

KEY DATA

ANTI-PERSONNEL (AP) MINE CONTAMINATION: HEAVY

(PRECISE EXTENT UNKNOWN)

AP MINE CLEARANCE IN 2022

NOT DISAGGREGATED

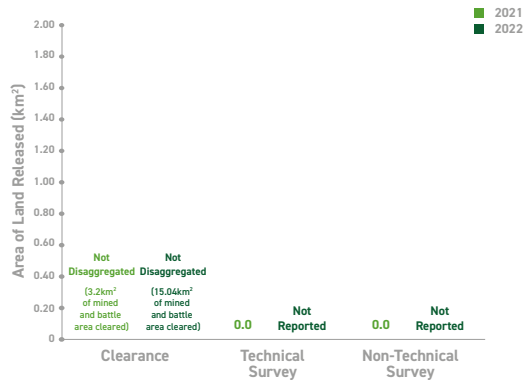
(15.04KM² OF MINED AND BATTLE AREA CLEARED IN 2022)

AP MINES DESTROYED IN 2022

NOT DISAGGREGATED

(AP MINES WERE NOT DISAGGREGATED FROM OTHER EXPLOSIVE ORDNANCE)

LAND RELEASE OUTPUT



KEY DEVELOPMENTS

In early 2023, the Minefield Clearance Bill (Amendment No. 2) was progressing through Israel's Knesset. The Bill would allow the national authority to collect fees for minefield clearance from developers planning to develop on contaminated land. The Bill also proposes to make permanent a temporary provision regulating clearance of unexploded ordnance (UXO) at the expense of developers. Israel did not disclose the extent of anti-personnel (AP) mine contamination nor provide disaggregated land release data for 2022.

RECOMMENDATIONS FOR ACTION

- Israel should accede to the Anti-Personnel Mine Ban Convention (APMBC) as a matter of priority.
- Israel should clear AP mines in areas under its jurisdiction or control as soon as possible, consonant with its obligations under international human rights law.
- Israel should report transparently on the full extent of mined area and its release, disaggregating AP mines from anti-vehicle (AV) mines and explosive remnants of war (ERW).

DEMINING CAPACITY

MANAGEMENT CAPACITY

- Israeli Mine Action Authority (INMAA)

NATIONAL OPERATORS*

- Israel Defense Forces (IDF)
- IMAG
- 4M
- Minefree
- AMAN
- QUADRO Projects & Technologies LTD

- IEOD
- GA-MAN (Quality Assurance/Quality Control (QA/QC))
- 4CI SECURITY LTD (QA/QC)
- OpMS-Open Minded Solutions Ltd (QA/QC)

INTERNATIONAL OPERATORS

- The HALO Trust (HALO)

OTHER ACTORS

- None

* As reported for 2022.¹ In January 2023, INMAA reported that only two companies in Israel could be hired to conduct mine clearance.²

UNDERSTANDING OF AP MINE CONTAMINATION

The exact extent of AP mined area in Israel is not known. Israel reported 41.58km² of confirmed mined area and a further 48.51km² of suspected mined area as at the end of 2017,³ but has not provided updated contamination data. The combined 90km² (as at end 2017) represents only the area affected by mines that is not deemed essential to Israel's security. The size of other mined areas is not made public. In January 2023, the Director of the Israeli Mine Action Authority (INMAA) reported a significantly different contamination figure in The Knesset, stating that there was the equivalent of 150km² of minefields in Israel [150,000 dunams],⁴ though it is unclear whether this figure includes mined area deemed essential for Israel's security. The total figure reported for 2017 included 18.38km² of mined area in the Jordan Valley (11.84km² of AP mined area, 6.19km² of AV mined area, and 0.35km² of mixed mined area) and in the West Bank.⁵ Since the last updated contamination data at the end of 2017 through to the end of 2022, The HALO Trust (HALO) has cleared a total of 69,320m² of AP mined area in the Jordan Valley and the West Bank. (See the *Clearing the Mines* reports on Palestine 2023 for further information).

