

## National Progress Report: Italy

March 31, 2016

Italy is fully committed to strengthening nuclear security by reinforcing national measures and international cooperation along the lines agreed to in the Washington, Seoul and The Hague Communiqués and the Washington Workplan.

### CONSOLIDATION OF THE GLOBAL NUCLEAR SECURITY ARCHITECTURE

Italy is a founding member of the G8 Global Partnership against the Spread of Weapons and Materials of Mass Destruction and participates in the Global Initiative to Combat Nuclear Terrorism (GICNT).

In 2015, Italy ratified the **2005 Amendment** to the Convention on the Physical Protection of Nuclear Materials (**CPPNM**), through Act n. 58/2015. The Act allocates specific responsibilities to competent authorities, and appoints the Ministry of Interior as the National Authority for the active physical protection of nuclear facilities and materials, both in situ and during transportation. The Act is also inspired by the operational security model adopted before the ratification of the Amendment.

As to the Act of **Ratification** of the International Convention on the Suppression of Acts of Nuclear Terrorism (**ICSANT**), this has been recently approved by the first chamber of Parliament. It includes provisions to strengthen the security of radiation sources.

Italy hosted the 2014 **Gift Basket on Nuclear Security Training and Support Centres/Centres of Excellence** (NSSC/CoE), which followed a 2012 Gift Basket sponsored by the United States. Both attracted a large number of co-sponsors (32 for the 2014 The Hague Gift Basket) highlighting the importance of these Centres in underpinning a strong and sustainable Global Nuclear Security Architecture. Striving toward implementation and sustainability, at the Washington Summit Italy will present a new and more focused 2016 Nuclear Security Training and Support Centres Gift Basket, which also takes on board the main outcomes of the High-Level Event organized in Bologna on “Nuclear Security Summit 2016 and beyond: the role of training and support centres and Centres of Excellence (CoE)”. The participants in this 2016 NSSC/CoE Gift Basket intend to support the following activities: strengthening of the IAEA NSSC Network; the establishment of regional networks to enhance regional coordination, promote best practices and share training

experiences; strengthening nuclear security training and technical support programmes; ensuring the sustainability of nuclear security training and support centres; enhancing cooperation with the IAEA, the United Nations, INTERPOL and GICNT and cooperation in the area of research and development with national and international institutes to promote scientific advancements in nuclear security.

## STRENGTHENING THE INTERNATIONAL ATOMIC ENERGY AGENCY

Italy is a major **contributor** to the IAEA regular Budget and actively supports the Agency through financial contributions to the Nuclear Security Fund and the Technical Cooperation Program. Italy also contributes to the IAEA activities related to the strengthening of the international nuclear security framework.

It actively participates in both the Nuclear Security Guidance Committee and the IAEA Nuclear Security and Support Centres (NSSC) Network. Moreover Italy is an active contributor to the drafting of the Nuclear Security Series.

Italy will attend the upcoming IAEA “International Conference on Nuclear Security: Commitments and Actions” which will take place in December 2016 including the ministerial segment.

## NUCLEAR MATERIALS CONSOLIDATION AND MINIMIZATION

The Italian national inventory of special nuclear material currently consists of limited quantities of Highly Enriched Uranium (HEU) and Plutonium stored in accordance with the CPPNM as amended. In an awareness of the importance of the timely removal and disposition of nuclear materials from facilities no longer using them, in accordance with the national programme for the **decommissioning** of existing nuclear plants, Italy has made significant efforts together with the United States to eliminate excess Highly Enriched Uranium and Plutonium. This cooperation resulted in the completion of three shipments in 2012, 2013 and 2014. Italy intends to carry forward its collaboration with the United States in order to remove the excess of HEU and Plutonium still present. In particular, Italy and the United States are jointly cooperating to implement technical activities on HEU material, preparatory to the development of other future repatriation projects.

Through these **repatriations**, Italy has contributed to the European HEU credits for the supply for research reactor needed for the production of medical radioisotopes and scientific research, in the framework of the Memorandum of Understanding agreed between the United States Department of Energy and the European Supply Agency.

The Italian national inventory has been further reduced with the shipment of Plutonium from the European Research Center located in the north of Italy.

