

ARTICLE 5 DEADLINE: 1 MARCH 2023
(INTERIM DEADLINE FOR SURVEY; UNLIKELY TO BE CONDUCTED)

KEY DATA

ANTI-PERSONNEL (AP)
MINE CONTAMINATION:
HEAVY
(NO CREDIBLE ESTIMATE)

AP MINE
CLEARANCE IN 2019

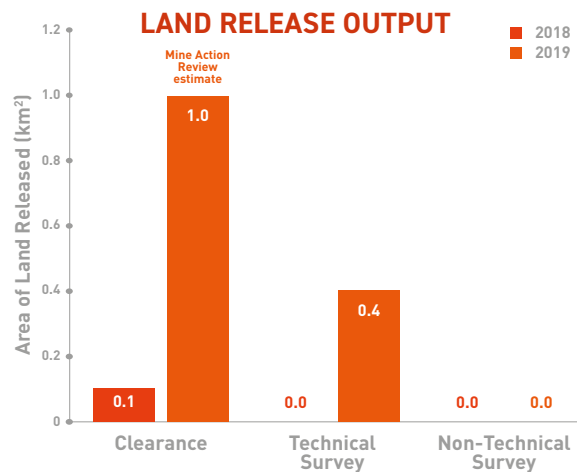
1 KM²

(MINE ACTION
REVIEW ESTIMATE)

AP MINES
DESTROYED IN 2019

1,536

(UNDP REPORTED FIGURE)



CURRENT LIKELIHOOD OF MEETING 2025 CLEARANCE TARGET (as per the Oslo Action Plan commitment): **LOW**

KEY DEVELOPMENTS

Yemen submitted an Article 5 deadline extension request in 2019, calling for three years in which to conduct nationwide survey and produce a new baseline estimate of anti-personnel mine contamination. HALO Trust started a programme in Yemen, opening an office in Aden, and the Yemen Executive Mine Action Centre (YEMAC) opened a coordination centre in Aden in April 2020.

RECOMMENDATIONS FOR ACTION

- YEMAC should report on developments in mine action to meet its Anti-Personnel Mine Ban Convention (APMBC) transparency obligations, at a minimum providing annual reports detailing the location of contamination and the results of land release disaggregated by survey and clearance.
- YEMAC should start systematic nationwide survey to establish a baseline estimate of contamination.
- Yemen should step up support to international demining organisations to expedite deployment of survey and clearance capacity and enhance training of YEMAC deminers.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2019)	Score (2018)	Performance Commentary
UNDERSTANDING OF CONTAMINATION (20% of overall score)	3	4	YEMAC has declared that the extent of anti-personnel mined area is unknown and in 2019 it was unable to conduct non-technical survey as a result of conflict. Armed conflict continued to add explosive hazard contamination, with extensive use of anti-personnel mines, in particular mines of an improvised nature.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	3	3	Mine action in Yemen, one of the world's poorest countries, is entirely dependent on international donor funding. Conflict between Sana'a-based and Aden-based authorities has de facto split YEMAC weakening its role managing nationwide mine action. YEMAC has, though, opened a coordination centre (in 2020) and is expanding partnerships with international organisations as part of UN-supported moves to strengthen the programme in areas controlled by the internationally recognised government. Sanaa-based authorities have expressed interest in a coordination office but taken no further action.
GENDER AND DIVERSITY (10% of overall score)	3	3	No reference was made to gender or diversity in Yemen's 2019 Article 5 deadline extension request and efforts by the United Nations Development Programme (UNDP) and other international organisations to widen the participation of women in mine action face cultural barriers.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	3	3	YEMAC, with support from UNDP and the Geneva International Centre for Humanitarian Demining (GICHD), is preparing to install IMSMA Core and thereby upgrade reporting. The existing system, described by YEMAC as unfit for purpose, is not reliably receiving or delivering results of survey and clearance. Yemen submitted an Article 7 report covering 2019.
PLANNING AND TASKING (10% of overall score)	5	5	Yemen does not have a national strategy or plan, but continued operations on an emergency basis focused on life-saving interventions and civilian infrastructure hit hard in the conflict.
LAND RELEASE SYSTEM (20% of overall score)	4	4	Yemen's national mine action standards were once IMAS-compliant but are now long out of date and YEMAC says its deminers do not observe them.
LAND RELEASE OUTPUTS AND ARTICLE 5 COMPLIANCE (20% of overall score)	6	5	YEMAC's emergency response targets all forms of explosive hazard and although the total area released dropped sharply in 2019, the number of mines cleared by YEMAC teams increased. Conflict and insecurity, however, prevented YEMAC from conducting non-technical survey to establish a baseline estimate of contamination, the main goal of its three-year Article 5 deadline extension plan.
Average Score	4.0	4.0	Overall Programme Performance: POOR

