Country Report of Korea

by
Dr. Yong-Hwan Kim
Director General
Atomic Energy Bureau
Ministry of Science and Technology (MOST)

Mr. Chairman,
Distinguished Delegates,
Ladies and Gentlemen,

It is my great pleasure to attend the Fifth Ministerial Level Meeting of the Forum for Nuclear Cooperation in Asia here in Hanoi. I would like to express my sincere appreciation to the Ministry of Science and Technology of Viet Nam and the Atomic Energy Commission of Japan for their co-hosting and excellent organization of this meeting.

At the last FNCA Meeting in Okinawa, we shared our views on the importance of the applications of radiation, radioisotopes and nuclear technology in the fields of agriculture, health, industry and the preservation of the environment, including the water and air quality. We also recommended a harmonization of the project activities between the FNCA and RCA. It is noted that a linkage between a sustainable development and nuclear energy exists in the FNCA member countries, and that nuclear energy should not be excluded from the CDM in the second commitment period of the Kyoto protocol.

Distinguished Delegates;

Amid an increasing demand for primary energy resources and a growing concern over the greenhouse effect, nuclear power has emerged as an important alternative energy source. The Kyoto Protocol , which is expected to be entered into force by February 2005, will reinforce the advantage of nuclear energy as a carbon-free energy resource. To address the global warming issue, nuclear energy should be a part of the solution in the future for a sustainable energy supply system. To this end, the world nuclear community is pursuing extensive global collaboration.

Korea has actively participated in the Generation IV International Forum (GIF), where an international effort on collaborative R&D is being made for the development of a future innovative nuclear energy system. The GIF is preparing a R&D plan of the Generation IV nuclear energy systems and its Member Countries will enter into a multilateral agreement on international collaboration in the near future, and collaborative R&D is expected to start in early 2005. Korea hosted the 13th GIF Policy Group meeting at Jeju Island in early September 2004.

As you are well aware, the IAEA also initiated an innovative reactor project, called INPRO (International Project on Innovative Nuclear Reactors and Fuel Cycles), which collects users' requirements for the new reactor concept and explores the technology information exchange systems among its Member States.

Distinguished Delegates;

It is my pleasure to briefly outline a number of recent nuclear-related developments in Korea and the progress being made by Korea in implementing cooperative activities since the previous meeting.

Korea currently has a total of nineteen nuclear power plants, including the 1,000MW electric Ulchin Unit 5, which has recently been connected to the grid. Since the year 2000, the average capacity factor for all the plants has been over 90% with an average trip rate of 0.5 to 0.6 times a year, which is regarded as an excellent performance within the international nuclear community.

The advanced pressurized water reactor of 1,400 MW electric APR1400 has boosted Korea's competitiveness in the development of nuclear technology as the plant is expected to operate safely as well as economically. The first unit of APR1400, Shin-Kori Unit 3, will be built soon for its commercial operation, expected in 2011.

Korea has remained competitive by utilizing advanced technologies in the areas of NPP management, construction and maintenance and safety practices. We are willing to share our expertise with the FNCA Member Countries by exchanging information and dispatching experts.

Korea continues to play a key role in developing an integrated modular small reactor called SMART, which will be used for both desalination and power generation, while forging collaboration with interested countries. It came to our attention that many countries were showing an increasing interest in mid- and small-sized reactors. The IAEA, Indonesia and Korea are working together to deploy SMART for a desalination project on Madura Island, Indonesia. Korea is ready to share the SMART-related technology and experiences with Member Countries of the FNCA.

Korea also supports the IAEA's establishment of the Asian Nuclear Safety Network (ANSN) for the enhancement of nuclear safety in the Asian region. The second ANSN Consultation Meeting was held in Korea last year, which was aimed at sharing our experiences in the field of the safety networking program.

