Request for extension of the deadline for fulfilment of obligations under Article 5 of the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction

# **Zimbabwe**

# March 2017



Prepared for the National Mine Action Authority of Zimbabwe (NAMAAZ)
Col MB Ncube
Director
Zimbabwe Mine Action Centre
P. Bag 7720
Causeway
Harare
Zimbabwe

Telefax: (+263-4) 703530 Email: <a href="mailto:zimacaction@gmail.com">zimacaction@gmail.com</a>

Contents	
Abbreviations	4
Executive Summary	5
1. Origins of the Article 5 Implementation Challenge	11
a. Circumstances that impeded compliance in last extension request.	12
b. Humanitarian, economic, social and environmental implications	13
c. Socio-economic impact of Landmines in Zimbabwe	13
2. Nature and Extent of Progress Made during fourth extension request	15
a. Resources made available to support progress	15
b. Methods used to identify areas containing AP	17
<ul><li>c. Methods and Standards of Controlling and Assuring Quality</li><li>d. Efforts undertaken to ensure effective exclusion of civilians from mined areas</li></ul>	17 18
e. Survivor assistance	18
f. Nature and Extent of Progress Made: Quantitative Aspects	19
3. The Remaining Challenge:	22
a. Nature of remaining challenge: Qualitative aspects	22
b. Nature of remaining challenge: Quantitative aspects	32
4. Detailed Work plan	33
a. Clearance Timeline	35
b. Estimated Funding required for extension request	37
c. Additional Activities during the extension period	37
5. Risks and assumptions	38
Table 1. Contamination level at the start of fourth extension request, (2014)	7 8-9 10 12 19 20 21 32 34 34 35 37 38
Figure 1. Organisational Structure of the Zimbabwe Mine Action Centre Figure 2. Minefields in Zimbabwe as of December 31, 2016. Figure 3. Musengezi to Rwenya River Minefield Figure 4. Sheba Forest to Leacon Hill Minefield Figure 5. Rusitu to Muzite Mission Minefield Figure 6. Sango Border Post to Crooks Corner Minefield Figure 7. Lusulu Minefield	11 22 23 26 29 30
Photo 1. Women walk safely through the cleared minefield to collect water	14

Photo 2 Some of Chimushonga Community settlements are 50m -100m from the minefield	
Photo 3. Children pass throughA deminer opens a two meter lane during survey	
Photo 4. Some of Chimushonga Community settlements are 50m -100m from the	
minefield	24
Photo 5. Cordon Sanitaire minefield with thick vegetation	27
Photo 6. Minefield conditions near Nyamapanda Border Crossing Point	27
Photo 7. A deminer opens a two meter lane in the timber plantation during	
survey at Imbeza, Sheba Forest to Leacon Hill minefield	26
Photo 9. Technical survey lanes at Cecil Kopje Task	27
Photo 11. Elephants grazing near Sango Border Post / Crooks Corner Minefield	31
Annex A. General Description of Minefields in Zimbabwe	40
Annex B. Zimbabwe Mine Action Work plan for 2017 to 2018	42

#### **Abbreviations**

APM Anti-Personnel Mine

APMBC Anti-Personnel Mine Ban Convention

APOPO Anti-Persoonsmijnen Ontmijnende Product Ontwikkeling / Anti-Personnel

Landmines Detection Product Development

CHA Confirmed Hazardous Area
GIS Geographic Information System

HALO Hazardous Area Life-support Organization ICRC International Committee of the Red Cross

MAG Mines Advisory Group MRE Mine Risk Education

NAMAAZ National Mine Action Authority of Zimbabwe

NMAS National Mine Action Standards NMCU National Mine Clearance Unit NPA Norwegian People's Aid

NPA Norwegian People's Aid NSP National Strategic Plan NTS Non-Technical Survey QA Quality Assurance QC Quality Control

QM Quality Management SHA Suspect Hazardous Area

SOP Standard Operating Procedure

TS Technical Survey

ZIMAC Zimbabwe Mine Action Centre

ZNMAS Zimbabwe National Mine Action Standards

GICHD Geneva International Centre for Humanitarian Demining

# **Executive Summary**

At independence in 1980, Zimbabwe inherited eight (8) distinct major mined areas that were laid between 1976-1979 by the Rhodesian Army along the country's borders with Zambia and Mozambique, respectively. The original contamination was at 180 886 000m² although erroneously reported as 511 050 000m² on previous extension requests. Through achievements in land release from the time Zimbabwe became a State Party to the APMBC and during previous extension periods, the contaminated land had been reduced to 74 922 163m² as at January 2014 when Zimbabwe was granted the 4th and current extension period in June 2014. During the fourth extension period, Zimbabwe achieved significant results by reducing 8 790 874m² of land leaving the remaining challenge at this present time. of 66 131 289m²

It is estimated that the original contamination included approximately three million (3,000,000) anti-personnel mines. The mines were laid on three different types of minefields, i) the Cordon Sanitaire, ii) Ploughshare and, iii) Reinforced Ploughshare minefields.

The Government of Zimbabwe remains concerned with the existence of minefields along the country's border. As such, since independence to date, the Government has made every effort to rid the country of these minefields which continue to injure, maim and in worst cases kill both humans and livestock. The efforts by the Government include provision of funding for mine action and seeking assistance from the international community before and after the country became a State Party to the Anti-Personnel Landmine Ban Treaty.

Zimbabwe like most States Parties became a State Party to the Anti-Personnel Landmine Ban Treaty (APMBC) in 1999 whereby it was obligated to have completed clearance of all the mined areas within the country's jurisdiction or control by March 2009. This was however not achieved. Accordingly, Zimbabwe requested for an extension period which was granted and since then the country has been granted four extension periods. The fourth and current extension period which expires on 01 January 2018 was granted during the Third Review Conference in Maputo, June 2014.

One of the conditions of granting the fourth extension period was for Zimbabwe to resurvey all the remaining contaminated land within her jurisdiction or control to come up with a clear picture of the remaining contamination and make a plan of action. Zimbabwe now talks with certainity of the remaining contamination after successfully carrying out resurveys of all contaminated areas. Currently ,Zimbabwe is now working on the National Strategic Plan with the assistance of GICHD. Demining Organisations in Zimbabwe have successfully increased their capacity. HALO Trust has increased its capacity to 240 deminers with room to further increase in 2017. Norwegian People's Aid, (NPA) increased capacity to 70 deminers while the National Mine Clearance Unit (NMCU) has increased by an additional 30 deminers bringing the capacity to 150 deminers up from 120, with equipment for the additional deminers provided by the ICRC. Zimbabwe looks forward to accelerated clearance rate due to the continual expansion of the three demining organisations currently at work. Added to the expansions by HALO Trust and NPA, and the

NMC Unit, it is pleasing to note that while preparing this extension request, Zimbabwe has engaged two more demining organisations, namely APOPO and the Mines Advisory Group (MAG). This will allow for more land to be relieved of mines thereby creating more room for greater opportunities. The Government of Zimbabwe has provided over USD\$1.5million to ZIMAC and NMCU during the extension period. These efforts have helped to bring a high level of clarity on the remaining Article 5 challenge.

The drafting and approval of national standards, that included updates on land release process also ensure Zimbabwe has responded to recommendations given in its 2014 Extension Request. These achievements have enabled Zimbabwe and its operators to resurvey mined areas under her jurisdiction and come up with a work plan to deal with an accurate figure of remaining contamination. The total area processed with NTS, TS and clearance during the extension period is 8 790 874m². During the extension period Zimbabwe also completed clearance on the Burma Valley minefield. This has resulted in increased business opportunities in areas of agriculture, tourism, mining, game ranching and industrial sites. On the social aspect, local inhabitants will freely access water sources, have ample grazing land for their domestic animals and travel across lands to visit their relatives without risking their lives and limbs.

# **Requested Period of Extension**

Zimbabwe now has a clear picture of the remaining contamination in areas under her jurisdiction or control. With surveys completed, expansion and capacity building of the current demining operators and the coming on board of two additional international demining organisations, Zimbabwe now seeks **an eight (8) year extension**, **January 2018 to December 2025**, during which it is envisaged that at current funding, clearance would most likely be completed.

