

YEMEN

ARTICLE 5 DEADLINE: 1 MARCH 2020
(NOT ON TRACK TO MEET DEADLINE)

PROGRAMME PERFORMANCE

	2017	2016
Problem understood	4	3
Target date for completion of mine clearance	3	3
Targeted clearance	5	4
Efficient clearance	5	4
National funding of programme	2	2
Timely clearance	5	4
Land-release system in place	5	5
National mine action standards	6	6
Reporting on progress	5	5
Improving performance	5	4
PERFORMANCE SCORE: POOR	4.5	4.0

PERFORMANCE COMMENTARY

Despite adverse conditions arising from Yemen's continuing armed conflicts, the Yemen Executive Mine Action Centre (YEMAC) expanded operations and improved productivity in 2017. In addition to problems of insecurity, however, teams are constrained by lack of training and equipment for the increasingly diverse range of hazards confronting them.

RECOMMENDATIONS FOR ACTION

- Authorities in Sanaa and Aden should give access to international demining operators to increase technical expertise and capacity and accelerate clearance.
- Authorities in Aden and Sanaa should expedite access of YEMAC staff to training outside Yemen.
- Gulf coalition engineer/demining units should coordinate with YEMAC to report details of clearance activity.
- YEMAC should fulfil its obligations to report on the progress of demining by issuing comprehensive reports disaggregating data on mine and unexploded ordnance (UXO) clearance.

CONTAMINATION

Yemen is contaminated with mines from conflicts in 1962–69 and 1970–83, mines that were laid in border areas between North and South Yemen before they unified in 1990, and mines from successive conflicts that erupted since 1994. These and the ongoing conflicts that flared in March 2015 have “changed the extent and complexity of contamination dramatically”, though its full extent is unknown.¹

A Landmine Impact Survey (LIS) completed in 2000 identified suspected hazardous areas (SHAs) containing mines and explosive remnants of war (ERW) covering an estimated 922km² and affecting 592 mine villages across 18 of Yemen’s 21 governorates. Yemen’s first Article 5 deadline extension request in 2008 stated that 710km² had been released and 457 areas covering 213km² remained to be “addressed”.² A second extension request submitted in December 2013 identified 107 confirmed minefields covering 8.1km² and 438 SHAs covering 338.4km². It noted that three governorates had yet to be surveyed.³

Yemen did not submit an Article 7 transparency report in 2018. As of writing, the last report, submitted in 2017, stated that 569 suspected or known mined areas covering 323km² remained and that survey was expected to identify additional contamination.⁴ A 2017 progress report by the United Nations Development Programme (UNDP) observed that “currently, there are very few tangible indicators measuring contamination or impact and what is available is outdated, ad hoc and often anecdotal.”⁵

Some of the heaviest mine and ERW contamination is reported in northern governorates bordering Saudi Arabia (al-Jawf and Saada), southern coastal governorates (Abyan, Aden, Lahej, and Taiz) and centre-west governorates (Hodeida, Marib, and Sanaa).⁶ The United Nations has noted that mine types laid in recent years were never found in government stocks, suggesting the new supply of weapons by external actors.⁷

Successive conflicts in the past decade have generated multiple reports of mine use. This includes the 2010 insurgency in northern Saada governorate led by Abdul Malik al-Houthi⁸ and the 2011 insurgency around southern Abyan launched by militants belonging to Ansar al-Sharia, linked to al-Qaeda in the Arabian Peninsula, as well as the war that erupted after March 2015 between Houthi rebels controlling the north of Yemen and the Saudi-led coalition backing President Abdu Rabbu Mansour Hadi, based in the south.⁹

A national non-governmental organisation (NGO), Mwatana for Human Rights, documented mine use by Houthi forces and forces loyal to former president Ali Abdullah Saleh that killed at least 57 civilians in 6 governorates between July 2015 and October 2016. It reported fighters placed mines in residential areas, main streets, homes, farms, and paths frequented by civilians.¹⁰ The Office of the UN High Commissioner for Human Rights has reported mine use by Houthis and associated forces since March 2015 and in 2017 Human Rights Watch said Houthi-laid mines had killed and maimed hundreds of civilians in six governorates.¹¹

