

KEY DATA

**CLUSTER MUNITION
CONTAMINATION: UNKNOWN**

SUBMUNITION
CLEARANCE IN 2021

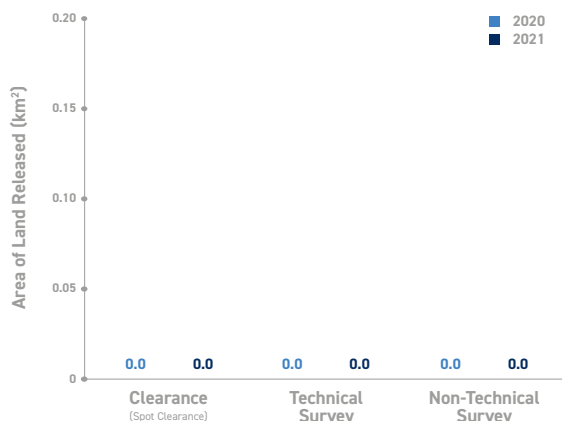
0m²

(SPOT CLEARANCE)

SUBMUNITIONS
DESTROYED IN 2021

1,777

LAND RELEASE OUTPUT



KEY DEVELOPMENTS

Management of mine action in Yemen continues to be geographically divided along the lines of the conflict that erupted in March 2015. Yemen's mine action programme remains on an emergency footing, balancing the need for urgent clearance to remove explosive hazards posing an immediate threat to communities and the longer term need for survey to locate and measure the extent of the threat. Norwegian People's Aid (NPA) completed registration with the authorities in November 2021 and established an office in Aden to help the Yemen Executive Mine Action Centre (YEMAC) develop a mine detection dog (MDD) programme in the south.

RECOMMENDATIONS FOR ACTION

- Yemen should accede to the Convention on Cluster Munitions (CCM) as a matter of priority.
- Yemen should comply with its obligations under international human rights law to clear cluster munition remnants (CMR) on territory under its jurisdiction or control as soon as possible.
- The Internationally Recognised Government of Yemen (IRG) should amend bureaucratic procedures and arbitrary barriers that are obstructing the importation of demining equipment and impeding implementation of YEMAC's mine action plans.
- YEMAC and the Yemen Mine Action Coordination Centre (YMACC) should increase transparency by publishing regular, comprehensive reports on developments in its management, planning, and implementation of mine action and the capacity of all mine action operators for survey and clearance.
- YEMAC and YMACC should publish annual work plans specifying areas targeted for survey and/or clearance.
- YEMAC and/or YMACC should publish regular updates on the results of the baseline survey disaggregating by location (governorate and district), size, and, where possible, type of contamination.
- Yemen should review, adopt, and circulate revised national mine action standards.
- YEMAC should clarify and circulate criteria for prioritization of survey and clearance.

CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

MANAGEMENT

- Yemen Executive Mine Action Centre (YEMAC)
- Yemen Mine Action Coordination Centre (YMACC)

NATIONAL OPERATORS

- YEMAC

INTERNATIONAL OPERATORS

- Danish Refugee Council Humanitarian Disarmament and Peacebuilding Sector (DRC)
- HALO Trust
- Swiss Foundation for Mine Action (FSD)

OTHER ACTORS

- United Nations Development Programme
- Norwegian People's Aid (NPA)

UNDERSTANDING OF CMR CONTAMINATION

The extent of cluster munition contamination in Yemen is not known. YEMAC has reported the presence of CMR in seven governorates with the heaviest contamination in the northernmost Saada and al-Jawf governorates bordering Saudi Arabia. The other affected governorates included Amran, Hajjah, Hodeida, Mawit, and Sana'a, including in Sana'a City.¹

Yemen had CMR contamination before 2015 and Human Rights Watch has said it recorded Saudi air strikes using cluster munitions dating back to 2009.² The escalation of armed conflict since 26 March 2015 significantly increased both its extent and the threat to the civilian population. This was the result of airstrikes by the Saudi Arabia-led coalition on territory controlled by the Houthis (Ansar Allah), which are the so-called De Facto Authority (DFA) in Yemen.³ In December 2016, the organisation reported that 18 coalition attacks using cluster munitions since the previous year had killed at least 18 civilians and injured 74 more.⁴

