

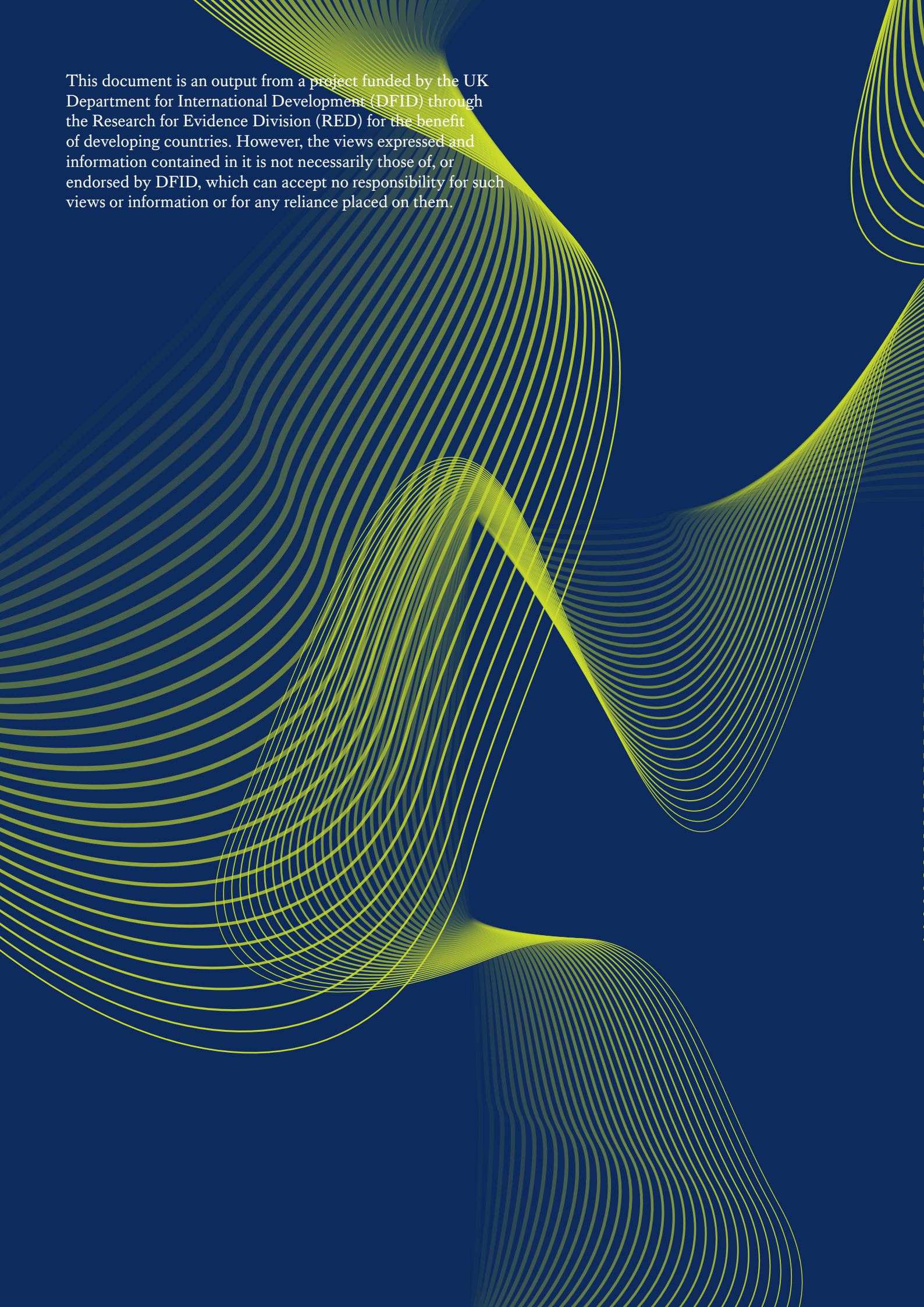
Mine action, early recovery and peacebuilding needs assessment of South Kordofan and Blue Nile States in Sudan

Final report

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Executive summary

This study seeks to chart the drivers and dynamics of peace in the Sudanese states of Blue Nile and South Kordofan to contextually situate mine action, mitigate risks and maximise the benefits of mine clearance for communities and humanitarian actors. This study was commissioned by the UK Department for International Development (DfID) through the East Africa Research Fund (EARF). The research consortium consisted of a commercial demining agency; the Policy Institute at King's College London, a policy research institute; and Mercy Corps Europe, a non governmental organisation (NGO).

Blue Nile and South Kordofan states in Sudan, also known as the Two Areas, have been affected by conflict for many decades. As a result, communities continue to lack access to basic services, such as latrines, accessible health posts, schools, and protected water sources. The conflict has also changed the socio-economic fabric of the areas, causing vast displacement of people seeking refuge from their areas of origin, altering the face of communities and changing how people try to sustain their livelihoods.

Anti-personnel and anti-vehicle landmines have been heavily used by belligerent parties in both Sudan's civil war and in hostilities since then. Landmines have continued to affect men, women, children and animals alike long after the conflict has ended: they affect communities and people's livelihoods significantly through injury, death, and forcefully shifted livelihood patterns.

Sudan has since made progress in clearing both anti-personnel and anti-vehicle landmines. However, progress has been slow, particularly in South Kordofan and Blue Nile. In 2018, Sudan was granted an extension to achieve its clearing target by 2023. Conflict made the states inaccessible for years, and as a result mine action has only recently commenced after several decades of inactivity.

The Government of Sudan has committed to clearing Blue Nile and South Kordofan, when security conditions will grant demining agencies full access. This calls for a greater understanding of the many ways in which people and their livelihoods have been affected by mine contamination, and how the use of landmines might have affected tensions between populations. In this study, we seek to provide an empirical base to underpin our understanding of life in the Two Areas, analyse perceptions of mine action in the regions and of agencies tasked with demining, as well as investigate prospects for demining and any ramifications of mine action.

Fieldwork findings

Based on surveys and interviews with members of the public living in the Two Areas, community leaders, and key stakeholders in Khartoum, we found the following:

Mines are a staple of everyday life in the Two Areas, and people use them for economic benefits – despite the dangers. After years of conflict it would seem people in the Two Areas have adapted their lifestyles according to the presence of mines and have developed coping mechanisms to the destruction mines can cause to people and animals. Based on the community leader interviews in particular, there appears to be a balance between people being fearful on the one hand and using mines where they can for their benefit on the other – for example, through scrap metal collection

and sales. There is also a generation currently growing up who have only known life with mine contamination.

Women bear the brunt of mine contamination, both in terms of stigmatisation as victims and as those responsible for income and care in cases where their husbands are seriously injured or killed by a mine. It was clear that women are affected in different ways to men: our results suggest that, as victims, they would be discriminated against more than men. As a member of a family with a mine victim, they would become (often the sole) caretaker and breadwinner, thereby changing their role in the family and the community.

Mine contamination can increase intercommunal tensions, but there is limited understanding of the capacity of mine action to act as a catalyst for peacebuilding and reconciliation. Mine contamination caused huge displacement and has led to competition over land within Blue Nile and South Kordofan, which, in turn, has increased intercommunal tensions. Mine action has helped people living in the Two Areas to rebuild their lives and their livelihoods. However, while demining has been used as a peacebuilding tool in the past, the extent to which mine action has helped reduce intercommunal tensions in the Two Areas was not clear.

Peace is crucial for mine action. This was brought up by all three participant groups. In the past, when peace agreements have been broken, or hostilities between armed actors has flared up again, this has impeded or slowed down mine action in the Two Areas. There is also another factor at play, which is the risk to demining agencies themselves. While not targets, demining can be perceived as a political activity, as can the provision of humanitarian assistance. This in turn puts aid workers and demining actors in danger, and has the potential risk of depriving populations in need of humanitarian assistance.

Mine action is generally viewed positively, but its scope and breath is too limited. While demining and mine risk education (MRE) were generally found to be useful, this had not reached all communities or all sections of the population, including those in need. Some remain unaware of the danger of mines. And a few feel there are little to no benefits to having demining agencies operate in the areas.

Relations are fragile between members of the public and demining agencies, which has an impact on whether and to whom people report landmines. While the public is broadly positive about the impacts of mine action, communities are more likely to report mines to security forces than NGOs, which suggests communities have little trust in demining agencies. While community leaders considered demining agencies to be reliable actors who have the necessary expertise for demining, these organisations do not enjoy similar levels of appreciation from the public. Both the security forces in the regions and the demining community have a more complex relationship with members of the public. The public does not appear to fully trust them, possibly due to a lack of direct interaction as a result of relatively new mine action operations.

Victims need greater support, but this needs to be linked to development activities. In the surveys and community leader interviews in particular, it became clear that people believe victims do not currently receive enough assistance. In particular, there were calls for income-generating activities. However, based on the extent to which victims can suffer trauma, as emerged from the survey, community re-integration activities are equally needed, as well as resources dedicated to supporting the families adapting to new life circumstances. Income generation and economic development are merely one aspect of this, there is an equal need for social and psychological support.

Demining requires more financial resources to ensure scope and breath, but extreme weather conditions will continue to raise challenges. The mine action that has been undertaken in the Two Areas so far is generally viewed positively. However, the pace is too slow and the coverage too meagre. More funding for mine action in the Two Areas, as well as greater stability, would help address this. A further challenge that needs mitigating is the movement of mines due to heavy rainfall.

Comparing the two states, people in South Kordofan appear to have a slightly better grasp of the dangers of mines and of mine action than those in Blue Nile. In South Kordofan, community leaders and members of the public appeared to be slightly more engaged with demining agencies than in Blue Nile. Equally, more respondents in South Kordofan stated they would report a suspicious item, and indeed, more respondents from this area stated they had made a report in the past.

Policy Recommendations

In light of this, we make the following recommendations:

1. The international community, working with relevant stakeholders in Sudan, **should continue to support the peace process in the Two Areas.** This is absolutely crucial to allow actors to begin addressing people's urgent needs in the region.
2. Where **there are clear processes for making reports of suspicious items, these need to be communicated more effectively to the community** by demining agencies and security forces, in coordination with community leaders. Where such processes do not exist, demining agencies need to work with community leaders and security forces to establish these and communicate this to members of the public. Demining agencies should use the trusted relationships they have with community leaders to do this, and in turn **use this to build greater trust with members of the public.**
3. In parallel, **a quick ERW reporting response unit (RRU) should be established within NMAC** but be based in both regions, to promptly respond to any reports of ERW or otherwise. This will in turn help build confidence in local authorities, and trust between demining agencies and members of the public.
4. **There needs to be better coordination between the community, the security forces, demining agencies and the mandated overarching humanitarian and demining bodies.**
5. **Demining agencies need to increase their outreach and engagement activities in mine-affected communities,** beyond the community leader, which some of the other recommendations here might be suggestions for. Among other benefits, such as trust building, this would also help create the feeling among communities that they are actively involved in prioritisation of mine clearance areas.
6. **Both mine victims and their families need greater support in living with a mine-related disability.** This should include support on how families might make changes to cope with mine-related injuries and the effect these have on families.
7. **Particular efforts need to be made to help mitigate the impacts of landmines on women,** for example through gender-sensitive rehabilitation and socio-economic reintegration strategies.
8. Children and young people who have been affected by mines, or whose family members have a mine-related injury, **need to receive greater support in developing their skills and finding employment, as well as psychological support.**
9. Both Blue Nile and South Kordofan require more mine action, including but not limited to MRE activities. While this is needed in South Kordofan too, **landmine-affected**

communities in Blue Nile in particular need to increase their understanding of the dangers of mines, and the support demining agencies can offer.

10. **More MRE activities are needed in mine-affected communities.** Efforts need to be made so that such activities achieve maximum possible participation from members of the public, to ensure they increase their knowledge on the dangers and risks of landmines.
11. **Sudan's Humanitarian Aid Commission and National Mine Action Centre need to better work together to ensure mine action is linked up with development programming.** This would allow for a holistic approach to mine action and development to help communities transition.

Introduction

This study seeks to chart the drivers and dynamics of peace in the Sudanese states of Blue Nile and South Kordofan to contextually situate mine action, mitigate risks and maximise the benefits of mine clearance for communities and humanitarian actors. This study was commissioned by the UK Department for International Development through the East Africa Research Fund. The research consortium consisted of a commercial demining agency; the Policy Institute at King's College London, a policy research institute; and Mercy Corps Europe, an NGO.

SafeLane Global Limited was the prime contractor for this work. The Policy Institute at King's College London (Policy Institute) and Mercy Corps Europe were sub-contracted for specific elements of the study. SafeLane coordinated the internal research activities and developed a Desktop Survey. The Policy Institute designed the study, developed the research materials, analysed the data and prepared the outputs, including this report. Mercy Corps Europe administered the surveys and conducted the interviews in-country with community leaders and the key stakeholders. The goal of the study was to help the UK DfID identify strategies and mechanisms to support socio-economic recovery activities for communities to be returned to cleared areas.

Blue Nile and South Kordofan states in Sudan, also known as the Two Areas, have been affected by conflict for many decades, as well as underinvestment in infrastructure and development. These states consistently rank well below the national average for development indicators such as life expectancy, poverty and literacy rates.¹ Communities continue to lack access to basic services, such as latrines, accessible health posts, schools, and protected water sources. Blue Nile and South Kordofan are removed from Khartoum both geographically and politically, and populations have in the past felt marginalised by the decision-makers in the capital. The conflict has also changed the socio-economic fabric of the areas, causing vast displacement of people seeking refuge from their areas of origin, altering the face of communities and changing how people try to sustain their livelihoods.

¹ Spittaels, S. and Weyns, Y. 'Mapping conflict motives: The Sudan-South Sudan border, International Peace Information Service. January 2014. P. 35.

Map 1: Map of Sudan



Anti-personnel and anti-vehicle landmines have been heavily used by belligerent parties in both Sudan's civil war and in hostilities since then. Landmines have continued to affect men, women, children and animals alike long after the conflict has ended: they affect communities and people's livelihoods significantly through injury, death, and forcefully shifted livelihood patterns.

