

Strengthening Transport Safety for Radioactive Material in Namibia: Challenges, Experiences, and Opportunities for International Collaboration

The safe and secure transport of radioactive material is essential to protect public health, the environment, and critical infrastructure. Namibia, as a significant uranium-producing nation, occupies a strategic role in the global nuclear supply chain and faces challenges in ensuring transport safety for materials used in mining, healthcare, and research. This submission examines Namibia's current transport safety framework, documents operational experiences and gaps, and identifies practical opportunities for regional and international collaboration to strengthen capacity.

This study uses a mixed approach: a review of national regulations and industry guidance, analysis of operational practices in mining supply chains and port operations, and interviews with stakeholders including the Namibian Radiation Protection Authority, mining logistics managers, customs officers, and emergency responders. The assessment focuses on packaging and labeling compliance, transport tracking and monitoring, training and competency of personnel, and emergency preparedness for incidents during long-distance land and maritime transport.

Key findings indicate that Namibia has adopted many international technical standards for packaging and labeling, and some industry operators follow robust internal procedures. However, systemic gaps remain: limited availability of specialized transport containers, inconsistent real-time monitoring and tracking tools, and a shortage of specialized training for first responders and customs personnel. Cross-border shipments present further complexity due to variable regional capacities and long transit routes which increase response times in the event of an incident. The analysis also identifies uneven resourcing for radiation monitoring equipment at intermediate transfer points and port facilities.

Despite these constraints, there are strong foundations for improvement. The establishment of a national Radiation Protection Authority and prior participation in IAEA training initiatives provide a platform for scaling capacity building. Industry-regulator partnerships have demonstrated the feasibility of implementing site-level monitoring and emergency drills. There is clear potential to adopt low-cost tracking and tamper-detection technologies, expand targeted training programs for transport operators and first responders, and integrate transport safety into regional corridor plans.

This submission proposes a set of pragmatic recommendations: (1) strengthen regulatory guidance and harmonize cross-border procedures with neighbouring states; (2) prioritize modular training and certification for customs and emergency personnel; (3) invest in basic monitoring and tracking infrastructure at key nodes (mining sites, transfer hubs and port facilities); and (4) pursue targeted technical cooperation with IAEA and regional partners to pilot tracking and response systems adapted to long-distance land and coastal routes.

Support for participation at this conference would enable exchange of best practices, access to technical guidance, and the formation of partnerships necessary to implement the recommendations. Sharing Namibia's experiences will also inform broader discussions on transport safety in resource-exporting developing countries and contribute to strengthening the global transport safety framework.

Country or International Organization

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