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

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Prepared for the National Mine Authority of Zimbabwe
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EXECUTIVE SUMMARY

1. At independence in 1980, Zimbabwe inherited 6 distinct major mined areas that had been laid by the Rhodesian Army along its borders with Zambia and Mozambique. The original contamination covered a total of 511.05 square kilometres. It is estimated that these areas contained over 2,605,400 anti-personnel mines and that there were and are three different types of minefields as follows:

a. Cordon Sanitaire: The cordon sanitaire barrier generally consists of three rows of sub-surface anti-personnel mines laid in a standard pattern with a width of 25 metres. This type of minefield was laid close to or on the international border.

b. Ploughshare Minefield: The ploughshare minefield consists essentially of three rows of *ploughshare* directional fragmentation mines mounted on 0.5 to 1 metre high stakes protected by sub-surface anti-personnel mines with a width of 400 metres.

c. Reinforced Ploughshare Minefield: The reinforced *ploughshare* minefield is essentially 6 rows of *ploughshare* directional fragmentation mines mounted on 0.5 to 1 metre high stakes protected by sub-surface anti-personnel mines with a width of 400 metres.

2. In order to respond to the contamination of mines and other explosive remnants of war (ERW), in 2000 the Government of Zimbabwe established the National Mine Action Authority of Zimbabwe (NAMAAZ) to regulate all mine action activities in Zimbabwe and the Zimbabwe Mine Action Centre (ZIMAC) to plan and coordinate mine action activities.

3. Clearance of the minefields started soon after independence, with priority being given to clearing small gaps in order to facilitate infrastructure development, resettlement and economic development. Major clearance started in 1998, with the United States of America providing initial financial, material and training assistance to the Zimbabwe National Army to clear the Victoria Falls to Mlibizi minefield. This support was discontinued after one and half years leaving Zimbabwe to complete the bulk of the clearance of the 286 square kilometre minefield on its own in 2005. Further financial assistance was provided by the European Union between 1999 and 2000 to demine the 145.28 square kilometre Musengezi to Rwenya minefield. This support was withdrawn when only 6.2 square kilometres had been cleared. Since then, there has been no international financial assistance provided to Zimbabwe to clear its mined areas. Zimbabwe has been doing everything possible within its capacity to rid itself of anti-personnel mines in compliance with the Convention.

4. In Zimbabwe's initial extension request submitted and granted in 2008, Zimbabwe had assumed that the minefields were 1.3 kilometre deep and therefore arrived at a much greater total area. During the initial extension period, ZIMAC, with support provided through the Implementation Support Unit (ISU) undertook a more detailed analysis using core data from sources that included the 1994 MineTech Survey Report, a 2000 Koch – MineSafe Completion Report, a 2010 HALO Trust Border Minefield Survey Report done for the Government of

Mozambique and significant experience and knowledge gained by Zimbabwe's National Mine Clearance Squadron from more than 12 years of clearance.

5. This analysis revealed that contamination data available on the mined areas of Musengezi to Rwenya, Sango Border Post to Crooks Corner, Rusitu to Muzite Mission, Sheba Forest to Beacon Hill and Burma Valley can be assumed to be reasonably accurate, and thus it can be concluded with certainty that no detailed technical survey will be necessary (with the exception of the Cordon Sanitaire in the Crooks Corner – Sango Border Post minefield, which is not recorded, but is known to exist). What would be required though is to confirm the accuracy of available information on these mined areas through a limited general survey. The mined areas of Lusulu, Mukumbura, Kariba and Rushinga all require more detailed technical survey but the figures provided in this request are based on reasonable analysis of the data available.

6. These mined areas have had a severe socio-economic impact on Zimbabwean rural communities. They have severely affected the rural economy as very large numbers of livestock have been and continue to be killed by mines. Mines also continue to injure or in extreme cases kill humans, due to lack of suitable health care facilities in affected areas. Zimbabwe has not been able to build or maintain a reliable database of casualties caused by landmines. What is clear, however, is that the population that is most at risk from landmines includes poor rural subsistence farmers, who are often forced through economic necessities to take risks. While the number of casualties reported is relatively low, the real numbers are likely to be much higher.

7. Unfortunately, perimeter fences that ensured effective exclusion of civilians from mined areas have since been damaged by animals and removed by locals for domestic use. Owing to prohibitive costs and lack of sustainable measures to secure the perimeter fence from theft, no replacement has been placed but danger warning signs have been put in place. Furthermore, an area which has been achieved, albeit not comprehensively, is the delivery of mine risk education (MRE) to vulnerable communities. While more MRE programmes are planned, their implementation is hampered by resource constraints.

8. To date, 295.8 square kilometres have been cleared, 196,887 anti-personnel mines have been destroyed and it has been established that a further 13.93 square kilometres can be removed from the list of suspected areas for other reasons. Zimbabwe still has 201.32 square kilometres of land contaminated with anti-personnel mines and UXOs continue to be recovered.

9. To date, land release has been carried out through full clearance. Following the total clearance of a particular minefield, a quality control / quality assurance team carries out inspection of the cleared area. Commercial deminers in the past have used a combination of mechanical clearance and standard manual demining techniques followed by an independent external quality assurance process. Military deminers use standard demining techniques, followed by an internal quality assurance process. Currently clearance of mined areas is being undertaken by military engineers with funding from the government. Subject to availability of funding, other players such as local commercial demining companies as well as international demining companies can also take part.

10. Zimbabwe has not been able to carry out its Article 5 commitments due to the following:

a. Inadequate funding for demining from the government: The economy is depressed and constrained as a result of factors such as illegal economic sanctions. 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.

b. Insufficient demining equipment: Due to inadequate equipment, the available military demining capacity cannot be fully utilised. Aged mine detectors and personal protective equipment (PPE) currently in use are endangering the lives of deminers. There is need to immediately re-equip to sustain operations. There is need to establish local capacity to repair broken down demining equipment, especially mine detectors.

c. Lack of meaningful mine action support from other States Parties and the international community: Zimbabwe has not received international support since 2000. This isolation has resulted in it lagging behind in mine clearance techniques and failing to get donor funding for mine action, particularly for contracting commercial demining companies. There is no independent verification of mine action standards. Illegal sanctions imposed by some potential donors have made it impossible for Zimbabwe to access any form of international assistance in the field of mine action. The sanctions have made it very difficult for Zimbabwe to import survey as well as demining equipment, most of which is not available locally.

11. A lot of benefits will be realised in humanitarian, economic, social and environmental aspects in the endeavour to fulfill 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 ranching 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.

