

KEY DATA

**CLUSTER MUNITION
CONTAMINATION:
UNKNOWN**

SUBMUNITION
CLEARANCE IN 2022

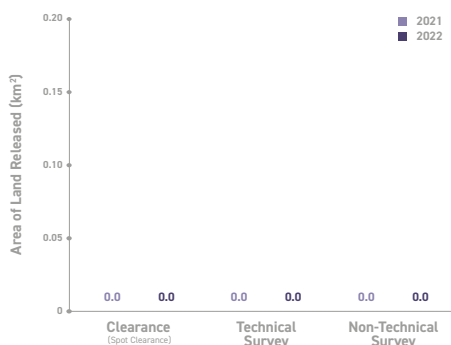
0km²

SPOT CLEARANCE

SUBMUNITIONS
DESTROYED IN 2022

271

LAND RELEASE OUTPUT



KEY DEVELOPMENTS

Yemen's internationally recognised government (IRG) laid out the general principles of a strategy for the mine action sector in the areas under its control in its Anti-Personnel Mine Ban Convention (APMBC) Article 5 deadline extension request submitted in March 2022 seeking an additional five years to its mine clearance deadline. YEMEN is not yet a State Party to the Convention on Cluster Munitions (CCM). In the south, the Yemen Executive Mine Action Centre (YEMAC) and the Yemen Mine Action Coordination Centre (YMACC), along with their respective implementing partners gave priority to rolling out the Yemen Baseline Survey intended to capture the extent of all explosive ordnance contamination. Three international demining organisations visited Sanaa in February 2023 to negotiate a memorandum of understanding (MoU) with YEMAC North that would provide a basis when signed for operating in areas of Yemen controlled by Ansar Allah De Facto Authorities. At the time of writing, the MoU had yet to be signed by YEMAN North.¹ The United Nations Development Programme (UNDP) decided to end its emergency mine action support to Yemen at the end of June 2023 due to lack of funding, opening the way for major restructuring of mine action in Yemen.

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 introduce streamlined, consistent and transparent procedures for the import of demining equipment.
- De Facto Authorities (DFA) in Sanaa should expedite access for international demining organisations in order to facilitate capacity development for the mine action programme.
- The DFA and YEMAC should establish a coordination centre similar to YMACC in the north to increase efficiency and avoid the conflict of interest in its current role as regulator and operator.
- YEMAC should draw up work plans for operations in the north and the south.

¹ Email from UNMAS Headquarters, 24 July 2023.

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)
- The HALO Trust (HALO)
- Norwegian People's Aid (NPA)
- Project MASAM/SafeLane Global

OTHER ACTORS

- United Nations Development Programme (UNDP)
- UN Resident Coordinator
- United Nations Mission to Support the Hodeidah Agreement (UNMHA)

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 Sanaa, including in Sanaa City.² Recent estimates of contamination provided by mine action authorities in northern areas controlled by the Sanaa-based De Facto Authorities (DFA) (the Houthis) and the rest of the country, which is largely controlled by the Aden-based internationally-recognised government (IRG), reflect the constraints on systematic survey imposed by nearly a decade of conflict and refer to explosive ordnance without specifying the type of hazard.

Yemen had CMR contamination before 2015 and Human Rights Watch has said it recorded Saudi air strikes using cluster munitions dating back to 2009.³ But the escalation of conflict since 26 March 2015 significantly increased both the extent of CMR and their 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).⁴ 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.⁵ Non-governmental organisations (NGOs) recorded coalition use of cluster munitions until February 2017 and suspected continued use in 2018 but have not reported use since then.⁶

YEMAC North reports contamination from 15 types of cluster munition, of which 10 are produced in the United States (US), along with two British- and three Brazilian-made types.⁷ Human rights groups have documented the use of 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 Sanaa 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.⁸

OTHER EXPLOSIVE REMNANTS OF WAR AND LANDMINES

Yemen is also contaminated by unexploded ordnance (UXO) other than unexploded submunitions and by anti-personnel and anti-vehicle mines (see Mine Action Review's Clearing the Mines report on Yemen for further information).

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

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

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

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

6 Cluster Munition Coalition, "Use of cluster munitions," undated, accessible at: <https://bit.ly/3CcPdv2>.

7 Email from Ahmed Yahya Alawi, Executive Officer, YEMAC North, 18 April 2023.

8 Human Rights Watch, "Brazil-made cluster munitions wound children", 23 December 2016; 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, Sanaa, "The bombing of civilians and residential neighbourhoods with international forbidden weapons (cluster munitions)", undated but 2018.