The 8 year period requested is the minimum period expected to do the job with the current capacity, anything less than this period will not be realistic and certainly Zimbabwe cannot complete the remaining contamination in a lesser period unless more players come on board.

Table 1. Contamination Level at the start of fourth extension request, (2014)

	Mined Areas	Total Area (m²)
1	Musengezi to Rwenya	29 327 211
2	Sango Border Post to Crooks Corner	28 605 729
3	Rusitu to Muzite Mission	15,000,000
4	Sheba Forest to Leacon Hill	8,231 200
5	Lusulu	56,000
	TOTAL	81 220 140m <sup>2</sup>

As at June 2014 the Rusite to Muzite Mission Minefield area was reported as 15 000  $000m^2$ , however, the NPA resurvey of the minefield in October 2016 reduced the

contaminated land to 8 702 023m². This reduces the total area of contamination on table 1 above with 6 297 977m² to **74 922 163m²**. During the period of the fourth extension to date Zimbabwe and its international partners have processed 8 790 874m², representing 12% of all confirmed and suspected mined areas in the country as at 2014. The challenge remaining at the start of the fifth extension request (2017) is 66 131 289m² and is summarised on table 2 below.

Table 2. Contamination level at the start of the fifth extension request, (2016).

	Mined Area	Linear Distance	Area(m²)	Clearance Organization
1	Musengezi to Mazowe River	229km	14 438 732	HALO Trust
2	Mazowe River to Rwenya River	130km	11 277 700	MAG
3	Sango Border Post to Crooks Corner. Ploughshare Mf	35km	17 292 098	National Mine Clearance Unit
4	Sango Border Post to Crooks Corner. Cordon Sanitare	35km	7 181 638	APOPO
5	Rusitu to Muzite Mission	71,765km	8 702 023	NPA
6	Sheba Forest to Leacon Hill	54km	7 183 098	NPA
7	Lusulu	1.5km	56 000	National Mine Clearance Unit
8	TOTAL	624.5KM	66 131 289	

# Clearance Plan for the Extension Request

Zimbabwe aims to complete its clearance obligations within 8 years, (2018-2025). A work plan based on existing capacities and funding has been developed for the period of the extension, as shown on table 3 below. During the extension period, ZIMAC will produce revised two (2) yearly work plans with benchmarks that can more accurately direct operations. These plans will be reported on an annual basis through Zimbabwe's Article 7 transparency report. An initial detailed work plan covering the period 2017-2018 is attached as Annex B.

Table 3. Annual clearance during the extension period (m<sup>2</sup>)

Minefield	2017	2018	2019	2020	2021	2022	2023	2024	2025	TOTAL
Musengezi to Mazowe (HALO)	1 290 300	1 405 700	1 740 000	1 740,000	1 740,000	1 740,000	1 740,000	1 740,000	1 302 732	14 438 732
Mazowe to Rwenya River (MAG)	700 000	802 000	1100 098	1300 000	1500 000	1600 000	1650 000	1650 000	1 075 602	11 277 700
Crooks Corner to Sango Border(Reinforced Ploushare) (NMC)	2 100 000	2100 000	2100 000	2100 000	2100 000	1 900 000	1900 000	2 000 000	988 098	17 292 098
Crooks Corner to Sango Border (Cordon Sanitaire) (APOPO)	300 000	900 000	750 000	900 000	850 000	900 000	1000 000	800 050	781 588	7 181 638

Rusitu to Muzite Mission (NPA)	164,104	984,000	1,000,000	1,200,000	1,500,000	1,600,000	1,600,000	653,919		8,702,023
Sheba Forest to Leacon Hill (NPA)	1,795,000	1 810 000	1 810 000	1 768 098						7 183 098
Lusulu(NMC)					30 000	26 000				56000
Total	7 035 300 <sup>1</sup>	7 367 700	8150 098	9 008 098	8 720 000	8 666 000	8 790 000	8 600 050	3072418	66 131 289

#### **Annual Finance**

The Zimbabwe Government has over the past three years provided funding to the tune of (\$1.5 m) at the rate of (\$500,000.00 annually for its demining institutions and national clearance operations. This is expected to continue and increase when the country's economic situation improves.

Table 4. Clearance Budget during the Extension Period 2018 to December 2025

Organisation	Year								Total	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	
International	Dono	r / Ope	rationa	l Suppo	rt					
NPA	3	3.15	3.3	3.46	3.63	3.81	4	4.2	4.41	32.96
HALO	4.65	5.36	5.25	5.69	5.8	6.03	6.21	6.4	6.59	45.39
APOPO	1	2	2	2	3.4	3.5	3.4	2.4	2	21.7
MAG	0.7	1	1	1.5	1.5	3	3	3	3	17.7
Sub-Total	9.35	11.51	11.55	12.65	14.33	16.34	16.61	16	9.41	117.75
Zimbabwe Go	Zimbabwe Government Support									
NMCU	0.6	0.7	1.5	1	1	1.5	2	2.5	3	13.8
Total	9.95	12.21	12.60	13.65	15.33	17.84	18.61	18.5	12.41	131.55

Overally, the Government of Zimbabwe remains committed to carry out its Article 5 obligations and the progress achieved can be seen in the following factors:

- Low accidents rates among civilians
- Low accident rates among demining operators
- Low security risks in country for operations
- High impact of cleared land for socio-economic development of communities, local and international businesses.
- Areas and size of contamination is known with a clear plan, known capacities and resources to achieve these obligations.

# 1. Origins of the Article 5 Implementation Challenge

The origin of Zimbabwe's Article 5 implementation challenge derives from the War of Liberation when between 1976 and 1979 the then Rhodesian Army laid minefields along the Northern and Eastern borders of the country to prevent infiltration and resupply of Zimbabwean liberation fighters operating from Mozambique and Zambia respectively. Combat action between the Liberation forces and the then government forces also resulted in large amounts of unexploded ordinance scattered around the country.

Following considerable research and planning by the then Rhodesian Army, minefield construction commenced in 1976 in the North Eastern border area of what is now Zimbabwe. By 1979, minefields had been laid in six significant areas. Several smaller minefields were also laid further inland to protect key infrastructure and permanent bases. The areas where the minefields were laid are highlighted on the map of Zimbabwe below and further information on the types of minefields are contained in Annex A

#### MINEFIELDS LOCATION IN ZIMBABWE

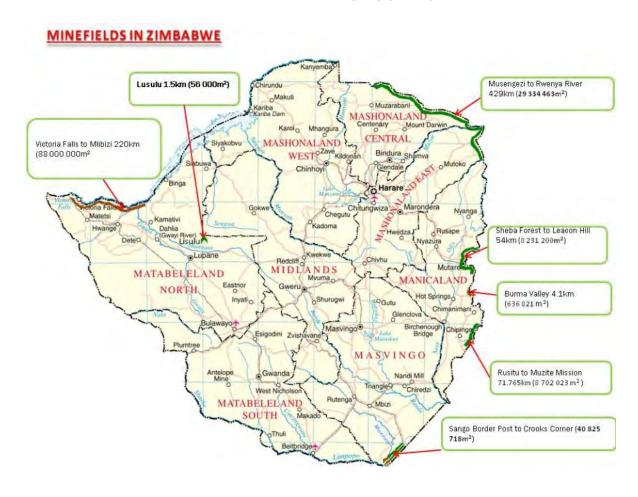


Figure 1 Minefields in Zimbabwe

# a. Circumstances that impeded compliance in last extension request.

The circumstances that impeded compliance have been highlighted on the previous three extension requests, similarly the fourth extension period was centred on the resurveys of the remaining contaminated and suspected hazardous areas. The remaining contamination or suspected areas was huge so much that it was not possible to do the surveys and complete clearance within the three year period granted the current extension period. Further to that the Government did not have enough resources to fully support survey and demining operations.

Accordingly, the nature of the fourth extension request was designed around a short period of time in order to complete re-survey of all the mined areas to come out with confirmed hazardous areas. These factors include a lack of sponsorship from the international community and donors. Today, Zimbabwe is happy to report that many of these challenges have lessened given the support that Zimbabwe is currently receiving from international organizations. Key factors impeding timely completion of Zimbabwe's Article 5 obligations are summarised table 5 below.

