

Enhancing nuclear security in Senegal

By Kendall Siewert

Experts discuss implementation of INSSPs at a workshop held in November 2019 in Dakar, Senegal.

(Photo: B. Battistella/IAEA)



Senegal has increased its readiness to address nuclear security threats, due in part to the country's Integrated Nuclear Security Support Plan (INSSP). Developed in collaboration with the IAEA, this plan is one of the ways Senegalese authorities are working to establish an effective and sustainable nuclear security regime.

“Before the INSSP, we did not consider nuclear security to be a problem that affected our country, as we do not have a nuclear power programme. In cooperation with the IAEA, we are working to assess our threats,” said Ndèye Arame Boye Faye, Director General of Senegal's regulatory body, the Radiation Protection and Nuclear Safety Authority (ARSN). “Since working with the IAEA, we have also reassessed our priorities and capabilities and enhanced our competencies in the field of nuclear security.”

Nuclear security measures focus on preventing, detecting and responding to the malicious use of radioactive materials, such as acts of nuclear terrorism. Countries can benefit from a comprehensive plan to help them identify their needs and implement measures that are effective and sustainable, with the ultimate goal of preventing potential harm from ionizing radiation if radioactive material falls into the wrong hands.

An INSSP helps a country to identify and prioritize its nuclear security needs and

provides suggested actions for improvement. Upon request, an INSSP can be jointly developed by relevant national authorities and the IAEA and, when appropriate, in collaboration with other international partners.

The plan addresses all aspects related to strengthening and sustaining nuclear security. This includes a country's legislative and regulatory framework, threat and risk assessment, and physical protection regime, along with detection of and response to criminal and unauthorized acts involving material out of regulatory control. Periodic revisions are made to maintain the INSSP's relevance and sustainability over time.

114 around the world

INSSPs are tailored to fit a country's national needs, whether that involves protecting small amounts of radioactive material or larger amounts associated with a nuclear power programme. These plans help countries regardless of the maturity of their nuclear security regime.

“The value of the INSSP is recognized by many countries, whether they are just starting to establish an appropriate legislative framework for nuclear security or have been operating nuclear power plants for several decades,” said Zéphirin Ouédraogo, Nuclear Security Officer at the IAEA. To date, 114 countries have drafted, finalized or approved

INSSPs. Among them, 84 countries have officially endorsed INSSPs and are in the process of their implementation.

Senegal takes a systematic approach

In 2012, Senegalese authorities requested an INSSP because the country used radioactive sources in various industries and medicine and had some sources that were out of regulatory control. Senegal began working with IAEA nuclear security experts to develop a plan, which included numerous relevant authorities, such as the regulatory body, customs, intelligence and law enforcement agencies.

Prior to the INSSP, many authorities in Senegal thought that nuclear security was exclusively a concern of the country's security forces, said Boye Faye. "The holistic approach to the INSSP helped authorities to become aware of their own and each other's responsibilities related to nuclear security, which ultimately improved their ability to work together."

During the implementation of the INSSP, which began in 2014, Senegalese authorities received equipment and training from the IAEA, such as training on regulatory inspection techniques, and hosted regional training courses on topics including transport security and human resources development. They also worked with the IAEA to develop a comprehensive nuclear law addressing security provisions, since the country's existing legislative and regulatory framework had primarily focused on safety and radiation protection.

Within the framework of the INSSP, Senegalese authorities identified the opportunity to strengthen their nuclear security regime by ratifying the Amendment to the Convention on the Physical Protection of Nuclear Material in July 2017. This key international legal instrument obliges a country to protect its nuclear facilities and material in use, storage and transport. It also requires countries without nuclear material, such as Senegal, to have in place some legal or regulatory provisions on international cooperation in order to prevent and combat acts of nuclear terrorism and other criminal offenses involving nuclear material and facilities.

As part of the regular review and update cycle for INSSPs, Senegal's INSSP was

revised in 2017 to reflect the country's achievements since the plan's implementation and to review its nuclear security priorities and needs. The next update is scheduled for 2020.

Training and helping others

The INSSP has helped the country's nuclear regulator to develop the capacity to provide training to various authorities, such as customs officials, on the detection of nuclear and other radioactive material out of regulatory control at places such as border crossings and airports. Senegal has also used the plan to seek and coordinate complementary assistance from other international partners, building upon the competencies developed through IAEA support.

A key benefit of the INSSP is that it enables the country concerned, the IAEA and other entities willing to provide nuclear security assistance to plan and coordinate activities from technical and financial points of view. Such coordination optimizes the use of resources and reduces the risk of duplication.

Supporting countries worldwide in enhancing nuclear security is one of the key functions of the IAEA. The IAEA Nuclear Security Series publications provide countries with international consensus guidance for this purpose. The INSSP structure is based on the recommended nuclear security provisions set forth in this series, which means that all suggested actions in the INSSP are tailored to help establish, maintain and sustain the nuclear security regimes of a country.

As part of these activities, the IAEA regularly conducts regional workshops to coordinate the implementation of INSSPs, such as the workshop held in November 2019 in Dakar, Senegal. This workshop brought together participants from 38 African countries.

"The goal of this workshop was to facilitate the exchange of good practices, identify challenges and discuss opportunities, both national and regional, related to the implementation of nuclear security activities within the framework of INSSPs," said Ouédraogo. "Improving nuclear security globally begins by improving nuclear security nationally and regionally."

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—Ndèye Arame Boye Faye, Director General, Radiation Protection and Nuclear Safety Authority, Senegal