12. The remaining 201.32 square kilometres is composed of 3.1 square kilometres of cordon sanitaire minefields and 198.22 kilometres of ploughshare or reinforced ploughshare. The terrain in some of these areas is mountainous and rocky thus making access to the minefield and employment of some of the demining equipment very difficult. Some of the areas have been affected by soil erosion as there are gullies while others are swampy or prone to flooding. In addition, there are areas that are thickly wooded or with hard clay surface which is hard to work on. All these characteristics as well as extremely high temperatures in some of the mined areas have the potential to significantly affect demining operations and have to be considered in planning.

13. Zimbabwe is requesting a second extension of 24 months until 1 January 2013. During this extension period Zimbabwe intends to seek and receive international technical assistance in order to train and equip a limited survey capacity and to improve the efficiency of the demining

capacity. The survey teams will undertake survey of the 4 remaining "unknown" areas: Rushinga, Lusulu, Mukumbura & Kariba, as well as undertaking further survey of the cordon sanitaire between Crooks Corner and Sango border post. We are confident of receiving assistance from an international partner at a relatively low level and we are optimistic that this will be the catalyst to encouraging donors to supporting our broader mine action goals.

14. At the same time as the survey process, our demining teams will work with international support to gain expert knowledge and update their skills which will offer a faster, more effective and safer way of operating. Although this activity would have been more beneficial if the international partner came with more modern equipment to equip our deminers, we are conscious of the likely challenges in doing so and are therefore prepared to use the old humanitarian demining equipment in our inventory. It is hoped that the international community will further appreciate Zimbabwe's commitment to ridding itself of all of its landmines.

15. Following the two year process of survey, retraining, consolidation of resources and fundraising, Zimbabwe is confident that it will be able to submit a further extension request containing a clear and effective plan for the final removal of all the remaining minefields as required under Article 5.

16. In order to make an estimate of the funds required, the following assumptions have been made: (a) The total remaining suspected hazardous area is 201.32 square kilometres; (b) There is 381 kilometres of frontage of cordon sanitaire minefield; (c) There is 538.8 kilometres of frontage of either ploughshare or reinforced ploughshare minefields; (d) Cordon sanitaire minefields are assumed to be 25 metres in width and ploughshare and reinforced ploughshare minefields area assumed to be 400 metres in width; (e) Cordon sanitaire minefields are known to consist generally of three rows of anti-personnel mines and contain around 5,500 mines per kilometre of frontage; (f) Ploughshare minefields are known generally to consist of three rows of ploughshare directional fragmentation mines protected by AP mines containing an average of 100 ploughshare and 300 anti-personnel mines per kilometre of frontage; (g) Reinforced ploughshare minefields are known to consist of essentially four rows of ploughshare directional fragmentation mines protected by anti-personnel with an average 100 ploughshare and 5,800 anti-personnel mines per kilometre of frontage; (h) The average industry norm cost of clearing land is considered to be in the region of US$1 per square metre (overall programme costs); and, (i) The approximate amount of land that can be released from the 201.32 square kilometres of suspected hazardous areas through means other than clearance will be 50 percent.[1]

17. Based on these assumptions, at this stage we believe clearing all mined areas in Zimbabwe will cost in the region of US$100 million. This effort would need to be managed tightly, and we believe that we are in a position to assume a certain degree of costs ourselves, with the support of donors and the United Nations. We would foresee proceeding in three phases:

a. Phase I: Deminer refresher training (all demining staff); Non-technical survey of 4 unknown areas (Rushinga, Lusulu, Mukumbura & Kariba); Technical survey of small areas of each for the 5 known minefields; MRE in high impact areas, Relocating ZIMAC out of the military cantonment area; Undertake development of Zimbabwe national mine

action standards in accordance with the International Mine Action Standards (IMAS); and, Resource mobilisation.

b. Phase II: Continued resource mobilisation; Re-equipping the mine clearance squadron and deploying it in a more effective manner; and, Working with partners to oversee either contract development for clearance activities and/or local organisations who agree to undertake major clearance activities.

c. Phase III: Beginning major clearance operations; Develop a national strategic mine action plan; and, Implementing the national mine action strategic plan.

18. It is the intention of the Zimbabwean government to maintain its support to the clearance of landmines in Zimbabwe through the continued deployment of the mine clearance squadron. Although the unit is currently struggling from the lack of sufficient equipment, we expect that external support will assist us with updating the unit's demining skills and assisting us with the provision of basic demining equipment such as detectors and PPE.

1. ORIGINS OF THE ARTICLE 5 IMPLEMENTATION CHALLENGE

The origin of Zimbabwe's Article 5 implementation challenge derives from the War of Liberation between 1976 and 1979. The Rhodesian Army laid minefields along the northern and eastern borders of the country to prevent infiltration and resupply of liberation movements operating from Zambia and Mozambique. Combat action between the two forces also resulted in a large amount of unexploded ordnance lying around the country.

Following considerable research and planning by the then Rhodesian Army, minefield construction commenced in 1976 in the north east 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 in Annex I.

2. NATURE AND EXTENT OF THE ORIGINAL ARTICLE 5 CHALLENGE: QUANTITATIVE ASPECTS

Most of the military records for the minefields are not readily available 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 MineTech and this survey formed the basis of the original extension request from Zimbabwe submitted to the Ninth Meeting of the States Parties.

During the initial extension period a more detailed level of analysis was carried out. This analysis, coupled with more than 12 years of clearance operations by the mine clearance squadron, provided a more accurate picture of the situation based on a number of assumptions. These assumptions firstly noted that the frontage (linear kilometres recorded) was often, but not always, a line of more than one minefield, of more than one type. For example, it was common in many areas for a *cordon sanitaire* minefield to be laid **at** or **on** the border, with a second parallel minefield – usually *ploughshare* or *reinforced ploughshare* minefields some distance behind – between 1 and 20 km. Further to this, an assumption has been made that the cordon sanitaire minefield has a width of only 25m, whereas the ploughshare and reinforced ploughshare minefields are assumed to have a width of 400m – something that the National Mine Clearance Squadron believe to be the case. It should be noted that the Mine Clearance Squadron has only worked on reinforced ploughshare minefields, but the 400m assumption remains the same for the smaller ploughshare minefields – something that is likely to reduce once work is underway.

