WEAPONS MARKING AND REGISTRATION IN BOSNIA AND HERZEGOVINA:

A MODEL FOR A REGIONAL APPROACH TO SALW LIFE-CYCLE MANAGEMENT IN THE WESTERN BALKANS

Background photo: Marking weapons in Bosnia and Herzegovina. *Photo courtesy of The HALO Trust.*

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The dissolution of the former Socialist Federal Republic of Yugoslavia and the subsequent Balkan Wars of the 1990s left large quantities of weapons and ammunition in poorly managed stockpiles and in the hands of state actors, non-state actors, and civilians. The widespread proliferation of small arms and light weapons (SALW) across the Western Balkans has led to a widely acknowledged problem concerning the diversion of weapons from police and military stockpiles for illicit use in Europe and elsewhere. The diversion of SALW due to poor physical security and stockpile management (PSSM) practices is a driver of armed violence, criminality, and stunted economic growth.

Following a national regulatory assessment with Small Arms Survey ("the Survey") in 2017, The HALO Trust (HALO) has worked with the armed forces of Bosnia and Herzegovina (AFBiH) and the European Force in Bosnia (EUFOR) to professionally mark and register a state military stockpile of approximately 63,000 assorted SALW of over 280 different types. The project comprises a three-way partnership between HALO, the AFBiH, and the UK-based company Pryor Marking Technology. However, the backbone of this unique project is not the marking process per se but the highly comprehensive database and record-keeping system, produced through research and the cataloging of the AFBiH SALW inventory.

With Bosnia and Herzegovina as a case study, this article discusses HALO's needs-based approach in establishing the AFBiH Weapons Marking and Registration project, a first of its kind in the Western Balkans. It analyzes how the project's success can be emulated in other countries across the region to bring about a sustainable solution to the problem of illicit SALW proliferation and diversion through technical expertise, collaboration, and national ownership.

A REGIONAL APPROACH TO SALW MARKING AND REGISTRATION

HALO developed its project in Bosnia and Herzegovina to enhance the implementation of both politically- and legally-binding regional and international frameworks relating to the marking and registration of SALW. At the international level, HALO's work supports the UN Firearms Protocol, the UN Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All Its Aspects (UNPoA), and the European Firearms Directive. In addition, the project directly relates to the UN Sustainable Development Goals (SDGs), specifically SDG 16 and its targets and relevant indicators 16.1, "significantly reduce all forms of violence and related death rates everywhere," and 16.4, "by 2030, significantly reduce illicit/arms flows."[1]

At the national level, HALO's work in Bosnia and Herzegovina falls within the country's normative and political framework on arms control, including the EUFOR-coordinated "Ammunition, Weapons, and Explosives (AWE) Master Plan"[2] and the government's SALW Control Strategy (2016–2020).[3] But how does this fit into the regional plan?

This project directly contributes to the Franco-German Initiative for the Western Balkans and the regional "Roadmap for a sustainable solution to the illegal possession, misuse and trafficking of Small Arms and Light Weapons (SALW) and their ammunition in the Western Balkans by 2024,"[4] coordinated by the South Eastern and Eastern Europe Clearinghouse for the Control of Small Arms and Light Weapons (SEESAC). The Franco-German Roadmap stipulates seven goals, the majority of which are to be met by 2024.[5] They relate to substantially reducing the supply, flow, and numbers of illicit SALW in the region while reducing the risk of proliferation and diversion.

The Roadmap is concerned with the illicit use and diversion of firearms from both civilian and police possession and the strengthening of state institutions to address and handle the problem at the legislative and policy levels. A key example of a shortcoming the HALO project can address is the inconsistencies in the marking and registration of weapons seized and confiscated by police. The BiH Marking Law "does not require that weapons are marked at the time of their seizure or confiscation," nor does it state categorically that weapons already in police and military ownership must be marked.[6] As a result, good record keeping and tracking of these weapons is difficult. Strong institutions and faith in them is a key component of making the project a success, but there must be demonstrable, tangible outputs. The AFBiH project is a steppingstone to achieving buy-in from stakeholders and

Image 1. Team Coordinator (TC) Renata carrying out quality control on a marked M16 as AFBiH staff look on. *All images courtesy of The HALO Trust.*

donors, and with the right support, can supplement human security and development efforts across the region.

A SYSTEM TAILORED TO STAKEHOLDER NEEDS

The marking and registration of weapons is "an essential prerequisite for limiting the diversion and illicit proliferation of SALW."[7] In order to develop a system that addresses diversion, a tracing element must be present through a registration and record-keeping function, making a weapon traceable through its entire life cycle. This function requires the development of a database so that the stockpile owner can establish and maintain a reliable inventory of weapons. This marking and registration system enables the tracing of weapons back to the point at which they were diverted from their stockpile.