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 movement (the DFA) controlling the capital Sanaa as well as much of the north and west of the country, and the IRG, operationally based in Aden and the south.

YEMAC was established in Sanaa in January 1999 as a national mine action agency and nominally maintains a national role but in practice has split into two operations, centred round Sanaa and Aden, respectively. YEMAC South informed Mine Action Review there was no coordination between the two because YEMAC North was under the control of Houthi militia.⁹ YEMAC South is believed to employ around 750 staff and YEMAC North around 500, but the number of active personnel in either entity is uncertain.¹⁰ UNDP earlier reported that, in total, YEMAC conducted clearance in 19 of Yemen's 21 governorates.¹¹ The Sanaa-based inter-ministerial 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 2019.¹²

YEMAC South, headquartered in Aden, operated with some 500 staff reports operating through three branches serving Hadramaut, Marib, and Taiz. It identified Aden, Abyan, Dhale, Hodeida, Lahej, and Taiz as high-priority districts for mine action interventions.¹³ Yemen's APMBC Article 5 deadline extension request, submitted in March 2022, said that YEMAC was planning to open an office in Marib to support operations in Al Bayda and Al Jawf governorates, as well as the western Shabwah governorate. Operations included explosive ordnance disposal (EOD) spot tasks, non-technical survey (NTS), and risk education.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 (QA)/quality control (QC).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 NTS 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.

YEMAC North functions as both the coordinator of mine action in northern governorates controlled by Houthi forces and as operator involved in all aspects of mine action including survey and clearance, risk education, victim assistance, information management, and quality management (QM), a situation seen as creating a problematic conflict of interest.¹⁸ To address that issue, YEMAC North and the DFA's Supreme Council for the Management and Coordination of Humanitarian Affairs (SCMCHA) have agreed in principle to set up a coordination centre similar to YMACC in the IRG-controlled areas but no action was taken in 2022 to implement the proposal.¹⁹

The DFA revoked the visa of UNDP's Senior Technical Adviser in 2021 limiting the programme's ability to support mine action in the north. Other UNDP staff were able to visit Sanaa in early 2022²⁰ but sporadic DFA denial of visas to UN and other international mine action operators has hampered development of capacity and operations to address explosive ordnance hazards.²¹ UNDP purchased 300 detectors and personal protective equipment (PPE) in 2022 to support YEMAC North operations around Hodeida.²² As of February 2023, however, the detectors were still being held in storage in Djibouti pending receipt of the necessary clearance for their importation from the IRG.²³ Three demining INGOs—Danish Refugee Council (DRC), The HALO Trust (HALO), and Norwegian People's Aid (NPA)—visited Sanaa in February 2023 and negotiated an MoU with YEMAC North that would provide a basis for operating in the DFA-controlled areas when signed. The MoU was under review as at the start of June 2023 but was planned for signing before the end of the year.²⁴

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

10 Interview with Stephen Bryant, UNDP, in Geneva, 23 November 2022.

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

12 APMBC Article 7 Report (covering 2018), Form A.

13 Email from Ameen Saleh Alaqili, Director, YEMAC, 21 May 2023.

14 Yemen APMBC Article 5 deadline Extension Request, March 2022, pp. 26–27.

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 UNDP, "Emergency Mine Action Project – Phase II, Annual Report for 2022", 15 February 2023, p. 21.

19 Ibid.

20 Email from Stephen Bryant, UNDP, 7 February 2022.

21 UNDP, "Emergency Mine Action Project, Yemen Phase Five Terminal Evaluation Report", September 2021, p. 11.

22 The order included 200 Ceia detectors, 100 Ebinger detectors, 200 demining aprons, 300 visors and 300 sets of knee and elbow pads (email from UNMAS Headquarters, 24 July 2023).

23 UNDP, "Emergency Mine Action Project – Phase II, Annual Report for 2022", 15 February 2023, p. 12.

24 Emails from Christina Hendryx, Programme Manager, Humanitarian, Disarmament and Peace Building (HDP), DRC, 15 May 2023; and Faiz Mohammad Paktian, Country Director, NPA, 7 May 2023.