Human rights groups have documented the use of United States (US) BLU-63 (in Sana'a City); BLU-97 combined effect submunitions (in Saada governorate); CBU-58 and CBU-105 sensor-fuzed munitions (in Amran and Sana'a governorates); Brazilian Astros II munitions (in Saada governorate and city), and British-made BL755 submunitions (in Hajjah governorate). They have also reported use of ZP-39 artillery-delivered submunitions of indeterminate origin.⁵

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Management of mine action in Yemen is geographically divided along the lines of the conflict that erupted in March 2015 between the Houthi (Ansar Allah) movement controlling the capital Sana'a and much of the north and west (the DFA), and the internationally recognised government (IRG), operationally based in Aden and the south. The Sana'a-based interministerial National Mine Action Committee (NMAC), which previously formulated national mine action policy, is no longer recognised by the IRG, which reported it had disbanded in 2019. In the south, YEMAC has fulfilled a double role of regulator responsible for policy and planning while also serving as the sole national operator.⁶

YEMAC was established in Sana'a in January 1999 as a national mine action agency and nominally maintains a national role today, with more than 1,000 staff working in 20 of Yemen's 21 governorates as at late 2019.⁷ In practice, however, YEMAC has split into two, centred round Sana'a and Aden. YEMAC South informed Mine Action Review there was no coordination between the two because YEMAC North was under the control of Houthi militias.⁸

YEMAC North employed around 500 staff, working in northern governorates controlled by Houthi forces.⁹ It manages all aspects of mine action including survey and clearance, risk education, victim assistance, information management, and quality management, but with much less equipment and assets than available to the south. YEMAC North and the DFA have agreed in principle to set up a coordination centre but as of the end of 2021 had not committed to a timeline for implementing it.¹⁰

1 Interviews with Ahmed Alawi, YEMAC, 17 February 2016; and Stephen Bryant, Chief Technical Adviser, United Nations Development Programme (UNDP), in Geneva, 6 February 2017.

2 Human Rights Watch, "Yemen: Cluster munitions harm civilians", 31 May 2015, at: <http://bit.ly/32sdP0x>.

3 UNDP, Grant Progress Report for 1 October–31 December 2015, 25 January 2016.

4 Human Rights Watch, "Brazil-made cluster munitions wound children", 23 December 2016, at: <http://bit.ly/32ub4vE>.

5 Ibid.; Human Rights Watch, "Yemen: Cluster munitions harm civilians", 31 May 2015; Amnesty International, "Yemen: children among civilians killed and maimed in cluster bomb 'minefields'", 23 May 2016; and Legal Centre for Rights and Development, Sana'a, "The bombing of civilians and residential neighbourhoods with international forbidden weapons (cluster munitions)", undated but 2018.

6 Anti-Personnel Mine Ban Convention (APMBC) Article 7 Report (covering 2018), Form A.

7 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, pp. 7, 14.

8 Email from Ameen Saleh Alaqili, Director, YEMAC, 26 December 2021.

9 Interview with Ameen Saleh Alaqili, YEMAC, in Geneva, 13 February 2020.

10 UNDP Annual Report on Mine Action in Yemen 2021, 15 February 2022, p. 18.

From Aden, YEMAC operated with some 550 staff mainly active in Abyan, Aden, Amran, Hadramaut, Lahj, and Taiz governorates. YEMAC also has an office in Mokha, and in 2019 it opened offices in Taiz to support operations around Hodeida, and in Marib for operations in al-Jawf governorate.¹¹ YEMAC said at the time that it had set up “skeleton” offices using its own resources pending receipt of financial support from the UN Development Programme (UNDP).¹²

YEMAC’s Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline extension request, submitted in March 2022, said YEMAC was planning to open an office in Marib to support operations in Al Bayda, Al Jawf, and western Shabwah governorates. Operations included explosive ordnance disposal (EOD) spot tasks, non-technical survey, and risk education.¹³ UNDP reported that in total YEMAC conducted clearance in 19 of Yemen’s 21 governorates.¹⁴

