

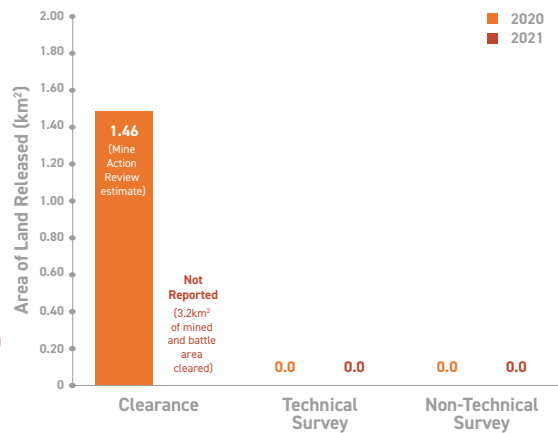
## KEY DATA

### ANTI-PERSONNEL (AP) MINE CONTAMINATION: HEAVY (PRECISE EXTENT UNKNOWN)

AP MINE CLEARANCE IN 2021  
**NOT REPORTED**  
(3.2KM<sup>2</sup> OF MINED AND BATTLE AREA CLEARED)

AP MINES DESTROYED IN 2021  
**NOT REPORTED**  
(ANTI-PERSONNEL MINES WERE NOT DISAGGREGATED FROM OTHER ORDNANCE)

## LAND RELEASE OUTPUT



## RECOMMENDATIONS FOR ACTION

- Israel should accede to the Anti-Personnel Mine Ban Convention (APMBC) as a matter of priority.
- Israel should clear anti-personnel 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 anti-personnel mined area and their release, disaggregating anti-personnel mines from anti-vehicle mines and explosive remnants of war (ERW).

## DEMINEING 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

### OTHER ACTORS

- None

## UNDERSTANDING OF AP MINE CONTAMINATION

The exact extent of anti-personnel mine contamination in Israel is not known. Israel reported 41.58km<sup>2</sup> of confirmed mined area and a further 48.51km<sup>2</sup> of suspected mined area, as at the end of 2017,<sup>1</sup> but has not provided updated contamination data since. The combined 90km<sup>2</sup> (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.

The total figure reported at the end of 2017 included 18.38km<sup>2</sup> of mined area in the Jordan Valley (11.84km<sup>2</sup> of anti-personnel mined area, 6.19km<sup>2</sup> of anti-vehicle mined area, and 0.35km<sup>2</sup> of mixed mined area) and in the West Bank.<sup>2</sup> Since the last updated contamination data at the end of 2017 through to the end of 2021, The HALO Trust cleared a total of 37,466m<sup>2</sup> of anti-personnel mined area in the Jordan Valley and the West Bank, according to data reported to Mine Action Review. (See the *Clearing the Mines* reports on Palestine for 2021 and 2022 for further information).

**Table 1: Mined area (at end 2017)<sup>3</sup>**

Type of contamination	CHAs	Area (km <sup>2</sup> )	SHAs	Area (km <sup>2</sup> )
Anti-personnel mines only	201	19.93	5	39.54
Anti-vehicle mines only	29	17.00	8	1.17
Anti-personnel and anti-vehicle mines	2	4.65	9	7.80
<b>Totals</b>	<b>232</b>	<b>41.58</b>	<b>22</b>	<b>48.51</b>

CHA = Confirmed hazardous area SHA = Suspected hazardous area

The Israeli Mine Action Authority (INMAA) and Israeli Defence Forces (IDF) have continued to contract and conduct clearance operations since this time but have not provided comprehensive, disaggregated data on mine contamination or land release. In its Convention on Certain Conventional Weapons (CCW) Amended Protocol II report covering 2021, Israel reported that the IDF had made significant progress in re-surveying mine affected areas, and in examining the possibility of area cancellation, following the completion of a fully detailed non-technical survey.<sup>4</sup>

The head of the INMAA told media in 2020 that INMAA estimates a total of 200km<sup>2</sup> of mined areas in Israel. Of this, some 100km<sup>2</sup> are deemed essential to Israel's national security while the remaining 100km<sup>2</sup> 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.<sup>5</sup> 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.<sup>6</sup> There 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.<sup>7</sup>

## PROGRAMME MANAGEMENT

A March 2011 law on minefield clearance established the INMAA to undertake a "comprehensive programme of mine clearing projects inside Israel".<sup>8</sup> 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."<sup>9</sup>

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

2 Ibid.

3 Ibid.

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

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

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

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

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

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

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. It 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 which will receive, manage, and allocate donations.<sup>10</sup>

