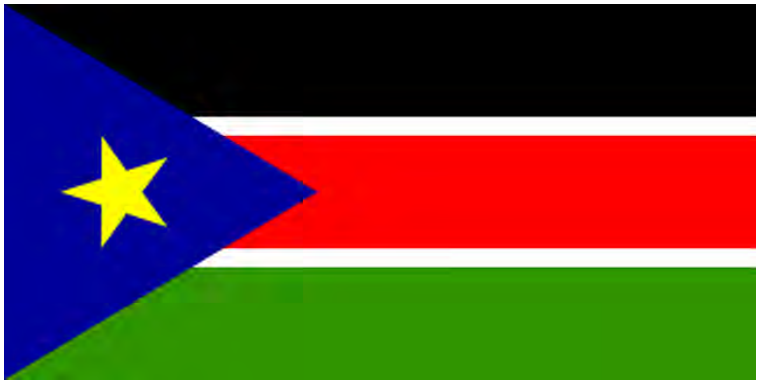

The Republic of South Sudan
Request for an extension of the deadline for completing the destruction of Anti-personnel Mines in mined areas in accordance with Article 5, paragraph 1 of the convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Antipersonnel Mines and on Their Destruction

Submitted at the 19th Meeting of the State Parties

Submitted to the Chair of the Committee on Article 5 Implementation

Resubmission Dated 17 August 2020

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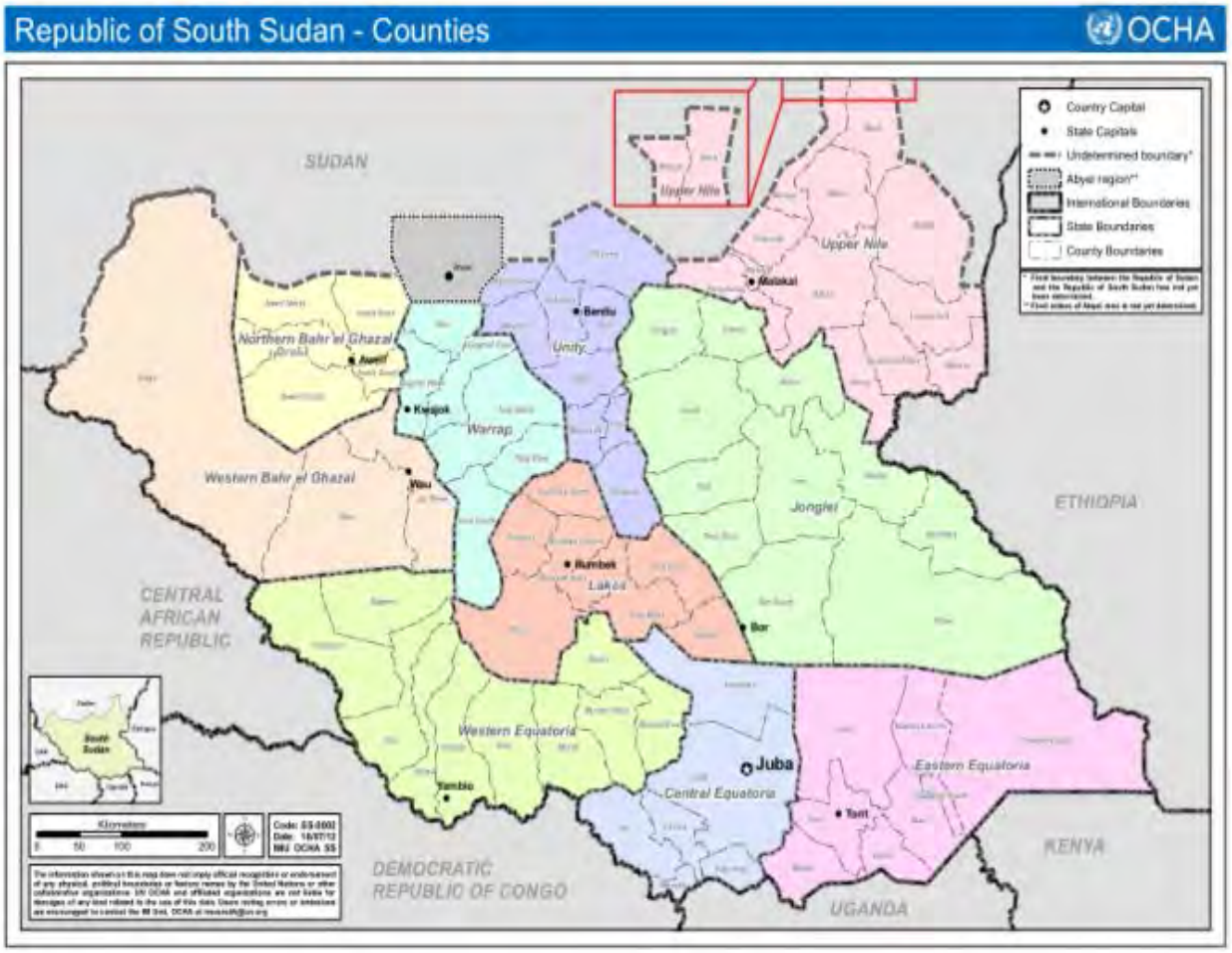
Contents

Abbreviations

AP	Anti-Personnel
APMBC	Anti-Personnel Mine Ban Convention
AT	Anti-Tank
BAC	Battlefield Area Clearance
BF	Battlefield
CM	Cluster Munition
DCA	Danish Church Aid
DDG	Danish Demining Group
FSD	Swiss Demining Federation
GBEG	Greater Bahr El Ghazal
GEQ	Greater Equatoria
GICHD	Geneva International Centre of Humanitarian Demining
GUN	Greater Upper Nile
IMAS	International Mine Action Standards
MAG	Mines Advisory Group
NMAA	National Mine Action Authority
NMAS	National Mine Action Standards
NBEG	Northern Bahr El Ghazal
NPA	Norwegian Peoples Aid
NGO	Non Governmental Organization
NTS	Non Technical Survey
OAP	Oslo Action Plan
OSIL	Operation Save Innocent Lives
R-ACSS	Revitalized Agreement on the Cessation of Hostilities on South Sudan
SLI	Save Lives Initiative
SIMAS	Sudan Integrated Mine Action Service
SPLM	Sudan People's Liberation Movement
SPLM-IO	Sudan People's Liberation Movement In Opposition
TDI	The Development Initiative
UNMAS	United Nations Mine Action Service
UNMISS	United Nations Mission in South Sudan
UXO	Unexploded Ordnance
WBEG	Western Bahr El Ghazal

I. Executive Summary



Introduction

The conflict that led to the creation of South Sudan lasted for 50 years and officially ended on 9 January 2005, with the signature of the Comprehensive Peace Agreement (CPA) between the Sudan People's Liberation Movement (SPLM) and the Government of Sudan (GoS)[1]. It had been one of the deadliest and longest lasting wars of the 20th century, and resulted in an estimated four million displaced people and two million deaths attributed to violence, famine and disease.

The CPA aimed at promoting democratic governance and the sharing of oil revenues between Sudan and South Sudan. It also established a timeline to the January 2011 referendum that led to the independence of South Sudan on 9 July 2011 South Sudan when it became the 193rd member state of the United Nations.

From the outset, the country faced tremendous humanitarian, development and security challenges. There were few tar roads and long running tribal tensions were not healed by the liberation. Inter-communal violence had broken out in several areas of the country even by the time of independence.

[1] "Sudan Comprehensive Peace Agreement 2005". *Peace Accords Matrix. Kroc Institute for International Peace Studies,* University of Notre Dame. Retrieved 16 July 2016

The legacy of the conflict could be found all over the country, not only in the form of minefields, cluster strikes and mined roads, but with unexploded ordnance also ever-present. More than four thousand people had already been injured by land mines and other unexploded ordnance and many of the roads remained mined. Further adding the logistical challenges there was only one bridge across the Nile and that is in the capital of Juba. This situation remains today.

Shortly after independence, the security situation along the border with Sudan deteriorated, especially in the disputed area of Abyei, in Upper Nile and Unity states, which resulted in significant addition of contamination of ERW.

The country remained at peace for little more than two years before a new phase of conflict erupted first in December 2013 and then again in July 2016. The fighting was largely along ethnic lines and was fought between the largely Dinka Sudan People's Liberation Movement (SPLM) led by President Kiir and the largely Nuer Sudan People's Liberation Movement In Opposition (SPLM-IO) led by the former Vice-President Dr Riek Machar[2]. The renewed violence led to widespread displacement, distress and destitution and added yet more explosive contamination to a country that was struggling to remove the legacy of previous fighting. Despite the signing of the Agreement on the Resolution of the Conflict in the Republic of South Sudan (ARCSS[3]) in August 2015, there have been few periods of genuine peace. The conflict's explosive legacy prevents the delivery of vital humanitarian aid and threatens the safety of individuals, communities and humanitarian actors. The socioeconomic cost of interrupted agricultural production, food insecurity, halted commerce and the lack of freedom of movement is incalculable.

The Government of Sudan (GoS) signed the Mine Ban Treaty of Ottawa on 4 December 1997 and ratified it on 13 October 2003 when Sudan was one country. In South Sudan SPLA/M reaffirmed their commitment to the Deed of Commitment of the Geneva Call in August 2003 in March 2008[4] they destroyed 6,000 anti–personnel mines to comply with Article Four of the Anti-Personnel Mine Ban Convention. Since then all newly identified anti-personnel mine stockpiles have been destroyed in South Sudan.

South Sudan deposited its notification of accession to the Convention[5] on 11 November 2011 at the 11th Meeting of States Parties in Phnom Penh, Cambodia on the 28 November.

After acceding to the mine ban convention, South Sudan was granted a 10-year period to meet all of its obligations under the Anti -Personnel Mine Ban Convention, in accordance with the provisions of this convention. That period is due to end in July 2021, but despite significant efforts and very generous international support it is clear that the country will not meet its obligations under Article 5 of the convention that requires it to clear all anti-personnel mined areas.

[2] Dr Machar was reappointed as First Vice President again on 22 February, 2020.

[3] Agreement on Resolution of Conflict in Republic of South Sudan August 2015

[4] Article 7 report for 2012 after the Mine Ban Convention Succeeded by The republic of South Sudan

[5] The Anti-Personnel Mine Ban Convention that is the Convention on Prohibition of the use, stockpiling, production and Transfer of anti-personnel mine and their destruction.

Clearance efforts were already well underway, as demining had begun in earnest in 2004. However, the return to violence, and general insecurity that has affected the country for the majority of the time since independence, had had a severe impact on the clearance effort and added yet more contamination to be cleared.

Since acceding to the treaty 1,609 hazardous areas have been cleared or cancelled and 388.6 km^2 of confirmed or suspected hazardous areas have been released. This work has left 353 known hazardous areas with a total area of 19.5km^2 to be addressed. This is disaggregated as follows:

Table of remaining contamination in South Sudan as of 30 June 2020

Hazard Type	Number of Hazards	Area of Hazards (m^2)
AP Minefields	122	7,337,011
AT Minefields	38	1,172,873
Mined Roads	25	3,313,354
Cluster Strikes	133	6,408,965
Battle Areas	35	1,278,907
Total	353	19,511,110

Over the years, South Sudan has developed efficient clearance techniques to address each of these hazard types as well as honing its capacity to undertake non-technical survey to better define the actual clearance requirement. This has led to almost four times as much ground being cancelled as has been cleared (315,826,314 m^2 cancelled versus 72,832,239m^2 cleared) and there remain clear opportunities for further reductions in the overall estimate that will be derived by further survey work.
Accordingly each of the remaining tasks has been classified according to the proposed clearance methodology (manual clearance, mechanical clearance, road clearance or resurvey). In total there are 90 tasks assigned for resurvey that in total extend across 6,333,897m^2 but whereas 28 of those tasks have no area assigned to them at all, the largest three account for 3,303,582m^2 (52% of the area assigned for resurvey and 17% of all remaining contamination). Thus South Sudan is confident that further survey work will reduce the actual contamination estimate.
The majority of the requirement for resurvey work is comprised of tasks in Jonglei State where 19 tasks are registered as contaminating 4,359,449m^2 (45% of which is attributed to a single SHA). In recognition of this disparity for planning purposes the clearance requirements for each of these hazards has been calculated on the basis of it being the size of a standard minefield or cluster strike (as determined by historical averages for completed tasks)

South Sudan has analysed the remaining contamination and made a realistic assessment of the likely clearance resources available to address it and is requesting a five year extension to allow it to complete its clearance of all mined areas in the country.

Explosive Ordnance Risk Education has been a cornerstone of the mine action programme in South Sudan with direct delivery of risk education given to 3.87 million people across the country. All risk education teams are gender balanced and access the entire community in order to understand their

concerns and priorities. There is no doubt that this has been effective as since joining the convention there have been 56 people injured by anti-personnel mines and 585 killed or injured by all explosive ordnance.

South Sudan now has a relatively 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, South Sudan now seeks **a five (5) year extension, 9 July 2021 to 9 July 2026** to allow it to complete the clearance of all mined areas in the country. It will make every effort to achieve the 2014 Maputo Review Conference objective of 2025 but cannot envisage doing so without an increase in funding. The current plan for the complete clearance of South Sudan is estimated to cost $148million with a maximum annual budget of $34.4 million for the demining season of 2021/22 and dropping to $24.75million in 2025/26. In order to achieve this South Sudan is appealing for an initial increase in support of $3million per year.

Although this plan is based upon the optimal deployment of the existing funded clearance resources working in South Sudan, some of those resources have other commitments and cannot be dedicated exclusively to the delivery of this plan. Besides which, there is no certainty that the current funding levels will be sustained. The largest single donor to mine action is the United Nations Mission in South Sudan whose own future is uncertain, but moreover the priorities of UNMISS are not always directly aligned with those of this plan and thus the UNMISS funded mine action teams may be tasked for other work to support UNMISS and the wider peace process.

The widespread insecurity that has affected South Sudan since 2013 has led to a plethora of small mobile teams. These are ideally suited for survey work and the clearance of spot UXO tasks, but are not well suited to the efficient clearance of minefields. In order to deliver the more efficient clearance capacity that is needed to meet the goals of this plan, mine action organisation are being encouraged to reconfigure their clearance teams to allow for more deminers and fewer support staff on each task.

This extension request is believed to be grounded in fact and based on proven clearance rates and realistic resource expectations. It is however also based on optimism and the hope that peace can prevail in the country. Without a doubt, the threat of renewed violence is the greatest threat to the plan, but this is followed by uncertainty over funding for mine action. The country is heavily dependent upon aid and food insecurity is rife, millions are displaced both inside and out of the country. Therefore, even before the emergence of COVID-19, there were already many conflicting demands on aid budgets.

This document outlines how full clearance of South Sudan's hazardous areas can be achieved; it details the resources required, and the methodology that will be used to address each of the 353 hazardous areas that remain. It also recognizes the uncertainties that still exists and includes a small provision to address those tasks that have not yet been identified but might still exist.

The Government of South Sudan is committed to delivering on its obligations under the Anti-Personnel Mine Ban Convention and believes that it is possible that it may do so by 9th July 2026.

II. Detailed Narrative

1 Introduction

South Sudan is requesting a five-year extension in order to complete the clearance of all known mined areas in the country and thereby meet the obligations that are outlined Article Five of the Anti-Personnel Mine Ban Convention. This document summarizes the work that has been undertaken so far, and how South Sudan has moved from a (pre-independence) start point, where the total contamination was estimated at more than a thousand square kilometres, to now having a well-defined picture of the remaining contamination and a clear plan for how to address it. The current understanding is that there are now just 122 anti-personnel minefields remaining as well as 231 other area clearance tasks (such as cluster strikes, mined roads and battle areas) and that the total area to be cleared is less than twenty square kilometres. In order to do this efficiently, South Sudan will need to both reconfigure and expand its existing clearance capacity. The document makes clear what additional support is required in order to achieve the aim of a landmine free South Sudan by 9th July, 2026.

2 Origin of the Article 5 implementation challenge

South Sudan became an independent country on 9 July 2011 and on its creation became a member of the Anti-Personnel Mine Ban Convention. The war that led to the creation of an independent South Sudan, had been fought at varying degrees of intensity over a period of more than forty years, and left widespread explosive contamination across the country. Many combatants had died and few records of where landmines had been planted were ever kept, meaning that there were no reliable or accurate records of contamination upon which a clearance plan could be based.

Mine action operations, that had commenced under the auspices of the former Sudan Mine Action Programme, were already well established at the time of independence, as was the South Sudan National Mine Action Authority (NMAA). A Landmine Impact Survey was conducted between 2006 and 2009 the results of which broadly reflect the details that subsequent survey and clearance has given. In turn, this has allowed the emphasis to be placed on the clearance of known hazards and in particular on opening up roads and infrastructure. As a result of this, minefields have continued to be recorded each year since, although the rate of discovery has dropped significantly.

Sadly, peace has seldom been universal in South Sudan, even at its creation the country was already witnessing fighting that involved several internal factions. Inter-communal fighting, often centred around grazing rights, has been a near-perennial problem. This violence, as well as the banditry that is prevalent in areas that lack rule of law, has persistently inhibited the deployment of mine clearance teams and has been an obstacle to a countrywide survey.

The independence war for South Sudan was in part borne out of a frustration at the inequality of wealth distribution in the former Sudan that manifested itself most visibly in the poor system of infrastructure of the south. Annual rains have all too often rendered already poor roads inoperable, to the extent that barges that take up to two months to navigate the waters of the Nile, have often proved to be the most reliable means of transport. Thus the deployment of demining teams, particularly those that rely on heavy equipment has never been easy in South Sudan, and often

proved prohibitively expensive, both in terms of real and opportunity costs, with extended periods of potential demining time being lost to transportation.

3 Nature and extent of progress made: Decisions and Recommendations of States Parties

South Sudan became a member to the Convention on 9 July 2011, that being the date it gained its independence. It has reported regularly to the Convention ever since. This is its first application for an extension to its Article Five obligations.

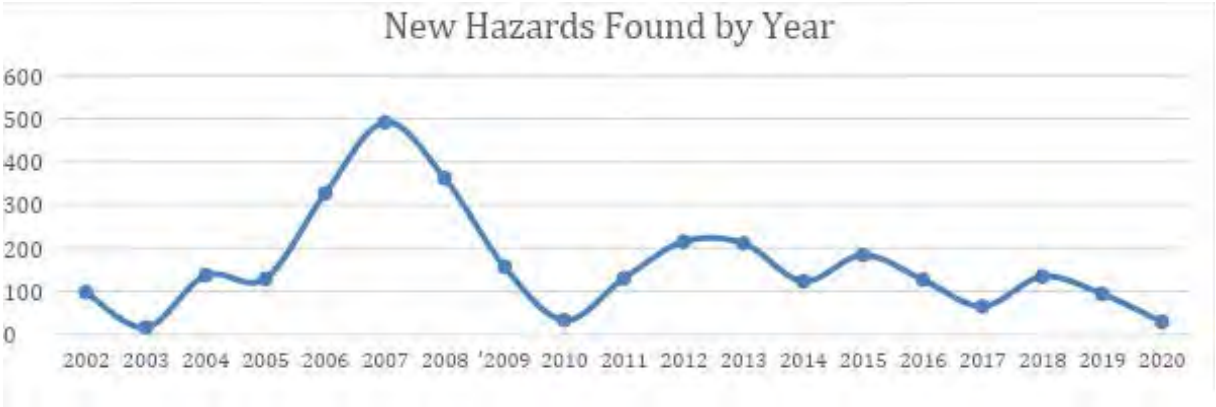
Throughout the period of implementation of the mine action programme there have been challenges with the management of data. In the main, this has been under the care of the United Nations Mine Action Service. The Information Management System for Mine Action (IMSMA) database has been used to manage all records of confirmed and suspected contamination as well as the clearance efforts that have been undertaken. Unfortunately, on two occasions efforts to upgrade the IMSMA software package led to serious data loss. Even now, these losses inhibit efforts to present an entirely accurate record of the history of mine action in South Sudan.

Nevertheless, although South Sudan does not have absolute clarity on the efforts of the past, it does consider that it has a clear perspective on the degree of remaining contamination and believes that this submission is well-grounded in fact. As such, South Sudan is well placed to comply with the Oslo Action Plan, Actions #2 and #19, as it has a reliable evidence based assessment of its contamination against which progress can be accurately measured and reported.

On 13 March 2008, Sudan declared that it had destroyed all stockpiles of anti-personnel mines.

4 Nature and extent of progress made: quantitative aspects

At the time that South Sudan entered into the convention only a Landmine Impact Survey[6] had taken place, fighting had broken out in some parts of the country and the subsequent years would reveal that much of the contamination had yet to be recorded.



[6] Landmine Impact Surveys, seek to emphasize the impact of landmines upon communities rather than to define the nature and perimeters of actual hazards.

The chart presented here shows how new area clearance tasks have continued to be reported since South Sudan joined the APMBC, but it is clear that the rate of new finds has steadily declined and it is the belief of the South Sudan National Mine Action Authority that few unknown tasks remain.

Since January 2011, which is taken as the effective start date for this analysis, 1,962 suspect hazardous areas have been recorded, of those 825 tasks were confirmed and cleared and 784 were disproved and cancelled. The disaggregation of these reports by task type is as follows:

Summary of all recorded area clearance tasks[7] since 2011

Hazard Type	Number of Hazards Reported	Number of Hazards Remaining	Number of Hazards Confirmed and cleared	Number of hazards cancelled	Area of Hazards actually (m^2)
Minefield	1,225	185	489	551	334,863,267
Cluster Strike	394	133	173	88	33,905,879
Confrontation Area	343	35	163	145	39,400,517
Total	**1,962**	**353**	**825**	**784**	**408,169,663**

In addition to these reports, there have been 13,565 separate reports of items of unexploded ordnance (often referred to as spot-UXO tasks) that have been dealt with on a case-by-case basis where 259,612 items of explosive ordnance were destroyed. Over the intervening years, the official estimate of contamination has been reduced to the following:

Summary of all remaining area clearance tasks as at 30 June 2020

Hazard Type	CHA		SHA	
	Number of Hazards	Area of Hazards (m^2)	Number of Hazards	Area of Hazards (m^2)
AP Minefields	64	2,866,375	58	4,470,636
AT Minefields	24	470,077	14	702,796
Mined Roads	12	1,313,011	13	2,000,343
Cluster Munitions	128	5,736,216	5	672,749
Battlefields	26	1,180,472	9	98,435
Total	**254**	**11,566,151**	**99**	**7,944,959**

It is interesting to note at this early stage that the average area of an SHA's is 75% greater than the average CHA. This indicates that the SHA estimates are inflated.

Thus the record of clearance for the period 1 January 2011 to 30 June 2020 in real and percentage terms is:

[7]

Summary of all land released (clearance and cancellation) since 2011

Hazard Type	Number of Hazards	Area of Hazards (m^2)
Minefield	1,040(84.9%)	323,040,029(96.5%)
Cluster Strike	261(66.2%)	27,496,914(81.1%)
Battlefield Areas	308(89.8%)	38,121,610(96.8%)
Total	**1,609(82%)**	**388,658,553(95.2%)**

The summary of clearance efforts since 2011 appears below. The table shows how, on a yearly basis, the estimate of remaining contamination has reduced. Of note is the clear evidence that more than four times as much ground has been struck from the database through survey efforts (that have been cancelled or corrected errant or inflated reports) than has actually been cleared.

Summary of land release activity undertaken on an annual basis 2011-30 June 2020

Year	Remaining Area (sqm)	# of Remaining Hazards	# of New Hazards	# of Cleared/ Cancelled Hazards	New Area Found (sqm)	Minefield Area Cleared (sqm)	BAC Area Cleared (sqm)	Cancelled Area (sqm)
2011	167,086,795	629	130	154	12,133,740	3,077,746	2,755,508	128,863,250
2012	142,664,213	565	215	279	20,314,782	7,644,281	6,325,218	30,767,866
2013	121,445,220	559	211	217	19,695,147	7,062,427	842,348	33,009,364
2014	113,245,313	518	123	164	9,768,800	2,927,901	3,430,256	11,610,550
2015	105,487,599	532	184	170	11,045,197	4,491,633	3,039,436	11,271,842
2016	87,047,979	501	127	158	8,765,776	2,534,010	4,590,825	20,080,561
2017	86,813,546	495	65	71	7,741,854	760,566	5,222,404	1,993,317
2018	39,419,470	368	134	261	14,950,517	2,699,672	5,842,819	53,802,102
2019	24,612,251	360	91	99	10,429,592	2,184,845	4,055,852	18,996,113
2020	19,511,110	353	29	36	3,674,701	1,226,061	2,118,431	5,431,349
Total			1,309	1,609	118,520,105	34,609,142	38,223,097	315,826,314

This clearance effort can be further disaggregated by geographical area to show the clearance work undertaken on anti-personnel and anti-vehicle mine contaminated areas;

Record of all AP minefield land release activity conducted by year, 2011-30 June 2020:

Year	Remaining Area (sqm)	# of Remaining Hazards	# of New Hazards	# of Cleared/ Cancelled Hazards	New Area Found (sqm)	Minefield Area Cleared (sqm)	Cancelled Area (sqm)	AP	AT	CM	UXO
2,011	159,825,138	441	67	87	4,108,845	2,973,472	15,569,264	1,735	60	63	6,569
2,012	135,707,379	374	114	181	11,292,669	7,200,659	28,209,769	1,269	288	67	1,211
2,013	112,456,597	347	106	133	6,612,008	5,472,163	24,390,626	794	59	131	506
2,014	104,621,836	291	41	97	3,120,701	2,311,653	8,643,809	374	165	186	212
2,015	96,640,133	275	73	89	4,011,962	3,166,472	8,827,193	1,125	127	157	1,477
2,016	80,503,533	227	25	73	2,506,293	2,435,364	16,207,529	913	324	256	1,435
2,017	79,631,722	220	14	21	1,257,148	659,041	1,469,918	228	7	71	45
2,018	29,781,285	147	21	94	2,982,939	2,104,374	50,729,002	1,162	28	190	367
2,019	12,194,728	126	11	32	1,575,212	1,023,593	18,138,175	405	5	3	63
	7,130,237	122	4	8	506,535	717,228	4,853,798	231	2	197	87
Total			476	815	37,974,312	28,064,019	177,039,083	8,236	1,065	1,321	11,972

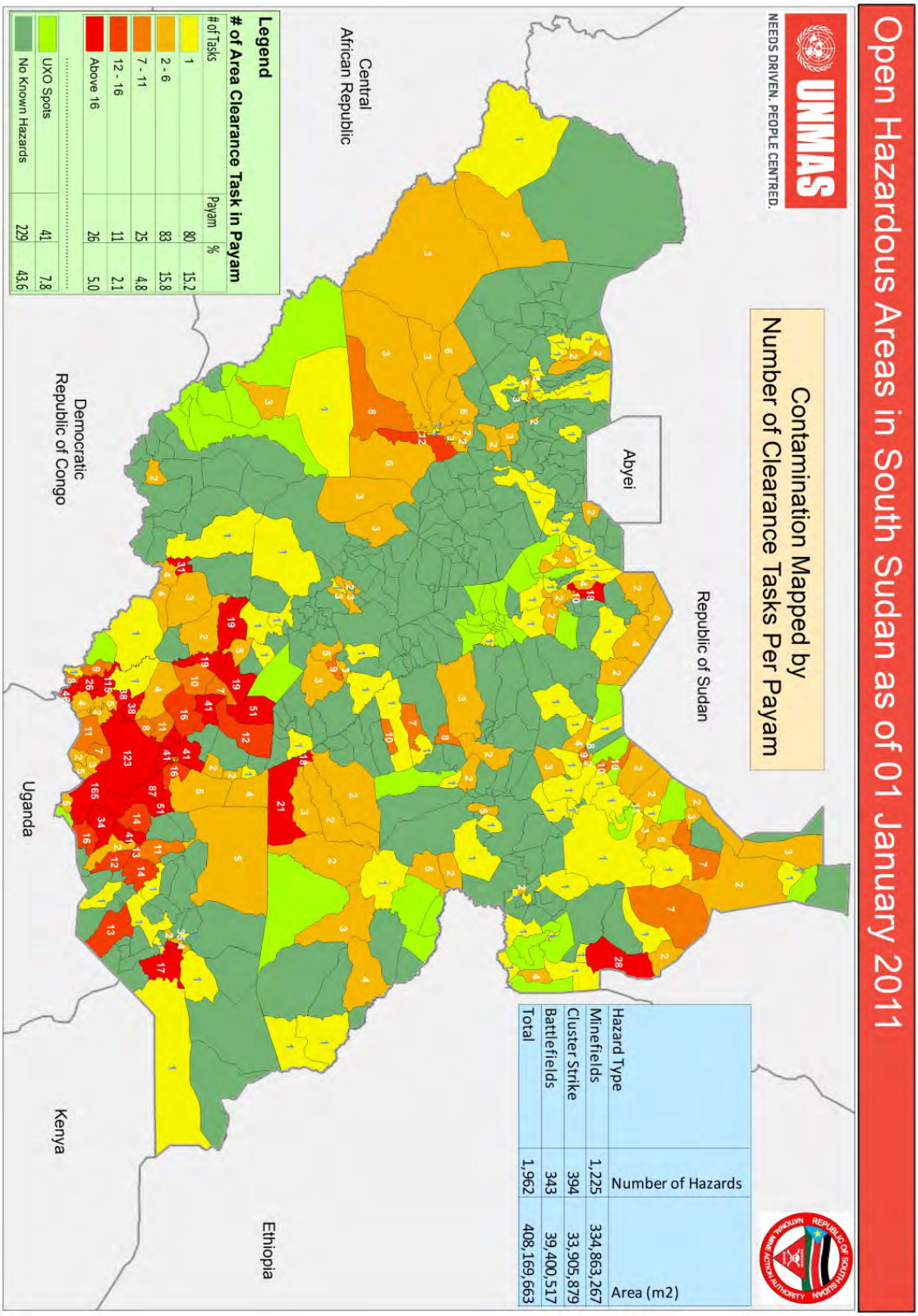
Record of all AT minefield land release activity conducted 2011-30 June 2020:

Year	Remaining Area (sqm)	# of Remaining Hazards	# of New Hazards	# of Cleared/ Cancelled Hazards	New Area Found (sqm)	Minefield Area Cleared (sqm)	Cancelled Area (sqm)	AT	CM	UXO
2011	3,633,072	111	14	14	1,107,616	104,274	107,697,590	3	0	3
2012	2,277,816	93	15	33	452,310	443,622	1,363,944	9	0	16
2013	1,854,263	87	29	35	1,561,736	1,590,264	395,025	43	794	160
2014	1,722,349	83	20	24	674,764	616,248	190,430	5	0	13
2015	1,361,494	75	15	23	1,268,100	1,325,161	303,794	67	0	55
2016	1,008,689	77	20	18	154,757	98,646	408,916	14	0	52
2017	1,794,576	77	15	15	956,230	101,525	68,818	4	0	4
2018	3,105,517	62	21	36	2,442,913	595,298	536,674	30	0	15
2019	4,692,127	59	22	25	3,167,315	1,161,252	419,453	14	57	10
2020	4,475,097	62	5	2	298,963	508,833	7,160	2	0	14
Total			176	225	12,084,704	6,545,123	111,391,804	191	851	342