Mines of an improvised nature

The current conflicts have also resulted in increased contamination from mines of an improvised nature, such as devices initiated by a pressure plate or crushed necklace, as well as improvised devices activated remotely or by photo-electric cells. Mines of an improvised nature as well as other improvised devices are being laid along roads, inside buildings, and built into house walls, posing a serious hazard to displaced families returning to their property.¹²

YEMAC reported Houthi forces emplaced mines of an improvised nature in northern Saada governorate during the 2006–09 insurgency, and frequently clears “cold” or abandoned devices.¹³ Human Rights Watch said YEMAC had cleared mines of an improvised nature in areas from which Houthi forces withdrew near the Red Sea port city of Mokha in February 2017.¹⁴

Independent investigators have documented three types of mine of an improvised nature used by Houthi forces on Yemen's west coast that are identical to, or closely resemble, conventional mines. They include a Claymore-type mine almost identical to a Chinese-made directional mine (Type 150-A GLD), a larger directional mine similar to an Iranian-made mine (M18A2) and an anti-vehicle

mine similar to Russian-made TM46 mines. Some of the mines of an improvised nature have serial numbers indicating mass production.¹⁵ The United Nations reported the appearance of improvised sea mines in the Red Sea since 2017. These were probably deployed by Houthi forces posing a threat to shipping.¹⁶

PROGRAMME MANAGEMENT

Yemen established a National Mine Action Committee (NMAC) in June 1998 by prime ministerial decree to formulate policy, allocate resources, and develop a national mine action strategy.¹⁷ NMAC, chaired by the Minister of State (a member of the cabinet), brought together representatives of seven concerned ministries. It is unclear if, or to what extent, the NMAC remains functional.

YEMAC was established in Sana'a in January 1999 as NMAC's implementing body with responsibility for coordinating mine action in the country.¹⁸ Amid the upsurge of violence since 2015, YEMAC has become, de facto, two organisations, split between Sanaa, under the control of the Houthis, and the southern city of Aden controlled by the Saudi-led coalition and Yemen's internationally recognised but exiled government. The Sana'a office coordinates operations in the north and centre of the country while the Aden office oversees operations in southern provinces.¹⁹

YEMAC is supported by a Regional Executive Mine Action Branch (REMAB) in Aden, also set up in 1999, as well as REMABs in al-Mukalla (Hadramout governorate), opened in March 2004 and Saada (April 2016).²⁰

Strategic Planning

YEMAC does not currently have a strategic plan for mine clearance. Since 2015, mine action has operated on an emergency basis and YEMAC has worked with UNDP to address emergency threats to communities posed by all explosive hazards, including mines, improvised explosive devices, cluster munition remnants, and unexploded aircraft and ground-launched ordnance. The lack of training and equipment limits YEMAC teams' ability to tackle many of the items encountered.

UNDP identified three main goals for emergency operations: preventing the situation from getting any worse; mitigating the impact of existing contamination; and, over the longer term, addressing Yemen's Anti-Personnel Mine Ban Convention (APMBC) obligations.²¹

In July 2017, UNDP started implementing Phase V (2017–20) of its programme in Yemen, which includes support for YEMAC in preparing the request for an extension to its Mine Ban Treaty Article 5 deadline, due for submission by March 2019. It has identified four desired outputs:

- Mine and UXO contamination is mapped and the impact assessed nationwide
- Mines and UXO are efficiently cleared in priority areas
- Risk education is increased in affected communities
- Survivors are screened, rehabilitated, and supported.

UNDP estimated total funding required for Phase V at \$39.9 million. As of June 2017, funding pledged amounted to \$9.8 million.²² It sought to increase funding from around \$6 million available in 2017 to around \$15 million a year.²³

Legislation and Standards

It is not known whether Yemen has national mine action legislation or national standards in place.

Quality Management

It is not known whether Yemen has any national quality management system in place.

