1. Introduction

Reference is made to two letters by the UN Legal Counsel dated 30 October 2019 and 19 November 2020, addressed to the former Acting Director General of the International Atomic Energy Agency, Mr Cornel Feruta, and the Director General of the International Atomic Energy Agency, Mr Rafael Mariano Grossi, respectively. In these letters, the IAEA was invited, at the request of the International Law Commission, to provide "*comments and observations*" on the "*draft principles on protection of the environment in relation to armed conflicts*", adopted by the International Law Commission at its seventy-first session.

In this connection, we share some general comments and individual specific observations, based on the mandate and experience of the IAEA which are attached to this note. These comments and observations predominantly relate to the functions of the IAEA envisaged under Article III(A)(6) of its Statute, which authorizes the Agency to "establish or adopt ... standards of safety for protection of health and minimization of danger to life and property ... and to provide for the application of these standards to its own operations as well as to the operations making use of materials, services, equipment, facilities, and information made available by the Agency or at its request or under its control or supervision; and to provide for the application of these standards, at the request of the parties, to operations under any bilateral or multilateral arrangement, or, at the request of a State, to any of that State's activities in the field of atomic energy".

The IAEA has, to date, published a series of 131 such <u>Safety Standards</u>, which provide fundamental principles, requirements and recommendations to ensure nuclear safety, serve as a global reference for protecting people and the environment, and contribute to a harmonized high level of safety worldwide. I note that the IAEA has, "*at the request of a State*" applied these standards in a variety of settings, including post-conflict situations involving radioactive materials. In this respect, the IAEA has assisted States with addressing environmental consequences linked to depleted uranium ammunitions, nuclear and radioactive installations, and nuclear weapons testing.

I. General Comments

(1) Depleted Uranium Ammunitions

With a view to radioactive residues from the use of depleted uranium in conventional munitions in armed conflicts, I note that particles dispersed in the environment and ammunition remnants may constitute potentially serious hazards for the environment and populations in affected areas alike. Yet, the IAEA has found that both safe management of these hazards and environmental remediation actions are frequently attainable, if desired. In these contexts, the IAEA has, in consultation and collaboration with United Nations system organizations, including the United Nations Environment Programme (UNEP) and the World Health Organization (WHO), performed radiological assessments and produced recommendations to governments on managerial actions to address the presence of depleted uranium in the environment, resulting in the protection and reassurance of people and States involved.

Specifically, upon request, the IAEA will evaluate existing information relevant to a radiological assessment and may participate in the collecting of environmental samples where local authorities are not trained to conduct such sampling. These samples are then measured in IAEA and international independent laboratories. The IAEA subsequently convenes teams of independent recognized experts that produce radiological assessments, as well as recommendations for the management of radioactive waste and remediation activities based upon the results of corresponding analyses. The relevant results and recommendations are then provided to the affected State, which remains responsible for implementation. The IAEA disseminates these results through publications (see, e.g., documents STI/PUB/1164 of August 2003 (Kuwait) and STI/PUB/1434 of June 2010 (Iraq), published in the IAEA Radiological Assessment Report Series).

(2) Nuclear and Radioactive Installations

A second potential source of risk to people and the environment linked to nuclear safety that may arise in the context of armed conflicts, relates to effects on nuclear and radioactive installations. Here too, upon request, the IAEA has provided assistance to States involved in armed conflicts and States participating in subsequent remediation efforts. In this context, I may refer, for example, to a request received from the government of Iraq in 2004, which entailed, inter alia, preparation, by the IAEA, of studies to determine the efforts needed to address risks emanating from nuclear and radioactive installations and to construct plans and programmes to support and implement this endeavour. The principal outcome of these studies was the Iraq Decommissioning Project, which focused on addressing the decommissioning of Iraq's former nuclear facilities and capacity building for Iraqi scientists from 2006 to 2013. During this period, significant decommissioning capacity was established within Iraq, and ongoing decommissioning of nuclear facilities throughout the State continues with support from Iraqi ministries and various international agencies, including the IAEA and the European Commission.

(3) Nuclear Weapons Testing

While the IAEA has not been requested to provide assistance relating to the effects of the use of nuclear weapons during armed conflicts on the public and the environment, its experience both with a view to environmental remediation after accidents at nuclear powerplants and nuclear weapons tests, may be especially relevant in post-conflict radiological situations involving the use of nuclear weapons. In the past, where radioactive residues from nuclear weapons testing were located in States lacking infrastructure and expertise necessary to evaluate associated radiation risks and remediation, or in cases where States have felt that an additional assessment was necessary, States occasionally requested IAEA assistance. In this regard, the IAEA has received requests from affected or testing States with respect to tests carried out in locations such as Algeria the Marshall Islands and Muroroa and Fangataufa (see, e.g., documents STI/PUB/1215 of 2005 (Algeria), STI/PUB/1054 of 1998 (Marshall Islands), published in the IAEA Radiological Assessment Report Series and Mururoa and Fangataufa at the following reference https://www.iaea.org/publications/4728/the-radiological-situation-at-the-atolls-of-mururoa-and-fangataufa

II. Specific Observations

While a variety of provisions under various documents published within the IAEA Safety Standards Series intersect with the subject matter of the draft principles on protection of the environment in relation to armed conflicts and the commentaries thereto (UN Document A/74/10), individual provisions appear particularly relevant in the present context and appear to merit corresponding observations. The following represents a brief chronological summary of such observations, pertaining to relevant provisions and practice linked to the IAEA.