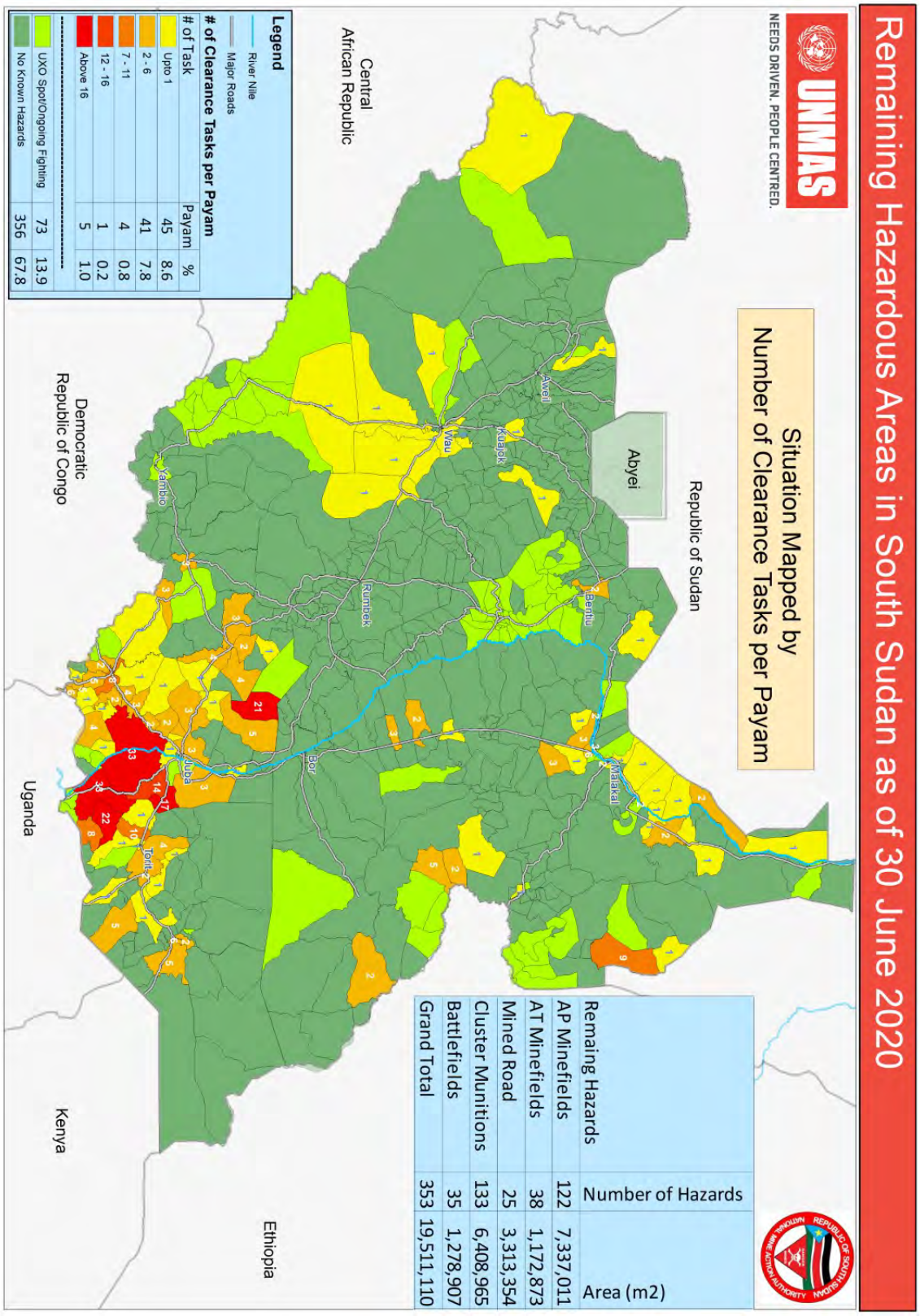
Record of all CM/BF land release activity conducted 2011-30 June 2020:

Year	Remaining Area (sqm)	# of Remaining Hazards	# of New Hazards	# of Cleared/ Cancelled Hazards	New Area Found (sqm)	BAC Area Cleared (sqm)	Cancelled Area (sqm)	AP	AT	CM	UXO
2011	3,628,586	77	49	53	6,917,279	2,755,508	5,596,396	0	0	245	196
2012	4,679,018	98	86	65	8,569,803	6,325,218	1,194,153	0	0	402	2,042
2013	7,134,360	125	76	49	11,521,403	842,348	8,223,713	0	2	230	45,039
2014	6,901,128	144	62	43	5,973,335	3,430,256	2,776,311	0	0	317	265
2015	7,485,972	182	96	58	5,765,135	3,039,436	2,140,855	0	0	1,292	152
2016	5,535,757	197	82	67	6,104,726	4,590,825	3,464,116	2	0	2,823	1,649
2017	5,387,248	198	36	35	5,528,476	5,222,404	454,581	1	0	993	9,838
2018	6,532,668	159	92	131	9,524,665	5,842,819	2,536,426	1	1	3,593	566
2019	7,725,396	175	58	42	5,687,065	4,055,852	438,485	1	1	2,586	1,216
2020	7,905,776	169	20	26	2,869,203	2,118,431	570,391	1	0	1,609	760
Total			657	569	68,461,090	38,223,097	27,395,427	6	4	14,090	61,723

Map showing the cumulative contamination number of area clearance tasks per payam that existed, or have been identified, in South Sudan since July 2011. Essentially this map shows the scale of the problem at the start of the clearance process. Of the 1,962 tasks that have been identified just 353 remained to be cleared on 30 June 2020.



Map showing the number of open area clearance tasks per payam as at 30 June 2020.



This map shows how the remaining contamination is largely concentrated in the Greater Equatoria region.

Summary of NPA mine action activities in South Sudan

NPA was involved in mine action activities in South Sudan in the period from 2004 until 2016. After South Sudan independence in 2011, NPA worked with the national mine action authority and UNMAS to help South Sudan meet their mine ban treaty obligations. NPA had activities including survey and clearance in South Sudan, with the use of manual deminers, technical assets and with the use of mine detection dogs. During NPAs time in South Sudan, NPA worked in many states, including the Equatorial States, Upper Nile, Jonglei and the Lake States. A lot of the demining was done to reduce the contamination of roads that had a high level of contamination.

In addition to demining and survey activities, NPA worked on capacity development of national staff, the destruction of ammunition stockpiles and physical and secure stockpile management. NPA also worked to increase gender diversity within mine action workforce with an aim of 25% female surveyors and deminers.

One of the major challenges working in South Sudan has been the unstable political situation that has affected the availability of funding.

As part of this effort, NPA established an all-female demining team consisting of 12 members, as seen in the picture below. The picture was taken during retraining prior to a UNMAS assessment in 2014. The team consisted of one Team Leader, one second commander, one team medic, one ambulance driver and eight deminers.

In the period of NPA mine action activities between 2011 and 2016, NPA released a total of 8,613,988m2 land. 22,533 devices were found in the same period.

5 Complications and challenges

The war in South Sudan was fought over many years by armies with very diverse arsenals. This resulted in a legacy of contamination that was not just limited to anti-personnel mines, but also to areas littered with cluster munitions, battlefields strewn with unexploded ordnance and many mined roads. Thus, a variety of hazards impacted roads, airstrips, key infrastructure as well as housing and agricultural land. As such, as is the case whenever these competing demands exist, it would have made no sense to solely prioritize the clearance of anti-personnel mines, and so the overall problem has been addressed in a holistic and efficient manner, rather than through clearance disaggregated by threat type to prioritize one hazard type over another. There are three key reasons for addressing all types of contamination concurrently

1. The logistical difficulties of deploying teams across such a large country, with just a few hundred kilometres of paved roads[8], are so great that significant efficiency gains are made when teams clear all hazards in an area before moving on rather than addressing them selectively based on some other form of prioritization.
2. An analysis of the victim data (see p28) shows that anti-personnel mines have accounted for fewer than 10% of all casualties recorded since 2011, which again calls for a holistic approach to the clearance of all hazards.
3. Humanitarian and development support requests are blind to the exact nature of contamination.

Meanwhile, at all times prioritization will always be given to supporting the needs of humanitarian and development communities in each area.

Much of the original recorded contamination was comprised of what we now know to have been inflated survey estimates. This has resulted in the greatest part of the perceived problem being cancelled as a result of more informed survey processes. Every mine action team in South Sudan includes a gender balanced community liaison component, which allows for extensive interaction with all elements of affected communities. The accuracy of survey work has been further assisted by the return of previously displaced people, who were able to assist in the delivery of a more informed opinion of the true nature of contamination. Nevertheless, the clearance efforts have been directed at very real problems and have led to a year on year reduction of the size of the mines problem in South Sudan.

Since 2011 there have been several outbreaks of extreme violence, most notably in 2013 and 2016, and sporadic fighting continues today. This has severely impacted upon the delivery of mine action operators, not just by inhibiting access to certain areas, but also through generating a climate of insecurity that has been prohibitive to the conduct of mine clearance operations. As a result, much of the current clearance capacity is now scaled to operate as small mobile teams that are better suited to survey and spot clearance work than to mine clearance, which demands a heavier structure to sustain efficient clearance operations.

There have also been technical challenges in South Sudan, most notably the presence of minimal metal anti-tank mines, predominantly laid in low densities in roads. This has led to the development of specialist road clearance teams and, in more recent years, the introduction of dual sensor (ground penetrating radar + metal detector) detection tools. The introduction of these hybrid detectors have proved to be an efficient and effective tool for the location of plastic anti-vehicle mines and so have

[8] Source https://www.worldbank.org/en/news/feature/2016/02/09/a-triumph-over-long-odds-building-rural-roads-in-south-sudan#:~:text=Now%2C%20South%20Sudan%20has%20a,Nadapal%20at%20the%20Kenya%20border.

contributed towards increased confidence for all road users. South Sudan has also made good use of mechanical clearance and ground preparation machines to enhance the productivity of search teams.

Since 2011, the sector has cleared 385 anti-personnel minefields and 104 anti-tank minefields. These were distributed as follows:

Record of all minefield clearance activity undertaken 2011-30 June 2020

State	AP MF						AT MF					
	# HA	Area (sqm)	AP	AT	CM	UXO	# HA	Area (sqm)	AP	AT	CM	UXO
Central Equatoria	222	13,381,061	4,858	752	591	10,093	43	3,253,489	0	113	851	191
Eastern Equatoria	99	8,359,705	2,291	282	723	935	23	1,757,874	0	65	0	108
Jonglei	6	253,168	291	0	0	6	5	18,996	0	0	0	0
Lakes	13	913,097	0	0	0	4	4	15,064	0	1	0	0
Northern Bahr El Ghazal	5	655,508	5	0	0	53		0	0	0	0	0
Unity	1	133,088	0	0	0	10	11	666,256	0	5	0	14
Upper Nile	16	3,339,700	676	23	7	665	8	188,125	0	5	0	3
Warrap	0	0	0	0	0	0		0	0	0	0	0
Western Bahr El Ghazal	3	5,915	1	3	0	186	7	540,913	0	1	0	5
Western Equatoria	20	1,022,777	114	5	0	20	3	104,406	0	1	0	21
Total	385	28,064,019	8,236	1,065	1,321	11,972	104	6,545,123	0	191	851	342

In parallel to this clearance work there have also been 173 cluster strikes and 163 battle area clearance tasks completed:

Record of all Cluster Munition and Battle Area Clearance work undertaken 2011-30 June 2020

State	CM				BF					
	# HA	Area (sqm)	CM	UXO	# HA	Area (sqm)	AP	AT	CM	UXO
Central Equatoria	68	9068140	7418	1012	68	6,533,814	2	0	0	52,532
Eastern Equatoria	43	4661166	3541	321	9	130,622	2	1	0	190
Jonglei	14	1466554	856	24	14	1,015,222	0	0	0	548
Lakes	4	305288	161	1	1	1,280	0	0	0	0
Northern Bahr El Ghazal	3	193523	112	0	4	575,398	0	0	0	123
Unity	2	671827	447	8	29	1,338,698	2	1	0	4,930
Upper Nile	4	180192	99	4	28	7,919,685	0	2	0	1,519
Warrap	1	7405	53	342	1	7,200	0	0	0	0
Western Bahr El Ghazal	11	1349915	504	8	6	733,125	0	0	0	127
Western Equatoria	23	2047700	899	34	3	16,343	0	0	0	0
Total	173	19,951,710	14,090	1,754	163	18,271,387	6	4	0	59,969

In addition to this clearance work non-technical survey also led to the cancellation of 784 tasks. These had previously been recorded as 430 AP tasks, 121 AT tasks and 233 Battlefields or Cluster Strikes:

Record of all cancellation done 2011-31 June 2020

State	AP MF		AT MF		BF/CM	
	# HA	Area (sqm)	# HA	Area (sqm)	# HA	Area (sqm)
Central Equatoria	245	16,421,060	42	1,464,683	78	3,560,029
Eastern Equatoria	75	33,670,504	6	98,872,893	59	6,897,170
Jonglei	25	28,155,747	26	701,275	20	649,622
Lakes	5	40,608	3	234,250	7	810,012
Northern Bahr El Ghazal	4	701,826	3	6,364	3	164,921
Unity	4	13,252,228	10	268,546	10	2,555,800
Upper Nile	24	60,213,422	19	9,574,489	21	3,513,695
Warrap	2	13,026,436	3	10,900		15,376
Western Bahr El Ghazal	9	7,025,333	6	151,633	14	8,606,500
Western Equatoria	37	4,531,919	3	106,771	21	622,302
Total	430	177,039,083	121	111,391,804	233	27,395,427

Thus since joining the Convention South Sudan has removed the following from its database of contamination:

Hazard Type	# of Tasks	Area
AP Minefields	385	28,064,019
AT minefields	104	6,545,123
Cluster strikes	173	19,951,710
BF	163	18,271,387
Cancellations	784	315,826,314
Totals	**1,609**	**388,658,553**

6 Nature and extent of progress made: qualitative aspects

- *Resources made available to achieve this progress (overview of both national and International inputs).*

Since 2011, South Sudan has made concerted efforts to clear those areas within the country that have been contaminated with AP mines. The efforts have been conducted under the leadership of The National Mine Action Authority which was established by the Government of South Sudan as the legal body with responsibility for the delivery and regulation of mine action activities in the country.

UNMAS has worked to support the development of the NMAA since its inception and has curated the records of contamination and clearance undertaken, as well as jointly (with the NMAA) monitoring the quality of clearance efforts. Although the primary responsibility for quality management lies with the implementers themselves, UNMAS and NMAA jointly share the responsibility for accrediting the organisations and for monitoring their adherence to their quality management plans. This process is realized through monthly visits to all teams from external parties, both from the clearance organisations' own quality management team and through UNMAS/NMAA visits.

Four commercial organisations (Mechem, G4S, Mine-Tech/DML and The Development Initiative) have engaged in demining operations along with five international NGOs (Mines Advisory Group, Norwegian Peoples Aid, Danish Demining Group, DanChurch Aid and Swiss Demining Foundation) and national NGOs (Operation Save Innocent Lives (OSIL), Sudan Integrated Mine Action Service (SIMAS) and Save lives Initiative (SLI)).

These organisations have deployed manual and mechanical clearance systems as well as both technical and non-technical survey teams. All clearance teams working in South Sudan, including survey teams, contain a community liaison element that engages with the local authorities and general public to explain the work being undertaken, learn about the local perceptions and concerns regarding explosive contamination (in all its forms) and to deliver risk education messaging.

Explosive Ordnance Risk Education has been integrated into the work of all teams conducting mine action, but in addition to those organisations already listed the following national organisations have also conducted MRE within the country. Child Assistant Organisation, Child's Destiny and Development Organization, Children Charity Organisation, Community in Need Aid, Christian Missionaries Initiative, Child Rehabilitation Organisation, Greater Upper Nile Organisation, Institute for Promotion of Civil Society, Save Lives Initiative, Women and Orphans Charitable Organisation, World Vision, and Media Theatre Team. These organizations have developed common teaching material that in bespoke fashion to different sections of the community to most effectively convey the key messages to the respective audiences

In line with the Oslo Action Plan Action #3 (ensuring that the needs and perspectives of women girls, boys and men are considered) Suspect Hazardous Areas are identified initially through engagement of community liaison teams that are then refined by the deployment of non-technical (NTS) survey teams. The gender-balanced nature of all community liaison teams in South Sudan enables them to speak to all sections of the community and thereby to build a comprehensive and inclusive picture of the contamination and of its impact on them. In turn, this community wide perspective of the impact of varying hazards assists greatly in the prioritization of clearance tasks by insuring that the needs of the community as a whole are addressed so that no-one is left behind.

The performance of the community liaison teams has improved significantly since South Sudan joined the Convention in both cancelling the errant reports of the past and in honing their information gathering skills to enable them to make more realistic assessments of the magnitude of newly identified hazards.

Once clearance tasks have been identified further survey work then takes place to define the limits of safe ground and to refine the estimate of contamination. Both manual and mechanical mine clearance teams have been deployed. In recent years, the teams have been equipped with advanced dual sensor detectors to enhance the performance of manual demining teams. The current clearance capacity operating in South Sudan includes light and heavy machines, mine detection dogs and manual deminers equipped with an array of different detectors. This combination of clearance resources allows for a tailored approach to all clearance tasks and thereby underpins efficient clearance operations through the deployment of the most appropriate clearance tool.

The South Sudan National Technical Standards and Guidelines (NTSG) outline the technical requirements expected of all demining operators in South Sudan. The NTSG are regarded as an organic document with revisions discussed by UNMAS and the implementing agencies and then approved by the NMAA. These documents include details on the expectations of how quality control and quality assurance are to be conducted, as well as the minimum data requirements and the procedures by which tasks are completed and handed over to the beneficiary population. The NTSG are modelled on the International Mine Action Standards (IMAS) but are tailored to the local situation to allow operators to deliver efficient safe and quality mine clearance operations. In line with Oslo Action Plan Action #5, the standards are regularly updated to ensure that they remain in harmony with the latest version of the IMAS.

The handover of cleared land is done on the completion of all clearance tasks with the work conducted formally recorded and documented within IMSMA. Representatives of both UNMAS and the local authorities are always present for the handover of the land.

The NMAA has regularly published national strategies, often with support of UNMAS and the Geneva International Centre for Humanitarian Demining (GICHD). The current strategy runs from 2019-2023 and has the following strategic goals:

1. **Advocacy and Communication** – The strategy stresses the need to continue to communicate South Sudan's mine/ERW problem through national and international awareness raising and adoption of international conventions.
2. **Survey and Clearance** – The strategy highlights the need to clarify the true extent of contamination and addressed through appropriate survey and clearance approaches.
3. **Mine Risk Education** – The need to promote safe behaviour amongst women, girls, boys and men is highlighted.

The requirement to prioritize the country's mine action needs is also recognized in the National Development Strategy[9]. It cites *"Contamination of areas with unexploded ordnance (UXO), explosive remnants of war (ERW) which affects farming, grazing and human settlement as a key issue that must be addressed to establish an environment for sustainable peace and development in the country during the NDS period (June 2018 – June 2021)".*

National capacity to implement operations

[9] Republic of South Sudan National Development Strategy June 2018 - June 2021

Over the years, there have been multiple attempts to develop the strength of South Sudanese national clearance organizations but as yet, although many South Sudanese nationals have demonstrated the technical ability to conduct mine action, no organization has ever developed into a sustainable capacity. South Sudan is acutely aware that some form of long-term capacity will be needed to address the inevitable new discoveries of explosive ordnance that will be made for many years to come. South Sudan is seeking to develop a capacity that may respond to those requests for assistance that arise and would like to base this within and around the existing structure of the NMAA. To support this aim UNMAS is seeking funding to deploy a national organisation to field EOD response teams in 2021. The intention is that those teams will report to the NMAA who will direct their tasking and monitor their performance.

Support for Mine Action

South Sudan has contributed to its clearance obligations through constant support to the NMAA and has covered the costs of both its Juba headquarters and three regional offices; Malakal, Wau, and Yei. The Malakal and Yei offices are currently suspended due to the security situation.

The efforts to rid South Sudan of landmines have been supported by a number of international donors, as well as with funding from the Assessed Budget of the United Nations and through the UNMAS Voluntary Trust Fund. The table presented below indicates the total support given to South Sudan in support of its Convention commitments:

Summary of financial support for mine action efforts in South Sudan

Year	Overall funding for mine action (US$)
2011	39,846,144
2012	56,228,146
2013	60,892,801
2014	50,709,347
2015	47,658,597
2016	43,414,777
2017	40,409,367
2018	42,826,126
2019	41,030,795

It is important to note that the figures presented here represent the support for mine action as a whole and are not disaggregated to show the support for purely mine clearance let alone the clearance of anti-personnel minefields. It should also be recognized that much of the United Nation's Assessed Budget funding received by UNMAS (which on average has contributed around three quarters of all sector funding) is used to support the mobility of the United Nations Mission in South Sudan (UNNMISS) as well as to address other ammunition management and security concerns. For example in 2019 of the $34.6million received by UNMAS just $25.2million went directly to mine action contracts with the remainder being used for its support work within UNMISS. Simultaneously, the requirement to provide support to UNMISS, has led to mine action teams being deployed to areas of particular interest to the Mission, rather than to those areas that are most effected by

landmines and unexploded ordnance. Looking forward those same UNMISS funded teams may well be called upon to play a role in the disarmament and demobilisation process that is likely to follow on from the establishment of a lasting peace. Although this is an undeniably important role in stabilising the country, it may further reduce the resources channelled to the implementation of the mine clearance effort.

7 Efforts undertaken to ensure the effective exclusion of civilians from mined areas

Throughout the history of mine action in South Sudan, there has been a heavy emphasis on the importance of Mine Risk Education (now referred to as Explosive Ordnance Risk Education). Through this, the whereabouts of confirmed and suspected hazardous areas have been gleamed from and communicated to the community leaders and members.

The approach adopted to EORE in South Sudan is in line with Action #28-#32 of the Oslo Action Plan (OAP) *Risk education is fully integrated into wider humanitarian activities*, this is coordinated through the cluster approach to humanitarian assistance with the Mine Action Sub Cluster being a component of the Protection Cluster (OAP#28). Context specific mine risk education is delivered to all affected groups and tailored to meet their capacity to absorb the information (OAP#29). Action point #30 is addressed through the timely follow up of all accidents to determine their underlying cause and appropriate risk education measures are then implemented to minimize the exposure of others living in the area. Eleven national organisations deliver risk education in South Sudan giving a strong degree of ownership of this pillar of mine action (OAP #31), and disaggregated data has been regularly submitted within the Article 7 reports.

In practice risk education is a two way process, where the risk educators not only disseminate information on the nature of explosive threats but also received information from the beneficiaries of their perception of risk in their area. The protocols used in South Sudan encourage the risk educators to actively seek out the views of women and girls so that their voices are heard and that their concerns are registered and addressed.

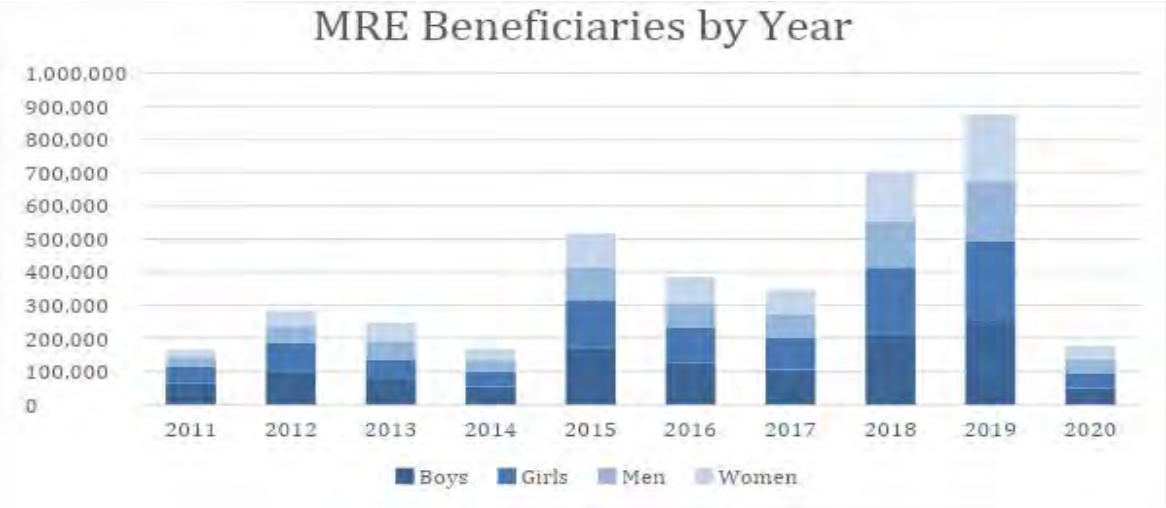
However, the scarcity of resources and the overwhelming poverty that has blighted much of South Sudan has meant that few minefields have been formally marked beyond the posting of “danger mines” signs to alert passers-by of the dangers. Nevertheless, UNMAS, on behalf of the NMAA, has maintained the centralized database of information relating to hazardous areas and has made information available to all interested parties.

Because of the difficulties of marking mined areas, the greatest effort to exclude civilians from them has therefore been directed towards mine risk education (MRE). The charts presented below show how many people have benefitted from a countrywide MRE programme over the years and how that effort has been directed across the country.

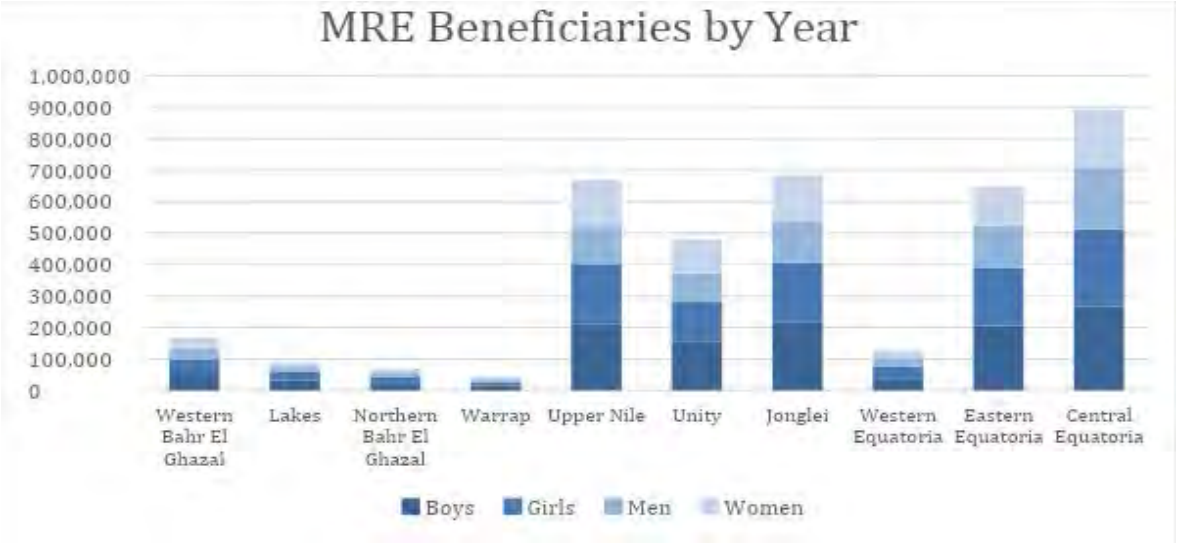
Since 2011, more than three and half million Southern Sudanese have benefitted from Mine Risk Education. These efforts are summarized in the following tables and charts:

Year on year sex and age disaggregated data of Explosive Ordnance Risk Education beneficiaries 2011-30 June 2020

Year	Boys	Girls	Men	Women	Total
2011	64,538	51,173	26,781	21,649	164,141
2012	101,885	85,420	48,391	49,020	284,716
2013	78,197	58,628	56,021	54,505	247,351
2014	54,892	45,214	33,390	34,159	167,655
2015	170,762	145,563	98,006	102,440	516,771
2016	124,752	109,426	71,558	79,547	385,283
2017	105,903	95,375	70,963	74,013	346,254
2018	214,494	198,869	140,277	149,849	703,489
2019	251,081	240,634	182,898	201,401	876,014
2020	49,304	46,069	39,291	42,468	177,132
Total	1,215,808	1,076,371	767,576	809,051	3,868,806



This effort can further be disaggregated by location as follows:

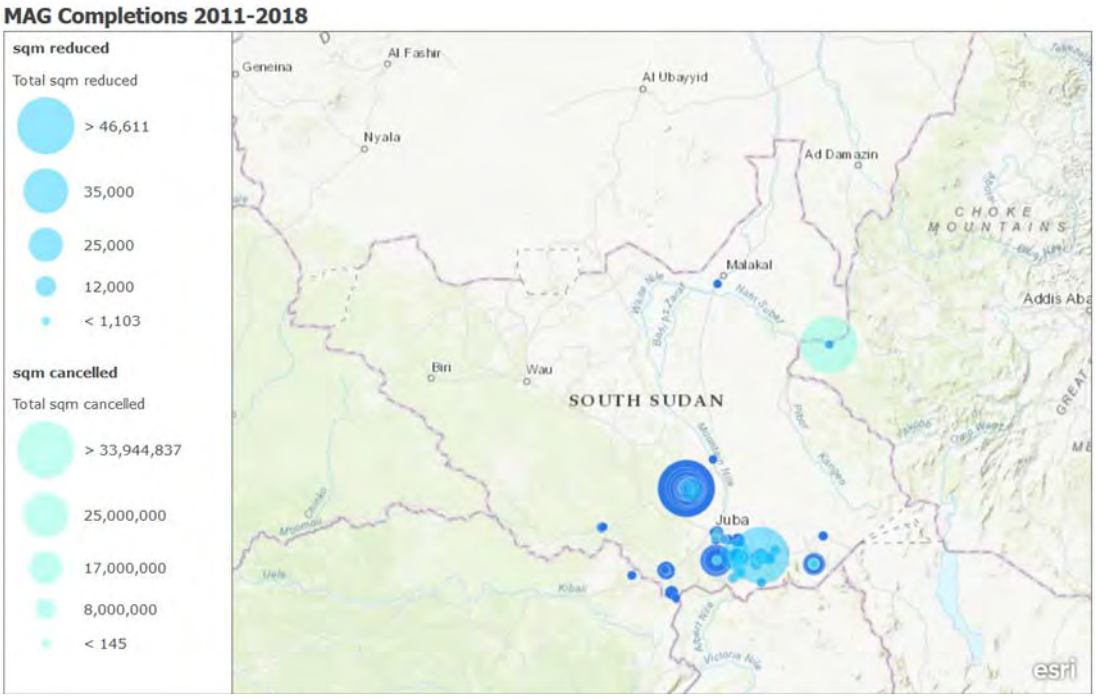


State by state level sex and age disaggregated EORE beneficiary data

State	Boys	Girls	Men	Women	Total
Western Bahr El Ghazal	52,001	45,330	34,696	35,678	167,705
Lakes	32,352	25,654	15,517	15,154	88,677
Northern Bahr El Ghazal	22,926	21,188	12,075	12,695	68,884
Warrap	15,834	10,560	8,212	7,814	42,420
Upper Nile	211,386	189,422	119,923	147,902	668,633
Unity	153,823	127,209	90,691	109,321	481,044
Jonglei	215,086	190,489	131,248	148,421	685,244
Western Equatoria	39,002	37,200	25,602	25,035	126,839
Eastern Equatoria	206,102	184,252	132,361	124,631	647,346
Central Equatoria	267,296	245,067	197,251	182,400	892,014
Total	1,215,808	1,076,371	767,576	809,051	3,868,806

Summary of MAG activities in South Sudan

MAG has operated in the region that is now South Sudan since 2004, primarily in Central and Eastern Equatoria, with additional operations in Jonglei, Upper Nile and Unity states. MAG mostly operates MTTs with mechanical assets and an attached community liaison (CL) capacity, which provides the greatest flexibility to adapt to different tasks and methodologies. MAG has been using MineWolf machines in South Sudan for mechanical ground preparation of minefields since 2014, as well as Bozena IV machines with a flail or a mechanical mulching head, what significantly increases performance on brush cutting for manual clearance of BAC tasks. The map below shows MAG's areas of operations since 2011 for land release activities only, with the larger circles representing larger total amounts of land released.