In the area of the safety and security of radioactive source materials, Korea has implemented a cutting-edge Radiation Safety Information System (RASIS) which can

track and monitor radioactive sources using a Global Positioning System (GPS) during its lifetime in a move to improve the security of radioactive materials and to prevent accidents. It is our hope that such a system will be used in all the FNCA Member Countries.

Honorable Ministers and Distinguished Delegates;

Let me now touch upon the future direction for cooperation in the FNCA Member Countries.

The FNCA has made every effort to contribute to a socio-economic development through the regional projects to promote the peaceful uses of nuclear energy. By concentrating its endeavors on the attainments of the UN Millennium Development Goals (MDGs), the Forum will be able to enhance its reputation among the nuclear communities and make its projects even more significant.

In light of the mutual benefit and supplementary effects, a close relationship between the IAEA/RCA projects and the FNCA projects beyond the limits of duplication should be established. It is therefore recommended that a suitable mechanism be constructed to cooperate and coordinate the activities of the projects to be implemented under the framework of these two regional cooperation systems.

Taking this opportunity, it is my pleasure to brief you on the activities of the RCA Regional Office (RCARO) which was established in Korea in 2002 by the RCA Member States to enhance its activities. In addition to fulfilling its mandate given by the Member States, i.e. to increase RCA visibility and viability, it has been carrying out nuclear knowledge preservation and enhancement program in order to assist the human resources development endeavors of the Member States.

These include the RCA Post-doctoral Fellowship Program, RCA-KAIST Nuclear Engineering Master's Degree Course, and RCA-KOICA Nuclear Medicine Internship Training Program. We are happy to note that these programs are gaining wider recognition amongst the RCA Member States to meet the current requirements as well as the future demand. Since the FNCA is also greatly emphasizing human resources development activities, Korea hopes that a supplementary cooperation between the FNCA and RCA will be further elevated.

The Korea Nuclear International Cooperation Foundation (KONICOF) was established in January 2004. The Foundation will support the Korean nuclear organizations to encourage their international cooperation activities through international training events, exchange of information and expertise, etc.

With respect to the Korean initiative on the "Asian Nuclear Students Interchange Pro grams" for the education of the next generation at the previous FNCA meeting, Asian

Network for Education in Nuclear Technology (ANENT) was launched in 2004 under a n IAEA program to facilitate regional cooperation in education related to research and training in nuclear technology in the region.

It is my understanding that the FNCA has made a great contribution to promoting reg ional cooperation to meet the needs of human resources for the sustainable developme nt of nuclear technology in Asia. For an even more effective regional cooperation, it i s proposed that the Forum be linked with ANENT to create a synergy effect on the reg ional cooperation of human resources development.

Distinguished Delegates;

I believe that nuclear energy shall prove itself to be a clean and important source to cope with the growing energy demand while preventing global warming. Nuclear power is one of the few proven technologies that can, on a large scale, contribute to a sustainable development, and it will continue to have a valuable role to play in the future energy supply in Korea. We will continue to develop nuclear energy in consideration of the environmental benefits of nuclear energy and the issues of a national energy security. Korea is very willing to share its expertise and experiences in developing the nuclear energy technologies with FNCA Member Countries.

It is important to make the nuclear industry safer and more economically viable, and to help the public understand the nuclear industry by enhancing its technical validity and transparency, so that nuclear power continues to play a critical role as a sustainable energy source in the 21st century.

Korea will firmly maintain its principle of nuclear transparency and will strengthen its cooperation with the international community to this end. We will faithfully implement the IAEA Safeguards Agreement and the Additional Protocol and other international nonproliferation agreements to which we are a State party.

I trust that the FNCA is recognized as an effective mechanism for enhancing socio-economic development through active regional partnerships, based on mutual understanding and cooperative international efforts. We are convinced that our efforts will be fruitful and make a contribution to the peaceful uses of nuclear energy in Asia.

With these remarks, I would like to once again extend my appreciation for the dedicated efforts of Viet Nam and Japan in preparing this meeting, as a successful forum.

Thank you very much.