



Ticking time bombs

Ineffective weapons stockpile management in Africa

INTRODUCTION

On 29 April 2009 a massive explosion at a government armoury on the outskirts of Dar es Salaam, Tanzania, sent shockwaves throughout the city and resulted in the deaths of at least three people, with scores more injured and left homeless.¹ The armoury, which was situated close to a military facility and a mere 14 km away from the city centre, was said to contain a significant amount of explosive ordinance, including mines and artillery shells.²

Less than a month later, on 27 May 2009, there was a series of explosions at an arms and ammunition storage area in a remote part of Mozambique. It was reported that the explosions took place at a base used by the Mozambican National Resistance (Resistência Nacional Moçambicana or RENAMO) – an insurgent group turned opposition party – during the civil war in Mozambique. Allegedly, assault rifles, rockets and landmines were being stored in the area. While the cause of the explosion and its impact (casualties and injuries) were not made known, there has been speculation that the explosion may have been brought about by inadequate storage processes and conditions.³ This explosion followed the March 2007 explosion at a military ammunition storage facility in Malhuzine, which resulted in the deaths of over 100 individuals and hundreds of injuries.⁴

In March 2008 an arms disposal factory and collection point for an arsenal from the former Cold War regime filled with old weapons exploded in Tirana, Albania, resulting in the deaths of 26 people and injuries to a further 302.⁵ ‘The blast also damaged 5500 houses in the area’⁶ and occurred not long after a similar explosion at storage sites in Montenegro and Serbia in 2006.⁷

The history of explosions in countries around the world illustrates the increased risk posed by improper ammunition management.⁸ The physical risk posed to communities by abandoned, damaged, and inappropriately stored and managed weapons and ammunition stockpiles, particularly military stockpiles, have for many

years resulted in devastating impacts on local communities around the world.

Table 1 illustrates the number of explosions that have occurred in Africa alone as a result of inadequately monitored and controlled conventional weapons (CW) and ammunition stockpiles.

The damaging effects of the explosions at the inadequately managed stockpiles listed above are just some of the many examples surrounding the impact such mismanagement has on countries that fail to consider the risks posed by such weapons stockpiles.

This paper will illustrate the importance of CW and ammunition stockpile management in Africa. The focus will predominantly be on military stockpiles, paying particular attention to small arms and light weapons (SALW) and ammunition. It will do so by giving a broad historical overview of stockpile management to date, as well as the various international and sub-regional legal and political imperatives that have been adopted to assist governments in controlling and managing such stockpiles. The paper will then outline some stockpile management initiatives and highlight the causes of stockpile explosions occurring in Africa. Ways in which stockpile management can be improved in the continent will then be outlined. The situation in two countries – Tanzania and Mozambique – will be analysed, both of which have experienced recent arms and ammunition explosions. The analysis will identify the impact such explosions have had on these countries, as well as any progress made to date in implementing any national, regional and international legally binding agreements on weapons stockpile management that the two countries have adopted thus far. The paper will highlight that much of the responsibility for limiting the destruction, injuries and fatalities caused by these weapons rests with governments.⁹ In conclusion, some recommendations on how stockpile management can be improved in the African context will be made, outlining basic guidelines that have been developed that could help improve the management of these weapons and ammunition stockpiles in Africa.