Since November 2016, operations have focused on clearing minefields and cluster munition strikes in the former states of Central and Eastern Equatoria. Currently, MAG has ten clearance teams and four mechanical assets operating in the two regions. Focussing clearance efforts in Central and Eastern Equatoria allows MAG to target high-priority mine and cluster munition contamination, to release fertile land that is also a destination for IDPs and returning refugees. Providing safe land allows communities to farm and build housing, reducing the demands for other forms of aid.

Over the last two years, MAG's teams in South Sudan have cleared/returned over 5 million m2 of safe land to communities for productive use. In addition, through non-technical survey, MAG also cancelled over 34 million m2 of land once thought to be contaminated. This is a significant step towards improving the understanding of mine and other unexploded ordnance contamination in South Sudan, and allows resource intensive clearance to focus on confirmed hazardous areas. Over 107,000 people – women, girls, boys and men in local communities, refugees and IDPs – have directly benefitted from MAG's land clearance while nearly 100,000 members of at-risk communities have received live-saving risk education.

The table on the following page shows MAG's achievements program-wide

INDICATOR	PROGRAM-WIDE 2016-19
Land cleared (m²) (Minefield and BAC)[10]	5,786,243 cleared; 14,922 reduced *(34,475,616 cancelled)*
# Anti-Personnel mines removed	863
# Anti-Tank mines removed and destroyed	16
# Items of UXO removed and destroyed	745 ERW, 3,807 Submunitions 12,326 SAA

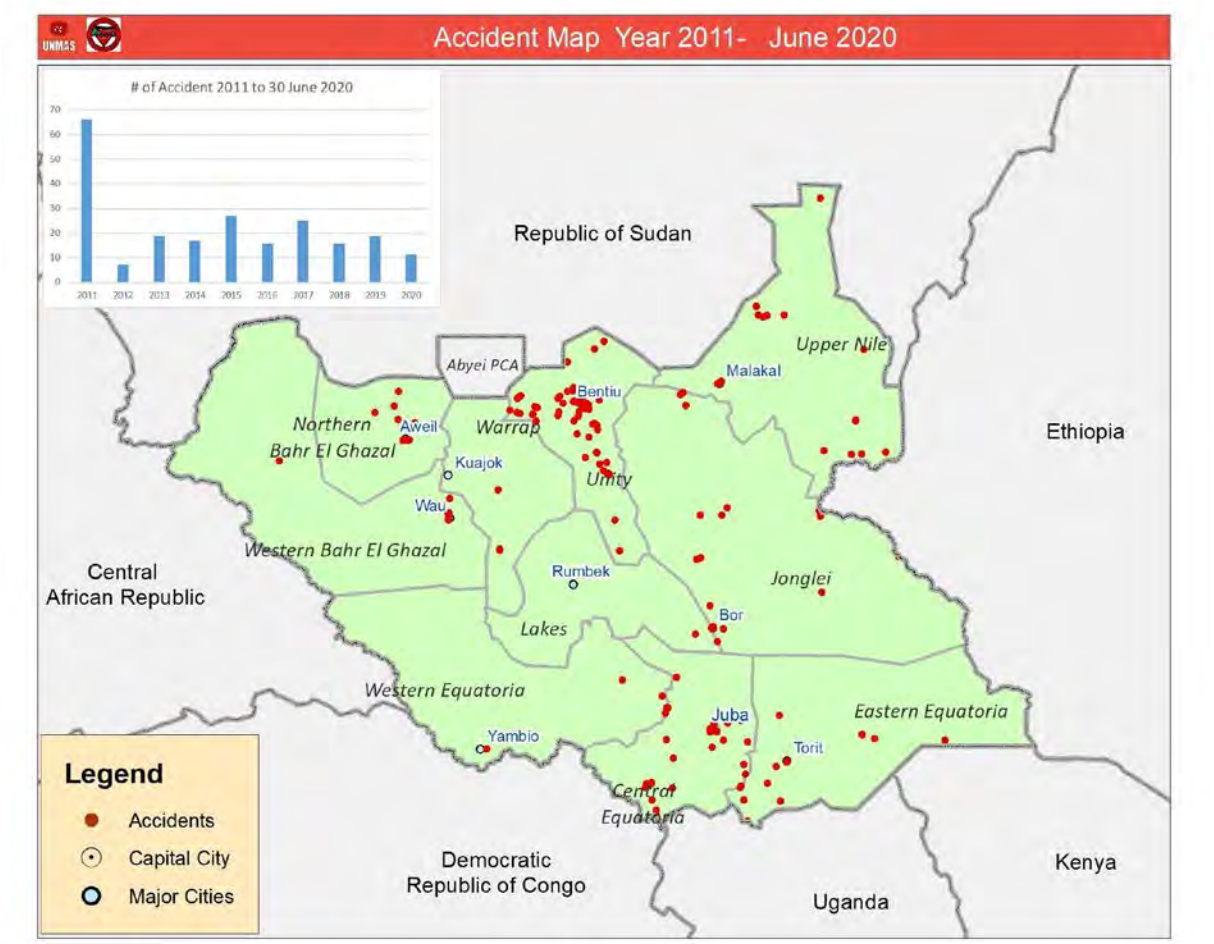
Supporting local development and capacity-building, MAG is invested in increasing skills and knowledge of NMAA staff, providing them with workshops, secondments and on-the-job trainings in the organization.

Being a gender-sensitive and diverse organization, MAG is putting additional focus to ensure that women are equally represented as men in MAG operations. Thus, MAG conducted its first female deminers training in South Sudan in 2018, and since then successfully employed all the trained deminers in various teams.

[10] Data provided for full completions that have been handed over and recorded in the IMSMA database.

8 Mine Accidents

Since South Sudan joined the Convention it has recorded 586 mine and UXO victims (however more than 4,500 were recorded in the ten years leading up to independence). Of these 56 were victims of AP mines, 146 of AT mines, 21 of Cluster Munitions, and 363 have been attributed to UXO. However the cause of the injuries to 17 of the victims has not been identified meaning that the true number of AP mine victims may well be higher than that recorded. It should also be noted that the difficulties of movement around the country, due to both the poor infrastructure and on-going fighting in many areas, means that the actual number of victims is almost certainly higher than the officially recorded figures.



Map showing all accident locations 2011-301 June 2020

The map above shows how the accidents have largely been concentrated in Unity State in the north, and in Central Equatoria in the south of the country. There are now just two clearance tasks remaining in Unity State but accidents continue to occur as unexploded ordnance is widespread across the state.

The chart and table below disaggregate the accident data by hazard type and by year. The chart reveals that other than since 2011, when 41 South Sudanese fell victim to anti-personnel mines, there have been relatively few AP mine accidents with an average of a fraction over one per year since 2012 and two years (2014 and 2018) when there were no AP mine accidents recorded.

It should not be forgotten that the displacement of 2.6million South Sudanese from their homes would have also contributed to the steep reduction in accident numbers in recent years.

Year	AP	AT	CM	SAA	Not known	UXO	Total
2011	41	112			2	18	173
2012	1				6	5	12
2013	2		7			38	47
2014	4	16	2			19	41
2015	3	7	2		7	57	76
2016	1	3		5		36	45
2017	3	1		2		52	58
2018			3	2	1	50	56
2019	1	7	7	1		35	51
2020				4		23	27
Total	**56**	**146**	**21**	**14**	**16**	**333**	**586**

Table of number of victims year on year by cause of accident

Mine Accidents have been recorded in each of the former ten states. However there have been no AP mine accidents in three states; Lakes, Warrap and Western Bahr El Ghazal since South Sudan joined the Convention. It is clear that the majority of victims resulted from incidents with unexploded ordnance.

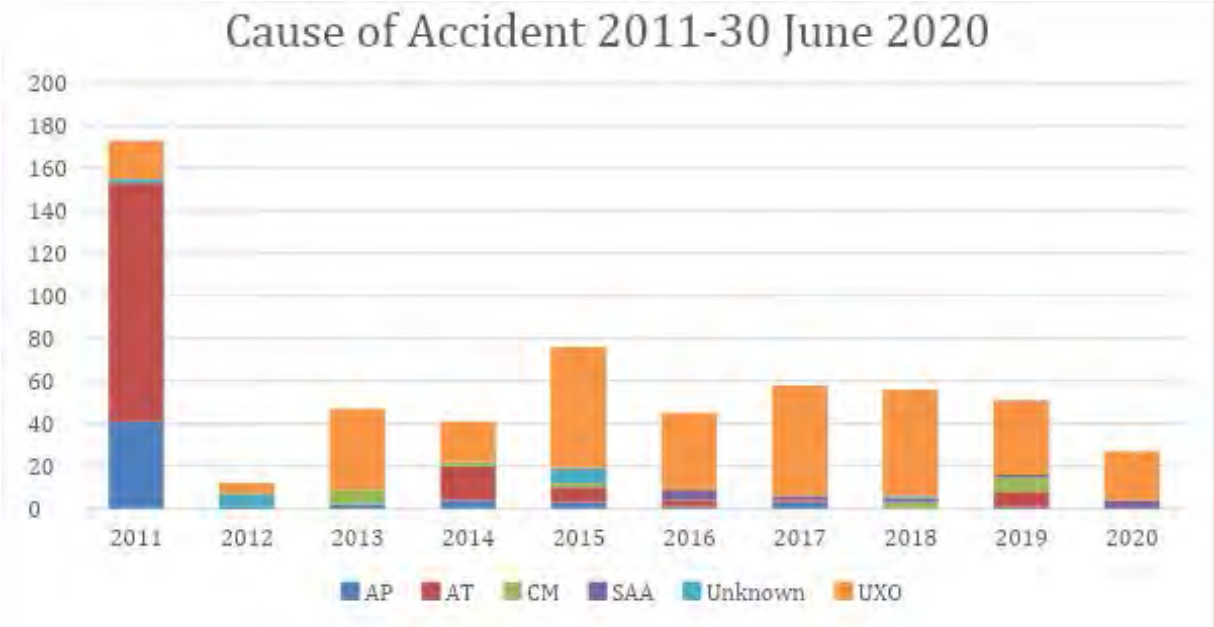
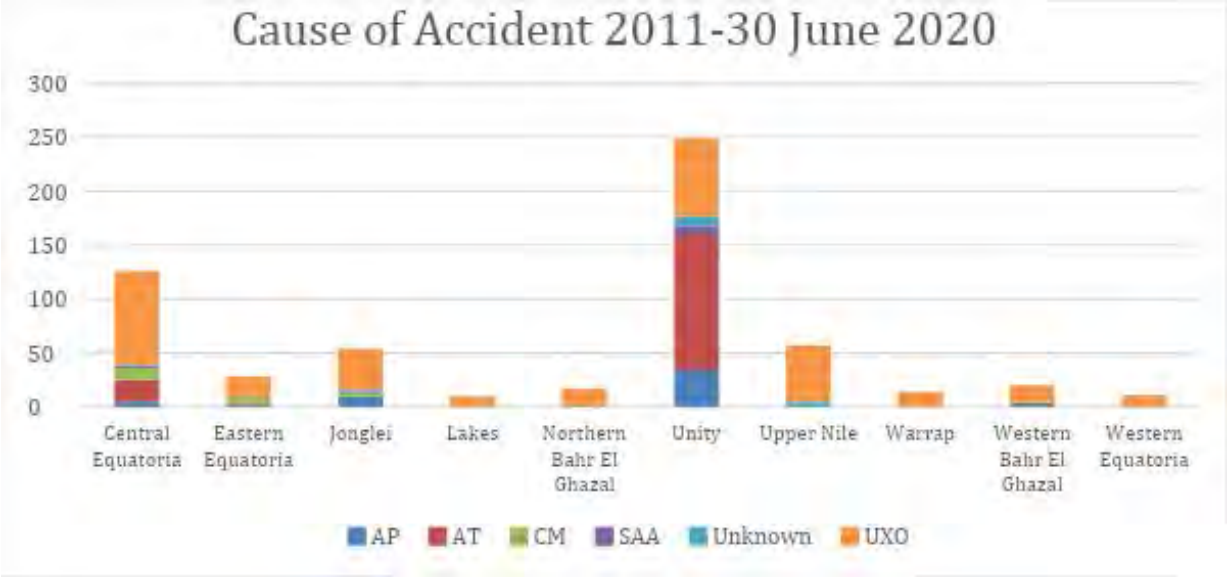
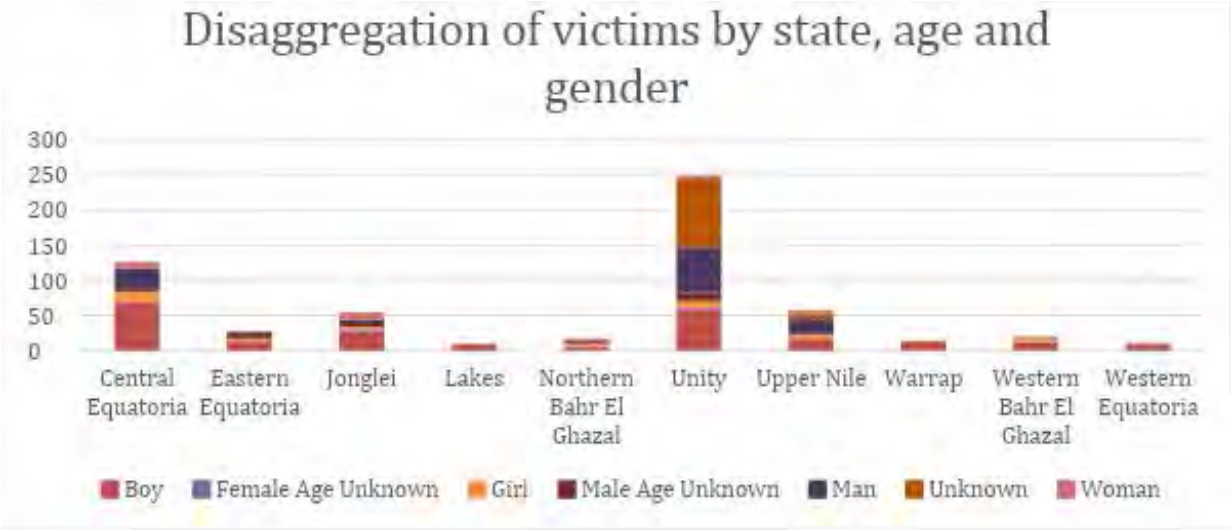


Chart showing number of victims by cause of accident year on year

South Sudan has signed the Convention on the Rights of Persons with Disabilities and has developed a plan for victim assistance. Details of all accidents are held within the Information Management System of Mine Action, and a pathway for referrals has been developed to ensure that victims get the support they need has been developed. However currently the only prosthetics workshop in the country is in Juba and there is a need for greater psycho-social support for victims.





9 Nature and extent of the remaining Article 5 challenge: quantitative aspects

As of 30 June 2020, South Sudan knows of the existence of 185 mined areas (122 AP minefields, 38 AT minefields and 25 mined roads), 133 cluster strikes and 35 battle areas. These are currently recorded as extending across an area of 19.51 km^2, however it is believed that this figure is likely to be further reduced through additional survey work. This is because a number of suspected hazard areas are thought to be far smaller than their original survey estimates.

South Sudan has a relatively well defined picture of the remaining contamination. The known minefields can further be disaggregated as follows:

Disaggregation of known minefields by type and classification:

Hazard Type	CHA		SHA	
	Number of Hazards	**Area of Hazards (m^2)**	**Number of Hazards**	**Area of Hazards (m^2)**
AP Minefields	64	2,866,375	58	4,470,636
AT Minefields	24	470,077	14	702,796
Mined Roads	12	1,313,011	13	2,000,343
Total	100	4,649,463	85	7,173,775

The majority of the suspected mined roads in South Sudan are devoid of vegetation and believed to only be contaminated with anti-vehicle mines. As such clearance is done using a combination of dual sensor detectors and mine detection dogs in a deployment style that achieves 1km of road clearance per day (8,000m^2/day). Therefore, road tasks are disaggregated from other demining tasks, as the speed of clearance is so different.

The efforts to clear South Sudan's explosive contamination has not only reduced the overall magnitude of the remaining problem it has also cleared all known hazardous items from 67% of payams (the third administrative division in South Sudan) within the country.

The maps presented later in this document show the dispersal of contamination by number of clearance tasks across the country. This map, which is disaggregated down to the payam level shows:

- that around **8.5% of payams (45 out of 525) have just one area clearance task remaining** in the Payam and that;
- the remaining **308 area clearance tasks are spread across 51 payams** (less than 10% of the country), and that;
- **5 payams account for 35% of all remaining tasks**.

- **429 payams (82%) have no area clearance tasks remaining**

In other words, the remaining clearance requirement in South Sudan is so concentrated that it can justifiably argue that 80% of its territory is now free from the requirement for proactive clearance and can now transition to the reactive phase of its explosive contamination management.

South Sudan believes that in the main it has an accurate understanding of the extent of its remaining contamination but recognizes that there are a few anomalies, that have been significantly over-estimated and are recorded as being inconceivably large and that require further survey work. In 2018 and 2019 there was a nationwide focus on using re-survey to reduce the contamination estimate that has seen a significant part of the problem struck from the database.

For example in March 2018 a team from MAG re-surveyed and cancelled a task in Jonglei that had originally (in 2003) been estimated at 34.47km^2 which at that time of the resurvey was almost 40% of the entire contamination in the country. Similarly in March 2020, a team from G4S cancelled the largest task remaining on the database that was a single hazard in the Makir Payam of Upper Nile State that in 2003 had been recorded as 4.68km^2.

There remain other apparently exaggerated hazards lying in hard to reach areas that have been prioritized for re-survey, but until they have been properly resurveyed they remain on the national contamination database. For the purposes of this planning exercise more reasonable figures, based on statistical historical averages of actual cleared and confirmed minefields have been projected.

These hazards are dispersed as follows:

Dispersal of remaining open hazards in South Sudan

State	MF		Mined Roads		CM		BF		ALL HA	
	# HA	Area (sqm)	# HA	Area (sqm)	#HA	Area (sqm)	# HA	Area (sqm)	#HA	Area (sqm)
Central Equatoria	88	2,009,077	2	16,399	42	2,479,032	20	462,319	152	4,966,827
Eastern Equatoria	27	955,457	3	678,429	69	3,303,680	5	263,836	104	5,201,402
Jonglei	22	4,222,952	6	1,739,226	6	55,458	1	28,200	35	6,045,836
Northern Bahr El Ghazal	1	113,862							1	113,862
Unity			1	70000			2	20,800	3	90,800
Upper Nile	12	460,538	5	335,258	4	133,067	6	493,752	27	1,422,615
Warrap	1	40,000	1	280,000	1	19745			3	339,745
Western Bahr El Ghazal	1	201,738	4	188,400	1	92000			6	482,138
Western Equatoria	8	506,260	3	5,642	10	325,983	1	10,000	22	847,885
Total	**160**	**8,509,884**	**25**	**3,313,354**	**133**	**6,408,965**	**35**	**1,278,907**	**353**	**19,511,110**

These tasks can be disaggregated (CHA/SHA) as follows:

Dispersal of remaining open CHA in South Sudan

State	MF		Mined Roads		CM		BF		ALL HA	
	#HA	Area (sqm)	#HA	Area (sqm)	#HA	Area (sqm)	#HA	Area (sqm)	#HA	Area (sqm)
Central Equatoria	49	1,593,989	1	7,054	40	1,981,981	14	396,761	104	3,979,785
Eastern Equatoria	19	905,871	2	51,028	69	3,303,680	3	240,959	93	4,501,538
Jonglei	10	413,828	2	525,671	4	55,458	1	28,200	17	1,023,157
Unity			1	70000			2	20,800	3	90,800
Upper Nile	8	125,576	4	334,258	4	133,067	6	493,752	22	1,086,653
Warrap			1	280,000	1	19745			2	299,745
Western Bahr El Ghazal	1	201,738	1	45,000	1	92000			3	338,738
Western Equatoria	1	95,450			9	150,285			10	245,735
Total	**88**	**3,336,452**	**12**	**1,313,011**	**128**	**5,736,216**	**26**	**1,180,472**	**254**	**11,566,151**

Dispersal of remaining open SHA in South Sudan

State	MF		Mined Roads		CM		BF		ALL HA	
	#HA	Area (sqm)	#HA	Area (sqm)	#HA	Area (sqm)	#HA	Area (sqm)	#HA	Area (sqm)
Central Equatoria	39	415,088	1	9,345	2	497,051	6	65,558	48	987,042
Eastern Equatoria	8	49,586	1	627,401			2	22,877	11	699,864
Jonglei	12	3,809,124	4	1,213,555	2	0			18	5,022,679
Northern Bahr El Ghazal	1	113862							1	113,862
Upper Nile	4	334,962	1	1,000					5	335,962
Warrap	1	40,000							1	40,000
Western Bahr El Ghazal			3	143,400					3	143,400
Western Equatoria	7	410,810	3	5,642	1	175,698	1	10,000	12	602,150
Total	**72**	**5,173,432**	**13**	**2,000,343**	**5**	**672,749**	**9**	**98,435**	**99**	**7,944,959**

Of this contamination there are thought to be 185 minefields remaining that contaminate an estimated area of 11,823,238 m^2. These can be further disaggregated as follows:

State	AP Minefields		AT Minefields		Mined Roads		All Minefields	
	#HA	Area (sqm)	#HA	Area (sqm)	#HA	Area (sqm)	#HA	Area (sqm)
Central Equatoria	74	1,787,116	14	221,961	2	16,399	90	2,025,476
Eastern Equatoria	22	794,733	5	160,724	3	678,429	30	1,633,886
Jonglei	13	3,810,671	9	412,281	6	1,739,226	28	5,962,178
Northern Bahr El Ghazal	1	113,862					1	113,862
Unity					1	70,000	1	70,000
Upper Nile	2	82,631	10	377,907	5	335,258	17	795,796
Warrap	1	40,000			1	280,000	2	320,000
Western Bahr El Ghazal	1	201,738			4	188,400	5	390,138
Western Equatoria	8	506,260			3	5,642	11	511,902
Total	**122**	**7,337,011**	**38**	**1,172,873**	**25**	**3,313,354**	**185**	**11,823,238**

Of this contamination there are thought to be 122 AP minefields remaining that contaminate an estimated area of 7,337,011 m^2. These can be further disaggregated as follows:

State	AP MF					
	CHA		SHA		Total	
	#HA	Area (sqm)	#HA	Area (sqm)	#HA	Area (sqm)
Central Equatoria	40	1,527,180	34	259,936	74	1,787,116
Eastern Equatoria	15	745,547	7	49,186	22	794,733
Jonglei	5	213,829	8	3,596,842	13	3,810,671
Northern Bahr El Ghazal			1	113,862	1	113,862
Unity						
Upper Nile	2	82,631			2	82,631
Warrap			1	40,000	1	40,000
Western Bahr El Ghazal	1	201,738			1	201,738
Western Equatoria	1	95,450	7	410,810	8	506,260
Total	**64**	**2,866,375**	**58**	**4,470,636**	**122**	**7,337,011**

It is interesting to note that the average task size for a Confirmed Hazardous Area is 44,787m^2, whereas the average task size for a Suspect Hazardous Area is 77,079m^2. The experience of the programme in South Sudan is such that it is expected that the actual scope of the SHAs will be smaller than has been estimated.

10 The Disaggregation of Current Contamination

In order to better visualize the remaining challenge the contamination is analysed here with the country divided into its three principal regions:

- Greater Equatoria, comprising Eastern, Central and Western Equatoria, where 79% (278) of the clearance tasks account for 11,016,114m^2 of contamination (56% of remaining contamination)

- Greater Bahr El Ghazal, comprising Warrap, Lakes and Northern and Western Bahr El Ghazal, where just 3% of the remaining tasks (10) account for 5% of the remaining contamination (935,745 m^2).

- Greater Upper Nile region comprising Jonglei, Unity, and Upper Nile states, where 18% (65) of tasks remain which are currently estimated to extend across 7,559,251 m^2 (39%). It is thought that this estimate is excessive and that survey work will drastically reduce the actual clearance requirement.

10.1 The Greater Equatoria Region

The majority of the remaining clearance tasks in South Sudan lie in the Greater Equatoria region of the country. This is also the area where the largest number of hazardous areas have been cleared and thus it is the part of the country in which the mine action sector is most confident of its understanding.

Across Greater Equatoria 123 minefields extend over an area of 3.47 km^2 (an average of less than 3ha per minefield), which is a realistic contamination estimate that suggests that all of this area will need to be cleared and that little will be reduced through technical survey or cancelled through non-technical survey.

Accordingly, Equatoria is expected to be the focus area for the deployment of clearance teams in the coming years. The concentration of clearance tasks within the region will lead to the more efficient deployment of demining teams.

The maintenance of peace, that saw the reconstitution of the Transitional Government of National Unity on February 22, 2020, will be critical to the timely delivery of the clearance plans outlined in this extension request. Nowhere is this more important than in Equatoria where the majority of clearance tasks remain. Unfortunately, at the time of writing, parts of Equatoria are still being disrupted by military action, which is inhibiting efforts to undertake clearance. It is reasonable to assume that this fighting will abate in time for the appropriate scale of clearance activities to resume in order to meet South Sudan's clearance obligations. However should peace not be established and sustained across the Greater Equatoria region, then this plan will not be achieved.

Of the 278 area clearance tasks that remain in the Greater Equatoria region, 69 are considered suitable for clearance using mechanical assistance, 42 of these tasks are minefields comprising 2,154,080.

Within the Greater Equatoria region there are currently 13 stretches of road alignment that mount to a total requirement of 147km of road to be cleared. 8 Sections of suspected mined road amounting to 700,470m^2 of recorded contamination have been surveyed in detail and are formally recorded within the IMSMA database but five stretches are yet to be fully surveyed. The estimate of clearance requirement has been based on the full stretch of road and may yet be further reduced through survey work.

The maps on the following page show the disaggregation of area clearance tasks across Greater Equatoria, first by showing the **number of tasks** per payam and then by showing the **total hazardous area** per payam. The strong correlation between the two maps shows that there is a strong relationship between the number of mined areas and their estimated size. This strong correlation suggests that the information for Greater Equatoria is very reliable.

Summary of all remaining hazards in the Greater Equatoria Region

State	AP Minefields	AT Minefields	Mined Roads	Cluster Strikes	Battlefields	Totals
	# of HA	# of HA	# of HA	# of HA	# of HA	# of HA
	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)
Central Equatoria	74	14	2	42	20	152
	1,787,116	221,961	16,399	2,479,032	462,319	4,966,827
Eastern Equatoria	22	5	3	69	5	104
	794,733	160,724	678,429	3,303,680	263,836	5,201,402
Western Equatoria	8	0	3	10	1	22
	506,260	0	5,642	325,983	10,000	847,885
Total	104	19	8	121	26	278
	3,088,109	382,685	700,470	6,108,695	736,155	11,016,114

Disaggregation of hazards and areas by State and by CHA/SHA

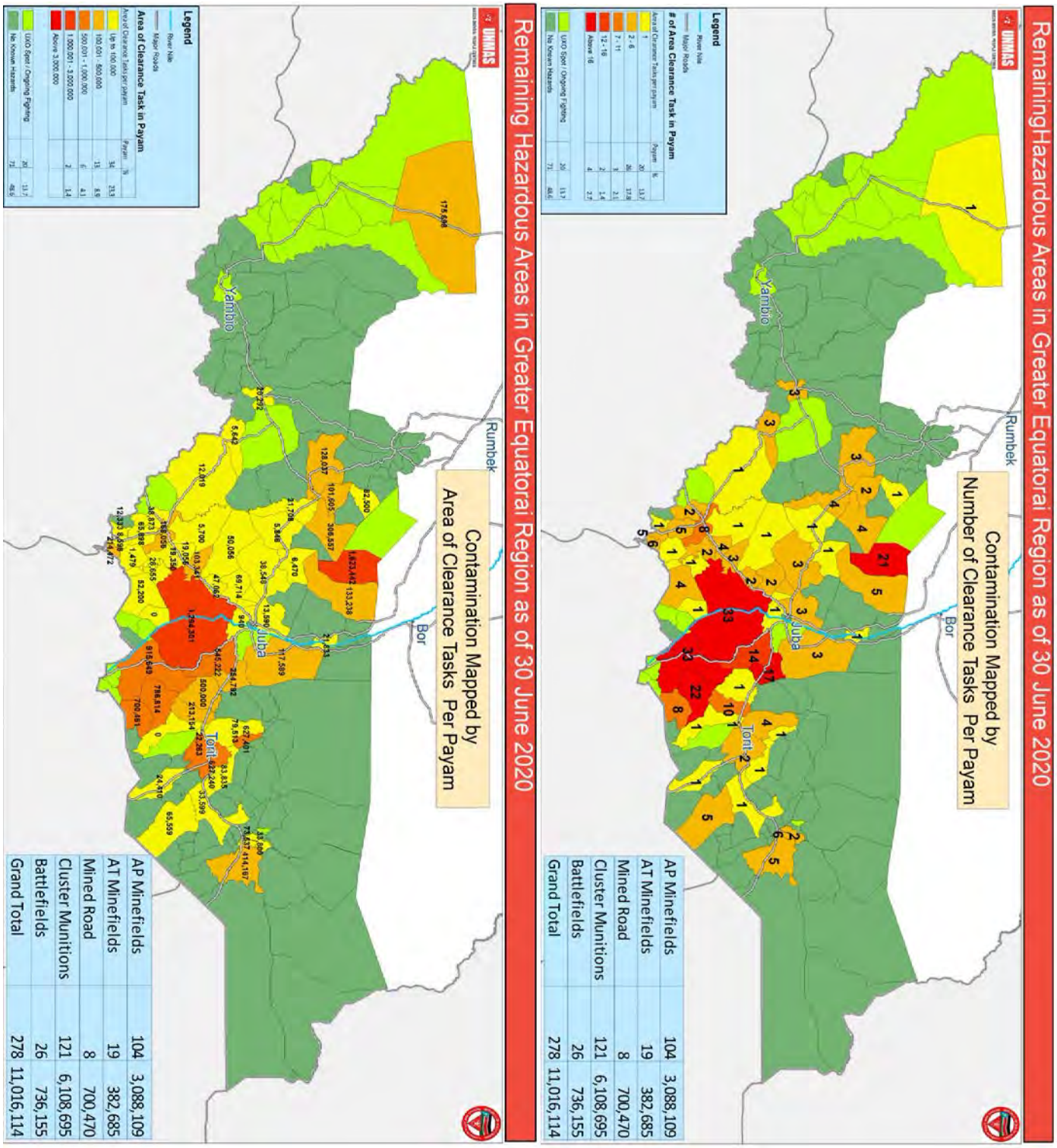
State	CHA		SHA		Total	
	# of HA	Area(Sqm)	# of HA	Area(Sqm)	# of HA	Area(Sqm)
Central Equatoria	104	3,979,785	48	987,042	152	4,966,827
Eastern Equatoria	93	4,501,538	11	699,864	104	5,201,402
Western Equatoria	10	245,735	12	602,150	22	847,885
Total	**207**	**8,727,058**	**71**	**2,289,056**	**278**	**11,016,114**

Disaggregation of Confirmed Hazardous Areas (CHA) in Great Equatoria:

State	AP Minefields	AT Minefields	Mined Roads	Cluster Strikes	Battlefields	Totals
	# of HA	# of HA	# of HA	# of HA	# of HA	# of HA
	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)
Central Equatoria	40	9	1	40	14	104
	1,527,180	66,809	7,054	1,981,981	396,761	3,979,785
Eastern Equatoria	15	4	2	69	3	93
	745,547	160,324	51,028	3,303,680	240,959	4,501,538
Western Equatoria	1	0	0	9	0	10
	95,450	0	0	150,285	0	245,735
Total	56	13	3	118	17	207
	2,368,177	227,133	58,082	5,435,946	637,720	8,727,058

Disaggregation of Suspect Hazardous Areas (SHA) in Greater Equatoria:

State	AP Minefields	AT Minefields	Mined Roads	Cluster Strikes	Battlefields	Totals
	# of HA	# of HA	# of HA	# of HA	# of HA	# of HA
	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)
Central Equatoria	34	5	1	2	6	48
	259,936	155,152	9,345	497,051	65,558	987,042
Eastern Equatoria	7	1	1	0	2	11
	49,186	400	627,401	0	22,877	699,864
Western Equatoria	7	0	3	1	1	12
	410,810	0	5,642	175,698	10,000	602,150
Total	48	6	5	3	9	71
	719,932	155,552	642,388	672,749	98,435	2,289,056



Maps showing the dispersal of tasks by number of tasks (CHA and SHA) and contaminated area per payam

10.2 Remaining Contamination in the Greater Bahr El Ghazal region

Three minefields and four mined roads remain in the Greater Bahr El Ghazal region. These are believed to contaminate a total area of 50.1 ha. Three of these minefields are believed to contain Anti-Personnel mines and contaminate 355,600m^2. However two of these are thought to be suitable for mechanical clearance that extends to 315,600m^2, leaving just 40,000m^2 to be cleared manually,

There are five roads that are through to be mined in Greater Bahr el Ghazal that amount to a requirement for 79km of clearance. Five of these stretches have been fully surveyed and account for 58km of this requirement.

