



# Lessons Learned from Weapon-marking Initiatives

Preventing the diversion of small arms and light weapons is a top priority for the international community.<sup>1</sup> The United Nations Programme of Action (UN, 2001) and the International Tracing Instrument (ITI) (UNGA, 2005) each addresses diversion at the policy level. The ITI in particular established core principles that states should implement in their counter-proliferation strategies. This policy development has enabled states to shift their focus towards implementing the ITI.

The marking of small arms and light weapons is a key component in states' efforts to prevent (or at least hinder) diversion. According to the ITI, marking all small arms with unique identification information increases the chances of successfully tracing illicit weapons to the point of their diversion (UNGA, 2005, sec. 1). This serves two counter-proliferation functions. Firstly, it enables the state to identify and hold individuals responsible for the diversion. Secondly, it dissuades legal users from selling weapons on the illicit market for fear of future punishment. As a result, dozens of states recently began marking state and civilian weapons through weapon-marking campaigns.

This push to mark weapons is currently championed at the regional level. Several regional organizations (ROs) have developed initiatives designed to ensure that each of their member states successfully marks its national stockpiles.<sup>2</sup>

In 2011–12 the Small Arms Survey examined the weapon-marking initiative under way among member states of the Regional Centre on Small Arms in the Great Lakes Region, the Horn of Africa and Bordering States (RECSA). This was the first regional marking initiative of its kind.<sup>3</sup> The study illustrated the challenges that arise when ROs and implementing states undertake marking operations (Bevan and King, 2013). Several of the observed challenges are universally applicable and thus can serve as lessons for others planning or implementing similar initiatives. This *Research Note* explores the key lessons learned from the RECSA experience, paying special attention to strategic and operational considerations that impact programme outcomes.

## How the marking is done: national commitment towards sustaining a long-term project

ROs have influenced national marking policy and practice. The latter typically involves supplying specialized equipment and/or training to their respective member states at the outset of marking programmes.

While this assistance is often vital for initiating the marking effort, it alone is not sufficient, and implementation is always the responsibility of the state. Labour and access to the stockpile are provided by states, regardless of whether or not ROs or donors provide some sort of assistance. Marking an entire national stockpile also takes time. Consequently, the successful completion of marking initiatives requires sustained effort and will from the implementing states.

States should plan for the different phases of a marking project life cycle (Bevan and King, 2013, p. 38). Initial start-up costs are significant. Procuring the marking machines, IT infrastructure, and record-keeping software; training marking teams; and allocating fixed assets such as offices and marking spaces in military or police facilities all require some initial investment.

Marking operations typically begin in areas with large weapons holdings such as capital cities and military facilities. This is the most cost-efficient stage of marking. The large concentration of weapons in one location means that resource requirements are relatively light, because neither marking machines nor weapons have to be transported over long distances.

As teams move away from areas of concentrated holdings, project expenses increase significantly. Expenditure on resources—vehicles, fuel, personnel, and subsistence allowances—increases accordingly as the marking moves to more remote locations. The daily rate of weapons marking also decreases progressively, since marking teams have to travel to ever-smaller units of the defence and security forces.

Marking continues even after the state has marked its entire existing weapons stockpile, i.e. the state must continue to mark weapons

**Photos (top to bottom):**

Restraint system for a Telus machine.  
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Clamping system used with the Couth MC 2000.  
© Benjamin King

A weapon mould used to secure South African Police Service R1 rifles. © Kyle Parker, Traceability Solutions

