



NUCLEAR SECURITY SUMMIT 2014

NATIONAL PROGRESS REPORT

CHILE

1. SUPPORT TO THE CONVENTION ON THE PHYSICAL PROTECTION OF NUCLEAR MATERIAL (CPPNM) AND THE INTERNATIONAL CONVENTION ON THE SUPPRESSION OF ACTS OF NUCLEAR TERRORISM (ICSANT).

Our country has signed the Convention on the Physical Protection of Nuclear Material (April 1994), endorsed its amendment (March 2009) and ratified the International Convention on the Suppression of Acts of Nuclear Terrorism (September 2010). As for the Amendment, Chile was the first Latin-American country to accept it. It has also assisted in promoting, at a Latin-American level, the subscription (and entry into force, when applicable) of such instruments at several fora under the aegis of IAEA and GICNT.

2. STRENGTHENING OF THE NUCLEAR AND RADIOLOGICAL SECURITY NATIONAL SYSTEM

Chile has deployed substantial efforts to strengthen its technical and institutional architecture in nuclear and radiological security. Such activities include bolstering capabilities and systems; the inception of a Nuclear and Radiological Security Support Plan (INSSP) under the umbrella of the IAEA; developing additional regulations to make control more stringent and facilitate traceability of radioactive sources in Chile, as well as improving control within a security culture enhancement framework building on established plans. Activities have included several training courses, work with domestic and international agencies, and assessment and implementation task forces of specific projects.

Chile is undertaking bilateral actions to reinforce source security, as, for example, the Administrative Agreement between the Canadian Nuclear Safety Commission and the Chilean Commission on Nuclear Energy on the Import and Export of Radioactive Sources, based on the principles of the Code of Conduct on the Safety and Security of Radioactive Sources (December 2011), which has improved both countries' capacity to monitor and control source-related risks.

TRAINING

At a domestic level, several training courses have been offered, with a particular emphasis on the participation of member agencies of the Chilean security infrastructure, in its diverse aspects.

A Seminar and Workshop on Radioactive Sources Security and Management was hosted in Chile by the Northwest Pacific National Laboratory (PNNL, United States) within the framework of the Global Threat Reduction Initiative (GTRI) and CCHEN, aimed at providing information on key issues connected with radioactive sources security. Representatives from several Chilean agencies responsible for the security of radioactive sources (regulatory authorities, law enforcement agencies, criminal laboratories, intelligence agencies, Customs, the Army) were present.

The Regional Training Course on Introduction to Nuclear Forensic Investigation, organized by IAEA, was held to raise awareness and understanding in domestic and regional stakeholders about the scope and implementation of forensic investigation in nuclear security incidents. The course was attended by several Chilean and regional agencies responsible for forensic investigation in nuclear security issues (nuclear and law enforcement agencies, criminal laboratories and Customs, mainly).



As for regulatory aspects, the meeting on “Physical Security Regulations on Radioactive Sources” with the Northwest Pacific National Laboratory (PNNL) held within the GTRI framework in August 2013 made regulatory improvements more visible, particularly as regards the security model for radioactive sources during their manufacturing, use, storage and transportation, to be applied by 1st, 2nd and 3rd level authorities.

Finally, training courses have been offered on computer security assessment at nuclear facilities, the implementation of Nuclear Security Recommendations on the Physical Protection of Nuclear Material and Facilities, and the INTERPOL Conference on the risks of CBRN material and investigation of radiological and nuclear incidents, at a Latin American level, connected with CBRN threats preparedness and response (Panama, August 2013).

NUCLEAR AND RADIOLOGICAL SECURITY SUPPORT PLAN

In 2012, Chile subscribed the commitment to implement a Nuclear Security Support Plan (INSSP) as an IAEA management instrument to assist member countries in implementing an effective, time-enduring security internal mechanism. In May 2013, an IAEA Security Assessment mission was carried out with the participation of 17 national agencies responsible for nuclear security, including ONEMI - the agency in charge of emergency management-, the Chilean Commission on Nuclear Energy, Customs, Investigative Police, the Ministries of the Interior, Foreign Affairs, and Health, the Chilean Prosecutor's Agency, National Intelligence Agency, the Army, the Agricultural and Livestock Service, the Civil Aviation General Directorate and the Maritime Territory Directorate).

Several proposals for improvement are found in INSServ mission's report, which must be implemented domestically. The INSSP shall be based on the above proposals.

Within the context of the INSServ mission, the capacity to detect radioactive material at borders was assessed in regulatory and technical terms. The IAEA prepared a project on the detection of radioactive material at border posts selected on the basis of cargo and human traffic (San Antonio, Santiago Airport and Complejo Fronterizo Los Libertadores), which must be implemented in the short run, and offered its support for equipment supply.