Sudan has since made progress in clearing both anti-personnel and anti-vehicle landmines, most recently declaring Kassala state free of landmines in April 2018.² However, progress has been slow. In 2018, Sudan was granted an extension to achieve its clearing target by 2023, rather than 2019. As of February 2018, the country as a whole still had 53 confirmed hazardous areas that are 2.42km² in size and 45 suspected hazardous areas of 16.87km².³ Progress in the Two Areas has been particularly slow, and has only recently commenced after several decades of inactivity. For years, the states were inaccessible due to conflict and hostilities. There is, nonetheless, an urgent need for mine action. This is particularly the case for South Kordofan, which, as one of the four remaining Sudanese states still contaminated with anti-personnel landmines, is the most heavily contaminated with 48 confirmed hazardous areas and 32 suspected hazardous areas.⁴

Table 1: Anti-personnel landmine contamination in the Two Areas (end 2017)

State	CHAs	Area	SHAs	Area
Blue Nile	4	0.2km ²	4	0.8km ²
South Kordofan	48	2.2km ²	32	15.4km ²

*CHA: confirmed hazardous area, SHA = suspected hazardous area

² Mine Action Review: Sudan, 2018. P. 221

³ Landmine Monitor 2018. P. 35.

⁴ Mine Action Review: Sudan, 2018. P. 221

The Government of Sudan has committed to clearing Blue Nile and South Kordofan, when security conditions will grant demining agencies full access.⁵ This calls for greater understanding of the multitude of ways in which people and their livelihoods have been affected by mine contamination, and how the use of landmines might have affected tensions between populations. In this study, we seek to provide an empirical base to underpin our understanding of life in the Two Areas, analyse perceptions of mine action in the regions and of agencies tasked with demining, as well as investigate prospects for demining and any ramifications of mine action.

The aim of this study was to generate context-specific evidence of underlying factors and dynamics that drive conflict in the Two Areas and bordering states of South Sudan and how landmines and explosive remnants of war (ERW) clearance activities may play into the local conflict dynamics.

The specific objectives were to:

1. Synthesise available literature on the drivers and dynamics of conflict in Sudan's Two Areas and states bordering South Sudan and the use and effect of landmines and other ERW on the humanitarian operations and socio-economic activities in these regions.
2. Assess the effect of landmines and other ERW and how this effects the perspective of local communities, and their perceptions of and relationship with, actors and agencies tasked with landmine and ERW clearance and humanitarian operations.
3. Examine the drivers and underlying factors influencing the conflict and other local dynamics (e.g., pre-existing tensions among communities and between communities and the State authorities, issues of land use and titling, preferences for landmine clearance prioritisation, etc.) associated with landmine clearance operations.
4. Based on the findings:
 - Identify the implications of landmine and ERW clearance activities on population movement, household and community livelihood patterns, and the movement and disposition of security forces and armed groups.
 - Make recommendations on effective policy and implementation approaches for responding to early recovery for areas cleared of landmines and ERWs.

⁵ Landmine Monitor 2018. P. 35.

Literature review findings

We conducted a thorough and robust literature review for this study. While we have not included all the findings here, we have included a summary to ensure the reader is situated in the literature, and to showcase the areas where more research is needed.

The findings from the literature review are summarised below. The research questions we set out to address for this part of the study broadly fall under two categories: 1. What are the drivers and dynamics of conflict in Sudan's Two Areas, and 2. How is the conflict influenced by landmine/ERW contamination?

We found that three broad themes exist within the literature.⁶ The first is on the causes of conflict. The second is on the impact of the conflict on the civilian population. The third category is where there are too many knowledge gaps to be able to put forward hypotheses.

Causes of conflict

There is broad agreement on the causes and drivers of the conflict in the Two Areas. Scholars tend to agree that the population's grievances have their origins in uneven development, political and economic marginalisation, perceived elite profiteering in Khartoum, and forced Islamisation of an ethnically and culturally diverse society.

A key element which caused the fractious relations between Sudan's centre and periphery, according to the literature, was the marginalisation by political elites.⁷ The racialised structure and political governance structure in Sudan has caused perceptions of alienation and political exclusion by ethnic minority groups in Sudan, such as in Blue Nile and South Kordofan, who, as a result, have experienced 'institutional constraints on their political and economic development', as Idres puts it.⁸ Ahmen and Sorbo argue that for those in South Kordofan, Blue Nile and Darfur, the government's policy of cultural assimilation following South Sudan's secession, announced in December 2010 in a speech by President Bashir, was a direct cause of the eruption of violence in 2011.⁹

Spittaels and Weyns, Trone and the International Crisis Group all agree that the root causes of the 2011 conflict have largely remained the same, but the ethnic dimension changed from the civil war.¹⁰ Since 2011, there has been coalition-building between rebel groups.¹¹ In addition, there is

⁶ For a full list of studies and papers included in the literature review, please see annex C of report.

⁷ Spittaels, S. and Weyns, Y. 'Mapping conflict motives: The Sudan-South Sudan border', International Peace Information Service. January 2014. p. 34 and Idres, A. 'Rethinking identity, citizenship, and violence in Sudan', International Journal of Middle East Studies. 2012. 44:2. P. 324; Rottenburg, R., Kunda Komey, G., and Ille E. The genesis of recurring wars in Sudan: rethinking the violent conflicts in the Nuba Mountains/South Kordofan. University of Halle. October 2011. P. 11; Brosché, J. 'The Crises Continue: Sudan's Remaining Conflicts', ISPI Working Paper. No. 41. October 2011. P. 4.

⁸ Idres, 2012, p. 324.

⁹ Ahmed, A. G. A. and Sorbo, G. M. 'Introduction: Sudan's durable disorder', in Ahmed, A. G. A. and Sorbo, G. M. (eds.), Sudan divided: Continuing conflict in a contested state. New York: Palgrave Macmillan. 2013. P. 2.

¹⁰ 'Sudan's spreading conflict (I): War in South Kordofan', African Report No. 198. International Crisis Group. 14 February 2013. P. 1 and Spittaels and Weyns, 2014. P. 20, 23, and Trone, M. 'Conflict in South Kordofan: The complexity of Sudan's interlocking crises', The SAIS Europe Journal. 24 April 2014.

¹¹ Spittaels and Weyns, 2014, p. 20.

also consensus among scholars that there was a clear political dimension to the 2011 conflict: the legitimacy of the state was contested and not accepted across Sudan.¹²

Brosché, Ayoud and Ahmed and Sorbo have all argued that a key fault line in the conflicts, both the civil war and the 2011 conflict was land rights.¹³ Land dispossession, resulting from a shift from subsistence agriculture to export-oriented farming and changes in the law, led to poverty and displacement of large populations, and added to the grievances, they argued.¹⁴

Impact of conflict on the population

There exist different perspectives on how communities have dealt with mine contamination, and the extent to which communities are resilient to contamination. A 2015 study by the International Refugee Rights Initiative and National Human Rights Monitoring Organisation found that civilians were building resilience to the conflict and were attempting to ensure the provision of basic services continued to the fullest extent possible in the conflict areas.¹⁵ The study found that local awareness raising campaigns had attempted to minimise civilian casualties, and that the population had not moved away to other areas and/or countries, in part because they view this as them exercising agency in the form of resistance against the state apparatus.¹⁶ Equally, the study found that there was a level of determination to resolve inter- and intercommunal tensions.

On the other hand, other studies have found that there is significant fear among the civilian population in both Blue Nile and South Kordofan. Ramification of this include displacement to areas with less hostilities, but also self-imposed movement restrictions to avoid risking coming across landmines.¹⁷ Many of the consequences of the Sudanese civil war, i.e. displacement, food insecurity and the like, were also seen following the conflict that erupted in 2011: security risks and destruction of housing, crops and livestock has led to significant displacement within the rebel held territories and to South Sudan and Ethiopia.¹⁸

A patchy field: gaps in the literature

Finally, we identified important gaps in the literature on the following three areas:

1. There is very little literature on the impact of landmines in the Two Areas, on both the civilian population and on the dynamics of the conflict. Amid the literature that does address this question, the main impacts described are that of public health¹⁹ (spread of diseases and

¹² Rottenburg, Kunda Komey, and Ille, 2011, p. 3 and Brosché, 2011. P. 4.

¹³ Brosché, 2011, p. 9, Ayoud, M. 'Land and conflict in Sudan', Conciliation Resources: Accord No. 18. 2006. P. 14 and Ahmed and Sorbo, 2013, p. 35.

¹⁴ Ahmed, A. G. A. and Sorbo, 2013, p. 4.

¹⁵ Hovil, L. Civilian perspective on the conflict in Sudan's Southern Kordofan State, International Refugee Rights Initiative and National Human Rights Monitoring Organisation. April 2015. P. 4.

¹⁶ Hovil, 2015, p. 4-5.

¹⁷ 'Sudan's spreading conflict (I)', 2013; 'Sudan's spreading conflict (II): War in Blue Nile', Africa Report No. 204. International Crisis Group. 18 June 2013; and Sultan, D. H. 'Landmines and recovery in Sudan's Nuba Mountains', Africa Today. 55 :3. 2009. P. 54.

¹⁸ Spittaels and Weyns, 2014, p. 34.

¹⁹ Sultan, 2009, p. 46.

physical maiming of people), and economic (inability to farm fertile land, leading to economic deprivation).²⁰

2. For both the drivers of conflict and the impact of landmines, there exist very little studies with an empirical base.
3. There is no robust evidence available in the public domain on the role, success and failures of the national mine action centre (NMAC) in Sudan in the regulation and coordination of mine action in Blue Nile and/or South Kordofan, or Sudan generally. There is limited grey literature on the role of NMAC in coordinating mine action in Sudan.²¹

²⁰ Sultan, 2009, p. 46.

²¹ See for example Mine Action Review, 2017 and Roberts, R. and Frilander, M. 'Preparing for peace: Mine action's investment in the future of Sudan' in Berg Harpviken, K. and Roberts, R. (eds.) *Preparing the Ground for Peace: Mine Action in Support of Peacebuilding* (Oslo: International Peace Research Institute, 2004). P. 10; *Landmine and Cluster Munition Monitor*, Sudan. 2016.

Methodology

This study took place in three phases: the first was conducting a literature review, the second undertaking fieldwork in the form of surveys and interviews in Sudan, and the final phase was the data analysis and write-up of the findings.

Research objectives and research questions

The study focussed on the following research aims:

1. Synthesise available academic and grey literature on the drivers and dynamics of conflict in Sudan's South Kordofan and Blue Nile States bordering South Sudan; and the use and effect of landmines and ERW on humanitarian operations, early recovery and peacebuilding activities in these regions.
2. Examine the perceptions of local communities on the potential impacts of landmines and other ERW on the local community and their livelihoods.
3. Examine the perception of local communities of actors and agencies tasked with mine action (landmine and ERW clearance) and implications for their relationship with such agencies and humanitarian operations.
4. Examine the perceptions of mine action, and drivers and underlying factors influencing early recovery and peacebuilding associated with landmine clearance operations (e.g., pre-existing tensions among communities and between communities and the State authorities, issues of land use and preferences for landmine clearance prioritisation, etc.); as well as the potential ramifications on or for the local population of such activities.
5. Assess the non-human drivers and barriers to efficient landmine and ERW removal in Sudan's South Kordofan and Blue Nile States (such as technology, climate, etc).

The fieldwork in the Two Areas and Khartoum served to empirically underpin the research, followed by the data analysis and report writing.

Literature review

As a first step, we conducted a synthesis of the available literature on the conflict dynamics and the impact of landmines and ERW in Blue Nile and South Kordofan (known as the Two Areas).

To do this, we employed the following methods: first, we undertook a search in the form of a rapid evidence synthesis. A rapid evidence synthesis provides an amalgamation of the publicly available literature. Its purpose is to assess where the gaps and weaknesses are in the existing literature, and by extension does not provide a weighted assessment of the drivers and landmine impacts. We developed and used pre-defined string searches and keywords to find and select material through Google Scholar. We specifically selected this search engine over other databases, because we wanted to guarantee the inclusion of both academic literature as well as grey literature. First, we

deployed string searches for the systematic search. Initially the inclusion criteria were publications published from 2008 onwards, but due to lack of returns we extended this to publications from 2005 and beyond. We searched through the first 10 pages of Google Scholar. We found that using this method led to a vast body of literature, however very few were recent publications (i.e. published in the past 6 years) or had an empirical base. As a result, we also conducted a targeted search through Google, which gave us an additional, though small, body of literature that is both a) recent, and b) empirically based.

We set two research questions to address for this part of the study:

1. What are the drivers and dynamics of conflict in Sudan's Two Areas?
2. How is the conflict influenced by landmine/ERW contamination?

For the rapid evidence synthesis, suitable literature was identified through a three-stage process. First, an initial shift took place, screening articles for relevance by title was conducted. Then a second screening took place, screening the articles for relevance by abstract. Finally, remaining results were subjected to a full text review to assess their relevance for inclusion in the study.