Summary of all contamination in Greater Bahr El Ghazal region

State	AP Minefields	AT Minefields	Mined Roads	Cluster Strikes	Battlefields	Totals
	# of HA	# of HA	# of HA	# of HA	# of HA	# of HA
	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)
Northern Bahr El Ghazal	1	0	0	0	0	1
	113,862	0	0	0	0	113,862
Warrap	1	0	1	1	0	3
	40,000	0	280,000	19,745	0	339,745
Western Bahr El Ghazal	1	0	4	1	0	6
	201,738	0	188,400	92,000	0	482,138
Total	3	0	5	2	0	10
	355,600	0	468,400	111,745	0	935,745

Disaggregation of hazards and areas by State and by CHA/SHA

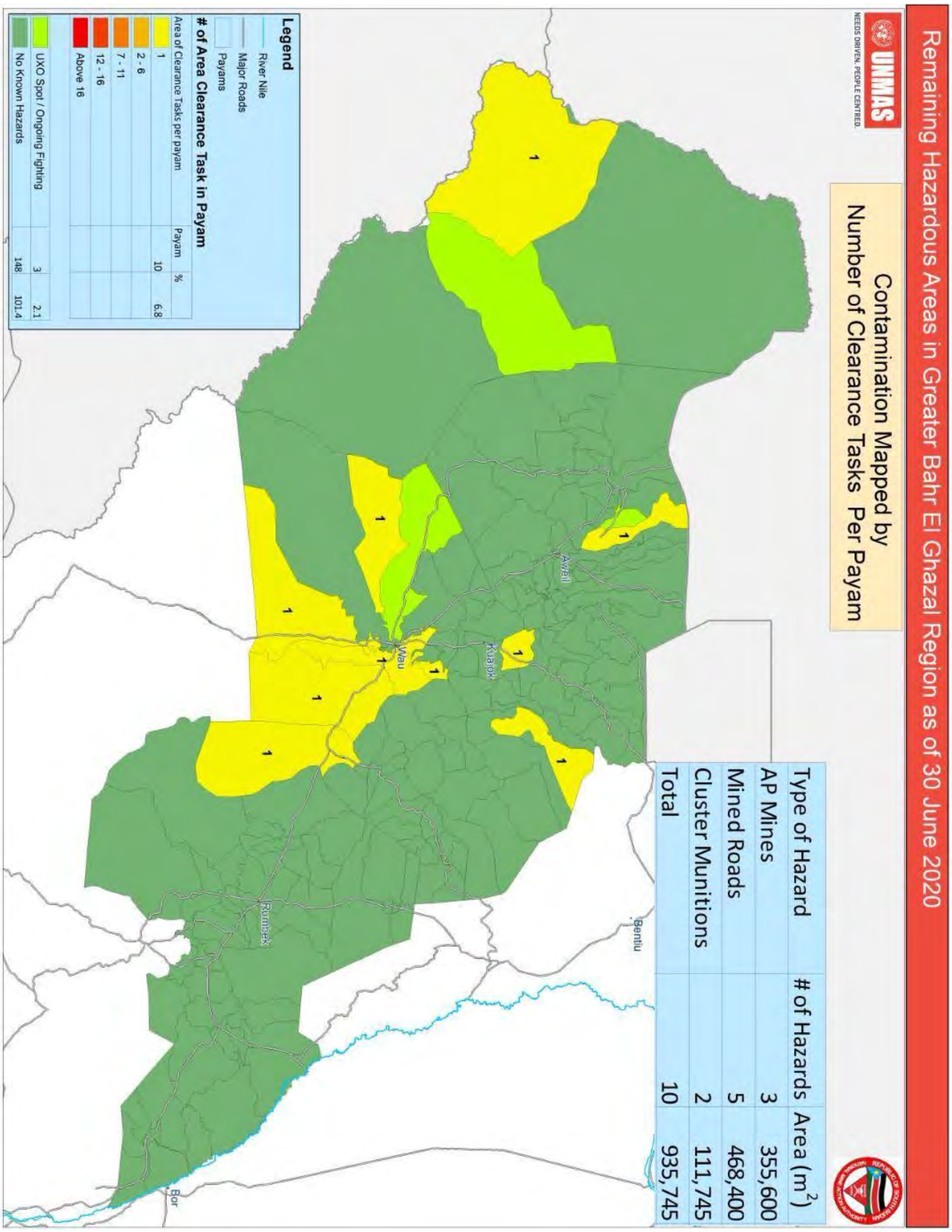
State	CHA		SHA		Total	
	# of HA	Area(Sqm)	# of HA	Area(Sqm)	# of HA	Area(Sqm)
Northern Bahr El Ghazal			1	113,862	1	113,862
Warrap	2	299,745	1	40,000	3	339,745
Western Bahr El Ghazal	3	338,738	3	143,400	6	482,138
Total	**5**	**638,483**	**5**	**297,262**	**10**	**935,745**

Disaggregation by State of Conformed Hazardous Areas:

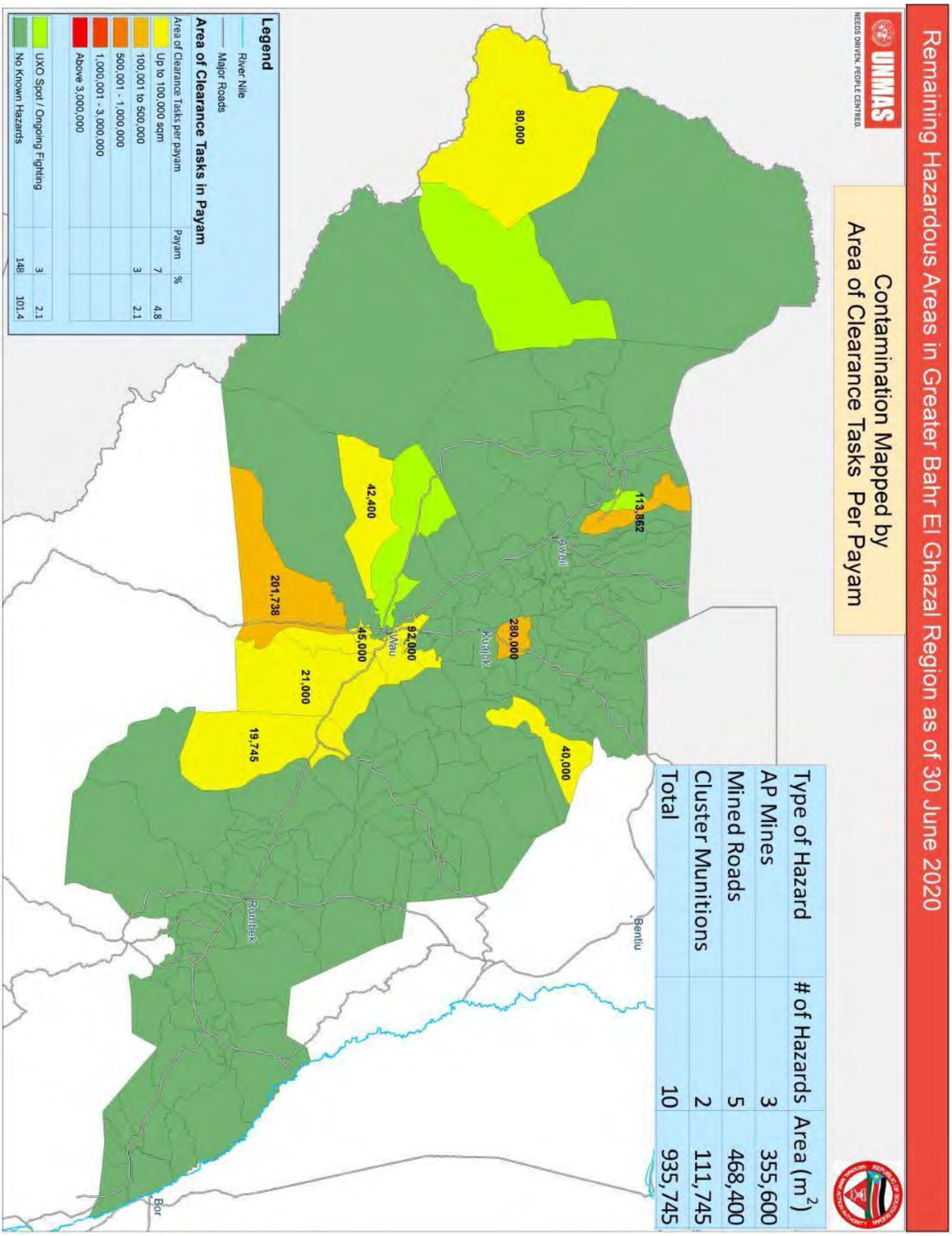
State	AP Minefields	AT Minefields	Mined Roads	Cluster Strikes	Battlefields	Totals
	# of HA	# of HA	# of HA	# of HA	# of HA	# of HA
	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)
Northern Bahr El Ghazal	0	0	0	0	0	0
	0	0	0	0	0	0
Warrap	0	0	1	1	0	2
	0	0	280,000	19,745	0	299,745
Western Bahr El Ghazal	1	0	1	1	0	3
	201,738	0	45,000	92,000	0	338,738
Total	1	0	2	2	0	5
	201,738	0	325,000	111,745	0	638,483

Disaggregation by State of Suspect Hazardous Areas:

State	AP Minefields	AT Minefields	Mined Roads	Cluster Strikes	Battlefields	Totals
	# of HA	# of HA	# of HA	# of HA	# of HA	# of HA
	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)
Northern Bahr El Ghazal	1	0	0	0	0	1
	113,862	0	0	0	0	113,862
Warrap	1	0	0	0	0	1
	40,000	0	0	0	0	40,000
Western Bahr El Ghazal	0	0	3	0	0	3
	0	0	143,400	0	0	143,400
Total	2	0	3	0	0	5
	153,862	0	143,400	0	0	297,262



Map showing number of hazardous areas per payam within Greater Bahr El Ghazal



Map showing documented hazardous area per payam within Greater Bahr El Ghazal

10.3 The Greater Upper Nile Region

Across the Greater Upper Nile region there remain 34 mine fields, 12 mined roads, 10 cluster munitions strikes and 9 battle areas. The estimate of contamination currently extends to 7.56 square kilometres.

Thirteen of the tasks in Jonglei have been assigned for resurvey. Together they amount to more than 3.8km^2 of which the largest three tasks account for more than 3km^2. Considering that the average size of those mined areas cleared in South Sudan since the country joined the Convention is around 7 ha this strongly suggests that these hazards have been significantly over-estimated. Accordingly, these suspected hazardous areas have been prioritized for re-survey as soon as possible, and it is assumed that the majority of this area will in due course be cancelled. A list of the tasks designated for resurvey is presented within Annex A of this report.

Of the 65 area clearance tasks that remain in the Greater Upper Nile region, 12 are considered suitable for clearance using mechanical assistance comprising 740,771m^2.

There are twelve stretches of mined road in Jonglei that have been properly surveyed and amount to a requirement for 267.5km (2,144,484m^2)of road clearance and a further five suspected roads that are estimated to require a further 151km of clearance. Thus the ceiling requirement is for 418.5km of road clearance.

Summary of remaining contamination in the Greater Upper Nile region

State	AP Minefields	AT Minefields	Mined Roads	Cluster Strikes	Battlefields	Totals
	# of HA	# of HA	# of HA	# of HA	# of HA	# of HA
	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)
Jonglei	13	9	6	6	1	35
	3,810,671	412,281	1,739,226	55,458	28,200	6,045,836
Unity	0	0	1	0	2	3
	0	0	70,000	0	20,800	90,800
Upper Nile	2	10	5	4	6	27
	82,631	377,907	335,258	133,067	493,752	1,422,615
Total	15	19	12	10	9	65
	3,893,302	790,188	2,144,484	188,525	542,752	7,559,251

Disaggregation of hazards and areas by State and by CHA/SHA

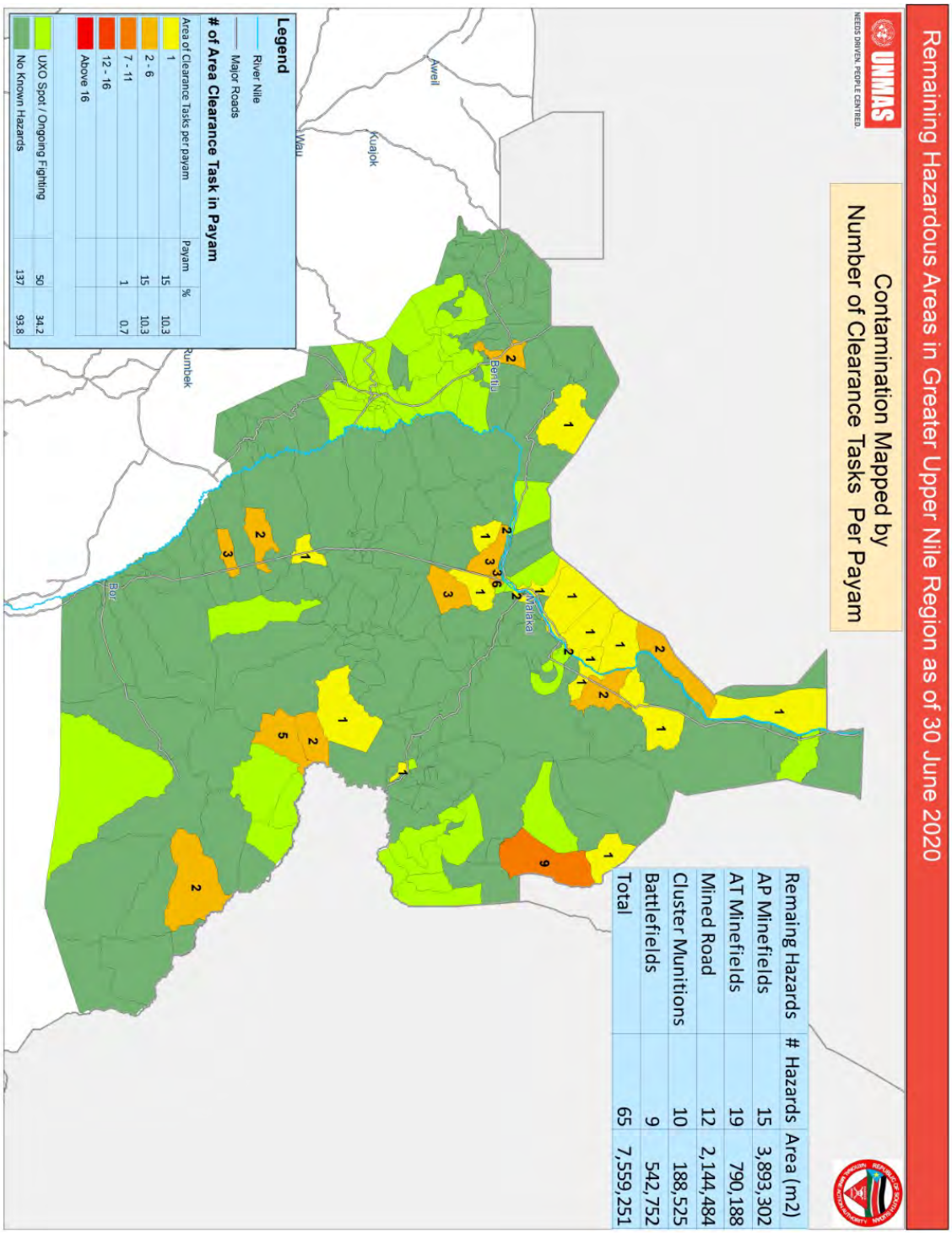
State	CHA		SHA		Total	
	# of HA	Area(Sqm)	# of HA	Area(Sqm)	# of HA	Area(Sqm)
Jonglei	17	1,023,157	18	5,022,679	35	6,045,836
Unity	3	90,800			3	90,800
Upper Nile	22	1,086,653	5	335,962	27	1,422,615
Total	**42**	**2,200,610**	**23**	**5,358,641**	**65**	**7,559,251**

Disaggregation by State of Conformed Hazardous Areas:

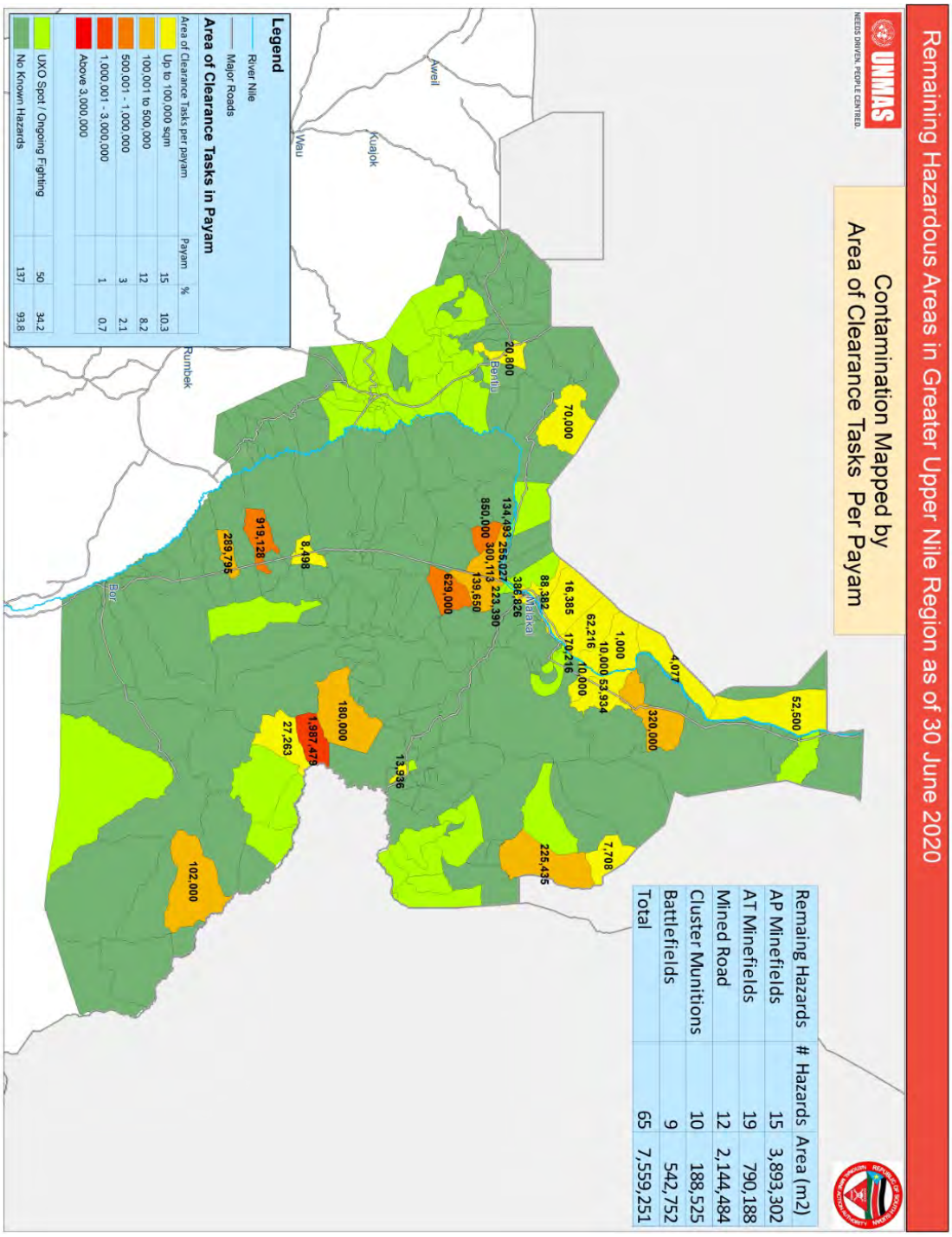
State	AP Minefields	AT Minefields	Mined Roads	Cluster Strikes	Battlefields	Totals
	# of HA	# of HA	# of HA	# of HA	# of HA	# of HA
	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)
Jonglei	5	5	2	4	1	17
	213,829	199,999	525,671	55,458	28,200	1,023,157
Unity	0	0	1	0	2	3
	0	0	70,000	0	20,800	90,800
Upper Nile	2	6	4	4	6	22
	82,631	42,945	334,258	133,067	493,752	1,086,653
Total	7	11	7	8	9	42
	296,460	242,944	929,929	188,525	542,752	2,200,610

Disaggregation by State of Suspect Hazardous Areas within :

State	AP Minefields	AT Minefields	Mined Roads	Cluster Strikes	Battlefields	Totals
	# of HA	# of HA	# of HA	# of HA	# of HA	# of HA
	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)	Area (Sqm)
Jonglei	8	4	4	2	0	18
	3,596,842	212,282	1,213,555	0	0	5,022,679
Unity	0	0	0	0	0	0
	0	0	0	0	0	0
Upper Nile	0	4	1	0	0	5
	0	334,962	1,000	0	0	335,962
Total	8	8	5	2	0	23
	3,596,842	547,244	1,214,555	0	0	5,358,641



Map showing the number of remaining CHA and SHA per payam in the Greater Upper Nile region



Map showing documented hazardous area per payam within Greater Upper Nile Region

It is important to note that the single largest hazard remaining in South Sudan is a minefield in the Akobo area that was estimated in 2003 at being Jekou area that has been recorded at 1.98km^2 in size. There is little doubt that this will be drastically reduced once it is safe to access the area and resurvey the task. Unfortunately Akobo has been particularly inaccessible in recent years due to security concerns.

11 Nature and extent of the remaining Article 5 challenge: qualitative aspects

a. *Provide information on the relevant qualitative characteristics of the remaining challenge (i.e. type of terrain, level and type of knowledge of the mined areas)*
b. *The use of photos can be useful to convey these factors of the request, (including difficulties and challenges specific to the region/mine field, and differences between regions/mine fields within the State.*

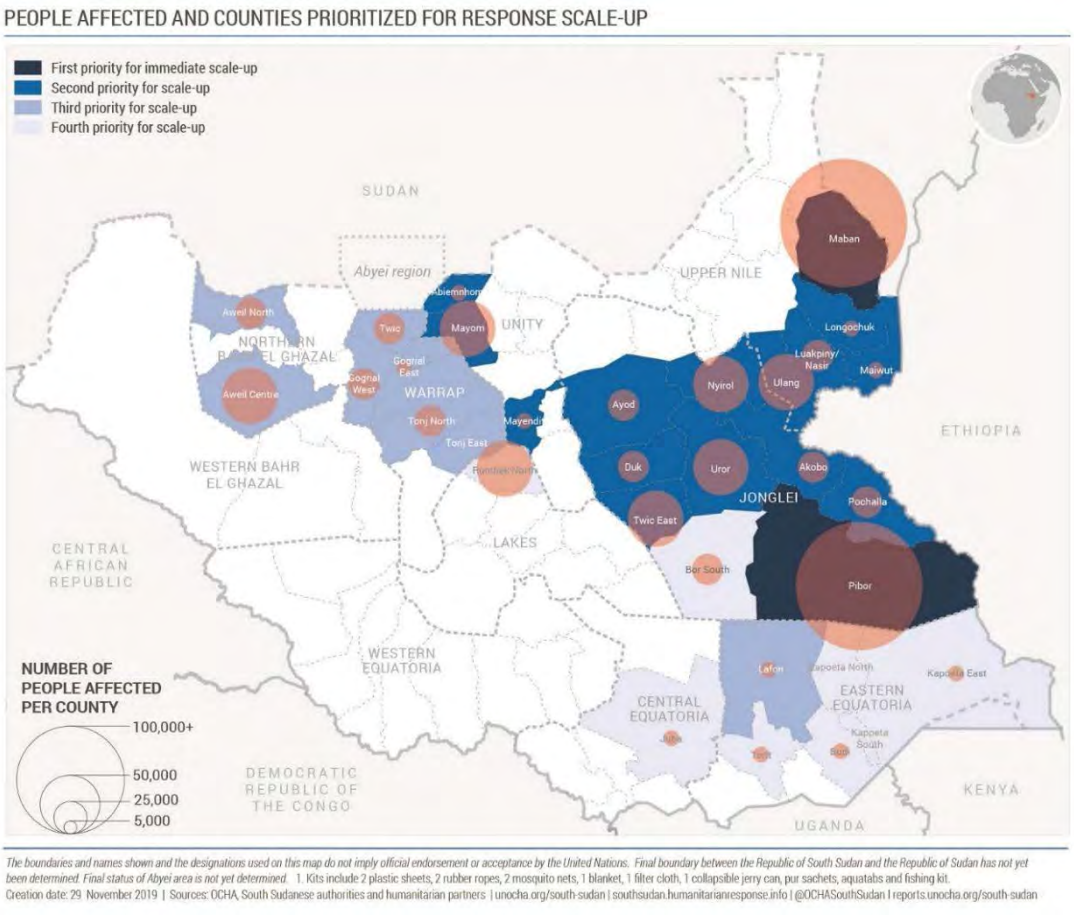
Mine clearance efforts in South Sudan will continue to be hindered by the extra-ordinary logistical challenge that undertaking any clearance task involves. The size of the country, the poor state of its infrastructure and the effects of the seasonal rains means that clearance in much of the country is only possible for eight months of the year.

Heavy seasonal rains render many roads unpassable for several months each year. Because of this, the demining season in the country is reduced to eight months of productive operations.

Moving heavy machines the length of the country is particularly problematic. Machines are generally moved up country by barge in a trip that takes two months.

South Sudan has further suffered in recent years by flooding which has extended into the regular demining season thus further reducing the opportunity to undertake clearance activities in large parts of the country.

The flooding that affected South Sudan in 2019 directly affected more than 600,000 people and its impact on livestock and agricultural production will takes years to recover. The impact on natural resources will lead South Sudanese to gather natural resources from mined areas.



South Sudan faces a further challenge in that it has become increasingly clear that the methodology used to clear roads at the start of the clearance effort was flawed. The methodology was based around a combination of vapour detection and the use of rollers (to initiate detonation). The poor build quality of some of the mines used led to the rollers simply crushing fuzes rather than initiating them, and as a result a number of mines that remained in heavily trafficked roads have recently been uncovered through the effects of weathering and resulted in the need for re-clearance of roads that were previously considered safe. This occasional use of new anti-vehicle mines as part of the on-going fighting has further complicated this situation. This additional burden has diverted clearance resources from the effort to clear AP mines in South Sudan. In response to this challenge, South Sudan has embraced modern technology, in the form of handheld ground penetrating radar to achieve clearance rates of one linear kilometre of road per day (8,000m^2/day).

Although there has been no use of anti-personnel mines, anti-vehicle mines have been used to restrict movement in the ongoing fighting. The mines pictured here were recovered from a road in Western Bahr El Ghazal in December 2018.

The impact of this trend has been the requirement to re-clear roads, which in turn diverts resources that would otherwise have been used to advance the clearance of AP mines in South Sudan.

12 Circumstances that impeded compliance during previous extension period

Despite the optimism of an independent South Sudan, almost throughout the period of its independence there has been fighting somewhere in the country, sometimes politically driven but often based on land rights or other inter-communal disputes. The divisions within the country have resulted in many parts of it being inaccessible to mine action teams for extended periods. Compounding the difficulties of security related access restrictions, the poor state of infrastructure and seasonal rains degrade many of the roads to a point that they are either impassable or so damaged that they cannot be relied upon for a casualty evacuation. As a result of this, demining activity in South Sudan is severely curtailed in this period to the extent that the regular demining "season", in which the majority of mineclearance takes place in South Sudan, is limited to the months of November through until June. This shortened demining year impedes productivity.

The on-going turmoil, particularly in the period post 2013, has led to millions of South Sudanese being displaced and forced to shelter in temporary accommodation. This displacement has led to the collapse of agricultural production and has brought much of the population to the edge of famine.

This economic backdrop has understandably impacted upon the climate of support for mine action funding, as other areas of immediate support have been prioritized.

Finally, the ever-present security threats have led more than a million South Sudanese to flee the country, and included in those numbers who have sought safety are many trained demining personnel.

12.1 Humanitarian, economic, social and environmental implications of the remaining mined areas

Minefields contaminate or deny access to land that would otherwise be used productively. At times, circumstances or lack of knowledge about the presence of mines leads community members to put themselves in danger by using or transiting through contaminated land. Minefields limit agriculture, grazing cattle, and the use of land for natural resources. In addition, minefields have been found around schools and clinics, and in a country where a significant amount of travel is done by foot, minefields make travel extremely dangerous. The table below shows the distance of the minefield from different facilities and use of the land, showing the prominence of blockages of agricultural land, roads, and water points.