Table 1: Mined area (at end 2017)⁶

Type of contamination	CHAs	Area (km ²)	SHAs	Area (km ²)
AP mines only	201	19.93	5	39.54
AV mines only	29	17.00	8	1.17
AP and AV mines	2	4.65	9	7.80
Totals	232	41.58	22	48.51

CHA = Confirmed hazardous area SHA = Suspected hazardous area

The INMAA and Israeli Defence Forces (IDF) have continued to contract and conduct clearance since then but have not provided comprehensive, disaggregated data on mine contamination or land release. In its Convention on Certain Conventional Weapons (CCW) Amended Protocol II Article 13 report covering 2022, Israel reiterated that the IDF had made "significant progress" in re-surveying mined areas, and in examining the possibility of area cancellation, following the completion of a fully detailed non-technical survey (NTS).⁷

The head of the INMAA told media in 2020 that INMAA estimated a total of 200km² of mined area in Israel. Of this, some 100km² are deemed essential to Israel's national security while the remaining 100km² will be cleared in order of priority. The online media source had obtained a map from the Israeli Ministry of Defence (MoD) that shows mines planted in a series of hotspots along Israel's eastern border. The minefields start from the north-eastern Israeli borders with Syria in the Golan Heights, with high concentration around the sea of Galilee (also known as the Tiberias lake).

Mined areas stretch southwards along the Jordan valley (east) all the way to the southern region of Eliat bordering Egypt.⁸ It is not clear whether the map includes the minefields considered essential to Israel's security or only the ones that can be cleared.

Israel's mine problem dates back to the Second World War. Subsequently, Israel laid significant numbers of mines along its borders, near military camps and training areas, and near civilian infrastructure. In August 2011, Israel's military reported planting new mines to reinforce minefields and other defences along its de facto border with Syria in the Golan Heights.⁹ The extent of mines laid by Syrian forces remains largely unknown although certain areas have been fenced off by the IDF. According to an online media report, however, fencing is not always properly maintained with warning signs, and civilians occasionally cross into minefields looking for edible plants.¹⁰

1 Convention on Certain Conventional Weapons (CCW) Amended Protocol II Article 13 Report (covering 2022), Form G.

2 "Approved in final readings: Temporary provision regulating clearance of unexploded ordnance at the expense of developer interested in developing land—to become permanent provision", *Knesset News*, 14 February 2023, at: <https://bit.ly/44ZKWHp>.

3 Email from Michael Heiman, formerly Director of Technology and Knowledge Management, Israeli National Mine Action Authority (INMAA), 26 May 2018.

4 "Approved for second and third readings by Foreign Affairs and Defense Committee: Israel National Mine Action Authority's power to remove unexploded ordnance to be made permanent", *Knesset News*, 30 January 2023, at: <https://bit.ly/3ACxRXG>.

5 Email from Michael Heiman, formerly INMAA, 26 May 2018.

6 Ibid.

7 CCW Amended Protocol II Article 13 Report (covering 2021), Form B.

8 "Below the surface: Israel's mine map is exposed", *N12*, 19 September 2020, at: <https://bit.ly/3xfQ9KV>.

9 "Israel army plants new mines along Syria border", *Associated Press*, 13 August 2011.

10 "New Golan mine-clearing project to begin this summer", *Jerusalem Post*, 16 March 2017, at: <http://bit.ly/2MyEKBC>.

PROJECT MANAGEMENT

A March 2011 law on minefield clearance established the INMAA to undertake a “comprehensive programme of mine clearing projects inside Israel”.¹¹ The law’s aim was “to create a normative infrastructure for the clearance of minefields that are not essential to national security, and to declare them as free from landmines with the highest degree of safety to civilians, in accordance with the international obligations of the State of Israel, and within the shortest period of time possible.”¹²

The law provides for the establishment of a professional Advisory Board, to be composed of representatives of relevant ministries and governmental and municipal authorities, as well as a representative for mine victims. The amendment to the Minefield and Unexploded Ordnance Clearance Bill 2023, proposes that representatives of the Ministries of Finance and Energy join the Advisory Board.¹³ The 2011 law calls for the formulation of annual and multi-year plans; coordination and cooperation between INMAA and the IDF; employment of private contractors in mine clearance operations; earmarking of specific government budget for such activities; and the creation of a National Minefield Clearance Fund to receive, manage, and allocate donations.¹⁴

In 2019, the Director of INMAA reported that a new regional law had given INMAA responsibility for clearing former military bases and for addressing abandoned explosive ordnance (AXO), UXO, and AV mines. Prior to this, the

INMAA had only had responsibility for addressing AP mines and mixed mined areas.¹⁵ As indicated above, in 2023, the Minefield and Unexploded Ordnance Clearance Bill (Amendment 2) proposed various changes, including allowing INMAA to collect fees from developers for clearing minefields and UXOs on land that developers plan to develop.¹⁶