Table 2: Three-step process for rapid evidence synthesis

String search	
Total returns for rapid evidence synthesis	20,340 articles
↓	
First screening	
Screening articles by title	30 articles
↓	
Second screening	
Reading through abstract and selecting relevant articles	23 articles
↓	
Third screening	
Full text review	17 articles

Data collection

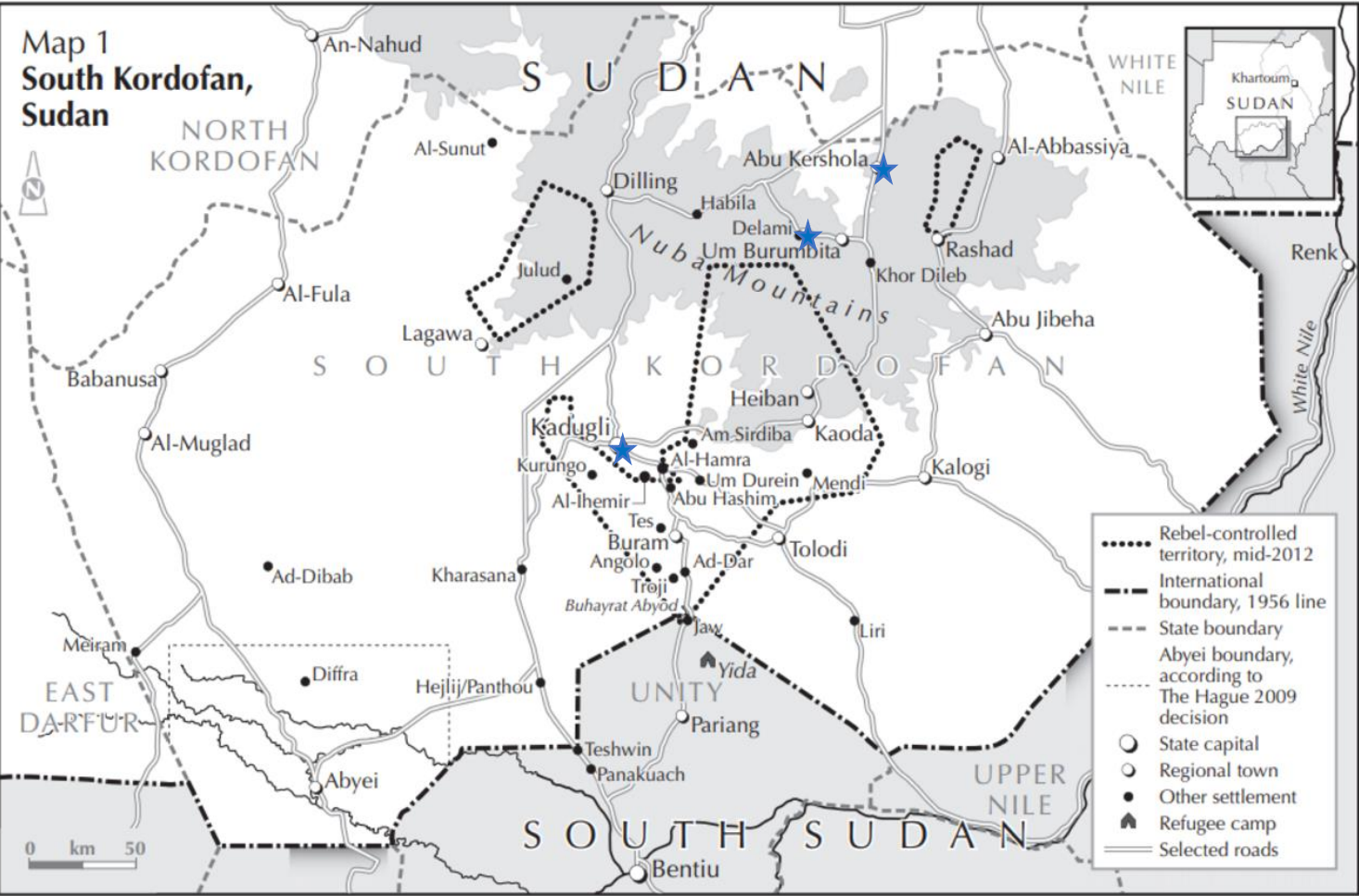
The second phase of the study entailed undertaking fieldwork in Sudan to get perspectives of three different groups: members of the public living in the Two Areas, community leaders and key stakeholders. The former two entailed administering surveys to members of the public in the Two Areas, and conducting structured interviews with community leaders. The areas in which this took place are shown in the table and maps below.

Table 3: Locations of fieldwork

State:	Locality:	Village:
South Kordofan	Kadugli	<ul style="list-style-type: none"> • Kadugli • Shaeer • Elhey Elawsat • Eldaraja • Elhey Eljanubi • Hey Elsouq
	Dalami	<ul style="list-style-type: none"> • Dalami • Um Heytan • Um Birimbeeta • Elhadara
	Abukershola	<ul style="list-style-type: none"> • Abukershola
Blue Nile State	Ed Damazine	<ul style="list-style-type: none"> • El Damazine • Sikka Hadeed • Morry • Elmadaris
	Bau	<ul style="list-style-type: none"> • Derrang
	El Kurmuk	<ul style="list-style-type: none"> • Kurmuk • Abgaren • Dindirru • Bulang

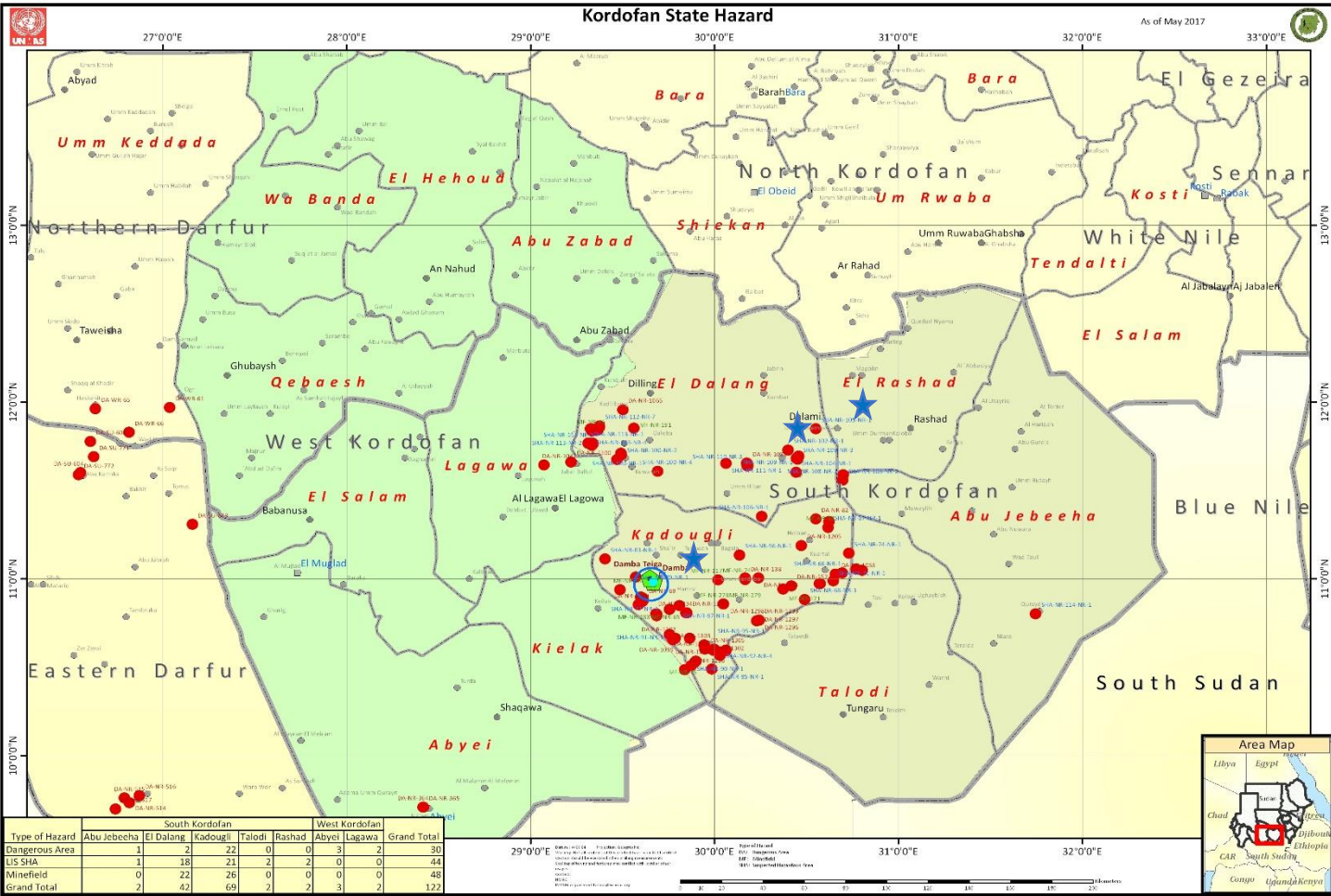
Map 2: Map of South Kordofan and the research data collection fieldwork locations

This map marks in blue, the three localities where the research study and field data collection took place.



Map 3: UNMAS Map of South Kordofan Hazard Areas 2018

This map marks confirmed hazard areas (CHA) within South Kordofan in red. The research study field locations from Map 2 have been overlaid in blue.



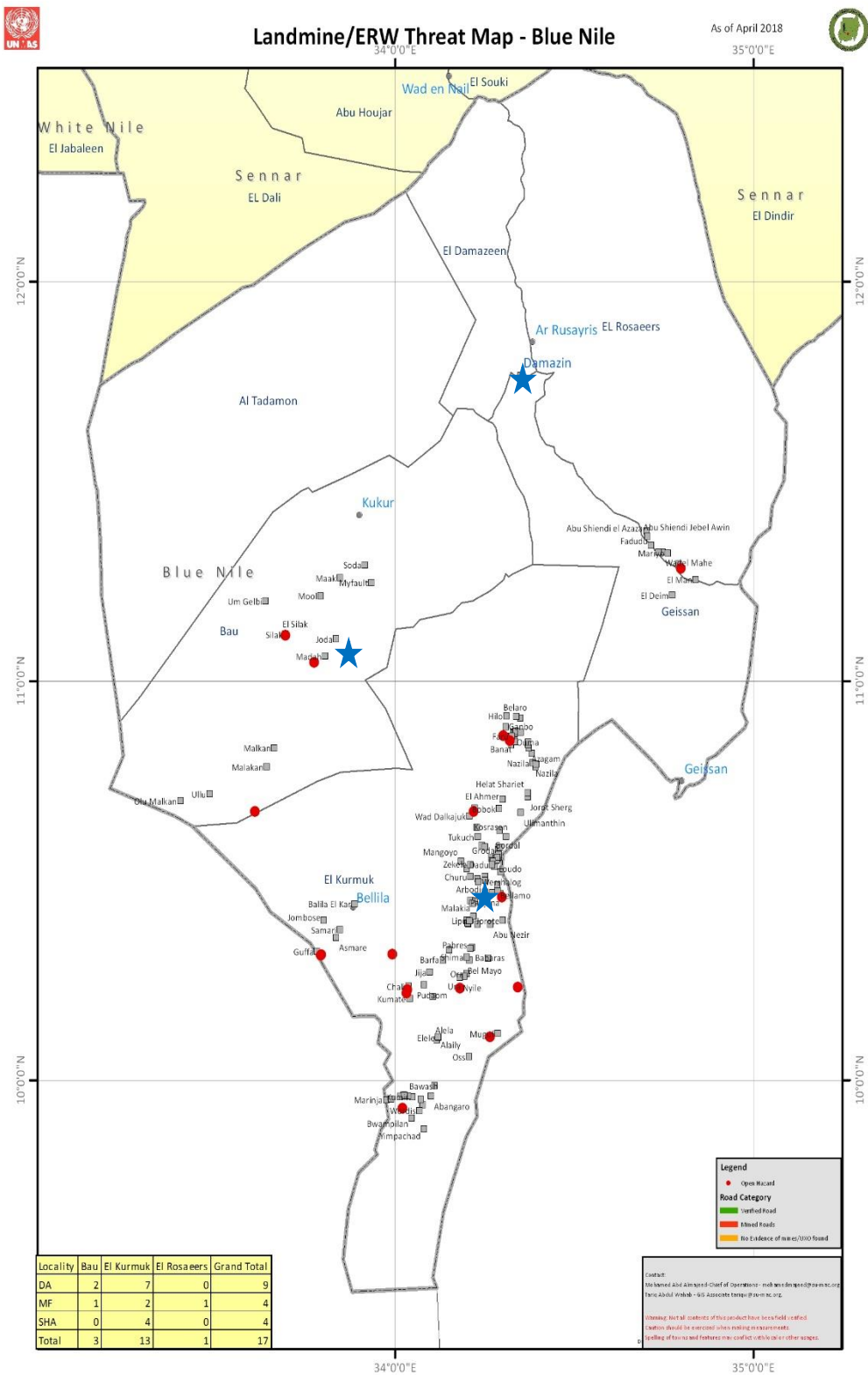
Map 4: Map of Blue Nile and the research data collection fieldwork locations

This map marks in blue, the three localities where the research study and field data collection took place.



Map 5: UNMAS Map of Blue Nile Hazard Areas 2018

This map marks 2018 open hazard areas (HAs) within Blue Nile in red. The research study field locations from Map 4 have been overlaid in blue.



These areas have been selected based on United Nations Mine Action Service (UNMAS) Sudan area prioritisation, population size, strategic positioning, proximity to suspected and confirmed hazardous areas (see UNMAS threat maps Maps 3 and 5 of 2018 CHAs and open HAs) and to current rebel held areas, diversity, and accessibility during the rainy season for data collection. In total, we administered 77 surveys to participants in South Kordofan, and 64 in Blue Nile state, amounting to 141 surveys in total.

In each locality, we conducted one to five interviews with community leaders, and administered a further 20 to 30 surveys to members of the public.

We attempted to have a balance in representation of survey participants across three age groups, and administered surveys to:

- 60 18-30-year-olds
- 59 31-50-year-olds
- 17 Older than 50-year-olds

Four participants preferred not to disclose their age.

We were asked to seek a balance of gender in participants, which we did: we administered surveys to 72 women, and 69 men. We were also asked to ensure our sample was broadly representative across age group, ethnicity, and included participants with disabilities. While we sought to have equal ethnic representation, this proved challenging due to the vast number of different ethnicities that exist in the Two Areas. There were a few survey respondents who preferred not to disclose their ethnicity. Among those who did, we administered surveys to:

- 29 Angasana
- 5 Baggara
- 2 Bargo
- 1 Barno
- 3 Clara
- 1 Deling
- 4 Fallata
- 1 Funj
- 1 Hamaj
- 2 Hawazma
- 1 Hawsa
- 14 Jaaleen
- 11 Jawamaa
- 24 Kadulgi
- 1 Karangu
- 5 Kawahla
- 1 Kenana
- 2 Messaryia
- 1 Miri
- 13 Nuba
- 13 Ragareeg

We also attempted to include participants with disabilities. Among 141 participants, 13 participants were happy to disclose they had a disability.

We did not differentiate between host populations (those whose families had been living there for a number of generations), and more recently settled communities, such as internally displaced persons (IDPs). We were conscious that differentiating between and excluding certain segments of the population might exacerbate community tensions, and as such we took a risk averse and ethically considered approach to the fieldwork. The inclusion of vulnerable people, such as IDPs, was beyond the scope of the research, however, and these surveys and community leader interviews were excluded from the analysis.