Table 1: Explosions in African ammunition depots, 1998–2011

Date	Country	Location	Casualties		Remarks/ possible cause	Source
			Fatal	Injured		
17 Jul 1998	Sudan	Khartoum	Not known	Not known	Not known	http://news.bbc.co.uk/1/hi/world/africa/134969.stm
15 Apr 2000	Democratic Republic of the Congo (DRC)	Kinshasa	101	216	Handling	http://news.bbc.co.uk/1/hi/world/africa/716625.stm
3 Mar 2001	Guinea	Conakry	10	Not known	Not known	Geneva International Centre for Humanitarian Demining (GICHD)
5 Jan 2002	Sierra Leone	Tongo	6	12	Handling	http://www.sierra-leone.org/slnews0102.html
27 Jan 2002	Nigeria	Lagos	1,500+	Not known	Fire	GICHD
5 May 2002	Guinea	Conakry	Not known	Not known	Not known	http://news.bbc.co.uk/1/hi/world/africa/1969572.stm
30 Oct 2002	Mozambique	Beira	6; 3 more on 23 Nov 2006 from unexploded ordnance kicked out from initial explosion	50	Lightning	http://www.ifrc.org/docs/appeals/annual04/011504.pdf
2003	Mozambique	Beira	0	0	Not known	GZ
16 Jul 2003	Angola	Menongue	2	15	Fire	NATO Munitions Safety Information Analysis Centre (MSIAC)
Jan 2005	Mozambique	Beira	0	0	Further to events of 30 Oct 2002	United Nations Development Programme (UNDP) Mozambique
24 Feb 2005	Sudan	Juba	80	250+	Fire (electrical?)	UN Office for the Coordination of Humanitarian Affairs, 25 June 2005. http://www.irinnews.org/print.asp?ReportID=45780 Sudan News
24 Feb 2005	Nigeria	Kaduna	4	44	Fire	<i>Nigeria World News & Archives</i> , 24 February 2005. http://news.biafranigeriaworld.com/archive/thisday/2005/02/24/explosions_rock_kaduna_ammunition_depot.php
4 Mar 2005	Ivory Coast	Abidjan	2	1	Handling	NATO MSIAC
25 Nov 2005	DRC	Walikale, North Kivu	6	0	Lightning	NATO MSIAC
28 Jan 2006	Kenya	Nairobi	0	0	Electrical fault	NATO MSIAC
19 May 2006	Sudan	Juba	2	10	Not known	UNDP Sudan
Dec 2006	Mozambique	Beira	5	0	Human error (scavenging)	GZ
Jan 2007	Mozambique	Malhuxine	0	3	Not known	http://www.makingthelinksradio.ca/index.php?option=com_content&task=view&id=100&Itemid=30
22 Mar 2007	Mozambique	Malhuxine	104+	400+	Not known	South Eastern and Eastern Europe Clearinghouse for the Control of Small Arms and Light Weapons (SEESAC) report http://www.chron.com/disp/story.mpl/ap/world/4655833.html

Date	Country	Location	Casualties		Remarks/ possible cause	Source
			Fatal	Injured		
8 Apr 2007	Sudan	Khartoum	0	0	Electrical fire?	http://www.sudantribune.com/spip.php?article21239
17 Jun 2007	DRC	Mbandaka	3	52	Not known	http://www.strategypage.com/qnd/congo/articles/20070624.aspx
23 Jun 2007	Mozambique	Malhuxine	5	11	During unexploded ordnance disposal resulting from previous explosions at the depot	UNDP Mozambique
1 Sep 2008	Mozambique	Beira	0	0	Fire	Mozambique public TV
29 Apr 2009	Tanzania	Dar es Salaam	3	150+	Not known	http://news.bbc.co.uk/1/hi/world/africa/8024656.stm
17 May 2009	Egypt	Abu Sultan	0	NK	Not known	NATO MSIAC
27 May 2009	Mozambique	Maringue	0	0	Not known	http://www.news24.com/
16 Feb 2011	Tanzania	Dar es Salaam	20	300	Not known	http://www.dailynews.co.tz/home/?n=17360&cat=home

Source: Explosive Capabilities Ltd

In many developing countries, the physical risk that exists to communities as a result of ‘abandoned, damaged and inappropriately stored and managed stockpiles and explosives’¹⁰ is significant. Weapons and ammunition explosions cause grave danger, not only once they have exploded, but also after an explosion has occurred, as in many instances undetonated and unstable munitions are randomly distributed (‘kicked out’) over a wide area.¹¹ These undetonated munitions or unexploded ordnance (UXO) can also lie dormant for many years and can have a disastrous humanitarian impact on the communities living nearby.¹² ‘The large number of casualties, widespread destruction of infrastructure, and the disruption of the livelihood of entire communities’¹³ as a result of these weapons and ammunition explosions not only affects the local communities socially, but also economically, as it results in instances of environmental degradation occurring in communities who rely on their natural resources for survival. Ammunition explosions exacerbate poverty by impeding agriculture and the resumption of commercial activities. Economically, the financial costs associated with such explosions are very high. The technically challenging clean-up costs due to the threat posed by UXO that end up littering the area long after the explosions have occurred are so high that most developing countries cannot afford them.¹⁴

UXO holds back reconstruction and becomes extremely dangerous when individuals, especially children in the area, become curious and pick it up.¹⁵ This may then result in its exploding, resulting in further casualties. In Chad, for example, mines and UXO from the

continuous civil warfare suffered by the country killed approximate 95 people in 2008, the majority of whom were children.¹⁶