Cumbersome and opaque bureaucracy particularly with regard to equipment imports and the issuance of visas have continued to pose a major impediment to the progress of mine action. YEMAC has previously 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.²⁵ The UN and international operators, however, document delays of a year or more in being able to bring in essential items such as detectors, PPE, and thermite which they say constitute the main challenge to expanding Yemen's capacity to address its explosive ordnance contamination. Procedures for obtaining import authorisations are not consistent. Requests to import demining equipment also require multiple signatures from high-level officials and the absence of one official can result in long delays.²⁶

UNDP has provided technical and administrative support to YEMAC for two decades but in 2022 faced reduced funding and was planning to end its current project in Yemen by the end of 2023.²⁷ 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. At the end of 2014, UNDP launched an Emergency Mine Action Project to support development of national capacity for mine action planning and programme management deploying an international adviser and from 2017 provided payment for approximately 1,000 national personnel to conduct survey clearance and EOD.²⁸ The first phase of the Emergency

Project ended in September 2021 and a second phase started in October 2021. The project's budget for 2022 was US\$11.7 million.²⁹

In 2021, UNDP's project was 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.³⁰ UNDP's chief technical adviser on Counter-improvised explosive devices (C-IED) left Yemen in June 2022 and was not replaced due to reduced funding. An adviser provided as an in-kind contribution by the Swedish Civil Contingencies Agency (MSB) joined in June 2022, supporting YEMAC and YMACC on C-IED and IED-disposal (IEDD).³¹ UNDP's Chief Technical Adviser (CTA) left the programme at the end of 2022. UNDP reported that after extensive consultations among partners and within the UN, UNDP had decided to phase out the project activities by the end of 2023.³² The UN informed YEMAC in June 2023 that payment for national staff would end at the end of June 2023. The UN was considering a proposal to support payment of salaries to 15 critical posts in both YEMAC Aden and YEMAC Sanaa but recommending donors channel funding to international NGOs.³³

Other institutions 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).

ENVIRONMENTAL POLICIES AND ACTION

YEMAC's implementing partners said they have had no indication that environmental management and protection feature in its planning and tasking. Revised national mine action standards include a chapter on Environment, Health and Safety Management but they exist only in draft form awaiting approval. DRC and HALO both reported applying their organisations' global policy and standing operating procedures (SOPs), but DRC said its SOP was largely generic and not adapted to local environmental conditions.³⁴

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

26 UNDP, "Emergency Mine Action Project – Phase II, Annual Report for 2022", 15 February 2023, p. 6; emails from Nicholas Torbet, HALO, 19 April 2022; and Christina Hendryx, DRC, 15 May 2023.

27 UNDP, Emergency Mine Action Project – Phase II, Annual Report for 2022, 15 February 2023, p. 24.

28 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, p. 9; interview with Stephen Robinson, UNDP, in Geneva, 20 July 2020; interview with Patrick Fruchet, Senior Mine Action Adviser to UN Resident Coordinator's Office for Yemen, in Geneva, 21 June 2023.

29 UNDP, "Emergency Mine Action Project – Phase II, Annual Report for 2022", 15 February 2023, p. 7.

30 UNDP *Annual Report on Mine Action in Yemen 2020*, p. 8.

31 UNDP, "Emergency Mine Action Project – Phase II, Annual Report for 2022", 15 February 2023, p. 11.

32 Ibid., p. 24.

33 Interviews with Patrick Fruchet, UN Adviser, in Geneva, 21 June 2023; and Aleksandar Mihajlov, Planning and Monitoring Specialist, UNDP, in Geneva, 22 June 2023.

34 Emails from Marie-Josée Hamel, Regional Programme Advisor – Middle East, DRC, 30 March 2022; and Nicholas Torbet, HALO, 19 April 2022.

