

Support to Southern African States in Nuclear Safety and Safeguards

Newsletter 2, February 2020

“An illustration of the partnership between the European Union
and the Southern African Development Community”



Representatives of the project participating countries and of SADC Nuclear Regulators' Network gathered on 27 November 2019 in Gaborone for their fourth joint meeting. Ambassador Jan Sadek, Head of the EU Delegation to Botswana and to SADC, praised the meeting as another illustration of the partnership between the European Union and the Southern African Development Community that covers many areas of mutual interest, including nuclear safety and security. He emphasized that the event is consonant with the objectives of the EU-SADC Economic Partnership, as it touches on the security/development nexus. Speaking of behalf of the Executive Secretary of SADC, Ms. Mapolao Rosemary Mokoena, Director for Infrastructure, SADC Secretariat, acknowledged that the member states are at different levels of developing their national strategies for the peaceful use of nuclear power and applications. She highlighted two specific objectives of project MC 5.01/15 B that are of great importance for the SADC region: harmonization of legal frameworks and capacity building of people and institutions. Ms. Dimpho Mogami, Secretary for Justice, Ministry of Defence, Justice and Security, Botswana, singled out the achievements of project MC 5.01/15 B with a focus on its outreach to more partners and to the younger generation. Dr. Messaoud Baaliouamer, the Executive Secretary of AFCONE, reminded the European Union-African Union joint commitment to promote sustainable development, peace, security, democracy and human dignity. He made an overview of AFCONE's efforts to encourage better collaboration among the various African organizations and forums in the field of nuclear and called for appropriate coordination of all regional networks. Prof. Jo-Ansie van Wyk, a political scientist from the University of South Africa, noted that national nuclear ambitions are often overriding a regional approach and insisted on AFCONE's leading role and SADC's greater involvement in building Africa's nuclear safety, security and safeguards.

Present at the joint meeting of the project partners were representatives of the British High Commission and the embassies of France, Japan and Zimbabwe in Gaborone.

Our Results:

120+ professionals from national institutions of Zambia, Malawi, South Africa, Mozambique, Tanzania, Botswana, Zimbabwe, the Kingdom of Eswatini and DR Congo trained in nuclear safety and safeguards in the transportation of Uranium Ore Concentrate and other radioactive materials;

43 experts from Tanzania, Zambia, Zimbabwe and Malawi acquired knowledge and skills to use the web-based Information Tracking System to monitor the transportation of radioactive materials within and across national borders;

23 representatives of public organizations and academia from 13 southern African states learned from the experience of European nuclear institutions during a study visit to Finland;

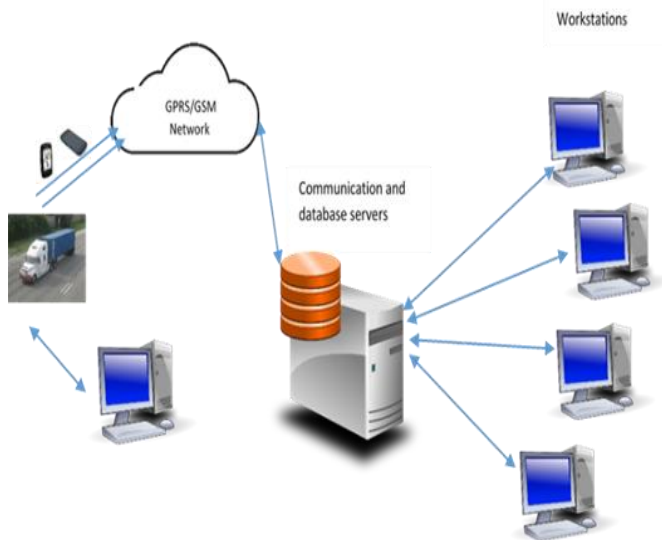
3 case studies on the national legal and institutional frameworks for the management of RN materials in Malawi, Tanzania and Zambia elaborated;

4 countries, Tanzania, South Africa, Malawi and Zambia, host servers, workstations and equipment – the key elements of the web-based Information Tracking System elaborated as part of the project;

400+ African high school and university students took part in nuclear advocacy initiatives supported by the project and the ISTC in Kenya, Zambia and South Africa.