With the above, we can set the following benchmark as the original contamination:

Table 1 - Original suspected contamination level

	Mined Areas	**Total Area (km^2)**
1	Victoria Falls to Mlibizi	286
2	Musengezi to Rwenya	145.28
3	Sango Borer Post to Crooks Corner	22.9
4	Rusitu to Muzite Mission	28.8
5	Sheba Forest to Beacon Hill	20
6	Burma Valley	1.32
7	Rushinga	2.8
8	Lusulu	2.8
9	Mukumbura	0.55
10	Kariba	0.6
	TOTAL	**511.05 km^2**

3. NATURE AND EXTENT OF THE ORIGINAL ARTICLE 5 CHALLENGE: QUALITATIVE ASPECTS

Three basic types of minefields were laid. Based on military planning processes and a limited number of records available, together with experience gained from the National Mine Clearance Squadron, the three different types of minefields generally consist of:

1. **Cordon Sanitaire:** The cordon sanitaire barrier generally consists of three rows of sub-surface anti-personnel mines (APM) laid in a standard pattern with a width of 25m. This type of minefield was laid **close to** or **on** the international border.

2. **Ploughshare Minefield:** The ploughshare minefield consists essentially of three rows of *ploughshare* directional fragmentation APMs mounted on 0.5 to 1m high stakes protected by sub-surface APMs.

3. **Reinforced Ploughshare Minefield:** The reinforced *ploughshare* minefield is essentially 6 rows of *ploughshare* directional fragmentation APMs mounted on 0.5 to 1m high stakes protected by sub-surface APMs.

As the laying continued, there was always some variation on the laying processes, as well as the types of mines laid. The assumed current contamination is shown at Table 2.

Table 2 - Current suspected contamination level

Ser	Location	Length of Cordon sanitaire	Length of Ploughshare/ Reinforced ploughshare	Area of cordon sanitaire (km^2)	Area of ploughshares (km^2)	Total Area assumed (km^2)
1	Musengezi to Rwenya	307	344	7.68	137.6	145.28
2	Sango Border Post to Crooks Corner	52	54	1.3	21.6	22.9
3	Rusitu to Muzite Mission	0	72	0	28.8	28.8
4	Sheba Forest to Beacon Hill	0	50	0	20	20
5	Burma Valley	0	3.3	0	1.32	1.32
6	Rushinga	0	7	0	2.8	2.8
7	Lusulu	0	7	0	2.8	2.8
8	Mukumbura	22	0	0.55	0	0.55
9	Kariba	0	1.5	0	0.6	0.6
	Total length & area	**381**	**538.8**	**9.53**	**215.52**	**225.05**

SOCIO-ECONOMIC IMPACT OF LANDMINES IN ZIMBABWE

Impact on the population of Zimbabwe. The recent problems Zimbabwe has suffered have meant, among other things, that it has not been possible to build or maintain a reliable database of casualties caused by landmines within the country. What is clear however, is that those populations least able to mitigate the threats from landmines, are those who are most at risk from landmines – the poor rural subsistence farmers, who are often forced through economic necessities to take risks. While the number of casualties reported is relatively low, the real numbers are likely to be much higher and until a full programme is established, it is unlikely to be quantified more.

Impact on Rural Communities. Mined areas are in rural areas that are inhabited by poor peasant farmers whose livelihood depends on land and livestock rearing. Mined areas deny peasant farmers about 174.08 km^2 of fertile land of which 145.28 km^2 is in Mukumbura and 28.8 km^2 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 relations and the unlucky ones have been maimed or injured by anti-personnel mines.

Minefields also deny the same people access to potable water sources as well as grazing. 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 grazing their livestock in mined areas that have not been properly cleared. This has in most cases resulted in injury or in some cases death has occurred 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 1,550 humans were killed or maimed, more than 120 000 livestock and thousands of wild animals have been killed. The denial of land due to existence of mines is with very few expectations, the direct cause of most deaths in the mined areas.

Impact on Commercial Farming. An area of about 68.9 km^2 of commercial farm land for tea estates and timber plantations is mined, and in some of this area 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 are 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 tourist and other activities have been constructed and are operational in the cleared area. However tourism development has remained impossible 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 remain uncleared. Although the minefield covers 22.9 km^2, the affected area spreads much wider. The potential for tourism is huge and an opportunity was lost during the recent 2010 Football World Cup.

4. METHODS USED TO IDENTIFY AREAS CONTAINING AP MINES AND REASONS FOR SUSPECTING THE PRESENCE OF AP MINES IN OTHER AREAS

In Zimbabwe's initial extension request, Zimbabwe had taken the recorded or surveyed 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 through the Implementation Support Unit (ISU) to assist with this analysis. The core data that were available were:

1. **Minefield Maps held by the Army.** The Zimbabwe National Army has 1:50 000 maps that show the general location of mined areas and gaps that have been opened. The mine laying records are not available except for the reinforced ploughshare minefield stretching from Limpopo river to Mwenezi river on the Sango – Crooks Corner Minefield.

2. **1994 MineTech Survey.** MineTech, a Zimbabwean demining company, was contracted by the EU in 1994 to undertake a technical survey of the country. Although Mine Tech presented information on the construction of the minefields, it would appear from their

survey report that they only carried out a general survey. ZIMAC has a hard copy of the Survey Report. This survey was undertaken through the process of physically visiting and verifying all minefields whose records were held by the Zimbabwe National Army.

3. **2000 Koch – MineSafe Completion Report.** Koch MineSafe were contracted to undertake clearance on the minefield between Musengezi to Rwenya and finished the project in 2000. The completion report shows that the project cleared around 130km frontage (around 6 km^2 of area) and also reported an additional suspect area of 22km frontage which remains to be surveyed (and is listed as Minefield in Mukumbura). Koch MineSafe learnt of the location of the reinforced ploughshare Mukumbura Minefield from the local communities whilst they were clearing the cordon sanitaire in that area.

4. **2010 HALO Trust border minefield survey for the Government of Mozambique.** This survey was undertaken by HALO Trust with an aim of clarifying the situation on the Mozambique – Zimbabwe border. An **unofficial** version of the survey was available, which offers only a limited degree of clarity and needs further investigation. This survey was done on behalf of the Mozambican authorities and in general, access to minefields was only obtained from the Mozambican side, meaning that it is likely that some clarity is missing. HALO Trust surveyed the entire minefields on the Zimbabwe - Mozambique Border by physically visiting each area. Communities living along the borders provided information on the mined areas. Mozambican Border guards and locals acted as guides for HALO survey teams. HALO carried a technical survey within the Mozambican territory in four locations to confirm the type and density of mines.

5. **Significant experience gained from more than 12 years of clearance by the National Mine Clearance Squadron.** During their years of experience, the mine clearance squadron have cleared the complete minefield from Victoria Falls to Mlibizi, around 286km^2 of SHA, and more recently, some 3.6km^2 of minefield at Crooks Corner. Their understanding of the threat posed and the patterns expected are significant.