While in the first instance we attempted to allow survey participants to complete the surveys themselves to try and mitigate any social acceptability bias, we were conscious that the low literacy rates might then prevent segments of the population from participating in the study.²² As such, we used trained enumerators to administer the surveys to participants, while taking the necessary precautions to ensure this was done confidentially where possible.

In addition to these surveys, we also conducted structured interviews with community leaders in each locality. We conducted interviews with four community leaders in Kadulgi, five in Dalame, four in Abukarshola, one in Ed Damazine and one in Baw. The community leaders interviewed were all male, and the majority of them were 50 or older. They were all identified as recognisable and respected members of their communities, for example as head of the village, Sheikhs, or leader of the tribe. In some cases, we also interviewed civic leaders, such as the headmaster of a school. Most interviews were conducted in the presence of a number of the community leader's villagers.

In addition to the fieldwork in the Two Areas, we also interviewed 17 key stakeholders in Khartoum. Relevant stakeholders for this project were identified through a stakeholder mapping exercise at the start of the project, to ensure the views of all key stakeholder groups were included.²³ We interviewed government officials (2 interviews), national NGOs (9 interviews), international NGOs (3 interviewees) and community-based organisations (3 interviews). It proved highly challenging gaining access to government officials and international NGOs, who were reluctant to participate in the study due to the sensitivity of the topics discussed. This is reflected through the number of interviews conducted with these stakeholder groups.

Data analysis

Once the fieldwork was completed, we entered the survey data into a digitalised database, which we then used for qualitative data analysis and reporting. This means we entered the all the data, i.e. the survey responses per survey participant into an Excel file. Once this process of data entry was

²² Unfortunately, there is no clear and up to date information regarding the literacy rates in South Kordofan and Blue Nile State. However, the most recent estimates from UNESCO indicate that 59.8% of men and 46.7% of women in Sudan are literate. In addition, UN OCHA estimates that the school enrolment rate for children in the conflict affected states in Sudan, including Blue Nile and South Kordofan States is 47%, which is far below the average enrolment rate in the rest of Sudan. Schools in these conflict affected states lack sufficient infrastructure and teaching materials. Furthermore, some areas in South Kordofan and Blue Nile were void of basic services such as education and inaccessible to humanitarian actors due to the conflict. These factors would suggest that there are low literacy rates in the suggested target locations. See UNESCO, Sudan: Education and literacy. ND. and UNOCHA, Humanitarian needs overview: Sudan. February 2018.

²³ The stakeholder matrix is included in the appendices. NB. The matrix served to identify key stakeholders. That does not mean these were all interviewed for this study, or that other relevant organisations not listed in the matrix were excluded. The matrix serves as an guide rather than a strict indicator of which organisations were included in the study.

completed, the file was locked for any changes and used for the survey data analysis by extracting trends based on the research questions set.

There were some inconsistencies in the ways in which the surveys were completed. To allow for this, we split the sample for questions where participants were asked to prioritise. This enabled us to report on both prioritised responses and non-prioritised responses.

To analyse the data from the community leader interviews and the key stakeholder interviews, we began by coding a third of each of the interviews, across locality for the community leader interviews, and across organisation type for the key stakeholder interviews. This allowed us to map emerging key themes across the sample group. Based on these themes, we established a framework, in line with the study's research questions, to code the remainder of each set of the interviews. These themes formed the basis for the analysis and were used to report on the data.

Finally, this is a qualitative study. As part of the research design, respondents were able to give multiple answers to one question, or could choose not to respond. So, while we used broad numbers to report on the findings, these may not always add up to a full 100 per cent. As a qualitative study, the intent has been to be able to draw out themes and perceptions, rather than report on statistics.

Fieldwork findings

In this section, we discuss the findings from the fieldwork. During the fieldwork we investigated the impact of landmines on the community and their livelihoods; people's perceptions of demining actors and the relationships between the community and demining actors; people's perceptions of demining and the impact of demining on communities; and any barriers or facilitators of mine action.

In doing so, we attempted to gain the views from different participant groups on these issues to better understand the regional and local dynamics at play. Having the participation at three different levels, namely members of the public in the Two Areas, community leaders, and elites in Khartoum gave us comprehensive insights into the situation in the Two Areas, and allowed us to make a number of policy recommendations (see final section).

We begin by discussing and analysing the results from the surveys containing the views of the members of the public in six localities in the Two Areas, then discuss the findings from the community leader interviews, and thirdly those from the key stakeholder interviews. We deliberately chose to report at the regional level rather than the locality level, as doing so at the locality level would contain the views of too small a sample to show any significance.

Summary of fieldwork findings

Based on surveys and interviews with members of the public living in the Two Areas, community leaders, and key stakeholders in Khartoum, we found the following:

Mines are a staple of everyday life in the Two Areas, and people use them for economic benefits – despite the dangers. After years of conflict it would seem people in the Two Areas have adapted their lifestyles according to the presence of mines, and have developed coping mechanisms to the destruction mines can cause to people and animals. Based on the community leader interviews in particular, there appears to be a balance between people being fearful on the one hand, and using mines where they can for their benefit on the other – for example, through scrap metal collection and sales. There is also a generation currently growing up who have only known life with mine contamination.

Women bear the brunt of mine contamination, both in terms of stigmatisation as victims and as those responsible for income and care in cases where their husbands are seriously injured or killed by a mine. It was clear that women are affected in different ways to men: our results suggest that, as victims, they would be discriminated against more than men. As a member of a family with a mine victim, they would become (often the sole) caretaker and breadwinner, thereby changing their role in the family and the community.

Mine contamination can increase intercommunal tensions, but there is limited understanding of the capacity of mine action to act as a catalyst for peacebuilding and reconciliation. Mine contamination caused huge displacement, and has led to competition over land within Blue Nile and South Kordofan, which, in turn, has increased intercommunal tensions. Mine action has helped people living in the Two Areas to rebuild their lives and their livelihoods. However, while demining has

been used as a peacebuilding tool in the past, the extent to which mine action has helped reduce intercommunal tensions in the Two Areas was not clear.

Peace is crucial for mine action. This was brought up by all three participant groups. In the past, when peace agreements have been broken, or hostilities between armed actors have flared up again, this has impeded or slowed down mine action in the Two Areas. There is also another factor at play, which is the risk to demining agencies themselves. While not targets, demining can be perceived as a political activity, as can the provision of humanitarian assistance. This in turn puts aid workers and demining actors in danger, and has the potential risk of depriving populations in need of humanitarian assistance.

Mine action is generally viewed positively, but its scope and breath is too limited. While demining and MRE were generally found to be useful, this had not reached all communities or all sections of the population, including those in need. Some remain unaware of the danger of mines. And a few feel there are little to no benefits to having demining agencies operate in the areas.

Relations are fragile between members of the public and demining agencies, which has an impact on whether and to whom people report landmines. While the public is broadly positive about the impacts of mine action, communities are more likely to report mines to security forces than NGOs, which suggests communities have little trust in demining agencies. While community leaders considered demining agencies to be reliable actors who have the necessary expertise for demining, these organisations do not enjoy similar levels of appreciation from the public. Both the security forces in the regions and the demining community have a more complex relationship with members of the public. The public does not appear to fully trust them, possibly due to a lack of direct interaction as a result of relatively new mine action operations.

Victims need greater support, but this needs to be linked to development activities. In the surveys and community leader interviews in particular, it became clear that people believe victims do not currently receive enough assistance. In particular, there were calls for income-generating activities. However, based on the extent to which victims can suffer trauma, as emerged from the survey, community re-integration activities are equally needed, as well as resources dedicated to supporting the families adapting to new life circumstances. Income generation and economic development are merely one aspect of this, there is an equal need for social and psychological support.

Demining requires more financial resources to ensure scope and breath, but extreme weather conditions will continue to raise challenges. The mine action that has been undertaken in the Two Areas so far is generally viewed positively. However, the pace is too slow and the coverage too meagre. More funding for mine action in the Two Areas, as well as greater stability, would help address this. A further challenge that needs mitigating is the movement of mines due to heavy rainfall.

Comparing the two states, people in South Kordofan appear to have a slightly better grasp of the dangers of mines and of mine action than those in Blue Nile. In South Kordofan, community leaders and members of the public appeared to be slightly more engaged with demining agencies than in Blue Nile. Equally, more respondents in South Kordofan stated they would report a suspicious item, and indeed, more respondents from this area stated they had made a report in the past.

Survey data shows understanding of danger of landmines, but less ability to cope comprehensively with the aftermath

We saw earlier that there is a gap in the literature on the impact of ERW and landmines on the population in the Two Areas. While there have been a number of studies focussed on other contexts, such as Colombia and Cambodia, these kind of empirical studies focussed on Sudan, and the Two Areas more specifically are sparse.

In the Sudanese context, respondents showed understanding of the dangers of mines. Participants who had seen ERW before felt more confident in their ability to identify ERW than participants who had not come across ERW before. However, the number of people being able to recognise ERW or landmines should be higher, as this might help them mitigate the risks of landmines. More specifically, one third of survey participants said they felt confident in identifying ERW or unexploded ordnance (UXO), and just under one third said they felt uncertain doing so. Participants felt most able to identify landmines, grenades and mortars, whereas only a small portion of respondents felt able to identify cluster munitions, booby traps, artisanal mines, aerial bombs or improvised explosive devices (IEDs). Anti-personnel and anti-vehicle landmines were most frequently used in these areas by combatants as explosive weapons, so this is in line what villagers are most likely to encounter, whereas artisanal mines and IEDs were less frequently used. We saw no variation in responses across gender, age, location. However, the majority of respondents who had a disability (9 out of 13 respondents) had seen ERW before. Among those who reported feeling uncertain about their ability to recognise a ERW, they still all believed it could be harmful – bar one participant. While this is good, more MRE is needed to help people identify mines they are most likely to come across in their day-to-day life.

People are most likely to come across mines when working. The survey results showed that people are most likely to come across mines when engaging in income-generating activities, with over a fifth of respondents saying people are most likely to come across mines while grazing animals. Collecting firewood, cutting poles in the forest, farming or travelling are other activities were respondents believe one could come across a mine. We also know that mine contamination, and the fear of landmines in particular, has restricted people's movements. As a result, people's ability to generate income and sustain their livelihoods is negatively affected by contamination.

Landmines are used in daily life

Another element is the use of scrap metal by communities. Two fifths of respondents reported that people collect mines or other ERW to sell scrap material. One previous study conducted in Cambodia has examined economic motivations for handling collecting ERW to salvage any scrap metal.²⁴ This is underpinned by another study conducted in Cambodia, which concludes that there are clear economic incentives for engaging in the collection of scrap metal, including UXOs and ERW, even if doing so risks serious physical harm.²⁵ The extent to which local economies in the Two Areas are supported by the selling, whether legal or illegal, of scrap material is not clear. This

²⁴ Moyes, R. 'Tampering: Deliberate handling and use of live ordnance in Cambodia', Handicap International Belgium, Mines Advisory Groups and Norwegian People's Aid. August 2004.

²⁵ Roberts, W. and Bilginsoy, C. 'Risking life and limbs in the global economy: Scrap metal price and landmine/UXO incidents in Cambodia', World Development Perspectives, 1. 2016. P. 21.

raises the question what kind of ramifications demining activities may have on this particular element of communities' livelihoods. While demining activities allow communities to return to previous widespread economic activities, further economic support and investment in infrastructure will be required to help communities cope with this shift.

There is a lack of awareness around the risks and dangers of mine contamination among some of the population. While only a small sample of our respondents said this, some respondents reported that people also collect mines or ERW to play with, or because they are not aware that the objects are dangerous. The number of respondents reporting this is slightly higher in Blue Nile than in South Kordofan. Only slightly more women than men reported this, suggesting that this is a big challenge for all. Age or ethnicity were not a defining element in suggesting better or worse understanding of the dangers of mines. A small segment of those interviewed (11 respondents in total) stated that people collect mines for self-defence, personal stockpiles or to extract the explosives.

In short, a small number of people within certain communities see some economic potential from the presence of landmines. A study focussed on the Lao PDR looked at the effectiveness of measures put in place to reduce the risk of UXO-related accidents due to the scrap metal trade. It found that national legislation to give provinces specific actions to undertake to tackle the issue were not effective for several reasons: first, the terminology used in the actions was not clear enough, meaning the confusion meant management and implementation differences across the board at the local authority level.²⁶ Second, implementation of legislation lacked ownership at that level. And thirdly, there was a lack of coordination among the relevant authorities to implement and act on the legislation.²⁷ At the local level, the study found that it was difficult to assess the success of community awareness raising programmes on the risks of ERW and UXO to help counter accidents resulting from scrap metal collection.²⁸ It does note, however, the discrepancy between an assertion that all ERW is dangerous, and the local experience in Lao that this is not the case.

In the case of the Two Areas, drawing on lessons from the Lao PDR, it would be helpful to establish a risk threshold; namely the risk members of the local communities are willing to do take in a perceived beneficial trade-offs for economic incentives. Further research is necessary to establish whether a recovery of the local economy and the provision of other forms of sustainable employment, such with demining teams would incentivise people away from the potential scrap metal trade.

Landmines affect both the individual victim as well as their families

Landmine and ERW contamination had clear economic and social consequences for individuals affected by mines or ERW. Two thirds of survey respondents were conscious that being injured by such a device would have further negative consequences, in addition to the physical injury and care required. Participants reported that being injured by a mine would have a physical impact, as well as a series of subsequent impacts on their employment and ability to earn an income. Injury, for example, would affect their ability to work, farm, or herd animals. Instead, respondents reported mine victims are likely to become dependent on their family for care, and food and sustenance. To a

²⁶ Moyes, R. and Vannachack, L. A study of scrap metal collection in Lao PDR, Geneva Centre for Humanitarian Demining. September 2005. P. 36

²⁷ Ibid.

²⁸ Ibid. P. 37

lesser extent, the individual could also be forced into work, or have to find illegal means of earning money.

Correspondingly, there was also a social dimension to being injured by a mine. Most survey respondents believed mine victims would become isolated from their family and community and suffer psychologically, possibly experiencing discrimination by the people surrounding them, and stigmatisation, as well seeing their role in the community change negatively. Stigmatisation and discrimination made it more difficult for mine victims to continue carrying out their previous roles and enjoy the same status as prior to the accident, forcing them to rehabilitate and reintegrate into their communities following an mine-related accident. To a lesser extent, respondents also believed victims were seen as careless and a burden. This is particularly the case because the victim was no longer be able to generate income, and instead household revenue was likely to decline due to additional medical costs and less income. In the same way, victims were no longer caretakers, but required care themselves instead, which resulted as being seen as a burden on their family.