GENDER AND DIVERSITY

Yemen's APMBC Article 5 deadline extension request submitted by the IRG in 2022 identified inclusion of women in mine action as a priority for YEMAC and YMACC. It stated that female staff already engaged in a number of activities, including information management (IM), NTS, risk education, and victim assistance. It stated, "there is no objection to including more women".³⁵

In the IRG-controlled south YEMAC started training female staff for EOD, NTS, and risk education in 2020.³⁶ In 2022, it reported it employed 36 women: 10 in NTS teams; 13 for risk education; 8 for victim assistance; and the remaining 5 in management/administrative posts. YMACC employed six women in a range of administrative and office roles. However, YMACC was reportedly resistant to employing women in multi-task teams.³⁷ YEMAC said it was working on increasing female employment and developing the capacity of women employees in cooperation with UNDP and the Geneva International Centre for Humanitarian Demining (GICHD).³⁸

UNDP has encouraged both YEMACs to expand the number of women teams for survey and clearance and in cooperation with the GICHD sought to ensure the data disaggregated by sex and age were collected in IMSMA reports.³⁹ However, it has previously noted that integrating women into the mine action programme remained "challenging". In 2021, it reported that among 17 women who underwent training, three took a Level 2 EOD course, three others attended an IEDD good practice course and engaged in IED disposal

operations with the Directorate of Family Protection, and ten were trained in NTS.⁴⁰ But international operators noted that YEMAC had not included any women in lists of personnel available for secondment.⁴¹

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 have reported cases where husbands have forbidden women applicants from attending interviews. Risk education is conducted separately for women, often by female staff, to encourage the 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.⁴² But female NTS/risk education staff still find it harder than their male counterparts gaining acceptance when going into communities to ask for information on explosive hazards.⁴³

Employment of women among international operators remained at a low level. The DRC Humanitarian Disarmament and Peacebuilding Sector said women made up seven of its thirty-six staff (19%), including two of the eleven in managerial positions and three of the twenty-seven in field operations.⁴⁴ At least one woman was employed in each of its three-strong NTS teams.⁴⁵ HALO reported women made up 14% of overall staff but it included eight women in two NTS teams.⁴⁶

INFORMATION MANAGEMENT AND REPORTING

Data management in the YEMAC South area of operations has improved since 2020 with the installation of the Information Management System for Mine Action (IMSMA) Core database and the introduction of approved reporting templates.⁴⁷ A main server was installed in YMACC in 2021 with support from UNDP and the GICHD to serve as a centralised data centre. YEMAC reported that all electronic reporting forms were designed with participation of operators in technical working groups (TWGs) and that a series of workshops and training sessions were organised for operators with support from UNDP and the GICHD.⁴⁸

YEMAC said the IM system operations continue to be reviewed and strengthened.⁴⁹ Implementing partners previously submitted operating results by email but in 2022 moved over to reporting via IMSMA. International operators noted the volume of data submitted to the database has increased sharply as survey and clearance operations expand and the database will need continuing support to maintain the quality of data. UNDP support has included IM specialists contracted through MSB and the GICHD.⁵⁰ Operators only have direct access to data relating to their own operations but are able to request maps and other data to support operations.⁵¹

YEMAC North works with an older IMSMA system.⁵² Its IM capacity in 2022 was not known.

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

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

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

38 Email from Ameen Saleh Alaqli, YEMAC, 21 May 2023.

39 UNDP, Emergency Mine Action Project - Phase II, Annual Report for 2022, 15 February 2023, p. 19.

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

41 Email from Christina Hendryx, DRC, 15 May 2023.

42 Email from Esteban Bernal, HDP Programme Manager, DRC, 23 March 2021.

43 Email from Christina Hendryx, DRC, 15 May 2023.

44 Ibid.

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

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

47 UNDP, Emergency Mine Action Project - Phase II, Annual Report for 2022, 15 February 2023, p. 9.

48 Email from Ameen Saleh Alaqli, YEMAC, 21 May 2023; interview with Stephen Robinson, UNDP, Geneva, 23 March 2021; and *UNDP Annual Report 2021*, p. 10.

49 Email from Ameen Saleh Alaqli, YEMAC, 21 May 2023.

50 UNDP, Emergency Mine Action Project - Phase II, Annual Report for 2022, 15 February 2023, p. 10.

51 Email from Christina Hendryx, DRC, 15 May 2023.

52 Email from GICHD, 30 April 2020.

PLANNING AND TASKING

Mine action in Yemen is conducted on an emergency basis in a context of continuing armed conflict, responding to immediate threats from all forms of explosive ordnance.⁵³ UNDP has observed that YEMAC needed to organise field operations to also address longer term impacts of contamination from explosive remnants of war.⁵⁴ A work plan in Yemen's APMBC 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.⁵⁵