Table 5. Summary of Circumstances impeding compliance

Ser	Circumstance	Comments	Degree to which circumstance may impede the ability of Zimbabwe to destroy all antipersonnel mines in mined areas
(a)	(b)	(c)	(d)
1	Level of contamination	The remaining contaminated or suspected hazardous areas was huge to be completed within three years. Also taking into account that priority was on resurveys thereafter clearance	High although re-surveys are now complete focus now on clearance
2	Inadequate funding for demining from the Government	The economy is depressed and constrained. Zimbabwe is unable to access funds from multilateral institutions to revitalise the economy. The government has numerous pressing commitments to meet with the little resources available This then means that the national demining unit will not operate at full capacity due to shortage of equipment and logistical resources. However there are indications that the international community may assist in the near future as such organisation like ICRC, HALO Trust, NPA, MAG and APOPO have partnered the Government.	High degree
3	Insufficient demining equipment.	Due to inadequate equipment, the available military demining capacity cannot be fully utilised.	The situation is improving with the assistance from ICRC.

# b. Humanitarian, economic, social and environmental implications

The clearance of land will result in more benefits in humanitarian, economic, social and environmental aspects in the endeavour to fulfil the work to be carried out during the requested period. This will allow for more land to be relieved of mines thereby creating more room for greater opportunities. Business opportunities in areas of agriculture, tourism, mining, game ranging and industrial sites would be realised over the period. On the social aspect, local inhabitants will freely access their water sources, have ample grazing land for their domestic animals and travel across lands to visit their relatives without risking their lives and limbs. In such a situation, investors would be much more willing to make business in a mine free land resulting in poverty reduction.

### c. Socio-economic impact of Landmines in Zimbabwe

These mined areas have a severe socio-economic impact on Zimbabwean rural communities. They have severely affected the rural populace in the affected areas as livestock have been and continue to be killed by mines. Mines also continue to injure or in extreme cases kill humans. What is clear, however, is that the population that is at most risk from landmines includes poor rural subsistent farmers, who are often forced through economic necessities to take risks.

# Impact on the Population of Zimbabwe

The mines do not affect the entire population of Zimbabwe but those living adjacent to minefields, it is those communities close to mined areas, the poor rural subsistence farmers, who are often forced through economic necessities to take risks. From information gathered so far, the greatest impact on the population has proven to be on the Musengezi to Rwenya and the Sango Border Post to Crooks Corner minefields. In a nutshell, the contaminated areas deny the local populace agricultural land, free movement of people and grazing land for the communities' livestock among others.



Photo 1. Women walk safely through the cleared minefield to collect water

#### **Impact on Rural Communities**

Mined areas are mostly in remote rural areas that are inhabited by poor peasant farmers whose livelihood depends on farming and livestock rearing. Mined areas deny peasant farmers about 77.280 000m² of fertile land of which 25 000 000m² is in Mukumbura and 15 000 000m² in Rusitu/Muzite area. Minefields have both an economic and social impact on these people, especially those that live adjacent to or within mined areas. They deny freedom of movement to these people. This in turn impacts on socialisation with relatives across the mined areas. Some have attempted to cross these minefields in order to maintain contact or communication with relatives and the unlucky ones have been maimed or injured by anti-personnel mines.

Minefields also deny the same people access to water sources as well as grazing land. Out of desperation, some people who live adjacent to known mined areas have as a result of land pressure ended up taking unnecessary risks by cultivating crops or herding their livestock in mined areas that have not been cleared. This has in most cases resulted in injury or in some cases death as a result of unavailability of suitable health care facilities in rural areas to deal with traumatic injuries caused by landmines. Very large numbers of livestock, a source of livelihood for the affected peasant farmers have also been lost. It is estimated that since 1980; over 1,561 humans were killed or maimed by mines and explosive remnants of war, more than

120 020 livestock and thousands of wild animals have been killed. The denial of land due to existence of mines is with very few exceptions.

# **Impact on Commercial Farming**

An area of about 5 000 000m<sup>2</sup> of commercial farm land for tea estates and timber plantations is mined, and in some of these areas, there is timber that is now well past its maturity and has obviously already lost its commercial value. Although no computation has been made, the revenue and potential income that has been lost by the country as a result of the existence of mines in these areas is too significant to be ignored.

# **Impact on Tourism**

The successful completion of the clearance of the Victoria Falls to Mlibizi minefield in 2005 unlocked tourism development potential around the town of Victoria Falls. Significant tourism development has taken place in the cleared area. State of the art tourist facilities and infrastructure such as an aerodrome for tourists and other activities have been constructed and are operational in the cleared area. However tourism development has remained a challenge in a huge area of the Great Limpopo Transfrontier Park (GLTP), a tripartite tourism project by Zimbabwe, South Africa and Mozambique where the Sango Border Post to Crooks Corner minefield is located and where contaminated areas remains uncleared.

# 2. Nature and Extent of Progress Made during fourth extension request: Qualitative Aspects

During the fourth extension period from June 2014 to December 2016 progress has been achieved both on the clearance front and total survey of all mined areas. The successful completion of re-surveys of all contaminated or suspected areas was a milestone achievement as today Zimbabwe can declare the remaining contamination with a high degree of accuracy. The surveys and clearance has reduced swaps of land as such estimation of the timeframe for the clearance of the remaining contamination was made possible. The capacity building and expansion of the current demining partners including the NMCU has seen the increased pace of clearance.

### a. Resources made available to support progress

# **Institutional Strengthening of ZIMAC**

The ZNMAS was compiled by the NAMAAZ on behalf of the Government of Zimbabwe. This document is written in accordance with the International Mine Action Standards (IMAS), and upholds the same conventions advocated by IMAS relating to all mine action activities governed and supported by IMAS. It was first compiled in 2010, drafted and approved in 2013. The document is subject to review and revision. All mine action organisations have started operating basing on these standards.

# Government of Zimbabwe strengthening of national mine action capacities

The Government of Zimbabwe is fully committed to rid the country of all landmines. This has been amply shown by its consistency allocating an annual amount of USD\$500 000 for demining operations during the last extension request, (2014-2016). Although the funds allocated have been inadequate to allow for the contracting of commercial demining companies to complement the military humanitarian demining efforts, Zimbabwe has gone a long way in demonstrating national ownership of the demining programmes.

# **Expansion of Demining Capacities**

There has been impressive expansion capacity on the part of the NMC Unit and the demining partners, HALO Trust and NPA.

Since signing an MOU with the Government of Zimbabwe in 2013, the ICRC has continued to support the NMCU operations over and above the support by the Government of Zimbabwe. They have donated a host of demining equipment and protective clothing including training of ZIMAC staff and deminers on best practice methods. The provision of equipment has seen the NMC Unit increasing its deminers to 150 up from 120 in the previous years. The Unit also boasts of self-sufficiency in terms of expertise due to international training courses conducted by ICRC. Beside trainings from ICRC, ZIMAC and NMCU staff attended GIS training with NPA in 2015.

HALO has been generously supported by the governments of the US, UK (DFID), Ireland (Irish Aid), Japan as well as the Julia Burke Foundation, World Without Mines, Actifonds Mijnen Ruimen, Jack Deloss Taylor Charitable Trust, The Dulverton Trust and Foundation Pro Victimis. HALO Trust hopes for continued support from these donors and will approach new ones in order to obtain the funding needed to expand operations in order to complete clearance within the national authority's timeline.

NPA is funded by the Norwegian Ministry of Foreign Affairs (NMFA), the United States Department of States (USDoS), the UK (DFID). International Trust Fund/Enhancing Human Security (ITF). In addition NPA has received funding from the United States for the testing of new clearance equipment. NPA increased their teams to 7 up from 4 the previous year.

MAG who are set to begin operations July 2017 will be funded by US Department of Defence, US Department of State, and DFID as well as private trusts and foundations. APOPO which will begin operations in June 2017, is to be funded by Hanover Flemish.