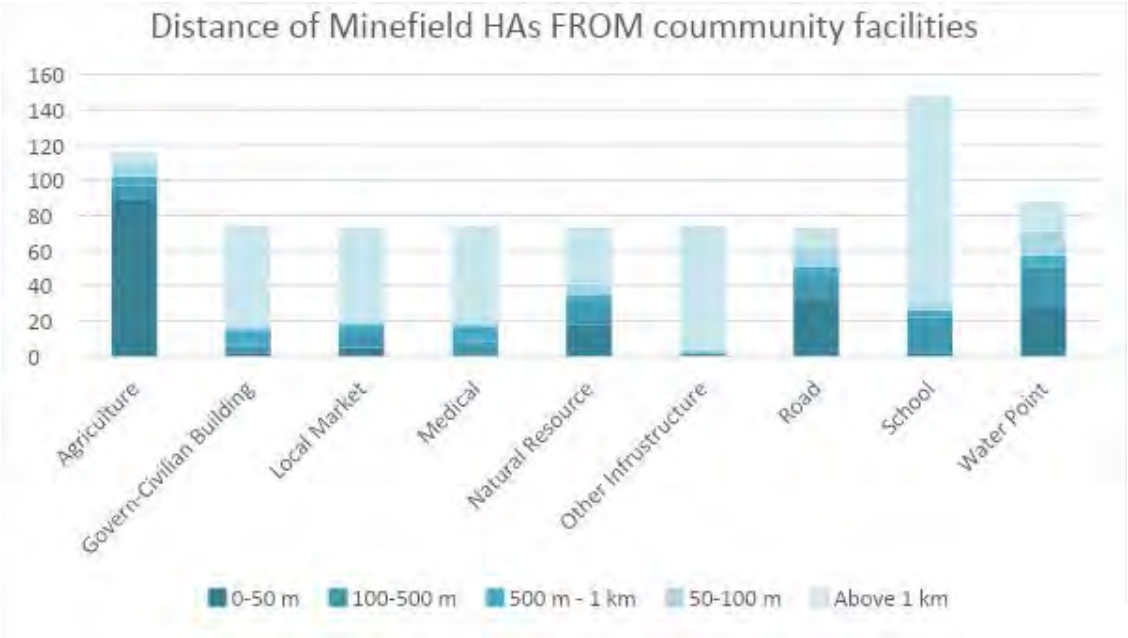


Figure 1: Number from community facilities (IMSMA) of mine HAs and their distance

12.2 Agriculture / Livestock

Agricultural land is most likely to be within or very close to minefield HAs. Of the 147 minefields for which data is available, 52% of HAs are located less than 50m from agricultural land, as shown in figure 3.[11] Furthermore, there is significant overlap between the densest minefield contamination and the most fertile land, as shown in the figure 2.[12]

[11] Data from UNMAS/IMSMA, provided by Mohammad Kabir Rahimi, 07 May 2019. on

[12] Map of agricultural potential: https://www.intechopen.com/books/application-of-geographic-information-systems/assessing-agricultural-potential-in-south-sudan-a-spatial-analysis-method#F3; map of open and closed minefields as of 31 March 2019 by UNMAS/IMSMA, provided by Thomas Frankhauser, 13 May 2019.

Comprehensive data on livestock accidents is not available. However, the risk to livestock cannot be overstated. A large proportion of the South Sudanese population are from cattle herding communities. In these communities, cattle represent wealth; without sufficient cattle, young men cannot marry and the family will not have a good place in society. The death any cattle therefore represent a major loss of wealth for the family.

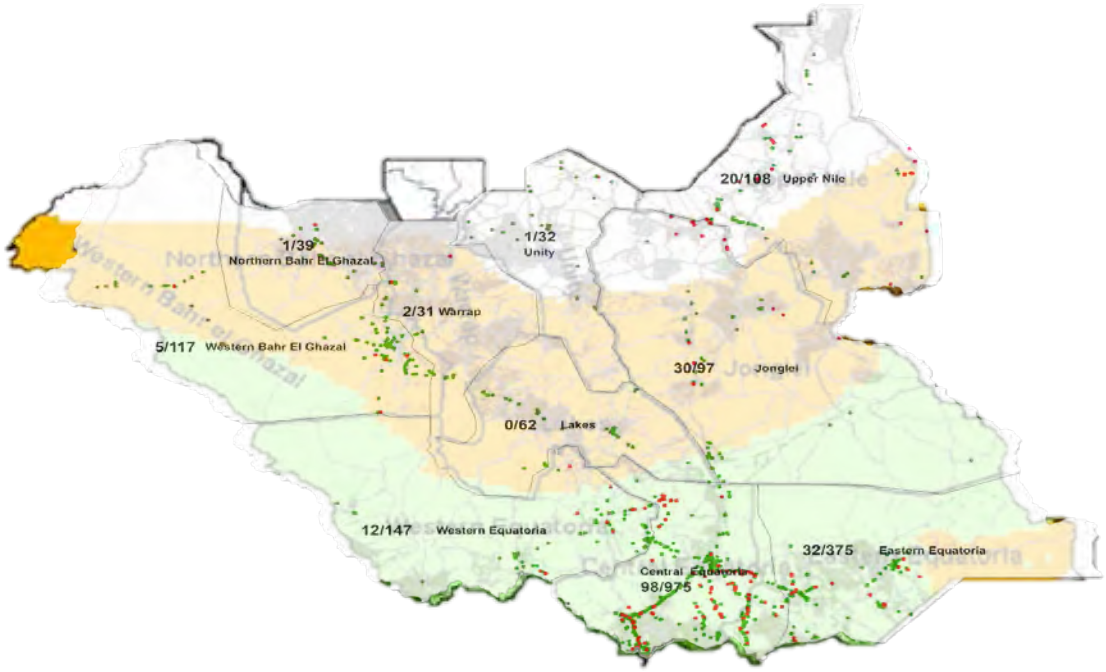


*Figure SEQ Figure * ARABIC 2: Open (red) and closed (green) hazards over map of agricultural potential (green indicates high agricultural potential; amber medium agricultural potential, and grey low agricultural potential.*

12.3 Infrastructure / community development

Minefields affect the ability of community members to reach water points, schools, health clinics and other services and infrastructure. In Lobok payam, Juba county, Central Equatoria, a minefield surrounded a health centre and a primary school. This minefield was cleared in December 2018 by MAG. As towns developed in areas that housed barracks for the SAF and SPLA, communities and services for these communities in many cases may end up being developed near minefields originally laid to protect the barracks. Most South Sudanese depend on boreholes for access to water. Of the 147 minefields for which data is available, 22% are located less than 50m from a water point.

12.4 Natural resources

The importance of natural resources to communities in South Sudan must not be understated. Land, which at first glance may appear to be unused, is use to burn charcoal (for home use and for sale), graze cattle and other livestock, collect fruits (for food and for making oil), hunting, and collecting honey. Because of the importance of these natural resources, community members may venture off known roads and known safe paths into unknown territory to collect natural resources, putting themselves at greater risk for accidents. Collecting food, water, and wood accounts for 5.05% of

reported accidents, and of the 147 minefields for which data is available, 14% are located less than 50 metres from land use for natural resources, as shown in figure 3.

12.5 Access / Displacement / Returns

Victim data shows that travelling was the most common activity when accidents occurred. The population of South Sudan is very mobile, and significant amounts of travel are conducted by foot. Accidents while travelling make up the highest share of activities at the time of the accident for both men and women, as shown in the table below of accidents (mine sand other ERW) by gender and age, which uses accident data from 2000 – July 2018.[13]

12.6 Accidents[14]

Accident data in South Sudan is limited by low levels of reporting. Furthermore, accident data does not disaggregate between the types of explosive hazards, thus accident data includes accidents due to AP mines, AT mines, remnants of cluster munitions, and other UXO. However, some general trends can be observed. Men and boys are most likely to be the victims of accidents: men are victims/survivors of 39% of accidents, males age unknown make up 18%, and boys make up 17% of victims and survivors. Although women and girls are less likely to be the victim of an accident, they are slightly overrepresented in accident deaths: 38% of girl victims died, while only 24% of boy victims died; 30% of women victims died, whereas only 23% of men victims did.[15]

Unsurprisingly given traditional gender norms, women are most likely to be involved in an accident while doing household work, with 80% of household work accident victims being women. Although accidents involving household work make up only 26% of the total[16]; these accidents are much more likely to be fatal; 60% of household work accidents were fatal.[17]

13 Amount of time being requested

South Sudan is requesting an extension of five years, (9 July 2021 -9 July 2026) in order to complete the removal and destruction of all anti-personnel landmines on its territory. Thus, South Sudan intends to complete the clearance of all known AP minefields within its territory by 9th July, 2026.

Rationale for the time requested

The Government of South Sudan is committed to the Oslo Action Plan and intends to clear its minefields to the fullest extent possible by 2025; however it must recognize that without a significant increase in clearance capacity that full completion shall not be completed until July 2026.

The rationale for the timeframe requested is based on the belief that South Sudan now has an

[13] Data provided by Mohammad Kabir Rahimi, UNMAS, 15 August 2018

[14] Accident data is not disaggregated by device type, as this is rarely known at the time of the report. Therefore, this data includes AP mines as well as AT mines, cluster munition remnants, and other ERW.

[15] Data from UNMAS/IMSMA, 2000 – July 2018, provided by Mohammad Kabir Rahimi on 15 August 2018. When gender is known but not age, the fatality rate is similar: 28% of females of unknown age died and 30% of males of unknown age died.

[16] Data year 2000 – August 2018, from IMSMA.

[17] Any discussion of accident data must note the significant underreporting of accidents. Accidents at home potentially may be easier to identify as a mine/ERW accident.

accurate assessment of the extent of its contamination and a clear understanding of the clearance requirement to achieve completion. The detailed rational for the requirements for both the number and type of teams as well as the number of years they are needed for is presented in paragraph 14 below.

14 Assumptions

South Sudan's plan for the clearance of contaminated areas as outlined in this extension request is based on six key assumptions:

1. Freedom of access, no resumption of fighting.
2. Sustained or increased funding.
3. Few additional minefields are recorded.
4. That the largest recorded hazards are cancelled, or drastically reduced, through re-survey.
5. That the following clearance rates can be sustained:
    a. That manual demining rates will average 20m^2 per deminer per day and that 15 lane teams will deploy and clear 300m^2 per day.
    b. That manual BAC teams will clear 1,000m^2 per day.
    c. That mechanical clearance teams will clear 2,000m^2 per day.
6. That COVID, insecurity and bad weather will limit the production of all clearance teams

Assumption One – Freedom of Access, no resumption of fighting.

This plan assumes the sustainment of peace and freedom of access for demining teams. Since the signing of the Revitalised Agreement on the Resolution of the Conflict in South Sudan (R-ARCSS) on 12 September 2018, the security situation across the country has improved, and there is now access to many areas that security issues previously rendered inaccessible. If all remaining minefields are to be cleared within the period laid out in this extension request, security will need to continue to remain permissive in contaminated areas and in Juba. Renewed fighting in task locations would hinder the deployment of clearance teams, while insecurity in Juba would impose significant logistical challenges on clearance operators and their ability to coordinate and support field-level operations.

Similarly, this plan assumes that Ebola Virus Disease (EVD) does not break out in South Sudan during the implementation period and thereby disrupt clearance efforts by restricting movement of personnel.

Assumption Two – Sustained Funding

The provision of sustained and adequate funding is a second key assumption underpinning this extension request. Currently the mine action programme in South Sudan is supported with donations that amount to $42million per year, however the largest single contributor to this figure is the contribution made (in 2019/20 the contribution was $34.6million) by UNMISS as the work of UNMAS is in alignment with the Mission's mandate to protect civilians and build durable peace. Any revisions to the Mission's mandate, and more importantly any significant reduction in Mission funding could well impact upon the support that UNMAS receives. Indeed, and somewhat paradoxically, the success of the peace agreement will almost certainly stimulate a reduction in the UNMISS budget, which may well affect support for UNMAS. There is also a strong possibility that UNMAS will be tasked by UNMISS to direct teams to engage in the management of weapons and ammunition resulting from the ongoing peace process, in turn this will draw clearance teams away from demining tasks, which will of course have a negative impact on the overall clearance process.

It should also be noted that the UNMISS/UNMAS funded teams are primarily deployed to enhance the mobility of the Mission and to ensure that humanitarian interventions are not impeded by the dangers of unexploded ordnance. The very widespread dispersal of unexploded ordnance across South Sudan means that inevitably a significant portion of clearance work is undertaken in direct support of humanitarian efforts, as a precautionary measure and therefore is done so at the opportunity cost of the clearance of known minefields.
Therefore, for clearance to continue at the rate required to adhere to the timelines outlined in this document, funding for clearance operators in the coming years will need to be equal to or greater than what has been received annually over the last several years.

Assumption Three – Few additional minefields are recorded
The current projection is based upon the understanding that there are few minefields remaining that have not been recorded. Although no recent systematic survey has taken place, South Sudan is confident that after sixteen years of sustained mine action that it does have an accurate picture of the total contamination and while recognizing that some currently unknown minefields will be recorded, it is confident that their impact will not significantly impact upon the plan. The last year of this plan is dedicated to the clearance of unknown tasks and to re-survey of areas to insure that none are missed.

Assumption Four - That the largest recorded hazards are cancelled, or drastically reduced, through re-survey
As has already been stated the ten largest hazards in the Greater Upper Nile region average more than a square kilometre each in size and account for almost 40% (10.67km^2) of all of the remaining contamination in the national contamination database. The experience of all demining conducted in South Sudan so far is that such large minefields do not exist and it is assumed that once safe access to this area is achieved that these tasks will either be cancelled or drastically reduced. Thus this plan is based on the assumption that there will be a reduction in the clearance requirement of at least 10km^2.

Assumption Five That the clearance rates are sustained - The clearance rates proposed are based on analysis of previous clearance and are therefore considered to be reasonable.

Assumption Six That COVID and Insecurity will impact upon efficiency of clearance operations – The actual capacity requirement has factored in the possibility of each team losing one working month per demining year due to COVID, insecurity or adverse weather constraints.

15 Risk Factors
In line with the assumptions outlined above, the following risks have been identified, which could impact the successful completion of planned demining activities within this extension period:

- **Insecurity:** a resumption of fighting in areas of operation and/or in the capital could slow progress towards clearance targets or, if severe, halt operations entirely. One emerging insecurity risk is the outbreak of the Ebola Virus Disease (EVD) in neighbouring Democratic Republic of Congo (DRC). The majority of the remaining mined areas lie in the Greater Equatoria region, which is the part of the country that borders the DRC, and it is there where EVD has previously broken out in South Sudan.
- **Economic:** a deterioration of South Sudan's economy could impact clearance operations. For example, a nationwide fuel shortage resulting from high inflation and reduced purchasing

power could interrupt operations and impact the ability to achieve the clearance targets detailed in this extension request.

- **Environmental:** environmental obstacles resulting from the annual wet season are well known and have been factored into the timeline of this extension request. However, extreme weather patterns that led to serious damage to national or local infrastructure could create unforeseen delays in clearance operations. Moreover, some of the remaining minefields in South Sudan are located in remote, hard-to-reach areas that could be more heavily impacted by such environmental access constraints.
- **Funding**: a reduction in the annual funding available for clearance operations in South Sudan would increase the time required to complete the clearance of the country, and could hinder adherence to the timeline set out in this document.
- **Failure to reconfigure the clearance capacity**: One of the principal obstacles to efficient clearance is the relatively small size of the majority of the current clearance teams. It is therefore important that the clearance organisations working in South Sudan reconfigure their teams to deliver a more efficient overall clearance capacity. This transformation has commenced, with UNMAS opting to field eight fifteen lane demining teams from November 2020, but this move needs to be replicated across the sector in order to deliver the required clearance capacity. Similarly MAG in 2020 has commenced the expansion fo its Multi Task Teams so that each now fields ten deminers.
- **COVID-19 or other diseases such as Ebola have a serious negative effect upon operations in South Sudan.** It is simply too early to determine the long term effects of COVID-19 in South Sudan, or the impact that an outbreak of the Ebola Virus Disease would have. Nevertheless the plan has been made on the assumption that the impact will be manageable.

16 Detailed work plan for the period of the requested extension

Because of the logistical difficulties that are faced in South Sudan, it is necessary to approach the work plan for the remaining clearance requirement at the regional level. Thus the requirements in terms of clearance assets for each part of the country are addressed here.

General Approach

The table of all remaining clearance tasks is presented as Annex A. This table shows the approach to be adopted for every single area clearance task in the current South Sudan contamination database. This table is the base record upon which all of the following tables are based.

16.1 Requirements for the completion of the Greater Equatoria Region

In order to determine the requirement for the different types of clearance teams, the problem has been broken down into known manual and mechanical clearance requirements for both minefields and cluster strikes/battlefields. It also identifies those tasks for which there is currently no definition beyond the fact that they have been identified for re-survey. For these tasks, for the purposes of planning, it is assumed that the current estimates are correct and the clearance approach taken is that which is least efficient.

Clearance requirement for known minefields

Within the Greater Equatoria region there are 57 manual demining tasks and 36 that can be addressed using mechanical support. It is important to note that these minefields in the Greater Equatoria region are particularly well defined, in comparison to the rest of the country, and that the 85 remaining minefields each average just 28,300m^2 (this is less than the historical average for all mineclearance tasks). It is therefore unlikely that survey action will lead to any significant reduction in the clearance requirement for these tasks, and thus full clearance is planned for these tasks. Those tasks where it is believed that additional survey work will have an impact on clearance are discussed below.

Using the established clearance rates of 20m^2 per demining lane per day, 15 lanes per team and 22 working days per month, and 2,000m^2 per mechanical team per day. We may deduce that the overall requirement for manual and mechanical demining teams, quantified in terms of operational demining team months, from Greater Equatoria is as follows:

State	Minefields					
	# manual tasks	Area Manual tasks	# of Manual team months	# mechanical tasks	Area Mechanical tasks	# of Mechanical Team months
C Equatoria	35	345,083	52	27	1,311,881	30
E Equatoria	9	281,392	43	10	621,086	14
W Equatoria	0	0	0	5	220,293	5
Sub Total	44	626,475	**95**	42	2,153,980	**49**

Thus, the clearance of these minefields will require 95 Manual team-months[18] and 49 Mechanical team-months.

<u>Clearance requirement for known cluster strikes and battle areas</u>

There remain 98 cluster strikes and 22 battle areas to be cleared within Greater Equatoria.
It is assumed that the clearance of cluster munition strikes and battle areas will be **cleared by manual teams at a rate of 1,000m^2 per day and by mechanical teams at a rate of 2,0000m^2 per day**, and that such teams work for eight months per year (22 days per month). On this basis, the requirement is as follows:

[18] A team-month is the product of one team working for one month (22 days).

State	Cluster strikes and Battlefield clearance tasks					
	# manual tasks	Area Manual tasks	# of Manual team months	# mechanical tasks	Area Mechanical tasks	# of Mechanical Team months
C Equatoria	41	1,883,377	86	10	880,980	20
E Equatoria	55	1,961,933	89	12	1,536,806	35
W Equatoria	7	142,017	7	2	8,268	1
Sub Total	**103**	**3,987,327**	**181**	**24**	**2,426,054**	**56**

Thus, the requirement is for 181 team-months of manual BAC teams and 56 team-months of mechanically assisted clearance teams.

Areas prioritized for re-survey

There are forty minefields and seventeen cluster strikes that require re-survey, but currently cannot be accessed because of on-going fighting or general insecurity. As such, it has been assumed that these tasks will be cleared in their entirety by manual clearance teams.

State	Minefields			Cluster strikes/battle areas		
	# manual tasks	Area Manual tasks	# of Manual team months	# Cluster tasks	Area Cluster tasks	# of Cluster Team months
C Equatoria	26	352,113	53	11	176,994	8
E Equatoria	8	52,259	8	7	68,777	3
W Equatoria	3	285,867	43	2	185,698	9
Sub Total	**45**	**690,239**	**104**	**7**	**311,661**	**20**

Thus, there is a requirement of 104 team-months of a Manual demining team and 20 team-months of a Manual BAC team.

Requirement for road clearance

The early efforts at road clearance in South Sudan had mixed results relating to an over-reliance on the use of non-technical survey and search methodology that combined methods of detection aimed at detonating mines and the use of large loop style metal detectors. Flaws in this approach have resulted in the appearance of minimum metal anti-tank mines on relatively heavily trafficked roads. This has resulted in a requirement to re-search roads, using more appropriate search equipment, that are invariably smooth surfaced with minimal vegetation. In field trials and recent clearance efforts, it has been established that a search team equipped with ground penetrating radar detectors can comfortably achieve one kilometre of road per day (which equates to 8,000m^2/day). Although the expectation is that a significant portion of the suspect road length will be addressed through survey techniques, the planning for the clearance requirement is based on the idea that the complete sections of all suspect highways will be searched and thus this is considered to be a conservative basis of planning.

The requirement for road clearance work in Greater Equatoria is summarized here:

Road clearance/assessment tasks		
State	# Suspect roads	Area Manual tasks
C Equatoria	2	16,399 (2km)
E Equatoria	3	678,429 (85km)
W Equatoria	3	5,642 (1km)
Sub Total	**8**	**700,470 (88 km)**

In addition to these records, there are also five other road alignments in Equatoria which have been reported, but as yet have not been surveyed because of security and access problems, which account for an additional 59km of road that may require clearance. Therefore, for planning purposes the figure used will incorporate all of these tasks in their entirety making the clearance requirement 147km.

So 147 km being cleared at 22km/month will require one team for 7 months.

<u>Survey Requirement</u>

Greater Equatoria is the most contaminated region of South Sudan. Thus, it is reasonable to assume that it will require the greatest survey capacity. South Sudan believes there will be a requirement throughout the clearance phase for one survey team per state for the first four years and that the number can reduce to two teams in year five, by when it is hoped that the requirement will transition to national operators. These teams will not only revisit tasks and aim to better define them but will also provide cover for Explosive Ordnance Disposal tasks that will arise for the foreseeable future.

Overall Clearance requirement for Greater Equatoria

Thus, the total clearance requirement needed to address the needs of Greater Equatoria can be summarized as:

Team type	Overall requirement (# team-months)
Manual demining	199 months
Mechanical demining	49 months
Manual BAC	201 months
Mechanical Cluster Clearance Teams	56 months
Road Team	7 months
Survey Team	Three teams for 4 years and two teams in the fifth year

The same methodology for analysing the overall clearance requirement shall now be applied to the other regions.

16.2 Requirements for the completion of the Greater Bahr El Ghazal Region

Clearance requirement for known minefields

Within the Greater Bahr El Ghazal region there are 3 manual demining tasks and 1 that can be addressed using mechanical support. Using the established clearance rates of 20m^2 per demining lane per day, 15 lanes per team and 22 working days per month, and 2,000m^2 per mechanical team per day. We may deduce that the overall requirement for manual and mechanical demining teams from Greater Bahr El Ghazal is as follows:

State	Minefields					
	# manual tasks	Area Manual tasks	# of Manual team months	# mechanical tasks	Area Mechanical tasks	# of Mechanical Team months
WBEG	0	0	0	1	201,738	5
NBEG	0	0	0	1	113,862	3
Warrap	1	40,000	6			
Lakes	0					
Sub Total	1	40,000	**6**	2	315,600	**8**

There are three minefields remaining in the Greater Bahr El Ghazal region. Using the established clearance rates, these areas require six manual demining team months and eight months of a mechanical team.

Clearance requirement for known cluster strikes and battle areas

There remain 3 cluster strikes or battle areas to be cleared within Greater Bahr El Ghazal.

It is assumed that the clearance of cluster munition strikes and battle areas will be **cleared by manual teams at a rate of 1,000m^2 per day and by mechanical teams at a rate of 2,0000m^2 per day**, and that such teams work for eight months per year (22 days per month).

State	Cluster strikes and Battlefield clearance tasks					
	# manual tasks	Area Manual tasks	# of Manual team months	# mechanical tasks	Area Mechanical tasks	# of Mechanical Team months
WBEG		Nil		Nil		
NBEG						
Warrap	1	19,745*	1			

State	Cluster strikes and Battlefield clearance tasks					
	# manual tasks	Area Manual tasks	# of Manual team months	# mechanical tasks	Area Mechanical tasks	# of Mechanical Team months
Lakes						
Sub Total	1	**19,745**	**1**			

* This task could be completed mechanically but the logistical demands of getting a machine to Warrap are such that it will make more sense to clear the task manually.

Thus the requirement for cluster munitions clearance in Greater Bahr El Ghazal is five team months.

Areas prioritized for re-survey

There are forty minefields and seventeen cluster strikes that require re-survey, but currently cannot be accessed on account of on-going fighting or general insecurity. As such it has been assumed that these tasks will be cleared in their entirety by manual clearance teams.

State	Minefields			Cluster strikes/battle areas		
	# manual tasks	Area Manual tasks	# of Manual team months	# Cluster tasks	Area Cluster tasks	# of Cluster Team months
WBEG						
NBEG						
Warrap						
Lakes						
Sub Total		**Nil**	**Nil**	Nil		

There no minefields or cluster strikes that require re-survey

Requirement for road clearance

Road clearance/assessment tasks		
State	# Suspect roads	Area Manual tasks
NBEG	nil	nil

Road clearance/assessment tasks		
State	# Suspect roads	Area Manual tasks
WBEG	4	188,400 (23km)
Warrap	1	280,000 (35km)
Lakes	0	
Sub Total	**5**	**58km**

In addition to these records there are also five other road alignments in Greater Bahr El Ghazal which are have been reported but on account of security reasons have not yet been surveyed these account for an additional 21km of road that may require clearance. Therefore, for planning purposes the figure used will incorporate all of these tasks in their entirety making the clearance requirement 79km

So 79km being cleared at 22km/month will require one team for 4 months.

Survey Requirement

There will be a requirement throughout the clearance phase for a single Survey team. This team will not only revisit tasks and aim to better define them but will also provide cover for Explosive Ordnance Disposal tasks that will arise for the foreseeable future.

Overall Clearance requirement for Greater Bahr El Ghazal

Thus the total clearance requirement needed to address the needs of Greater Equatoria can be summarized as:

Team type	Overall requirement (#team-months)
Manual demining	31
Mechanical demining	5
Manual BAC	4
Mechanical Cluster Clearance Teams	Nil
Road Team	One team for 6 months
Survey Team	One team for 5 years

16.3 Requirements for the completion of the Greater Upper Nile region

Clearance requirement for known minefields

In the Greater Upper Nile region there are 23 minefields remaining to be cleared. Eight of these can be cleared mechanically while the remainder will be cleared manually.

State	Minefields					
	# manual tasks	Area Manual tasks	# of Manual team months	# mechanical tasks	Area Mechanical tasks	# of Mechanical Team months
Jonglei	3	39,400	6	6	382,601	9
Upper Nile	6	102,368	16	6	358,170	8
Unity						
Sub Total	**9**	**141,768**	**22**	**12**	**740,771**	**17**

Based on the established clearance rates, these tasks will require 39 team-months of manual demining support and 13 team-months of mechanical clearance support.

Clearance requirement for known cluster strikes and battle areas

There remain 9 cluster strikes or battle areas to be cleared within Greater Upper Nile.

It is assumed that the clearance of cluster munition strikes and battle areas will be **cleared by manual teams at a rate of 1,000m^2 per day and by mechanical teams at a rate of 2,0000m^2 per day**, and that such teams work for eight months per year (22 days per month). On this basis the requirement is for 8 team months of manual clearance and no requirement for mechanical clearance.

State	Cluster strikes and Battlefield clearance tasks					
	# manual tasks	Area Manual tasks	# of Manual team months	# mechanical tasks	Area Mechanical tasks	# of Mechanical Team months
Jonglei	4	83,658	4	Nil		
Upper Nile	6	596,672	27			
Unity	1	20,800	1			
Sub Total	6	**153,380**	**32**			

The requirement for Greater Upper Nile demining support is 32 team-months of a manual clearance team.

Areas prioritized for re-survey

There are thirteen minefields and four cluster strikes that require re-survey. The current estimate of contamination of these tasks is more almost nine million square metres. There is no doubt that this is a massively inflated figure. The three largest tasks in this region account for 7.5km^2 and yet there are three tasks for which there is no area assigned**. For planning purposes, it has been assumed that each of the 17 recorded hazards is the size of an average minefield in South Sudan (70,000m^2) and so a planning figure of 1,190,000m^2 has been used.** On this basis, the requirement is as follows:

State	Minefields			Cluster strikes/battle areas		
	# manual tasks	Area Manual tasks	# of Manual team months	# Cluster tasks	Area Cluster tasks	# of Cluster Team months
Jonglei	13	3,800,951 (reassessed as 910,000)	138	3	0 reassessed as 210,000	10
Upper Nile	nil			1	30,147 (70,000)	3
Unity						
Sub Total	**13**	**3,800,951**		**4**	**30,147**	**13**
Planning figure	**13**	**3,800,951**	**138**	**4**	**240,147**	**13**

This will require 138 team-months of a manual demining team and for thirteen team-months for a BAC team.

Requirement for road clearance

Road clearance/assessment tasks		
State	# Suspect roads	Area Manual tasks
Jonglei	6	1,739,226 (217km)
Upper Nile	5	335,258 (42km)

Unity	1	70,000 (8.5km)
Sub Total	**12**	**267.5km**

Within the Greater Upper Nile region, there are an additional five stretches of road that stretch for 151 km where severe access problems and general insecurity have prevented detailed survey from taking place. For planning purposes, it has been assumed that these roads will be cleared in their entirety making the overall requirement 418.5km

So 418.5 km being cleared at 22km/month will require one team for nineteen months.

Survey Requirement

There will be a requirement throughout the clearance phase for two Survey teams. These team will not only revisit tasks and aim to better define them but will also provide cover for Explosive Ordnance Disposal tasks that will arise for the foreseeable future.

Overall Clearance requirement for Greater Upper Nile

Thus, the total clearance requirement needed to address the needs of Greater Equatoria can be summarized as:

Team type	Overall requirement (#team-months)
Manual demining	177
Mechanical demining	13
Manual BAC	32
Mechanical Cluster Clearance Teams	
Road Team	19
Survey Team	2 Team for five years

The summary of the overall requirement can is as follows:

Region	Manual Demining (m^2)	Mechanical demining (m^2)	Manual BAC (m^2)	Mechanical BAC (m^2)	Road Clearance (km)
Greater Equatoria	1,316,714	2,153980	4,298,988	2,426,054	147
Greater Upper Nile	1,051,768	740,771	393,527		268
Greater Bahr El Ghazal	40,000	315,600	19,745	315,600	79
Totals	**2,942,877**	**2,211,653**	**4,493,166**	**2,880,305**	**484**

16.4 Summary of required clearance capacity

Thus the overall clearance capacity needed to fully address all of the known contamination and to address that part of the currently suspected area which it is reasonable to be believe will require clearance is as follow:

Team type	GEQ	GUN	GBEG	Total requirement
	Team-months	Team-months	Team-months	Team-months
Manual demining	199	177	31	407
Mechanical Teams	49	13	5	67
Manual BAC Teams	201	32	4	237
Mechanical Cluster Teams	56		Nil	56
Road Teams	7	19	6	32
Survey Teams	Two teams for 5 years	One Team for 5 years	One team for 5 years	20 team-years

This equates to:

Manual Demining teams **12 teams are needed for five years**
Mechanical Demining teams **2 teams are needed for four years**
Manual BAC teams **6 teams for five years**
Mechanical BAC teams **2 teams for four years**
Road clearance teams **2 teams are needed for two years**
Survey requirement **6 teams for four years, 4 teams for the fifth year**

The requirements above however, represent the absolute minimum capacity required to complete the full clearance requirement. The figures presented so far assume that every single team works each day for eight full months and that there is no wastage due to travel time, adverse weather or restrictions related to the Coronavirus.

To compensate for these unknowns the actual requirements used for calculating the budget requirement have been based on the assumption that one full month of work will be lost each year to these uncertainties. It is hoped that this will afford sufficient reserve so that all goals can be achieved in a reasonable manner. Should the projection be too conservative then the clearance goals will be achieved ahead of time and costs will be reduced towards the end of the extension period.

17 Institutional, human resource and material capacity available to implement the work plan

Current Clearance and Survey Resources

As at January 2020 the following clearance assets were either deployed or in reserve working in South Sudan. It should be noted that this is a snapshot of the situation, and that in the absences of multi-year funding this may change.