Somewhat surprisingly, one fifth of respondents believed being injured by a mine would positively change their role in the community, or be welcomed by the community. Many respondents acknowledged the difficulties of being injured by a mine, and this answer was often given in conjuncture with other, negative, responses, such as losing the ability to work. It could be that while being a mine victim causes a host of negative consequences for the victim and their family, it also drew sympathy from the community.

The primary reason respondents believed people became disabled was God's will, rather than ERW or a landmine. The majority of respondents believed people became disabled because of God's will, while just one fifths of respondents stated that people become disabled due to a mine or other UXO. This was particularly prevalent among respondents in Blue Nile. Yet, nearly all survey respondents recognised that mines or ERW were dangerous, and could kill or injure those in the proximity of an explosion. To a lesser extent respondents believed they could be blinded too when hit by a mine. This shows that there is a complex dynamic between understanding the relationship between landmines and disability, and common understandings on the reasons why people become disabled. While respondents may well be aware that the immediate trigger for becoming disabled is a landmine, this is challenged by their belief systems. As a result, any MRE activities should seek to carefully manage these beliefs, and build people's understanding of the direct relationship between mines and disabilities.

The belief that God is responsible for ERW-related accidents has implications for the delivery of MRE. It may be that a more effective way of raising awareness and creating understanding about the risks of landmines is by involving religious leaders in the delivery of MRE. Insofar as we are aware, currently humanitarian agencies tend to engage more with community leaders than religious leaders for the delivery of programmes and activities. In South Kordofan and Blue Nile State, it is uncommon for the religious leader to also be the community leader, they are usually two separate individuals. There is much less engagement with religious leaders by humanitarian agencies and the most common situations would be where there are no community leaders available, who may have been displaced due to conflict.

Training and having religious leaders delivering MRE is not an anomaly in mine action however. Indeed, doing so features in the International Mine Action Standards (IMAS) Best Practice Guidebook, and UNMAS has worked with the Afghan Ministry of Hajj and Religious Affairs to

train over 4000 Mullah Imams to conduct mine/ERW risk education.²⁹ In the case of the Two Areas, any direct involvement of religious leaders in the delivery of MRE should be carefully considered, using a conflict sensitive approach. Before implementing this across affected communities, the ramifications of using this approach need to be carefully monitored and evaluated as to not exacerbate tensions within communities or between communities and demining agencies.

Beyond the individual, landmine and ERW contamination also has economic and social consequences for victims' families and the community as a whole. The majority of respondents believed that a family member being injured by a mine would lead to reduced family income, whereas over two fifths believed it would lead to a family crisis. Equally, half of respondents believed it would add pressure on the spouse to provide income, or for the family to pay for the treatment of the victim. Injuries and disabilities resulting from landmines, then, have consequences beyond victims and can negatively affect the entire family.

Women were affected differently by mines and mine-related injuries than men, and are therefore likely to require different rehabilitation and socio-economic reintegration strategies than men do. Combined, over half of respondents – male and female – stated that women could be divorced, returned to their parents, that the husband could take a new wife, or that the women would be expected to stay at home and look after the husband. Additionally, one fifth of respondents stated that girls would not be able to get married. Respondents also believed that stepping on a mine could cause infertility. For married women infertility might have meant that they would be divorced or left by their husbands, and for unmarried girls it meant their desirability as a wife would decline, adding to the stigma of being a landmine victim. All of this amounts to a high likelihood of women being discriminated and stigmatised if they were to be injured by a mine. It is clear, then, that women are impacted differently by mines than men.

An individual's mine injury also affects their children. Children would be expected to have to leave school to either provide care to their injured family member, or income, or both. Two fifths of respondents stated children would have to leave school to provide care, whereas the majority of respondents stated that children would be expected to provide income, either through work or by begging in the street. Equally, one fifth of respondents stated that parents may no longer be able to afford to pay for their children's education. From the survey results, it became clear that children's education was harmed indirectly by mine contamination.³⁰

It is clear, then, that people living in the Two Areas have had to develop coping mechanisms to live with the presence and constant threat of landmines. As we have discussed, landmines affect victims, their families and their livelihoods in the short term and the long term. Their presence also has consequences for the ways in which people in landmines contaminated areas go about living their lives. The fear of the presence of landmines means people will avoid certain land, roads and other areas for fear of danger. On the opposite side of the spectrum, a small segment of people will seek out landmines for scrap metal to help sustain their livelihood.

²⁹ IMAS mine risk education best practice guidebook 11: The collected IMAS on mine risk education. UNICEF. 2005. P.90; Hall, S. Mine action in Afghanistan: A success story in danger – an evaluation of UNMAS in Afghanistan (2008-2014). UNMAS. 2014. P. 44.

³⁰ Smith, A. and Vaux, T. 'Education, conflict and international development', Department for International Development. 2003.

There are fragile relations between members of the community and NGOs, which impacts whether people report landmines at all and to whom

We found that there seem to be low levels of trust between members of the general public within the community and those who they might report landmines to. One third of survey respondents stated that even if they were to report the item, nothing would happen, i.e. it would not be destroyed, removed, or marked. Equally, a smaller section of respondents believed reporting a mine would lead to an interrogation by armed actors (police, military, or other armed force), or an accusation of being an insurgent themselves. And yet, despite this concern, members of the public are more likely to report a suspicious item to the local military or the local police, rather than a national or international NGO operating in the region. This may be because the police or the military have been longer established in the region than some of the NGOs. Or it may be that the security forces, such as the local police and military, are more visible and as a result easier to approach.

Members of the public have little direct interaction with demining agencies, which may help explain people's preference for speaking to security forces rather than demining agencies to report landmines. Few members of the community (one fifth) had interacted directly with demining agencies, and when they did, it was predominantly through MRE workshops. Whereas two thirds of respondents had not come across them before. Only very few participants (4 in total) had interacted with a demining agency because they wanted to report a mine. Very few respondents reported having been approached by or having approached demining agencies directly. The difficulty here is that positive interaction can help build trust between demining actors and the community, yet apparently too few of such opportunities have arisen in the past. It also means only very few people have benefitted from MRE activities and have been fully briefed on the risks posed by mines and ERW.

Among those very few participants who were able to specifically name demining agencies who worked in the Two Areas, they all reported feeling that the demining activities made them feel safer. In contrast, when asked about their experience of these demining agencies a more mixed picture emerges, which respondents not wanting to answer the question, feeling neither negative nor positive about their interaction with the demining agency, and one participant feeling negative about the experience. There was an even spread between the two states on this issue. The specific demining agencies that were named were JASMAR for Human Security, National Units for Mine Action and Development (NUMAD), Friends of Peace and Development Organisations (FDPO) and UNMAS. JASMAR seemed to be the most well-known organisation. As we will discuss later on, this suggests that participants generally felt more positive about the demining work than about the national demining agencies themselves.

Perhaps somewhat controversially, utilizing the current status quo of security forces being respondents' main gateway for making a report of a suspicious item could in turn be used as a positive channel of communication to positively further develop that relationship. However, there could be serious risks and negative ramifications to empowering security forces to fully engage in mine action, especially in a context such as the Two Areas. A previous study by GICHD based on five case study countries concluded that national and local security forces in a post-conflict setting is highly sensitive and politicised. The provision of assistance for mine action purposes could also enhance combat capacity.³¹ Mine action should therefore remain firmly situated within a civilian humanitarian/developmental framework, whereby security forces can play a supporting role. At the

³¹ The role of the military in mine action, GICHD. 2003. P. 16.

same time however, the study found that the use of local military forces in humanitarian demining tasks can contribute to increasing community confidence in them, particularly when a community liaison is used.³² Essentially, the bottom line is that better coordination between the community, the security forces, demining agencies and the mandated overarching humanitarian and demining bodies is required.

Nonetheless, the above suggests two things: first, low levels of trust in an effective relationship between security forces in the region, the local community, and demining actors in the area that would help coordinate effective mine action, and demining in particular. Women demonstrate slightly more faith than men in the relevant authorities responding effectively. And second, low levels of trust in the NGO community in particular. Both these issues are problematic and may cause a hindrance when demining actors attempt to work closely with communities, as would be expected.

This is problematic, because the majority of respondents stated that they would report a suspicious item. Their belief that little would happen, however, as a result of making that report, or the belief that doing so could potentially backfire on themselves, is a disincentive to raise awareness through any more formalised procedures. The regional diversion here is notable, with under half of respondents living in South Kordofan stating they would make a report, and four fifths of people living in Blue Nile.

While a relatively high number of respondents stated they would report a suspicious item, few have actually done so in the past. One fifth of respondents stated they have made a report before, whereas two thirds stated they had not. This is particularly high in Blue Nile state, where the vast majority had not made a report in the past. In South Kordofan, just over half of respondents had not made a report in the past. And only one respondent stated they had not made a report because they did not know who to go to for the report. So while many respondents have seen UXOs before, and the majority state that they would make a report, the number of respondents who have indeed made a report after coming across a suspicious item is low.

This is a central issue at the heart of demining operations, as demining agencies need to be able to work with communities to develop their programming, and equally local communities need to feel they benefit from mine clearance activities. And yet, at the moment, this relationship does not appear to be functioning in the best way possible.

To some extent this could be due to mine action only having started recently in the Two Areas. Communities and demining agencies may simply not have had the time yet to build strong relations, and as a result, communities may still be somewhat suspicious of demining agencies and their staff.

Participants' prioritisation areas are related to participants' perception that reporting suspicious items does not change anything, discussed above, and has implications for UNMAS and demining agencies on prioritisation. People's perceptions, whether rightly or wrongly, that nothing happens with their reports is damaging to relations between the community and mine action stakeholders. Instead, this should be linked to prioritisation and engagement on the ground with members of the communities. It shows the need for mine action tasking being informed by people's needs and views.

While some of this work would usually fall to community liaison officers there does not appear to be a structured, systematic and concerted effort to consolidate knowledge between organisations; rather organisations tend to keep knowledge within the organisation itself.

³² The role of the military in mine action, GICHD. 2003. P. 16.

Tackling this requires NGOs and demining agencies to undertake comprehensive engagement and outreach activities within mine affected communities. These should include tailored campaigns on how to report a suspicion item and to whom to report a suspicious item. Secondly, an external audit to examine reports made by the population and the extent to which those items have been cleared would help assess the accuracy of people's perception of reporting. If the perception is inaccurate, and reported mines are indeed swiftly cleared, this should be reflected in outreach campaigns. Should the perception be accurate, then there is a need to strengthen coordination for reporting and mine clearing between the local authorities, community leaders, demining agencies and the security forces. Essentially, there is a need for the population to gain trust in the coordination function between themselves, the security forces and demining agencies.

Respondents perceived the impact of demining activities more positively than demining agencies themselves

Respondents appeared to be broadly more positive about the impact of mine action than demining actors themselves. A majority of respondents reported feeling safer since demining activities begun in their area. Very few participants reported having experienced little change. In contrast, possibly due to the little direct interaction, over half of respondents did not respond when asked about their experience of demining agencies and actors. Among those who did, just under one third of participants reported feeling positive about demining agencies and actors, and a smaller sample felt neither positive nor negative.

There was an equal split among respondents between those who felt demining activities had made it easier for them to support their family, and those who did not or chose not to answer the question. Just under half of respondents reported that demining activities had made it easier for them to support their family. The same number of respondents stated that demining activities had made it easier for them to work. However, almost the same number of respondents chose not to answer that question, or felt that demining activities have not had that positive effect, suggesting that while there is support for demining activities among some segments of communities, this is not necessarily a sentiment shared by all, or something that all feel has contributed to bettering their lives.

In terms of demining priority areas, we asked respondents to prioritise which areas should be demined and weighted their top three choices to create a list of priority areas.³³ The top three prioritisation areas for demining were:

1. Roads
2. Forest
3. Mountains

This is followed by farming areas, fields, schools, houses, military bases, caves and areas next to the road, with water points, trenches and military checkpoints at the bottom of the prioritisation list. These are the areas that are perceived to be the most important by the public. Based on this, being able to travel is the top priority for respondents, whereas areas with a primary economic purpose, such as farming land, is secondary.

Respondents' perceptions that nothing happens when they report an item would suggest a perception among the population that their demining priorities are not being understood properly by

³³ NB. Just under half of respondents prioritised their responses, so this is representative of those respondents only.

demining agencies. While community leaders have more levels of interaction with demining agencies than members of the public do, and seem to be generally more positive about demining agencies themselves, as we will discuss in the next section, it would seem that this is not the case for members of the public, possibly leading to issues of prioritisation. It would be worth exploring opportunities for engaging a broader segment of the local community in prioritisation, and reaching out into the community beyond the community leader. This might also help improve relations between communities and demining agencies.

Despite the relatively positive views about the impacts of demining, the weather has affected demining operations and in doing so slowed down demining operations. Half of respondents believed the weather had an impact on demining operations. Only few respondents believed technology, such as mobiles or the internet, or national or local authorities had an impact.

In conclusion, there is a fractious relationship between members of the community and demining agencies. As a result, despite being fearful of security forces, people are more likely to report mines to security forces than demining actors. Despite this, respondents' perception of their work was largely positive, although we cannot say for certain to what extent this is due to social acceptability bias. Strengthening relations between demining actors and members of the public, focussing in particular on building trust, might lead to people feeling more comfortable reporting landmines to demining agencies.

Impacts of mine action on peacebuilding

As we have seen, survey participants were on the whole fairly positive about mine action. As a result of mine action, they feel safer, and more able to provide for their families. This leads us to the possible longer term positive impacts of mine action, such as sustainable peace-building. Mine action is a useful confidence-building measure between parties where there has been a protracted conflict.³⁴ The objective of having to work across warring parties to obtain a common goal, namely demining of a particular area, can serve as a useful stepping stone for trust building, as seen in the case of Colombia.³⁵

Essentially, peace is a prerequisite of mine action. At the moment, however, cross line mine action is not yet possible – insofar as we have been able to establish. This means that UNMAS have concentrated efforts on areas firmly within the control of the central government of Khartoum – which in turn has affected prioritisation of mine action work.