5. NATIONAL DEMINING STRUCTURE

The National Mine Action Authority of Zimbabwe (NAMAAZ), is a policy and regulatory body on all issues relating to mine action in Zimbabwe. It was established in terms of an Act of Parliament [The Anti-Personnel Mines (Prohibition) Act Chapter 11:19] and has 9 high level civil servants members. The Deputy Secretary Policy Public Relations & International Affairs in the Ministry of Defence (MoD) is the Chairman and is deputised by the Deputy Secretary in the Ministry of Foreign Affairs. Committee Members include Deputy Secretaries from the following government ministries: Ministry of Natural Resources and Environment, Local Government, Finance, Labour and Social Welfare and Home Affairs. A UNDP Representative and the Director of the Zimbabwe Mine Action Centre are also on the NAMAAZ Committee. The organisation is dynamic and can be adapted as necessary, to suit changing circumstances and enhance effectiveness in mine action.

MANDATE OF NAMAZ

- Policy making and mine action implementation coordinating body.
- Conscientising the nation and International Community about the landmine problem and demining activities in Zimbabwe.
- Sourcing funds to finance various mine action projects.
- Setting out national mine action programme priorities.
- National Landmine Victim Assistance Policy formulation.
- Seeking any assistance required from the UN and other organisations or states parties on the implementation of national plan under article 6 of the mine ban treaty.

6. NATURE AND EXTENT OF PROGRESS MADE: QUANTITATIVE ASPECTS

Efforts to clear the mines started after Zimbabwe gained independence. A significant amount of clearance has been undertaken by the Zimbabwean National Army and a major minefield laid between Victoria Falls and Mlibizi has been cleared. Additionally, significant clearance has been carried out in the North Eastern Border on the Musengezi to Rwenya minefield as part of the Koch – MineSafe project funded by the EU between 1999 and 2000. Casualties are still being reported in this area in the numerous small areas that were not cleared by the project (although they were marked, ten years passage of time has resulted in the majority of marking being removed and populations now not knowing where cleared and non-cleared areas are). MRE has been carried out in the past in these areas but has not been sustained due to resource constraints. Resources are being sought to ensure the effective exclusion of civilians from these areas and also ensure that civilians in the area are aware of the situation. MRE in this area and other high impact areas will be prioritised in our future plans. A more systematic turnover of cleared land to local communities will be done in the future.

So far a total of 295.8 km^2 have been addressed culminating in the destruction of **196 887** anti-personnel mines. Furthermore, there is 15 km^2 area (points ***b*** and ***c*** below) which was cleared not in accordance with current IMAS and therefore all the area must be addressed in future clearance as it has not been included in the total area cleared. UXOs have been routinely recovered from battle areas in the country side by military EOD teams stationed at Provincial Centres. In the early post war period an average of 600 UXOs were recovered annually. 1,621 UXOs were recovered from 2000 to 2010.

The current clearance progress is as follows:

a. Victoria Falls to Mlibizi minefield: **286 km^2**.

b. Cleared gaps: **10 km^2**.

c. Forbes Border Post: 5 **km^2**.

d. Sango Border Post to Crooks Corner: [1]**3.6 km^2**.

e. Musengezi to Rwenya Minefield by Koch – MineSafe[2]: **6.2 km^2**

[1] Following a detailed analysis of the contaminated area that was conducted with assistance from the ISU, the area previously reported as cleared has been reduced to reflect the area that was physically cleared covering a depth of 400m. In the past, the cleared area was calculated on the basis that the contaminated area covered a depth of 1300m along the minefield.

Further to Table 2, there are a number of areas that can be removed from the list of suspected areas for a number of reasons. These are noted at Table 3.

Ser	Location	Length of Cordon sanitaire removed (km)	Length of Ploughshare/ Reinforced Ploughshare removed (km)	Area of cordon sanitaire (km^2)	Area of ploughshares (km^2)	Total Area removed (km^2)
1	Musengezi to Rwenya **(9km frontage of this minefield has been found and agreed to be within Mozambican territory)**	9	0	0.23	0	0.23
2	Rusitu to Muzite Mission **(12.3km frontage of this minefield has been found and agreed to be within Mozambican territory)**	0	12.3	0	4.9	4.9
3	Sheba Forest to Beacon Hill **(44km frontage of this minefield has been found and agreed to be straddling Mozambican and Zimbabwean territory and ownership has thus been shared)**	0	22	0	8.8	8.8
`	Total length & area removed	**9**	**33.3**	**0.23**	**13.7**	**13.93**

Table 3 - Suspect contamination that can be removed

7. NATURE AND EXTENT OF PROGRESS MADE: QUALITATIVE ASPECTS

Before 1998, a number of gaps in minefields were cleared to permit the limited free passage between communities. Additionally, gaps provided the opportunity for the construction of government offices and development of infrastructure.

The most notable qualitative progress made is in the clearance of Victoria Falls in 2005 which allowed for the unhampered expansion of the town, provided local inhabitants and tourists with access to the Zambezi River, facilitated game viewing in cleared areas of the Zambezi Basin and culminated in the development of major tourism infrastructure. This has certainly had a positive effect on the development of the region.

[2] During the period of the contract, Koch MineSafe declared they had cleared 6.2 km^2 of minefield. Available records are unclear, but it is assumed that the clearance was on a cordon sanitaire minefield.

8. METHODS AND STANDARDS USED TO RELEASE AREAS KNOWN OR SUSPECTED TO CONTAIN AP MINES

Ser	Name of mined area	Total area cleared (km^2)	Means used to destroy the mines	Number of anti-personnel mines destroyed	Number of other explosive munitions destroyed
(a)	(b)	(c)	(d)	(e)	(f)
1	Victoria Falls to Mlibizi minefield	286	Explosive demolitions	25 959	12 UXOs
2	Sheba Forest to Beacon Hill (Forbes border Post)	5	Explosive demolitions	500	
3	Sango to Crooks Corner minefield	3.6	Explosive demolitions	6009	
4	Cleared gaps	10	Explosive demolitions	2000	
5	Part of Musengezi – Rwenya minefield	6.2	Mechanical and explosive demolitions	162 419	
6	**TOTAL**	**295.8**[3]		**196 887**	

The SHAs that have since been cleared and released were known minefields. For this reason, the method used to release land in these areas was through full clearance. In each case, clearance was preceded by a technical survey to ensure that resources were not wasted clearing areas without contamination. Two methods have been used so far to clear minefields:

- Koch – MineSafe used a combination of mechanical clearance (using a ground tiller method) and standard manual demining techniques followed by a separate external quality assurance process.
- Military mine clearance has been undertaken in the remainder of the areas and consists of standard demining techniques, followed by an internal quality assurance process (except for the most recent $3.6km^2$ in the Crooks Corner to Sango area, where there has been, thus far, no quality assurance undertaken).

