

PAST, PRESENT, *FUTURE*: Mine Action in Motion

By Ambassador Stefano Toscano, Ph.D. [Geneva International Centre for Humanitarian Demining]

Highlighting Key Mine Action Developments

The story of mine action is one of an *adaptive and solution-oriented sector*. Time and again, mine action has developed new approaches, tools, and standards to meet evolving challenges and circumstances at the field level. A strong partnership among all key actors has characterized the sector since its early years and has been instrumental to its agility and evolution.

Over the last three decades, the sector has come to realize the paramount importance of ***national ownership***. National mine action programs in countries such as Afghanistan, Cambodia, and Lebanon have evolved from being heavily supported or led by international technical advisors to assuming complete responsibility for programmatic decision-making, with only limited support from the United Nations or other international stakeholders. National ownership has been decisive in ensuring that mine action be increasingly mainstreamed into governmental structures and programs, allowing synergies with ministries dealing with issues such as economic development, disability, and education. Thanks to the hard work of committed local actors and support from international technical advisors, local expertise and technical capacity have developed over the years.

The process of ***strategic planning*** has played a significant role in supporting this evolution towards increased national ownership. Developing comprehensive national strategies, under the leadership of the national authorities, is instrumental to ensuring that all actors involved pull in the same direction and mobilize the resources needed for operational activities. In the same vein, the *Anti-Personnel Mine Ban Convention* (APMBC) and the *Convention on Cluster Munitions* (CMM) have promoted in recent years multistakeholder approaches that foster better planning, cooperation, and coordination at national levels: the so-called individualized and country-coalition approaches.

At a technical level, the sector has managed to agree on, establish, and codify all of the key areas of mine action operations through the ***International Mine Action Standards (IMAS)***. The development of these global guidelines that outline good practice for mine action is unique within conventional disarmament—both in terms of the sophistication of their governance and in their uptake at the operational level within the sector. The IMAS have evolved to integrate learning; new policies, structures, and methodologies are adopted within a common,

transparent, and accountable framework. The IMAS are integral to the high level of confidence enjoyed by the sector, an aspect of great significance given its particular role in helping to render communities safe from explosive hazards.

The evolution of ***land release*** within the IMAS stands out as an example of the role that standards have played in moving mine action forward within a humanitarian framework. Land release represents the evolution of the pillar formerly called demining and an initial focus on removing (and counting) mines to a new approach that focuses on contaminated land and the socioeconomic consequences resulting from it. Land release also recognizes that removing contamination relies on both analytical and technical processes: non-technical survey (NTS), technical survey (TS), and clearance were developed as a system based on sound and transparent risk management and enhanced efficiency over an approach that required all land suspected of contamination to be demined or fully cleared. Millions of square meters of contaminated land have been cancelled from national databases as a result of better analysis and information gathering during NTS. This has saved millions of dollars in mine action resources, allowing for more meaningful investments and ultimately helping to save countless lives.

The mainstreaming of ***gender and diversity*** (G&D) considerations at the strategic and operational levels has gained considerable traction in recent years, out of the imperative to ensure that mine action interventions include and benefit all. The sector has improved its ability to integrate G&D in its work and to ensure that the issue is addressed from both the ethical and technical dimensions. Today, operational teams routinely collect data on how different target groups are affected by explosive contamination and tailor resources to address these needs so that more people benefit from mine action. In addition, the transformative role of mine action toward empowering women is by now fully acknowledged.

The Role of Innovation

As the mine action sector has matured, innovation has continued to shape and reshape approaches. To be sure, this has not happened in isolation: new ideas and methods have often been the result of **partnerships**, bringing together experts from different backgrounds, civil society, academia, and commercial companies, but also relying heavily on contextual knowledge gathered through interaction with beneficiary communities. Promoting innovation through such channels as the biennial Technology Workshops has proven to be a good way of bringing product developers and potential users together to exchange experiences and opinions.

The importance of sound **information management** to allow for evidence-based decision-making is now undisputed. Our ability to accurately understand and depict the problem, including the type and location of explosive ordnance (EO) contamination in a given working context, is a fundamental pre-requisite to the design of effective responses at all levels. Information management systems have improved continuously, not least thanks to the ability of the sector to harness the potential of new and evolving technologies—particularly geographic information systems.