YEMAC's Article 5 deadline extension request submitted in March 2022 identified Yemen's Baseline Survey (YBLS), which is key to understanding the extent, location, and type of all explosive ordnance hazards, as its priority, along with building the capacity and resources of the mine action sector for survey and clearance. The request emphasised flexibility, stating that the plans it set out were a "living document" that would be subject to continuous review to adapt to changing circumstances.⁵⁶ Operators report YMACC has regular meetings that are well attended by YEMAC and implementing partners and frankly discuss operational issues.⁵⁷

International operators received the first task orders from YMACC in July 2020, marking a significant step forward for planning and coordination.⁵⁸ UNDP has said YEMAC needed to finalise a review of its internal structure in order to increase efficiency and clarify the division of responsibilities between YEMAC and YMACC.⁵⁹

International operators said the process of issuing task orders had improved and in 2022 reported that it was functioning smoothly.⁶⁰ YMACC issues task orders in consultation with operators assigning tasks in districts where their NTS teams have previously worked. DRC said it then prioritises high-risk areas within the district. However, operators also report that receipt of task orders does not ensure access to designated sites and local military or political groups require separate approvals or permissions. Access to the West Coast requires a specific movement permission which has to be renewed frequently. Renewals are subject to frequent delays and operators are sometimes denied access at checkpoints even when they possess the required authorisation.⁶¹

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Yemen is in the process of revising and updating its NMAS. 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.⁶²

YEMAC reported it has revised 31 chapters of NMAS which are undergoing a final review and were expected to be approved and adopted before the end of 2023.⁶³ They include standards relating to land release, and are compliant with IMAS and the 2019 APMBC Oslo Action Plan.⁶⁴

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, while new clearance SOPs were introduced in January 2023.⁶⁵ HALO said it had developed new SOPs for NTS and drafted SOPs for clearance that would be finalised after it had taken delivery of the new detectors.⁶⁶

53 APMBC Article 5 deadline Extension Request, March 2022, p. 26.

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

55 APMBC Article 5 deadline Extension Request, March 2022, p. 27.

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

57 Email from Christina Hendryx, DRC, 15 May 2023.

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

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

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

61 Email from Christina Hendryx, DRC, 15 May 2023.

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

63 Email from Ameen Saleh Alaqili, YEMAC, 21 May 2023.

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

65 Emails from Marie-Josée Hamel, DRC, 30 March 2022; and Christina Hendryx, DRC, 15 May 2023.

66 Email from Nicholas Torbet, HALO, 19 April 2022.

OPERATORS AND OPERATIONAL TOOLS

YEMAC South and YEMAC North are nominally the biggest operators but both lack financing and the number of personnel active in both organisations is uncertain. YEMAC South reported it operated with 30 manual clearance teams with 256 deminers and 3 EOD/battle area clearance (BAC) teams with 29 operators in addition to between 15 and 18 NTS teams with up to 72 staff; 7 technical survey (TS) teams with a total of 45 personnel; and six mine detection dog (MDD) teams with an unspecified number of dogs and handlers. YEMAC South also reported employing 5 risk education teams with a total of 15 staff and 3 QM teams with 14 staff. It indicated the number of staff could fall in 2023 due to a downturn in international donor funding.⁶⁷

YEMAC North said it had some 170 deminers divided between a clearance unit with 58 deminers and 4 clearance platoons with 28 deminers each. It said it also deployed two NTS teams, five TS teams with a total of thirty-five surveyors, one mechanical team, three risk education teams, and two QA teams. YEMAC North also reported operated three MDD platoons with a total of 36 dogs in the field and 29 others undergoing training.⁶⁸

DRC had a total staff of 36 people in 2022, with five teams conducting NTS and nine people working in three BAC/EOD teams. Facing delays in the import of equipment, DRC was able to start EOD tasks in 2022 with support from YEMAC which loaned it PPE. In 2023, it added a six-strong manual demining team and embarked on its first clearance task.⁶⁹

HALO started 2022 with 38 staff, operating two four-strong NTS/risk education teams and three five-strong clearance teams trained to EOD Level 1 that were conducting

mainly BAC and bulk demolitions. HALO 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. NTS teams use Survey123 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 2022.⁷⁰

NPA supported development of an MDD programme for YEMAC with an Aden-based team of six international and seven national staff training team leaders and dog handlers. In August 2022, it embarked on delivering Risk Education-Conflict Preparedness and Protection with 20 staff seconded from YEMAC and deployed in four mixed-gender teams of five people, working in Al Dhale, Hodeida, Marib, and Taiz governorates.⁷¹