DEMINEING CAPACITY

MANAGEMENT CAPACITY

- Yemen Executive Mine Action Centre (YEMAC)

NATIONAL OPERATORS

- YEMAC
- Yemen Army Engineers

INTERNATIONAL OPERATORS

- Danish Demining Group (DDG)
- The HALO Trust
- Norwegian People's Aid (NPA)
- SafeLane/Dynasafe

OTHER ACTORS

- United Nations Development Programme (UNDP)

UNDERSTANDING OF AP MINE CONTAMINATION

YEMAC stated in 2019 and again in 2020 that “the level of contamination and the subsequent impact by AP mines in Yemen is not known.”¹¹

A Landmine Impact Survey in 2000 found mine contamination in 18 of Yemen's 21 governorates resulting from conflicts in 1962–69 and 1970–83, as well as mines laid in border areas between North and South Yemen before they unified in 1990, and mines from successive conflicts that erupted since 1994. Yemen's second Article 5 deadline extension request, submitted in 2014, identified 107 confirmed minefields covering a total of 8.1km² but also an additional 438 suspected hazardous areas (SHAs) covering 338km². By 2017, YEMAC said it had 569 suspected mined areas remaining, which were affecting 323.5km².² YEMAC believed a significant proportion of this might be released or reduced through survey. However, the United Nations has observed that the conflict which erupted in March 2015 “changed the extent and complexity of contamination dramatically.”³ It also largely halted systematic survey preventing a determination of contamination in any part of the country.

Houthi officials have acknowledged using landmines⁴ and their forces reportedly laid mines in at least six governorates in 2016.⁵ Since 2017, Houthi and associated forces have reportedly laid large numbers of anti-personnel mines and anti-vehicle mines, including mines of an improvised nature, in particular along Yemen's west coast in a bid to stall the advance of pro-government Yemeni and Saudi coalition forces towards the strategic port of Hodeida. Houthi-laid mines continued to inflict heavy civilian casualties and have hampered deliveries of humanitarian aid.⁶ A mine attack on a convoy carrying the internationally-recognized government's defence minister west of Marib city in February 2020 suggested Houthi forces continue to lay mines.⁷

Current conflicts have also resulted in increased contamination from improvised mines, which have proved a particular threat, inflicting heavy deminer and civilian casualties. Use of improvised explosive devices (IEDs) is attributed mainly to Houthi-aligned forces, al-Qaeda in the Arabian Peninsula, Islamic State-Yemen, and criminal gangs.⁸ YEMAC reported over 4,000 incidents involving improvised devices in 2019.⁹ Analysis of 2,440 improvised devices encountered since 2017 found that 70% were anti-personnel mines of an improvised nature.¹⁰

Some anti-vehicle mines were reportedly modified to detonate with the weight of a person,¹¹ making them anti-personnel mines falling within the APMBBC. Other improvised mines include devices initiated by a pressure plate or crushed necklace. Operators also encountered improvised devices activated remotely or by photo-electric cells. Improvised mines, as well as other IEDs, have been produced in Yemen “on an industrial scale” and laid along roads, inside buildings, and built into house walls, posing a serious hazard to displaced families returning to their property.¹²

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.¹³ Operators have also found PMN mines attached to remote-control firing devices for use as additional charges for detonating larger IEDs.¹⁴

The UN reported the appearance of improvised sea mines in the Red Sea since 2017. These mines, which were probably deployed by Houthi forces, pose an obvious threat to shipping.¹⁵ Sea mines struck 57 vessels, mainly fishing boats, in 2017–19, including nine in 2019, and although placed along Yemen's Red Sea coast some have been found drifted as far east as the coast of Hadramout governorate.¹⁶

A panel of international experts reported to the UN Human Rights Council in August 2019 that it had confirmed civilian casualties caused by anti-personnel and anti-vehicle mines emplaced by Houthi fighters in Aden, Hudayda, Lahej, and Taiz governorates.¹⁷

NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Management of mine action in Yemen is 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, and the internationally recognised government (IRG), operationally based in Aden and the south. The Sana'a-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. In the south, YEMAC has fulfilled the double role of regulator responsible for policy and planning while also serving as the sole national operator.¹⁸

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 2019.¹⁹ In practice, however, YEMAC has split into two, centred round Sana'a and Aden. The Sana'a office employed around 500 staff, working in northern governorates controlled by the Houthi forces. From Aden, YEMAC operated with some 550 staff mainly active in 2019 in Abyan, Aden, Amran, Lahej, and Taiz governorates.²⁰

In April 2020, YEMAC opened a coordination centre in Aden intended to strengthen programme management in areas controlled by the IRG. The centre is intended to facilitate cooperation with international organisations and will have responsibility for accrediting them. It will also have departments for planning, information management, and quality assurance/quality control (QA/QC).²¹ The centre convened its first coordination meeting on 9 April 2020, but is expected to take up to 18 months to become fully operational as staff undergo training.²²

YEMAC is supported by Regional Executive Mine Action Branches (REMABs) in Aden, set up in 1999; al-Mukalla (Hadramout governorate), which opened in March 2004; and Saada (April 2016).²³ The extent to which they are still operational is not clear. YEMAC also has an office in Mokha and in 2019 opened offices in Taiz to support operations around Hodeida and in Marib for operations in al-Jawf governorate.²⁴ YEMAC said it had set up "skeleton" offices using its own resources pending receipt of financial support for them from UNDP.²⁵

UNDP provides technical and administrative support to YEMAC through a project carried out by three international and ten national staff working from a number of different offices. 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. By the end of 2019, its Sanaa office comprised two international staff, including a chief technical adviser, and three national staff; in Aden it had four international and two national staff. UNDP also had national field staff in Hodaydah, Mokha and Mukalla.²⁶

Yemen's mine action is funded by international donors. UNDP estimated Yemen's annual funding needs at some US\$16 million. At the end of 2019, donor funds that had been provided or pledged amounted to \$20.8 million up to the end of June 2021.²⁷ Additionally, Saudi Arabia's King Salman Fund agreed with Dynasafe Middle East Project Management in 2018 to finance a US\$40 million demining project.²⁸ The fund provided a further US\$30.5 million for the project for the year from 1 June 2019 to 30 May 2020²⁹ and in June 2020 said it would fund the operation for a third year.³⁰

GENDER AND DIVERSITY

Yemen made no reference to gender and diversity in the mine action plans and priorities set out in the its 2019 Article 5 deadline extension request.

UNDP reported placing emphasis on mainstreaming gender principles into plans aiming for equal participation as beneficiaries, employees, and decision-makers in mine action. UNDP's goals included ensuring survey information is collected by organisations representing women and girls as well as men and boys; that data are disaggregated by gender and age; and that risk education materials address the risks associated with all gender roles.³¹

The extent to which YEMAC has embraced these ideas is unclear. In 2019, it rejected a suggestion that women might be included in training for demining teams. Employment of women in mine action, however, faces significant obstacles, in part due to their position as responsible for family care. Danish Demining Group (DDG) was unable to accept some women candidates for recruitment in the face of resistance from family members. Women in management positions often face bullying and disrespect from male subordinates.³²

Among international operators, DDG employed a female international as head of programme and six women nationals among its 25 staff in 2019. Women employees included a risk education/non-technical survey officer and four risk education staff, three of whom were also trained as surveyors. DDG also employed a woman medic.³³

Risk education is conducted separately for women, often by women staff to encourage women's participation. DDG has found that including women in non-technical survey/community liaison activities is difficult as men often take the lead in field activities and tend to overlook including women.³⁴

INFORMATION MANAGEMENT AND REPORTING

YEMAC submitted an Article 5 deadline extension request covering 2019. Improved reporting will require not only timely submission but also significant improvement in the quality of data on which they are based.