In April 2020, YEMAC South opened YMACC in Aden with a view to strengthening programme management in areas controlled by the IRG. The centre, which is intended to facilitate cooperation with international organisations, has responsibility for accrediting organisations and issuing task orders. It has departments for planning, information management, and quality assurance/quality control.¹⁵ The centre convened its first coordination meeting on 9 April 2020 and by early 2021 employed 44 people.¹⁶ It had set up technical working groups focused on non-technical survey and risk education.¹⁷

Mine action stakeholders say the creation of YMACC has improved coordination with operators but decision-making boundaries between YEMAC and YMACC are opaque. Other institutions significantly involved in decision-making or administrative procedures significantly affecting mine action include the Ministry of Planning and International Cooperation (MOPIC), the National Security Agency, and the Ministry of Defence, while mine action stakeholders also point to interventions by the Saudi Ministry of Defence Evacuation & Humanitarian Operations Centre (EHOC).

UNDP provides technical and administrative support to YEMAC through a project conducted by six international and nine national staff working from a number of different offices. These included four project area coordinators based in Aden, Hodeida, Mokha, and Mukalla; two administrative staff in Sana’a; and three in Aden.¹⁸ The UN supported mine action in Yemen from 1999 to 2003 through a programme implemented by the UN Office for Project Services (UNOPS). From 2003, the programme came under full national management. UNDP deployed an international adviser to YEMAC at the end of 2014 to support planning and programme management.¹⁹ The DFA revoked the visa of UNDP’s Senior Technical Adviser in 2021 but other UNDP staff were able to visit Sana’a in early 2022.²⁰

GENDER AND DIVERSITY

YEMAC said the inclusion of women in mine action was a priority in 2021 and, in Yemen’s APMBC Article 5 deadline extension request submitted by the IRG in March 2022, repeated that it was the position of both YEMAC and YMACC.²¹ It started training female staff for EOD, non-technical survey, and risk education in 2020.²² The extension request noted that YEMAC had employed 15 women in non-technical survey, another 15 women in risk education, while others worked in information management and victim assistance. It stated “there is no objection to including more women”.²³ However, YMACC was reportedly resistant to employing women in multi-task teams.²⁴

UNDP noted that integrating women into the mine action programme remained “challenging”, but it reported that among 17 women who underwent training in 2021, three took a Level 2 EOD course, three others attended an improvised explosive device disposal (IEDD) good practice course and engage in IED disposal operations with the Directorate of Family Protection, and 10 women were trained in non-technical survey.²⁵

Social and cultural conventions present a significant impediment to efforts to promote inclusion in the sector. Women’s traditional role as responsible for family care is seen as discouraging women from applying for jobs. Operators report cases where husbands have forbidden women applicants from attending interviews. Risk education is conducted separately for

11 2019 APMBC Article 5 deadline Extension Request, pp. 5 and 22; and email from Stephen Robinson, Senior Technical Adviser, UNDP, 21 July 2020.

12 APMBC Article 7 Report (covering 2019), Form D.

13 Yemen APMBC Article 5 Extension Request, March 2022, pp. 26-27.

14 UNDP Annual Report on Mine Action in Yemen 2020, February 2021, p. 9.

15 UNDP, “Emergency Mine Action Project, Annual Progress Report 2019”, 20 January 2020, p. 12; and email from Ameen Saleh Alaqili, YEMAC, 26 December 2021.

16 Emails from Ameen Saleh Alaqili, YEMAC, 5 May 2021; and Stephen Robinson, UNDP, 27 May 2020.

17 UNDP Annual Report on Mine Action in Yemen 2020, p. 14.

18 Ibid., p. 8.

19 UNDP, “Emergency Mine Action Project, Annual Progress Report 2019”, 20 January 2020, p. 9; and interview with Stephen Robinson, UNDP, in Geneva, 20 July 2020.

20 Emails from Ameen Saleh Alaqili, YEMAC, 26 December 2021; and Stephen Bryant, UNDP, 7 February 2022.

21 Email from Ameen Saleh Alaqili, YEMAC, 26 December 2021; and APMBC Article 5 deadline Extension Request, March 2022, p. 21.