All the cleared area was cleared by military deminers save for the 130 km ($6.2\ km^2$) stretch in the Musengezi to Rwenya minefield which was done by Koch – MineSafe.

9. METHODS AND STANDARDS OF CONTROLLING AND ASSURING QUALITY

In respect to the progress noted in section 8, after the total clearance of a particular minefield, a Quality Control/Quality Assurance team would carry out quality inspection on the cleared area. This was done on all cleared portions except the Sango to Crooks Corner minefield which is still under clearance. However it should be noted that even after the quality inspections have been done, elements of up to 0.01% of either UXO or mines may go unnoticed due to human and mechanical error. On the commercial demining contract on the Musengezi to Rwenya minefield, QA was undertaken by an external commercial company through monitoring and supervision. Although reports of mine incidents in cleared areas in this minefield continue to be received, it is

[3] The total area cleared excludes serials 2 and 4 that were not cleared in accordance with current IMAS and hence will need re-clearance. The area is also subject to confirmation of records.

highly unlikely that these have occurred in areas that were reported as cleared but may be occurring in uncleared areas that are adjacent to cleared areas. The absence of markings between the cleared areas and the many small uncleared areas within the cleared areas appears to contribute to the belief that cleared areas are unsafe. These areas were originally marked, but ten years on, most marking is now non-existent.

In areas cleared by the National Mine Clearance Squadron, Quality Control/Quality Assurance is done by deminers who were not engaged in the initial clearance through post clearance verification.

10. EFFORTS UNDERTAKEN TO ENSURE THE EFFECTIVE EXCLUSION OF CIVILIANS FROM MINED AREAS

An area which has been achieved, albeit not comprehensively, is the delivery of MRE to vulnerable communities. Mine Risk Education 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. More comprehensive MRE programmes are planned but efforts to effectively reach out to all affected communities remain a major challenge owing to funding constraints.

Some of the mined areas were previously perimeter fence marked 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 to alert civilians of the existence of a minefield were erected.

11. RESOURCE MADE AVAILABLE TO SUPPORT PROGRESS MADE TO DATE

The Government of Zimbabwe is fully committed to rid the country of all landmines. This has been amply shown by its consistency in annually allocating a budget for demining operations since 1980. Although the funds allocated have been inadequate to allow for the contracting of commercial demining companies to complement the military humanitarian demining efforts, the act has gone a long way in demonstrating national ownership of the demining programmes. The USA donated demining equipment and tools in 1998, which saw the start of the full clearance of the Victoria Falls to Mlibizi minefield. Unfortunately the USA withdrew its support in 2000. The EU funded the clearance of the Musengezi to Rwenya minefield from 1999 to 2000. The EU also withdrew its support after the clearance of only 6.2 km^2 of the 145.28 km^2 minefield.

Funding level of the demining operations in Zimbabwe

Year	2003	2004	2005	2006	2007	2008	2009	2010
(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)	(j)
Financial resources made available by Zimbabwe[4]	US$ 500 000	US$ 500 000	US$ 500 000	US$ 500 000	US$ 500 000	US$ 500 000	US$ 500 000	US$ 600 000[5]
Financial resources made available by actors other than the State Party	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Totals	US$ 500 000	US$ 500 000	US$ 500 000	US$ 500 000	US$ 500 000	US$ 500 000	US$ 500 000	US$ 600 000

12. CIRCUMSTANCES THAT IMPEDE COMPLIANCE

	Circumstance	Comments	Degree to which circumstance may impede the ability of Zimbabwe to destroy all anti-personnel mines in mined areas
(a)	(b)	(c)	(d)
1	Inadequate funding for demining from the government	The economy is depressed and constrained as a result of among other things, illegal economic sanctions. 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.	High degree
2	Insufficient demining equipment.	Due to inadequate equipments, the available military demining capacity cannot be fully utilised. Aged mine detectors and PPE currently in use are endangering the lives of deminers. There is need for immediate re-equipping to sustain operations. There is need to establish local capacity to repair broken down demining equipment especially mine detectors.	In the medium term, military humanitarian demining will grind to a halt once the few pieces of equipment are broken down.
3	Lack of meaningful mine action support from other state parties and international community	Zimbabwe has not been supported by the International Community since 2000. This isolation has resulted in it lagging behind in mine clearance techniques and failing to get donor funding for mine action particularly for contracting commercial demining companies. There is no independent verification of Mine Action standards.	High degree
4	Illegal sanctions imposed by some potential donors	The sanctions have made it impossible for Zimbabwe to access any form of international assistance in the field of mine action. Zimbabwe cannot import survey as well as demining equipment - most of which is not available locally. The sanctions have made it very difficult for Zimbabwe to obtain much needed survey and demining equipment which is imported	High degree

[4] Funding levels have been revised to include employment costs, maintenance of demining equipment and vehicles as well as cater for logistic items that sustained the demining operations. Allocations between 2003 and 2009 were in local currency and have been converted to USD equivalent. Although funds were allocated in 2009, there was hyper inflation which eroded the original value of the funds resulting in no demining operations being done.

[5] Funding in 2010 is in US$. The normative annual allocation has been increased by US$100 000.

13. HUMANITARIAN, ECONOMIC, SOCIAL AND ENVIRONMENTAL IMPLICATIONS

A lot more benefits will be realised 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.

14. NATURE AND EXTENT OF THE REMAINING ARTICLE 5 CHALLENGE: QUANTITATIVE ASPECTS

Zimbabwe believes that it has a total of **201.32 km^2** of suspected minefield remaining to be cleared. Based on available data, the mined areas of Musengezi to Rwenya, Sango Border Post to Crooks Corner, Rusitu to Muzite Mission, Sheba Forest to Beacon Hill and Burma Valley can be assumed to be reasonably accurate (with the exception of the cordon sanitaire minefield in the Crooks Corner – Sango border post, which is not recorded, but known to exist and thus requires further survey). **If resources are available, it would also be appropriate to confirm the accuracy of available information on these mined areas through a limited general survey.**

The mined areas of Lusulu, Mukumbura, Kariba and Rushinga all require more detailed technical survey but the figures provided are based upon reasonable analysis of the data available.