YEMAC with support from UNDP and the GICHD was preparing a major upgrade of its information management in 2020. YEMAC has operated an Information Management System for Mine Action (IMSMA) database but its 2019 Article 5 deadline extension request described it as "outdated" and "not usable".³⁵ The GICHD prepared to install IMSMA Core funded by the United States and UNDP, which added an information specialist to its Aden staff in 2019, expecting a soft launch of the system in mid 2020.³⁶ In the meantime, UNDP also worked with YEMAC on developing data collection forms.³⁷

PLANNING AND TASKING

Yemen does not have a current strategic plan or annual work plans for tackling mines, IEDs, or ERW. Mine action in 2019 and 2020 continued to be conducted on an emergency basis. Yemen's recent conflicts "have changed the extent and complexity of contamination dramatically and in many cases, YEMAC is neither trained nor equipped to deal."³⁸ In April 2019, UNDP started to develop a counter-IED programme focused on building YEMAC capacity in threat assessment, IED identification, and render-safe procedures using semi-remote measures.³⁹

The priority set out in Yemen's Article 5 deadline extension request in 2019 was to conduct nationwide survey to generate a baseline of contamination that would provide a basis for long-term planning. Other goals include developing a system of planning and prioritisation, updating Standard Operating Procedures (SOPs) and national mine action standards, strengthening information management, procuring new equipment, and establishing a coordination office. YEMAC reportedly intended to assign its planned coordination office the task of drawing up a new planning system. The request also calls for developing training and capacity for YEMAC staff, increased partnerships with international organisations, and the opening of additional YEMAC offices in Marib and Taiz.⁴⁰

LAND RELEASE SYSTEM

STANDARDS AND LAND RELEASE EFFICIENCY

Yemen's national mine action standards were based on the International Mine Action Standards (IMAS) when they were drawn up in 2007 but they were only available in Arabic in hard copy. YEMAC acknowledged that the standards were obsolete and said SOPs based on the standards were not consistently applied by its deminers.⁴¹ YEMAC was in contact with the GICHD on developing national standards and the new coordination centre, as one of its first acts, started reviewing a draft of interim national standards.⁴² UNDP also reported preparation of national standards and technical operating procedures for humanitarian operators clearing IEDs, including improvised mines.⁴³

YEMAC has said its deminers' efficiency was lowered by lack of training, particularly for coping with mines of an improvised nature, and by old or obsolete equipment.⁴⁴ UNDP observed that productivity would be increased by developing survey and land-release methodologies.⁴⁵ UNDP provided training to 25 YEMAC personnel working in Shabwah and Hadramout in January 2020, focusing on use of pulling kits for remote render-safe procedures and on IED threat assessment, which led to a decline in deminer casualties.⁴⁶

OPERATORS AND OPERATIONAL TOOLS

YEMAC remained Yemen's biggest operator, with the number of personnel reportedly rising to more than 1,000 in 2019, slightly more than in 2018, although it seconded many of these to other international operators. It also had the biggest geographic reach with teams conducting risk education, survey, or clearance in 95 of Yemen's 333 districts, up from 81 districts in 2018.⁴⁷ In addition to manual demining teams, YEMAC started to revive a mine detection dog (MDD) programme and had active teams working under its Sana'a-run programme and preparations to develop kennels and MDD operations in the south. However, YEMAC has faced acute lack of resources and training.

SafeLane/Dynasafe, given US\$40 million a year by Saudi Arabia's government through the King Salman Relief and Rehabilitation Fund, reported employing 19 internationals in 2019 along with some 304 national staff, mainly seconded from YEMAC.⁴⁸ It expected the number of personnel to rise to around 400 in the course of 2019 and reported operating 32 multi-task teams working on the west coast and in the Lahej, Marib, and Shabwah governorates.⁴⁹ SafeLane's operating results are not recorded in YEMAC's database and it did not respond to Mine Action Review's request for information.

DDG, the longest established international demining organisation in Yemen, expanded its programme employing 26 staff, including four internationals based in Aden, including the head of programme, two staff with EOD specialisation, and a medical trainer. It also had seven staff trained in risk education and non-technical survey and two medics in Mokha city covering the west coast, with two risk education staff in Ataq, Shabwah governorate. DDG was not able to conduct

EOD in 2019 but delivered training to YEMAC in January and February, though the scope was limited by lack of access to explosives or a safe location for demolitions.⁵⁰

The HALO Trust established a presence in Yemen in July 2019 when it signed an agreement with the Ministry of Planning and International Cooperation (MOPIC). Its programme manager arrived in November with two more international staff on site by the end of the year. HALO opened an office in Aden in January 2020. It then trained 42 YEMAC staff in EOD, conducting two courses up to EOD level 3 in Amman and one in Aden, but which was also limited by lack of explosives. YEMAC seconded 17 of those trained to work with HALO Trust in 2020. It expected to deploy two more international staff in 2020 and to hire additional national staff for administration and information management as well as at least two more EOD/survey teams and a community liaison team.⁵¹