# Development of National Strategic Plan for Mine Action, (2017-2022)

The formulation of the Zimbabwe National Mine Action Strategic Plan commenced in December 2016 with the assistance of GICHD Advisors and Zimbabwe Demining

Stakeholders. This five year plan will be completed in 2017 and submitted to relevant ministries for approval. The NSP will highlight the Zimbabwe Mine Action aim, goals objectives from 2017 to 2022. Once approved, a copy of the national strategic plan will be sent as an annex to this request.

# Drafting of National Standards during fourth extension period

During the fourth extension period, ZIMAC revised the National Mine Action Standards (ZNMAS). This document is binding and all operators in Zimbabwe abide by the set statutes. Their SOPs are inspected to ensure they conform to the ZNMAS. The notable inclusions on this work are the national standards on land release, handover, marking and guality management.

# b. Methods used to identify areas containing AP mines.

Most of the minefields in Zimbabwe were known, fenced and marked. Mostly they stretch along the borders. Over the years, Zimbabwe had taken the recorded or length of the minefield and multiplied it by an average width of 1.3 km. During the initial extension period a more detailed analysis was undertaken by ZIMAC with support provided by Implementation Support Unit (ISU) which resulted in some areas being found to be free of mines hence reducing the initial extent of contaminated land.

# c. Methods and Standards of Controlling and Assuring Quality

The ZNMAS on its own has Safety and Quality as the prime objectives, that is, it ensures that mine action activities are conducted safely to give quality products and services. Besides the ZNMAS, quality is guaranteed as early as the accreditation process where only organisations with good and known track record are accredited. Organisations are also to show evidence of a robust internal quality management system as a requirement for operating in Zimbabwe. On deployment, organisations are attached with ZIMAC Quality Assurance (QA) Officers who conduct daily monitoring of an organisation's mine action activities and assisting the organisations on best ways of doing things which assure quality end product. Over and above the ZIMAC QA Officers, each organisation has its own internal QC measures. Besides this daily monitoring, ZIMAC Quality Management (QM) Office Section conducts both deliberate and impromptu visits to carry out quality assurance checks on clearance or training worksites. Noted none conformities are discussed and rectified. After the total clearance of a particular minefield segment, a Quality Control Team from ZIMAC carries out post clearance sampling and inspection. This is done to all cleared areas including NMC Unit's work.

Well after land is handed over, ZIMAC in conjunction with the responsible demining organisation carry out post handover impact assessment to verify if the clearance met the intended standard. This includes going around the communities assessing what they are using the cleared land for and if they are coming across any suspicious objects. A handover process is included in ZNMAS 08.04, Section 9, 'Completion

Report and Handover Certificate, with example documentation given in <u>Annex B Guidance on the use of IMSMA for post-clearance documentation</u>. These standards direct operators on procedures for informing ZIMAC, NAMAAZ and communities on completion of tasks.

# d. Efforts undertaken to ensure effective exclusion of civilians from mined areas

Zimbabwe has a national standard for Mine/ERW Risk Education, (ZNMAS 11). This standard ensures that ZIMAC and demining organisations have a responsibility to ensure that MRE activities are carried out in a safe, effective and efficient manner, but also in a manner that includes full community liaison. The aim should be to reduce the impact on men, women, boys and girls living in, or near to, land contaminated with Mines/ERW. ZIMAC's Mine Risk Education policy is outlined in the ZNMAS and is drawn up in accordance with the national MRE policies of Zimbabwe.

MRE continues to be done to educate people in mine affected areas on the dangers of mines. Mine risk education teams take advantage of community developmental and social gatherings to disseminate information. Face to face and small media methods are used to communicate with the targeted audiences. In 2015, an MRE course was conducted and the MRE teams have increased their outreach programmes. In order to raise awareness of the scale of the challenges communities face and to enable the media and general public improve their understanding of the efforts being done to address the landmine problem, a Mine Action Media Awareness campaign was launched on 31 October 2013. The inaugural event involved eight (08) local and international media houses. HALO Trust and NPA also conduct community liaison and MRE within allotted areas.

Based on ZNMAS 08.05 Chapter 6. The hazard marking system is designed to provide clear warning to the local population of the presence of mines or ERW.

Some of the mined areas were previously marked by a perimeter fence to ensure the effective exclusion of civilians from mined areas. However, the perimeter fence has since been damaged by animals and some of it was removed by the local inhabitants for their own use. Owing to prohibitive costs and lack of sustainable measures to secure the perimeter fence from theft, the vandalised/stolen fence has not been replaced. However, danger warning signs and concrete beacons to alert civilians of the existence of a minefield were erected. During the requested extension period, MRE will be carried out by all organizations as part of clearance operations.

#### e. **Survivor assistance**

Zimbabwe is committed to the care of survivors and will be developing survivor assistance as part of national strategic plan that is expected to be approved in 2017. This strategy will greatly improve Zimbabwe's response to survivors. HALO has formed a partnership with Zimbabwean-based Cassim's Prosthetics through which HALO identifies mine survivors while registered prosthetist Mr. Cassim provides a

made to measure prosthetic limb. Over 30 men and women have benefitted from this partnership in 2015.

# f. Nature and Extent of Progress Made: Quantitative Aspects

The Burma Valley minefield was completely cleared and handed over to the local authorities for productive agricultural use in June 2015. ZIMAC QC Teams continue to carryout post clearance on all areas cleared by the NMC Unit and the two demining partners. Since the start of operations up to December 2016, an area of 2,739,198m² (28km liner distance) was cleared by HALO Trust and ZIMAC QM Team conducted Post Clearance Inspection of the area expected to be handed over to the local authorities in due course after a few portions noted on the QC have been attended to.

On the other hand an area covering 12 370 064m² (21km double stretch) cleared by the NMC Unit is currently under post clearance re-verification to ascertain if the level of clearance done previously meets the intended land use. On completion of this process, a hand over ceremony will be arranged. NPA has also cleared an area covering 500 065m² with external QC by ZIMAC Team already completed only awaiting handover.

To date a total of **8 790 274m<sup>2</sup>** has been cleared since 2014 culminating in the destruction of **37 913** anti-personnel mines. UXOs have been routinely recovered from battle areas in the country side by military EOD teams stationed at Provincial Centres.

Clearance has been spearheaded from three fronts, that is, by military engineers with funding from Government on the Crooks Corner to Sango Border Post minefield, HALO Trust working on the Rwenya to Musengezi Minefield and NPA who completed the Burma Valley minefield are now on the Leacon Hill to Sheba forest Minefield. These clearance organisations have also conducted detailed technical surveys and clearance on their respective minefields further reducing **74,922,163m²** of contamination as at in 2014, by 12% to **66,131,289m²**, which is a significant achievement.

Table 6. Contamination level at the start of fourth extension request, (2014)

	Mined Areas	Total Area (m <sup>2</sup> )
1	Musengezi to Rwenya	29 327 211
2	Sango Border Post to Crooks Corner	28 605 729
3	Rusitu to Muzite Mission	8,702,023
4	Sheba Forest to Leacon Hill	8,231 200
5	Lusulu	56,000
	TOTAL	74 922 163m <sup>2</sup>

During the extension 8 790 274m<sup>2</sup> has been processed, representing 12% of all confirmed and suspected mined areas in the country. The challenge remaining at the start of the fifth extension request (2017) is 66,131, 289m<sup>2</sup>. The qualitative and quantitative nature of these achievements will be explained in the sections below.