- **26 Medium Multi-Task Teams** (8-12 people): (14 UNMISS, +12 bilaterally funded (10MAG, 1 DDG, 1 DCA))
- **6 Small Multi-task teams** (Survey/EOD teams): (4 UNMISS + 2 bilaterally (1 DDG, 1 DCA))
- **3 Mechanical Clearance Teams** (3 UNMISS)
- **3 Light Flails/Mechanical BAC teams**: 3 bilaterally funded
- **2 Road verification teams (Dogs/rollers/GPR)**: 2 UNMISS

In order to achieve the plan, the following resources will be needed:

Team Type	Required number of teams				
	2021	2022	2023	2024	2025
15 lane Manual	12	12	12	12	12
BAC	7	7	7	7	7
Mechanical Mineclearance	3	2	2	2	2
Mechanical BAC	2	2	2	2	
Road	2	2			
Survey	6	6	6	6	4

Thus, it is clear that in broad terms the current capacity is similar to that which these projections require. For example there is a requirement for up to twelve 15-lane demining teams (180 demining lanes) and six Manual BAC teams, but at the time of writing there are no 15-lane demining teams. However, there are 26 eight-lane teams; if 20 of those eight-lane teams were to reconfigure then they could combine to produce ten 15-lane teams and six BAC teams.

So if the teams were to be restructured then there would be a shortfall of two fifteen lane teams that would be needed to be match the required capacity.

Since there are already enough team leaders and medics (to support the larger teams), this expansion can be most efficiently engineered by simply expanding the capacity of ten of the existing eight-lane teams.

In order to achieve this the existing operators and donors are being asked to plan their future efforts around the deployment of larger teams. Should this not be possible in the near future then the consequence shall be that there will be a greater focus on for the clearance of all battle areas and cluster strikes in the early years of this extension, and a greater concentration on mineclearance in the latter years. Providing that the additionally required deminers are deployed in the latter years then the overall completion target should not be compromised.

To pilot this initiative UNMAS is reconfiguring its clearance resources and from November 2020 will be fielding eight fifteen lane demining teams. However there is no certainty of sustained funding for these teams.

Current Capacity

The capacity that is funded from November 2020 currently stands at:

Entity	UNMAS/ UNMISS	MAG	DDG	DCA	Requirement	Shortfall
Fifteen Lane Demining team	8	0	0	0	12	4
Mechanical Demining team	3				2 (from 2022 onwards)	NIL
BAC team Manual	6	3	3		6	4 team surplus
BAC mechanical	0	2			2	NIL
Survey/EOD team	0	1	1	4	6	NIL

Thus it is clear that the current capacity within South Sudan is more or less in line with that required to meet the needs of this extension request. However, just how COVID 19 will impact on the ability of each of the respective implementing agencies to meet their targets is still not clear.

In order to achieve the goals set out in this plan it is evident that the clearance capacity will have to expand slightly. In order to achieve this UNMAS, the mine action NGOs, the National Mine Action Authority and the Embassy of Germany (acting Chair of the Mine Action Support Group) have convened a meeting in Juba for mid-August in order to discuss initiatives to increase operating capacity and to seek additional funding particularly for those organisations that have trained personnel and equipment but lack the operating costs needed to deploy them.

South Sudan is seeking to expand the operating capacity of those NGOs that are already established inside the country, as it is believed that expanding their capacity will be the most efficient way to increase overall capacity as there will be minimal or no requirement to expand their headquarter structures. Thus all additional funding should go straight to expanding capacity.

Development of the National Mine Action Authority

Concurrent to these clearance efforts South Sudan will seek support to empower the National Mine Action Authority to develop a regionally based coordination and response mechanism that can address all hazardous item reports, and which can carry out survey of newly identified hazardous areas.

South Sudan will seek funding to enable an independent entity, to implement a project to train, equip and mentor the NMAA and to support its nascent years in taking the lead in coordinating the response to new reports of hazardous items.
UNMAS, with support from the Government of japan has been implementing a capacity building project with the National Mine Action Authority that has covered administrative as well as operational areas, but further work is needed. It is hoped that this project will be undertaken by one of the international non-governmental organisations currently working in the country that has recent experience of implementing a similar capacity-building project.

Number of Work Days per year

The practice in South Sudan is to demine from November through until June, which is when the impact of the seasonal rains sets in. July is spent in servicing equipment and compiling end of season reports, August through to mid-September is when the demining personnel take their annual block leave, and from late September the retraining and accreditation process commences to enable a resumption of demining in September. Thus, demining activities are only conducted during eight months of the year. However for the purposes of planning it has been assumed that one full month will be lost each year to uncertainties such as COVID19, insecurity, and bad weather. Ordinarily a deminer is working for around 22 days per month. This is considered to be a reasonable estimate as the transition to sustained mineclearance activities from the current focus on survey and spot tasks will lead to more prolonged deployments and less inter-task upheaval.

Mechanical Mine Clearance Requirement

The overall clearance requirement for mechanical mine clearance has been estimated at 2.22km^2 of minefields. In South Sudan the average output for a medium tiller, such as the MineWolf 330, is 2,000m^2 per day, while heavier tillers such as the MineWolf 370 can deliver a higher output, getting them to tasks is increasingly difficult, and so the planning figure used for future clearance is 2,000m^2 per day.

Machines are expected to operate for eight months per year (176 days total).

Thus, a Medium Tiller, operating with appropriate manual demining support can be expected to clear 360,000m^2 per year. As such, the calculations used within this request are based on the deployment of medium tillers, in the full realisation that the use of heavier machines should only increase productivity and thus accelerate clearance.

In order to clear all of the known mined areas that are suited to mechanical clearance and to provide a reserve for any additional tasks that materialise; 2 mechanical clearance teams (each with one medium tiller) will be needed for four years.

Manual Clearance Requirement:

As has already been shown, this plan assumes that there will be a requirement for around 5 square kilometres of land to be searched for landmines. The 185 remaining tasks may be disaggregated into those tasks that can be cleared with mechanically assistance (46 tasks) and those that can only be cleared manually (70 tasks) and those tasks that are designated for resurvey (39 tasks). Erring on the

side of caution this plan has assumed that full manual clearance will be required for the minefields in the Greater Equatoria and Greater Bahr El Ghazal regions, and that in the Upper Nile region, the re-survey tasks in Jonglei, where there are obvious disparities with historical norms, the clearance plan is based on the assumption that each of the resurvey tasks will be reduced to seven hectares (70,000m^2) that being the historical average clearance task size.

Thus, there is a requirement to clear 2.94km^2 of AP mined ground using only manual. Working without mechanical clearance, the daily average productivity for a South Sudanese deminer is 20m^2 and can be expected to demine for 180 days a year. Thus, in order to clear the projected requirement of 0.6km^2 per year there is a requirement for up to 12 demining teams (15 lanes each) which will have the capacity to clear more than 3km^2 of mined ground over five years.

Cluster Munitions Clearance Requirement

In addition, there will be a requirement to clear 141 cluster strikes and 30 battle areas extending over 6.4 km^2. Six Cluster Munitions/BAC clearance teams will deploy and have the combined capacity to clear more than 1km^2 each per year as well as two mechanical clearance teams that will each have the capacity to clear an additional 350,000m^2 per year. So again, there is more than adequate capacity to address the known hazards as well as some redundancy should additional contamination be identified.

Road Clearance Requirement

Finally there is still a significant problem with mined roads, the plan puts forward sufficient capacity to survey and clear 352 km of road per year for two years, which should not only clear all remaining confirmed and suspected mined roads but also generate a surplus capacity to assist with other clearance requirements should the need arise. It is important this buffer is maintained as many of the mined roads are hard to access and the teams will spend some time simply getting to their start points.

18 Detailed Work Plan: Qualitative information

A detailed work plan showing how each of the 353 tasks remaining in South Sudan is attached as Annex A. This shows the methodology that will be adopted for every task. All tasks will as a first step be subjected to extensive non-technical survey to determine the actual clearance requirement and regular monitoring from the clearance organisation, the national a

Methodology to be used

18.1 Non–Technical Survey Teams

South Sudan will continue to rely on the use of manual clearance techniques and wherever possible to mechanically assist the manual teams. Survey teams have been deployed extensively in recent years and have achieved significant results in reducing the overall estimate of contamination down to a manageable level. South Sudan plans to continue to deploy non-technical survey teams, particularly to those suspect areas that are significantly larger than the proven average task size. At the time of writing there remain 72 mined areas that have been classed as suspect hazard areas on the contamination database that account for a combined area of 5,173,432m^2 (5.1 km^2) that are scheduled to be resurveyed as there is some doubt about the original reports. In Jonglei State there are 12 potential mined areas that currently are recorded as contaminating 3.82km^2. This would suggest that each one of these tasks is almost ten times the historical average for similar tasks and so these figures are considered unrealistic. Unfortunately, ongoing insecurity has prevented NTS teams accessing these sites, but all relevant stakeholders agree that once safe access to these sites is possible that around 80% of this area will be cancelled. For planning purposes, the historical average has been used to calculate the likely clearance requirement.

18.2 Mine clearance

As has already been stated, mine clearance will be conducted by the use of manual and mechanical methods. The use of both methodologies, which have proved to be complementary, is well established in South Sudan. South Sudan has both minimum metal anti-personnel and anti-vehicle mines. To assist the detection of such hazards South Sudan has increased its use of dual sensor (ground penetrating radar and metal detector combination) detectors. The use of GPR detectors is at the heart of South Sudan's plans for road clearance.

18.3 Cluster Munition and Battle Area Clearance

South Sudan has developed a strong methodology for the clearance of cluster munitions using large loop detectors. These allow the operator to discriminate between potential cluster munition sized targets and general clutter and thus improve clearance rates. Operators in South Sudan have further

enhanced the productivity of cluster munitions clearance teams through the use of mechanical vegetation cutting equipment.
The clearance of cluster munitions is done using "large loop" detectors which can be calibrated to discriminate the size of signals and thereby allow for swift clearance as only the targets that generate a reading less than that of a cluster munition can be ignored.

18.4 Road Clearance

Anti-vehicle mines with minimal metal content were used during the conflict in South Sudan and continue to present a challenge to clearance teams. South Sudan has developed a specialist clearance capacity that makes full use of dual sensor detectors to clear stretches of road at an efficient rate. All clearance is then verified by Mine Detection Dog teams to confirm the quality of the clearance. This combination has been shown to achieve clearance rates of one linear kilometre of road per day (8,000m^2).

19 Milestones for completion

This plan outlines the overall optimal requirement for the full clearance of all hazards within the extension period. The plan demonstrates how the suggested capacity is sufficient to clear all of the country's minefields, cluster strikes and battlefields. This section demonstrates how the progress could be mapped, but it is important to note that the actual progress achieved in each year will be dependent upon the balance of team type deployed. So for example in the early years of the extension, it might be reasonable to expect the rate of clearance of cluster munitions tasks exceed the projected rate, but over the course of the request it is expected that some of those teams will reconfigure to a mine clearance role and thus that the rate of mine clearance will catch up over the course of the extension. Thus the following section serves to demonstrate that the planned capacity is adequate and to indicate the likely milestones for progress.

The suggested capacity will be able to deliver the following outputs:

Manual mineclearance

There is a requirement to clear 104 tasks that are estimated to contaminate 2,942,877m^2. 15 Lane demining teams are expected to clear 300m^2 per team per day, which equates to 52,800m^2 per team per year. However that assumes that the teams lose no working days to travel, COVID restrictions,

insecurity or rain. None of which can be predicted with any certainty. Accordingly the plan envisages that four weeks of work are lost by each team each year to account for these losses. Thus a planning figure of 46,200m^2 per team per year.
The total clearance requirement includes those totals have already been identified as well as an additional safety factor of 10% of the current estimates to account for newly identified tasks and the impacts of other unforeseen circumstances. The table below indicates the contamination at the start of each year along with the expected clearance to be achieved in that year. It also projects the number of minefields that will be cleared each year and that the number that will remain at the end.

	Capacity		Potential Output			
	Area (m^2)	# of Teams	Area Cleared	# of tasks cleared	Remaining Area at year end (m^2)	# of Tasks remaining
2021	2,942,877	12	554,400	20	2,388,477	85
2022	2,203,677	12	554,400	20	1,834,077	65
2023	1,570,077	12	554,400	20	1,279,677	45
2024	936,477	12	554,400	25	725,277	20
2025	302,877	10	462,000	16	263,277	4
2026		5	462000	15	NIL	NIL

This projection shows that there sufficient capacity to address a small number of tasks that may yet be uncovered.

Mechanical clearance
There is a requirement to clear 54 tasks mechanically that extend over an area of 3,210,451m^2.
Mechanical teams for both mineclearance and cluster munition clearance are expected to clear 2,000m^2 per team per day. This equates to 352,000m^2 per team per year. However it is inevitable that time will be lost to deployment, COVID and security issues, and so for this analysis a full month of output has been discounted for each team each year. In this case the margin for safety has been calculated
This results in a planning output of 308,000m^2 per machine per year.

	Capacity		Potential Output		
	Area (m^2)	# Teams	Area Cleared	Area Remaining	# tasks remaining
2021	3,210,451	2	924,000	2,286,451	38

	Capacity		Potential Output		
	Area (m^2)	# Teams	Area Cleared	Area Remaining	# tasks remaining
2022	2,506,451	2	616,000	1,670,451	27
2023	1,802,451	2	616,000	1,054,451	16
2024	1,098,451	2	616,000	438,451	5
2025	394,451	2	440,000	NIL	NIL

Cluster munition and Battle Area Clearance tasks

The Clearance requirement for cluster munitions' clearance tasks and Battle Area Clearance tasks is estimated to be a total 168 tasks contaminating 7,687,872m^2. Cluster munitions clearance teams using manual clearance drills are expected to clear 1,000m^2 per team per day, while mechanically supported teams are expected to clear 2,000m^2 per day. This equates to 176,000m^2 and 352,000m^2 per team per year. Once again, as a general factor of safety to guard against COVID, insecurity and travel time the expected productivity of each team has been calculated on the assumption that one month each year will be lost to such delays.

	Capacity		Remaining problem	
	# Teams	Area Cleared	Remaining Area at end of year (m^2)	Number of tasks remaining
2021	8 Manual+ 2 Mechanical	1,232,000 man + 616,000 mech	5,839,872	123
2022	7 Manual+ 2 Mechanical	1,078,000 man + 616,000 mech	4,145,872	81
2023	7 Manual+ 2 Mechanical	1,078,000 man + 616,000 mech	2,451,872	44
2024	7 Manual+ 2 Mechanical	1,078,000 man + 616,000 mech	757,872	7
2025	7 Manual	792,000 man	Nil	Nil

Prioritisation of areas

South Sudan is now into the end-game of its clearance efforts. Every one of the remaining hazards needs to be cleared and, given the enormity of the work that has already been undertaken, aside from those tasks where specific humanitarian interventions are planned, few of the remaining tasks can be prioritized for immediate clearance. Thus, the intention is to be pragmatic in the sequencing of tasks for clearance and to deploy the clearance teams through a selection process that aims to balance; security, logistical requirements, and concentration of effort. South Sudan believes that this combination will need to the most efficient clearance plan that allows for optimal supervision and monitoring of clearance efforts.

20 Financial / Institutional Capacities

Cost of Clearance

In order to determine the cost of clearance throughout the duration of this extension request, estimates have been made based on the current costs with a small increase added to account for inflation. This has led to the following assumptions that have been used:

- Cost of one 15 man demining team with all overheads will be $900,000
- The cost of one mechanical demining team with all overheads will be $2.2million per year
- The cost of one BAC/Cluster munitions team month with all overheads $650,000 per year
- The cost of a mechanically assisted BAC/Cluster munitions team will be $1.2 million per year
- The cost of a specialist road clearance team will be $1.2 million per year

Using these values and the capacity requirements outlined in section 14, leads to the following deduction:

Team Type	Cost / Team ($million/yr)	21/22	22/23	23/24	24/25	25/26	Budget
15 Lane Manual Demining	# Of teams	12	12	12	12	12	
	$0.9million	10.8	10.8	10.8	10.8	10.8	54
BAC team	# Of teams	8	7	7	7	7	7
	$0.65 million	5.2	4.55	4.55	4.55	4.55	23.4
Mechanical Demining teams	# Of teams	2	2	2	2	2	
	$2.2 million	6.6	4.4	4.4	4.4	4.4	24.2
Mechanical BAC teams	# Of teams	2	2	2	2		8
	$1.2 million	2.4	2.4	2.4	2.4		9.6
Road Clearance team	# Of teams	2	2				
	$1.2 million	2.4	2.4				4.8
Survey	# Of teams	6	6	6	6	4	
	$0.5 million	3	3	3	3	2	10
National Authority	1	1	1	1	1	1	
	$1.0 million	1	1	1	1	1	5
Quality Assurance	1	1	1	1	1	1	
	$3 million	3	3	3	2	2	13
Total cost per year		34.4	31.55	29.15	28.15	24.75	148.0

This combined capacity is projected to deliver the following outputs over the five years of this plan:

- Manual clearance 3,141,600m^2 of minefields
- Mechanical clearance 3,212,000m^2 of minefields
- Cluster munitions/BAC 4,576,000m^2 of battle areas and cluster strikes by manual search techniques
- Cluster munitions/BAC 2,816,000m^2 of battle areas and cluster strikes by mechanically assisted search techniques
- 704km of road cleared

Thus, the combined output is expected to be: 6,353,600m^2 of mined areas
7,392,000m^2 of cluster strikes and battle areas
704km of road searched for AT mines

Thus, the projected amount is that required to address all known minefields, cluster strikes and battle areas within South Sudan, but leaves little capacity to address new contamination.

Concept Notes, supported by the Government of South Sudan and submitted by international NGOs currently operating in the country are attached to this document as Annexes B and C

What are the expected sources of funding, (national and international)?
Raising international support for South Sudan has become increasingly challenging. There are multiple competing demands on humanitarian funding and with near perpetual uncertainty surrounding the peace process, all independent operators have struggled to develop the critical mass needed to make clearance efficient. This situation is further exacerbated by the logistical challenges faced in South Sudan that impacts upon the costs of clearance. Finally, the Government of South Sudan has limited its support to mine action to assistance to the running costs of the NMAA but has made no resources available for clearance activities or risk education. Moving forward it is critical to the long term success of this plan that the National Mine Action Authority are sufficiently well supported to establish themselves as the long term response and management capacity to address the residual contamination that will inevitably remain beyond the completion of the proactive search of all known hazardous areas.

In recent years the funding allocated to actual Demining clearance activities have been as follows:

Organisation	Amount ($million)		
	2018	2019	2020
UNMAS	24.30	24.30	25.20
MAG (non UNMAS)	5.59	5.10	4.10
DDG(non-UNMAS)	1.12	1.22	1.22
DCA (non-UNMAS)	1.0	1.0	1.00
Total	32.01	31.66	31.42

From this it can be seen that current funding levels are not sufficient to meet the requirements of the extension request, and that an injection of an additional $3million per year will be needed to meet the goal. This is the requirement to deliver the optimal solution, the reality is that without the injection of increased funding then the programme will remain at its existing capacity. In turn this means that a greater proportion of the overall budget will be spent on support (headquarters) costs and proportionally less will go direct to the field. However an increase in funding will not lead to

increased support requirement and thus will deliver greater efficiencies, especially if the additional money is directed to those organisations that are already established in South Sudan.

Currently there is very little certainty of future funding in South Sudan, UNMAS receives the majority of its budget from the Assessed Budget, which is expected to grow smaller in the coming years and the bilaterally funded NGO activities are funded on an annual basis and are subject to factors beyond their control. UNMAS is therefore working with the current Chair of the Mine Action Support Group to stimulate interest in meeting the needs of the sector to deliver the goals outlined in this request.

Nevertheless the greatest risk to this plan is undoubtedly a return to violence. The international community are already supporting the country with more than $2billion dollars of assistance each year and are struggling to cope with the needs of six million displaced people. Widespread flooding in 2019 resulted in the loss of thousands of cattle that in turn has accentuated the ongoing inter-communal violence that primarily revolves around grazing rights and cattle migration. Thankfully, the Revitalized Agreement on the Resolution of the Conflict in South Sudan is holding and steady progress is being made towards the power sharing within the country, thus there are grounds for optimism. Nevertheless, the needs of South Sudan are immense and funding for mine action is often relegated down the list of donor priorities.

Despite these challenges significant resources do flow into South Sudan, and it is clear that if the current funding is not only sustained but boosted by a small injection of additional support then this plan is very achievable.

21 Other considerations

Since its creation, South Sudan has seldom been at peace, but at the time of writing the politically motivated fighting has abated, but nevertheless inter-communal violence continues and is prohibiting the clearance of known hazards. South Sudan's APMBC extension request is conditional upon the establishment and maintenance of sustained peace. In recent years the spread of contamination across the country has meant that it has almost always been possible to deploy mine action teams to clear hazards in parts of the country that were unaffected by the fighting. However, as the clearance of the country moves towards completion the need to have peace and stability in Equatoria will become ever more critical. Currently those conditions do not exist, but efforts to establish a lasting peace continue. Delivering that peace will be critical to the success of this plan.

22 Annexes

A. **Details of all remaining hazards in South Sudan**

B. **Concept Note for additional clearance capacity from Danish Demining Group**

C. **Concept Note for additional clearance capacity from Mines Advisory Group**

Summary of the outstanding clearaance requirement and proposed clearance methodology for the Greater Equatoria region

Region	State	County	Payam	Boma	Hazard ID	Area	Hazard Type	Date Recorded	Methodology	CHA/SHA	Type
Summary of AP Minefields for MANUAL CLEARANCE											
GEQ	Central Equatoria	Juba	Northern	Kworojik	G4S-017-20	1,990	Minefield (AP)	5-Jun-20	Manual	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lirya	Ngangala	MAG-015-19	10,036	Minefield (AP)	1-Jul-19	Manual	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lokiliri	Tingli	G4S-001-19	28,835	Minefield (AP)	27-Apr-19	Manual	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lirya	Ilyangari	TDI-289-18	12,314	Minefield (AP)	9-Jun-18	Manual	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lirya	Ngangala	SIM-019-13	44,148	Minefield (AP)	10-Mar-18	Manual	CHA	AP Mines
GEQ	Central Equatoria	Yei	Yei Town	Ronyi	DDG-167-15	4,464	Minefield (AP)	10-Oct-15	Manual	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lirya	Ilyangari	G4S-116-15	2,928	Minefield (AP)	3-Oct-15	Manual	CHA	AP Mines
GEQ	Central Equatoria	Yei	Yei Town	Yei	NPA-078-15	7,862	Minefield (AP)	23-Jun-15	Manual	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Aru	MAG-228-15	11,000	Minefield (AP)	29-May-15	Manual	CHA	AP Mines
GEQ	Central Equatoria	Yei	Yei Town	Rwonyi	NPA-070-15	20,699	Minefield (AP)	5-May-15	Manual	CHA	AP Mines
GEQ	Central Equatoria	Lainya	Kenyi	Limbe	TDI-035-13	4,908	Minefield (AP)	26-Apr-14	Manual	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Odemo	NPA-172-13	25,013	Minefield (AP)	6-Nov-13	Manual	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Karpeto	TDI-061-13	32,554	Minefield (AP)	19-Feb-13	Manual	CHA	AP Mines
GEQ	Central Equatoria	Yei	Mugwo	Jombu	NPA-008-12	2,542	Minefield (AP)	11-Dec-12	Manual	CHA	AP Mines
GEQ	Central Equatoria	Terekeka	Rijong	Kowori	DA-SS-6130	400	Minefield (AP)	17-Mar-12	Manual	CHA	AP Mines
GEQ	Central Equatoria	Lainya	Kupera	Kupera	DA-SS-4382	10,350	Minefield (AP)	27-May-10	Manual	CHA	AP Mines
GEQ	Central Equatoria	Terekeka	Terekeka	Tindilo	DA-SS-1909	2,400	Minefield (AP)	14-Feb-08	Manual	CHA	AP Mines
GEQ	Central Equatoria	Juba	Northern	New Site	G4S-013-20	1,600	Minefield (AP)	5-May-20	Manual	SHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Lobonok	DCA-120-17	3,735	Minefield (AP)	17-Mar-17	Manual	SHA	AP Mines
GEQ	Central Equatoria	Morobo	Gulumbi	Kendila	DA-SS-6150	758	Minefield (AP)	12-Dec-13	Manual	SHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Lobonok	DA-SS-3289	1,257	Minefield (AP)	15-Jun-13	Manual	SHA	AP Mines
GEQ	Central Equatoria	Juba	Lirya	Lirya	DA-SS-4294	15,000	Minefield (AP)	4-May-10	Manual	SHA	AP Mines
GEQ	Central Equatoria	Lainya	Kupera	Kupera	DA-SS-3583	9,000	Minefield (AP)	29-Jul-09	Manual	SHA	AP Mines
GEQ	Central Equatoria	Juba	Lirya	Ngulere	DA-SS-2383	6,000	Minefield (AP)	3-Jun-08	Manual	SHA	AP Mines
GEQ	Central Equatoria	Terekeka	Terekeka	Tindilo	DA-SS-2123	5,655	Minefield (AP)	25-Mar-08	Manual	SHA	AP Mines
GEQ	Central Equatoria	Terekeka	Terekeka	Tindilo	DA-SS-473	3,142	Minefield (AP)	22-Jun-05	Manual	SHA	AP Mines
GEQ	Central Equatoria	Terekeka	Terekeka	Tindilo	DA-SS-478	8,100	Minefield (AP)	22-Jun-05	Manual	SHA	AP Mines
GEQ	Central Equatoria	Terekeka	Terekeka	Tindilo	DA-SS-477	12,723	Minefield (AP)	22-Jun-05	Manual	SHA	AP Mines
GEQ	Central Equatoria	Terekeka	Terekeka	Tindilo	DA-SS-476	14,294	Minefield (AP)	22-Jun-05	Manual	SHA	AP Mines
GEQ	Eastern Equatoria	Kapoeta East	Katodori	Nanaknak	MCH-048B-16	3,276	Minefield (AP)	7-Jun-19	Manual	CHA	AP Mines
GEQ	Eastern Equatoria	Torit	Hiyala	Tirrangore	MAG-110-16	127,240	Minefield (AP)	20-May-16	Manual	CHA	AP Mines
GEQ	Eastern Equatoria	Torit	Bur	Oudo	TDI-036-16	67,787	Minefield (AP)	16-Apr-16	Manual	CHA	AP Mines
GEQ	Eastern Equatoria	Budi	Komori	Monita	MAG-303-15	20,800	Minefield (AP)	2-Jan-16	Manual	CHA	AP Mines
GEQ	Eastern Equatoria	Magwi	Magwi	Kit 4	NPA-139-13	2,596	Minefield (AP)	18-Sep-13	Manual	CHA	AP Mines

Region	State	County	Payam	Boma	Hazard ID	Area	Hazard Type	Date Recorded	Methodology	CHA/SHA	Type
GEQ	Eastern Equatoria	Magwi	Pageri	Ayii	G4S-500-18	12,000	Minefield (AP)	22-Jul-18	Manual	SHA	AP Mines
Sub Total					**35**	**537,406**					
Summary of AP Minefields for MECHANICAL CLEARANCE											
GEQ	Central Equatoria	Juba	Lobonok	Odemo	DA-SS-6052D	111,057	Minefield (AP)	4-Apr-20	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lokiliri	Tingli	G4S-026B-19	152,171	Minefield (AP)	21-Mar-20	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Juba	Rokon	Rokon	G4S-006-20	6,470	Minefield (AP)	28-Feb-20	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lirya	Ngulere	MTI-122C-15	5,780	Minefield (AP)	14-Dec-19	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Juba	Ganji	Kuli Papa	G4S-076-16	46,599	Minefield (AP)	10-Jul-18	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Karpeto	TDI-047-18	54,894	Minefield (AP)	2-Feb-18	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Karpeto	TDI-024-18	6,975	Minefield (AP)	19-Jan-18	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Terekeka	Tindilo	Peri	G4S-358-17	415,327	Minefield (AP)	22-Jun-17	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Aru	DCA-571-15	200,396	Minefield (AP)	2-Jan-16	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Kelang	DML-180-15	78,000	Minefield (AP)	13-Nov-15	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Kajo-keji	Liwolo	Dongoro	DML-175-15	13,000	Minefield (AP)	31-Oct-15	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Lobonok	G4S-076-15	2,446	Minefield (AP)	22-Jun-15	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Lobonok	G4S-074-15	25,379	Minefield (AP)	22-Jun-15	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Morobo	Kimba	Kaya	G4S-317-14	8,464	Minefield (AP)	2-Jan-15	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Lainya	Kenyi	Loka West	DA-SS-6267	14,148	Minefield (AP)	28-Apr-14	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Lainya	Mukaya	Dimo	DA-SS-4281	5,700	Minefield (AP)	27-Apr-14	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Yei	Yei Town	Kargulu	DA-SS-6224	26,792	Minefield (AP)	15-Apr-14	Mechanical	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lirya	Lirya	G4S-255-16	1,822	Minefield (AP)	17-Mar-16	Mechanical	SHA	AP Mines
GEQ	Central Equatoria	Juba	Lirya	Ngangala	MTI-070-15	10,305	Minefield (AP)	27-Feb-15	Mechanical	SHA	AP Mines
GEQ	Eastern Equatoria	Torit	Bur	Bur	MAG-213B-16	22,263	Minefield (AP)	6-Apr-20	Mechanical	CHA	AP Mines
GEQ	Eastern Equatoria	Magwi	Pajok	Pajok	G4S-532-16	118,988	Minefield (AP)	21-Jun-16	Mechanical	CHA	AP Mines
GEQ	Eastern Equatoria	Magwi	Pajok	Pogee	DA-SS-2115	217,904	Minefield (AP)	31-Oct-15	Mechanical	CHA	AP Mines
GEQ	Eastern Equatoria	Torit	Bur	Oudo	MTI-151-15	2,500	Minefield (AP)	27-May-15	Mechanical	CHA	AP Mines
GEQ	Eastern Equatoria	Budi	Loriyok	Ngarich	MF-SS-36	33,599	Minefield (AP)	11-May-14	Mechanical	CHA	AP Mines
GEQ	Eastern Equatoria	Lafon	Lohutok	Loming	MF-SS-43	83,835	Minefield (AP)	6-Mar-14	Mechanical	CHA	AP Mines
GEQ	Eastern Equatoria	Magwi	Pageri	Ayii	MTI-138-15	8,033	Minefield (AP)	15-May-15	Mechanical	SHA	AP Mines
GEQ	Western Equatoria	Mundri East	Kediba	Kediba1	DA-SS-2241	2,000	Minefield (AP)	28-Mar-14	Mechanical	SHA	AP Mines
GEQ	Western Equatoria	Mundri East	Lozoh	Lanyi	DA-SS-6106	300	Minefield (AP)	27-Mar-14	Mechanical	SHA	AP Mines
					28	**1,675,147**					