22 Email from Ameen Saleh Alaqili, YEMAC, 5 May 2021; and UNDP Annual Report 2020, p. 15.

23 APMBC Article 5 deadline Extension Request, March 2022, p. 21.

24 Email from Marie-Josée Hamel, Regional Programme Advisor – Middle East, DRC, 30 March 2022.

25 UNDP, Annual Report on Mine Action in Yemen 2021, p. 15.

women, often by female staff, to encourage participation of women, who are considered valuable informants on account of their knowledge of local conditions acquired carrying out family chores such as collecting wood and herding livestock.²⁶

Employment of women among international operators remained at a low level. The Danish Refugee Council Humanitarian Disarmament and Peacebuilding Sector (DRC) said 21% of its national employees were women and none worked in managerial or supervisory positions, but at least one woman was employed in each of its three-person non-technical survey teams.²⁷ Women made up 14% of HALO Trust's staff overall, but included eight women in two non-technical survey teams.²⁸

INFORMATION MANAGEMENT AND REPORTING

YEMAC, with support from UNDP and the Geneva International Centre for Humanitarian Demining (GICHD), upgraded its headquarters Information Management System for Mine Action (IMSMA) database, installing the Core version which UNDP reported became operational in September 2020.²⁹ The system was installed in YEMAC in 2021 and will serve as a centralised data centre.³⁰ YEMAC's northern office works with an older IMSMA system.³¹

Efforts continued in 2021 to bring the system into line with international standards. YEMAC and its implementing partners developed a range of hard copy and electronic reporting forms, including non-technical survey forms, which underwent extensive modification in the course of the year. Operators said the quality of data and access to it had improved during the year but observed the system involved considerable duplication and could benefit from streamlining.³² UNDP said an information management technical working group is considered one of the vital mine action groups in which all implementing partners and stakeholders participate³³ but its meetings were suspended

in 2021 because of COVID-19 and have not resumed on a regular basis. Implementing partners say the need for inclusive discussion on information management has increased and that the lack of such meetings has hampered timely decision making.³⁴

Gaps in reporting remained a significant concern in 2021. YEMAC stated that all mine action data collected by operators is nationally owned and shared. It said Project MASAM provides monthly reports detailing the operating sites of its teams, operating results, and locations of mine contamination.³⁵ International implementing partners say that some actors are not disclosing operating results, creating uncertainty about what areas have been surveyed or cleared, risking duplication of efforts or the omission of hazardous areas in the national database.³⁶ Among key operational challenges facing the sector, UNDP reported "the lack of cooperation between Project MASAM and YEMAC (South) in terms of sharing statistically verifiable data on contamination in areas where Project MASAM operates."³⁷

PLANNING AND TASKING

Mine action in Yemen continues on an emergency basis in a context of continuing conflict that has not lent itself to detailed advance planning, responding instead to immediate threats from all forms of explosive ordnance.³⁸ UNDP observed that YEMAC needed to organise field operations to also address longer term impacts of contamination from explosive remnants of war.³⁹ A work plan in Yemen's APMB Article 5 deadline extension request identified general areas of activity such as emergency response, survey, and risk education, but gave no details. It said it would update its plans every year or two.⁴⁰

26 Email from Esteban Bernal, Programme Manager, Humanitarian, Disarmament and Peace Building, DRC, 23 March 2021.

27 Email from Marie-Josée Hamel, DRC, 30 March 2022.

28 Email from Nicholas Torbet, Head of Region – Middle East (Yemen, Libya), HALO Trust, 19 April 2022.

29 *UNDP Annual Report on Mine Action in Yemen 2020*, p. 13; and email from Esteban Bernal, DRC, 23 March 2021.

30 Interview with Stephen Robinson, UNDP, Geneva, 23 March 2021; and *UNDP Annual Report 2021*, p. 10.

31 Email from GICHD, 30 April 2020.

32 Emails from Marie-Josée Hamel, DRC, 30 March 2022; and Nicholas Torbet, HALO Trust, 19 April 2022.

33 *UNDP Annual Report on Mine Action in Yemen 2021*, p. 11.