Table 7. Summary of Progress Made, (June 2014-December 2015)

Mined area location	Total area known or suspected to contain antipersonnel mines at the beginning of the reporting period	Amount of area <u>cleared</u> during the reporting period (square metres)	during the	during the reporting	Total area addressed in the context of Article 5 obligations during the reporting period (square metres)	context of Article 5 obligations (i.e., at the end of the reporting
Musengezi to Rwenya	29 327 211 m <sup>2</sup>	622 522 m <sup>2</sup>	805 586m <sup>2</sup>	27 370m <sup>2</sup>	1 455 478m <sup>2</sup>	27 871 733m <sup>2</sup>
Sango Border Post to Crooks Corner	28, 605,729	2174532m <sup>2</sup>	2, 101,300	Nil	2 324 607m <sup>2</sup>	26 281 122m <sup>2</sup>
Rusitu to Muzite Mission	8, 702,023	Nil	Nil	Nil	Nil	8, 702,023
Sheba Forest to Leacon Hill	8, 231,200	98 422m²	51 617m²	10 379m²	160 418m²	8 070 782m²
Lusulu	56 000	Nil				56,000
Total	74 922 163m <sup>2</sup>				3 940 503m²	70 981 660m²

Table 8. Summary of Progress Made, as of Dec 31, 2016

Mined area location	suspected to	known or suspected to contain anti- personnel mines	Amount of area cleared during the year 2016 (square metres)	Amount of area <u>reduced</u> during the year 2016 (square metres)	year 2016	addressed in the context of Article 5 obligations during the year 2016 (square	Number of areas remaining to be addressed in the context of Article 5 obligations (i.e., at the end of the year 2016)	Total area remaining to be addressed in the context of Article 5 obligations (i.e., at the end of the year 2016)
Musengezi to Rwenya	102	27 071 733111	1, 027,704	1, 127,577		2, 100,001	131	23 / 10 432111
Sango Border Post to Crooks Corner	02	26, 281,122	131,995	1, 675,391	Nil	1, 807,386	02	24, 473,736
Rusitu to Muzite Mission	35	8, 702,023	Nil	Nil	Nil	Nil	35	8, 702,023
Sheba Forest to Leacon Hill	25	8 070 782m²	511,616	376,068	Nil	887,684	23	7 183 098m²
Lusulu Total	01	56 000 <b>70 981 660m²</b>	Nil			4 850 371m <sup>2</sup>	01	56,000 <b>66 131 289m²</b>

# 3. The Remaining Challenge:

# a. Nature of remaining challenge: Qualitative aspects

The geographical locations of the remaining minefields in Zimbabwe's jurisdictions and control are highlighted on the map of Zimbabwe below.

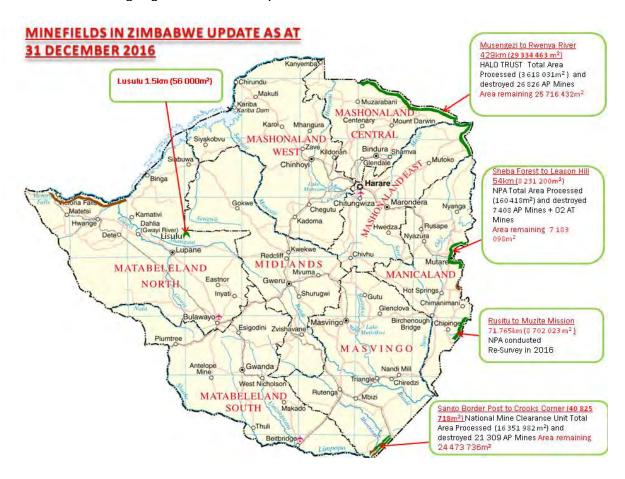


Figure 1. Mine Fields in Zimbabwe as of December 31, 2016.

# Musengezi to Rwenya River Minefield (HALO and MAG)



Figure 2. Musengezi to Rwenya River Minefield

The minefield was originally estimated to cover a frontage of 335km and 400m depth. This is the longest minefield containing in some areas the cordon sanitaire, the ploughshare and the ploughshare reinforced minefields running parallel to each other. Before survey began the estimated area was over 145 000,000m<sup>2</sup>. HALO's survey was able to cancel 80% of that area, leaving 29.200,000m<sup>2</sup> of land in the north east which required clearance. In terms of responsibility for clearance, this entire area will be split between operators with HALO being allocated the minefields in Mashonaland Central Province i.e. from Chidodo to the Mazoe River.

The minefield inhibits free movement of people, some with relatives on the Mozambican side and vice versa, access to water resources, grazing land and cultivation by the local inhabitants which is the source of their livelihood. In some areas, the villages are as close as 100m from the minefield which means children who were born since independence have never ventured more than 100m East of their villages except where there were gaps opened through the minefield.



Photo 2. Some of Chimushonga Community settlements are 50m -100m from the minefield

This minefield has the highest number of reported mine victims including livestock.

The known victims from this minefield are one hundred and fifty two (152) which includes girls, women, boys, and men. Boys are injured while herding cattle when they stray into the minefield, while women get injured while fetching firewood. Men sometimes sacrifice their lives when one of their livestock gets hit by a mine instead of watching it die, they try to retrieve the injured livestock and in the process get injured by mines.

In terms of livestock injured or killed by mines, there are no accurate statistics as some go unreported, suffice to mention that in 2015 alone a total of sixteen cattle were hit by mines on this minefield. The figure might be more as some may not have been reported.

In addition to geographic and technical data HALO Trust observed that the humanitarian priorities here are a very bit as high as in any other country around the world. Roads were used as the safe baseline for the mine laying process. Post conflict, communities have settled along these same roads so we find minefields on one side and dense habitation on the other. Typically the minefields separate communities from their fields and water sources. Children have to walk beside minefields to get to class. While human casualties are relatively low (thanks to the minefields being well structured and well known to the communities), livestock accidents are a common occurrence. HALO Trust recorded 19 cattle accidents on one task in two months.



Photo 3. Children pass through cleared minefield during a break in demining.

# Largette (Character Manager Date (Character Manager Da

# Sheba Forest to Leacon Hill Minefield (NPA).

Figure 3. Sheba Forest to Leacon Hill Minefield

Minefield

The minefield is a reinforced ploughshare and stretches for 50km along the Eastern border of the country. The minefield is generally in hilly and mountainous areas, characterized by thick bush of indigenous vegetation. The overgrowth is more pronounced during the rainy season and less after winter. Accessibility is difficult in wet weather. Further to the North the minefield is in timber plantations of eucalyptus and pine. Metal contamination is high where human activities take place or where fragmentation mines exploded.



Photo 4. Sloppy and rocky task at Cecil Kopje



Photo 5. Minefield perimeter fence post at Imbeza, notice the steep terrain



Photo 6. Technical survey lanes at Cecil Kopje Task

The minefield, however, inhibits cultivating of timber, some of which has overgrown its maturity stage. The farmers find it very difficult if not impossible to harvest their timber plantations due to the minefields. There are no statistics of mine victims on this minefields mainly the locals took heed of MRE as early as 1980. There are however people who illegally cross the border to and from Mozambique putting their lives in danger although there have been no incidents of mine victims to illegal border jumpers as they referred to. Also the presence of minerals on the mined land cannot be overruled. Exploration of minerals is not possible until the minefield is totally cleared.



Photo 7. A deminer opens a two meter lane in the timber plantation during survey at Imbeza, Sheba Forest to Leacon Hill minefield

# **Rusitu to Muzite Mission Minefield (NPA)**



Figure 4. Rusitu to Muzite Mission Minefield

The minefield is also along the Eastern border stretching for seventy five kilometres (75km) hinders free movement of people some of whom have relatives across the border in Mozambique and vice versa, grazing land, water resources and cultivation. The area is predominately a tea plantation region. Expansion of tea estates and exploring new ones is not possible due to the minefield.

The minefield is generally in hilly and mountainous areas, characterized by thick bush of indigenous vegetation. The overgrowth is more pronounced during the rainy season and less after winter. A few rivers traverse the minefield flowing from Zimbabwe into Mozambique. Gorges and steep slopes are common. Accessibility is difficult in wet weather when roads become slippery.

Metal contamination is high where human activities take place or where fragmentation mines exploded. In some areas the soil is highly mineralised so that only specially modified minimum metal detectors are effective.



Photo 8. Local Population need to pass through the minefield to access water from Budzi River

# Sango Border Post to Crooks Corner Minefield (NMCU and APOPO)

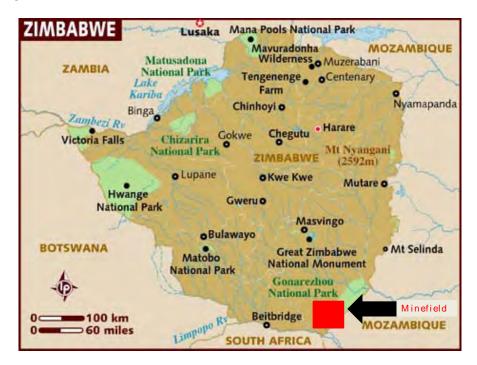


Figure 5. Sango Border Post to Crooks Corner Minefield

The Sango Border Post to Crooks Corner Minefield stretches for fifty three kilometres (53km) linear distance along the South Eastern corner of the country. There are two minefields running parallel to each other at a distance of 5km apart. The NMCU will undertake clearance on the Ploughshare minefield, (Sector 3) and APOPO will begin clearance on the cordon sanitaire minefield, (Sector 4).