SECURITY SYSTEM

Chile has made use of support mechanisms (IAEA and other agencies) such as international security missions advising as to the review of civil nuclear material and facilities security systems, including missions from the IAEA - such as the International Physical Protection Advisory Service (IPPAS) and the Division of Nuclear Security (NSNS) - and the US, including the National Nuclear Security Administration through the Global Threat Reduction Initiative (GTRI).

Since 2004, our country has maintained a cooperative relationship with the US Government, particularly its Department of Energy, to implement and improve security systems at nuclear facilities, thus complying with objectives in INFCIRC 225/REV 5. Additionally, jointly with the Department of Energy, it is working towards the enhancement of security in national facilities other than nuclear ones. This has recently entailed participation by national stakeholders in the medical and industrial field. Expansion into the strengthening of industrial irradiation facilities and the development of security infrastructure of sources in excess of 1000 curies in the nuclear medicine area is worthy of mention. This has been supplemented with drills at nuclear centers.

REINFORCEMENT OF CAPABILITIES

A Security Culture Awareness Plan is presently under way, under the supervision of the Nuclear and Radiological Authority, involving security aspects in domestic operators.

As for regulatory matters, the competent Authority has boosted the visibility and traceability of radioactive sources during their life cycle in the country by publishing additional import and export regulations, and making an intensive use of IAEA radioactive sources information system.

Moreover, several efforts have been made to review domestic laws and regulations on nuclear security and identify deviations from international commitments subscribed by Chile on the matter, as well as to raise awareness in the several stakeholders involved in the processes.



A remote centralized monitoring system of fixed radioactive sources is at an operational phase. It is equipped with a surveillance room reporting to the agency responsible for radiological security and control (CCHEN).

3. CONTRIBUTION TO IAEA NUCLEAR SECURITY ACTIVITIES

Chile has adopted the recommendations made in IAEA security documents and implemented the Code of Conduct in national practices, as well as reinforced the Regulatory Authority Information System (RAIS), which allows controlling and making a high-activity radioactive sources national inventory.

Our country continues to play an active role in assisting IAEA's activities in security and emergency areas. This has translated into the development of joint approaches, sharing of experience at an international level and the generation of relevant activities within the country. Through its experts, in this period, our country has actively supported several initiatives aimed at strengthening the capabilities of Member States, organized by IAEA, as the Guidelines for Implementation of Security Management and Security Plans for Radioactive Material and Ancillary Facilities, training courses on Radioactive Material Transportation Safety and other contexts (ANS), such as Research Nuclear Reactors Security (American Nuclear Society, ANS).

In March 2013, IAEA invited Chile to participate in the Sealed Radioactive Sources Global Inventory Project consisting in a research study of Member States to determine the global inventory of sealed radioactive sources in the world. Its purpose is to have an international sources inventory as precise as possible to provide key information to those interested in solving current sealed sources issues, with a special emphasis on developing countries, where sources management and security need to be strengthened, particularly as regards high activity and transuranic sources. Replying States must have an adequate regulatory framework and an advanced radioactive wastes safe management system.

The foregoing has entailed an intense work with regulatory authorities, operators of sealed radioactive sources user facilities and the radioactive wastes management group. The results of this project and any activities deriving therefrom will make sealed sources, their magnitude and evolution more visible.

4. SUPPORT TO NUCLEAR SECURITY INTERNATIONAL INITIATIVES

Chile has actively participated in and endorsed international cooperation initiatives and mechanisms to improve nuclear security and prevent nuclear terrorism, both at a global and regional level.

A number of nuclear security activities have been carried out in Chile, mostly led by CCHEN, which involve most Chilean agencies holding legal responsibilities on the matter. Said activities have included training courses, meetings with national and international agencies, assessment missions and implementation of specific projects.

Our country has been an active member of the Global Initiative to Combat Nuclear Terrorism, both within the framework of the Implementation and Assessment Group and the GICNT forum, and of the regulatory meeting on security. Also worthy of mention is our participation at the Response and Mitigation Working Group (RMWG), which prepared a Response and Mitigation Working Document (RMWD). This role was played by the Chilean Nuclear Authority, which in 2013 led one of the three main areas: preparedness.

Within the framework of meetings held by the three IAG standing working groups (Mexico City, May 2013) – Detection of Radioactive Material, Nuclear Forensics and Response and Mitigation – the organization of a security drill between Argentina and Chile stands out. Said drill will be carried out during the first half of 2014 at the borders and will allow to assess security facilities' capabilities and gain knowledge for the strengthening thereof.

