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NUCLEAR POWER AFTER FUKUSHIMA

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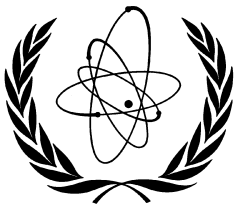

INTERNATIONAL ATOMIC ENERGY AGENCY

Ladies and Gentlemen,

It is a great pleasure for me to be with you today as a guest of the Institute for Security Studies.

South Africa is a valued partner for the International Atomic Energy Agency, working closely with us in all areas of our activity.

As you may be aware, an IAEA *Integrated Nuclear Infrastructure Review* team has just concluded a mission in South Africa. This was a team of IAEA and other international experts, who were invited to assess the status of your country's nuclear infrastructure and to help identify future development needs.

This was the first such mission to an African country and the first to a country which already has a nuclear power programme.

The mission made a thorough review of all areas of South Africa's nuclear infrastructure. It noted strengths and made recommendations for further action in some areas.

I congratulate South Africa on this significant move to ensure a robust framework for expansion of its nuclear power programme.

Helping countries to introduce nuclear power, or to expand existing programmes, is an important part of our work at the IAEA.

It is up to each individual country to decide whether or not to make nuclear power part of its energy mix. But if a country decides to do so, the IAEA helps it to build and operate nuclear power plants safely, securely, efficiently and profitably.

When I became IAEA Director General three years ago, there was much talk of a global nuclear renaissance. Dozens of countries were thinking about introducing nuclear power and many of the 30 or so existing users planned to build

additional plants.

Then came the Fukushima Daiichi accident, two years ago next month. It caused profound public anxiety and damaged confidence in nuclear power. Some people predicted that nuclear power would go into decline.

However, the evidence suggests that this will not be the case.

Some European countries announced plans to move away from nuclear power. But, globally, nuclear power looks set to continue to grow steadily, although more slowly than we expected before the Fukushima Daiichi accident.

There are 437 operating nuclear power reactors in the world today. The latest IAEA projections, which are based on what Member States tell us, suggest that number could increase by 80 or 90 in the next 20 years. It could even double.

There are 67 new reactors under construction. The main growth in the coming decades is expected in countries such as China and India, which are already major users of nuclear power.

South Africa, as you know, plans to build more reactors in the coming decades. A number of other countries have taken the decision to introduce nuclear power, including Bangladesh, Egypt, Jordan, Nigeria, Poland and Vietnam.

Nuclear power 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. These are the main reasons which new countries tend to give for wanting nuclear power plants.

Nuclear energy also has important non-electric applications such as seawater desalination, district heating and heat for industrial processes.

In many countries, the main obstacle to building new reactors is financial.

The costs of construction can be considerable, although these may be offset by lower and more stable fuel costs during operation.

Last week, I visited the site of a new nuclear power plant which is under construction in the United Arab Emirates. The UAE is the first country in 27 years to start building its first nuclear power plant.

The disposal of nuclear waste is sometimes seen as a major challenge for the future of nuclear power. In fact, waste disposal is not a technical challenge but more an issue of public acceptance. The nuclear industry has managed waste successfully for more than half a century.

In June this year, 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.

Ladies and Gentlemen,

The lasting legacy of the Fukushima Daiichi accident will be a much more intense global focus on safety.

The accident 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.

A few months after the accident, our Member States adopted an *IAEA Action Plan on Nuclear Safety*, which is now being implemented.

Virtually all Member States with nuclear power plants have conducted stress tests to assess how well facilities are likely to withstand extreme events such as earthquakes and tsunamis. Many practical steps have been taken, such as equipping plants with portable diesel generators and building higher protective walls.

Ladies and Gentlemen,

I would like to say a few words about other important aspects of the work of the IAEA.

We are best known to the public for our work in preventing the spread of nuclear weapons. IAEA inspectors are constantly on the road, visiting all types of nuclear facilities throughout the world to verify that nuclear material is not being diverted from peaceful purposes.

The Agency is most often in the international headlines because of our work to verify Iran's nuclear programme.

The IAEA also helps with the establishment of nuclear-weapon-free zones.

Last November, I attended a conference in Addis Ababa of *States Parties to the Treaty of Pelindaba,* which established a nuclear-weapon-free zone in Africa. I complimented the countries of this continent, including South Africa, for their tenacity in pursuing the goal of a nuclear-weapon-free zone for decades, until the Treaty finally entered into force in 2009.

The promotion of peaceful uses of nuclear science and technology is a feature of the Treaty of Pelindaba. It is also one of the cornerstones of the work of the IAEA.

Our mandate requires us to help developing countries gain access to nuclear technology for peaceful purposes. We do this through our extensive technical cooperation programme.

For example, we help to increase food production in dozens of countries through the use of nuclear techniques to develop more robust varieties of crops that thrive in difficult conditions.

We work to improve access to clean drinking water and to combat deadly animal diseases such as foot-and-mouth, which can destroy the livelihoods of entire communities.

Cancer control in developing countries is high on the Agency's agenda.

Some 70 percent of cancer cases are now diagnosed in developing countries. Most of these countries are ill-prepared to respond, lacking both radiotherapy equipment and properly trained specialists. As a result, 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 train health professionals. One of my goals is to establish a Cancer Training Centre at our laboratory complex outside Vienna within the next few years.

Ladies and Gentlemen,

In recent 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. 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.

We help countries to put laws and regulatory infrastructure in place to protect nuclear and other radioactive material. We also help them to strengthen physical security at nuclear, industrial or medical facilities where such material is stored, or while it is being transported.

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.

Nuclear security will be the focus of an important IAEA ministerial conference in Vienna in July this year.

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.

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

Thank you.