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Transcript

Future Prospects for Nuclear Energy

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Yukiya Amano:

Ladies and gentlemen,

It is a great pleasure for me to speak here at Chatham House.

I am aware that this is a very knowledgeable audience. Some of you are leading world experts in issues which I will touch upon today, such as nuclear non-proliferation. I would therefore like to start by talking about some aspects of the work of the International Atomic Energy Agency which are less well known.

We are much more than the 'world's nuclear watchdog', the common media shorthand for our role. The IAEA makes important contributions to tackling fundamental global problems such as food security, water and energy shortages and climate change, as well as in the area of human health.

Through our technical cooperation programme, we help to make nuclear technology available to our member states for peaceful purposes – for example, cancer control in developing countries. This is a major priority for me personally.

Some 70 per cent of cancer cases are now diagnosed in developing countries. Most of them are ill-prepared to respond. There is a shortage of around 5,000 radiotherapy machines in low- and middle-income countries. There are not enough well-trained specialists. As a result, around three-quarters of patients are diagnosed too late for effective treatment. This means that hundreds of thousands of people do not have access to treatment that could save their lives.

The Agency supports over 130 projects in cancer diagnosis, management and treatment. Oncology and radiotherapy centres are being established with our support in countries such as Afghanistan, Eritrea and Mozambique. We provide extensive training to health professionals. One of my major goals is to establish a Cancer Training Centre at our laboratory complex outside Vienna within the next few years.

Our nuclear applications laboratories are doing pioneering work related to human and animal health, food security and safety, agriculture, and environmental monitoring.

At the Rio+20 conference in June, the Agency announced the establishment of an Ocean Acidification International Coordination Centre at the IAEA Environment Laboratories in Monaco. This responds to concern among

member states about climate change, including the threat of ocean acidification due to increased carbon dioxide uptake by the oceans.

Ladies and gentlemen,

Nuclear power remains the best known peaceful application of nuclear energy.

To the surprise of some observers, it remains a growth area globally despite the Fukushima Daiichi accident last year. Our latest projections show a steady rise in the number of nuclear power plants in the world in the next 20 years.

Most of the new nuclear power reactors which are planned or under construction are in Asia. Established users such as China, India, the Republic of Korea and the Russian Federation plan significant expansions of their nuclear power programmes.

I understand that, here in the UK, a programme of nuclear power plant construction is planned to replace plants that will be retired in the few decades.

Countries as diverse as Vietnam, Bangladesh, Poland and Belarus are keen to build their first nuclear power plants.

Nuclear energy offers many benefits. It can help to improve energy security, reduce the impact of volatile fossil fuel prices, mitigate the effects of climate change and make economies more competitive. It also has important non-electric applications such as seawater desalination, district heating and heat for industrial processes. The Agency is committed to supporting the development of new and emerging applications in these areas.

The Fukushima Daiichi accident was the worst at a nuclear facility since Chernobyl in 1986. It caused deep public anxiety and damaged confidence in nuclear power. It was a wake-up call for everyone involved in nuclear power – a painful reminder that safety can never be taken for granted, even in an advanced industrial country.

In the aftermath of the accident, our member states adopted an IAEA Action Plan on Nuclear Safety, which is now being implemented. Progress has been made in many areas – for example, in ensuring that nuclear power plants have proper backup electricity supply in case of a prolonged blackout.

The IAEA expanded its programme of expert peer review services for member states. These involve assessments of plant safety, regulatory effectiveness or emergency preparedness and response. We are undertaking

a systematic review of IAEA Safety Standards, taking into account lessons learned from the Fukushima Daiichi accident.

In December, the Fukushima Ministerial Conference on Nuclear Safety, organized by the government of Japan and the IAEA, will take place in Fukushima Prefecture. We will present a report outlining the conclusions of a series of international expert meetings which we have been holding. We will also prepare a comprehensive report on the accident, to be finalized in 2014.

Next June, we will hold an International Ministerial Conference on Nuclear Power in the 21st Century in St Petersburg, Russia. It will provide a valuable opportunity to consider nuclear power's long-term contribution to sustainable development.

Nuclear safety remains the primary responsibility of individual countries. However, governments have recognized that effective international cooperation is vitally important and that the IAEA has a unique role to play in this regard.

Ladies and gentlemen,

In the last few years, world leaders have given considerable attention to the threat of nuclear terrorism. The Agency plays the central role as the global platform for strengthening nuclear security. We have unique technical competence in this field.

To put it simply, our work focuses on helping to minimize the risk of nuclear and other radioactive material falling into the hands of terrorists, or of nuclear facilities being subjected to malicious acts.

The IAEA has established internationally accepted guidance that is used as a benchmark for nuclear security. We help countries to put laws and regulatory infrastructure in place to protect nuclear and other radioactive material. We provide guidance to states on how to implement their international obligations in this area.