Chile has developed an active regional agenda on security matters against the background of MERCOSUR agreements. Our country has acted through a coordination team to materialize MERCOSUR's Specialized Working Group on Illicit Traffic in Nuclear and/or Radioactive Material (GTETIMNR), formed by the Ministry of the Interior, the Ministry of Foreign Affairs (DISIN-DIFROL), Carabineros, Customs, the Civil Aviation Directorate and National Intelligence Agency. The Chilean Commission on Nuclear Energy (CCHEN), was appointed as domestic and international coordinator for the prevention, detection and response to radiological risk situations, particularly at border posts.



5. CONTRIBUTION TO MINIMISING HIGHLY-ENRICHED URANIUM (HEU)

The facilities where nuclear material is kept are owned by the Chilean State. They are subject to safeguards and efforts are being developed to minimize the number of said facilities. As regards nuclear material, Chile has reduced its enriched uranium reactors to less than 20% and has no highly-enriched nuclear fuel (HEU). Additionally, our country does not consider plutonium separation as part of its nuclear fuel cycle activities. In principle, the use of highly-enriched uranium in research and development initiatives is not foreseen.

6. ESTABLISHMENT OF A CENTER FOR EXCELLENCE

In 2012, at the Nuclear Security Summit (Seoul), Chile committed to establish a Nuclear Security Support Center (CASN in Spanish), the implementation of which is currently at its final stage. It will allow training in preparedness, response, detection equipment management and mitigation actions in emergencies of different origin, of a radiological nature, which involve action by security people at differing levels (authorities, operators, supervisors, stakeholders, etc.) It also considers maintaining specific equipment capacity. This will enhance security concepts consistent with radiological security.

CASN will reinforce national capabilities in response to criminal or unauthorized acts connected with nuclear and other radioactive material, radiological crimes scene management and enhancement of national coordination tasks. It has established relations with a wide array of agencies responsible for security at a national level, including ONEMI - the agency in charge of emergency management- the Chilean Commission on Nuclear Energy, Customs, law enforcement agencies, the Ministries of the Interior, Foreign Affairs, and Health, the Chilean Prosecutor's Agency, National Intelligence Agency, the Army, the Agricultural and Livestock Service, the Civil Aviation General Directorate and the Maritime Territory Directorate).

7. INCREASED EFFORTS TO COMBAT THE ILLICIT TRAFFIC IN NUCLEAR AND RADIOACTIVE MATERIAL.

Our country has been an active player in the provision and management of information, through IEIA's database (ITDB), and in the efforts deployed within MERCOSUR (Argentina, Brazil, Paraguay, Uruguay and Venezuela, with Bolivia, Chile, Colombia, Ecuador and Peru as associate members).

As explained in item 4 hereof, since 2011 Chile has developed an active regional agenda on the matter, within the context of prevention and control agreements, through MERCOSUR Specialised Working Group on Illicit Traffic in Nuclear and/or Radioactive Material (GTETIMNR), which agenda has continued into 2012 and 2013. This entails generating prevention, detection and response capabilities to face radiological risk situations, with a special emphasis on border posts.

Chilean border posts have been broken down based on risk categories in order for their monitoring and source control capabilities to be improved. Technological improvements will be made at the most critical control points (10), from a land, air and maritime perspective. Medium and low priority points will be later implemented in the medium run. The IAEA is rendering services through the Radioactive Material Detection at Border Posts project, to be soon implemented.

During 2012 and 2013, efforts deployed have been aimed at training different stakeholders, developing guidelines and procedures, identifying control needs in specific areas and points and raising awareness at institutional levels, at a regional level.

In the light of the above, the bilateral drill between Chile and Argentina, scheduled to take place in June 2014, at border posts to combat illicit traffic will allow assessing security infrastructure capabilities and gaining knowledge for their improvement.

8. STRENGTHENING OF COOPERATION BETWEEN THE NUCLEAR INDUSTRY AND THE GOVERNMENT



Our country has two research nuclear reactors dependent upon the Chilean State. Security involves participation by the Army (for security purposes) and the Chilean Commission on Nuclear Energy (CCHEN) as operator. To such end, the relevant systems are in place, their continuous strengthening having been described in item 2 of this Report.

Concerning the private sector and the public sector beyond CCHEN, no nuclear facilities exist, only industrial irradiation, nuclear medicine and radiotherapy facilities regulated and controlled by the Competent Authorities. As part of said activities, sources are controlled in terms of security, including the implementation of protection measures and systems, use and destination traceability and improvement of the security culture with a view to permanently strengthening it.

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