HALO and the Survey established specific parameters for the AFBiH system during the preparatory phase of the project in 2017 through comparative analysis of the Bosnia and Herzegovina Marking Law and other relevant BiH legislation, with technical guidelines including the now defunct International Small Arms Control Standards (ISACS) and, since then, the more recent Modular Small Arms Control Implementation Compendium (MOSAIC). Equally, HALO and the Survey measured the technical requirements for the record keeping components of the project against the relevant national and international frameworks, including the International Tracing Instrument (ITI).

Identifying the specific stakeholder requirements was essential in developing the bespoke system prior to any marking taking place. The Bosnian Ministry of Defense, Ministry of Foreign Trade and Economic Relations (MoFTER), the AFBiH, Ministry of Security, and EUFOR participated in the preparatory phase. HALO held over thirty meetings and workshops with representatives from each of the stakeholder groups, ensuring collective agreement on each key aspect of the database. Based on this assessment, HALO and Pryor developed a flexible, tailor-made data-capture solution. This ensured that the physical marking process and the database met the needs of the national stakeholders, both in the immediate and longer term.

A SUSTAINABLE SOLUTION THROUGH COLLABORATION

As per the aforementioned framework assessment, HALO, the Survey, and EUFOR determined that the system needed several key characteristics to make it sustainable, effective, and in-line with international standards such as the MOSAIC relating to the particular marking standards and, perhaps more importantly, the ITI with regard to record keeping and data management.

Inventory and weapons catalogue. Pryor and HALO built the database and record-keeping system from the ground up to allow for the input of large amounts of non-marking data in order to assist the AFBiH with broader inventory management. The database enables the AFBiH to include qualitative information on SALW life-cycle aspects such as the serviceability and condition of items. It also allows for the uploading of images of weapons, enabling the armed forces to develop a comprehensive weapons catalogue.

The catalogue upon which the database was built can be used to aid in the establishment of similar projects in other Balkan countries. This would reduce both start-up costs and the time required to establish a workable database in line with stakeholder wishes, ensuring that physical marking and registration can begin quickly. External monitoring and evaluation also allows for lessons learned to be implemented for future projects, increasing efficiency and effectiveness.

Security. Ensuring system and data integrity is paramount to developing any data management system. Two issues arose and were addressed during the creation of the database: (1) the establishment of different authorization levels for users, both across the armed forces and at the ministerial level, and (2) the need to record individual user actions, allowing for tracking patterns of behavior by a specific user.

The integrity of the marking and registering process was engineered to reduce the margin for error as much as possible. Thanks to the comprehensive weapons catalogue that forms the backbone of the database, a supervised operator can select from several preset, drop-down fields with selectable options pertinent to a particular weapon. For example, if the operator selects a specific weapon, the selectable caliber option will be limited to that particular weapon. Every factory serial field must be manually filled in twice, and the system does not allow fields to be copied and pasted, eliminating as much human error as possible from the marking process. Furthermore, every entry into the system and every edit is recorded.[8] Any deleted entries can be recovered thereby safeguarding against any errors, accidental or intentional.

Image 2. TCs Samir and Renata checking the depth of marks on an M16.

The database is run through Pryor's bespoke software and is connected directly with the marking machine and its control unit through USB. Once the database issues a number and the operator has filled in all required drop-down fields, the marking happens immediately. The identifying marks applicable to that weapon cannot thereafter be duplicated or changed. Efforts to erase marks will only serve to potentially damage the weapon because the marking trace, when the mark has been stamped into the weapon, can be seen under x-ray and retrieved.

In partnership with EUFOR, HALO conducted complementary training on weapons serviceability and storage management, which will enhance the physical security of the AFBiH stockpile. In addition to marking the weapons themselves and their corresponding registration, the system allows for greater ease of stockpile management through the use of barcodes and data matrices. The chore of stocktaking can be relatively painless when marked and registered weapons are stored in sealed containers labelled with a complex mark that can be quickly and easily scanned, providing an operator with information instantaneously.

Accessibility. The system permits specific users to have different authorization levels, from the unit level up to the relevant ministries. In Bosnia and Herzegovina, the system is configured such that a basic read and print function is available to those within the military concerned with unit-level logistics and PSSM. At a higher level, a write function allows select users to add information for record-keeping purposes without amending the marking data, enabling these users to request a movement of weapons from one location to another. The Chief and Deputy Chiefs of the Joint Staff hold the highest level of access alongside representatives from the Ministry of Defense and the Ministry of Foreign Trade and Economic Relations, who are able to authorize such a move, or in other circumstances, export, write off, or destroy weapons. Every decision is recorded within the system and is fully traceable, ensuring transparency in the handling and movement of SALW, and accountability for those authorizing such actions.

Pryor, HALO, EUFOR, and the AFBiH are currently looking at what the final infrastructure of the system will look like and have not yet confirmed exactly which representatives from which ministries will have the highest level of access. However, once the marking and registration component of the project is complete, the information held on separate registries at the marking locations will need to be merged onto a single database operating on a cloud-based system from a centrally managed server. This will allow live viewing and access along with real-time tracking and record keeping. The beneficiary government should choose the structure of the final system once variables such as connectivity, broader information technology infrastructure, and the routine availability of electricity are taken into consideration.