Information Management

YEMAC is responsible for information management and maintains an Information Management System for Mine Action (IMSMA) database. UNDP observed that although not updated, the system was providing more reliable data. Most database staff in Sanaa had left by the beginning of 2017. YEMAC recruited new staff for its offices in Sanaa and Aden, who underwent IMSMA training in Jordan in May 2017.²⁴

UNDP also recruited a mapping expert in 2017 working in the Aden office to boost preparing and distributing contamination maps.

Operators

YEMAC was Yemen's only humanitarian clearance operator in 2017. By the start of 2016, it had some 850 staff split between offices in Sana'a and Aden, of whom between 350 and 400 were said to be active. These included three UXO clearance teams set up at the end of 2015 to focus on contamination in cities.²⁵ YEMAC subsequently recruited additional staff and reported reaching around 700 field staff in 2017.²⁶ YEMAC also had 19 mine detection dogs (MDD) in 2017, of which six were active supporting survey and clearance.²⁷

A Dynasafe MineTech subsidiary, Dynasafe Middle East Project Management, signed an agreement with Saudi Arabia's King Salman Fund in March 2018 for a \$40 million demining operation funded by the Saudi government. The project was due to run for a year initially, with the possibility of extension subject to review. It became operational in May 2018 with headquarters in Marib and sub-offices in Sanaa and Aden. The project expected to build up a staff of more than 400, including 20 international experts and advisers, and to operate with a little over 300 YEMAC staff, including 32 demining teams.²⁸

Danish Demining Group (DDG) had offices in both Sana'a and Aden in 2016 but in 2017 worked only in the south. It is accredited to provide risk education, and in 2017 it delivered training for close to 10,000 people. In 2018, it planned to increase risk education capacity and start non-technical survey.²⁹

Norwegian People's Aid (NPA) conducted an assessment mission to Sanaa in October 2017 to explore the possibilities for establishing a programme to support YEMAC's MDD capacity. UNDP agreed to provide \$500,000 to help launch a two-year project to restore the MDD programme.³⁰

The HALO Trust agreed in 2017 to provide training on survey and use of thermite torches for YEMAC personnel in Jordan. Ten YEMAC personnel attempting to leave through Aden to attend a HALO course were detained by the authorities in Aden at the end of July 2018.³¹

The Saudi-led coalition has two mine action teams, from the United Arab Emirates (UAE) and Sudan, deployed in the south. Little is known about their capacity or assets, or any activities. The UAE has reportedly agreed to "clear" Dhubab city in south-western Taiz governorate.³²

LAND RELEASE

Despite Yemen's continuing war and a humanitarian crisis described by the UN as the worst in the world, YEMAC expanded capacity and the scope of operations in 2017. YEMAC field staff reached 700 operating in 55 districts of 14 governorates in 2017. This compares favourably with the previous year when it worked in 47 districts across 9 governorates. UNDP reported expenditure of \$5.8 million in 2017, up from \$4.5 million the previous year. In 2018, it was due to reach about \$8.7 million.³³

Survey in 2017

YEMAC conducted technical survey on a total of 3km² in 2017. More than half of that amount was accounted for by operations to rehabilitate the Amran cement factory, a key economic facility, which had been hit by air strikes in 2015 and 2016, but did not involve mine clearance.

Clearance in 2017

YEMAC cleared 8,556,883m² of ERW-contaminated land in 2017, according to UNDP, more than double the area recorded as cleared in 2016. Available data, however, did not disaggregate the extent of mine clearance although it involved the destruction of at least 1,729 anti-personnel mines (see Table 1). Mine Action Review has estimated that mine clearance covered 1km² in 2017.

YEMAC conducted mainly spot clearance of high-threat, high-impact tasks prioritising civilian infrastructure rather than undertaking large area clearance that would tie down assets for extended periods of time.³⁴ YEMAC also reportedly cleared 632 items of improvised ordnance in 2017, but available data did not identify how many devices were victim-activated and meet the definition of an anti-personnel landmine under the APMBC.