INMAA was established within the MoD, with ministry staff responsible for planning mine action.¹⁷ INMAA was charged with clearance operations and release of land intended for civilian use.¹⁸ It assumed responsibility to: establish a national policy for mine clearance, taking into consideration military procedures and international demining standards; liaise with operators to carry out demining; oversee clearance activities and contact relevant military commanders for the opening of closed military zones; coordinate activities with the IDF and other government authorities; execute public relations activities to increase awareness of existing minefields; and prepare annual and long-term demining plans.¹⁹

In 2017, the annual mine action budget for Israel was NIS41.7 million (approx. US\$11.5 million), of which NIS27 million was from the INMAA’s budget and the remaining NIS14.7 million from additional external funding by various infrastructure development companies and state authorities.²⁰ In 2023, the Director of INMAA indicated its budget of NIS27 million had remained constant “over the years” and was not linked to inflation.²¹

ENVIRONMENTAL POLICES AND ACTION

The INMAA website indicates that Israel has a standard operating procedure (SOP) on environmental protection and preservation of nature and landscape values.²² The website has one page dedicated to “Preserving the environment” and another on how operations are conducted. The latter indicates that when a project is identified for clearance, research includes environmental factors and environmental impact and involves various authorities and stakeholders including the Nature Reserves Authority, agricultural coordinators, and the regional council.²³

GENDER AND DIVERSITY

The extent to which gender and diversity are mainstreamed in Israel’s mine action programme is not known. Israel has said mine risk education (MRE) material is produced in both Hebrew and Arabic, and warning signs on the perimeters of minefields are also in English.²⁴

11 Minefield Clearance Law 5771-2011 of March 2011, unofficial translation at: <http://bit.ly/2GDOQgJ>; Amended Protocol II Article 13 Report (covering 2010), Form A. Form A refers to details provided in Form D, but the information in Form D has been deleted.

12 Minefield Clearance Law 2011 (MCL 5771-2011).

13 “Approved in final readings: Temporary provision regulating clearance of unexploded ordnance at the expense of developer interested in developing land—to become permanent provision”, *Knesset News*, 14 February 2023.

14 CCW Amended Protocol II Article 13 Report submitted in 2022 (covering 2022), Form D.

15 Interview with Marcel Aviv, Director, INMAA, in Geneva, 7 February 2019.

16 “Approved for second and third readings by Foreign Affairs and Defense Committee: Israel National Mine Action Authority’s power to remove unexploded ordnance to be made permanent”, *Knesset News*, 30 January 2023; and “Approved in final readings: Temporary provision regulating clearance of unexploded ordnance at the expense of developer interested in developing land—to become permanent provision”, *Knesset News*, 14 February 2023.

17 Email from Michael Heiman, formerly INMAA, 26 May 2018.

18 Amended Protocol II Article 13 Report (covering 2020), Form B.

19 IDF website, “Israel National Mine Action Authority”, undated but accessed 17 August 2022 at: <https://bit.ly/3AmMLAT>.

20 Email from Michael Heiman, formerly INMAA, 26 May 2018.

21 “Approved for second and third readings by Foreign Affairs and Defense Committee: Israel National Mine Action Authority’s power to remove unexploded ordnance to be made permanent”, *Knesset News*, 30 January 2023.

22 Standard 06.50 (Version 05/2020) listed on INMAA’s website (Hebrew text), accessed on 28 April 2023 at: <https://bit.ly/3dDNSEf>.

23 INMAA’s website (Hebrew text), accessed on 18 August 2023 at: <https://bit.ly/44h6zT9>.

24 Amended Protocol II Article 13 Report (covering 2022), Form A.

INFORMATION MANAGEMENT

According to Israel, in 2022, the IDF's Engineering Corps continued to promote improved minefield Global Positioning System (GPS) recording and geographic information system (GIS) capacity to build an "accurate archive of manually-emplaced minefields".²⁵ Moreover, the IDF is reported to provide information to local authorities and to the general population on land rights and use, and responds to requests for updated information on minefields, "as appropriate".²⁶ The Engineering Corps maintains a set of detailed regulations and instructions for recording minefields and mined areas.²⁷ In addition, INMAA manages a "minefield information bank" that is open for public queries concerning demining plans and programmes, and indicates measures taken to enhance public awareness of safety and security to minimise mine-related risks.²⁸

In 2022, the IDF continued its programme to preserve the history of the minefields, including in digital records, while the Israeli Mapping Centre (IMC) produces "commercially available" maps with minefields said to be clearly marked.²⁹

