate and adapt to the results of those inevitable changes to climate that are rapidly unfolding around our world.

There is no doubt that we face complex global, national and local challenges. The impacts of climate change are steadily becoming more apparent and, in many instances, are far more alarming than previously anticipated. We see more frequent extreme weather events that affect a growing percentage of the world's population. Impacts as diverse as rising sea levels and the spread of plant and animal diseases and pests are affecting environments and ecosystems all across the planet.

Of course, it is the nature of such global challenges that poorer, less-developed nations must inevitably bear the brunt of the effects of an increase in average temperatures, and indeed, from those of greater temperature variation. The reality is that those nations and territories that bear the greatest responsibility for bringing about manmade climate change since the beginning of the Industrial Revolution are very likely to be the ones that are least harmed by its consequences.

To reference this is not a demand for recrimination, but rather a call to action for all nations to share responsibility and to contribute to devising solutions and responses that demonstrate the best of human ingenuity. Our borders are meaningless in the face of climate change and so should our means be borderless.

My own small country of Jordan presently emits less than three tons of CO₂ per capita - around 1/5 of the US level, and half of the world's average. Jordan's contribution to the global greenhouse atmospheric stock since the pre-industrial era of 1870 is infinitesimally small. But we are determined to lead by example and to invest in a better global future.

We recognise that nuclear technology offers us all low-carbon power on a meaningful scale, and it must be one of our key, innovative means of mitigating CO2 emissions. However, at current global rates of adoption and installation, nuclear technology is having little impact on the fight against global warming. Ladies and Gentlemen: The Paris Agreement was silent on the role of nuclear energy. It is up to us to make its case and to communicate it well and widely.

It is certainly true that the governments or populations of many Less Industrialized Countries, including Jordan, might prefer to use inexpensive fossil sources to fuel their development, as they seem so much more straightforward than advanced low carbon energy sources. However, Jordan, has chosen a different path, one that we believe the international community should celebrate. Our small and energy-deprived nation has embarked on an ambitious programme to develop both renewable and nuclear energy. We have done this not because we seek praise, but because it is the right thing to do - for our people, our region and our planet.

Solar and wind power are contributing greatly to our electricity production, but the challenge and cost of storage mean that these intermittent sources have yet to have the major impact that we hope for. However, as with many other nations with ambitions to ensure energy and climate security, we are facing major financial hurdles in the implementation of our desired nuclear power programme.

At the Paris Conference, the developed world reaffirmed a commitment to mobilize some \$100 billion a year in climate finance by 2020, and agreed to continue mobilizing finance at a level of \$100 billion a year until 2025. This promise must come to fruition for nations like Jordan so that we may develop nuclear energy that is reliable and fit for the market.

Of course, the wider innovative use of nuclear technologies is essential to help advance climate science, to monitor climatic changes, and to aid adaptation to climate impacts. We are doing what we can. The inauguration of Jordan's first research and training nuclear reactor in 2016 at the Jordan University of Science and Technology, and our support for SESAME, the Synchrotron-Light for Experimental Science and Applications in the Middle East, have demonstrated our commitment to nuclear technology in a range of research arenas, not least climate change. Climate-smart agriculture to develop varieties of plants tolerant to drought, and to facilitate the selection of animals resistant to diseases, and the improved management of water resources, are just some of the areas in which nuclear technologies may have

a dramatic impact today and in the future. Isotopic techniques may also help to better predict rain patterns in water-poor areas such as ours.

But we must all work together on challenges that will inevitably be shared. We must show ourselves to be innovative in how we use existing knowledge and how we develop future technologies. We members of the IAEA must explore together the synergies between nuclear power and other energy sources, especially renewables, and we must encourage development of a new generation of nuclear technologies, particularly from Small Modular Reactors to meet the specific demands of newcomers.

We may only achieve what we must in order to safeguard our planet by working together and by respecting our needs as human family. Security will depend on our collaboration and our creativity. I wish you all well in your vital mission.

Finally, I would like to wish the Director General, Mr Yukiya Amano, a full and speedy recovery.

Thank you.