34 Email from Nicholas Torbet, HALO Trust, 19 April 2022.

35 Email from Ameen Saleh Alaqili, YEMAC, 26 December 2021.

36 Email from Marie-Josée Hamel, DRC, 30 March 2022.

37 *UNDP Annual Report on Mine Action in Yemen 2021*, p. 6.

38 APMB Article 5 deadline Extension Request, March 2022, p. 26.

39 *UNDP Annual Report on Mine Action in Yemen 2021*, p. 20.

40 APMB Article 5 deadline Extension Request, March 2022, p. 27.

YEMAC identified its priority for 2021 as conducting baseline survey in line with Yemen's APMBC Article 5 deadline Extension Request, expanding risk education, improving coordination with humanitarian agencies in identifying operating priorities, and updating standing operating procedures (SOPs) and national mine action standards (NMAS).⁴¹ YMACC priorities in 2021 included planning survey and clearance in conjunction with operators; directing implementation of the baseline survey; accrediting and tasking mine action organisations; building up operational capacity; mobilising donor support; and prompt investigation of demining accidents.⁴²

Priorities remained largely unchanged in 2022. A new APMBC Article 5 deadline extension request submitted by Yemen in March 2022 keeps the baseline survey as its top priority along with building the capacity and resources of the mine action sector. The request emphasises flexibility and states the plans it set out are a "living document" that will be subject to continuous review to adapt to changing circumstances.⁴³

International operators received the first task orders from YMACC in July 2020, marking a significant step forward for planning and coordination.⁴⁴ Lack of clarity on the boundaries between YEMAC and YMACC exposed some initial coordination challenges and UNDP said YEMAC needed to finalise a review of its internal structure in order to increase efficiency.⁴⁵ International operators said the process of issuing task orders had improved and that it was functioning

smoothly in 2021. YMACC had monthly meetings with implementing partners who reported it consulted them on work plans and issued task dossiers in a timely manner.⁴⁶

Bureaucratic obstacles particularly with regard to equipment imports and the issuance of visas continued to pose a major impediment, holding back the fulfilment of YEMAC plans to expand cooperation with international demining organisations and attract more international support. YEMAC informed Mine Action Review that: "Yemen does not have any obstacles or delays in matters of importing equipment." It said delays experienced by some operators were due to their own administrative procedures, errors in their applications, or a lack of understanding of the required legal procedures. It also noted that in meetings with MOPIC, national mine action authorities pointed out the importance of importing equipment for survey and clearance.⁴⁷

HALO Trust noted it had tried for two years to import a range of equipment, including Minelab F3 detectors, delaying operations. It received approval in late 2021 but as of April 2022 was still awaiting delivery.⁴⁸ DRC similarly reported a serious blockage to importing equipment, also citing customs complications in transit countries as an additional delaying factor. The transfer of responsibility for issuing visas from MOPIC to the Ministry of Interior in the second half of 2021 saw the time taken to issue visas for international staff typically increase from one month to three months, causing further delays implementing planned activities.⁴⁹

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Yemen is in the process of revising and updating its national mine action standards. The existing NMAS were based on the International Mine Action Standards (IMAS) when they were drawn up in 2007, pre-dating most of Yemen's CMR contamination. In 2019, YEMAC acknowledged that the standards were obsolete and said SOPs based on the standards were not consistently applied by its clearance personnel.⁵⁰

YEMAC reported it had revised 32 chapters of NMAS in 2021, including standards relating to land release, and that these were compliant with IMAS and the Oslo Action Plan. The new standards have yet to be approved by the government⁵¹ and had not come into effect as of May 2022. DRC said its local SOPs, which are based on its global SOPs but adapted for Yemen, were updated and approved in 2021. SOPs for non-technical survey were revised by the NTS manager and approved by the organisation's head office.⁵² HALO Trust said it had developed new SOPs for non-technical survey and drafted SOPs for clearance that would be finalised after it had taken delivery of the new detectors.⁵³

