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Meeting of the Group of Experts on Protocol V to the CCW Convention
Article 3 on the surveillance, clearance and destruction of ERW

Tuesday 7 April 2015 (3:00 pm)

Delivered by Mr. Bruno Donat, Chief, Geneva Office, UNMAS

Madam Coordinator¹,

UNMAS wishes to contribute to the exchanges of information on the explosive ordnance disposal clearance operations with a few remarks regarding the two questions put forward to this Group of Experts, and for which I have received inputs from my UNMAS colleagues who are technical specialists on these matters.

First, regarding the particular challenges in clearing sand desert areas, a “soft impact” such as the falling of explosive ordnance into sand (and into snow or muddy soil) is a suboptimal case for every fuze.

Due to the fact that a fuze has several safety-functions like rain-drop-safety (and a rain drop is very hard), it is difficult to find the edge between an impact on a target and a crash with a raindrop. Therefore, sandy ground is likely to lead to a larger rate of dud explosive ordnance. In same test scenarios, soft ground has led to an increased failure rate from about 2% up to 50%.²

Snow and cold weather create further problems. Some fuzes contain preservatives against oxidation. These preservatives are light oily liquids that tend to freeze and additionally hamper the function of the fuzes. Similarly, cold temperatures can hamper self-destruction mechanisms of fuzes of ammunition with a calibre between 20 and 60mm.

¹ Ms. Diana Kazina (Latvia)
² Figures obtained during a firing test by an UNMAS expert in Yuma/South Arizona with 155 mm improved conventional munitions (ICM).
Combining soft grounds with issues related to the self-destruction function, dangerous situations result, because these duds are very sensitive. So it is very risky to pick up ammunition with a spring-stretched fuze.

To avoid high failure rates, improved fuzes with reliable self-destruct functions have to be developed. The improvements should include the issue of soft impact, especially when combined with cold temperatures.

Second, with regards to challenges in clearing areas where intensive battles took place, this question has no simple answer, since every battlefield is different and new for those who come to clear; hence, each battlefield has its own special challenges.

Nevertheless, it is important to highlight that a battlefield is not a laminar area with just one layer of ammunition. Factors such as the rotation of combatants, the building of different fortifications, the laying of mines and the loss of equipment lead to different layers of explosive ordnance on a single arena. In addition, explosions of artillery rounds or other ammunitions could also cover the duds of explosive ordnance used in combat.

Therefore, clearance operators have to be informed of the history of the battle, of who controlled the area and other battle-related circumstances, such as the combat tactics used or the skills of the combatants.

UNMAS encourages High Contracting Parties to continue this exchange of information on ERW clearance challenges in the future.

(Should you have any enquiry on these very technical matters, we will facilitate exchanges with UNMAS technical specialists)

I thank you.