The evolution of modern land release processes combined with **technological advances** in mapping facilitated a shift from early “big hand, small map” approaches, whereby rapid survey processes led at times to the inclusion of large suspected hazardous areas (SHAs) in national databases, thus complicating the task of turning them into confirmed hazard areas (CHAs) afterward. It might appear straightforward from today’s perspective; however, countries such as Angola and Sri Lanka benefitted significantly from progress in information management in the early 2000s, when accurate polygon mapping was made possible by a combination of improved survey techniques and the possibility to equip survey and risk education teams with handheld GPS devices, accurate to a matter of meters. Further improvements in the way that practitioners understand evidence and engage with communities are also ensuring that the location of contamination is judged far more accurately today than ever before. Recent successes in Sri Lanka are testament to this, where 19 sq km—approximately

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50 percent of the recorded mined problem—were cancelled during a 2016/2017 baseline survey.

Early hopes that emerging detection technology would provide some sort of silver bullet for the sector might have been dashed; however, significant progress has been made. The range of tools available continues to expand, and the sector

is finding new and innovative ways to harness technology. Countries like Cambodia and Zimbabwe have benefitted from the deployment of new dual sensor technology, combining magnetic and GPR detection to reduce time spent investigating false signals. In Bosnia and Herzegovina, the sector is exploring new methods to train, equip, and deploy animals in survey and detection roles, such as the SMART mine detection dog (MDD) system. Globally, innovative ways of deploying machines of different shapes and sizes have emerged, from the handheld trimmers that have sped up manual clearance, helping Mozambique move toward completion, to the bespoke demining machines that use heavy tillers capable of quickly processing large areas under the right conditions. And we are only beginning to see the potential of more recent innovations in remote sensing and artificial intelligence.

Innovation is not limited to new tools, equipment, and operational methods: the sector is finding more sophisticated ways of looking at the bigger picture such as measuring progress in terms of **outcomes and impact**. In 2017, the Geneva International Centre for Humanitarian Demining (GICHD) and the United Nations Development Programme (UNDP) produced a joint study articulating the linkages between mine action and the sustainable development goals (SDGs), pointing to the latter as a perfectly adequate framework to measure the broader transformational impact of mine action. Several affected states now include the SDGs in their national mine action strategies, such as Bosnia and Herzegovina, which included mine action achievements in its national reports on SDG implementation for the first time in 2020, illustrating the direct contribution of mine action in achieving sustainable development. The APMBC Oslo Action Plan, approved at the Fourth Review Conference in 2019, is the first of its kind to include measurable actions associated with clear indicators that can be used to track progress at the global level.

Next Steps: The Way Ahead

Mine action is and will remain first and foremost a response to a humanitarian imperative generated by EO contamination, and as such, part of broader humanitarian endeavors. Looking ahead, the sector will be increasingly called upon to work in or close to conflict zones, environments often characterized by instability, weak state institutions, and the presence of armed groups. Regrettably, humanitarian actors face a shrinking operational space in these environments,

with less room to maneuver and more security threats. Mine action will need to find new ways to operate in these environments, and to cooperate and coordinate with the broader humanitarian community.

Conflicts are increasingly **urbanized**, as is the damage they cause. This has created tremendous human misery and displaced millions of people. Urban settings with dense infrastructural EO contamination makes it difficult to locate it safely. EO being buried under rubble

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in many cases, and in an environment where metal contamination negates the use of metal detection, new procedures and equipment are needed and under development. Further, refugees, internally displaced persons, and returnees are particularly vulnerable to risks from EO, emphasizing the importance of developing new methods and technologies in the field of explosive ordnance risk education (EORE).

Victim-operated improvised explosive devices (IEDs), especially those located in complex urban environments, provide yet another challenge that mine action operators are called to address. Due to their varying composition, detection that does not focus on metal but on some of the common attributes of IEDs such as “crush wires” (these can be concealed in urban dwellings under carpets or other imperceptible locations) are enhancing the speed of operations and the safety of staff. However, further work on how to address IEDs is required.