41 Email from Ameen Saleh Alaqili, YEMAC, 5 May 2021.

42 Ibid.

43 APMBC Article 5 deadline Extension Request, March 2022, p. 29.

44 Emails from DRC, 25 March 2021; and Matthew Smith, Programme Manager, HALO Trust, 17 May 2021.

45 UNDP *Annual Report on Mine Action in Yemen 2021*, p. 20.

46 Emails from Marie-Josée Hamel, DRC, 30 March 2022; and Nicholas Torbet, HALO Trust, 19 April 2022.

47 Email from Ameen Saleh Alaqili, YEMAC, 26 December 2021.

48 Email from Nicholas Torbet, HALO Trust, 19 April 2022.

49 Emails from Marie-Josée Hamel, DRC, 30 March 2022; and Nicholas Torbet, HALO Trust, 19 April 2022.

50 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, p. 17; and 2019 APMBC Article 5 deadline Extension Request, p. 16.

51 Email from Ameen Saleh Alaqili, YEMAC, 26 December 2021.

52 Email from Marie-Josée Hamel, DRC, 30 March 2022.

53 Email from Nicholas Torbet, HALO Trust, 19 April 2022.

Criteria for prioritising tasks remained unclear. Yemen's Article 5 deadline extension request says it has a prioritisation mechanism and augments it with input from local authorities and humanitarian agencies.⁵⁴ YEMAC said it has a temporary prioritisation matrix⁵⁵ but implementing partners said it had not been circulated so they were unaware of the criteria. UNDP said national mine action authorities would use threat impact assessments prepared by experts it had contracted to identify priority mine action projects for supporting delivery of humanitarian assistance.⁵⁶

OPERATORS AND OPERATIONAL TOOLS

YEMAC is nominally the biggest operator employing some 500 personnel in YEMAC North and 550 personnel in YEMAC South but both organisations lacked financing and it was unclear how many survey or clearance teams they deployed. At the end of 2020, YEMAC reported that its staff of 491 in the south included 30 manual clearance teams with 272 personnel; 15 non-technical survey teams with 60 staff; 7 technical survey teams with 49 staff; and 2 EOD teams with 22 people.⁵⁷ It is unclear if the structure and composition of operational teams changed in 2021. Yemen's APMBC Article 5 deadline extension request in March 2022 said the national programme had a total of 66 mine action teams but gave no details of how these assets were distributed around the country or how many were active.⁵⁸

Project MASAM, funded by Saudi Arabia's King Salman Humanitarian Aid and Relief Center, reported it deployed 32 teams but gave no further details of their composition.⁵⁹ It said that it "trains, equips and supervises over 450 Yemeni nationals", including deminers, administration, logistics, and security support staff, supported by technical mentors. It operated with headquarters in Aden and Marid and deployed teams in Aden, Al-Jawf, Aldala'a, Al-Hudaydah, Maa'rib, Shabwa, and Taiz.⁶⁰ The project's record of items destroyed does not specify any cluster munition remnants. Saudi Arabia was reported in July 2021 to have extended its \$33.6 million contract with Project MASAM and its implementing partner, SafeLane Global, by another year.⁶¹

DRC had a total staff of 33 people, including five teams conducting non-technical survey and risk education working mainly from Aden, although it also received a task order for these activities in Lahj governorate. It also had nine people working in three battle area clearance/EOD teams but they did not conduct any clearance in 2021 as they awaited clearance to import equipment. In the hope imports would receive clearance in 2022, DRC planned to add three multi-task teams to its capacity.⁶²

The HALO Trust, with 38 staff, operated two four-person non-technical survey/risk education teams and three five-strong EOD teams trained to Level 1 that were conducting mainly battle area clearance (BAC) and bulk demolitions. HALO Trust also operated a twelve-person mechanical team working with a Bobcat Backhoe and a front loader. In April 2022, HALO added another 24 operations personnel to its EOD and survey capacity. Non-technical survey teams use Survey 123 for data collection and migrate it directly to HALO's Global Operation Information Management System (GO-IMS) which it brought into operation in Yemen in early 2022.⁶³