Region	State	County	Payam	Boma	Hazard ID	Area	Hazard Type	Date Recorded	Methodology	CHA/SHA	Type
Summary of AP Minefields for RESURVEY (provisionally planned for manual clearance)											
GEQ	Central Equatoria	Juba	Northern	Juba Na Bari	MAG-420-13	-	Minefield (AP)	6-Jun-13	Resurvey	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Karpeto	TDI-051-12	-	Minefield (AP)	4-Dec-12	Resurvey	CHA	AP Mines
GEQ	Central Equatoria	Kajo-keji	Nyepo	Kekidi	TDI-041-12	-	Minefield (AP)	13-Nov-12	Resurvey	CHA	AP Mines
GEQ	Central Equatoria	Morobo	Kimba	Yondu	DA-SS-6145	83,741	Minefield (AP)	5-May-12	Resurvey	CHA	AP Mines
GEQ	Central Equatoria	Terekeka	Terekeka	Tindilo	DA-SS-5833	-	Minefield (AP)	3-May-12	Resurvey	CHA	AP Mines
GEQ	Central Equatoria	Juba	Lirya	Ngulere	DML-017-16	64,776	Minefield (AP)	24-May-16	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Yei	Mugwo	Payawa	MA-IS-SS-73-SS-1	2,683	Minefield (AP)	27-May-15	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Yei	Mugwo	Payawa	MA-IS-SS-73-SS-3	8,800	Minefield (AP)	27-May-15	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Yei	Mugwo	Jombu	MA-IS-SS-74-SS-1	4,475	Minefield (AP)	25-May-15	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Morobo	Gulumbi	Giliri	G4S-314-14	-	Minefield (AP)	14-Nov-14	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Odemo	MAG-619-13	-	Minefield (AP)	18-Mar-14	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Morobo	Gulumbi	Kindi	MA-IS-SS-90-SS-2	7,840	Minefield (AP)	12-Dec-13	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Karpeto	TDI-023-13	-	Minefield (AP)	24-Jan-13	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Kuruki	DA-SS-6022	521	Minefield (AP)	16-May-12	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Lainya	Kenyi	Limbe	DA-SS-4981	-	Minefield (AP)	25-Nov-10	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Juba	Lokiliri	Lokiliri	DA-SS-3870	-	Minefield (AP)	24-Nov-09	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Morobo	Gulumbi	Morobo	DA-SS-2802	-	Minefield (AP)	17-Jul-08	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Juba	Lirya	Lirya	DA-SS-2382	-	Minefield (AP)	3-Jun-08	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Terekeka	Tindilo	Rume	MA-IS-SS-130-SS-1	12,760	Minefield (AP)	5-May-08	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Terekeka	Terekeka	Tindilo	DA-SS-1920	1,885	Minefield (AP)	18-Feb-08	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Juba	Dolo	Tuliang	MA-IS-SS-120-SS-1	19,500	Minefield (AP)	16-Jan-08	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Juba	Lobonok	Tombur	MA-IS-SS-98-SS-3	9,750	Minefield (AP)	9-Dec-07	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Juba	Bungu	Bele	DA-SS-999	33,555	Minefield (AP)	21-Dec-06	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Morobo	Gulumbi	Morobo	DA-SS-866	-	Minefield (AP)	25-Aug-06	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Lainya	Kenyi	Kenyi	DA-SS-500	-	Minefield (AP)	20-Sep-05	Resurvey	SHA	AP Mines
GEQ	Eastern Equatoria	Budi	Komori	Budi	MF-SS-34	17,312	Minefield (AP)	28-Mar-08	Resurvey	CHA	AP Mines
GEQ	Eastern Equatoria	Budi	Komori	Budi	MF-SS-33	5,000	Minefield (AP)	28-Mar-08	Resurvey	CHA	AP Mines
GEQ	Eastern Equatoria	Budi	Komori	Budi	MF-SS-32	11,197	Minefield (AP)	28-Mar-08	Resurvey	CHA	AP Mines
GEQ	Eastern Equatoria	Budi	Komori	Budi	MF-SS-31	11,250	Minefield (AP)	28-Mar-08	Resurvey	CHA	AP Mines
GEQ	Eastern Equatoria	Torit	Imurok	Chuful	G4S-134-15	21,653	Minefield (AP)	10-Oct-15	Resurvey	SHA	AP Mines
GEQ	Eastern Equatoria	Torit	Bur	Bur	MAG-461-13	150	Minefield (AP)	12-Mar-13	Resurvey	SHA	AP Mines
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	DA-SS-5229	-	Minefield (AP)	19-Feb-11	Resurvey	SHA	AP Mines
GEQ	Eastern Equatoria	Torit	Bur	Torit	DA-SS-4891	-	Minefield (AP)	17-Jun-10	Resurvey	SHA	AP Mines
GEQ	Eastern Equatoria	Magwi	Pageri	Kit 1	MA-IS-SS-97-SS-2	7,350	Minefield (AP)	3-Dec-07	Resurvey	SHA	AP Mines
GEQ	Western Equatoria	Mundri East	Kediba	Kediba1	DA-SS-5147	95,450	Minefield (AP)	17-Jan-11	Resurvey	CHA	AP Mines
GEQ	Western Equatoria	Mundri East	Kediba	Kediba1	DA-SS-6102	108,707	Minefield (AP)	30-Mar-14	Resurvey	SHA	AP Mines

Region	State	County	Payam	Boma	Hazard ID	Area	Hazard Type	Date Recorded	Methodology	CHA/SHA	Type
GEQ	Western Equatoria	Mundri East	Kediba	Kediba1	DA-SS-6189	100,400	Minefield (AP)	28-Mar-14	Resurvey	SHA	AP Mines
GEQ	Western Equatoria	Mundri East	Lozoh	Lui1	DA-SS-6114	8,986	Minefield (AP)	27-Mar-14	Resurvey	SHA	AP Mines
GEQ	Western Equatoria	Mundri West	Mundri	Mbara	DA-SS-6107	107,917	Minefield (AP)	6-Jun-12	Resurvey	SHA	AP Mines
GEQ	Western Equatoria	Mvolo	Dari	Dari	MA-IS-SS-135-SS-1	82,500	Minefield (AP)	6-May-08	Resurvey	SHA	AP Mines
GEQ	Central Equatoria	Yei	Mugwo	Yamba	G4S-250-16	47,398	Minefield (AP)	15-Mar-16	Resurvey	CHA	AP Mines
					41	**875,556**					
Summary of AT Minefields for MANUAL CLEARANCE											
GEQ	Central Equatoria	Juba	Northern	Luri	G4S-012-19	10,000	Minefield (AT)	13-Feb-19	Manual	CHA	AT Mines
GEQ	Central Equatoria	Juba	Ganji	Kuli Papa	TDI-009-20	463	Minefield (AT)	7-Feb-19	Manual	CHA	AT Mines
GEQ	Central Equatoria	Terekeka	Tindilo	Sommaring	SIM-046a-15	1,438	Minefield (AT)	29-Apr-15	Manual	CHA	AT Mines
GEQ	Central Equatoria	Juba	Lirya	Langabu	G4S-177-13	9,604	Minefield (AT)	15-Dec-13	Manual	CHA	AT Mines
GEQ	Central Equatoria	Juba	Mangala	Mogiri	TDI-372-19	4,000	Minefield (AT)	19-Jun-19	Manual	SHA	AT Mines
GEQ	Central Equatoria	Juba	Lirya	Lirya	TDI-245-18	15,871	Minefield (AT)	21-Jun-18	Manual	SHA	AT Mines
GEQ	Eastern Equatoria	Torit	Bur	Oudo	G4S-032B-19	9,076	Minefield (AT)	24-Oct-19	Manual	CHA	AT Mines
GEQ	Eastern Equatoria	Kapoeta East	Katodori	Nangolet	DA-SS-2084	38,217	Minefield (AT)	20-Mar-11	Manual	CHA	AT Mines
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	G4S-245-16	400	Minefield (AT)	14-Mar-16	Manual	SHA	AT Mines
					9	**89,069**					
Summary of AT Minefields for MECHANICAL CLEARANCE											
GEQ	Central Equatoria	Terekeka	Tindilo	Konyoki	MAG-019-19	12,725	Minefield (AT)	13-Jul-19	Mechanical	CHA	AT Mines
GEQ	Central Equatoria	Juba	Lokiliri	Jebel Molok	G4S-030-19	10,616	Minefield (AT)	30-May-19	Mechanical	CHA	AT Mines
GEQ	Central Equatoria	Juba	Lobonok	Karpeto	G4S-501-18	10,000	Minefield (AT)	25-Jul-18	Mechanical	CHA	AT Mines
GEQ	Central Equatoria	Yei	Yei Town	Logo 2	MA-IS-SS-70-SS-2	12,081	Minefield (AT)	23-Apr-14	Mechanical	SHA	AT Mines
GEQ	Eastern Equatoria	Magwi	Pageri	Amee	MAG-026B-19	85,696	Minefield (AT)	25-Nov-19	Mechanical	CHA	AT Mines
GEQ	Eastern Equatoria	Kapoeta East	Katodori	Buno	MCH-033-16	27,335	Minefield (AT)	8-May-19	Mechanical	CHA	AT Mines
					6	**158,453**					
Summary of AT Minefields for RESURVEY (provisionally planned for manual clearance)											
GEQ	Central Equatoria	Juba	Lobonok	Kuruki	MAG-589-13	10,000	Minefield (AT)	7-Mar-14	Resurvey	CHA	AT Mines
GEQ	Central Equatoria	Juba	Lobonok	Karpeto	DA-SS-2814	1,963	Minefield (AT)	17-Jul-08	Resurvey	CHA	AT Mines
GEQ	Central Equatoria	Juba	Lobonok	Sindiru	MAG-462-13	-	Minefield (AT)	14-Jun-13	Resurvey	SHA	AT Mines
GEQ	Central Equatoria	Terekeka	Terekeka	Tindilo	DA-SS-1265	123,200	Minefield (AT)	6-Jun-07	Resurvey	SHA	AT Mines
					4	**135,163**					

Region	State	County	Payam	Boma	Hazard ID	Area	Hazard Type	Date Recorded	Methodology	CHA/SHA	Type
Summary of CLUSTER MUNITIONS STRIKES for MANUAL CLEARANCE											
GEQ	Central Equatoria	Terekeka	Tindilo	Peri	MAG-018A-19	319,367	Cluster Munitions	27-May-20	Manual	CHA	CM
GEQ	Central Equatoria	Juba	Lirya	Ngulere	MTI-117B-15	15,556	Cluster Munitions	30-Nov-19	Manual	CHA	CM
GEQ	Central Equatoria	Juba	Lokiliri	Kubi	G4S-142D-16	5,883	Cluster Munitions	21-Mar-20	Manual	CHA	CM
GEQ	Central Equatoria	Juba	Lobonok	Nyarbang	TDI-094-20	18,928	Cluster Munitions	20-Mar-20	Manual	CHA	CM
GEQ	Central Equatoria	Terekeka	Tindilo	Peri	MAG-008C-19	44,213	Cluster Munitions	19-Mar-20	Manual	CHA	CM
GEQ	Central Equatoria	Juba	Lobonok	Aru	MAG-002-20	11,485	Cluster Munitions	10-Mar-20	Manual	CHA	CM
GEQ	Central Equatoria	Juba	Lokiliri	Kubi	MAG-022-19	17,010	Cluster Munitions	31-Aug-19	Manual	CHA	CM
GEQ	Central Equatoria	Terekeka	Tindilo	Rume	MAG-061B-18	102,508	Cluster Munitions	4-Jul-19	Manual	CHA	CM
GEQ	Central Equatoria	Terekeka	Tindilo	Peri	MAG-007B-19	25,790	Cluster Munitions	19-Jun-19	Manual	CHA	CM
GEQ	Central Equatoria	Juba	Lokiliri	Kubi	G4S-025-19	162,383	Cluster Munitions	24-Apr-19	Manual	CHA	CM
GEQ	Central Equatoria	Terekeka	Tindilo	Konyoki	MAG-004-19	48,537	Cluster Munitions	2-Apr-19	Manual	CHA	CM
GEQ	Central Equatoria	Juba	Lobonok	Karpeto	G4S-536-18	35,772	Cluster Munitions	19-Dec-18	Manual	CHA	CM
GEQ	Central Equatoria	Terekeka	Tindilo	Sommaring	MAG-128-18	55,456	Cluster Munitions	24-Nov-18	Manual	CHA	CM
GEQ	Central Equatoria	Terekeka	Tindilo	Tindalo	MAG-127-18	110,538	Cluster Munitions	14-Nov-18	Manual	CHA	CM
GEQ	Central Equatoria	Terekeka	Tindilo	Rume	MAG-125-18	210,208	Cluster Munitions	1-Nov-18	Manual	CHA	CM
GEQ	Central Equatoria	Yei	Yei Town	Gimunu	TDI-125-15	43,632	Cluster Munitions	20-Aug-18	Manual	CHA	CM
GEQ	Central Equatoria	Juba	Dolo	Kuda	DA-SS-6610	19,048	Cluster Munitions	9-Aug-18	Manual	CHA	CM
GEQ	Central Equatoria	Juba	Lirya	Lirya	TDI-250-18	9,104	Cluster Munitions	17-May-18	Manual	CHA	CM
GEQ	Central Equatoria	Juba	Lirya	Palong	TDI-219-18	10,000	Cluster Munitions	28-Apr-18	Manual	CHA	CM
GEQ	Central Equatoria	Lainya	Lainya	Lokurubang	G4S-539-16	27,000	Cluster Munitions	20-Jun-16	Manual	CHA	CM
GEQ	Central Equatoria	Terekeka	Tindilo	Sommaring	TDI-004-16	10,000	Cluster Munitions	5-Jan-16	Manual	CHA	CM
GEQ	Central Equatoria	Juba	Lobonok	Karpeto	NPA-055-15	70,840	Cluster Munitions	24-Apr-15	Manual	CHA	CM
GEQ	Central Equatoria	Juba	Lobonok	Karpeto	NPA-053-15	22,300	Cluster Munitions	23-Apr-15	Manual	CHA	CM
GEQ	Central Equatoria	Terekeka	Tindilo	Sommaring	SIM-004A-15	100	Cluster Munitions	24-Feb-15	Manual	CHA	CM
GEQ	Central Equatoria	Morobo	Kimba	Kimba	NPA-106-14	72,371	Cluster Munitions	7-Nov-14	Manual	CHA	CM
GEQ	Central Equatoria	Morobo	Kimba	Kimba	NPA-049-14	28,488	Cluster Munitions	4-May-14	Manual	CHA	CM
GEQ	Central Equatoria	Morobo	Kimba	Kimba	NPA-048-14	16,734	Cluster Munitions	4-Apr-14	Manual	CHA	CM
GEQ	Central Equatoria	Yei	Tore	Adiyo	NPA-031-14	12,019	Cluster Munitions	21-Feb-14	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Moli	DA-SS-6014	159,939	Cluster Munitions	11-May-12	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pajok	Pajok	MAG-327-15	15,620	Cluster Munitions	24-Oct-15	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Ame	NPA-107B-13	20,199	Cluster Munitions	29-May-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	MAG-124B-18	72,041	Cluster Munitions	28-May-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	MAG-021A-19	58,243	Cluster Munitions	25-May-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Amee	NPA-067-15	100,490	Cluster Munitions	29-Apr-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	DA-SS-6018B	5,879	Cluster Munitions	4-Apr-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Torit	Imurok	Imurok1	MAG-123C-15	28,887	Cluster Munitions	3-Apr-20	Manual	CHA	CM

Region	State	County	Payam	Boma	Hazard ID	Area	Hazard Type	Date Recorded	Methodology	CHA/SHA	Type
GEQ	Eastern Equatoria	Magwi	Pageri	Amee	TDI-109-20	19,268	Cluster Munitions	31-Mar-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Torit	Kudo	Omeo	G4S-009-20	10,233	Cluster Munitions	13-Mar-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	MAG-009B-19	36,281	Cluster Munitions	10-Mar-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Moli	MAG-012-15	78,198	Cluster Munitions	16-Feb-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Ayii	NPA-067A-14	11,971	Cluster Munitions	8-Feb-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Amee	NPA-069B-15	39,633	Cluster Munitions	7-Feb-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Licari	G4S-029B-19	17,070	Cluster Munitions	30-Jan-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Amee	MAG-001-20	14,999	Cluster Munitions	27-Jan-20	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	G4S-048-19	10,000	Cluster Munitions	13-Dec-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pajok	Pajok	G4S-047-19	10,522	Cluster Munitions	12-Dec-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	G4S-040-19	88,924	Cluster Munitions	10-Dec-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Obbo	MAG-030-19	10,850	Cluster Munitions	22-Nov-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Obbo	MAG-031-19	10,943	Cluster Munitions	22-Nov-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Amee	MAG-028-19	10,367	Cluster Munitions	17-Oct-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Obbo	MAG-027-19	10,630	Cluster Munitions	11-Oct-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	MAG-011-19	30,011	Cluster Munitions	1-Oct-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Ikotos	Ikotos	Ikotos	G4S-028-19	24,410	Cluster Munitions	2-Jul-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Torit	Imurok	Isaloro1	MAG-084B-16	32,457	Cluster Munitions	19-Jun-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Torit	Imurok	Imurok1	MAG-088C-16	28,832	Cluster Munitions	17-Jun-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Kapoeta South	Kapoeta	Lomangole	TDI-221B-18	17,052	Cluster Munitions	14-Jun-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Kapoeta North	Paringa	Parenga	TDI-252-19	23,800	Cluster Munitions	7-May-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Kapoeta South	Kapoeta	Katome	TDI-249-19	10,000	Cluster Munitions	6-May-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Torit	Imurok	Imurok	TDI-158-19	18,146	Cluster Munitions	1-Apr-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Kapoeta East	Katodori	Koroji Loyakali	TDI-153-19	165,112	Cluster Munitions	1-Apr-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Kapoeta North	Paringa	Nacolobo	TDI-071-19	10,000	Cluster Munitions	12-Feb-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Kapoeta South	Kapoeta	Nanaknak	TDI-052-19	10,000	Cluster Munitions	1-Feb-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	MAG-002-19	11,581	Cluster Munitions	31-Jan-19	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	MAG-126-18	10,346	Cluster Munitions	1-Nov-18	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Amee	G4S-521-18	6,800	Cluster Munitions	1-Oct-18	Manual	CHA	CM
GEQ	Eastern Equatoria	Torit	Imurok	Imurok1	MAG-201B-16	10,000	Cluster Munitions	2-Jun-18	Manual	CHA	CM
GEQ	Eastern Equatoria	Kapoeta South	Kapoeta	Kapoeta	TDI-222-18	14,480	Cluster Munitions	1-May-18	Manual	CHA	CM
GEQ	Eastern Equatoria	Kapoeta South	Kapoeta	Lomangole	TDI-213-18	10,122	Cluster Munitions	26-Apr-18	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pajok	Owiny Kibul	G4S-279-18	293,553	Cluster Munitions	5-Apr-18	Manual	CHA	CM
GEQ	Eastern Equatoria	Kapoeta South	Kapoeta	Kapoeta	TDI-050-17	11,883	Cluster Munitions	2-Jan-18	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Amee	TDI-045-17	10,128	Cluster Munitions	11-Nov-17	Manual	CHA	CM
GEQ	Eastern Equatoria	Torit	Imurok	Imurok1	MAG-217-16	41,441	Cluster Munitions	3-Jun-16	Manual	CHA	CM
GEQ	Eastern Equatoria	Torit	Imurok	Imurok1	MAG-086-16	4,100	Cluster Munitions	23-Mar-16	Manual	CHA	CM

Region	State	County	Payam	Boma	Hazard ID	Area	Hazard Type	Date Recorded	Methodology	CHA/SHA	Type
GEQ	Eastern Equatoria	Magwi	Pageri	Amee	MAG-294-15	5,041	Cluster Munitions	2-Jan-16	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pajok	Pajok	MAG-285-15	5,874	Cluster Munitions	27-Oct-15	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Loa	G4S-172-15	20,443	Cluster Munitions	27-Oct-15	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Loa	NPA-065-15	25,274	Cluster Munitions	11-May-15	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Ayii	NPA-064-15	7,422	Cluster Munitions	2-May-15	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Loa	MAG-164-14	10,236	Cluster Munitions	29-Mar-14	Manual	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Loa	NPA-118-13	11,243	Cluster Munitions	7-Aug-13	Manual	CHA	CM
GEQ	Western Equatoria	Mundri West	Amadi	Madebe	G4S-003-19	60,307	Cluster Munitions	15-Jan-19	Manual	CHA	CM
GEQ	Western Equatoria	Mundri West	Amadi	Madebe	G4S-002-19	41,298	Cluster Munitions	11-Jan-19	Manual	CHA	CM
GEQ	Western Equatoria	Mundri West	Mundri	Mundri	G4S-530-18	10,000	Cluster Munitions	22-Nov-18	Manual	CHA	CM
GEQ	Western Equatoria	Maridi	Maridi	Mabilindi	G4S-138-18	10,000	Cluster Munitions	19-Feb-18	Manual	CHA	CM
GEQ	Western Equatoria	Mundri West	Mundri	Mundri	G4S-525-17	10,120	Cluster Munitions	22-Nov-17	Manual	CHA	CM
GEQ	Western Equatoria	Maridi	Maridi	Sika Rhumbek	MAG-156-16	292	Cluster Munitions	18-Oct-16	Manual	CHA	CM
GEQ	Western Equatoria	Maridi	Maridi	Maridi	MAG-417-14	10,000	Cluster Munitions	29-Nov-14	Manual	CHA	CM
					87	**3,388,261**					
Summary of CLUSTER MUNITIONS STRIKES for MECHANICAL CLEARANCE											
GEQ	Central Equatoria	Lainya	Lainya	Lobgili	DA-SS-5760B	67,341	Cluster Munitions	1-Jun-19	Mechanical	CHA	CM
GEQ	Central Equatoria	Yei	Yei Town	Yei	DA-SS-6200	47,519	Cluster Munitions	14-Apr-14	Mechanical	CHA	CM
GEQ	Central Equatoria	Terekeka	Tindilo	Sommaring	MAG-003C-19	67,645	Cluster Munitions	6-Apr-20	Mechanical	CHA	CM
GEQ	Central Equatoria	Lainya	Lainya	Lokurubang	G4S-537-16	9,000	Cluster Munitions	20-Jun-16	Mechanical	CHA	CM
GEQ	Central Equatoria	Terekeka	Tindilo	Sommaring	TDI-037-16	148,269	Cluster Munitions	23-Apr-16	Mechanical	CHA	CM
GEQ	Central Equatoria	Yei	Lasu	Lasu	DDG-090-16	5,823	Cluster Munitions	6-Apr-16	Mechanical	CHA	CM
GEQ	Central Equatoria	Kajo-keji	Liwolo	Dongoro	DML-174-15	23,000	Cluster Munitions	26-Oct-15	Mechanical	CHA	CM
GEQ	Central Equatoria	Yei	Yei Town	Gimunu	DA-SS-6204	15,332	Cluster Munitions	10-Apr-14	Mechanical	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Ayii	G4S-485B-16	117,102	Cluster Munitions	21-May-20	Mechanical	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Ame	MAG-005C-19	54,619	Cluster Munitions	3-Apr-20	Mechanical	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Aliya	G4S-248C-16	119,050	Cluster Munitions	16-Sep-19	Mechanical	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Ayii	G4S-536-16	26,000	Cluster Munitions	18-Jun-16	Mechanical	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Amee	G4S-528-16	100,000	Cluster Munitions	18-Jun-16	Mechanical	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	G4S-211-15	25,000	Cluster Munitions	2-Jan-16	Mechanical	CHA	CM
GEQ	Eastern Equatoria	Torit	Imurok	Imurok1	MAG-319-15	27,638	Cluster Munitions	2-Jan-16	Mechanical	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pajok	Pajok	MAG-281-15	38,000	Cluster Munitions	2-Jan-16	Mechanical	CHA	CM
GEQ	Eastern Equatoria	Torit	Hiyala	TIRANGOLE	G4S-170-13	500,000	Cluster Munitions	28-Oct-13	Mechanical	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	Bura Mango	G4S-014-13	6,499	Cluster Munitions	14-Oct-13	Mechanical	CHA	CM
GEQ	Eastern Equatoria	Magwi	Magwi	IJULA	G4S-017-13	22,898	Cluster Munitions	14-Oct-13	Mechanical	CHA	CM
GEQ	Eastern Equatoria	Torit	Kudo	Lowoi Boma	G4S-023-13	500,000	Cluster Munitions	12-Oct-13	Mechanical	CHA	CM

Region	State	County	Payam	Boma	Hazard ID	Area	Hazard Type	Date Recorded	Methodology	CHA/SHA	Type
GEQ	Western Equatoria	Mundri East	Witto	Buoje	G4S-082-15	5,846	Cluster Munitions	23-Jun-15	Mechanical	CHA	CM
GEQ	Western Equatoria	Mundri East	Lozoh	Lui1	G4S-076-14	2,422	Cluster Munitions	30-Mar-14	Mechanical	CHA	CM
					22	**1,929,003**					

Summary of CLUSTER MUNITIONS STRIKES for RESURVEY (provisionally planned for manual clearance)											
GEQ	Central Equatoria	Yei	Yei Town	Pakula	MAG-070-12	22,725	Cluster Munitions	1-Jun-15	Resurvey	CHA	CM
GEQ	Central Equatoria	Juba	Lokiliri	Kubi	MTI-037-15	1	Cluster Munitions	3-Feb-15	Resurvey	CHA	CM
GEQ	Central Equatoria	Juba	Wonduru	Katigiri	DA-SS-5819	50,056	Cluster Munitions	19-Apr-12	Resurvey	CHA	CM
GEQ	Central Equatoria	Juba	Dolo	Tuliang	DA-SS-6622	-	Cluster Munitions	18-Jan-12	Resurvey	CHA	CM
GEQ	Central Equatoria	Juba	Lirya	Ngulere	MTI-159-15	21,548	Cluster Munitions	16-Jun-15	Resurvey	SHA	CM
GEQ	Central Equatoria	Juba	Lobonok	Karpeto	DA-SS-6304	475,503	Cluster Munitions	27-Oct-12	Resurvey	SHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Ayii	MTI-030-15	1	Cluster Munitions	29-Jan-15	Resurvey	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Ayii	MTI-171-15	1	Cluster Munitions	21-Jan-15	Resurvey	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Ayii	MTI-010-15	1	Cluster Munitions	13-Jan-15	Resurvey	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Opari	MAS-013-14	27,713	Cluster Munitions	20-Jul-14	Resurvey	CHA	CM
GEQ	Eastern Equatoria	Magwi	Pageri	Loa	NPA-060-13	18,184	Cluster Munitions	18-May-13	Resurvey	CHA	CM
GEQ	Western Equatoria	Nagero	Nagero	Nagero	TDI-072-12	175,698	Cluster Munitions	19-Dec-12	Resurvey	SHA	CM
					12	**791,431**					
Summary of BATTLEFIELDS for MANUAL BAC											
GEQ	Central Equatoria	Juba	Lokiliri	Nyolo	G4S-027B-19	2,431	Battlefield	6-Apr-20	Manual	CHA	BF
GEQ	Central Equatoria	Juba	Mangala	Jabor	G4S-522B-18	74,215	Battlefield	6-Apr-20	Manual	CHA	BF
GEQ	Central Equatoria	Juba	Mangala	Mogiri	TDI-044-20	39,374	Battlefield	11-Feb-20	Manual	CHA	BF
GEQ	Central Equatoria	Juba	Bungu	Bungu	G4S-046-19	36,159	Battlefield	1-Dec-19	Manual	CHA	BF
GEQ	Central Equatoria	Juba	Rejaf	Loggo West	G4S-018C-19	940	Battlefield	3-Apr-19	Manual	CHA	BF
GEQ	Central Equatoria	Juba	Lobonok	Morsak	G4S-330-18	43,011	Battlefield	3-May-18	Manual	CHA	BF
GEQ	Central Equatoria	Juba	Lokiliri	Nyolo	TDI-044-14	1,000	Battlefield	7-Feb-18	Manual	CHA	BF
GEQ	Central Equatoria	Terekeka	Terekeka	Yari	G4S-375-17	21,833	Battlefield	27-Jun-17	Manual	CHA	BF
GEQ	Central Equatoria	Juba	Lobonok	Lobonok	DCA-112-17	43,469	Battlefield	15-Mar-17	Manual	CHA	BF
GEQ	Central Equatoria	Juba	Lobonok	Odemo	G4S-309-16	64,000	Battlefield	3-Apr-16	Manual	CHA	BF
GEQ	Central Equatoria	Juba	Ganji	Kuli Papa	MAG-289-14	28,900	Battlefield	10-Jun-14	Manual	CHA	BF
GEQ	Central Equatoria	Juba	Lobonok	Luwala	G4S-130-18	1,296	Battlefield	13-Feb-18	Manual	SHA	BF
GEQ	Central Equatoria	Morobo	Gulumbi	Gulumbi	TDI-074-12	1,479	Battlefield	11-Dec-13	Manual	SHA	BF
GEQ	Eastern Equatoria	Magwi	Pajok	Owiny Kibul	MAG-004-20	3,632	Battlefield	1-May-20	Manual	CHA	BF
GEQ	Eastern Equatoria	Magwi	Magwi	Magwi	MAG-282B-15	57,100	Battlefield	1-Jul-19	Manual	CHA	BF
GEQ	Eastern Equatoria	Kapoeta East	Katodori	Nanaknak	TDI-287-19	180,227	Battlefield	23-May-19	Manual	CHA	BF
					16	**599,066**					

Region	State	County	Payam	Boma	Hazard ID	Area	Hazard Type	Date Recorded	Methodology	CHA/SHA	Type
Summary of BATTLEFIELDS for RESURVEY (provisionally planned for manaul clearance)											
GEQ	Central Equatoria	Lainya	Wuji	Wuji	DA-SS-5799	28,655	Battlefield	12-Dec-13	Resurvey	CHA	BF
GEQ	Central Equatoria	Morobo	Kimba	Kimba	TDI-021-13	4,674	Battlefield	21-Feb-13	Resurvey	CHA	BF
GEQ	Central Equatoria	Kajo-keji	Liwolo	Ajio	DA-SS-3304	8,100	Battlefield	30-Mar-09	Resurvey	CHA	BF
GEQ	Central Equatoria	Juba	Lokiliri	Ngerjabe	TDI-137-15	19,120	Battlefield	3-Jul-15	Resurvey	SHA	BF
GEQ	Central Equatoria	Morobo	Lujulo	Lujulo	TDI-063-12	12,333	Battlefield	15-Dec-12	Resurvey	SHA	BF
GEQ	Central Equatoria	Juba	Lokiliri	Lokiliri	DA-SS-6056	23,230	Battlefield	25-May-12	Resurvey	SHA	BF
GEQ	Central Equatoria	Yei	Lasu	Lasu	DA-SS-4043	8,100	Battlefield	5-Feb-10	Resurvey	SHA	BF
GEQ	Eastern Equatoria	Torit	Ifwotu	Kicenga	G4S-097-13	-	Battlefield	5-Nov-13	Resurvey	SHA	BF
GEQ	Eastern Equatoria	Magwi	Magwi	Ayii	DA-SS-6047	22,877	Battlefield	6-Apr-12	Resurvey	SHA	BF
GEQ	Western Equatoria	Mundri East	Lozoh	Wiroh	G4S-021-19	10,000	Battlefield	8-Apr-19	Resurvey	SHA	BF
					10	**137,089**					
Summary of MINED ROADS for ROAD CLEARANCE											
GEQ	Central Equatoria	Juba	Mangala	Bilinyang	G4S-101-14	9,345	Mined Road	8-Apr-14	Road clearance	SHA	AT Mines
GEQ	Eastern Equatoria	Magwi	Pageri	Opari	MAS-012-14	6,028	Mined Road	20-Jul-14	Road clearance	CHA	AT Mines
GEQ	Eastern Equatoria	Magwi	Magwi	Lerwa	G4S-176-14	45,000	Mined Road	30-May-14	Road clearance	CHA	AT Mines
GEQ	Central Equatoria	Juba	Lobonok	Kelang	DCA-269-16	7,054	Mined Road	2-Jan-17	Road clearance	CHA	AT Mines
GEQ	Eastern Equatoria	Lafon	Burgilo	Lafon	TDI-350D-19	627,401	Mined Road	4-Apr-20	Road clearance	SHA	AT Mines
GEQ	Western Equatoria	Maridi	Landili	Naam	DA-SS-175	1,250	Mined Road	6-Nov-12	Road clearance	SHA	AT Mines
GEQ	Western Equatoria	Maridi	Landili	Naam	DA-SS-176	1,250	Mined Road	29-Nov-08	Road clearance	SHA	AT Mines
GEQ	Western Equatoria	Maridi	Landili	Naam	DA-SS-186	3,142	Mined Road	18-Mar-04	Road clearance	SHA	AT Mines
					8	**700,470**					

