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Overview of Canada's National Nuclear Forensics Library Development Programme

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The Government of Canada has launched the Canadian National Nuclear Forensics Capability Project (CN-NFCP) as a whole-of-Government initiative to augment Canada's national capacity to respond to the threat of nuclear and other radioactive material out of regulatory control. As part of this initiative, the Canadian Nuclear Safety Commission (CNSC) was charged with the task of developing a National Nuclear Forensics Library (NNFL) cataloguing Canada's nuclear and other radioactive material holdings.

Canada's NNFL consists of databases and an analytical component that consolidates information about our material holdings in a manner that allows for the potential origin attribution of a material (or sample thereof) that is intercepted or interdicted in the response to a radiological and/or nuclear (RN) threat or security event.

This paper will provide an overview of the process that the CNSC and other government stakeholders undertook to define the objectives and scope of the NNFL development programme, including a discussion on the instruments that enable it. Furthermore, the paper will discuss the technology development component of the programme for addressing NNFL requirements related to data management and pattern recognition methods for comparative query. Lastly, the paper will provide a status update on the development of Canada's NNFL, including preliminary performance metrics.

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