A Web-Based Information Tracking System to Monitor the Transportation of RN Materials

The Software Company Ltd., developer of the Information Tracking System (ITS) for the project participating and partnering countries, has elaborated a thorough training methodology for the appropriate target audience and skill sets. The training consists of a three-day modules of instruction with lectures, presentations, group discussions, and a final test. The training materials include a manual and a set of scenarios designed to allow students to apply various IST functionalities. An exam is administered at the end of the training. To pass, a student must answer correctly at least fifteen from all twenty questions. A passing grade earns certification for the acquired skills to use the ITS.



Testimonials by trainees

We are glad that we are going to host this system; we will provide the necessary infrastructure to run it. Adam Marco, Tanzania

The system is very helpful. Really nice app! Ian Mukabe, RPA, Zambia

This training was so informative because it answered the very important questions. We were able to track the shipment from the start point to the end point. Gift Mmangitsa, Malawi

The experts are teaching us how the web-based system works and how we, as a region, can incorporate that to ensure safe and secure transport of radioactive materials. Natsai Vanessa Mutanga, Zimbabwe



Forty-three experts from Malawi, Tanzania, Zambia and Zimbabwe acquired appropriate skills during the two specialized trainings. In Arusha, Tanzania and in Livingstone, Zambia, the trainings in April and in December 2019, respectively, were completed with a demonstration of the application of the ITS. The real-time simulations of tracking the movement of a radiation sources with the ITS were captured in a short promotional video. The system allows the collection and evaluation of all relevant data in a fast, continuous, comprehensive and consistent manner. The ITS provides an opportunity for information sharing among the authorities of the participating countries while letting other SADC users at national and international level to take part upon request.



From the Production Mine

The Zambia Radiation Protection Authority (RPA) in collaboration with the International Science and Technology Center hosted a training course on nuclear transportation safety in Lusaka in July 2019. The fifty-three participants came from line ministries, regulatory bodies, hospitals, mining

industries, a uranium exploration company, a research and training centre, the national anti-terrorism institution, and companies involved in industrial radiography and in transportation. Participants from customs offices from DRC and Mozambique joined the training. Currently, the largest quantity of radioactive material transported through Zambia is the Uranium Ore Concentrate (UOC) from Kayelekera Mine in Karonga, Malawi to Walvis Bay, Namibia. Lecturers from the RPA explained how the Authority is involving

Joining Forces with the SADC Nuclear Regulators' Network



The third joint meeting of SADC Nuclear Regulators' Network and the Steering Committee of project MC5.01/15B completed on a high note in Malawi on 11 October 2019, when the 40+ participants adopted common decisions about the activities they will implement during the extension of the project with 12 months until November 2020. These activities will include: trainings to hone the skills of experts in operating the Information Tracking System (ITS) for monitoring and reporting the movement of radioactive materials; a table-top and field exercise on the information management in the nuclear field; awareness raising events as an effort to spread the word about the project's potential

to assist SADC member countries to harmonize their radiation safety and safeguards regulations and process.

On 29 April 2019, the Prime Minister of Tanzania Hon. Kassim Majaliwa inaugurated the Second Joint Meeting of SADC Nuclear Regulators' Network and the fifth Steering Committee of Project MC 5.01/15 B. Mr. Majaliwa greeted over 40 participants from 16 countries and international organizations from Africa, Europe and Central Asia, who gathered at the city of Arusha, headquarters of the Tanzanian Atomic Energy Commission. The Prime Minister extended his "deep appreciation to the EU for the continuous support in ensuring that the nuclear safety, security and safeguards in the region are reinforced". Mr. Majaliwa recalled: "the transportation of nuclear and other radioactive material is a global concern and not a one-country issue. It is therefore important for the SADC region to have harmonized guidelines for nuclear material safety and security."



A three-day regional conference on enhancing Africa's capacity on nuclear safety, security and safeguards took place in Lusaka in August 2018 with over 110 participants from the public, private and civil society sectors from ten African countries. Bernard Kapasa, Permanent Secretary at the Cabinet office, speaking on behalf of Dr. Roland Msiska, Secretary to the Cabinet, delivered a keynote speech at the conference, convened by Zambia's Radiation Protection Authority and several public institutions and government agencies. Heads and senior managers of radiation protection authorities from Malawi, Tanzania, Zambia and South Africa talked about their national radiation safety regimes and infrastructures. One of the outcomes of the conference is the establishment of the Zambian chapter of

the continental network African Young Generation in Nuclear (AYGN). The young professionals adopted a position statement, pledging -inter alia- 'to support the application of safeguards requirements ... and to create awareness and commitments thereof among the governments and the populations across the [SADC] member states...'

