

Investigation, prosecution and adjudication of radiological and nuclear terrorism

by Talgat Toleubayev

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Terrorists and organized criminal groups constantly seek to obtain radiological and nuclear materials to kill or cause substantial injury to others by detonating “dirty bombs”, dispersing these materials, or exposing others to toxic and harmful health effects. Their ultimate objective is to cause the maximum level of harm and panic among the population due to the destructive and psychological consequences of such attacks. Although a sophisticated level of education as well as special conditions are needed to create a very powerful bomb, the availability of certain open source literature and the relatively easy access to radiological and nuclear materials facilitate these criminal actors’ capacity to acquire materials that can be used to build radiological and nuclear weapons.

According to the International Atomic Energy Agency’s (IAEA) Incident and Trafficking Database (ITDB), 4,075 confirmed incidents were reported from 1993 to 2022. Given the fact that only 143 participating countries in the ITDB report about their incidents on a voluntary basis, we do not have a real picture of the scale of incidents worldwide. Out of this overall number of incidents reported, 344 of them were related to incidents likely to be connected with trafficking or malicious use. This explains why almost 8,5 percent of all

reported incidents to the IAEA attracted the attention of investigators, prosecutors, law enforcement agencies, and other relevant authorities.

For the purpose of thwarting the illicit trafficking of chemical, biological, radiological and nuclear (CBRN) materials, investigative and prosecutorial authorities may intervene at any stage in the process of their acquisition, stockpiling, production, transfer, use or misuse. Prosecutors need to provide a very strong case in a court of law to convince the judge and jury of the deliberate nature of such crimes and this must be supported with immaculate evidence. Yet, it takes many years for the criminal case to go from the crime scene to the adjudication in the courtroom. This long process may impact the evidence’s integrity.

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It is obvious, that the probability of radiological and nuclear terrorism may be low due to stringent regulatory and control regimes enforced by

states, but the impact of such incidents when materials fall into the wrong hands will be very high. Criminals tend to target the weakest link of the entire security chain in order to obtain these materials during their production, legitimate use, transportation, and storage. Access to radiological and nuclear materials has also recently become more realistic due to such negative factors as the growing nexus between crime and terrorism; ongoing regional instabilities; uncontrolled territories; and the abundance of materials

as part of some failed states' historical heritage.



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The most challenging parts of investigating and prosecuting these criminal cases is when the crime scene is contaminated with chemical, biological, radiological and nuclear materials. As a result, different response methodologies and

additional mechanisms will be required to protect investigators, first responders and other actors involved in the crime scene and to keep the evidence intact. Fortunately, some of these procedures are already well referenced and covered in various manuals published by partner international organizations.

One such publication is the [IAEA's Nuclear Security Series 22G, entitled Radiological Crime Scene Management Implementing Guide](#). This document was jointly sponsored by

the IAEA, UNICRI and Interpol when it was initially published in 2014. Currently, the guide is being updated by the IAEA with some inputs provided by UNICRI. This joint initiative between the IAEA and UNICRI led to the design of a second complementary publication: the Prosecutor's Guide to Radiological and Nuclear Crimes, which UNICRI is developing in close coordination with the IAEA, the United Nations Office on Drugs and Crime (UNODC), the Nuclear Forensics Centre of the European Commission Joint Research Centre

(JRC) and the International Association of Prosecutors (IAP).

The Prosecutor's Guide to Radiological and Nuclear Crimes will be a complementary document for prosecutors, investigators and judges with some useful tips, lessons learned and best practices from previous real criminal case examples, which may serve as a precedent. A step-by-step recommendation, aimed at successful investigation and building a criminal case for the prosecution of radiological and nuclear crimes will be

an integral part of this manual. A guidance manual covering international conventions and legal instruments, touching on legislation and criminalization aspects, explaining national capabilities in investigation and prosecution, including investigative intelligence, and outlining prosecutorial challenges, success stories and appeal processes will support all relevant players in this process.

The initial story with the UNICRI's series of action-oriented guidance manuals "From the

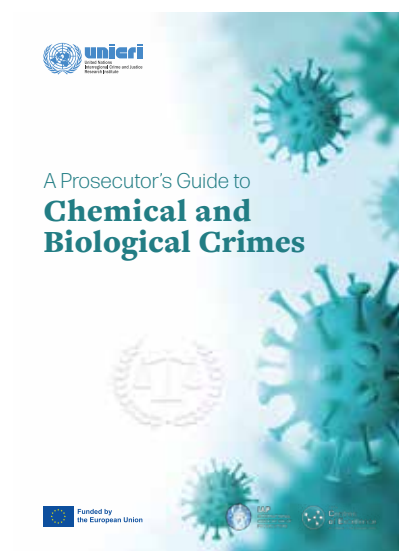
The Prosecutor's Guide to Radiological and Nuclear Crimes will be a complementary document for prosecutors, investigators and judges



Crime Scene to the Courtroom”, started back in 2020. In close cooperation with relevant partner international organizations and subject matter experts, UNICRI started developing its guidance manuals dedicated to prosecutors, investigators, law enforcement and judicial authorities. This action was endorsed by partner countries within the framework of the European Union Chemical, Biological, Radiological and Nuclear Risk Mitigation Centres of Excellence Initiative (EU CBRN CoE) and fully funded by the Foreign Policy Instruments (FPI) Service of the European Commission.

