COUNTRY PAPER

By
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Prof. Yoichi Fuji-ie, Chairman of Atomic Energy Commission,
H.E. Mr. Dato' Law Hieng Ding, Minister of Science, Technology and Environment, Malaysia
Her Execellency Dr. Estrella Fagela Alabastro, Minister of Science and Technology, The Philippines,
H.E. Mr. Zhang Huazhu, Chairman of China Atomic Energy Authority,

Distinguished Delegates from the FNCA Member Countries;

It is my great pleasure to attend this Fourth FNCA Ministerial Meeting here in Okinawa. I would like to express my sincere appreciation to the Government of Japan, the Japan Atomic Industrial Forum, and the Okinawa Prefecture for organizing this meeting so excellently.

Taking this opportunity, as the host of the Third FNCA Ministerial Meeting in Seoul in October 2002, I would like to thank all the FNCA Member Countries for their valuable support in leading the Third FNCA Seoul Ministerial Meeting to a successful conclusion.

At the last FNCA Meeting in Seoul, we shared our views on the necessity for nuclear knowledge preservation as a preparatory measure for inducing the second nuclear Renaissance. We formulated a high level task group for the human resources survey. We also emphasized the importance of

cooperation in the areas of radiation application, research reactor training and medical technology development with benefits for a better life in Asia. Korea proposed to establish an "Asian Mutual Fund for Nuclear Liability" for securing a compensation mechanism related to the operation of nuclear power plants.

Distinguished Delegates;

Nuclear energy has been one of the most important energy option in the past, present and it will be in the future. To this end, world nuclear community is pursuing extensive global collaboration. While past nuclear technology has grown on a national basis, various atomic energy international joint development schemes are under negotiation.

Generation-IV reactor program is progressing through the International Forum (GIF) since 2001 with the participation of 10 countries from around the world. This program is preparing for a future reactor to be used as one of the major energy sources in 2030. 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 technology information exchange system among the IAEA's Member States. The ITER (International Thermonuclear Experimental Reactor) project for fusion energy is another challenge for all of us. It is now at the final stage of consultation for a site selection and role assignment.

Based upon the accumulation of nuclear science and technology during the past 50 years, the world expects a wide spectrum of atomic energy applications in the 21st century. They are seawater desalination, district heating, hydrogen production along with electricity production, and radiation technology (RT). Especially, the RT market is forecasted to be up to 1.2 trillion US dollars in 2010.

The scope for the utilization of radiation and radioisotope will be expanded into not only water resources management, food preservation, environmental protection and public health, but also technology fusion with the promising high-tech areas of BT, NT, IT and ST.

Distinguished Delegates;

Let me now introduce a brief overview on the atomic energy development of Korea since the 2002 meeting.

Nuclear energy has been one of the major growth engines for the Korean economy. Korea has 18 nuclear power plants in commercial operation supplying 40% of the nation's electricity. 8 more nuclear power plants will be constructed by 2015. 4 units will be the Korean Standard Nuclear Power Plants with a capacity of 1,000MWe, and 4 units will be the Advanced Power Reactor with a capacity of 1400MWe (APR1400).

In the case of small and medium sized nuclear reactors, active research efforts have been devoted to the 300MW System integrated Modular Advanced ReacTor (SMART) program. SMART can be utilized for seawater desalination as well as power production. Its pilot plant will be commissioned by 2008. Currently, the Korea/Indonesia/IAEA tri-party cooperation project for SMART's feasibility on the Madura Island is under implementation. Korea is ready to share SMART-related technology and experience with Member States of the FNCA.

Furthermore Korea strives for expediting RT development. Currently, Electron accelerator technology for industrial wastewater purification is being commercialized. The pilot plant with a capacity of treating 1,000 tons of dye wastewater will be constructed in collaboration with the IAEA. The Korea/IAEA joint training center for electron accelerator application is to be opened to all IAEA Member States.

In the area of the safety and security of radioactive source materials, Korea has designed a tracking method using the Global Positioning System (GPS) attached to radiological source containers. We hope the FNCA Member States will join this new real time detection system against the lost radiation source materials.
Recently, Korea has enacted two new legislations to cope with the changing environment of atomic energy. The "Law on Radiation and Radioisotope", promulgated in December 2002, aims at promoting the utilization of RT.

And, the "Law on the Physical Protection of Nuclear Material and Facilities and the Measures for a Radiological Emergency", enacted in May 2003, provides a legal framework to help prevent nuclear terror and to establish a nation-wide radiological emergency management system.

Honorable Ministers and Distinguished Delegates;

Now, I would like to touch upon the future directions on atomic energy cooperation in Asia.

As I mentioned earlier, RT needs higher attention, especially, in medical diagnosis and therapy. The establishment of a stable production and distribution system of radioisotopes is an essential part for radiation utilization. In this regards, Korea proposes we consider the joint construction of a medical isotope producer (MIP) to be used exclusively for the production of radioisotopes for our common prosperity.

In our region, we are aware that every Member State has its own strong R&D area and related large-scale research facility. Korea has a 30MW multipurpose HANARO research reactor, the 1GeV Pohang Light Source Accelerator and the Korea-Superconducting Tokamak Advanced Research (K-STAR) facility. Korea suggests the FNCA devise a Regional Resources Management Function to assist in the sharing of the large-scale research facilities in Asia. This activity will enable us to stimulate our cooperation spirit among the FNCA Member States and achieve the utmost efficiency from our regional atomic energy R&D capacity.

Last but not least, I would like to reemphasize the importance of education for the next generation. Korea hopes the "Asian Nuclear Students Interchange Program" for fostering young atomic energy specialists in our region be developed. Through this new academic network, I believe future young nuclear students in Asia will be able to study at any competent academic institution in their interested subject areas.

Distinguished Delegates;

When Korea was faced with a financial crisis several years ago, nuclear energy continued to provide us with a stable supply of electricity at a low cost. That was the major driving force behind Korea overcoming the crisis in such a short period of time. This proved to us that nuclear is a realistic energy source with the characteristic energy security.

The economic growth rate of Asia was around 6.4% in 2002. Asia is the fastest growing region in the world. Nuclear energy will surely serve as an engine putting the Asian economy on a solid foundation. Korea is very willing to share its expertise and experiences in the developing nuclear energy technologies with the other Asian countries.

With these remarks, I would like to appreciate once again the dedicated efforts of Japan in preparing this 4th meeting as a successful forum.

Thank you very much.