Summary of the outstanding clearaance requirement and proposed clearance methodology for the Greater Upper Nile region

Region	State	County	Payam	Boma	Hazard ID	Area	Hazard Type	Date Recorded	Methodology	CHA/SHA	Type
GUN	Upper Nile	Maban	Boung	Gasmalla	MCH-021-18	66,246	Minefield (AP)	5-Feb-18	Manual	CHA	AP Mines
					1	**66,246**					
Summary of AP Minefields for MECHANICAL CLEARANCE											
GUN	Jonglei	Fangak	Phom	Pacchoul Kon	MF-SS-52B	106,293	Minefield (AP)	4-Feb-20	Mechanical	CHA	AP Mines
GUN	Jonglei	Pochalla	Pochalla	Aparangom	G4S-023-19	82,000	Minefield (AP)	16-Apr-19	Mechanical	CHA	AP Mines
GUN	Jonglei	Canal_Pigi	Kadak	Atar	DA-SS-816	1,427	Minefield (AP)	16-Mar-13	Mechanical	CHA	AP Mines
GUN	Upper Nile	Fashoda	Kodok Town	Alganal	MF-SS-10	16,385	Minefield (AP)	2-Apr-13	Mechanical	CHA	AP Mines
					4	**206,105**					
Summary of AP Minefields for RESURVEY (provisionally planned for manual clearance)											
GUN	Jonglei	Canal_Pigi	Kadak	Atar	TDI-146-18	3,600	Minefield (AP)	3-Mar-18	Resurvey	CHA	AP Mines
GUN	Jonglei	Canal_Pigi	Korwai	Canal	DA-SS-2566	20,509	Minefield (AP)	20-Jun-08	Resurvey	CHA	AP Mines
GUN	Jonglei	Canal_Pigi	Atar	Atar	MF-SS-73	-	Minefield (AP)	3-Oct-11	Resurvey	SHA	AP Mines
GUN	Jonglei	Canal_Pigi	Wuonlam	Wunadol	MA-IS-SS-165-SS-1	850,000	Minefield (AP)	23-May-09	Resurvey	SHA	AP Mines
GUN	Jonglei	Canal_Pigi	Wuonlam	Wunlem	MA-IS-SS-185-SS-1	274,000	Minefield (AP)	20-May-09	Resurvey	SHA	AP Mines
GUN	Jonglei	Canal_Pigi	Wuonlam	Wunkech	MA-IS-SS-167-SS-1	135,000	Minefield (AP)	4-May-09	Resurvey	SHA	AP Mines
GUN	Jonglei	Canal_Pigi	Wuonlam	Khan	MA-IS-SS-163-SS-1	220,000	Minefield (AP)	4-May-09	Resurvey	SHA	AP Mines
GUN	Jonglei	Canal_Pigi	Nyainthokmalual	Nyith	MA-IS-SS-160-SS-1	139,650	Minefield (AP)	3-May-09	Resurvey	SHA	AP Mines
GUN	Jonglei	Canal_Pigi	Atar	Atar	DA-LK-2	113	Minefield (AP)	31-Aug-05	Resurvey	SHA	AP Mines
GUN	Jonglei	Akobo	Bilkey	Dengjok	DA-SS-120	1,978,079	Minefield (AP)	3-Dec-03	Resurvey	SHA	AP Mines
					10	**3,620,951**					
Summary of AT Minefields for MANUAL CLEARANCE											
GUN	Jonglei	Canal_Pigi	Nyainthokmalual	Khor Fulus	G4S-013-19	10,000	AT Mines	21-Feb-19	Manual	CHA	Minefield (AT)
GUN	Jonglei	Akobo	Dengjok	Nucta	G4S-548-16	9,400	AT Mines	24-Jun-16	Manual	CHA	Minefield (AT)
GUN	Jonglei	Pochalla	Pochalla	Oporiah	G4S-253-16	20,000	AT Mines	9-Mar-16	Manual	SHA	Minefield (AT)
GUN	Upper Nile	Maban	Boung	Bunj	TDI-255B-13	6,107	AT Mines	1-Jun-19	Manual	CHA	Minefield (AT)
GUN	Upper Nile	Maban	Jinkuata	Bunj	DDG-470-18	1,600	AT Mines	2-Dec-18	Manual	CHA	Minefield (AT)
GUN	Upper Nile	Maban	Boung	Bunj	DDG-428-18	6,400	AT Mines	3-Nov-18	Manual	CHA	Minefield (AT)
GUN	Upper Nile	Maban	Jinkuata	Bunj	DDG-427-18	11,130	AT Mines	3-Nov-18	Manual	CHA	Minefield (AT)
GUN	Upper Nile	Maban	Boung	Origi	TDI-041-15	10,885	AT Mines	7-Feb-15	Manual	SHA	Minefield (AT)
					8	**75,522**					
Summary of AT Minefields for MECHANICAL CLEARANCE											
GUN	Jonglei	Canal_Pigi	Nyainthokmalual	Nyinthok	MA-IS-SS-169-SS-2	174,593	Minefield (AT)	10-May-13	Mechanical	CHA	AT Mines
GUN	Jonglei	Canal_Pigi	Nyainthokmalual	Nyinthok	MA-IS-SS-169-SS-1	6,006	Minefield (AT)	9-May-13	Mechanical	CHA	AT Mines
GUN	Jonglei	Canal_Pigi	Nyainthokmalual	Khor Fulus	NPA-040-13	12,282	Minefield (AT)	15-Feb-13	Mechanical	SHA	AT Mines
GUN	Upper Nile	Maban	Khor El Amer	Khor El Lamer	DDG-048-19	7,708	Minefield (AT)	24-Jan-19	Mechanical	CHA	AT Mines
GUN	Upper Nile	Melut	Panomdit	Panhomdit	DDG-259-17	10,000	Minefield (AT)	14-Mar-18	Mechanical	CHA	AT Mines
GUN	Upper Nile	Melut	Paloch	Dingtoma	MCH-026-18	320,000	Minefield (AT)	21-Feb-18	Mechanical	SHA	AT Mines
GUN	Upper Nile	Manyo	Kaka	Kaka	TDI-191-13	2,500	Minefield (AT)	30-May-13	Mechanical	SHA	AT Mines
GUN	Upper Nile	Manyo	Kaka	Kaka	DA-SS-2186	1,577	Minefield (AT)	30-Apr-13	Mechanical	SHA	AT Mines
					8	**534,666**					
Summary of AT Minefields for RESURVEY (provsionally planned for manual clearance)											

GUN	Jonglei	Canal_Pigi	Korwai	Canal	DA-SS-2567	-	Minefield (AT)	20-Jun-08	Resurvey	CHA	AT Mines
GUN	Jonglei	Akobo	Bilkey	Akobo	DA-SS-4004		Minefield (AT)	2-Feb-10	Resurvey	SHA	AT Mines
GUN	Jonglei	Akobo	Diror	Kaikuin	MA-IS-SS-166-SS-1	180,000	Minefield (AT)	5-May-09	Resurvey	SHA	AT Mines
					3	180,000					
Summary of CLUSTER MUNITIONS STRIKES for MANUAL CLEARANCE											
GUN	Jonglei	Twic East	Kongor	Garele	TDI-135C-18	18,081	Cluster Munitions	2-Apr-20	Manual	CHA	CM
GUN	Jonglei	Twic East	Kongor	Kongor	MAG-010-19	10,114	Cluster Munitions	27-May-19	Manual	CHA	CM
GUN	Jonglei	Akobo	Bilkey	Akobo	TDI-008-18	27,263	Cluster Munitions	10-Jan-18	Manual	CHA	CM
GUN	Upper Nile	Fashoda	Kodok	Aburoc	DDG-372-19	10,000	Cluster Munitions	15-May-19	Manual	CHA	CM
GUN	Upper Nile	Maban	Boung	Bunj	DDG-094-19	86,000	Cluster Munitions	31-Jan-19	Manual	CHA	CM
GUN	Upper Nile	Maban	Boung	Bunj	DDG-424-18	6,920	Cluster Munitions	1-Nov-18	Manual	CHA	CM
					6	**158,378**					
Summary of CLUSTER MUNITIONS STRIKES for RESURVEY (provisionally planned for manual clearance)											
GUN	Jonglei	Akobo	Bilkey	Akobo	DA-SS-4269	-	Cluster Munitions	14-Feb-10	Resurvey	CHA	CM
GUN	Jonglei	Akobo	Bilkey	Akobo	DA-SS-4365	-	Cluster Munitions	21-May-10	Resurvey	SHA	CM
GUN	Jonglei	Akobo	Bilkey	Akobo	DA-SS-4366	-	Cluster Munitions	21-May-10	Resurvey	SHA	CM
GUN	Upper Nile	Maban	Jinkuata	Bunj	DDG-098-13	30,147	Cluster Munitions	14-Apr-13	Resurvey	CHA	CM
					4	**30,147**					
Summary of BATTLEFIELDS for MANUAL BAC											
GUN	Jonglei	Fangak	Phom	Phom El Zeraf	G4S-009-19	28,200	Battlefield	2-Feb-19	Manual	CHA	BF
GUN	Unity	Rubkona	Budaang	Yoahnyany	G4S-031C-19	18,980	Battlefield	6-Apr-20	Manual	CHA	BF
GUN	Unity	Rubkona	Dhorbor	Luor	G4S-010-20	1,820	Battlefield	14-Mar-20	Manual	CHA	BF
GUN	Upper Nile	Manyo	Wedakona	Wedakona	G4S-003-20	52,500	Battlefield	28-Jan-20	Manual	CHA	BF
GUN	Upper Nile	Malakal	Northern Malakal	Lowakt Shamali	G4S-503-17	88,382	Battlefield	21-Jun-18	Manual	CHA	BF
GUN	Upper Nile	Melut	Galdora	Galdora	G4S-371-18	2,500	Battlefield	14-May-18	Manual	CHA	BF
GUN	Upper Nile	Melut	Galdora	Galdora	G4S-335-18	51,434	Battlefield	4-May-18	Manual	CHA	BF
GUN	Upper Nile	Malakal	Southern Malakal	Dinka Shuku	G4S-320-18	285,000	Battlefield	30-Apr-18	Manual	CHA	BF
GUN	Upper Nile	Luakpiny/Nasir	Nasir	Nasir	G4S-133-17	13,936	Battlefield	30-Mar-17	Manual	CHA	BF
					9	**542,752**					
Summary of MINED ROADS for ROAD CLEARANCE											
GUN	Unity	Pariang	Jamjang	Jam jang	G4S-575B-17	70,000	Mined Road	20-Jun-19	Road clearance	CHA	AT Mines
GUN	Upper Nile	Fashoda	Kodok	Kodoko	G4S-514-18	10,216	Mined Road	1-Jun-20	Road clearance	CHA	AT Mines
GUN	Upper Nile	Malakal	Southern Malakal	Gata Junbi	G4S-204B-18	101,826	Mined Road	31-Mar-20	Road clearance	CHA	AT Mines
GUN	Upper Nile	Manyo	Adhidwoi	Adhidwoi	G4S-019-20	1,000	Mined Road	12-Jun-20	Road clearance	SHA	AT Mines
GUN	Jonglei	Duk	Ageer	Poktap	G4S-193-18	275,671	Mined Road	10-Mar-18	Road clearance	CHA	AT Mines
GUN	Jonglei	Duk	Payuel	Poktap	G4S-263-18	643,457	Mined Road	6-Apr-18	Road clearance	SHA	AT Mines
GUN	Jonglei	Twic East	Kongor	Garalei	G4S-559-17	261,600	Mined Road	8-Dec-17	Road clearance	SHA	AT Mines
GUN	Upper Nile	Fashoda	Kodok Town	Alganal	TDI-062-18	160,000	Mined Road	1-Jun-18	Road clearance	CHA	AT Mines
GUN	Upper Nile	Fashoda	Kodok	Kodoko	TDI-092-18	62,216	Mined Road	22-Feb-18	Road clearance	CHA	AT Mines
GUN	Jonglei	Canal_Pigi	Korwai	Canal	DA-SS-5724	250,000	Mined Road	1-Apr-11	Road clearance	CHA	AT Mines
GUN	Jonglei	Canal_Pigi	Korwai	Canal	DA-SS-5725	300,000	Mined Road	1-Apr-11	Road clearance	SHA	AT Mines
GUN	Jonglei	Duk	Padiet	Ayueldit	DA-SS-2234	8,498	Mined Road	21-Apr-08	Road clearance	SHA	AT Mines
					12	**2,144,484**					

Summary of the outstanding clearaance requirement and proposed clearance methodology for the Greater Bahr El Ghazal region

Region	State	County	Payam	Boma	Hazard ID	Area	Hazard Type	Date recorded	Methodology	CHA/SHA	Type
Summary of AP Minefields for MANUAL CLEARANCE											
GBEG	Warrap	Gogrial East	Toch West	Lietnohm	G4S-346-18	40,000	Minefield (AP)	9-May-18	Manual	SHA	AP Mines
					1	**40,000**					
Summary of AP Minefields for MECHANICAL CLEARANCE											
GBEG	Northern Bahr El Ghazal	Aweil North	Ariath	Mabior Angui	TDI-032D-19	113,862	Minefield (AP)	29-May-20	Mechanical	SHA	AP Mines
GBEG	Western Bahr El Ghazal	Wau	Kpaile	Bo River	DA-SS-326	201,738	Minefield (AP)	28-Feb-18	Mechanical	CHA	AP Mines
					2	**315,600**					
Summary of CLUSTER MUNITIONS STRIKES for MANUAL CLEARANCE											
GBEG	Western Bahr El Ghazal	Jur River	Marial Bai	Alel Chok	TDI-090D-19	92,000	Cluster Munitions	21-Mar-20	Manual	CHA	CM
					1	**92,000**					
Summary of CLUSTER MUNITIONS STRIKES for MECHANICAL CLEARANCE											
GBEG	Warrap	Tonj South	Tonj	Sanayai	G4S-038B-19	19,745	Cluster Munitions	31-Jan-20	Mechanical	CHA	CM
					1	**19,745**					
Summary of MINED ROADS for ROAD CLEARANCE											
GBEG	Western Bahr El Ghazal	Jur River	Marial Bai	Kuom2	TDI-092-20	45,000	Mined Road	10-Mar-20	Road Clearance	CHA	AT Mines
GBEG	Western Bahr El Ghazal	Raga	Ringi	Minamba	TDI-200-19	80,000	Mined Road	22-Apr-19	Road Clearance	SHA	AT Mines
GBEG	Western Bahr El Ghazal	Jur River	Kuajena	Kwargina	TDI-379-18	21,000	Mined Road	18-Dec-18	Road Clearance	SHA	AT Mines
GBEG	Warrap	Gogrial West	Gogrial	Gogrial	TDI-083-17	280,000	Mined Road	2-Jan-18	Road Clearance	CHA	AT Mines
GBEG	Western Bahr El Ghazal	Wau	Besselia	Jabel Kawaja	G4S-060-15	42,400	Mined Road	3-Jun-15	Road Clearance	SHA	AT Mines
					5	**468,400**					

FEBRUARY 2020

Danish Demining Group (DDG)

Concept note on: "Survey, clearance and risk education for conflict affected populations in South Sudan"

Type of project: Humanitarian Demining (HD)

Country: South Sudan

Total amount requested: USD $18,000,000 ($3,000,000 per year)

Project duration: 6 years (2020-2026)

Contact Information:

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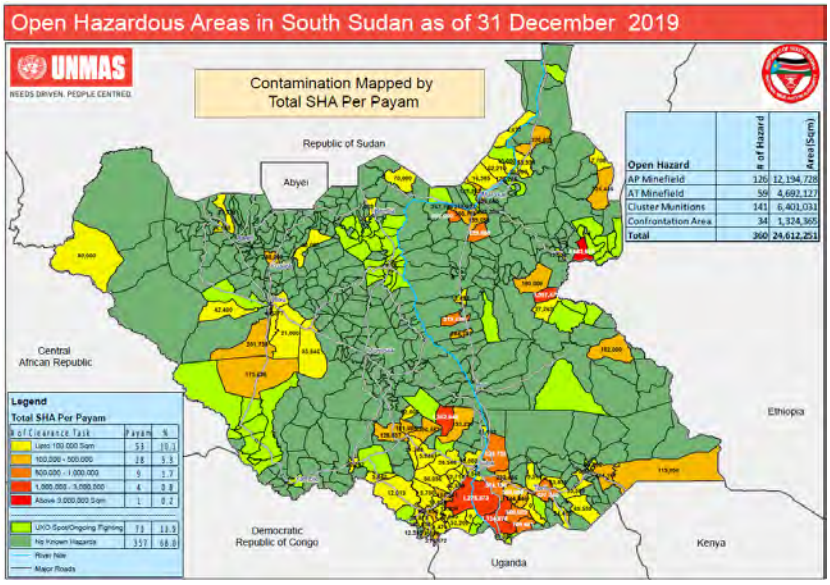
1. Problem Analysis



Mine action activities are urgently needed across South Sudan to support the country's transition to peace and civilian protection. While tensions remain, the signing of the Revitalised Agreement on the Resolution of the Conflict in South Sudan (R-ARCSS) on 12 September 2018 has led to a significant improvement in the security situation across the country. Areas that were previously inaccessible due to insecurity can now be reached. In particular, humanitarian access has opened up in previous hotspots in Upper Nile state. In order to capitalise on this window of relative stability, the Humanitarian Mine Action (HMA) sector urgently requires a flexible but thorough approach to the survey and clearance of areas of the country that remain heavily contaminated by mines, cluster strikes, explosive remnants of war and small arms ammunition. National entities involved in the Humanitarian Mine Action sector in South Sudan are also in need of capacity building support in terms of training and mentoring in the area of Mine Risk Education. National actors – including the National Mine Action Authority – are ideally positioned to assist and lead in humanitarian mine action efforts in South Sudan, due to their knowledge of the intricacies of the operating environment, their permanent presence in the country and their extensive access to hard-to-reach locations.

While much progress has been made in recent years, many parts of South Sudan remain heavily contaminated by mines and Explosive Remnants of War (ERW). The South Sudan Information Management System for Mine Action (IMSMA) shows the Equatorias, Jonglei and Upper Nile state to be the most heavily contaminated states in South Sudan. Much of this contamination dates back to the Sudanese civil war. However, new contamination has also resulted from the more recent clashes between rival armed groups since 2013. The hazards that are present in the proposed project's target locations pose a serious risk to the civilian population residing in these areas, as well as to humanitarian aid workers operating there.

DDG has been implementing Explosive Ordnance Risk Education (EORE), survey and clearance in South Sudan since 2006 and has observed the impact of ERW contamination on vulnerable populations across the country. Of great concern is the risk of death or injury involving ERW as a result of increased population movement as civilians move to access humanitarian assistance at key service delivery points. The relative improvement in the security situation has also led to significant numbers of civilians returning to the country from refugee camps in Sudan and other neighbouring countries, where they have sought safety until recently. Many of these civilians transit through contaminated land. These experiences put DDG in a unique position to respond in such contexts and underline the critical need for

Fact Box on Danish Demining Group's Background in South Sudan

DDG has been conducting HMA operations in South Sudan since 2006, including survey to define the mine/ERW threat, clearance, and delivery of Explosive Ordnance Risk Education. As one of the most effective frontline Mine Action responders in the country, DDG has a track record and proven experience operating in hard-to-reach locations, often with sizable IDP populations and high rates of ERW contamination, which have tended to be underserved by mine action interventions due to access restrictions. DDG's effective and adaptable operational methodology continues to allow operations in various deep field locations to continue, despite a fluid security context that has only recently begun to stabilise.

risk education and clearance to render service delivery points safe and ensure corridors of movements used by vulnerable populations are free of ERW contamination.

2. Project Overview

Activities will directly support achievement of South Sudan's commitments under the Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction. The project timeframe aligns with the Government of South Sudan's request to extend its deadline for completing the destruction of anti-personnel (AP) mines. Through its Humanitarian Mine Action activities outlined in this concept note, DDG will support in completing clearance of all remaining AP minefields before the new deadline of 1 June 2026.

Under this project, DDG will respond to immediate threats to life with an Explosive Ordnance Disposal (EOD), Battle Area Clearance (BAC) and Manual Minefield Clearance (MMC) response, whilst delivering EORE in conjunction with survey activities to prevent casualties in any given location and enable safe return of displaced populations. DDG Mine Action operations have a proven track record of facilitating humanitarian and development activities, and such a focus will be maintained under this intervention. Capacity on the ground will consist of 5 combined clearance and risk education teams capable of conducting survey, clearance and risk education to enhance safety and freedom of movement across the country. Tasks which will support the humanitarian response in the area will be prioritised.

DDG will also provide capacity building support to national entities, including the National Mine Action Authority (NMAA), through Training of Trainer workshops focused on Explosive Ordnance Risk Education. Recognising the importance of mainstreaming gender within mine action programming, DDG will also host roundtable discussions with representatives of both national and international mine action organisations, that will be aimed at promoting gender-inclusive approaches to humanitarian mine action interventions and capturing best practices and lessons learnt.

2.1 Objectives

This project aims to increase the ability of conflict affected populations in South Sudan to move freely, safely and in dignity, including when attempting to access humanitarian assistance. DDG's mode of delivery will also ensure that its teams systematically prioritise the most urgent humanitarian threats at any given point, rendering humanitarian service delivery points safe and ensuring corridors of movement used by vulnerable populations are free of ERW contamination. DDG will also build the capacity of local partners to deliver EORE, while facilitating networking and joint planning among humanitarian mine action organisations and local authorities on strengthening gender mainstreaming in their interventions.

2.2 Outputs and Activities

Outputs will include:

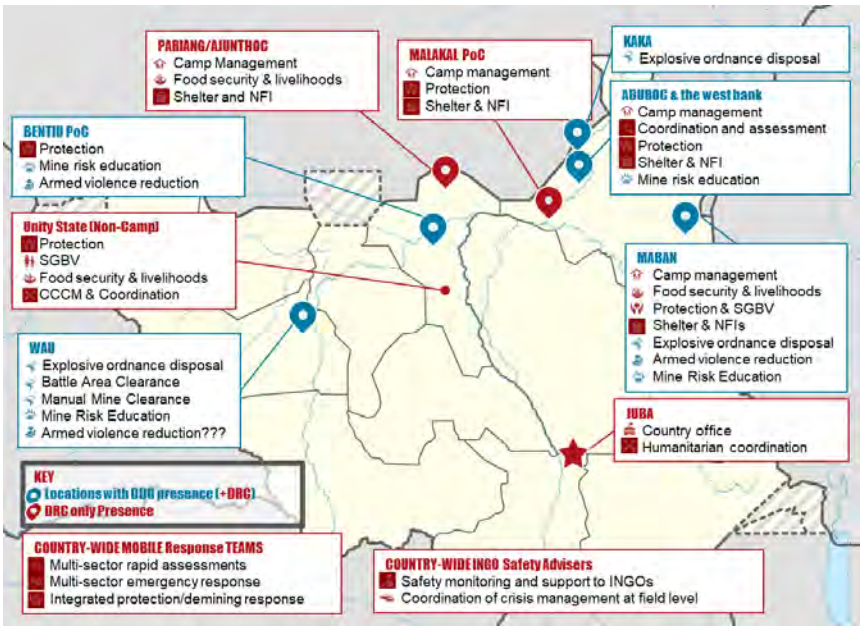
- Non-Technical Survey (NTS) – to target and prioritise clearance according to humanitarian need, survey will be conducted using a mixture of key informant interviews and household questionnaires held with the local population and authorities. NTS will determine the likely locations and density of Explosive Remnants of War (ERW) contamination in target locations, whilst assessing the impact of these hazards on vulnerable populations in any given location.
- Explosive Ordnance Disposal (EOD) – once NTS has determined the nature of the threat, technical capacities within the teams will be deployed to remove and destroy identified hazards.

- Manual Minefield Clearance (MMC) and Battle Area Clearance (BAC) - each team will be able to act as a MMC and BAC capacity, performing static clearance activities across larger, clearly defined battle areas (identified through the above data collection activities and technical survey as appropriate).
- Explosive Ordnance Risk Education (EORE) – the teams will contain a capacity to deliver safety messaging raising awareness amongst at-risk population groups about how to recognise dangerous items, as well as associated safe practices that should be followed, and high risk behaviour that should be avoided in relation to ERW.
- Training of Trainers in EORE – through ToT workshops under this project, DDG will build the capacity of national entities (including the National Mine Action Authority) to effectively deliver EORE. Participants of the capacity building workshops will be mixed gender, with the aim that 50% of identified candidates will be female.
- Roundtable Discussion – DDG will facilitate roundtable discussions in which representatives of humanitarian mine action organisations and local authorities will explore the current challenges and opportunities for mainstreaming gender in a more systematic way throughout mine action programming, highlighting some of the best practices and strategies that can be adopted, with distinct recommendations to embed gender mainstreaming into each of the five pillars of humanitarian mine action.

3. Task Prioritisation, Methodology and Operational Capacity

DDG's effective and adaptable operational methodology, combined with the pre-existing infrastructure of DDG in Upper Nile state, will allow for rapid and safe deployment to project locations. The map below outlines the extensive operational infrastructure of DDG in South Sudan, as well as that of Danish Refugee Council – DDG's parent organisation. DDG's capacity on the ground will be fully roving across the country, capable of responding immediately to call outs from local civilians and humanitarian partners. In this way, DDG will maintain the flexibility to deploy to new locations in response to the evolving humanitarian crisis and response, thereby ensuring that humanitarian mine action activities serve as an enabler facilitating safe delivery of multi-sector assistance.

DDG will maintain five teams under the proposed project in order to continue essential survey, clearance and risk education across the country. DDG will continue tracking the broader humanitarian response as well as contextual developments that lead to changes in civilian population movements, in order to ensure that its Mine Action programming remains relevant and that areas of operations are prioritised based on continuously evolving civilian and humanitarian needs in the target locations.



4. Project Resources and Timeframe

DDG can implement this project on a short timeframe by augmenting its existing logistical and technical expertise and set-up in South Sudan. A sum of USD $18,000,000 would enable survey, clearance and risk education to be rolled out and sustained across the country over a 6-year period. This equates to USD 3 million per year.

Minefield clearance in Central and Eastern Equatoria to Support South Sudan's Article 5 Obligations

Mine-related and Humanitarian Situation in the Project Region

South Sudan was home to one of the longest and most brutal conflicts in Africa. From 1955 until 1972 and then again from 1983 until 2005, the Sudan People's Liberation Movement/Army (SPLM/A) and the Government of Sudan (GoS), fought one of the deadliest wars of the 20th century, leading to an estimated 2 million deaths, famine, and widespread displacement. Although the war ended with the signing of the Comprehensive Peace Agreement in 2005 and the independence of South Sudan in 2011. However, the legacy of the landmines and explosive remnants of war that were left by all parties to the conflict have remained. Clearance of these hazards has also been stymied due to the conflict that erupted in the newly formed state in 2013 and the resumption of hostilities in 2016.

Today, eight of South Sudan's ten states are known to be contaminated with minefields. However, Central and Eastern Equatoria have the largest number of these minefields, with 79 minefields in Central Equatoria and 29 minefields in Eastern Equatoria.[1] Together 2.7 square kilometres of land is contaminated in the two states.

In addition to being some of the most heavily contaminated parts of South Sudan, the states of Central and Eastern Equatoria also border Uganda, which currently hosts large numbers of South Sudanese refugees. High numbers of returning refugees are expected to settle in or transit Central and Eastern Equatoria, if and when a lasting peace takes hold. Returnees may not be aware of contamination if it has been laid since they were displaced, or of legacy contamination in a new area they have settled. As the chart below shows, the three states with the highest number of current and potential returnees[2] are also the states with the most minefield hazardous areas recorded in the IMSMA database.

As communities return and expand the demand for land for housing, agriculture and infrastructure will increase. Livelihood activities, from herding and grazing cattle, to farming in South Sudan's most fertile areas, are restricted by landmines in East and Central Equatoria. In this regard, increasing the amount of land available to communities for safe, productive use will increase resilience and reduce reliance on other forms of aid.

[1] As of January 2020.
[2] According to the IOM mobility tracking database for South Sudan, March 2019.

Project Design

MAG has scalable response capacity that can be mobilised to clear landmines. MAG aims to deploy one mechanical team utilizing MAG's MineWolf 370 machine and one manual demining team. Although the use of mechanical assets achieves high levels of outputs, many tasks are not suited for such heavy assets, and can only be cleared with a manual capacity. Of the 108 minefields in Central and Eastern Equatoria, 21 are expected to be suited to mechanically-assisted minefield clearance while 52 minefields can only be cleared manually.. However, mechanically-assisted clearance is not possible during the wettest months of the year, therefore the team will stand down during these months.

MAG has a long history of conducting mechanically-assisted clearance in South Sudan utilizing the medium MineWolf330 and the heavy MineWolf370, achieving an average of approximately 3,500m^2 per day of clearance.

MAG's mechanical capacity will deploy a team consisting of 2 machine operators, 12 deminers, 1 deputy and 1 team leader, 2 technical field manager, and 2 medics as well as drivers, mechanic, and cooks to support the team in the field to conduct mechanically-assisted minefield clearance. The additional staff will allow the team to operate on a rotational leave, to maximize the number of working days during the months when operations are feasible.

MAG's manual capacity will deploy a manual minefield clearance team of 10 deminers, 1 deputy and 1 team leader, and 1 technical field manager, along with the requisite drivers, medics (1), and cooks to support the team. In addition, MAG could increase on this capacity by scaling up the manual component of this project by modifying existing multi-task teams into larger mine action teams, if additional funding were available.

In line with the Article 5 extension submitted by the Government of South Sudan, MAG expects to deploy the mechanical capacity for 3 years (2021-2023) and the manual capacity for 5 years (2021-2026). If two teams were funded for the full period, MAG would expect to clear over 2 million square metres of minefields within five years.

Summary Logical Framework:

Project impact: South Sudan meets its Article 5 obligations. Land release builds community resilience and supports the integration of returnees by increasing the amount of land available for safe use by women, girls, boys and men.	
Project Outcome (immediate)*:* Women, girls, boys, and men are able to use land safely for farming, housing, grazing of cattle, natural resources, infrastructure, community services, and access.	
Yearly Outputs	Activity
Output 1: 600,000 square metres of land released through mechanically-assisted clearance and technical survey (9 months of operations)	Activity 1.1: MAG resurveys hazardous areas as necessary to determine as precisely as possible the boundaries of the minefield. Cancellation of land that is confirmed as un contaminated is possible, although significant cancellation is not expected in the area of operations. Activity 1.2: MAG will conduct mechanically assisted minefield clearance with a trained and accredited team, while clearance utilising a machine is possible.
Output 2: 45,400 square metres of land released through manual clearance and technical survey (12 months of operations)	Activity 2.1: MAG resurveys hazardous areas as necessary to determine as precisely as possible the boundaries of the minefield. Cancellation of land that is unlikely to be contaminate is possible, but significant cancellation is not expected in the area of operations. Activity 2.2: MAG will conduct manual minefield clearance with a trained and accredited team.

Budget

Total Amount Requested:	
Mechanical Capacity (per year):	€1,000,000
Manual Capacity (per year):	€650,000