The survey data helps to show that mine action has supported people living in the Two Areas to rebuild their lives and their livelihoods. It is not clear, however, to what extent existing demining activities in the Two Areas has helped decrease tensions between community through the release of land. Whether any fears exist that mine action may create conflict risk did not come up during the fieldwork. The difficulty in assessing this is in part also because the fieldwork took place in Government controlled areas in Sudan, thereby making it difficult to make claims about the potential of mine action to reduce tensions between communities in government-controlled areas and communities in non-governmental-controlled areas.

³⁴ Mine action and peace mediation, GICHD and Swiss Peace. 2016. P. 25.

³⁵ Ibid.

There are regional differences in awareness of landmines

We know that South Kordofan is more heavily contaminated with UXO and ERW than Blue Nile is, and as such people living in South Kordofan are more likely to have come across ERW of any kind than people living in Blue Nile. Bearing this in mind, it is important to note the differences related to people's awareness and understanding of landmines in Blue Nile. As discussed, respondents in Blue Nile reported people in Blue Nile might pick up ERW to play with or because they do not know the object is dangerous, more so than respondents in South Kordofan, and they are more likely to believe people become disabled because of God's will, rather than an ERW than people in South Kordofan, based on those participants' responses.

This points to a lesser understanding of the dangers of ERW and UXOs in Blue Nile than in South Kordofan. Equally, it raises the question of the extent to which people in Blue Nile need to have better understanding on ERW, as they are less likely to come across them than people who live in South Kordofan.

Community leaders view mine action positively, but challenges remain

The interviews with community leaders led us to the following four findings, which we will explore below:

1. Landmines drive people away from their homes and pastures
2. Consent from and coordination with the community is key for demining to take place
3. Perceptions of mine action are broadly positive among community leaders
4. Demining itself is only one aspect of mine action. Greater MRE and mine victim support is also needed

Landmines drive people away

For community leaders, the contamination of landmines and ERW has had predominantly economic consequences for the local population. Community leaders described the ways in which this affected their livelihoods, for example not being able to farm, or restricting the movements of their cattle. One community leader from Kadugli said about the impacts of landmines: 'locals feel insecure in their movement, they are afraid of mines and UXOs'. According to them, people's livelihoods were dependent on agriculture or grazing animals. Instead, farms and farmland in suspected ERW contaminated areas were being abandoned, and people were forced to find new farming areas that were more remote. Equally, they described how mine contamination has negatively impacted trade. With contamination, travel has become more dangerous and as a result people travelled less, which in turn hampered the trade of goods between villages and communities. Both these issues, not being able to farm and restricted movement, has had negative economic consequences and directly negatively affected people's livelihood in the community.

Community leaders also described social consequences. The fear of mines and ERW restricted people in all aspects of life. The knowledge that some areas may be contaminated with mines has 'left people feeling fearful', and less willing to travel. One community leader said that 'it's a big problem to my people, they don't know how to survive with it'. The impact of mine contamination was highly visible, according to some of the community leaders interviewed, particularly through the number of people living with disabilities caused by ERW. Having a disability from an ERW-related accident has meant people cannot work and became dependent on their family. For children and young adults, it may have meant having to drop out of school.

In addition to economic and social consequences, mine contamination also disrupted the patterns of living of different population groups. Multiple community leaders used the term 'peaceful coexistence' to describe relations between the tribes and different ethnic groups in their villages. But they also described how this peaceful coexistence was negatively affected by the last armed conflict from 2011. In Blue Nile, one community leader mentioned there had been tensions between nomads and farmers. This was due to the scarcity of arable land due to landmine contamination, and thus increased competition for land: farmers who want to farm have to compete with nomads who want to graze their animals on the same land.

Another aspect described was that people did not always feel equipped to cope with ERW or landmines, whether this is to remove them themselves, have them removed by experts, or report them. One community leader from Dalame said: 'people have no information [on how] to deal with mines'. Another described it as: 'They [people] don't know how to coexist with these mines'. It is interesting to note that there was a belief among the population that they needed to coexist with mines.

In El Damazine one community leader suggested that while his town is not contaminated, the rebel-held rural areas are, specifically Kurmuk where ERW caused tractors to explode. This suggests that access for demining agencies to rebel-held areas is limited, with more mine incidents as a result. Our fieldwork was limited to Government held areas, and as such we cannot make further claims about the effectiveness of mine action in non-government held areas.

Consent from, and coordination with, the community is key for demining to take place

Community leaders, contrary to members of the general public within communities, viewed demining agencies as reliable and 'committed to their promises'. While they did not specify whether they meant NGOs or commercial operators, nor whether they were national or international, this showed a results-driven relationship. It meant community leaders felt they could trust demining agencies. Most community leaders described their role and interaction with demining actors as a liaison one: they served as the contact person for demining agencies. One community leader considered it is responsibility to do so, saying: 'it is part of our duty as community leaders to interact with demining agencies'. In that role, they helped organise meetings and training sessions. Generally, they acted as the link between the community and the demining actors.

However, not all community leaders had interacted with demining agencies in the past, despite having come across or been affected by mines. While less members of the public in Blue Nile had interacted with demining agencies, this was not the case with the community leaders we spoke to, the majority of whom had worked with demining agencies in the past. This suggests that while there

are established relations between community leaders and demining agencies in Blue Nile, this does not trickle down to the rest of the local population. At the same time, Blue Nile is less heavily contaminated than South Kordofan state, which means that it is likely that there are less demining agencies present in the state, and thus communities are less likely to come across them.

The gap in trust between members of the public and community leaders is notable here: community leaders tend to trust demining agencies more so than people within those communities. This may be due to community leader being more likely to have come across demining agencies and their staff, and worked with them in the community. Members of the public in the Two Areas, on the other hand, seem to be more at arms-length from demining agencies, and have not directly engaged with them as much as community leaders. A factor in this could also be that demining has only recently begun in the Two Areas.

There was, however, varying support for who should lead and conduct the demining. NGOs were generally widely viewed as accepted by the community, according to the community leaders, with the relevant expertise and resources. In other words, NGOs were trusted by villagers to conduct demining operations and work with the community in doing so. The absence of mention of national and/or local authorities in this regard was notable. Most community leaders did note the importance of having the consent of the community in which demining actors operated, underscoring the importance for these actors to engage with communities directly. In contrast, others viewed the responsibility as lying with the government, or a shared responsibility between NGOs and the government.

Perceptions of mine action are broadly positive among community leaders

The perception of demining activities was mainly positive. Community leaders felt that in the local areas, demining has made people in the community feel safer, according to the community leaders interviewed. They reported villagers making use of cleared land, and enjoying greater freedom of movement, allowing for travel to the bigger regional towns, such as Kadugli. People ‘feel confident to go farming’, according to one community leader from Dalame. This would suggest that demining activities alleviated the negative economic consequences of contamination.

Equally, community leaders reported that people felt ‘safer’, and that demining activities also had a secondary effect as a confidence building measure for people in the community: there is a perception that the area was safer, and people felt more confident to travel again. As one community leader from Kadugli put it: ‘from the beginning I am very happy about their presence, they make [cause] change in mindset’. Some community leaders suggested that conflict affected and caused any internationally-led demining activities to cease. This was especially the case in interviews with community leaders interviewed in Kadugli and Damazine.

Community leaders described the main role of demining agencies as one of raising awareness about the dangers of landmines by providing MRE training and workshops. Of the benefits of MRE, one community leader said: ‘I know how to deal with strange objects’. However, it was not clear to what extent this knowledge and risk education was accessed and understood by all people in the locality. While community leaders reported that those living in the village were aware of the danger of mines and how to avoid them, it was not clear to what extent people had knowledge of ways to report mines, or any other pathways to safely remove the mine.

Some community leaders were more sceptical about the effects of demining activities, arguing that there has been little visible impact of the presence of these agencies on the ground, and stating that far more need to be done in terms of awareness raising and the training of people to deal with mines and ERW.

While demining and demining actors were broadly viewed positively by community leaders. Some community leaders mentioned that a family member was employed by a demining agency, suggesting that demining agencies also helped relieve some of the economic pressures by using capacity building measures and employing members of the community. The extent to which this is a successful and viable incentive to lure people away from more dangerous income generating activities such as scrap metal collection, is not clear.

With regards to the facilitators and barriers to demining operations, it was clear that the rainy season acts as a barrier. This is largely due to the inaccessibility for NGOs during that period, and as a result the suspension of nearly all demining and humanitarian activities.

Demining is only one aspect of mine action, greater peacebuilding, MRE and victim support is needed

A priority for community leaders seemed to be firmly establishing peace and stability in their areas, which they also linked to creating greater opportunities for demining activities, an equally important priority. Some community leaders linked the feasibility of demining activities directly to active hostilities, stating that in order for demining activities to take place, peace agreements were needed and a cessation of hostilities. Equally, in Dalami one community leader stated that the area was still in a 'state of instability' due to the conflict between the government and the Sudan People's Liberation Army (SPLA). It is clear that community leaders linked hostility with the use of mines.

Nearly all community leaders spoke of the value of MRE: they regarded these activities as of high importance for their community. Demining actors were associated with building understanding around the risks of landmines and ERW, thereby indirectly helping to safeguard the community.

Some community leaders called for greater support for ERW victims, for example through the provision of orthopaedics, and helping to building economic activities, i.e. income generating activities.

Interviews with key stakeholders show the need for a holistic approach to demining, peace building, reconciliation and development

In this section, we analysed the views from key demining stakeholders in Khartoum.

Intercommunal tensions are exacerbated by mine contamination

A key theme that emerged across the interviews as a key social consequences of mine contamination, was the tension between and within communities. In the first instance, mine and ERW contamination has led to reduced availability of arable farming land, directly affecting people's ability to farm, and graze animals. This had a direct impact on individuals' and communities' livelihoods. In the second instance, less farming land has led to greater competition between farmers as they compete for the little available land free of contamination, and thus, essentially compete for the ability sustain their livelihood. In addition to increased tension among farmers, mine contamination has also increased tensions between farmers and nomadic communities, as nomadic routes cross farming land. In short, the conflict has had an indirect consequence of raising tensions between people and groups of people due to economic competition.

While communal tensions were underscored as a challenge that has been brought to the forefront by mine contamination, interviewees did not discuss whether, in turn, demining activities could have any possible peacebuilding ramifications, or in the least reduce any of these tension. Mine action is situated firmly in between peace and development.³⁶ Thus, it might be plausible to think that with the release of land back to villagers, competition over arable land might decrease, resulting in a decline of tensions between or within communities. While mine action in the Sudan has been used as a peacebuilding tool in the past, this has not been without its challenges. A 2008 GICHD evaluation of the UN Development Programme Sudan Mine Action Programme concluded that mine action in Sudan had made important contributions to broader processes, including peacebuilding efforts and the return of displaced people.³⁷ Equally, it found that mine action was one of the areas in which the Sudanese central government and the Government of South Sudan worked together most effectively.³⁸ However, this was not raised by interviewees. It would be worth exploring whether establishing a firmer and more visible link between mine action and peace-making/building could have a positive influence on the conduct of belligerent parties.

Another way in which intracommunal tension was manifested, was through IDPs and host communities. Heavy contamination of landmines in particular areas has led to people leaving those areas, resulting in large numbers of IDPs: an estimated 2.3 million IDPs in the whole of Sudan, with an estimated 230,000 IDPs living in Blue Nile and South Kordofan.³⁹ Contrary to Darfur, there are no IDP camps in Blue Nile or South Kordofan, and instead IDP communities have established themselves in settlements among the host population. A 2017 ODI study showed that mass displacement to conglomerations has led to worsened health conditions, greater insecurity and risks of violence, can put pressure on the economy and exacerbate tensions between IDPs and the host communities.⁴⁰ In addition to this, the length of the conflict in the Two Areas has meant that many IDPs lived in protracted displacement, yet often their rights were not acknowledged or respected by the government.⁴¹ In the case of Blue Nile and South Kordofan, some IDPs wished to return to their areas of origin, but it was not safe to do so due to contamination – although a UN Office for the Coordination of Humanitarian Affairs needs assessment stated that IDPs need to be better informed about the dangers of mines before returning home⁴² suggesting IDPs lack good understanding of the risks posed by mines. This meant they either voluntarily return to their area of origin with the risk of

³⁶ Jung, Y. 'Mine action in the era of the SDGs and sustaining peace', SIPRI. 27 July 2017.

³⁷ Paterson, T. and Bohle, V. Evaluation of the UNDP Sudan mine action capacity building and development project. GICHD. February 2008. P. 3.

³⁸ Paterson and Bohle, 2008, p.3.

³⁹ NB. These are official government estimates from 2016, as there is no formal registration procedure for IDPs outside of refugee camps. UNOCHA, Humanitarian needs overview: Sudan. 2016. Pp. 4 and 6.

⁴⁰ Kirbyshire, A., Wilkinson, E., Le Masson, V. and Batra, P. 'Mass displacement and the challenge for urban resilience', Overseas Development Institute. 2017.

⁴¹ Assal, M. A. M. 'Whose rights count? National and international responses to the rights of IDPs in the Sudan', Development Research Centre on Migration, Globalisation and Poverty, University of Sussex. 2006. P. 26.

⁴² UNOCHA-HAC Blue Nile, Blue Nile joint needs assessment, phase 1 report – First semester 2018. P. 32.

getting injured or killed. Or they remained in their current area, where their political status was contested, and they have limited rights. Displacement, in turn, has put a strain on the limited social services that exist in the host region. This, in turn, also has the potential to see tensions flare between host communities and IDP communities. Additionally, there is also the psychological effects of being injured by a landmine, which has caused challenges for communities.

Mine contamination has increased the severity of the economic situation in the Two Areas

There was consensus among interviewees that mine and ERW contamination affected the livelihood of communities. It has hampered their ability to farm, graze animals, or undertake similar economic activities. While prior to the 2011 conflict the situation for people in the Two Areas had already been challenging, this has deteriorated since then. There was a lack of capacity and investment in the region. People who lived in the area generally experienced poverty and lack of access to resources, and basic services, such as health or water, sanitation and hygiene (WASH). In essence, mine contamination in Blue Nile and South Kordofan was said to have an impact on people's lives in all respects; it has affected their security and livelihoods, their ability to farm and herd animals, and their ability to travel.

