JAMES MARTIN CENTER FOR NONPROLIFERATION STUDIES

Vienna Center for Disarmament and Non-Proliferation

Vienna, September 2012

FACT SHEET #4

Information Relevant to the IAEA General Conference

Topic: IAEA and Nuclear Safety

WHAT IS THE ROLE OF THE IAEA IN NUCLEAR SAFETY?

The IAEA has played a largely advisory role in the area of nuclear safety since the Chernobyl disaster in 1986. The Agency is the depositary for four conventions on nuclear radiation, transport, and waste safety, and it has developed codes of conduct for both the safety and the security of radioactive sources and research reactors. These codes have been adopted by the Board of Governors and approved by the General Conference.

In a disaster scenario (like Fukushima), the IAEA primarily facilitates the exchange and provision of information between member states and to the public. The Agency can also provide assistance to affected countries if help is requested. The IAEA Incident and Emergency System (IES) is the point of contact, with 24/7 coverage, for member states; the Incident and Emergency Centre (IEC) is the Agency's operational focal point. The IEC develops standards and helps strengthen member states' preparedness by developing training programs and organizing exercises. The Center has the responsibility to appraise and assist in the development of national plans as well as aiding in communication between countries. The Centre also helps in providing a coordinated international response to nuclear and radiological events.

HOW DID THE IAEA REACT TO FUKUSHIMA?

Following the March 2011 earthquake and tsunami in Japan, the IAEA notified member states and international organizations of the emergency at the nuclear plant in Fukushima, and provided states and the public with frequent briefings as it received information from Japan. As the IAEA established operations in Japan to aid in environmental monitoring, the Agency's Director General Yukiya Amano visited the country for a series of high-level meetings, including with then Prime Minister Naoto Kan. Shortly thereafter, Amano called a Board of Governors meeting to report on the results of his trip and actions taken by the IAEA and to hear concerns from other member states.

The IAEA faced serious criticism for its handling of this disaster. Some Western states as well as media within Japan called the IAEA's response too slow, confusing and dependent on information from Japan. Many experts, however, countered that the IAEA cannot accomplish a great deal without a mandate for enforcement of safety standards or receiving more resources to implement safety programs. Officials from the IAEA also countered that this critique showed a misunderstanding of the Agency's mandate, under which nuclear safety standards are voluntary. Amano called a ministerial-level conference in June 2011 to explore ways to strengthen the IAEA's role in nuclear safety. The conference adopted a Ministerial Declaration calling for improvements in global nuclear safety and asked the Agency to prepare a draft Action Plan to

address relevant issues. The action plan was approved by the IAEA General Conference and the Board of Governors in September 2011. The 2012 General Conference is slated to assess its implementation.

WHAT IS IN THE ACTION PLAN?
HOW HAS THE PLAN BEEN IMPLEMENTED?
WHAT FURTHER STEPS ARE BEING CONSIDERED?

The action plan called for strengthening: IAEA nuclear safety peer reviews; emergency preparedness and response; the effectiveness of national regulatory bodies and operating organizations; IAEA Safety Standards and their implementation; the international nuclear safety legal framework's effectiveness; capacity building; communication, information dissemination, and transparency; and nuclear safety research and development. The Agency and member states have taken a number of steps to implement the plan. In November 2011, the IAEA released a methodology to help states assess whether structures, systems, components, and operator actions can fulfill necessary safety functions when extreme events occur.

At a meeting of experts in March 2012 (the one-year anniversary of the Fukushima accident), many IAEA member states assessed the safety vulnerabilities of their own plants as a step towards greater public transparency. A common list of safety priorities appeared to emerge from these discussions. These included: enhancing nuclear power plant protection against extreme events (earthquakes, tsunamis, flooding, and tornadoes) and their consequences, such as total "station blackout," loss of reactor and spent fuel pool cooling, and loss of communications. Recommendations from this forum also focused on enhancing emergency response and hydrogen explosion control; providing for more robust instrumentation that can withstand accident conditions to ensure the continued monitoring of key safety parameters in the reactors and spent fuel pools; and implementing stronger accident mitigation measures and improving emergency management capabilities.

Several experts also proposed establishing an additional layer of protection to prevent a severe accident, regardless of the initiating event. This additional protection would prevent an accident's progression to a situation that results in fuel damage and melting. They suggested considering the provision of additional fixed and mobile equipment to provide the increased capacity to meet essential functions, such as delivering power and cooling water.

Japan announced earlier this year that in December 2012 it will co-host a ministerial conference on nuclear safety with the IAEA in Fukushima prefecture. Organizers see the conference as, among other things, an opportunity to discuss the progress on strengthening nuclear safety, including through the implementation of the IAEA action plan.

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