Sustainability. Pryor provided training for HALO personnel and those working as team coordinators who oversee and manage the daily marking and registration. In turn, the AFBiH marking teams who carry out the technical inventory as well as the marking and registration itself are trained using the "train-the-trainer" approach. This is done through previously trained AFBiH personnel who conduct the training for new marking team members with assistance from HALO and EUFOR staff.

Project sustainability is often determined by levels of funding. While marking team coordinators are HALO staff and funded through bilateral grants, members of the AFBiH comprise the marking teams. It should be noted that the system itself is not reliant on funding but does require personnel with a working knowledge to maintain it. So long as there remains a commitment to fund trained personnel, this life-cycle management system is sustainable. To that end, once the marking of the AFBiH stockpile is completed, HALO will continue to engage with stakeholders to help ensure a smooth transition to full-state ownership of the system.

Crucial to the sustainability of such a system is consideration of the gendered effects relating to diverted and illicit firearms. While this subject itself is beyond the scope of this article, any SALW life-cycle management projects should observe gender as a key consideration. MOSAIC 06.10 states that "ensuring that gender is adequately integrated into all stages of a small arms control initiative is essential to assuring its overall quality."[9] Of the four team coordinators employed by HALO in Bosnia and Herzegovina, two are women and

two are men. As men comprise the majority of the AFBiH marking teams, HALO and the Geneva International Centre for Humanitarian Demining (GICHD) will carry out a joint project once COVID-19 restrictions permit that aims to raise awareness of the gender-based dynamics within the AFBiH teams. A gendered, regional approach to SALW programming in the Balkans would benefit not only national stakeholders but would also drive positive and progressive development throughout the region.

Integration and data sharing. As the building blocks of the database software are Microsoft development tools and backend database platforms, not only does this mean the system has been developed using trusted and robust tools, it also offers flexibility and opportunity for an intuitive information exchange should future integration with other national, regional, or international information management and sharing systems be required. However, it is of the utmost importance to recognize the sovereignty of each beneficiary government as well as the political and cultural sensitivities prevalent throughout the Western Balkans. As such, the ITI states that "the choice for record keeping is a national prerogative."[10]

While there might be the temptation for stakeholders to shy away from acknowledging potential shortcomings in their SALW management systems, the prevention of diversion and the upholding of a sustainable marking and registration system requires an understanding of the problem, the means to address it, and the willingness to be transparent. Transparency is as much a political issue as it is a technical one, and the introduction of new processes often need to be accompanied with a positive shift in organizational culture in order to allow that process to succeed. There might be a hesitation to engage in data sharing due to a perceived lack of benefit either in the material sense or because there can be a tendency to view relationships as zero-sum.

The utility of integrated registries across the Western Balkans is not a new idea. In 2016, a feasibility study stated that "failing to take action now on the subject of linking SALW registries will miss a significant opportunity to capitalize on the regional enthusiasm for collaborative working."[11] As the database and the information contained within belongs to the beneficiary government, the approval of the exchange of information would need to be unanimous. The fact remains that increased transparency and an integrated regional approach to data management are essential to its success.

FUTURE CHALLENGES

Currently, HALO in Bosnia and Herzegovina has marked and registered 95 percent of the military stockpile. The project is on track for completion by the end of 2020. However, there needs to be an understanding from stakeholders and implementing partners alike that the challenges of successfully maintaining these systems begins at the point of project completion. For all the effort that has gone into supporting the implementation of a highly workable system, the measure of success will be in its sustainability.

Where possible, HALO looked to similar projects in an effort to learn from their successes and challenges. The sharing of knowledge and practices across the SALW sub-sector of PSSM, for example, is not yet systematically practiced. In the Balkans, this is in part due to underdeveloped stakeholder relationships and a poor understanding of what different partners could achieve and at what cost. National and regional projects could therefore be targeted more effectively.

In pursuing a regional solution, there is a risk of implementers, whether they be non-governmental or inter-governmental entities, pursuing interventions that are too narrowly focused in scope to have any real impact or too shallow so as to merely pay lip-service to the tenets laid out in the Franco-German Roadmap. In the AFBiH project, HALO has identified a cost-effective and tangible solution, which has the potential to scale across the region.

CONCLUSION

A regional approach in the establishment of sustainable and gender-sensitive marking and registration programs is an essential component of an effective life-cycle management program necessary to achieve a successful, long-term solution to the problems associated with diverted and illicit SALW in the Western Balkans. Although each constituent nation will have its own requirements to which such a project can be tailored, the principles that have ensured the success of the AFBiH project in Bosnia and Herzegovina can and should be applied to SALW interventions throughout the region. The sustainability of such projects rests on three factors: the political will to see them implemented to completion, funding, and the provision of continued support by capable implementers. With that in mind, the future holds opportunities as well as challenges. Donors are increasingly looking for tangible results in the Western Balkans and the well-coordinated partnership between the private, military, and humanitarian sectors in Bosnia and Herzegovina provides a model to support and emulate.

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