HISTORICAL OVERVIEW

Since 2008 follow-up meetings concerning the United Nations Programme of Action to Prevent, Combat and Eradicate the Illicit Trade in Small Arms and Light Weapons in All Its Aspects (UNPoA) have stressed the importance of stockpile management and surplus disposal, identifying improperly managed stockpiles as a serious security threat that needs to be made a national priority by all states.¹⁷ The large global stocks of weapons and ammunition that have been accumulated over the years, acquired for use during combat or training,¹⁸ have raised wide concern among both international organisations and individuals alike over the manner in which they are being controlled, monitored and stockpiled.¹⁹ Research over the years has shown that ‘a single automatic rifle used in combat’ or for training purposes can fire ‘thousands of rounds of ammunition over a few hours or days’.²⁰ The use of such weaponry has led to a large amount of ammunition being accumulated by many countries. These stockpiles are continually growing, with little or no attention being paid to the manner in which this ammunition is being stored or disposed of.

In Africa, stockpile management has to date been far from adequate. In the past decade the African continent has experienced at least 27 known explosions, with at least nine in Mozambique; four in Sudan; three in the

Democratic Republic of Congo (DRC); two each in Guinea, Nigeria and Tanzania; and one each in Angola, Ivory Coast, Egypt, Kenya and Sierra Leone (see Table 1).²¹ Many of these explosions resulted in a number of fatalities and many more injuries, most of which occurred as a result of inadequately managed stockpile depots being situated in close proximity to densely populated communities.²²

In response to the impact sustained by such explosions, African governments have adopted a number of legal and political imperatives over the years to assist them in implementing effective stockpile management systems. Key agreements in this regard at the international level are discussed below.

United Nations Programme of Action

The UNPoA of July 2001 saw Member States agree to the following:

- To ensure, subject to the respective constitutional and legal systems of States, that the armed forces, police or any other body authorised to hold small arms and light weapons establish adequate and detailed standards and procedures relating to the management and security of their stocks of these weapons. These standards and procedures should, *inter alia*, relate to: appropriate locations for stockpiles; physical security measures; control of access to stocks; inventory management and accounting control; staff training; security, accounting and control of small arms and light weapons held or transported by operational units or authorised personnel; and procedures and sanctions in the event of thefts or loss (para. 17).
- To regularly review, as appropriate, subject to the respective constitutional and legal systems of States, the stocks of small arms and light weapons held by armed forces, police and other authorised bodies, and to ensure that such stocks declared by competent national authorities to be surplus to requirements are clearly identified, that programmes for the responsible disposal, preferably through destruction, of such stocks are established and implemented and that such stocks are adequately safeguarded until disposal (para. 18).²³

At the Third Biennial Meeting of States Parties (BMS3) on the UNPoA in 2008, the issue of stockpile management and surplus disposal was a key focus area. The BMS3 outcome document highlighted the importance of stockpile management by acknowledging:

- That poorly managed and inadequately secured stockpiles of small arms and light weapons posed a serious security threat.

- The need for raising awareness, as applicable, among relevant national authorities of the critical importance of putting in place adequate systems and procedures for national stockpile management.
- That the identification of surplus small arms and light weapons was facilitated by the existence of effective national stockpile management systems and that the existence of adequate marking and recordkeeping and tracing systems were factors that enhanced the effectiveness of stockpile management.
- That the proper management of stockpiles of small arms and light weapons could be both efficient and cost-effective. It could help to prevent accidents and to reduce the risk of diversion and proliferation and could help to reduce surplus accumulation and replacement rates. Such management also served to improve the reliability of stocks of small arms and light weapons.
- That effective national stockpile management and surplus disposal required corresponding national laws, regulations and administrative procedures, including provisions for enhanced safety and security. Establishing effective regulations, standards and procedures for the management of stocks implied expending resources.
- That the proper identification and responsible disposal of their surplus stocks, preferably through destruction, required resources.
- That the full and regular review of existing management, safety and security measures was the first step towards improving stockpile management.
- That it was important for competent national authorities to have accurate information on the condition and size of the national stockpile of small arms and light weapons in determining national requirements. To that end, comprehensive inventory and accounting systems needed to be established in order to enable States to effectively classify, account and record stockpile movements.
- That the physical condition of national stockpiles needed to be regularly assessed to detect and prevent deterioration.²⁴

At the Fourth Biennial Meeting of States Parties (BMS4) in 2010, stockpile management and surplus disposal were not central points of the discussions; however, delegates continued to reaffirm the needs and priorities identified at the BMS3, and states were encouraged to:

- Enhance practical cooperation by reviewing past and existing international cooperation practices and through further efforts on all aspects of the implementation of the Programme of Action, including joint or coordinated action, among all relevant agencies, including stockpile management,

law enforcement, judicial, prosecutorial, investigative, intelligence, border and customs control agencies, as well as arms control officials responsible for arms transfer licensing, transit, brokering and transport

- Share knowledge and expertise on the implementation of the Programme of Action, including in the development of appropriate legislation, regulations and administrative procedures, the development of weapons collection programmes, and the strengthening of national capacities, including the training of national authorities in such areas as investigative techniques, prosecution, border controls, stockpile management, tracing and the use of marking machines²⁵

At the sub-regional level, the following agreements apply.