15. NATURE AND EXTENT OF THE REMAINING ARTICLE 5 CHALLENGE: QUALITATIVE ASPECTS

The remaining mined area consists of:

- **3.1 km^2** cordon sanitaire
- **198.22 km^2** of ploughshare or reinforced ploughshare

The terrain in some of these areas is mountainous and rocky thus making access to the minefield and employment of some of the demining equipment very difficult. Some of the areas have been affected by soil erosion as there are gullies while others are swampy or prone to flooding. In addition to this, there are areas that are thickly wooded or have hard clay which is hard to work on. All these characteristics as well as extremely high temperatures in some of the mined areas have the potential to significantly affect demining operations and have to be considered in planning.

16. AMOUNT OF TIME REQUESTED AND A RATIONALE FOR THIS AMOUNT OF TIME

Given the challenges faced in recent years by Zimbabwe, the difficulties of taking a standard approach to fundraising and implementation are recognised. With illegal sanctions still in place and no external sources of support having been received in country in the last ten years – the most difficult times Zimbabwe has faced – we have been able to make little real impact on the significant degree of mine contamination throughout our country. Our armed forces, through the National Mine Clearance Squadron, have been able to undertake limited clearance but at the current rate of clearance, it will take decades to deal with the remaining problem, by which time further significant irreparable damage will have been caused to the country and its people. We are in the process of appealing directly for support from international organisations, who we hope will initially be able to supply us with expertise to bolster our own capacity, and we will then attempt again to raise awareness and resources from the donor community and our fellow States Parties. Already there is conservation with a number of IOs as regards resource mobilisation. Although it is too early to comment on the likely outcomes of these engagements, it is fair at this stage to assume that there seems to be renewed interest in the landmine problem in Zimbabwe.

Zimbabwe is therefore requesting a further 24 month extension of its deadline. By requesting an extension of the deadline until 1st January 2013, Zimbabwe intends to seek and receive international technical assistance in order to train and equip a limited survey capacity and to improve the efficiency of our demining capacity. The survey teams will undertake survey of the four remaining "unknown" areas: Rushinga, Lusulu, Mukumbura & Kariba, as well as undertaking further survey at the cordon sanitaire between Crooks Corner and Sango border post. None of these areas are believed to be significant in size and it is envisaged that this process will take around two months. Zimbabwe is now confident of receiving assistance from an international partner at a relatively low level (several international experts for a short period of time) and is confident that this will be the catalyst to encouraging donors to supporting our broader mine action goals.

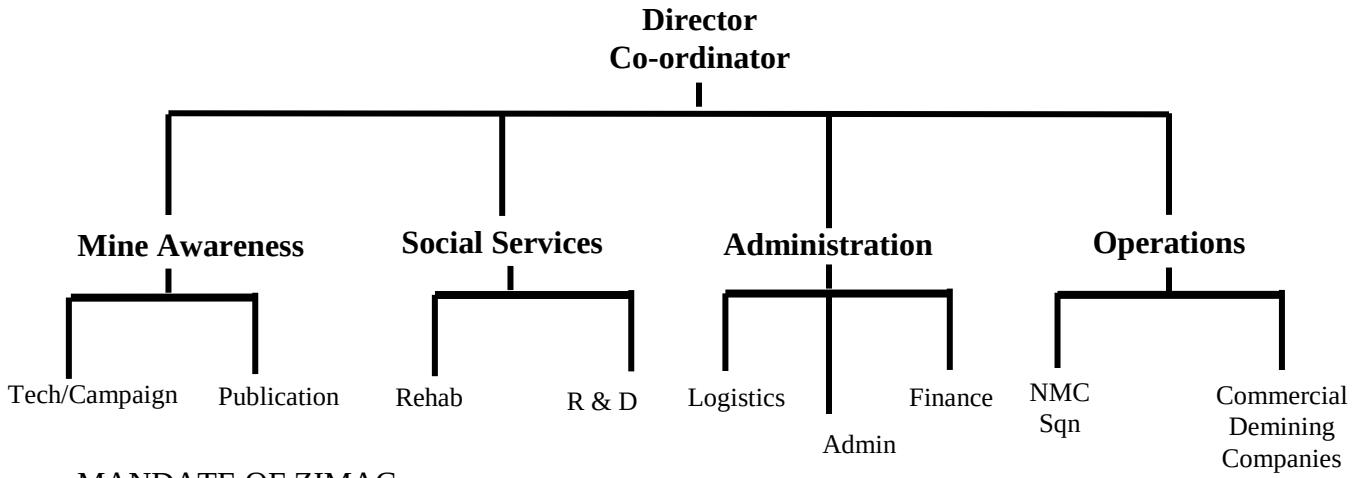
At the same time as the survey process, our demining teams will work with international support to gain expert knowledge and update their ten-year old skills which will give a faster, more effective and safer way of operating. Although this activity would have been more beneficial if the international partner came with more modern equipment to equip our deminers, we are conscious of the likely challenges in doing so and as such, will therefore be content with utilising the old humanitarian demining equipment that we have in our inventory. It is hoped that in a relatively short period of time after this, the international community will recognise Zimbabwe's commitment to ridding itself of all of its landmines.

Following the two year process of survey, retraining, consolidation of resources and fundraising, Zimbabwe is confident that it will be able to submit a further extension request that will allow a clear and effective plan for the final removal of all the remaining minefields as required under Article 5.

17. INSTITUTIONAL, HUMAN RESOURCES AND MATERIAL CAPACITY AVAILABLE

ZIMBABWE MINE ACTION CENTRE (ZIMAC)

Zimbabwe Mine Action Centre (ZIMAC is the focal point and the coordination centre of all mine action activities in the country. ZIMAC was established in 2000 with skeletal officers and clerical staff to run its affairs. ZIMAC reports to NAMAAZ. It is currently housed by the Ministry of Defence but there are plans in the near future –subject to availability of financial resources - to find a suitable location that would be readily accessible to all mine action stake holders. The organisational chart for ZIMAC is shown below.