PLANNING AND TASKING

INMAA is "tasked with forming a national demining plan, which will be consistent with Israel's international obligations and based on IDF's demining procedures and instructions, as compatible as possible with International Mine Action Standards".³⁰ According to Israel, INMAA defines clearance policies, sets the national priorities, creates a work plan for mine clearance, and implements these in coordination with the relevant governmental ministries, the IDF, and local authorities.³¹

INMAA approves annual and perennial mine clearance plans which are executed by "civilian local operators".³² INMAA's multi-year clearance plan for 2017–20 focused on technical survey (TS) and clearance in the Golan Heights in the spring/summer/autumn, and in the Jordan Valley and Arava Plain in the winter.³³ Information on the priorities of the updated mine clearance plan were not made available. According to its website, however, part of INMAA's plan since 2020 has been to conduct mechanical and manual clearance of nearly 0.17km² across three minefields in the Golan Heights, and of 0.19km² in Naama Bell in the Jordan valley.³⁴ According to online media reports, as at March 2021, clearance in Naama Bell area was reported to be underway,³⁵ and as at February 2022, clearance was nearing completion at least in one of the sites in the Golan Heights (Mitzpe Gadot)³⁶ although the INMAA website still shows the sites as in planning.³⁷

Clearance tasks are assigned according to a classification formula laid down by INMAA. The criteria used for the formula are largely based on the risk level and development potential of the affected areas.³⁸ INMAA has in the past (in the four years to 2016) studied the social and economic impacts of land released, as well as on the potential impact for future clearance sites,³⁹ but it is unclear to what extent this continues.

25 Ibid.

26 Ibid., Forms A and B.

27 Ibid., Form A.

28 Ibid., Forms A and B.

29 Ibid., Form A.

30 Ibid., Form D.

31 Ibid., Form B.

32 Ibid.

33 Email from Michael Heiman, formerly INMAA, 26 May 2018.

34 INMAA website, accessed on 6 July 2021.

35 "Watch: Minefield clearance near Jericho Israel today", *The Limited Times*, 30 March 2021, at: <https://bit.ly/3wu6Wc9>.

36 "Documentation: Ammunition discovered in an old Syrian bunker in the Golan Heights was destroyed Israel today", *The Limited Times*, 1 February 2022, at: <https://bit.ly/3PX13hC>.

37 INMAA website (Hebrew text), accessed on 31 July 2023.

38 Email from Michael Heiman, INMAA, 23 July 2017.

39 Email from Michael Heiman, INMAA, 19 September 2016.

LAND RELEASE SYSTEM

National mine action standards, which concern rules and regulations covering clearance methods, quality management, legislation, and insurance, are available on the INMAA website and updated “on occasion”.⁴⁰ There are also IDF regulations and orders concerning marking, fencing, and monitoring, as well as demining and disposing of mines, booby-traps, and other devices.⁴¹ IDF’s instructions and SOPs are reported to be regularly reviewed.⁴²

OPERATORS AND OPERATIONAL TOOLS

Commercial companies are contracted to conduct clearance as well as quality assurance (QA) and quality control (QC). In 2017, 106 demining personnel and 36 machines were deployed for clearance operations.⁴³ For 2022, INMAA listed seven approved mine clearance companies and three QA/QC companies in its CCW Amended Protocol II Article 13 Report.⁴⁴ No further information was disclosed for 2022, although in January 2023, INMAA reported in the Knesset that only two companies in Israel could be hired to undertake mine clearance.⁴⁵

Israel has reported that the IDF conducts mine clearance according to their own mine action plans “that are executed by their military methods and techniques”. They have an annual programme that includes demining, monitoring, and maintenance of mined area protection.⁴⁶ During the winter, the IDF give special attention to minefields that are close to farms, residential areas, or hiker routes, as mines may be carried into these areas by floods.⁴⁷ In 2022, Israel again reported that the IDF conducted hundreds of inspections of the fencing and marking of minefields, and that it had installed additional signs in the north of the country.⁴⁸

HALO works under the auspices of both INMAA and the Palestine Mine Action Centre (PMAC) in the West Bank (see the *Clearing the Mines* report on Palestine for further information). Every mine clearance project in Israel has an INMAA supervisor, a QA/QC contractor, and a clearance operator.