Norwegian People's Aid (NPA)'s plan to establish a presence in Yemen in 2019 to support development of YEMAC's MDD programme was held up by security developments. NPA expected the project to go ahead in 2020 with the deployment of a technical adviser in Aden around September or October 2020. NPA conducted an MDD handler assessment in Aden in June 2019, selecting 14 candidates for training due to take place at NPA's Global Training Centre in Bosnia in June 2020. As at May 2020, NPA had 12 long-leash MDDs under training in Bosnia which would be transferred to Yemen after the handlers' training. NPA had planned to visit Sana'a for discussions on MDD support in June 2019 and February 2020 but the visits were postponed for administrative and security reasons.⁵²

YEMAC is acutely short of all forms of equipment. UNDP concluded it would be incapable of fulfilling its APMBC obligations even in the event of peace. Plans for a wide-ranging upgrade of equipment in 2019 were delayed by cumbersome regulations and procedures. In 2019, YEMAC took delivery of 40 pick-up trucks, 16 ambulances, 16 trucks, two back-hoe loaders, and two truck-mounted cranes. Vehicles were divided equally between the Sana'a and Aden programmes.⁵³

Delivery of 300 Italian CEIA mine detectors planned for 2019 finally occurred in May 2020. UNDP concluded it would not be possible to deliver the detectors to the north and that they would all be used by deminers working in the Aden-led programme.⁵⁴

UNDP reported that YEMAC's Sanaa-centred operation deployed MDDs in the field more frequently in 2019 and had asked for an assessment of its MDD operations.⁵⁵ YEMAC's Aden-based operation expected development of an MDD programme to accelerate in 2020.⁵⁶ YEMAC has been developing new facilities in Aden with technical advice from NPA, including three kennel buildings, a dormitory for handlers, and outdoor facilities, including a 12,000m² search training area.⁵⁷

DEMINER SAFETY

YEMAC has not reported deminer casualties in 2019 but a total of 20 deminers are believed to have been killed or injured in the course of the year, mainly as a result of detonations of improvised devices, including mines of an improvised nature.⁵⁸

The Saudi-financed Project Masam implemented by SafeLane reported a team leader was killed by an anti-personnel mine in western Taiz governorate in April 2020. The project's managing director, Ousama Algosaibi, said the project, which started operating in May 2018, had "offered until now 21 martyrs and more than 16 wounded, most of whom lost their limbs."⁵⁹ Nearly all of the more than 37 recorded casualties are believed to have occurred in 2019. They include five international staff killed in a single incident in January 2019.⁶⁰ Seven SafeLane deminers were killed in April by an explosion in a storage area holding mines and ERW for destruction in the port city of Mokha.⁶¹

LAND RELEASE OUTPUTS AND ARTICLE 5 COMPLIANCE

Against the background of Yemen's continuing conflict, YEMAC gives priority to delivering an emergency response to mitigate the threat to civilians posed by all forms of explosive hazard rather than focusing on anti-personnel mined areas and Yemen's obligations under the APMBC.

LAND RELEASE OUTPUTS IN 2019

UNDP reported that YEMAC released 3.5km² of ERW contamination through survey and clearance in 2019, a little more than half the 6.7km² released in 2018.⁶²

SURVEY IN 2019

Large-scale non-technical survey to develop a baseline estimate of contamination was not possible in 2019, due to Yemen's continuing conflict and widespread insecurity. UNDP reported that YEMAC released 371,833m² through technical survey and that "numerous survey operations" in 2019 covered a total area of 355,976m².⁶³

CLEARANCE IN 2019

YEMAC did not release details of any area cleared of anti-personnel mines in 2019, reflecting the emergency firefighting character of operating against a background of continuing conflict. Clearance operations are focused on high-impact spot tasks giving priority to civilian infrastructure that has suffered heavy damage in Yemen's conflict aggravating the world's most acute humanitarian crisis in 2019. The data available showed wide variations in results.