to the Exporting Seaport

stakeholders in drafting regulations on transportation of radiation sources. During a session on the project's web-based Information Tracking System (ITS), one of the participants, equipped with GPS and a cellular phone, was dispatched on the streets of Lusaka. The trainees observed his movements projected on a screen and followed his communication with the operator. In a specially designed questionnaire, they shared valuable comments about the desired improvement of the ITS. The trainees visited the Chirundu Border post, met customs officials and attended a presentation by the Zambia Revenue Authority on safety and security incidents of radioactive materials.

The training in Zambia followed in the steps of the first training on "Nuclear Safety, Security and Safeguards in the Transport of UOC and other Radioactive Materials" conducted in November 2018 by the National Nuclear Regulator (NRR)/Center for Nuclear Safety and Security in Krugersdorp, RSA, for over 40 experts from government agencies and regulatory bodies representing Malawi, Zambia, Tanzania, South Africa, Botswana, DRC and the Kingdom of Eswatini.

The European Union Shares Best Practices with its African Partners

Finland has a most impressive record in Europe in terms of proven expertise in nuclear safety and of impeccable normative and institutional framework for the use of nuclear energy. Organized by ISTC in cooperation with Environics Ltd., the CBRN Suomi Association, and Societal Security Solutions Ltd., a week-long study visit brought to Finnish nuclear institutions 23 representatives of public organizations and academia from 13 southern African countries in June 2019. They visited Finland's Radiation and Nuclear Safety Authority (STUK), the Helsinki City Rescue Department, the Finland's biggest port Hamina-Kotka – a major cargo harbour on the Baltic Sea. The African experts travelled to Eurajoki site and visited the TVO Nuclear Power Plant, which provides almost a quarter of the Finnish net electricity acquisition, and the underground rock characterization nuclear waste facility ONKALO.



Advocating the culture of nuclear safety, security and safeguards



ISTC, together with the International Atomic Energy Agency, the African Commission on Nuclear Energy, the World Nuclear University, the International Youth Nuclear Congress and other international organizations, delivered a strong message of encouragement to the African Young Generation in Nuclear (AYGN) as this continent-wide network of young professionals convened its Second African Youth Nuclear Summit in Pretoria on 8-11 October 2019. AYGN gathered over 100 participants from the fields of nuclear science, research, education and industry and invited managers and CEOs from public and private nuclear bodies and institutions to discuss a wide range of issues related to the peaceful and innovative use of nuclear power, technologies and products.

Project MC5.01/15B attracted attention at the first International Regulators Conference on Nuclear Security in Africa, convened in Morocco in October 2019. Members of the Project's pool of experts presented a paper on the existing safety and security frameworks, challenges and opportunities for the strengthening and harmonization of nuclear regulatory frameworks in Malawi, Namibia, Tanzania, Zambia, and in the SADC region at large. The paper depicts the overall situation of the safety and security regimes in the participating countries - enacted laws, promulgated regulations, and established policies - that are applicable to uranium mining, processing, reclamation, long-term stewardship, transportation, and security.

ISTC acknowledges duly the role of the African Commission on Nuclear Energy (AFCONE) in putting together the puzzle of sub-regional collaboration into the larger continental scheme. AFCONE and ISTC established relations in April 2019. On 25 June 2019 the ISTC Management became the first external delegation to officially visit the new AFCONE Headquarters in Pretoria. Three months later, ISTC and AFCONE signed a Memorandum of Cooperation that aims to help establish specialized human and operational capacities able to fully meet the African demand for peaceful nuclear applications in contribution to development goals.

Lessons from the implementation of Project MC5.01/15B were shared at the ESARDA Symposium on *Safeguards and Nuclear Material Management* convened in May 2019 in Stresa, Italy. At a roundtable on *Outreach and Partnership*, Kamen Velichkov made a presentation based on the experience accumulated by ISTC throughout the implementation of EC-funded projects in Africa, and through the support ISTC accorded to the establishment of the *African Young Generation in Nuclear*. ESARDA is an association of European organizations formed to advance and harmonize research and development (R&D) in the area of nuclear safeguards.