The IAEA also helps countries to strengthen physical security at nuclear, industrial or medical facilities where nuclear or other radioactive material is stored, or while it is being transported. This may involve things like establishing better access control and alarm systems.

We make it more difficult for criminals and terrorists to traffic nuclear and radioactive material across borders by providing detection equipment at border crossings and training border guards. In the past ten years, we have trained over 12,000 people in more than 120 countries in nuclear security.

We have helped to ensure that radioactive sources which were not properly secured were transported to a safe and secure national storage facility, or repatriated to their country of origin. We have also helped countries to put a considerable amount of high enriched uranium into more secure storage.

One hundred and seventeen countries now contribute information to the IAEA's Illicit Trafficking Database, which monitors thefts and other unauthorised activities involving nuclear and radioactive materials. The Database is the most authoritative global source of information on illicit trafficking.

More than 2,200 incidents have been registered since the Database was established in 1995. Most of these are fairly minor, but some are more serious. Taken together, they show that much work is needed and that we must never become complacent.

One of the key risks we face is that terrorists could detonate a so-called dirty bomb, using conventional explosives and a quantity of nuclear or other radioactive material, to contaminate a major city.

This would not be a fully-fledged ‘nuclear bomb’. But such an attack could lead to mass panic and cause considerable economic disruption. Clearly, the utmost vigilance is required.

These issues will be addressed at an International Conference on Nuclear Security which the IAEA is organizing in Vienna next July. I hope for strong participation at ministerial level.

Ladies and gentlemen,

One of the IAEA's core functions is to verify that states are not working to acquire nuclear weapons.

The global standard is that all safeguards agreements between member states and the Agency should be implemented fully. So should UN Security Council resolutions. That has been my approach since I took up office nearly three years ago.

The two main safeguards issues on our agenda in recent years have been Iran and North Korea. These are very different cases. What they have in common is the fact that both countries have failed to cooperate fully with the IAEA. This makes it very difficult for us to do our job effectively.

Seen from London or Vienna, Iran's nuclear programme often causes most concern. But from the perspective of Australia or Japan – both of which I

visited a few weeks ago – and from other countries in the Asia-Pacific region, the North Korean programme is equally worrying.

Since April 2009, the IAEA has not been able to implement any safeguards measures in that country. North Korea's recent statements about uranium enrichment activities and the construction of a light water reactor are deeply troubling.

I believe the Agency has an essential role to play in verifying North Korea's nuclear programme. I call upon North Korea to fully comply with all of its international obligations and to cooperate fully with the Agency.

In the case of Iran, I reported last November that the Agency had credible information indicating that Iran had carried out activities relevant to the development of a nuclear explosive device. I requested Iran to clarify these issues. We intensified our dialogue with Iran this year, but no concrete results have been achieved.

The IAEA has not said that Iran has nuclear weapons. What we have said is that there is extensive, credible and consistent information suggesting that Iran has engaged in activities related to their development. Iran has a case to answer.

The present situation is that the Agency can verify that nuclear material declared to us by Iran under its Safeguards Agreement is not being diverted to military purposes.

However, Iran is not cooperating fully with us, so we are unable to provide credible assurance about the absence of undeclared nuclear material and activities. Therefore, we cannot conclude that all nuclear material in Iran is in peaceful activities.

We will continue negotiations with Iran on a structured approach to resolving all outstanding issues. I am committed to resolving this issue by diplomatic means. I hope we can reach agreement with Iran without further delay.

The IAEA's nuclear verification activities represent an important contribution to the goal of global nuclear disarmament.

For example, we have been asked by the Russian Federation and the United States of America to undertake a verification role under their agreement concerning the management and disposition of plutonium no longer required for defence purposes.

We also support the creation of new nuclear-weapon-free zones and help in implementing such zones. These already cover vast regions of the world.

In November 2011, we were able to host an IAEA Forum on Experience of Possible Relevance to the Creation of a Nuclear-Weapon-Free Zone in the Middle East. That was 11 years after the IAEA General Conference decided to hold such a meeting. This reflects the complex nature of the issue. The Forum provided an opportunity for member states to engage in a constructive exchange of views on this important issue.

However, there remain fundamental differences of views among countries of the region on this issue and it has not been possible to make further progress. I will continue my efforts, nevertheless.

Ladies and gentlemen,

As you see, the work of the IAEA covers many very different fields.

As director general, I try to pursue the Agency's multiple objectives in a balanced manner. I am guided by our mandate, which is to contribute to the welfare and security of the world through peaceful nuclear technology, and to prevent the spread of nuclear weapons.

The IAEA is first and foremost a technical organization, although our work can have important political implications. I believe we contribute most effectively to addressing the challenges I have outlined when we approach them from a technical perspective.

I hope I have given you a useful overview of some of those challenges. I will now be happy to take your questions.

Thank you.