The impact of this minefield is similar to other minefields documented above. Hindering the free movement of the local populace, tourists and reducing the amount of grazing land available for animals and wildlife. The area is predominately cattle ranching region and National Parks and Wild Life. The minefield runs adjacent to the Gonarezhou National Parks. This National Parks forms the tripartite game sanctuary joining the Kruger National Parks in South Africa and the Limpopo National Parks in Mozambique to form the Great Limpopo Transfrontier Parks (GLTP) one of the biggest game sanctuaries in the world.



Photo 9. Elephants grazing near Sango Border Post / Crooks Corner Minefield

The other two countries to the tripartite enjoy the privileges of the game sanctuary while the minefield on the Zimbabwean side deters tourists. The minefield has claimed numerous wildlife. The actual statistics are not easily obtainable but as confirmed by officials from National Parks and Wildlife Management, skulls of wildlife are scattered on the game reserve. On the other hand the reported human mine victims from this minefield is ten (10) mainly men injured while in search of their stray cattle.

#### Lusulu



Figure 6. Lusulu Minefield

The minefield is an inland minefield in Matebeleland North Province. It was laid as a protective minefield to the Lusulu Police Station, Shopping Centre and a Keep where the locals were mobbed and grouped in a protected locality by the then Rhodesian Forces. The minefield was partially cleared by NMCU in 2003 and 2004 to facilitate the expansion of the Police station and the shopping centre. A total of 56 000m<sup>2</sup> of the Lusulu minefield is yet to be cleared.

# b. Nature of remaining challenge: Quantitative aspects

During its fourth extension request Zimbabwe clarified and more accurately defined its remaining challenge. The remaining challenge is given in Table 9 below.

Table 9. The Remaining Challenge given in metres squared

	Mined Area	Linear	Area (m²)
		Distance	
1	Musengezi to Mazowe River	229km	14 438 732
2	Mazowe River to Rwenya River	130km	11 277 700
3	Sango Border Post to Crooks Corner.	35km	17 292 098
	(Ploughshare Minefield)		
4	Sango Border Post to Crooks Corner.	35km	7 181 638
	(Cordon Sanitaire)		
5	Rusitu to Muzite Mission	71,765km	8 702 023
6	Sheba Forest to Leacon Hill	54km	7 183 098
7	Lusulu	1.5km	56 000
8	TOTAL	624.5KM	66 131 289

# 4. Detailed Work plan

ZIMAC envisage meeting the 2025 free of mines Zimbabwe target by continuing clearance using the National Mine Clearance Unit, the HALO Trust, Norwegian People's Aid, MAG and APOPO. Zimbabwe is now aware of the remaining extent of contamination and at the current funding levels and anticipated future expansions, the target is achievable.

Zimbabwe aims to complete its clearance obligations within 8 years, (2018-2025). A work plan based on existing capacities and funding has been developed for the period of the extension, refer to table 13 below. During the extension period, ZIMAC will produce revised two (2) yearly work plans with benchmarks that can more accurately direct operations. These plans will be reported on an annual basis through Zimbabwe's Article 7 transparency reports. An initial detailed work plan covering the period 2017-2018 is attached as Annex B to this extension request.

Table 10. Allocation of the minefields for the extension period to Clearance Operator

	Mined Area	Linear Distance	Area (m²)	Clearance Organization
1	Musengezi to Mazowe	229km	14 438 732	HALO Trust
	River			
2	Mazowe River to Rwenya	130km	11 277 700	MAG
	River			
3	Sango Border Post to	35km	17 292 098	National Mine Clearance
	Crooks Corner.			Unit
	Ploughshare Minefield			
4	Sango Border Post to	35km	7 181 638	APOPO
	Crooks Corner. Cordon			
	Sanitaire			
5	Rusitu to Muzite Mission	71,765km	8 702 023	NPA
6	Sheba Forest to Leacon	54km	7 183 098	NPA
	Hill			
7	Lusulu	1.5km	56 000	National Mine Clearance
				Unit
8	TOTAL	624.5KM	66 131 289	

The plan and timelines have been put together in collaboration with partner organizations. It is important to highlight that this plan will see alterations as new organizations deploy staff on the field and accumulate lessons learned concerning operations in Zimbabwe.

Over the extension period, the National Mine Clearance Unit will continue clearance of the Sango Border Post to Crooks Corner reinforced Ploughshare minefield while international organizations will continue clearance operations of their allocated minefields. The current organisational capacities of clearance operators are shown in Table 11.

Table 11. Organisational capacities at start of the extension period

	Organisational capacities at start of the extension period									
Ser	Activity	Area to be covered	Capacity at start of period							
1.	Clearance	Musengezi to Mazowe	30 sections in October 2016, May increase by October 2017, 240 deminers							
2.	Clearance	Mazowe to Rwenya	MAG- Not yet on the ground. Will probably have started by July 2017							
3.	Clearance	Sango Border Post to Crooks Corner(Ploughshare)	5 troops (150 deminers)							
4.	Clearance	Sango Border Post to Crooks Corner(Cordon	APOPO- Not yet on the ground. Like MAG may start by June 2017							
5.	Clearance	Rusitu to Muzite	40 deminers till 2020 when more will be added							
6.	Clearance	Sheba Forest to	66 deminers up to completion in 2020 then transfer							
7.	Clearance	Lusulu	30 deminers to begin in 2020 from expansion of							

### a. Clearance Timeline

The clearance capacity and funding given are manageable estimates. The total clearance cost per square metre is at \$2.8/M² which is way above the average clearance cost rate of \$1.8/m² as the future will become clearer by the unfolding of each year, the figures will always be revisited at the end of each year. The rate of clearance of the two new organisations will be set to improve with time as learning and improvement of methods will be taking place.

Table 12. Annual clearance during the extension

Minefield	2017	2018	2019	2020	2021	2022	2023	2024	2025	TOTAL
Musengezi to Mazowe (HALO)	1 290 300	1 405 700	1 740 000	1 740,000	1 740,000	1 740,000	1 740,000	1 740,000	1 302 732	14 438 732
Mazowe to Rwenya River (MAG)	700 000	802 000	1100 098	1300 000	1500 000	1600 000	1650 000	1650 000	1 075 602	11 277 700
Crooks Corner to Sango Border(Reinforced Ploushare) (NMCU)	2 100 000	2100 000	2100 000	2100 000	2100 000	1 900 000	1900 000	2 000 000	988 098	17 292 098
Crooks Corner to Sango Border (Cordon Sanitaire) (APOPO)	300 000	900 000	750 000	900 000	850 000	900 000	1000 000	800 050	781 588	7 181 638
Rusitu to Muzite Mission (NPA)	164,104	984,000	1,000,000	1,200,000	1,500,000	1,600,000	1,600,000	653,919		8,702,023

Sheba Forest to Leacon Hill (NPA)	1,795,000	1 810 000	1 810 000	1 768 098						7 183 098
Leacon Tilli (Ni A)										
Lusulu(NMC)					30 000	26 000				56000
Total	7 035 300	7 367 700	8150 098	9 008 098	8 720 000	8 666 000	8 790 000	8 600 050	3072418	66 131 289

#### b. Estimated Funding required for extension request

To meet the target of 2025, the Demining organisations in Zimbabwe need funding as highlighted on table 6 below. This is in relation to the allocated areas. The projected budget is from 2017 to 2025. MAG and APOPO are yet to start work by June 2017. All their figures were estimates. Table 13 below provides a summary of the expected funding for this period. The following table provides an annual overview of the expected funding required by each respective humanitarian mine action operator to achieve clearance goals under this extension request.