SADC Firearms Protocol

In Africa, Southern African Development Community (SADC) member states are bound by the legally binding SADC Protocol on Control of Firearms, Ammunition and Other Related Materials (SADC Firearms Protocol). In terms of this document:

State Parties undertake to: enhance their capacity to manage and maintain secure storage of state-owned firearms (art. 8)²⁶

In 2006 the Southern African Regional Police Chiefs Cooperation Organisation (SARPCCO) Secretariat was tasked, in conjunction with other member states, 'to come up with guidelines on best practices to control firearms, ammunition and related materials in the region'. These standard operating procedures (SOPs) are to serve as a guideline for the implementation of regional standards with regards to the SADC Firearms Protocol.²⁷

Nairobi Protocol

In terms of the legally binding Nairobi Protocol for the Prevention, Control and Reduction of Small Arms and Light Weapons in the Great Lakes Region and the Horn of Africa (Nairobi Protocol), signatory states are required to:

Establish and maintain complete national inventories of small arms and light weapons held by security forces and other state bodies, to enhance their capacity to manage and maintain secure storage of state-owned small arms and light weapons²⁸

At the Third Ministerial Review Conference held in Nairobi in June 2005, the Best Practice Guide on SALW, as categorised and defined by the Nairobi Declaration and the Nairobi Protocol, was approved. The aim of this

guide was to 'elaborate a framework for the development of policy, review of national legislation, general operational guidelines and procedures on all aspects of SALW, required for implementation, by the Nairobi Protocol'. The guide also covers the 'SALW stockpile in legal non-state possessions, as well as that in state possession during peacetime'.²⁹

Economic Community of West African States (ECOWAS) Convention

In terms of the ECOWAS Convention on Small Arms, Light Weapons, Their Ammunition and Other Related Materials:

- Member States shall take the necessary measures to ensure the safe and effective management, storage and security of their national stocks of small arms and light weapons
- To this effect, Member States shall establish effective standards and procedures for stockpile management, storage and security. These standards and procedures shall include:
 - Appropriate site
 - Physical security measures of storage facilities
 - Inventory management and record keeping
 - Staff training
 - Security during manufacture and transportation
 - Sanctions in case of theft or loss
- Member States shall ensure that stockpiles of small arms and light weapons by manufacturers, dealers, as well as individuals, are securely stored in accordance with the appropriate standards and procedures
- Member States shall undertake to regularly review, in accordance with national laws and standards, the storage facilities and conditions of small arms and light weapons held by their armed and security forces and other authorised bodies, in order to identify, for disposal, surplus and obsolete stocks
- The Executive Secretary shall ensure, in collaboration with Member States, that effective standards and procedures for stockpile management of weapons collected in the context of peace operations are duly observed³⁰

Adequate management of CW and ammunition stockpiles constitute an important part of taking action against the illicit use and inadequate storage of SALW and ammunition. In order to implement the above legal and political imperatives more effectively, correct storage practices need to be followed. By doing so, states will have the ability to curb and eventually prevent possible explosions occurring.

In Central Africa, one of the few African sub-regions that did not previously have its own legal instrument for the control of SALW, such an instrument has recently been

drafted by the United Nations Regional Centre for Peace and Disarmament in Africa in a bid to reduce violence and promote peace and security in the region. The Central Africa Convention for the Control of Small Arms and Light Weapons, Their Ammunition, Parts and Components that Can Be Used for Their Manufacture, Repair and Assembly, known as the Kinshasa Convention, has been adopted by 11 states in Central Africa, namely Angola, Burundi, Cameroon, Central Africa Republic, Chad, Congo, the DRC, Gabon, Equatorial Guinea, Rwanda, and São Tomé and Príncipe.³¹ While still fairly new and a work in progress, the preliminary draft of the Kinshasa Convention highlights the need for adequate stockpile management by State Parties. In Article 18: Management and Safeguarding of Stocks in the preliminary draft, it states that:

