Technology and Human Resource Development in the Area of Nuclear Nonproliferation and Nuclear Security to Support Peaceful Use of Nuclear Energy

Nuclear Nonproliferation Technology Development for Japanese and International Applications

We have been developing proliferation-resistant nuclear technologies, methodologies for evaluating proliferation resistance, and advanced safeguard technologies through cooperation with international partners such as the U.S. Department of Energy (DOE). In the field of environmental sample analysis for safeguards, we have been providing technical support to the International Atomic Energy Agency (IAEA) as a part of the IAEA Network Labs.

Development of Measures to Accounting for and Control of Nuclear Material in Response to the accident at the Tokyo Electric Power Company, Incorporated Fukushima Daiichi Nuclear Power Station (1F)

We have initiated an investigation of the measures required to account for and control nuclear material that remains within the core of the reactors, because conventional measures of accounting and control cannot be applied to such nuclear material.

Contributions to the International Community Based on Our Expertise and Experience

With respect to activities relating to the Comprehensive Nuclear-Test-Ban Treaty (CTBT), we have operated radionuclide monitoring stations and established a national data center for the analysis and evaluation of data collected at worldwide radionuclide monitoring stations, and thus have contributed to the establishment of an international monitoring system for the detection of nuclear tests.

We have also played a significant role in increasing the understanding of the atmospheric diffusion of radioactivity caused by the accident at 1F by using the network of CTBT radionuclide monitoring stations.

Support for Government Policy Formulation Based on Our Expertise

As a think tank in this area, we conduct policy research, including research on the issues to be addressed if the Japan-U.S. Nuclear Cooperation Agreement is amended.

Strict Management of Nuclear Material at Our Own Facilities and Utilization of the Experience Gained from Management of Nuclear Material

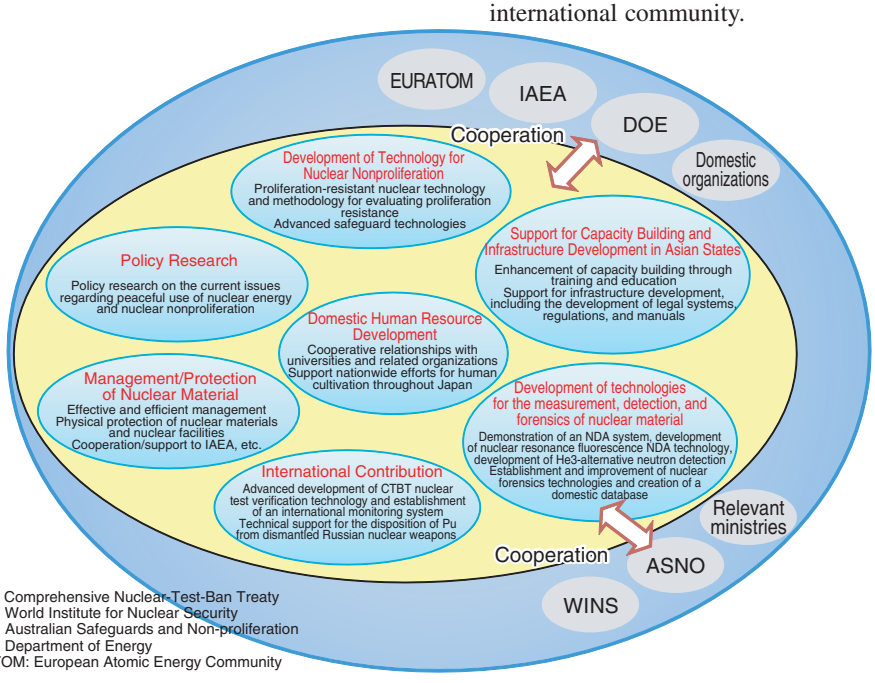
We have had strict management of our nuclear material. Moreover, we assist in the streamlining of inspections and providing technical support to the Japanese Government and the IAEA. We also provide support to the IAEA in the field of physical protection, and respond appropriately in case of revisions to Japanese legislation in this area.

New Efforts on Nuclear Security

On the basis of commitments of the Japanese government at the Nuclear Security Summit in April 2010, we established the Integrated Support Center for Nuclear Nonproliferation and Nuclear Security (ISCN) in December 2010, and began carrying out its mission of capacity building and infrastructure development, focusing on the Asian region.

Approximately 600 participants (approximately 280 participants mainly from Asian states) participated in the training courses and other activities organized by the ISCN in FY 2011. We are proud of the contributions that we are making in the area of capacity building

Furthermore, in cooperation with the United States, we have started developing technology for the measurement of nuclear material, which will contribute to the advancement of accounting for and control of nuclear material, as well as for nuclear detection and forensics technology utilizing cooperation with the United States. We will continue to provide support to the Japanese government in the area of international contributions by establishing an accurate technology by the end of 2013 and sharing such technology with the international community.



CTBT : Comprehensive Nuclear-Test-Ban Treaty
WINS : World Institute for Nuclear Security
ASNO : Australian Safeguards and Non-proliferation
DOE : Department of Energy
EURATOM: European Atomic Energy Community

Fig.12-1 JAEA activities for the development of science and technology for nuclear nonproliferation
We have two primary missions: to support the government in developing nuclear nonproliferation policies through research, and to support the government and international organizations by developing nuclear nonproliferation technology. In addition, we appropriately implement the management of nuclear material and the development of related technology, and conduct capacity-building activities.