Some clearance of mines and other explosive ordnance was reportedly conducted by UAE military engineers but the objectives and extent of such activities was unknown.³⁵

Table 1: Clearance in 2016 and 2017³⁶

Year	Area (m ²)	AP mines destroyed	AV mines destroyed	Improvised munitions destroyed	ERW destroyed
2017	8,556,883	1,729	3,763	632	341,175
2016 ³⁷	3,072,181	16,440	16,750	1,048	228,572

AP = Anti-personnel AV = Anti-vehicle

The improvements in productivity appeared to continue in 2018 with clearance of 5,123,548m² recorded in the first five months of the year. Operations resulted in clearance of 448 anti-personnel mines, 4,122 anti-vehicle mines, 600 improvised munitions, and 1,846 items of UXO. Most clearance was in Dhamar (1.1km²) and Sana'a (1.01km²) governorates, with substantial areas also cleared in Hajjah, Saada, and Taiz governorates. Most of the items destroyed were in Aden and Sanaa.³⁸

Developments in 2018

Dynasafe MineTech became operational in Yemen in May 2018 and reported clearing 800 mines in June 2018. Project goals include clearance of all high-threat areas, clearing roads to allow safe passage of humanitarian goods, and making schools safe. In August 2018, it reported operating in west coast areas and in the provinces of Lahej, Marib, Sanaa, and Shabwah.³⁹

ARTICLE 5 COMPLIANCE

Under Article 5 of the APMB (and in accordance with the five-year extension granted in 2014), Yemen is required to destroy all anti-personnel mines in mined areas under its jurisdiction or control as soon as possible, but not later than 1 March 2020. It will not meet this deadline and will need to request a third extension.

Yemen was previously granted five-year Article 5 deadline extensions by states parties to the APMB in 2008 and 2014. For the second extension, Yemen requested the additional time to clear 107 confirmed mined areas covering 8.1km² but it is not on track to achieve this target.⁴⁰ The subsequent escalation in conflict disrupted clearance activity and shifted operational priorities from legacy minefields to emergency clearance of ERW. Yemen should submit its third extension request by March 2019.

YEMAC decided in consultation with UNDP in June 2018 that it would request a three-year extension to its Article 5 deadline from April 2020 until April 2023 on the basis that in the prevailing environment of conflict it was not feasible to plan further ahead (and in the hope the conflicts would come to an end). YEMAC would treat the three years as an interim emergency response, and aim to conduct a national contamination survey to provide a realistic basis for a subsequent ten-year extension request. In the three-year interim period, clearance of legacy minefields, often well-known to communities, would take a lower priority than high-threat ERW.⁴¹

Table 2: Mine clearance in 2013–17

Year	Area cleared (km ²)
2017	*1.00
2016	3.07
2015	0
2014	0.34
2013	1.16
Total	5.57

* Estimated clearance output, as mine clearance not disaggregated from ERW clearance