- State Parties shall keep the warehouse secure and shall ensure the good management of stocks of small arms and light weapons at all times. As such, it shall define and harmonise the administrative measures and procedures for the management, securing and storage of the stocks.
- The administrative measures and procedures referred to in paragraph 1 of this Article is particularly clear on the determination of the storage site, institution of physical security measures, definition of the inventory-taking and record-keeping procedures during transportation.
- State Parties shall establish a national register for small arms and light weapons, their ammunition and any equipment for the manufacture thereof in the possession of the armed and security forces and other authorised State body.
- State Parties shall establish the inventory and declare the stocks obsolete of small arms and light weapons, their ammunitions and any other equipment for the manufacture thereof. They shall proceed to mark these obsolete arms in compliance with the provisions of Article 16.
- State Parties shall adopt the necessary administrative measures and procedures for enhancing the management and security capacities of small arms and light weapons' armouries belonging to the armed and security forces and by other authorized State bodies.³²

STOCKPILE MANAGEMENT INITIATIVES

A number of stockpile management initiatives exist globally that could assist African states in effectively securing and managing their weapons and ammunition stockpiles. Proper inventory management systems and accounting control procedures are just two very important aspects. A national database should be used so as to achieve a holistic and effective approach to managing

weapons stockpiles.³³ Within this database, the number of weapons and ammunition held by the Ministry of Defence and the Ministry of Interior should be accounted for by recording the make, model and serial numbers of the weapons and ammunition; the physical location of where these weapons and ammunitions will be held; and their condition and designation, i.e. whether they are surplus stock, reserve stock or operational stock.³⁴ All of the above information should be logged into a computerised national database, which should then be 'collated and controlled by an established national authority'.³⁵ These procedures form the basis of an effective and efficient stockpile management system, and as such allow for timely and effective decisions on any future occurrences.

The physical location of the weapons and ammunition stockpiles is key to preventing possible leakages and explosions from occurring, and needs to be monitored. Weapons and ammunition storage facilities need to be placed in areas where they pose no threat to the local community and where they can be monitored and assessed on a regular basis.³⁶ The threat and frequency of the active dangers these weapons and ammunition pose are always very high, especially during possible leakages through theft, burglary, espionage and terrorist attacks.³⁷ As such, their physical location is paramount to preventing such incidents from occurring. The surrounding perimeter should also be taken into account, by conducting a risk assessment analysis of the area, which should take into account, among other issues, temperature and humidity levels, the nature and dynamics of local environment and infrastructure, and security measures.³⁸ Physical security measures can include:

- Lock-and-key practice
- Access control
- The management of inventory, accounting control procedures and protection measures in the event of an emergency situation
- Procedures aimed at maximising the security of weapons being transported to and from storage facilities
- Precautions and sanctions in the event of loss and theft of such weapons
- Security training for personnel regarding SALW stockpile locations and buildings
- Assistance in improving existing stockpile management and security procedures³⁹

CAUSES OF STOCKPILE EXPLOSIONS IN AFRICA

Contributing factors to continuous explosions occurring in Africa include instances where weapons stockpiles are being improperly stored and not being sufficiently monitored. The shelf life of the ammunition depends

substantially on the manner and condition in which it is stored.⁴⁰ If stored incorrectly and not monitored regularly, the ammunition has the potential to become unreliable and extremely volatile, posing a great risk to the community and ecosystem that surround it.⁴¹ Stockpiles of unstable CW and ammunition do not only pose a grave risk to nearby communities, but also to the economies of the countries in which they are stored.

There exists no 'authoritative technical standards' that ... comprehensively address ... stockpile management

Stockpile explosions can also be caused by unauthorised tampering with CW, which is typically motivated by theft or sabotage, as well as environmental factors such as lightning strikes, extreme heat and fires.

The financial costs associated with such explosions range from clean-up operations to infrastructure repair and development, and the rebuilding of communities. African states should therefore review their national stockpile management instruments and, where necessary, 'request financial, technical, and other assistance' to strengthen their national capacities in order effectively to manage these weapons stockpiles.⁴²

The sheer number of explosions that have taken place in Africa to date demonstrate the lack of adequate stockpile management in the continent, as well as the need for better management of weapons and ammunitions stockpiles. While regional SOPs have been developed to control and manage CW, particularly SALW, 'no authoritative technical standards' exist that more comprehensively address the stockpile management aspect of these weapons in Africa.⁴³