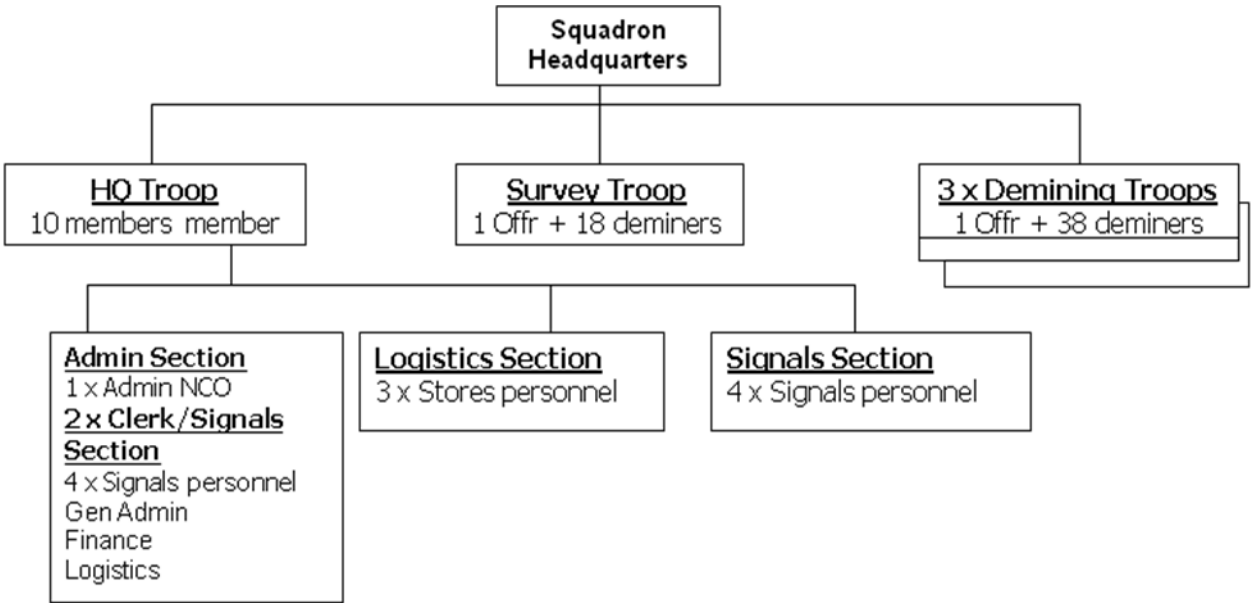
MANDATE OF ZIMAC

- Co-ordination of all landmine victims, care, rehabilitation and reintegration.
- Establishment and maintenance of a mine action database.
- Production and co-ordination of a national plan to destroy banned landmines.
- Monitoring adherence to the OTTAWA convention in Zimbabwe and elsewhere.
- Supervision of the destruction of banned AP mines.
- Planning for the conduct of Mine Risk Education (MRE) campaigns.
- Establish communication with all mine action stakeholders and interested groups at both national and international level.

NATIONAL MINE CLEARANCE SQUADRON

There are 8 registered commercial demining companies in Zimbabwe, some of them with international experience. None of them is engaged in clearing mines in Zimbabwe at present due to lack of funding. Demining operations are currently being carried out by National Mine Clearance Squadron (NMC), which is a military unit which was established in 1982 and has an establishment for 140 deminers and 24 support staff. The organisational structure for NMC is as follows:

NATIONAL MINE CLEARANCE SQUADRON



18. DETAILED WORKPLAN

EXECUTION PLAN (SHORT TERM PLAN ONLY)

Survey. Two survey teams of 10 surveyors each will be taken from within our existing capacity and trained in basic and advanced survey techniques by an international organisation. These teams will, with the support of the international organisation, undertake surveys to understand the nature of the contamination at the four unknown areas – Rushinga, Lusulu, Kariba and the minefield believed to be west of Mukumbura as well as the Sango Border Post to Crooks Corner Cordon Sanitaire. The teams will require survey equipment.

Clearance. It has been more than ten years since the military demining teams were last trained under the US project. Some of the basic skills have become eroded and a refresher training course will be delivered by the international organisation in order to provide up to date skills in effective and safe demining operations. This will boost the current rate of clearance.

Given the isolation of Zimbabwe over the last ten years, we recognise that mobilisation of resources will continue to pose a challenge, but we are confident of obtaining sufficient support from international sources to assist us to begin regaining momentum. As already alluded to, we have recently been in correspondence with a number of organisations to attempt to begin the process of re-invigoration. Negotiations are ongoing with them.

It is the intention of the Zimbabwean government to maintain its support to the clearance of landmines in Zimbabwe through the continued deployment of the 164 members of the mine clearance squadron. Although the unit is currently struggling from the lack of sufficient equipment, we expect that external support will assist us with updating the unit demining skills and assisting us with the provision of basic demining equipment such as detectors and PPE.

Costs

Given the lack of any real progress over the last years and thus a clear understanding of the actual costs and rates, it should be noted that the figures presented here are estimates based on industry best practices and understanding. By the time that the next, and hopefully final, extension request is submitted in two years time, it is expected that the experience gained in Zimbabwe will be sufficient to make a more accurate assessment of the situation.

However, in order to make some estimates of the costs required, we have made a number of assumptions:

- The total remaining SHA is 201.32 km^2.
- There is 381km frontage of cordon sanitaire minefield.
- There is 538.8 km frontage of either ploughshare or reinforced ploughshare minefields.
- Cordon sanitaire minefields are assumed to be 25m in width Ploughshare and reinforced ploughshare minefields are assumed to be 400m in width.
- Cordon sanitaire minefields are known to consist generally of three rows of AP mines and contain around 5,500 mines per km frontage.
- Ploughshare minefields are known generally to consist of three rows of ploughshare directional fragmentation mines protected by AP mines. They contain on average 100 ploughshare and 300 AP mines per km frontage
- Reinforced ploughshare minefields are known to consist of essentially four rows of ploughshare directional fragmentation mines protected by AP mines – much more heavily so in alternate rows. They contain on average 100 ploughshare and 5,800 AP mines
- The average industry norm cost of clearing land is considered to be in the region of US$1/$m^2$ (overall programme costs)
- The average amount of land that can be released from the 201.32 km^2 SHA will be 50%[6]

Based on the above assumptions, we believe that the programme to clear Zimbabwe will cost in the region of US$100 million. The costs of this would need to be managed tightly, and we believe that we are in a position to undertake a certain degree of this ourselves, with the support of donors and the United Nations.

[6] This is based on area reduction figures from Bosnia and Herzegovina (95%), Cambodia (75%), Azerbaijan (90%) and Ethiopia (95%). Zimbabwe's figures are lower because the extant minefields are so clearly defined.

Alternatives

Given the isolation Zimbabwe has suffered from over the last ten years, we are pragmatic enough to accept that there is still a chance of continued donor isolation. Two options are considered.

Option one – No outside donor support available.

This option assumes that the *status quo* is maintained and that the international community fail to provide support to Zimbabwe. This has been the situation within Zimbabwe over the last ten years throughout which the demining programme has been maintained (with the exception of the year 2009, when no clearance was undertaken) under the sole funding of the Government of Zimbabwe. This was through the toughest years of the financial crisis of the country and the donor isolation that has been maintained since 2000.