Project MASAM, funded by Saudi Arabia's King Salman Humanitarian Aid and Relief Center, reported that it deployed 32 teams employing some 450 national deminers but gave no further details of their composition.⁷² 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 Marib and deployed teams in Aden, Al-Jawf, Aldala'a, Al-Hudaydah, Maa'rib, Shabwa, and Taiz.⁷³ The project's record of items destroyed does not specify any CMR. 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.⁷⁴

DEMINER SAFETY

Yemen's mine action programme has experienced heavy casualties among deminers in the past five years, particularly in Project MASAM.⁷⁵ YEMAC and Project MASAM suffered 10 casualties in 2022, including five fatalities, in incidents involving anti-personnel mines and IEDs in Hodeida governorate.⁷⁶ DRC and HALO reported they did not sustain any casualties in 2022.⁷⁷

LAND RELEASE OUTPUTS IN 2022

Mine action in Yemen is conducted on an emergency basis focused on survey to identify the extent of contamination by all forms of explosive ordnance conducting urgent clearance to remove explosive hazards that pose an immediate threat to communities. CMR are not identified as a major part of Yemen's explosive hazard threats⁷⁸ and are not a target of specific survey or clearance.

67 Email from Ameen Saleh Alaqlti, YEMAC, 21 May 2023.

68 Email from Ahmed Yahya Alawi, YEMAC North, 18 April 2023.

69 Email Christina Hendryx, DRC, 15 May 2023.

70 Email from Nicholas Torbet, HALO, 19 April 2022.

71 Email from Faiz Mohammad Paktian, NPA, 7 May 2023.

72 Project MASAM website, "HE Ambassador Al-Jaber: Our support for our Yemeni brothers of Project Masam continues", 11 May 2023.

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

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

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

76 Email from Ameen Saleh Alaqlti, YEMAC, 21 May 2023.

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

78 Email from Ameen Saleh Alaqlti, YEMAC, 21 May 2023.

SURVEY IN 2022

In the IRG-controlled south, operators did not conduct any cancellation but YEMAC reported reduction of 0.8km² in six governorates (see Table 1).⁷⁹

Table 1: IRG-controlled area reduced by technical survey 2022⁸⁰

Governorate	Area released	Area reduced (m ²)
Abyan	5	170,410
Aden	7	9,617
Al Dhale	8	16,460
Lahej	5	326,713
Shabwah	2	24,102
Taiz	10	234,643
Totals	37	781,945

In DFA-controlled areas, YEMAC North reported conducting NTS in five governorates; Sanaa, Al Jawf, Marib, Al Bayda and Hodeida in a period of 12 months to the end of March 2022.⁸¹

CLEARANCE IN 2022

In IRG-controlled areas YEMAC recorded clearance of a total of 17.84km² in 2022 but it did not report clearance of any CMR and the basis for this figure, far exceeding the clearance recorded in previous years, was unclear.⁸²

Data provided by UNDP identified destruction of 271 submunitions in 2022, far fewer than the previous year (see Table 2).

Table 2: YEMAC operating results in IRG-controlled areas (2020–22)⁸³

Year	Area cleared (m ²)	Submunitions destroyed	AP mines destroyed	IEDs destroyed	AV mines destroyed	Other UXO destroyed
2022	5,900,000	271	875	3,180	9,023	57,011
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

In DFA-controlled areas YEMAC North reported clearance of 1,506 submunitions in the 12 months to the end of March 2022.⁸⁴

Table 3: Reported Five-Year Summary of YEMAC Explosive Ordnance Clearance in IRG-controlled Areas

Year	Area cleared (m ²)
2022*	5.9
2021*	4.5
2020*	3.1
2019**	1.0
2018**	1.0
Total	15.5

* UNDP data ** Mine Action Review estimates

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ Email from Ahmed Yahya Alawi, YEMAC North, 18 April 2023.

⁸² Email from Ameen Saleh Alaqili, YEMAC, 21 May 2023.

⁸³ UNDP Mine Action Dashboard, February 2021; *UNDP Annual Report on Mine Action in Yemen 2021*, p. 11; and UNDP, Emergency Mine Action Project – Phase II, Annual Report for 2022, 15 February 2023, pp. 8, 12.

⁸⁴ Email from Ahmed Yahya Alawi, YEMAC North, 18 April 2023.