Table 10. Clearance Budget during the Extension Period 2017 to 2025

Organisation		Year								Total
	2017	2018	2019	2020	2021	2022	2023	2024	2025	Total
(a)	(e)	(f)	(g)	(h)	(j)	(k)	(l)	(m)	(n)	(p)
International Dono	r Support (\$USE	millio	n dolla	ars)						
NPA	3	3.15	3.3	3.46	3.63	3.81	4	4.2	4.41	32.96
HALO	4.65	4.65	5.25	5.69	5.8	6.03	6.21	6.4	6.59	44.68
APOPO	0.5	2	2	2	3.4	3.5	3.4	2.4	2	21.2
MAG	0.7	1	1	1.5	1.5	3	3	3	3	17.7
Sub-Total	8.85	10.8	11.55	12.65	14.33	16.34	16.61	16	9.41	116.54
Zimbabwe Government Finance (\$USD million dollars)										
NMCU	0.6	0.7	1.5	1	1	1.5	2	2.5	3	13.8
Total	9.45	11.50	13.05	13.65	15.33	17.84	18.61	18.50	12.41	130.34

### c. Additional Activities during the extension period

 Resource mobilisation will be an ongoing effort in Zimbabwe with these efforts currently beginning to bear fruit. Funding support from the international community is expected to increase directed to international partners, the HALO Trust, Norwegian People's Aid (NPA), APOPO and Mines Advisory Group (MAG). Zimbabwe will also continue, as it has done in the past, to solicit support from the international community

# **Relocation of ZIMAC out of Military Cantonment**

• ZIMAC will be relocated out of the cantonment area once Government avails funds for purchasing accommodation. Funds required for this are being sourced by the Ministry of Defence.

# 5. Risks and assumptions

During the extension period there are many factors that may affect the completion of demining activities targets stated in the extension request. The benefits of operating in Zimbabwe include:

- Low accidents rates among civilians. Using the Musengezi to Rwenya Minefield victim's statistics for period 2013 to 2016 it can be noted that from MRE accident rate decreased. Table 13 below shows the mine victims in the HALO operational area.
- Low accident rates among demining operators
- Low security risks in country for operations
- High impact of cleared land
- Areas are known, size of contamination known, plan capacities and resources

Table 14. Musengezi to Rwenya Mine Victims

Task ID	Accident Date	Year	Injuries	M/W/B/G	Activity	
Rushinga	26/11/2016	2016	Unknown	Man	Heading Cattle	
Nyamapanda	28/10/2016	2016	Lost a hand	Boy	Tampering	
Nyamapanda	Feb-16	2016	Fragmentation injuries	Boy	Tampering	
	03/11/2015	2015	Fragmentation injuries	Boy	Tampering	
	02/11/2015	2015	Fragmentation injuries	Boy	Tampering	
	02/11/2015	2015	Fragmentation injuries	Boy	Tampering	
	01/11/2025	2015	Killed	Man	Tampering	
	27/09/2015	2015	Lost an arm	Boy	Tampering	
17	01/03/2014	2014	Above knee amputation	Man	Herding cattle	
96	01/01/2014	2014	Fragmentation injuries	Boy	Tampering	
96	01/01/2014	2014	Fragmentation injuries	Boy	Tampering	
96	01/01/2014	2014	Fragmentation injuries	Boy	Tampering	
96	01/01/2014	2014	Killed	Man	Tampering	
96	01/01/2014	2014	Killed	Man	Tampering	
7	01/01/2013	2013	Fragmentation injuries	Man	Tampering	
15	01/01/2013	2013	Loss of fingers	Man	Tampering	
54	01/01/2013	2013	Fragmentation injuries	Man	Tampering	
54	01/01/2013	2013	Fragmentation injuries	Man	Tampering	
72	01/08/2013	2013	Killed	Man	Tampering	
107	01/12/2013	2013	Killed Ma		Tampering	
111	01/06/2013	2013	Loss of both eyes	Woman	Foraging	

171	01/07/2013	2013	Below knee amputation	Woman	Herding cattle
194	01/10/2013	2013	Below knee amputation	Boy	Herding cattle
200	01/12/2013	2013	Below knee amputation	Man	Hunting

The risks likely to be encountered in the areas are as follows:

# Heavy rains.

Zimbabwe generally experience heavy rains during summer from November to March. During this time of the year demining activities may be suspended or conducted on a slow pace which may result in failure to meet stated deadlines of the extension period. Heavy rains may also move or deeply bury mines resulting in missed mines which may also delay the process.

#### Terrain

Minefields in the Eastern part of the country are located in thick vegetation and mountainous areas which may delay the process.

# Ploughshear minefields

All minefields contain ploughshear mines which have already detonated of which fragments are scattered thereby slowing the pace of demining.

# **Financing**

The plans for clearance of the mined areas in Zimbabwe will depend on the continuation of funding from the Government as well as from the international community.

# Annex A. General Description of Minefields in Zimbabwe

# **Types of Mine fields**

The types of mine fields present in Zimbabwe have been well documented in previous extension request. Notable characteristics of these fields will be outlined in this section below. All minefields contain both buried anti-personnel (AP) mines and above surface ploughshare fragmentation AP mines. The sub surface mines are still intact and active forty (40) years later. They have an activity rate of around 90%. Above 85% of the mined land had sub surface types which are the R2M2, VS50, RAP1 and the M969. The above surface ploughshare mines that have deteriorated and have an activity rate of below 2%. These have either detonated some due to activation from animals, throwing fragments all over the minefield or are still intact but the trip wires rusted away.

The full records of these minefields are not readily available, the then Rhodesian forces might have either destroyed them or hidden them but the few that are available are thorough and detailed. Over the years the Zimbabwe National Army has gathered and recorded a lot of useful information about the location of these minefields. In 1994, the first attempt at a consolidated analysis was undertaken by Mine Tech and this survey formed the basis of the original extension request.

During the initial extension period a more detailed level of analysis was carried out. However, this analysis was full of approximates and assumptions. Firstly the area calculations were based on a single frontage not recognising that in some instances there was a second parallel minefield some distance behind – between 1 and 5 km. Further to this, it was assumed that the cordon sanitaire, the ploughshare and reinforced ploughshare minefields had an average width of 400m. In reality the cordon sanitaire have an average with of 25m while the reinforced ploughshare is the one which average 400m.

Based on military planning processes and a limited number of records available, together with experience gained by the National Mine Clearance Unit, the three different types of minefields identified generally consist of:

#### 1. Cordon Sanitaire

The cordon sanitaire barrier was laid **close to** or **on** the international border. It generally consists of three rows of sub-surface anti-personnel mines (AP mines) laid in a standard pattern with an average width of 25m.

# 2. Ploughshare Minefield

The ploughshare minefield consists essentially of three rows of *ploughshare* directional fragmentation AP mines mounted on 0.5 to 1m high stakes protected by sub-surface AP mines.

# 3. Reinforced Ploughshare Minefield

The reinforced *ploughshare* minefield is essentially 3 rows of *ploughshare* directional fragmentation AP mines mounted on 0.5 to 1m high stakes protected by sub-surface AP mines. These rows will be laid back to back with sub surface clusters of AP mines. The average depth of this type of minefield is 400-500m

# Annex B. Zimbabwe Mine Action Work plan for 2017 to 2018

# Musengezi to Rwenya Minefield

# a. Musengezi to Mazowe sector.

As at 31 December 2016 HALO Trust was left with a total of 25 716 432m<sup>2</sup> uncleared area of the Musengezi to Rwenya Minefield. In case MAG turn up for the Mazowe to Rwenya sector HALO Trust remain with 14 438 732m<sup>2</sup> from Musengezi to Mazowe minefield sector as at the above period.

<u>Current Capacity</u>. HALO Trust currently has a capacity of 29 demining sections with a total of 240 deminers. With total capacity, HALO has been averaging approximately 130,000m<sup>2</sup> of clearance per month.

### Activities and Milestones for 2017 to 2018

<u>Training</u>: A mechanical demining team will be trained in the first half of 2017. Refresher training in conducted monthly with existing manual deminers. Further training courses will be run if there are opportunities for expansion.