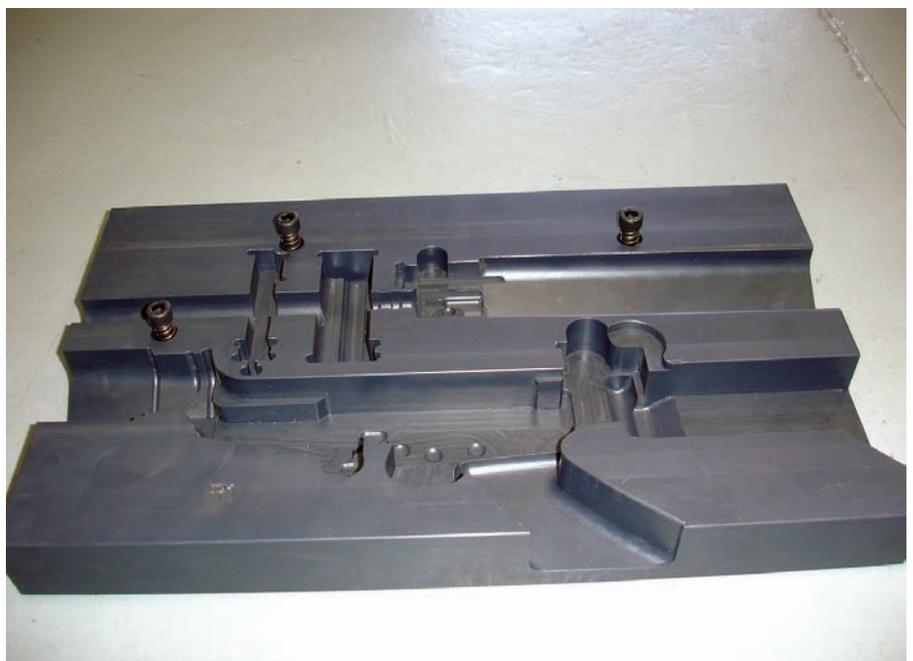
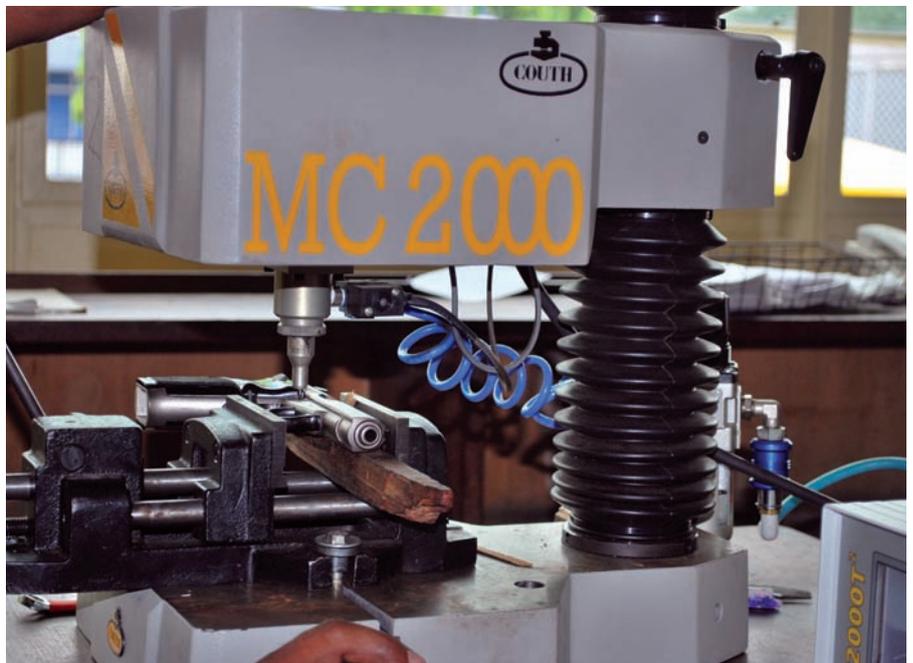
when it imports them.<sup>4</sup> This involves installing marking machines in the facilities where the weapons are unpacked and catalogued, before they are deployed to military or police personnel.

This life cycle illustrates how the supply of marking machines and record-keeping software is not on its own sufficient to maintain brisk, uninterrupted weapon-marking activities. Delays to programmes typically come at the start of the field deployment stage. Given that most states begin weapons marking in capital cities and then proceed into the countryside, initial budget allocations often fail to anticipate the increase in resource demands (mainly relating to transport logistics such as vehicles, fuel, and marking team daily allowances).

National governments need to assess their allocation of resources to marking initiatives and consider making greater use of the logistical capacity of defence and security forces. Additionally, there is a clear need for national governments to work more closely with prospective international donors in the drafting of staged implementation plans that should anticipate resource demands throughout the entire marking initiative. Efficient project planning would aid national governments in conducting long-range forecasts of resource requirements in advance of security force mobilization (involving personnel, vehicles, and fuel) and would in particular facilitate specific, scheduled requests for donor assistance to fill funding gaps. Such comprehensive life cycle planning would mitigate the periodic dormancy that halts many marking programmes.

**Considerations before purchasing marking equipment**

Various marking methods are available that are suitable for weapons. The Small Arms Survey *Issue Brief* No. 1



(Persi Paoli, 2010) provides a detailed description and gives the pros and cons of each of the most common technologies.

Prior to procuring marking equipment, states should consider the process each weapon will go through to be given a mark. Any modern marking technology will imprint a mark on a weapon in just a few seconds (Persi Paoli, 2010, p. 9), but preparing the weapon for marking is much slower and significantly increases the time required to mark each weapon. Choosing an ergonomically designed system can dramatically improve marking efficiency, particularly when calculated out to tens of thousands of weapons.

Several features can change the rate of marking, but loading a weapon onto a marking machine is one of the lengthiest steps in the process. It requires a relatively precise placement of the weapon and, particularly with dot-peen or stamping machines, utilizes a restraining system to hold the weapon in place (see photos). The fewer adjustments an operator has to make to secure a weapon, the quicker the process will become.

## A comprehensive approach

The actual marking of weapons is just one of the components required to carry out marking initiatives. Preventing diversion requires the ability to trace weapons to the source where they became illicit. The ITI clearly states that successful tracing requires a comprehensive approach involving marked weapons, accurate records, and cooperation among states in exchanging information (UNGA, 2005, paras. 7–23). These three mutually reinforcing features are required for successful weapons tracing. Therefore, marking initiatives should ensure that robust records and formal information exchanges are also present in their planning.