MEASURES TO IMPROVE STOCKPILE MANAGEMENT IN AFRICA

In many African countries, the secrecy attached to the manufacture, distribution and storage of these SALW and ammunition has meant that it is difficult to accurately determine the scale and magnitude of the CW stockpile management problem.⁴⁴ This lack of transparency in some instances has also led to the monitoring and control of such stockpiles being neglected, resulting in preventable problems occurring. In this instance, government, parliamentarians and armed forces have

a vital role to play in ensuring that the community is informed about any weapons and ammunition stockpiles, particularly their location and proximity to the community.⁴⁵ While it is acknowledged that this kind of information is kept secret as a matter of national security, the community should, at the very least, be made aware of the danger such sites pose by enclosing and adequately securing them. Warnings signs should also be erected so as to prevent community members from living too close to such storage facilities.⁴⁶

In order to assist states in effectively managing their weapons and ammunition stockpiles, a number of best-practice guidelines (BPGs) for stockpile management and security measures have been developed by regional and international organisations such as SARPPCO, in the form of its Standard Operating Procedures for the Implementation of the SADC Protocol on the Control of Firearms, Ammunition and other Related Materials, and the South Eastern and Eastern Europe Clearinghouse, for the Control of Small Arms and Light Weapons (SEESAC)⁴⁷ so as to guide countries in their efforts to effectively manage and limit the risks posed by arms and ammunition stockpiles.

By effectively implementing these and similar BPGs for stockpile management and security, African countries could manage their weapons stockpiles much more effectively and deal with the threat posed by such stockpiles.

STOCKPILE MANAGEMENT IN AFRICA: CASE STUDIES

Arms and ammunition depot explosions and the diversion of the ammunition stocks of state actors highlight the relevance of the issue of inadequate stockpile management in Africa.⁴⁸ While some countries have adopted the abovementioned legal and political imperatives to assist them in implementing effective stockpile management systems, the results have been far from adequate. The cases of Mozambique (2007) and Tanzania (2009 and 2011) illustrate this.

Mozambique

The 15-year post-independence civil war in Mozambique came to an end with the signing of the 1992 General Peace Agreement in Rome by Joaquim Chissano, then president of the Republic of Mozambique, and Afonso Dhlakama, then leader of RENAMO, the main rebel movement at the time.⁴⁹ As a consequence of this peace agreement, Mozambique, with the support and assistance of the United Nations Operation in Mozambique (ONUMOZ), coordinated a disarmament and demobilisation programme that 'encouraged former guerrilla fighters and government soldiers to hand over

their weapons'.⁵⁰ However, the number of surrendered weapons was far less than anticipated, and as a result, a large quantity of weapons used during the civil war was unaccounted for.⁵¹ Furthermore, those weapons that were collected were probably housed in inadequate storage facilities.⁵²

In August 2001 the Mozambique government adopted the SADC Firearms Protocol, ratifying it in September 2002.⁵³ This protocol requires member states to establish national inventories of all firearms held and stored by security forces and other state parties so as to effectively manage and maintain the secure storage and safe destruction of surplus, redundant or obsolete state-owned firearms and ammunition.⁵⁴

From the early 1990s violent crimes increased in both South Africa and Mozambique, to a large degree due to the availability and mobility of weapons and ammunition.⁵⁵ In 1995 Operation Rachel was established under the Crime Combating Agreement between Mozambique and South Africa, according to which these countries agreed to cooperate with and assist each other to combat crime.⁵⁶ The aim of Operation Rachel was to locate, collect, and dispose of the arms and ammunition that had not been collected by ONUMOZ. The operation was driven by intelligence on hidden weapons caches provided to the police by ex-combatants, the public and informer networks.⁵⁷ Between 1995 and 2009 more than 50 000 firearms and 30 million rounds of ammunition were collected and destroyed as part of Operation Rachel. Mozambique has also been involved in SARPPCO joint operations relating to the control and proliferation of firearms.⁵⁸

In 2007, however, the successes of Operation Rachel and the Mozambican government's active role in combating the proliferation of SALW were arguably being overshadowed by weapons stockpile explosions, with the most destructive one occurring in Malhuzine on 22 March 2007, which resulted in more than 104 people being killed and scores more injured.⁵⁹ This was the third explosion at Malhuzine, with previous explosions taking place in 1985 and January 2007. There has also been weapons depot explosions in Beira in October 2002, January 2005 and December 2006. In assessing the March 2007 explosion, arms control specialists raised concerns about the state of Mozambique's other 17 weapons depots, 'as well as those of similar such arsenals in the hands of security forces in other African countries'.⁶⁰

In the aftermath of the 2007 Malhuzine explosion, the Mozambican government has made a concerted effort to improve national arms and ammunition control processes. The Arms and Ammunition Act (2007) has entered into force, and cooperation between the Government of Mozambique and the United Nations Development Programme (UNDP) in the area of small arms control has been initiated in terms of a project

known as Weapons Risk Mitigation and Mainstreaming Mine Action, Small Arms and Light Weapons Controls 2008–2011.⁶¹ A key component of this project involves UNDP providing technical advisory support to the government on the control and management of weapons and ammunition stockpiles.