In the framework of the abovementioned decommissioning process, in June and September 2015, the Ministry of the Interior carried out two successful multimodal transportations (road and train) of irradiated nuclear fuel from Northern Italy to France. These operations were facilitated by the well-established coordination between the central and local Authorities, before and during the transportation, in particular with regard to the assessment of internal and international threats. The transfers were monitored by a dedicated “response task force” which followed the entire cycle of operations.

#### ENHANCING NATIONAL NUCLEAR SECURITY CAPACITY

Nuclear security measures, including **transport security measures**, are implemented in accordance with the 2005 Amendment to the CPPNM and INFCIRC 255/Rev.5, together with the relevant EU Directives and in compliance with the IAEA Code of Conduct on Safety and Security of Radioactive Sources. International transportations of national irradiated fuel and nuclear materials are currently carried out along the lines set out in the national programme for the decommissioning of nuclear installations.

Following the ratification of the 2005 Amendment to CPPNM, the Italian Administrations have envisaged a review of the **Physical Protection Plans** at different installations.

Italy has further improved the efficiency of the early warning radiation network which now includes more than 1200 stations throughout the national territory, 2 national centres and 16 regional centres. The network operates 24 hours a day and it has been tested during attack simulation exercises and cross-border emergencies. Italy is also working to develop a comprehensive emergency response system. The Firefighters Department has continued to carry

out crisis management exercises, including those related to terrorist attacks with radiological materials.

#### ENHANCING EFFORTS IN COMBATING ILLICIT TRAFFICKING

In 2010 Italy and the U.S. signed a Memorandum of Understanding within the framework of the Megaports Initiative, to prevent the smuggling of nuclear and other radioactive materials through the global maritime system. Under a cost-sharing arrangement, the Department of Energy's National Nuclear Security Administration worked with the Italian Customs Agency to help secure cargo containers passing through several Italian ports. Since September 2013 the ports of Genoa and La Spezia have been equipped with mobile detection systems. Taking into consideration the key role played by Italian ports in the Mediterranean region, Italy's participation in the Initiative is crucial to enhanced security in the area.

#### STRENGTHENING NUCLEAR SECURITY CULTURE

Since its G8 Presidency in 2009, Italy has paid special attention to education, training and institutional capacity-building as essential elements for an effective safety and security infrastructure. At the 2010 Washington Summit, Italy announced the creation of an International School on Nuclear Security with the IAEA and the **International Centre for Theoretical Physics (ICTP)** in Trieste. In 2016, the School is to hold its sixth annual training course. The School is highly regarded by the participants from both developing and emerging countries and is considered as a model for other Schools of Nuclear Security. Italy also worked closely with the IAEA and the ICTP for the realization of the pilot course of the new "School of Radiation Emergency Management" held in Trieste in September 2015.

Italy's educational effort is further strengthened by **Master's courses offered by a number of Italian Universities**. The Master's Course on the "Protection against CBRN events", organized at the University of Rome "Tor Vergata", has gained an international status since the academic year 2014/2015, thanks to an agreement with the Organization for the Prohibition of Chemical Weapons (OPCW). The original Course has been divided into two new Master's Courses: a first-level course designed to train "CBRNe First Responders" and an advanced one for "Decision Makers CBRNe Advisors". Both courses received the acknowledgment as "NATO Selected" and are held under

agreements with several national governmental, scientific and academic institutions. The latest course started in March 2016.

## RECENT DEVELOPMENTS IN ITALIAN NUCLEAR ENERGY POLICY

In 2011 Italy decided to discontinue its nuclear energy programs. Nevertheless, Italy continues to maintain a strong commitment to nuclear safety and security. The Energy Strategy adopted in March 2013 acknowledged the important asset of high level expertise in nuclear technologies, including research reactors and R&D centres. Within the framework of this Strategy, national efforts are mainly devoted to decommissioning and management activities of radioactive waste and limited residual amounts of irradiated fuel and nuclear materials, including the preparatory activities of siting and construction of a national centralized repository for radioactive wastes.

The institutional framework on nuclear safety and radiation protection envisages the establishment of a regulatory authority, the National Inspectorate for Nuclear Safety and Radiation Protection (ISIN), responsible for nuclear safety, radiation and physical protection.