However, efforts to improve record-keeping can prove particularly problematic. Record-keeping is not a one-off activity. To sustain an up-to-date national registry, changes in weapons ownership (including the circulation of weapons among different units of

the defence and security forces) need to be updated quickly. This requires developing and sustaining either an electronic or a paper-based data management system.

For many states the main problem facing effective record-keeping is not access to record-keeping software, but whether the required IT infrastructure and communications systems are nationally available. These components are essential if records are to be updated remotely and rapidly. Key infrastructure (such as electricity or internet connections) is not always available. This is particularly true of less-developed rural areas outside capital cities. Finding a cohesive solution that works for both the capital and remote outposts is a challenge.

National governments and international donors need to give more thought to developing procedures that will allow units to update registries remotely. One option would be to create a series of regional registries that could monitor distant outposts more frequently and be linked remotely to a central record-keeping system in capital cities (Bevan and King, 2013, p. 42). The minimum requirements are one computer terminal per district or sector; a means of remote communication (such as mobile wi-fi); the ability to back-up and securely store records; and, in most cases, generators and fuel to power the systems. Such commitments would require the allocation of significant resources, but they are fundamental to ensuring the long-term success of national marking initiatives.

If resources do not permit such allocations, then states could choose a coordinated accounting system combining electronic and paper-based records. In this scenario armourers would catalogue weapons according to a standard national format that includes protocols for updating the central database, plus periodic audits.

## Linking to the wider benefits of marking initiatives

Implementing marking programmes presents the opportunity to exploit additional benefits. For instance, the process of marking weapons is essen-

tially an inventory management exercise. As weapons are marked and recorded the state is simultaneously clarifying the size and quality of its national stockpiles. This presents many opportunities for marking to also benefit states' broader physical security and stockpile management (PSSM) practices. This is particularly true if PSSM assistance programmes are under way at the same time as marking programmes.<sup>5</sup> PSSM programmes are often funded by agencies unconnected with national marking programmes and that might not be aware of such programmes. The shared interests, however, illustrates that some coordination would be beneficial. Marking initiatives should therefore link, when possible, with other PSSM programmes.

## Conclusion

Marking is a key component of the international community's efforts to prevent weapons diversion. ROs deserve a great deal of credit for mobilizing their member states to begin marking programmes. Their initiative, plus the implementation efforts of many states, has led to hundreds of thousands of weapons receiving identifying marks.

Despite the successes, these programmes are more challenging than they initially might appear. Their impact extends to broader state stockpile management practices, and these links with PSSM practices need to be considered if the marks are to maintain their utility. The programmes also require a sustained, yet uneven, supply of resources. Programme planning therefore needs to consider these variables early on if marking efforts are to successfully counter diversion.

Governments that exhibit the political will to meet their marking and record-keeping commitments but require external assistance will be best served by planning effectively. Generally speaking, external support is likely to be less generous than in the recent past. Countries seeking support that have moved beyond *procurement* and begun to effectively *implement* their objectives are likely to fare better than those who have not. ■

## Sourcing

This *Research Note* is based on the forthcoming Special Report No. 19, *Making a Mark: Reporting on Firearms Marking in the RECSA Region*, which reviews eight of the 15 RECSA members' practices and their progress towards meeting the goals inherent in the marking of firearms.

## Notes

- 1 Diversion involves the transfer of weapons as a result of loss, theft, or sale from legal users—including defence and security forces and civilian users—to illicit users (Bevan, 2008, p. 43).
- 2 See Berman and Maze (2012). These ROs include the Caribbean Community; East African Community; European Union; European Law Enforcement Agency; Organization of American States; Regional Centre on Small Arms in the Great Lakes Region, the Horn of Africa and Bordering States; Southern African Regional Police Chiefs Cooperation Organization; and South Eastern and Eastern Europe Clearinghouse for the Control of Small Arms and Light Weapons.
- 3 Interview with Godfrey Bagonza, RECSA Secretariat, Nairobi, 11 February 2013.
- 4 According to the International Small Arms Control Standard, post-manufacture markings include those applied at the time of import and transfer from government stock to civilian use, and to permanently confiscated and deactivated weapons (UNCASA, 2012, paras. 5.3–5.6).
- 5 A wide range of activities are designed to improve PSSM practices, including the comprehensive cataloguing of armoury contents; the racking of weapons; and the introduction of security measures such as exterior lighting, roof and window bars, and secure doors and locks. See King (2011) for more information.

## References

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**For more information on weapon-marking, please visit: <http://www.smallarmssurvey.org/?marking-record-keeping-tracing>.**

## About the Small Arms Survey

The Small Arms Survey serves as the principal international source of public information on all aspects of small arms and armed violence, and as a resource centre for governments, policy-makers, researchers, and activists. In addition to Research Notes, the Survey distributes its findings through Occasional Papers, Special Reports, Working Papers, Issue Briefs, a Book series, and its annual flagship publication, the *Small Arms Survey*.

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