The Inter-Ministerial Commission to Prevent, Combat and Eradicate Illicit Trafficking in Small Arms and Light Weapons has identified the need to rehabilitate all police and customs armouries and to train law enforcement officers in weapons collection, management and destruction.⁶² To this end the government and UNDP are working towards:

- Undertaking a professional technical assessment of the stability, security and conditions of existing stockpiles, as well as of government capabilities to manage the stockpiles.
- Developing draft SOPs based on the above assessment, which will provide the basis for an effective ammunition management system.
- Developing a model ammunition depot based on the technical assessment and SOPs to showcase improvements and provide training to the Ministry of Defence.
- Installing appropriate physical security systems, fire alarms and fire-fighting equipment at arms depots.
- Improving storage infrastructure (buildings and internal roads) at the model depot.⁶³
- The training of police and customs officials in stockpile management, as well as weapons and ammunition destruction (in collaboration with HALO Trust). The training includes the physical rehabilitation of three police armouries to international standards. The three rehabilitated armouries will act as a model for the rehabilitation of other police armouries.⁶⁴

The government has, however, indicated that it remains confronted by some weapons stockpile management challenges. A number of government weapons storage facilities do not meet international standards, particularly in terms of physical security. There have also been incidents where security force personnel have 'rented' out their official firearms to criminals, and these weapons have been used in incidents of armed violence. Military ammunition storage sites were reportedly over-stocked and exceeded safe explosive limits, presenting a hazard to local communities.⁶⁵

Tanzania

Tanzania is a country strategically located between Southern and Eastern Africa; it shares its borders with eight countries, namely Kenya, Mozambique, Malawi,

Zambia, the DRC, Burundi, Rwanda and Uganda.⁶⁶ Over the years, Tanzania has played host to a large number of refugees fleeing violence-affected areas in the Great Lakes region. These trans-border movements, coupled with a number of foreign liberation movements that have been based in the country between the 1960s and 1998, have left a large number of arms in circulation within the country's borders.⁶⁷ Arms have continued to flow in and out of the various conflict areas surrounding Tanzania, which are traded across by rebel groups and unscrupulous forces by way of the country's north-western border.⁶⁸ This proliferation of arms continues to contribute heavily to the illicit spread of SALW within the country. With the large number of weapons circulating, the level of armed crime throughout the country has also seen a substantial increase.⁶⁹

Ineffective stockpile management in Tanzania ... has resulted in explosions in recent years

Tanzania is a signatory to the Nairobi Protocol and the SADC Firearms Protocol, both of which require signatory states to establish and maintain effective weapons and ammunition stockpile structures and systems. However, it has been suggested that arms leaked from government storage facilities are the main source of illegally distributed arms in Tanzania. Weak security measures to monitor state-held stocks and 'insufficient capacity to store the large number of surrendered and recovered weapons that are waiting to be registered or destroyed' have been identified as the main reasons for this.⁷⁰

Tanzania has in recent years, however, instituted a number of arms destruction initiatives in order to reduce the number of illicit weapons in circulation. The most recent was the public destruction held on 25 May 2010 in the Kagera region in north-west Tanzania to mark Africa Day and commemorate the African Union's Year of Peace and Security. Many of the weapons that were destroyed were 'recovered from or voluntarily surrendered by civilians and refugees living in the area'.⁷¹

Ineffective stockpile management in Tanzania, particularly of military stockpiles, has resulted in explosions in recent years. The two most prominent arms depot explosions took place in April 2009 and February 2011 at military bases close to Dar es Salaam. Both incidents resulted in deaths, injuries and the destruction of property.

The April 2009 explosion, which occurred during an inspection of the Mbagala storage facility by the Tanzanian People's Defence Force (TPDF),⁷² sent

shockwaves through a densely populated area situated a mere 90 m away from the main storage facility, which did not have a security fence to restrict access.⁷³ The arms facility, which contained weapons such as assault rifles, man-portable air-defence systems, various types of mortars, rocket-propelled grenades, mines and ammunition of various calibres, was entirely destroyed.⁷⁴ Reportedly, 40 civilians died, scores were injured, and thousands of homes were either damaged or destroyed.⁷⁵ Children were separated from their parents during the chaos and some civilians drowned in a river as they tried to escape from the effects of the blast.⁷⁶

In an attempt to assist the government of Tanzania after this explosion, the Mines Advisory Group offered to deploy a small technical team to provide technical assistance and support; this team arrived in Dar es Salaam the day after the explosion.⁷⁷ The TPDF, however, declined this offer of assistance.⁷⁸ However, the TPDF subsequently accepted an offer of assistance from the United States Office of Weapons Removal and Abatement rapid reaction team.