The process of successfully going from the crime scene to the courtroom requires the different agencies to understand the complex scientific regulations and procedures and acquire the necessary awareness and knowledge related to the CBRN materials used by perpetrators. The investigation, prosecution and adjudication of such crimes require authorities to possess knowledge on the different CBRN materials, the methods that perpetrators use to plan and execute the crime, the forensic capabilities, the intelligence and information sharing methods, and many more. The involvement, coordination, and cooperation of national CBRN teams, prosecution and justice authorities, investigation and law enforce-

ment officials, forensics laboratories, research facilities, and intelligence agencies, all contribute to safely addressing the different aspects of the crime. Moreover, while such crimes are under the responsibility of national authorities, international and regional cooperation is extremely useful and necessary.



This initiative brought its first results with the issuance and dissemination of [A Prosecutor's Guide to Chemical and Biological Crimes](#), which became central in the development of capacity-building activities aimed at enhancing knowledge and skills about the entire process of the case investigation, starting from the crime scene contaminated with chemical and biological materials to the eventual prosecution and adjudication of the crime in the courtroom.

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A comprehensive capacity-building and training package was developed by UNICRI to integrate the provisions of these CBRN Guides into the professional duties of prosecutors in the partner countries and strengthen their investigative, prosecution and adjudication capabilities. The training package consists of the following theoretical courses and practical exercises:

- The **Table top exercise (TTX)** which brings together the strategic and operational level decision makers from the beneficiary countries by using some of the real-life case examples integrated in the Guide. The TTX helps beneficiaries to identify their needs, gaps and priorities, as well as help them to effectively address those needs and tackle the gaps during the activities and in the long-term.
- **Building a case for the prosecution of CBRN crimes training** is a standalone, modulable course

that consists of 37 lessons that can be adapted based on the specific needs of the beneficiaries. The training package allows the participants to learn about the entire process of investigating a case from the crime scene contaminated with chemical and biological materials to the eventual prosecution and adjudication of the crime in the courtroom.

- The **Moot court or mock trial**, a practical simulation training activity of the court proceedings. Participants have the opportunity to apply the theoretical

skills they learned during the training courses and to successfully practice the prosecution of a CBRN crime in a simulated moot court with the participation of real judges, prosecutors, law enforcement officers and other relevant authorities.

- The **Train-the-Trainer (TTT)** course that aims to incorporate these training courses into the curriculum of training institutions or academies for prosecutors, law enforcement or police. Participants develop the knowledge and skills needed to incorpo-

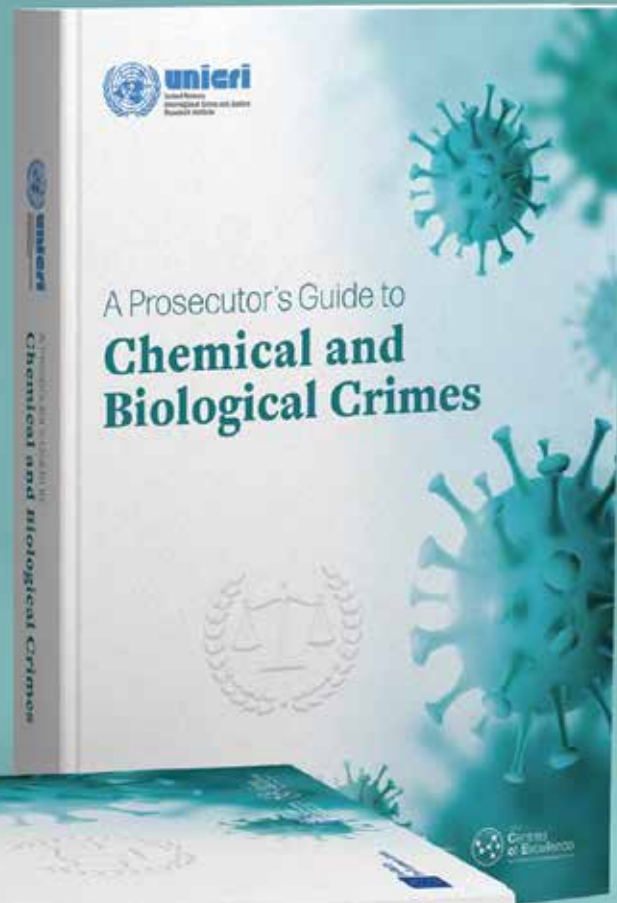
rate the guides and the training package as part of their training curriculum. Training institutions will be involved in this initiative from the outset to ensure their support and engagement.

While this training package is intended primarily for prosecutors, it is also targeted at other judicial and investigative agencies due to the cross-cutting nature of prosecutorial work. This includes relevant law enforcement authorities which are leading the investigation and prosecution from the crime scene to the courtroom.



ABOUT THE AUTHOR

Talgat Toleubayev works as the Regional Coordinator within the United Nations Interregional Crime and Justice Research Institute's CBRN Risk Mitigation and Security Governance Programme since 2019. In this position, he coordinates activities and projects for 10 countries in South East and East Europe region within the framework of the European Union's CBRN Risk Mitigation Centres of Excellence Initiative. He also coordinates the development of a series of action-oriented guidance documents and the capacity building and training packages of the UNICRI, aimed at successful investigation, prosecution, and adjudication of CBRN crimes. He is a retired police Lieutenant-Colonel.




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