Yemen's Article 7 report covering 2019 did not record any area clearance, but noted the destruction of 1,414 anti-personnel mines, 34,408 anti-vehicle mines, 2,228 IEDs, and 73,739 items of UXO.⁶⁴ Data provided by UNDP showed YEMAC cleared a total of 3.12km² affected by all types of ERW in 2019. Although this was less than half the 6.66km² cleared in 2018, it said YEMAC destroyed 1,536 AP mines in 2019, compared with 680 the previous year, together with 786 improvised devices, and more than 53,000 other items of ERW.⁶⁵

Tasks undertaken by YEMAC included clearance of the Red Sea Mills near the port of Hodeida holding some 51,000 tons of grain that could not be reached because of the presence of mines and unexploded ordnance. Three YEMAC teams restored access, clearing more than 1,200 ERW items. UNDP observed that "YEMAC does not implement International Mine Action Standards but with given restraints and under constant threat of artillery attack, has demonstrated a high-level of diligence, adaptability and resourcefulness."⁶⁶

Table 1: YEMAC clearance of mines and ERW in 2019⁶⁷

Area cleared (m ²)	AP mines destroyed	AV mines destroyed	UXO destroyed	IEDs destroyed
3,115,830	1,536	10,091	41,687	786

YEMAC did not receive disaggregated details of operating results from SafeLane/Project Masam. In May 2020, Project Masam reported that since June 2018 it had cleared 10.3km², destroying in the process 164,205 landmines and 105,492 items of UXO.⁶⁸ A SafeLane press release in June 2020 said that since the start of the project it had cleared more than 10km² and destroyed 54,332 landmines, 108,126 items of UXO, and 4,901 IEDs.⁶⁹

ARTICLE 5 DEADLINE AND COMPLIANCE



Yemen's five-year conflict has created conditions that prevent it from taking the action required to fulfil its obligations under the APMBC. The main aim of the three-year extension to Yemen's Article 5 deadline agreed in 2019 is to conduct a nationwide survey to establish a baseline estimate of contamination that would then provide a basis for assessing the time and resources needed for anti-personnel mine clearance. Instead, continued hostilities have added new contamination, prevented significant survey to establish a baseline estimate, and kept clearance of anti-personnel mines subordinated to emergency clearance of all explosive hazards.

Expanding engagement with international organisations is slowly building the capacity of YEMAC management and field teams but mainly in areas under the IRG. There appeared to be few immediate benefits for areas under Houthi control, where lack of reporting also obscured what activity is being undertaken. Moreover, productivity in 2020 will be negatively affected by the impact of the COVID-19 pandemic. YEMAC continued to work in the north and south, but non-technical survey and IMSMA training was halted or postponed. The closure of Aden airport delayed deployments of international staff and also prevented casualty evacuation, requiring international organisations to suspend clearance.⁷⁰

The five-year data in Table 2 below should be treated with caution.

Table 2: Five-year summary of AP mine clearance

Year	Area cleared (km ²)
2019	*1.0
2018	*0.1
2017	*1.0
2016	*3.0
2015	0
Total	*5.1

* Mine Action Review estimates.