Mine action has an **enabling role** towards reconstruction and development and, more broadly, the achievement of the SDGs—it’s overall relevance. It is therefore essential for mine action to be placed firmly within the so-called triple nexus. More work is needed on this front to ensure and document mine action’s transformative impact on humanitarian, developmental, and peace-building efforts. Sound information management can play an integral part in this. The recent standardization of IMAS global minimum data requirements combined with a shift towards fully GIS-based information management systems such as Information Management System for Mine Action (IMSMA) Core will make it possible for comparable data to be aggregated and analyzed to support sound prioritization and operational decision-making.

The current COVID-19 global pandemic represents both a challenge and an opportunity to increase our efforts toward stronger **national ownership** and the **localization** of responses. Mine action should, indeed, be “as local as possible and as international as necessary,” to quote UN Secretary General, António Guterres. The sector has shown great resilience and adaptability in adjusting to the new realities presented by the pandemic. The increased use of modern technologies such as digital tools and platforms has been an integral component, as was the remarkable flexibility and support shown by donors. The pandemic also illustrated the importance and wealth of on-site/local expertise and local partners that can assume key responsibilities in the implementation of mine action programs. This is true especially in contexts where a solid mine action architecture is in place, delineating clear roles and responsibilities among different governmental agencies and nongovernmental, international partners. In these contexts, mine action might serve as an inspiration for other sectors regarding the delivery of public services.

Mine action was and is in motion. It has evolved significantly over the past three decades and will continue to do so as new challenges emerge. Finding the right balance, timing, and sequencing between the necessary humanitarian support to provide in immediate, post-conflict situations and the longer-term imperative to help strengthen national and local institutions will be paramount. As Desmond Tutu said “we need to stop just pulling people out of the river, we need to go upstream and find out why they are falling in.” In so doing, the sector will continue to work towards making itself redundant. *As it should.* ©

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Ambassador Stefano Toscano has been the Director of the Geneva International Centre for Humanitarian Demining (GICHD) since January 2014, bringing extensive experience in multilateral diplomacy and human security affairs following a rich career with the Swiss Ministry of Foreign Affairs. As diplomatic collaborator in Bern (1998–2002), Ambassador Toscano was in charge of the small arms portfolio and thereby grew familiar with the importance and potential of the humanitarian disarmament agenda. As a Counselor at the Swiss Mission to the United Nations in New York (2002–2006), he was in charge of humanitarian, environmental, and migration affairs before serving as Vice Chairman of the 2nd Committee of the U.N. General Assembly. After returning to Switzerland in 2006, Mr. Toscano was Head of Section, Humanitarian Policy and Migration, at the Human Security

Division of the Political Directorate, then Deputy Head of Division. In the three-and-a-half years before joining the GICHD, he was the Deputy Chief of Mission at the Swiss Embassy in Cairo. Ambassador Toscano holds a Ph.D. in natural science from the Swiss Federal Institute of Technology in Zurich and a master’s degree in international relations from the University of San Diego.

ENDNOTES

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1. Reference Sri Lanka Strategy.
2. In the late 1990s and early 2000s, much of the detection R&D and trials were related to metal detectors. The hopes at that time were that the Ground Compensation and Large Loop detection were going to be the silver bullet, which wasn't the case. In the 2010s, R&D moved towards the dual and double sensor detection (metal detection and GPR). While this advancement did enhance the efficiency of work, it by no means provided the silver bullet (for many reasons) that the sector was (is) seeking. However, through this R&D work, progress has been made and its undeniable that efficiency and safety of operations has improved as a result.
3. The foundation behind the Humanitarian-Development-Peace-Nexus (HDPN), also known as the triple nexus, is based on the need for stronger collaboration, coherence, and complementarity towards the delivery of collective outcomes. By leveraging the comparative advantages of its three dimensions, the nexus has the potential to reduce vulnerabilities and decrease the number of appeals that remain unanswered, while strengthening risk management capacities and tackling the root causes of conflict. In addition, this approach has been at the center of multilateral efforts to fulfil the commitments made at the 2016 World Humanitarian Summit and accelerate progress towards the 2030 Agenda for Sustainable Development. The triple nexus promotes a change in the way activities are planned, implemented, monitored, reported, and financed in order to more effectively and coherently meet needs, reduce risks, and build resiliency in the short, medium, and long term.