Norwegian People's Aid (NPA) completed registration with MOPIC in November 2021 and established an office in Aden to help YEMAC develop a mine detection dog (MDD) programme in the south. NPA has one MDD technical adviser and two team leaders to provide technical and managerial support. NPA previously had 12 dogs undergoing long-leash training at its Global Training Centre in Bosnia and Herzegovina and brought these to Yemen in October 2021. NPA selected 12 MDD handlers from a group put forward by YEMAC and ran a training course on support for technical survey. The handlers and dogs deployed at the start of March 2022 and by early April 2022 had released some 6,860m² of battle area.⁶⁴

DEMINER SAFETY

Yemen's mine action programme has experienced heavy casualties among deminers in the past four years, particularly in Project MASAM.⁶⁵ DRC and HALO Trust reported they did not sustain any casualties in 2021.⁶⁶ No reports of casualties were received from other operators.

54 APMBC Article 5 deadline Extension Request, March 2022, p. 7.

55 Email from Ameen Saleh Alaqili, YEMAC, 26 December 2021.

56 UNDP Annual Report on Mine Action in Yemen 2021, p. 11.

57 Email from Ameen Saleh Alaqili, YEMAC, 5 May 2021.

58 APMBC Article 5 deadline Extension Request, March 2022, p. 15.

59 Project MASAM website, 'What we do', at: <https://bit.ly/3KXW2m1>, accessed 27 April 2022.

60 Project MASAM website, 'Where we work', at: <https://bit.ly/3L0UoQy>, accessed 27 April 2022.

61 "Saudi Arabia extends mine clearing contract in Yemen", *Arab News*, 21 July 2021.

62 Email from Marie-Josée Hamel, DRC, 30 March 2022.

63 Email from Nicholas Torbet, HALO Trust, 19 April 2022.

64 Email from Faiz Mohammad Paktian, Programme Manager, NPA, 8 April 2022.

65 Project MASAM reported 37 casualties between May 2018 and April 2020: 21 killed and 16 injured.

66 Emails from Marie-Josée Hamel, DRC, 30 March 2022; and Nicholas Torbet, HALO Trust, 19 April 2022.

LAND RELEASE OUTPUTS IN 2021

Yemen's mine action programme remains on an emergency footing, balancing the need for urgent clearance to remove explosive hazards posing an immediate threat to communities and the longer term need for survey to identify, locate, and measure the extent of those threats.

SURVEY IN 2021

In June 2021, YEMAC started a programme of non-technical survey in IRG-controlled areas as part of its commitment to develop a baseline estimate of mine contamination.⁶⁷ It said 17 task orders were issued in six governorates leading to the recording of more than 160 hazardous areas.⁶⁸ UNDP also reported a steady flow of reports into the IMSMA database,⁶⁹ but as of April 2022 YEMAC had not provided an overview of the survey findings. Survey activity in the north, if any, is unknown.

CLEARANCE IN 2021

YEMAC reported BAC of 4.49km² in 2021, 43% per cent more than the previous year (see Table 1), but covering all forms of explosive remnants of war.⁷⁰ The number of CMR destroyed during clearance operations have fluctuated sharply, from 79 in 2018, to 7,071 in 2019, falling back to 403 in 2020, and rising again to 1,777 in 2021.⁷¹ Mine Action Review has not recorded any clearance of cluster munition-contaminated area for 2021.

Table 1: YEMAC operating results for 2020-2021⁷²

Year	Area cleared (m ²)	Submunitions destroyed	AP mines destroyed	IEDs destroyed	AV mines destroyed	Other UXO destroyed
2021	4,489,389	1,777	1,204	1,032	5,034	61,439
2020	3,132,896	403	923	512	5,317	54,108

⁶⁷ APMBC Article 5 deadline Extension Request, p. 9.

⁶⁸ Email from Ameen Saleh Alaqili, YEMAC, 26 December 2021.

⁶⁹ *UNDP Annual Report on Mine Action in Yemen 2021*, p. 10.

⁷⁰ *Ibid.*, p. 11.

⁷¹ UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, p. 14; UNDP Mine Action Dashboard, February 2021; and *UNDP Annual Report 2021*, p. 11.

⁷² UNDP Mine Action Dashboard, February 2021; and *UNDP Annual Report on Mine Action in Yemen 2021*, p. 11.