<u>Deployment:</u> Demining is seasonal due to adverse weather conditions during the rainy season; however, in the area where HALO Trust is operating it's possible to identify tasks that can be worked on during the wet season. does not receive too much rainfall hence they operate throughout the year with monthly breaks.

Annual Projections: HALO Trust is projected to address 1 600 000m<sup>2</sup> in 2017and 1 500 000m<sup>2</sup> in 2018 and remain with an area of 11 338 732m<sup>2</sup> of the Musengezi to Mazowe River Minefield sector to be completed by 2025. (The 2017 figure is higher than 2018 as HALO is currently working on tasks with very little contamination and hence higher than normal clearance rates.)

**Future Plans**. If additional funding can be sourced, it is HALO's intention to increase the number of manual demining sections deployed. The mechanical demining team should be operational by mid-2017 and should improve clearance rates on tasks with very high metal content/ deeply buried mines.

# b. Mazowe to Rwenya Minefield sector

To be cleared by MAG. The Organization is expected to start work in July, 2017. MAG is expected to complete 350 000m<sup>2</sup> in 2017 and 900 000m<sup>2</sup> in 2018 and remain with an area of 10 027 700m<sup>2</sup> to be addressed by 2025.

#### SHEBA FOREST TO LEACON HILL MINEFIELD

As at 31 December 2016 NPA remained with an area of 7,183 098m<sup>2</sup> uncleared land.

<u>Current Capacity</u>. NPA commenced clearance of this minefield in June 2014 and currently they have a capacity of seven (7) demining teams with a total of 70 deminers. The current average monthly clearance rate is 44,880m<sup>2</sup>. 2016 annual clearance of 511,616m<sup>2</sup> and annual land release of 887,684 m<sup>2</sup>.

# **ACTIVITIES AND MILESTONES FOR 2017 TO 2018**

**<u>Training</u>**: Training for deminers, Team Leaders, Supervisors and EOD Level 2 Course conducted concurrently with refresher trainings for old deminers as and when required.

<u>Deployment</u>: Demining is seasonal due to adverse weather conditions during the rainy season, however, NPA work throughout the year and break for annual leave during the course of the year.

**Annual Projections**: NPA is expected to release 930,000<sup>2</sup> in 2017 and 762,800<sup>2</sup> in 2018 and remain with 5,490 298m<sup>2</sup> to be completed by 2025.

<u>Future Plans</u>. NPA intends to improve on methodologies and use of advanced alternative technology to increase the rate of clearance. Given more funding, they are set to grow even more in the year 2017 with the introduction of the MDD team on the cards.

#### RUSITU TO MUZITE MISSION MINEFIELD

**Results of Survey**. NPA conducted a merged non-technical survey (NTS) and technical resurvey(TS) of the Rusitu to Muzite Mission minefield in October 2016. Originally the minefield was estimated to be 15,000,000m², from the survey the spans a total of 71,765meters in length and totals of 8,702,023m² containing an estimated 6,470 anti-personnel mines.

<u>Current Capacity</u>. Deployment of three manual demining teams is set for September 2017, with the MDD to join by latest January 2018.

Activities and Milestones for 2017 to 2018.

<u>Annual Projections</u>: NPA is expected to release 570,000m<sup>2</sup> in 2017 and 737,200m<sup>2</sup> in 2018.

<u>Resources Required</u>. The resources required will be taken from the current capacity under the Sheba Forest to Leacon Hill minefield.

# Sango Border Post to Crooks Corner Minefield

**Results of Survey.** From resurvey and mapping conducted by National Mine Clearance Unit in May 2016 it came out that Crooks corner to Sango Border Minefield has a total area of 40 825 718m<sup>2</sup>. As at 31 December 2016 a total area of 24 473 736m<sup>2</sup> remained uncleared.

<u>Current Capacity</u>. NMC Unit has a compliment of five (5) troops (150 deminers). The monthly clearance rate is 12 600 square metres (680 400m<sup>2</sup>/ Annual clearance).

# Activities and Milestones for 2017 to 2018.

<u>Training</u>: Deminer training for new deminers and refresher training for old deminers is done annually in March. Demining season is from April to November after which deminers go for the annual shutdown from December to March of the following year.

Annual Projections: NMC Unit is expected to clear 2 100 000m<sup>2</sup> in 2017 and 2 100 000m<sup>2</sup> in 2018 and remain with 13 092 098m<sup>2</sup> of the ploughshare minefield to be completed by 2025. The Cordon Sanitaire minefield was allocated to APOPO which is expected to have started work in February 2017. APOPO is also expected to complete 300 000m<sup>2</sup> in 2017 and 600 000m<sup>2</sup> in 2018 and to remain with an area of 6 281 638m<sup>2</sup> again to be completed by 2025.

**Resources Required.** The NMC Unit continues to receive demining equipment required to replace old and/or broken down equipment.

**Equipment**: The fiscus provides US\$ 800 000 for both equipment and other operational costs.

**<u>Rations</u>**: Supplied through normal army channels.

<u>Salaries and allowances</u>: Covered through the fiscus.

<u>Future Plans</u>. Resources are being mobilised to equip and logistical support NMC Unit.

**LUSULU**. The Lusulu minefield was partly cleared in 2003 with an area of 2 368 square metres released for expansion of the Lusulu business centre. An area of 56 000 square metres remains to be cleared ZIMAC

Quality Control by ZIMAC team to be conducted on all areas which clearance has been completed by demining organizations. Also land release and handover of ZIMAC Quality checked areas to be done in 2017.

Table 15. Projected budget for the Period 2017-2018

Ser	Organisation	Projected Annual dolla	_ ,	Total Projected Budget(million dollars)	Remarks
		2017	2018		
1	ZIMAC	0.3	0.5	0.8	For Quality Control and Information Management.
2	NMC Unit	0.6	0.7	1.3	Funded from the fiscus by the Government of Zimbabwe. The budget does not include employment costs.
3	HALO Trust	4.65	4.65	9.3	
4	NPA	3	3.15	6.15	
5	MAG	0.7	1.0	1.7	
6	APOPO	0.5	2	2.5	

#### ADDITIONAL ACTIVITIES DURING THE YEAR 2017 AND 2018.

 Resource mobilization. Resource mobilisation will be an ongoing effort in Zimbabwe with these efforts currently beginning to bear fruit. The Government of Zimbabwe will continue to fund demining operations by NMC Unit. Funding support from the international community is expected to increase through international partners, the HALO Trust and Norwegian People's Aid (NPA).

Zimbabwe will also continue, as it has done in the past, to solicit support from the international community.

- Relocation of ZIMAC out of Military Cantonment. ZIMAC will be relocated out of the cantonment area once Government avails funds for purchasing or renting accommodation. Funds required for this are being sourced by the Ministry of Defence and the Government is committed to the relocation of ZIMAC offices.
- <u>Development and Implementation of National Strategic Plan</u>. In the lead up to the submission of the extension request containing the national clearance plan, Zimbabwe is in the process of developing its National Strategic Plan to be presented in complement to the clearance plan after completion of resurvey reports from her demining partners.

#### **RISKS AND ASSUMPTIONS**

During the extension period there are many factors that may affect the completion of demining activities targets stated in the extension request. The risks likely to be encountered area as follows:

- Heavy rains. Zimbabwe generally experience heavy rains during summer from November to March. During this time of the year demining activities may be suspended or conducted on a slow pace which may result in failure to meet stated deadlines of the extension period. Heavy rains may also move or deeply bury mines resulting in missed mines which may also delay the process.
- <u>Terrain</u>. Minefields in the Eastern part of the country are located in thick vegetation and mountainous areas which may delay the process.
- <u>Ploughshear minefields</u>. All minefields contain ploughshear mines which have already detonated of which fragments are scattered thereby slowing the pace of demining.
- **Financing**. The plans for clearance of the mined areas in Zimbabwe will depend on the continuation of funding from the Government as well as from the international community.
- Overall economic/political climate. The plan assumes that the political and economic climate remains conducive to demining operations.

<u>Lessons Learned</u>. Some of the partner organizations have not worked in Zimbabwe in the past hence clearance rates are estimations only. A full season's clearance is required before accurate figures can be produced.