- 1 2018 Article 5 deadline Extension Request, March 2019, p. 19; Article 7 Report (covering 2019), Form D.
- 2 Article 7 Report (covering 1 April 2016 to 30 March 2017), Form D.
- 3 Article 7 Report (covering 2018), Form D.
- 4 J. Gambrell and M. Harb, "Landmines will be hidden killer decades after war", *Associated Press*, 24 December 2018.
- 5 Human Rights Watch, "Yemen: Houthi-Saleh forces using landmines", 20 April 2017. The affected governorates included Abyan, Aden, Lahej, Marib, Sana'a, and Taiz.
- 6 Civilian Impact Monitoring Project, "2019 Annual Report", undated but 2020, p. 2; Human Rights Watch, "Yemen: Houthi landmines kill civilians, block aid", 22 April 2019.
- 7 "Yemen land mine kills six in convoy carrying defence minister, who is unharmed", *Reuters*, 19 February 2020.
- 8 UNDP submission to the UN Secretary-General on countering the threat posed by IEDs, 4 April 2020.
- 9 G. Collett, "Countering the Improvised Explosive Device in Yemen (C-IED Yemen)", Concept Note 2021-22", UNDP, 30 June 2020.
- 10 Email from Gareth Collett, Chief Technical Adviser – Counter IED, UNDP, 20 July 2020.
- 11 Human Rights Watch, "Yemen: Houthi landmines kill civilians, block aid", 22 April 2019.
- 12 Minutes of Yemen Mine Action Technical Working Group meeting, Amman, 24 July 2018.
- 13 Conflict Armament Research, "Mines and IEDs Employed by Houthis on Yemen's West Coast", September 2018, pp. 5-6, 11.
- 14 Email from Gareth Collett, UNDP, 24 July 2020.
- 15 UN Security Council, Final Report of the Panel of Experts, UN doc. S/2018/68, 26 January 2018, Annexes 40 and 41, pp. 166-171.
- 16 Telephone interview with Gareth Collett, UNDP, 22 July 2020, citing interview with Col. Alim al-Namouri, Head of Hadramout Coast Guard, 16 January 2020.
- 17 "Situation of human rights in Yemen, including violations and abuses since September 2014", Report of the Group of Eminent International and Regional Experts, UN doc. A/HRC/42/17, 9 August 2019, pp. 8-9.
- 18 Article 7 Report (covering 2018), Form A.
- 19 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, pp. 7,14.
- 20 Interview with Ameen Saleh Alaqili, Director, YEMAC, in Geneva, 13 February 2020.
- 21 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, p. 12.
- 22 Email from Stephen Robinson, Senior Technical Adviser, UNDP, 27 May 2020.
- 23 Email from Stephen Bryant, Chief Technical Advisor, UNDP, 22 July 2018.
- 24 2019 Article 5 deadline Extension Request, pp. 5, 22; email from Stephen Robinson, UNDP, 21 July 2020.
- 25 Article 7 Report (covering 2019), Form D.
- 26 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, p. 9; interview with Stephen Robinson, UNDP, in Geneva, 20 July 2020.
- 27 *Ibid.*, p. 27; UNDP, Phase V, "Emergency Mine Action Project", Project Document, p. 1.
- 28 Email from Chris Clark, Global Operations Director, Dynasafe MineTech, 6 August 2018.
- 29 "Report of the Assistance Provided by the King Salman Humanitarian Aid and Relief Center to the Republic of Yemen", undated but 2020, p. 89.
- 30 Press release, SafeLane Global, 3 June 2020.
- 31 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, p. 21.
- 32 Email from Marie-Josée Hamel, Regional Programme Advisor – Middle East, DDG, 16 April 2020.
- 33 *Ibid.*
- 34 *Ibid.*
- 35 2019 Article 5 deadline Extension Request, p. 10.
- 36 Email from Stephen Robinson, UNDP, 27 May 2020.
- 37 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, p. 12.
- 38 *Ibid.*, p. 21.
- 39 Telephone interview with Gareth Collett, UNDP, 22 July 2020.
- 40 Interview with Ameen Saleh Alaqili, Director, NMAP/YEMAC, in Geneva, 23 May 2019.
- 41 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, p. 17; 2019 Article 5 deadline Extension Request, p. 16.
- 42 Email from Stephen Robinson, UNDP, 27 May 2020.
- 43 UNDP submission to the UN Secretary-General on countering the threat posed by IEDs, 4 April 2020.
- 44 2019 Article 5 deadline Extension Request, p. 16.
- 45 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, p. 9.
- 46 Telephone interview with Gareth Collett, UNDP, 22 July 2020. UNDP reported YEMAC had cleared more than 160 IEDs in Hadramout and Shabwah governorates, mostly improvised mines, in the first half of 2020, all without incident.
- 47 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, p. 7.
- 48 Email from Chris Clark, SafeLane Global, 17 April 2019.
- 49 Information from SafeLane Global website, accessed at bit.ly/2Xcc8mp.
- 50 Email from Marie-Josée Hamel, DDG, 16 April 2020.
- 51 Email from Nick Torbert, Deputy Head of Region, Middle East, North Africa and Afghanistan, HALO Trust, 14 April 2020.
- 52 Email from Kenan Muftic, Head of Global Training Centre for MDDs/EDDs, NPA, 18 May 2020.
- 53 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, p. 15.
- 54 *Ibid.*; and email from Stephen Robinson, UNDP, 27 May 2020.
- 55 Interview with Stephen Robinson, UNDP, in Geneva, 20 July 2020.
- 56 UNDP, "Emergency Mine Action Project, Annual Progress Report 2019", 20 January 2020, p. 7.
- 57 Email from Kenan Muftic, NPA, 18 May 2020.
- 58 Information provided by mine action sector stakeholders during research in 2020.
- 59 "The martyrdom of one of Masam's heroes in the fields of human generosity", Project Masam website, 21 April 2020, at: bit.ly/2ZGrxtg.
- 60 KSrelief, "KSrelief mourns loss of life following explosion related to Masam demining project in Yemen", Statement, 21 January 2019.
- 61 Agence France-Presse, "Six deminers killed in Yemen blast", 26 April 2019.
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