If Zimbabwe is unfortunate enough to find itself continuing to be isolated by the international donor community and no resources are available, the government of Zimbabwe will still attempt to maintain, and, dependent on the financial situation, would seek to increase its support to this issue.

However, the country's resources are extremely limited. The mine clearance squadron of 140 deminers have only 24 serviceable metal detectors between them and a very low level of serviceable personal protective equipment (PPE). At current rates of clearance which are regressing due to demining equipment constraints, it will take Zimbabwe at least another 50 years[7] to deal with its problem. Even if the capacity were to be increased in size by 100%, this gives a figure of 25 years.

Further to this, Zimbabwe's isolation has resulted in the capacity using outdated techniques which are not as efficient as they could be should outside support be available to improve capacity. Finally, it should be noted that our equipment and PPE is in urgent need of replacement and this in itself puts the deminers' safety at risk and needs to be urgently addressed.

Option two – Donor support begins to provide support to Zimbabwe for the clearance of its landmines.

This option is, in our opinion, the preferred option and it is hoped that the international community look favourably on Zimbabwe's extension request. An outline plan is included below.

[7] Assuming a current national capacity of around 2 km^2/year and assuming a 50% reduction by technical survey.

Detailed plan:

Phase	Activity	Time Line	Costings
1	Gain support from International organisation and undertake activities for: • Demining refresher training (all demining staff) • Survey training (12 experienced and selected staff)	Within 12 months	Very limited and reasonable resources are expected to be brought by international organisation who undertakes training. Estimated: US$ 200,000
	Undertake non-technical survey of 4 unknown areas (Rushinga, Lusulu, Mukumbura & Kariba)	Within 12 months	
	Undertake specific technical survey of small areas of each of the 5 known minefields	Within 12 months	
	Mine Risk Education in high impact areas	Within 12 months	US$100 000
	Relocate ZIMAC out of Military cantonment area.	Within 18 months	US$ 130,000 capital costs
	Undertake development on Zimbabwe national mine action standards in accordance with internationally accepted norms (IMAS)	Within 24 months	External support required, but estimated US$50,000
	Begin to mobilise funding support from donor and States Parties community	Immediately but over 24 months	-
2	Continue to mobilise funding support from donor and States Parties community.	Ongoing	-
	Re-equip mine clearance squadron and deploy in more effective manner	12 – 24 months subject to resourcing availability	Re-equipping costs estimated to be around US$200,000[8]

[8] This figure excludes logistical requirements for sustaining field work.

Phase	Activity	Time Line	Costings
2	Work with partners to oversee *either* contract development for clearance activities *and/or* work closely with international or local organisation who agree to undertake major clearance activities.	As soon as possible	Details to be worked out after survey phase. Expected total costs for clearance expected to be in region of US$ 100 million
3	Begin major clearance operations	As soon as possible, subject to resource availability	-
	Develop national strategic mine action plan	Once results of surveys become clearer	-
	Implement national mine action strategic plan	As soon as possible	-

Annex II. Location of Minefields in Zimbabwe

LEGEND

Area 1	Victoria Falls to Mlibizi (286 km^2)- cleared.
Area 2	Musengezi to Rwenya Minefield (145.28 km^2)
Area 3	Sheba Forest to Beacon Hill (20 km^2)
Area 4	Burma Valley (1.32 km^2)
Area 5	Rusitu to Muzite Mission (28.8 km^2)
Area 6	Sango Border Post to Crooks Corner (22.9 km^2)
Area 7	Lusulu (2.8 km^2)
Area 8	Kariba (0.6 km^2)
Area 9	Mukumbura (0.55 km^2)
Area 10	Rushinga (2.8 km^2)

Annex 1. National overview of Zimbabwe's Article 5 Implementation

	Name of the area under the jurisdiction or control of the State Party in which antipersonnel mines are emplaced or suspected to be emplaced	Original SHA (square kilometers)	Size of the area that can be removed (square kilometers	Size of the area under the jurisdiction or control of the States Party in which mines are emplaced or suspected to be emplaced (square kilometers)	Size of the area that has been addressed (square kilometers)*	Number of AP mines destroyed	Number of AT mines destroyed	Number of UXO's destroyed	Size of the area remaining to be addressed (square meters)	Date in which the area was or will be considered no longer dangerous due to the presence or suspected presence of mines
1	Victoria Falls to Mlibizi	286		286	286	25 959	Nil	12	0	
2	Muzengezi to Rwenya	145.28	.23	145.05	6.2	162 419			138.85	
3	Sango Border Post to Crooks Corner	22.9		22.9	3.6	6 009			19.3	
4	Rusitu to Muzite Mission	28.8	4.9	23.9	0				23.9	
5	Sheba forest to Beacon Hill	20	8.8	20	0				11.2	
6	Burma Valley	1.32		1.32	0				1.32	
7	Rushinga	2.8		2.8	0				2.8	
8	Lusulu	2.8		2.8	0				2.8	
9	Mukumbura	0.55		0.55	0				0.55	
10	Kariba	0.6		0.6	0				0.6	
11	Various gaps opened					2 500				
	TOTALS	**511.05**	**13.93**	**497.12**	**295.8**	**196 887**			**201.32**	

ANNEX III – Comparison Table with Original Request

	Minefield remaining to be cleared	Estimate given in last extension request (km^2)	Revised estimate following detailed analysis in July 2010 (km^2)	Total remaining (km^2)	Remarks
(a)	(b)	(c)	(d)	(f)	(e)
1	Victoria Falls to Mlibizi	0	0	0	
2	Musengezi to Rwenya	435.5	145.28	138.85	Less 0.23km^2 which is within Mozambique Less 6.2 km^2 which was cleared by Koch – MineSafe
3	Sango Border Post to Crooks Corner	182	22.9	19.3	Less 3.6 km^2 which has been cleared by the mine clearance squadron.
4	Rusitu to Muzite Mission	97.5	28.8	23.9	Less 4.9 km^2 which is in Mozambique
5	Sheba Forest to Beacon Hill	65	20	11.2	Less 8.8km^2 which is 50% of the 44km agreed to be straddling the border
6	Burma Valley	3.9	1.32	1.32	
7	Rushinga	Not yet surveyed	2.8	2.8	
8	Lusulu	Not yet surveyed	2.8	2.8	
9	Mukumbura	Not yet surveyed	0.55	0.55	
10	Kariba	1.5	0.6	0.6	Laid in 1963