The February 2011 incident involved a series of inter-linked explosions in ammunition depots in the Gongo la Mboto military base. Approximately 20 people were killed, 300 injured and 4 000 displaced, while several homes and a school were destroyed.⁷⁹ This incident clearly indicates that substantial work in improving weapons and ammunition stockpile management in Tanzania is urgently required.

CONCLUSION AND RECOMMENDATIONS

The destructive impact that inadequate stockpile management has had and continues to have on many communities in Africa provides a grim example of the seriousness attached to the need to locate weapons and ammunition stockpiles in safe areas away from civilian communities, as well as to implement effective stockpile management procedures. These stockpiles pose a significant threat and have 'enduring consequences in vulnerable and fragile societies',⁸⁰ as indicated above, and as such need to be adequately managed and/or disposed of by making use of the correct mechanisms and BPGs.

There is a pressing need for governments in Africa to promote the safe and secure storage and destruction of weapons and ammunition stockpiles so as to prevent the occurrence of future risks such as explosions and to deal with challenges such as the proximity of such stockpiles to residential areas. While a number of regional and international initiatives have been adopted in an attempt to control these stockpiles, continued explosions and misuse of such weaponry illustrate that not enough is being done by governments and similar institutions to adhere to these agreements.⁸¹

The Mozambican and Tanzanian stockpile explosions are just some examples of the consequences of ineffective stockpile management that have occurred across the African continent over the past decade. These explosions illustrate how inadequately managed weapons stockpiles can wreak havoc in developing countries, which have neither the technical capacity nor the financial means to cope with such disasters.

A number of actions can be taken to promote and establish long-term best practices in the management and control of weapons and ammunition stockpiles, a few of which have been expanded on above. These range from enhancing the safety and security of such weapons and ammunition to the destruction and disposal of such stocks. In order to safely and securely manage and control weapons and ammunition stockpiles, governments and armed forces would benefit substantially from implementing the following guidelines:

- Proper storage facilities should be constructed.
- Physical security measures should be instituted, such as lock-and-key practices and access control.
- Inventory should be properly managed and proper accounting control procedures should be introduced.
- Procedures should be designed to deal with an emergency situation.
- Procedures aimed at maximising the security of arms and ammunition being transported to and from storage facilities should be implemented.
- Precautions should be taken to prevent the loss and theft of weapons and ammunition, and adequate sanctions should be introduced should this occur.
- Training should be provided for personnel regarding stockpile management, arms depot construction and security procedures.⁸²

International assistance and cooperation is vitally important for the above guidelines to be implemented, as many countries in Africa lack the technical, financial or institutional resources to meet them. As such, African states should request assistance and make use of the various states, and of international and regional organisations that are in a position to assist them in developing adequate stockpile management practices.

With increased political will from both governments and armed forces in the effective management of weapons and ammunition stockpiles, and continued support, both financial and otherwise, from countries and international and regional organisations willing to assist, African countries could go a long way towards protecting their communities from the scourge of inadequately managed weapons and ammunition stockpiles.

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ABOUT THIS PAPER

Weapons and ammunition explosions at government depots, in particular at military stockpiles across the world, highlight the risks posed by inadequately managed and poorly stored weapons stockpiles. In Africa, the physical risks posed by these stockpiles, and the explosions that occur as a result of them, have left many communities suffering injury and death.

While there have been a number of legal and political initiatives adopted to assist African governments in better managing and securing their stockpiles, there are still a range of challenges that contribute to continued explosions occurring on the continent.

This paper identifies explosions that have occurred in both Mozambique and Tanzania and assesses the need for African governments to implement and promote more effective stockpile management systems, so as to prevent the occurrence of future risks and explosions.

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Lauren Tracey is a consultant in the Arms Management Programme (AMP) at the Institute for Security Studies in Pretoria. Her research focus is on Small Arms Light Weapons (SALW) issues in Southern Africa, and she takes particular interest in the developmental implications of weapons of mass destruction (WMD) and efforts to mitigate such threats or their actual use in Africa.

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