Israel uses several types of machines in its mine clearance operations for ground preparation, survey, and clearance. They are said to include, as and where appropriate, screening and crushing systems, bucket loaders, excavators, sifters, and flails/tillers. Israel has reported that all mine clearance machines are tested and approved by INMAA during the initial preparation period of an operation, and that it has a system of quality management and results based management for its mechanical operations.⁴⁹

A pilot project in 2017 using mine detection dogs (MDDs)⁵⁰ had concluded that dogs would not be a valuable tool.⁵¹ However, after investigating and conducting further research into animal detection and behaviour, INMAA planned to conduct further trials.⁵²

LAND RELEASE OUTPUTS AND PROGRESS TOWARDS COMPLETION

LAND RELEASE OUTPUTS IN 2022

The precise extent of release of AP mined area has not been reported for 2022, and Israel has not reported any disaggregated data to Mine Action Review on the release of AP mined area since 2017. Israel does not disaggregate between clearance of mined area and clearance of battle area in its CCW Amended Protocol II reporting. As previously mentioned, in its Amended Protocol II Article 13 Report for 2022, Israel reiterated that the IDF had made “significant progress” in re-surveying mined areas, and assessing the possibility of area cancellation, following completion of NTS.⁵³ Israel stated that in 2022, the IDF cleared 35,000m² of land destroying approximately 400 mines and ERW,⁵⁴ in comparison with 564,000m² of land cleared in 2021, when a combined total of 140 mines and ERW were destroyed.⁵⁵ In addition, Israel indicated that the INMAA cleared

40 Amended Protocol II Article 13 Report (covering 2022), Form B; and INMAA’s website (Hebrew text), accessed on 24 July 2023.

41 Amended Protocol II Article 13 Report (covering 2022), Form D.

42 Ibid., Form A.

43 Email from Michael Heiman, formerly of INMAA, 26 May 2018.

44 Amended Protocol II Article 13 Report (covering 2022), Form G.

45 “Approved in final readings: Temporary provision regulating clearance of unexploded ordnance at the expense of developer interested in developing land—to become permanent provision”, *Knesset News*, 14 February 2023.

46 Email from Eran Yuwan, Ministry of Foreign Affairs, 29 April 2014; and Amended Protocol II Article 13 Report (covering 2019), Form B.

47 Amended Protocol II Article 13 Report (covering 2022), Form B.

48 Ibid., Forms A, B, and C.

49 Ibid., Form C.

50 Ibid.

51 Email from Michael Heiman, formerly INMAA, 26 May 2018.

52 Interview with Marcel Aviv, INMAA, Geneva, 7 February 2019.

53 Amended Protocol II Article 13 Report (covering 2022), Form B.

54 Ibid.

55 Amended Protocol II Article 13 Report (covering 2021), Form B.

approximately 15km² of land and destroyed 2,917 mines and ERW in 2022,⁵⁶ a significant increase from the 2.65km² of land cleared and 13,370 mines and ERW reported destroyed in 2021.⁵⁷

HALO resumed clearance of minefields in Area C of the West Bank in 2022, working under the auspices of both INMAA and PMAC, after this was paused in 2021 due to a lack of funding.⁵⁸ HALO completed clearance at a minefield site in Tulkarem (Nur a-Shams) in 2022,⁵⁹ and two minefields in Jenin (Yabad and Qabatiya) by the start of June 2023, thus completing Phase 1 of HALO's operations in the West Bank. This concerned in total nine high-priority, Jordanian-laid minefields (see the *Clearing the Mines 2023* report on Palestine for further information).⁶⁰

PROGRESS TOWARDS COMPLETION

It is likely to take many decades to clear remaining AP mine contamination in Israel, in areas deemed not essential to Israel's security alone. The Director of INMAA acknowledged the extent of the challenge in January 2023, informing the Knesset's Foreign Affairs and Defense Committee that, "There are 150,000 dunams [150km²] of minefields in Israel, and the army has already given up on [sic] 100,000 [100km²]. With our existing resources, it will take us at least 100 years to clear all these areas. With such budgets, companies from abroad won't come, and additional Israeli companies will not be opened. At present there are only two companies in Israel that can be hired, and that also affects the rate of progress."⁶¹

56 Amended Protocol II Article 13 Report (covering 2022), Form B

57 Amended Protocol II Article 13 Report (covering 2021), Form B.

58 Emails from Ronen Shimoni, HALO, 17 May 2022 and 26 March 2023.

59 Email from Ronen Shimoni, HALO, 26 March 2023.

60 Emails from Ronen Shimoni, HALO, 27 July 2023 and 2 August 2023.

61 "Approved in final readings: Temporary provision regulating clearance of unexploded ordnance at the expense of developer interested in developing land—to become permanent provision", *Knesset News*, 14 February 2023.