Paragraph (6) of Principle (4) ("[d]*esignation of protected zones*"), addresses the significance of the term "*cultural*" with a view to protected zones. In this context, it is noted that within IAEA Safety Standards, definition of the term "*environment*", in the context of environmental protection, has been established, inter alia, by an information note referencing the "*protection and conservation of … amenities used in … cultural … activities*" (Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards (IAEA General Safety Requirements Part 3, No. GSR Part 3), p. 391).

Paragraph (9) of the same Principle refers to designation of protected areas by reference to "*rights of indigenous peoples*" and Principle (5) ("[p]*rotection of the environment of indigenous peoples*") refers, inter alia, to the "*special relationship between indigenous people and their environment*" (paragraph (1)). With respect to radioactive discharges, it is noted that IAEA Safety Standards have denominated, among others, "*indigenous peoples living in the vicinity of* [a] *facility or activity under consideration*" as "*interested parties*" (Regulatory Control of Radioactive Discharges to the Environment (IAEA General Safety Guide, No. GSG-9), p. 42).

Principle (10) ("[c]*orporate due diligence*") indicates that "*States should take appropriate legislative and other measures aimed at ensuring that corporations … exercise due diligence with respect to the protection of the environment, including in relation to human health, when acting in an area of armed conflict or in a post-armed conflict situation*". Especially where armed conflicts have occurred in States that lack legislative and regulatory frameworks for the protection of the environment from hazardous materials such as radioactive material, adoption of relevant international safety standards, such as the IAEA Safety Standards, may assist affected States with regulating the activities of relevant corporations operating on their territory.

Principle 15 ("[e]*nvironmental considerations*") provides that "[e]*nvironmental considerations shall be taken into account when applying the principle of proportionality*". It is noted that IAEA Safety Standards provide assessment methodologies and criteria to define the level of harm or risk of harm to people and the environment emanating from ionizing radiation, ranging from negligible and acceptable, to harmful and severely harmful for instance, IAEA Fundamental Safety Principles¹, IAEA General Safety Requirements Part 3²; ; IAEA General Safety Requirements Part 7³ ; IAEA General Safety Guide No GSG-8⁴; IAEA General Safety Guide No GSG-10⁵]. Perhaps, these methodologies and criteria may prove useful in the context of applying the principle of proportionality with a view to environmental considerations associated with hazardous materials, in particular munitions.

Principle 23 ("[p]*eace process*") stipulates that "[p]*arties to an armed conflict should* ... *address matters relating to the restoration and protection of the environment damaged by the conflict*" and that "[r]*elevant international organizations should, where appropriate, play a facilitating role in this regard*". In this context reference is made to the comments above relating to the application of IAEA safety standards pursuant to Article III(A)(6) of the IAEA Statute upon request from States [for instance, IAEA Safety Guide No WS-G-3.1⁶], and previous instances where the IAEA has been requested to assist with remediation in post-conflict situations, for example, where environmental risks arose subsequent to use of depleted uranium ammunitions.

Principle 24 ("[s]*haring and granting access to information*") provides for the granting of "access to relevant information by States and relevant international organizations", while Principle 25 ("[p]ost-armed conflict environmental assessments and remedial measures") stipulates that "[c]ooperation among relevant actors, including international organizations, is encouraged with respect to post-armed conflict environmental assessments and remedial measures". Once more referring to the examples provided under general comments above regarding the IAEA's experience in post-conflict situations, it is noted that individual States have provided the IAEA with information which was necessary to perform assessments and develop recommendations for relevant remedial actions. Similarly, as regards cooperation, reference is made to the comments relating to depleted uranium ammunitions and nuclear installations, with respect to which the IAEA supported environmental assessments and advised on remedial measures, in cooperation with affected States, other parties to armed conflicts, assisting States and international organizations such as UNEP and WHO.

¹ In particular Principle 5 of SF-1 (Optimization of protection)

² Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards

³ Preparedness and Response for a Nuclear or Radiological Emergency

⁴ Radiation Protection of the Public and the Environment

⁵ Prospective Radiological Environmental Impact Assessment for Facilities and Activities

⁶ Remediation Process for Areas Affected by Past Activities and Accidents. This guide is being revised and will be superseded by IAEA General Safety Guide No GSG-15 (in publication)

Principle 27 ("[r]*emnants of war*") indicates that, "*after an armed conflict, parties to the conflict shall seek to remove or render harmless toxic and hazardous remnants of war*". In addition to what has been written above, I note that IAEA Safety Standards provide for identification and quantitative assessment of hazards and risks of hazards, as well as for the remediation or removal and safe management of radioactive remnants and wastes related to radioactive and nuclear materials which may result from armed conflicts [for instance, IAEA Safety Guide No WS-G-3.1]. The practice of the IAEA has thus included applying Safety Standards as a basis for providing assistance in post-conflict situations with a view to the removal of hazardous materials.

Principle 28 ("[r]*emnants of war at sea*") provides that "[s]*tates and relevant international organizations should cooperate to ensure that remnants of war at sea do not constitute a danger to the environment.*" In this context, it is of particular note that the IAEA acts, in cooperation with the International Maritime Organization, as a technical advisor under the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter 1972, also known as the London Convention. The convention addresses dumping, accidents and losses at sea and encompasses, among others, radioactive material within its scope. It may be of interest to the Commission that the IAEA has established and maintains a relevant international database, which includes information on military equipment or remnants which are radioactive, as well as nuclear material resulting from past dumping activities and accidents, listing, inter alia, military aircraft, nuclear reactors, nuclear weapons and nuclear vessels (see the Inventory of Radioactive Material Resulting from Historical Dumping, Accidents and Losses at Sea: For the Purposes of the London Convention 1972 and London Protocol 1996, (most recently published in October 2015 [IAEA-TECDOC-1776]).