THE SLOW-MOTION PANDEMIC: LAND MINES

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Sunday, April 4, 2021 was the second International Mine Awareness Day since the World Health Organization declared COVID-19 a pandemic. It's an interesting milestone to ponder, and tempts us to paraphrase the 2001 remark to the press by then United Nations General Secretary Kofi Annan, that "mines are weapons of mass destruction in slow motion". We might say that mines are a pandemic in slow motion.

While health officials and researchers around the world leapt into action to develop tests and vaccines to respond to COVID-19, the response to the slow-motion "pandemic" of landmines has fallen behind in the last seven years, after more than a decade of progress.

Before the Ottawa Mine Ban Treaty became binding international law in March of 1999, tens of thousands of mine casualties occurred worldwide every year since the 1930s. This implies about one million casualties.

Enactment of the Mine Ban Treaty and subsequent clearance of mines, unexploded ordnance (UXO) and other explosive remnants of war (ERW) sharply reduced annual casualties, reaching a minimum of 3,457 in 2013 according to the annual Landmine and Cluster Munition Monitor published by the International Campaign to Ban Landmines (ICBL) and the Cluster Munition Coalition. Sadly, casualties rose in subsequent years, with 5,554 in 2019 (the latest year for which data have been compiled). Eighty percent of these casualties were civilians, and forty-three percent were children, creating a very different victim demographic than for COVID-19 which has fallen heavily on the elderly (although the young are increasingly affected by variants). However, there is one thing in common; they both disproportionately affect people of color.

ERW data for the pandemic year of 2020 will not be available until November of 2021, but we can anticipate some patterns.

When the pandemic was declared in March of 2020, The United Nations Mine Action Service (UNMAS) reports that "operations ceased, projects were postponed, personnel were stranded, budgets were re-negotiated, and procurement was delayed." Chronically-underfunded mine action saw scant financial resources diverted (and rightly so) to pandemic response. In addition, face-to-face community risk education (which has been clearly shown to be most effective) was severely curtailed. Perhaps worst of all, travel and personal contact restrictions prevented many survivors, particularly those with permanent disabilities, from accessing support services such as rehabilitation, counseling, vocational training, etc.

While COVID-19-induced lockdowns might seemingly reduce the risk of encountering explosive threats, many of the world's most ERW-contaminated regions are inhabited by subsistence farmers who cannot "work from home." And, many have no choice but to work land that they know is contaminated with ERW. In fact, in some rural areas, the need to fetch water for the universally-recommended frequent handwashing increased the daily exposure to potential ERW.

Meanwhile, conflicts continued in many parts of the world. According to the Monitor, while Myanmar is the only State whose regular forces employ landmines (and has been for the more than two decades since formal tracking began), non-state armed groups are alleged to have used mines and/or improvised explosive devices (IEDs) in about 15 other countries or territories. Going into the pandemic, ten states were characterized as "heavily" contaminated; Afghanistan, Bosnia and Herzegovina, Cambodia, Croatia, Ethiopia, Iraq, Thailand, Turkey, Ukraine, and Yemen. Additionally, three states allegedly suffering "new" landmine contamination include Afghanistan, Yemen and Ukraine. And according to a UNICEF statement on March 20, 2021, ongoing conflict in Libya has produced ERW contamination that threatens half a million lives.

But, the ERW clearance community is accustomed to challenges, changes in plans, and dangerous conditions. They leveraged existing operations and infrastructure to deal with the convergence of the slow-motion ERW pandemic and the fast-motion COVID one. Many risk-education programs combined mine/ERW awareness with COVID-19 prevention, and field teams distributed soap, sanitizer, masks and medical supplies to remote areas. So, in the midst of a dark time, there were bright spots:

- State parties to the Mine Ban have destroyed more than 55 million landmines since the Mine Ban.
- In 2020, Chile was declared landmine-free.
- Also in 2020, the UK announced that the Falkland Islands/Islas Malvinas were mine-free for the first time since the 1982 war.
- Just a few weeks ago, on March 12, 2021 a manual mine clearance team in Colombia – composed of former FARC-EP guerillas – found and removed their first active and dangerous improvised mine less than a week after beginning operations.

However, there may be safer, more effective methods than manual clearance. With funding from NATO's Science for Peace and Security Program, we've been working to develop multi-sensor autonomous cooperating robots for humanitarian detection of explosive threats. The robots operate largely on their own, communicate with each other, and share real-time data to remote monitors and operators in different countries or continents. This "socially distant" approach is well-suited to the time of COVID-19.

In a recent demonstration, a single field operator in Italy deployed a robotic platform with impulse and holographic radar sensors, while teams in Switzerland and The United States monitored the data stream, and produced near-real-time images of subsurface targets.

With vaccinations rising in some countries, and possible herd immunity on the horizon, global mine action has revived through the fall of 2020 and early 2021. But there will never be a vaccination or herd immunity to protect against death and destruction from landmines and other explosives.

In order to meet ICBL's challenge to "Finish the Job" of achieving a mine-free world, we must continue unearthing them one-by-one, but at a faster pace. That's the only way to finally grind the slow-motion pandemic to a halt.

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