One interviewee mentioned that there have been reports of mines being sold in markets as scrap metal. This suggests two dimensions: first, that an economy around mines and ERW has developed in the Two Areas, and that mines constituted an element of people's livelihood. Second, stating the obvious but worth mentioning nonetheless, it also showed that people have become so normalised to mines and their threats, that they are willing to collect and attempt to disarm them, to then use their materials. This meant that any post-demining economic recovery activities need to take into account any disruption caused by demining to livelihoods, in the first place. In the second place, policy-makers should be aware that demining activities might cause an illicit market in scrap metal to flourish in parallel.

A few interviewees pointed out that exact figures on mine victims do not exist. This lack of data makes it more difficult to understand the scope of the challenge at hand.

Mine contamination affects women and children more than men

Based on our analysis, women and children carried the burden of mine contamination. Women were affected by both the conflict and mine contamination. In some communities, women became the sole breadwinner while men fought in the conflict with militias. In addition to this, women were also reported to become the sole breadwinner if the husband was injured or killed by a mine. In addition to being the sole breadwinner, women also became the main caretakers. This put significant pressure on the women in the communities, who were obliged to take dual roles. Families where women were solely responsible for both income and care faced additional challenges: a 2007 GMAP study found that female-headed households often represented the poorest in Sudan, and were restricted by lack of financial resources, time and mobility.⁴³

⁴³ Gender and Landmines, from concept to practice. Swiss Campaign to Ban Landmines. 2008. P. 44.

Children, in turn, have been heavily affected by the conflict. According to one interviewee, the conflict has meant that children have been recruited as child soldiers by armed groups, and/or have been forced to leave school early. This decreased chances for upward social mobility for the next generation of children. If recruited as child soldier, they will be likely to harbour deep psychological trauma and require specialised community re-integration strategies.⁴⁴ And even for those children who have not been recruited as child soldiers, not being able to complete primary education will heavily impact their future opportunities. In addition, according to one interviewee, children who lack economic opportunities have grown up to hold extreme views and behaviours. This suggests there may be pressure on any peacebuilding and reconciliation efforts in the regions, and emphasises the need for economic development to grow opportunities for the populations.

Demining activities are viewed positively, but funding and coverage is an issue

Demining, and to a lesser extent, demining agencies, were seen in a positive light by key stakeholders. The impact of demining activities in the Two Areas can be broadly divided into two categories: 1) MRE and raising awareness about the danger of mines, and 2) increased economic development in the agricultural sector in particular. Demining has increased the areas available for farming, grazing animals and collecting firewood, i.e. income-generating activities. According to some interviewees, mine action has given people more security in the first instance. It has also allowed people to re-establish a normal daily routine, such as collecting drinking water.

Demining has also allowed movement of people and goods between villages to return, improving trade and economic relations between these areas, although it is not clear how strong these links were previous to the 2011 eruption of violence, nor to what extent re-establishing these trading routes has been taken up by the local population.

Interviewees highlighted that while demining has had positive impacts, at the current rate, it is not enough. More demining work is required to cover wider areas, to clear land of ERW and allow for the voluntary return of IDPs to their villages of origin. While demining operations themselves were considered beneficial, their coverage is limited when compared to the large size of contaminated areas. At the same time, the risk of mines remained: communities who did not have sufficient understanding of the dangers of demining continued to put themselves at risk as a result.

Several interviewees raised the issue of funding for demining activities. Mine action is costly, and time consuming, and requires resources beyond the capacity of the central government.

Demining could reinforce existing challenges in the political sphere

Some interviewees raised the issue of restricted access into non-governmental held areas. This affects demining efforts as well as MRE and awareness raising, and indirectly hampers conflict recovery and socio-economic development efforts in those areas. Equally, interviewees raised the issue that demining efforts require the consent of the government and the rebels, which has stalled

⁴⁴ See for example, Ozerdem, A. and Podder, S. *Child Soldiers: From recruitment to reintegration*. Palgrave Macmillan, London. 2011, and Denov, M. *Child Soldiers*. Cambridge University Press. 2010.

and hampered demining operations in the past. Conflict-affected areas remained affected by mine contamination, and there were no signs of development happening there.

It was raised in the interviews that the political situation in the region has an impact on humanitarian operations. For example, the national government wants to see humanitarian assistance coordinated through Khartoum, whereas Sudan People's Liberation Movement-North (SPLM-N) wants the assistance to come through South Sudan or Ethiopia. This fractured approach to humanitarian assistance meant that the end-user, namely the vulnerable population, is affected negatively in the end.

There appeared to be a gap between the ways in which elite interviewees and community leaders spoke of the political situation in the Two Areas. From the elites interviews it became clear that active hostilities still exist, and that clashes between the government and the SPLM-N/SPLA still happened. There was significant more emphasis on the highly fluid and continued difficult security situation, particularly so by interviewees who worked for international NGOs (INGOs). Community leaders, on the other hand, tended to focus on the challenge posed by mines and the need for demining activities. There was little to no mention of active conflict and the challenges this posed to their communities today.

This gap may originate from the different positions the interviewees found themselves in during the course of the interview. While elite interviews were conducted in one-on-one settings, community leaders were often surrounded by a number of people from the area during the course of the interview. This might have made it more challenging for them to speak of the conflict.

The weather impacts contamination areas and demining activities

There were also challenges posed by non-human factors. Extreme weather conditions, such as prolonged or heavier than usual rainy seasons, increased by climate change, has meant that mines and ERW have moved due to floods and extreme rains, according to one interviewee. This has meant that any land surveying activities may be rendered futile by the next rainy season, when the items may have been transported miles away by the weather. One interviewee raised the issue of deforestation as well, highlighting that this accelerates problems experienced during the rainy season with flooding. The rainy season itself also heavily impacted demining activities. It impeded movement of demining staff and delays demining activities due to interruptions.

Peace and stability are a prerequisite of demining

Efficient and effective demining activities required streamlined coordination between key stakeholders and stakeholder groups. It was suggested that, at the moment, the coordination between the police, security forces and military engineers is weak, and that better coordination between NGOs and security forces is needed.

There was a degree of consensus among elite interviewees on how various stakeholder groups could best support demining activities. National government needs to help map the location of mines, including providing maps of where they laid mines. The latter is politically sensitive as it might show that this was done more recently by the Sudanese Armed Forces (SAF) than is currently being

acknowledged. Equally, national government should do what it can to ensure and maintain peace agreements, allowing demining activities to take place.

A number of interviewees stated that procedures need to be simplified for demining agencies, although there were disagreements whether responsibility for this lay with the national government or the local government. It was also said that the national government should make the movement of demining agencies easier, for example by revising which goods, such as mine clearance goods, require permits to travel. Local government, in turn, was called upon to simplify bureaucratic procedures, possibly with the support of national government.

It was said that communities could help support demining activities by reporting suspected items to key relevant authorities. Yet, as we have seen, reporting levels are low and levels of trust in terms of reporting an item and something being done about them are equally low. This means that trust needs to be built between communities, security forces, and demining and humanitarian agencies. It was also suggested that communities have an advocacy role with the local government, to facilitate the presence of demining agencies.

NGOs are able to help by continuing MRE activities, and coordinating with other key stakeholders. It was mentioned that MRE is an issue that cuts across humanitarian relief operations, and therefore all NGOs should build the capacity of communities in this area.

The responsibility of providing support for victims lies with NGOs and local government, according to the interviewees. Local government could help support victims by registering them, thereby facilitating the work NGOs undertake to support victims. NGOs, in turn, need to help communities develop and implement income generating activities for mine victims.

Demining is merely the beginning of development in the Two Areas

There was a clear message from the interviewees that clearing Blue Nile and South Kordofan is not the end of the road in terms of humanitarian and developmental assistance required. Demining operations need to be followed up with holistic development projects that seek to redress people's livelihoods and improve outcomes for populations in the Two Areas, economically and socially.

What also became clear is that a holistic approach to demining, peace building, reconciliation and development is needed. Demining activities, which can help lead to development, require political stability. This is largely dependent on adherence to peace agreements by all parties involved, and reconciliation programmes between the affected communities.

Agriculture is the main livelihood activity in the Two Areas and the presence of mines has reduced the areas of cultivatable land. As a result, as discussed, some of the population was displaced. In addition, the reduced land impacts households' ability to develop sustainable livelihoods. Mine clearance once again frees up this land and increases the area available for cultivation. This is significant due to the sensitivity of land and land access, particularly for displaced populations. Mine action can therefore contribute to improved livelihood opportunities, help create the conditions for reduced socio-economic stresses within households, and post-conflict recovery.

However, further interventions are recommended to ensure that intercommunal conflict does not arise over the land that is cleared. This is a potential area of intervention for humanitarian and/or development actors.

However, while mine action is an important first step, it does not necessarily lead to economic or social development in an area that has been affected by conflict. This is especially the case where the population remains traumatised; where there is too little capacity or basic infrastructure to enable economic development to take place, or whereby mine action releases infrastructure, but the wider context is not in place to make full use of these.⁴⁵ Demining activities and land clearance, however, can help stimulate investment and land use.⁴⁶ Equally, targeted planning efforts for infrastructure, capacity and development of value chains is important.⁴⁷ So while demining is an important first step, achieving development in the Two Areas will depend on support for agriculture and livelihoods in general, strengthening governance and rule of law, and investing in infrastructure.

Limitations of the study

As with any other social science study, there are limitations to the study. While we sought to ensure the rigour and robustness of the study, the context in Sudan and the sensitivity of the topics at hand meant that there are a number of considerations to bear in mind when reading the results.

Perhaps most important of these is that this study is not fully representative of the Two Areas as a whole. The scope and scale of our project is not broad enough to be able make statistically significant claims. What our work does do is give a robust and relatively broad sense of people's perception and experiences of landmines and demining efforts in the Two Areas. Equally, while we attempted to have a sample representative of the Two Areas, we recognise that, due to the sample size, our study remains highly localised. This affects the claims we are able to make, and the conclusions that can be drawn from this study.

This study also took place in a challenging environment in areas that have experienced conflict. It is worth noting that the topics discussed were potentially sensitive for the participants, particularly for the survey participants, and this may have influenced their responses. Participants might have been concerned that what they said could endanger themselves or their family, and altered their responses accordingly.

Additionally, the people who participated in the study were largely self-selected. This means they likely had an interest in the topic and were keen to express views of some sort about the issues at hand. A proportion of participants, particularly among survey participants, were identified and approached through a community leader. While we obtained the participants' consent and mitigated any ethical considerations which could be caused by the gatekeeper (i.e. the community leader), this did mean we had less influence over who participated in the study.

Relatedly, often when conducting research with human participants, social acceptability bias is a concern.⁴⁸ We mitigated the risk of this happening as much as possible by administering the surveys and conducting the interviews confidentially where possible and appropriate, ensuring the anonymity of participants and making sure they understood what this meant, as well as making it clear that there were no 'right' or 'wrong' responses.

⁴⁵ IOD PARC, Meta evaluation of mine action and development. Final report. 31 July 2012. p. 17.

⁴⁶ IOD PARC, 2012, p. 16.

⁴⁷ IOD PARC, 2012, p. 17.

⁴⁸ For more information about social acceptability bias, see Nederhof, A. J. (1985) "Methods of coping with social desirability bias: A review", *European Journal of Social Psychology*. 15. Pp. 263-280.

Dynamics between interviewer and interviewee may also have had an impact on the responses given, as with any study of this kind. This does not invalidate our findings, but will have had some influence on the answers and responses given by participants.

There were also some inconsistencies in the ways in which the surveys were completed in two ways in particular. The first is a fairly high rate of 'no response' being given as an answer. The second is that participants did not always prioritise responses to questions when asked to do so. This was factored in during the data analysis, where we split the sample to be able to report on as much of the data as possible, as discussed above.

Finally, as mentioned previously, this study contains the views of host communities only, and not those of IDPs and other vulnerable people. Further conflict-sensitive research would be needed to gain their perspectives on the issue of mine contamination and the impact of this.

Conclusion and policy recommendations

Our findings show a deeply complex relationship between people's livelihoods, the prevalence of landmines and engagement with actors such as the authorities, police or demining agencies. Mine action has had a positive impact on people's lives, and helped to offset some of the negative consequences of mine contamination in the Two Areas. However, demining work remains too restricted, and segments of the population still have too little understanding of the dangers and risks posed by mines.

While Sudan has made significant progress on mine action in the past two years, there is need to maintain momentum to achieve the clearing target of 2023, and to help populations mitigate the risks of landmines until then. This requires continued funding for mine action. It also requires access to contested areas, and thus continued support to the peace process. There is a crucial role to play here for the international community to support the government of Sudan, local authorities and civil society and grass-root organisations in this endeavour.

Our research did raise a number of challenges. This was manifested in part through the fragile relations between members of the public and demining agencies. Establishing closer working relationships between demining agencies and security forces, and reaching out more effectively to members of the public is important, firstly, for having the consent of communities on the one hand, and secondly for more effective demining where needed by the population. At the moment, communities at times feel their demining prioritisation needs are not always heard, which in turn hampers trust-building between communities and demining agencies. Targeted outreach and engagement with communities, beyond community leaders, would help address prioritisation concerns and help build trust.

In part, this also shows the extent to which mine action is a political, and at times highly contested process which requires the close cooperation of many different stakeholders, each with their own interests and goals. At the local level, mine action has a direct impact on people's lives and their livelihoods, raising the stakes for any involvement in clearance work.

Our research also showed that while broadly people are aware of the dangers of landmines, they are far less able to cope with the aftermath of mine-related injuries. As a result, women and children are particularly negatively affected by landmines.

In light of this, we make the following recommendations:

1. The international community, working with relevant stakeholders in Sudan, **should continue to support the peace process in the Two Areas**. This is absolutely crucial to allow actors to begin addressing people's urgent needs in the region.
2. Where **there are clear processes for making reports of suspicious items, these need to be communicated more effectively to the community** by demining agencies and security forces, in coordination with community leaders. Where such processes do not exist, demining agencies need to work with community leaders and security forces to establish these and communicate this to members of the public. Demining agencies should use the trusted relationships they have with community leaders to do this, and in turn **use this to build greater trust with members of the public**.