- 1 United Nations Development Programme (UNDP), "Emergency Mine Action Project, Annual Progress Report 2017", January 2018, p. 6; Yemen Article 5 deadline Extension Request Update, 10 March 2016, p. 4.
- 2 Article 5 deadline Extension Request, 31 March 2008, p. 2.
- 3 Second Article 5 deadline Extension Request, submitted 17 December 2013, pp. 11–13.
- 4 Anti-Personnel Mine Ban Convention (APMBC) Article 7 Report (for 1 April 2016 to 31 March 2017), Forms D and L.
- 5 UNDP, "Mid-Year Report, 2017", 20 July 2017, p. 4.
- 6 UNDP, Phase V, "Emergency Mine Action Project", Project Document, p. 1.
- 7 UNDP, "Emergency Mine Action Project, Annual Progress Report 2017", January 2018, p. 6.
- 8 Article 7 Report (for 1 April 2009 to 31 March 2010), Form I.
- 9 "Yemen: Landmines stall IDP returns in the south", *IRIN*, 28 June 2012, at: <http://www.irinnews.org/Report/95752/YEMEN-Landmines-stall-IDP-returns-in-south>.
- 10 Mwatana for Human Rights, "Concealed Killer", Sana'a, undated but 2017, p. 21.
- 11 "Situation of human rights in Yemen", Report of the UN High Commissioner for Human Rights, UN doc. A/HRC/33/38, 4 August 2016, p. 10; Human Rights Watch, "Yemen: Houthi-Saleh forces using landmines", 20 April 2017.
- 12 Minutes of Yemen Mine Action Technical Working Group meeting, Amman, 24 July 2018.
- 13 Article 5 Extension Request Update, 10 March 2016, p. 5; UNDP, "Mid-Year Report, 2017", 20 July 2017, p. 4.
- 14 Human Rights Watch, "Yemen: Houthi-Saleh Forces Using Landmines", 10 April 2017.
- 15 Conflict Armament Research, "Mines and IEDs Employed by Houthis on Yemen's West Coast", September 2018, pp. 5–6, 11.
- 16 United Nations Security Council, final report of the panel of experts, S/2018/68, Annexes 40 & 41, pp. 166–171, 26 January 2018.
- 17 Article 7 Report, Form I, 31 March 2009.
- 18 Article 5 deadline Extension Request, 31 March 2008, p. 2.
- 19 Interviews with Ahmed Alawi, YEMAC, and Stephen Bryant, Chief Technical Adviser, UNDP, in Geneva, 17 February 2016; UNDP, "Support to eliminate the impact from mines and ERW – Phase IV, Annual Progress Report 2014", undated but 2015.
- 20 Email from Stephen Bryant, UNDP, 22 July 2018.
- 21 UNDP, "Emergency Mine Action Project, Annual Progress Report 2017", January 2018, p. 6.
- 22 UNDP, Phase V, "Emergency Mine Action Project", Project Document, p. 1; donors were the United States (\$7 million), the United Kingdom (\$1.1 million), the Netherlands (\$1.1 million), and Germany (\$0.5 million).
- 23 UNDP, Phase V, "Emergency Mine Action Project", Project Document, p.7.
- 24 UNDP, "Emergency Mine Action Project, Annual Progress Report 2017", January 2018, p. 10.
- 25 Interview with Ahmed Alawi, YEMAC, and Stephen Bryant, UNDP, in Geneva, 17 February 2016.
- 26 UNDP, "Emergency Mine Action Project, Annual Progress Report 2017", January 2018, p. 12.
- 27 Colin Bent and Alma Dukic, "Yemen Assessment Report", NPA, undated but November 2017, pp. 16–18.
- 28 Email from Chris Clark, Global Operations Director, Dynasafe MineTech, 6 August 2018.
- 29 Email from Maria Ersvaer, Programme and Operations Coordinator, DDG, 30 April 2018.
- 30 Colin Bent and Alma Dukic, "Yemen Assessment Report", NPA, undated but November 2017; Minutes of Yemen Mine Action Technical Working Group meeting, Amman, 24 July 2018; email from Stephen Bryant, UNDP, 27 July 2018.
- 31 Email from Stephen Bryant, UNDP, 31 July 2018.
- 32 UNDP, Minutes of Mine Action Technical Working Group Meeting, Amman, Jordan, 24 July 2018.
- 33 UNDP, "Emergency Mine Action Project, Annual Progress Report 2017", January 2018, p. 9.
- 34 *Ibid.*, p. 12.
- 35 See, e.g., "UAE armed forces continues clearing landmines in Yemen's west coast", *Emirates News Agency*, 30 January 2018.
- 36 UNDP, "YEMAC clearance activities 2016–17, productivity January–December 2017" received by email from Stephen Bryant, UNDP, 3 April 2018.
- 37 Clearance data showed 16,198 anti-personnel mines were cleared in Aden and 15,947 anti-vehicle mines were cleared in Aden (9,476), Hadramout (4,779), and Lahej (1,692). No explanation for the exceptionally high number of items cleared in these locations was immediately available.
- 38 UNDP, "YEMAC productivity, January to May 2018", received by email from Stephen Bryant, UNDP, 15 July 2018; Minutes of Yemen Mine Action Technical Working Group meeting, Amman, 24 July 2018.
- 39 Emails from Chris Clark, Dynasafe MineTech, 6 August 2018.
- 40 Article 5 deadline Extension Request, 31 March 2008, p. 13.
- 41 Minutes of Yemen Mine Action Technical Working Group meeting, Amman, 24 July 2018.