3. In parallel, **a quick ERW reporting response unit (RRU) should be established within NMAC** but be based in both regions, to promptly respond to any reports of ERW or otherwise. This will in turn help build confidence in local authorities, and trust between demining agencies and members of the public.
4. **There needs to be better coordination between the community, the security forces, demining agencies and the mandated overarching humanitarian and demining bodies.**
5. **Demining agencies need to increase their outreach and engagement activities in mine-affected communities**, beyond the community leader, which some of the other recommendations here might be suggestions for. Among other benefits, such as trust building, this would also help create the feeling among communities that they are actively involved in prioritisation of mine clearance areas.
6. **Both mine victims and their families need greater support in living with a mine-related disability.** This should include support on how families might make changes to cope with mine-related injuries and the effect these have on families.
7. **Particular efforts need to be made to help mitigate the impacts of landmines on women**, for example through gender-sensitive rehabilitation and socio-economic reintegration strategies.
8. Children and young people who have been affected by mines, or whose family members have a mine-related injury, **need to receive greater support in developing their skills and finding employment, as well as psychological support.**
9. Both Blue Nile and South Kordofan require more mine action, including but not limited to MRE activities. While this is needed in South Kordofan too, **landmine-affected communities in Blue Nile in particular need to increase their understanding of the dangers of mines**, and the support demining agencies can offer.
10. **More MRE activities are needed in mine-affected communities.** Efforts need to be made so that such activities achieve maximum possible participation from members of the public, to ensure they increase their knowledge on the dangers and risks of landmines.
11. **Sudan's Humanitarian Aid Commission and National Mine Action Centre need to better work together to ensure mine action is linked up with development programming.** This would allow for a holistic approach to mine action and development to help communities transition.

Appendix A: string search terms

Conflict origins and dynamics

- ('Blue Nile' OR 'South Kordofan' OR 'Two Areas') AND ('Sudan People's Liberation Army (SPLA)' OR 'Sudan People's Liberation Movement-North (SPLM/N)' OR 'Sudan Revolutionary Front (SRF)') AND ('Sudan Armed Forces (SAF)' OR 'Popular Defence Forces (PDF)' OR 'Rapid Support Forces') AND ('conflict' OR 'combating' OR 'ethnic conflict' OR 'insurgency') AND ('identity') AND ('community tension' OR 'community friction')
- ('Blue Nile' OR 'South Kordofan' OR 'Southern Kordofan' OR 'Two Areas') AND ('conflict' OR 'combating' OR 'ethnic conflict' OR 'insurgency') AND ('identity')

Impact of landmines

- ('Blue Nile' OR 'South Kordofan' OR 'Two Areas') AND ('Sudan People's Liberation Army' OR 'Sudan People's Liberation Movement-North' OR 'Sudan Revolutionary Front') AND ('Sudan Armed Forces' OR 'Popular Defence Forces' OR 'Rapid Support Forces') AND ('conflict' OR 'combating' OR 'ethnic conflict' OR 'insurgency') AND ('identity') AND ('landmines' OR 'explosive remnants of war' OR 'unexploded ordnance')
- ('Blue Nile' OR 'South Kordofan' OR 'Two Areas') AND ('conflict' OR 'combating' OR 'ethnic conflict' OR 'insurgency') AND ('landmines' OR 'explosive remnants of war' OR 'unexploded ordnance')

We also conducted a region-specific search:

- 'South Kordofan' AND 'conflict' AND '2011' AND 'landmines' filetype:pdf
- 'Blue Nile' AND 'conflict' AND '2011' AND 'landmines' filetype:pdf

Appendix B: stakeholder matrix

Stakeholder and Basic Characteristics	Description	Interests in the Project
Humanitarian Aid Commission (HAC)	A governmental department at both the state and federal level. HAC's role is to coordinate humanitarian interventions of national and international NGOs.	HAC approval at both the state and federal level is required for any data collection under the project, the process of gaining permission will also include HAC reviewing the data collection tools. It is likely that a representative from HAC will accompany the enumerators to the target field locations and be present during the
National Intelligence and Security Service (NISS)	The intelligence service of the federal government of Sudan. The NISS also supports the Rapid Support Forces who have been accused of human right abuses in the Darfur region.	MC staff must obtain permission from NISS to travel to field locations.
Local Community Leadership	A traditional system of community leadership exists in Sudan, who in the absence of formal governance structures can represent the primary authority in the communities. However, armed conflict and widespread displacement mean that some traditional leadership structures have been eroded or undermined in many conflict-affected communities. In addition, local community leadership structures are not inclusive and are largely composed of older male from the dominant ethnic group.	Community leaders will participate in the data collection process as key informant interviewees. Community leaders also serve as gate-keepers to gain access to community members. Obtaining the support from community leadership is critical to the project success.
National Mine Action Centre (NMAC)	NMAC is the Sudanese governmental body responsible for: Legislation and regulations, including the granting of license of national and international mine action groups/actors Planning: Implement and plans projects Coordination: Coordination of activities and programs to address mines and ERW Reporting: Issues annual reports on actions taken to combat mines. Supervision of administrative activities- job applications, compliance, investigation of mine incidents.	NMAC plans and implements mine clearance projects in Sudan and are a key stakeholder in the research project.
Community Members in Target Areas	Direct programme beneficiaries of any mine clearance efforts	Community members will be requested to participate in the data collection process and their views are key to the project success
Community Based Organisations (CBOs)	Organisations representative of the community	CBOs will be utilised as a platform to engage community members and encourage support for and participation in the project.
International Non-Governmental Organisations (INGO),	Mercy Corps, CARE International, World Vision, Save the Children	INGOs are key humanitarian actors in the target areas and MC will engage them as research participants during the data collection process.
UN Agencies	There are 27 UN agencies/entities working in Sudan working to encompass development cooperation, humanitarian assistance and peacekeeping. The	UN agencies in the target areas are key humanitarian actors in the target area and MC does not foresee any

	collective response of the United Nations to national development priorities is outlined in the United Nations Development Assistance Framework (UNDAF) and is supported by the United Nations Resident Coordinator's Office.	challenges in engaging their views in the research process.
	UNMAS - The United Nations Mine Action Service (UNMAS) is a section of the Department of Peacekeeping Operations and was formed in 1997 to serve as the United Nations focal point for mine action and to support the UN vision of a 'world free of the threat of landmines and unexploded ordnance'.	Given UNMAS prevalence in leading Mine action in Sudan, they will have key interest in the outputs of the study and MC expects ease of access to elite interview candidates.
	UNDP - The United Nations Development Programme (UNDP) is the United Nations' global development network. UNDP advocates for change and connects countries to knowledge, experience and resources to help people build a better life.	Whilst its key objective is building a better life for people, UNDP are the least influential out of the 4 agencies with UNMAS/UNICEF and WFP conducting the activities. Whilst there will be a reference to UNDP, it will not be a priority UN elite interview.
	UNICEF - The United Nations Children's Fund (UNICEF) is a United Nations (UN) program that provides humanitarian and developmental assistance to children and mothers in developing countries.	The output of this research has direct comparison to the key objective of UNICEF and as such their experience in Sudan will be significant. Expectation that opinions will be capture within the data collection.
	WFP - The World Food Programme (WFP) is the food-assistance branch of the United Nations and the world's largest humanitarian organisation addressing hunger and promoting food security.	WFP will be able to address the humanitarian food security response in areas they may not have detail of prior to the assessment
Armed Non-State Actors	<p>Presently, the armed non-state actor, the Sudan People's Liberation Movement-North (SPLM-N) control areas in Blue Nile and South Kordofan state.</p> <p>Humanitarian access to these areas is restricted and civilians residing in these areas are experiencing chronic food insecurity, high rates of malnutrition and a lack of basic services.</p> <p>In January 2018, an extension of the unilateral ceasefire between the Government of Sudan and the SPLM-N was announced. While activities hostilities have subsided, tensions between the government and the SPLM-N remain high. Of further concerns is the worsening political divide within the leadership of the SPLM-N. The political divide has led to violent clashes with strong ethnic undertones between units of the SPLM-N in its territory in Blue Nile State and in refugee camps hosting South Sudanese refugees in Blue Nile State.</p>	While it is likely that SPLM-N leaders would be supportive of the project in an effort to increase their legitimacy.

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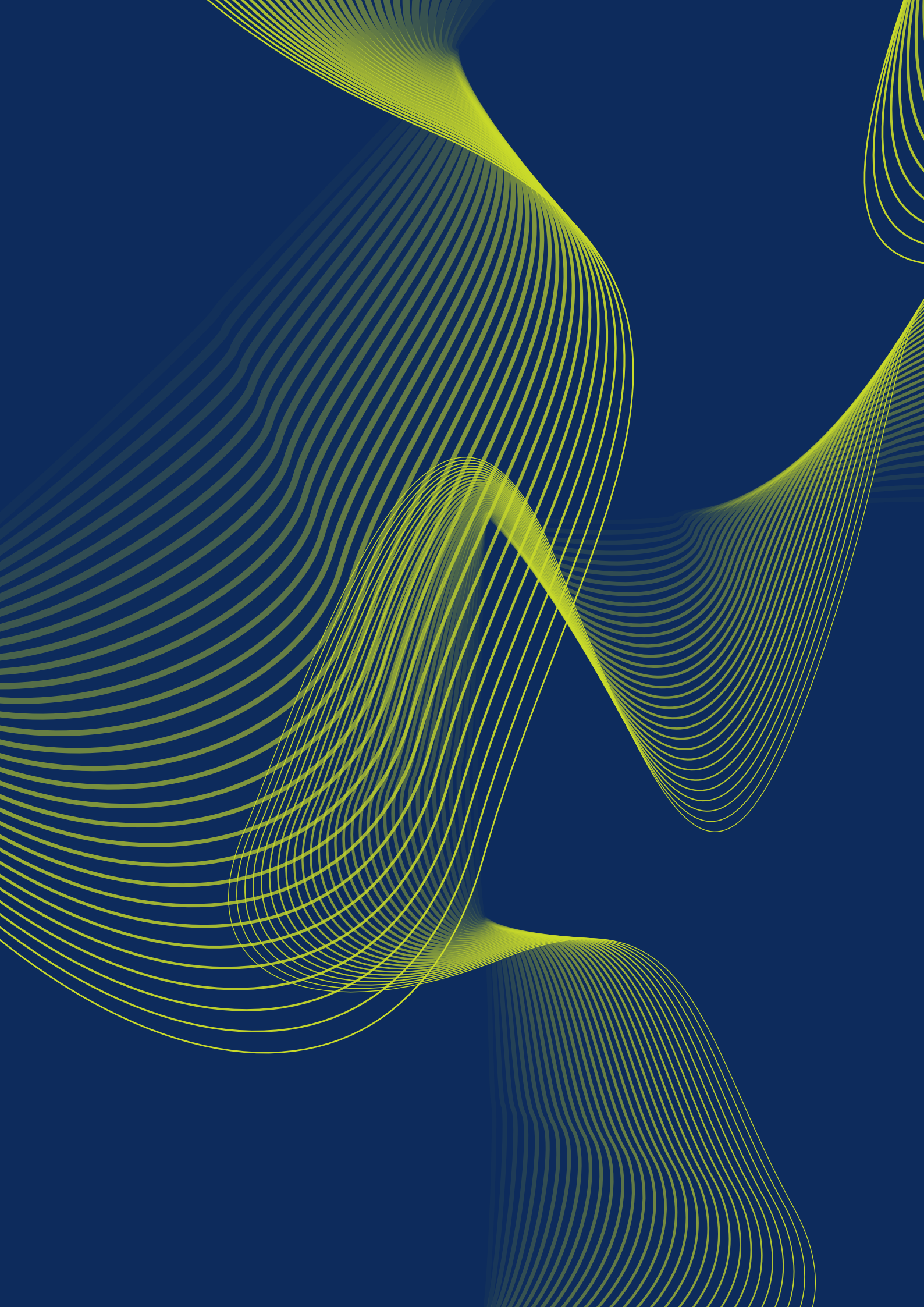
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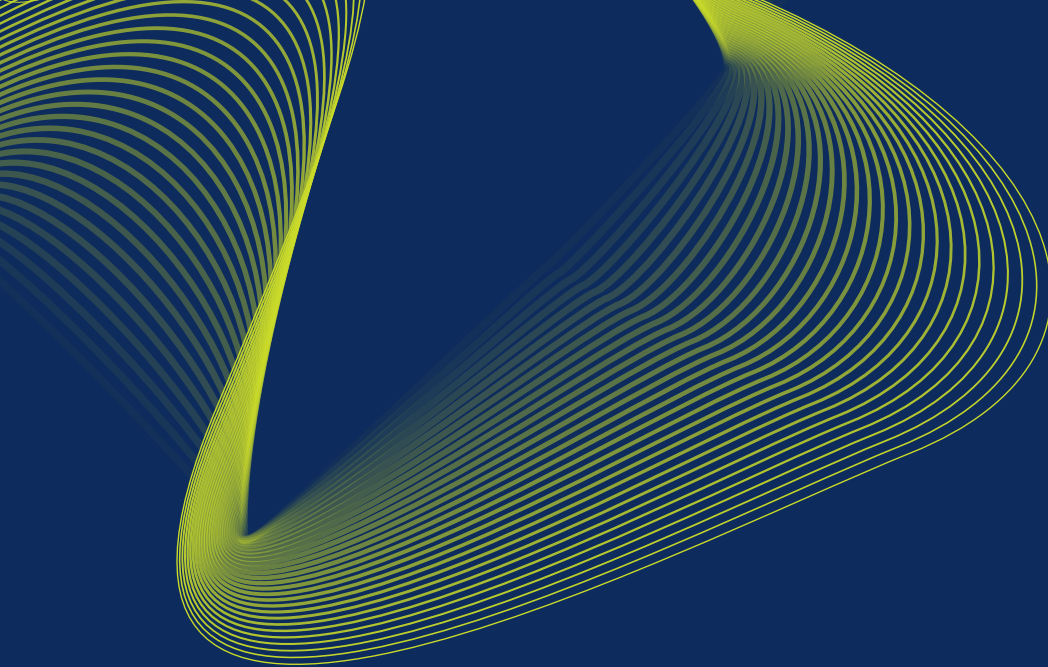
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