In February 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), unexploded ordnance (UXO), and anti-vehicle mines. Prior to this, the INMAA had only had responsibility for addressing anti-personnel mines and mixed mined areas.<sup>11</sup>

INMAA was established within the MoD, with ministry staff responsible for planning mine action.<sup>12</sup> INMAA is in charge of clearance operations and release of land intended for

civilian use.<sup>13</sup> It assumes 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 activities; oversee mine 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.<sup>14</sup>

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.<sup>15</sup> The size of INMAA's budget has not been made public since. The Geneva International Centre of Humanitarian Demining (GICHD) supported INMAA's technical activities in 2020<sup>16</sup> but not in 2021.<sup>17</sup>

## ENVIRONMENTAL POLICIES AND ACTION

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The INMAA website indicates that Israel has a standard operating procedure (SOP) on environmental protection and preservation of nature and landscapes.<sup>18</sup> The website has one page dedicated to "Preserving the environment" and another on how operations are conducted indicates that when a project is identified for clearance, research includes environment factors and environmental impact and involves various authorities and stakeholders including the Nature Reserves Authority, agricultural coordinators, and the regional council.<sup>19</sup>

## GENDER AND DIVERSITY

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The extent to which gender and diversity are mainstreamed in Israel's mine action programme is not known. Israel has stated that its mine risk education (MRE) material are all produced in both Hebrew and Arabic.<sup>20</sup>

## INFORMATION MANAGEMENT

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According to Israel, in 2021, the IDF's Engineering Corps continued to promote improved minefield GPS recording and Geographic Information System (GIS) capacity to build an "accurate archive of manually-emplaced minefields". The Engineering Corps maintains a set of detailed regulations and instructions for recording minefields and mined areas.<sup>21</sup> 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.<sup>22</sup> In 2021, 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.<sup>23</sup>

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10 CCW Amended Protocol II Article 13 Report submitted in 2022 (covering 2021), Form D.

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

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

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

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

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

16 CCW Amended Protocol II Article 13 Report (covering 2020), Form E.

17 GICHD website, accessed on 21 July 2022 at: <https://bit.ly/3Pr9P7A>.

18 Standard 03.20 (Version 05/2020) listed on Israel's National Mine Action Authority (INMAA's) website (Hebrew text), accessed on 17 August 2022 at: <https://bit.ly/3dDNSEf>.

19 INMAA's website (Hebrew text), accessed on 17 August 2022 at: <https://bit.ly/3dpPL7t>.

20 CCW Amended Protocol II Article 13 Report (covering 2021), Form A.

21 Ibid., Form B.

22 Ibid., Forms A and B.

23 Ibid., Form A.

## 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".<sup>24</sup> According to Israel, INMAA defines clearance policies, sets the national priorities, and implements them in coordination with the relevant governmental ministries, the IDF, and local authorities.<sup>25</sup>

INMAA approves annual and perennial mine clearance plans which are executed by "civilian local operators".<sup>26</sup> INMAA's multi-year clearance plan for 2017–20 focused on technical survey and clearance in the Golan Heights in the spring/summer/autumn, and in the Jordan Valley and Arava Plain in the winter.<sup>27</sup> Information on the priorities of the updated mine

clearance plan were not made available but INMAA's website indicates that, since 2020, four clearance tasks have been in the planning stages for approximately 0.17km<sup>2</sup> across three minefields in the Golan Heights and for another 0.19km<sup>2</sup> in Naama Bell in the Jordan valley.<sup>28</sup>

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.<sup>29</sup> 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,<sup>30</sup> but it is unclear to what extent this continues.

## 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".<sup>31</sup> 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.<sup>32</sup> IDF's instructions and SOPs are reported to be regularly reviewed.<sup>33</sup>

### 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.<sup>34</sup> For 2021, INMAA listed seven approved mine clearance companies and three QA/QC companies in its CCW Amended Protocol II Article 13 Report.<sup>35</sup>

In addition, 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.<sup>36</sup> 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.<sup>37</sup> In 2021, Israel reported that the IDF conducted hundreds of inspections of the fencing and marking of minefields.<sup>38</sup>

The HALO Trust 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. All mine clearance machines are tested and approved by INMAA during the initial preparation period of an operation.<sup>39</sup> Some of these operations are conducted by Israel directly, while others are performed by contractors.<sup>40</sup>

24 Ibid., Form D.

25 Ibid., Form B.

26 Ibid.

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

28 INMAA's website (Hebrew text), accessed 28 July 2022 at: <https://bit.ly/3B7y1aM>.

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

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

31 CCW Amended Protocol II Article 13 Report (covering 2020), Form B; and INMAA's website, accessed on 6 July 2021, (Hebrew text), at: <https://bit.ly/3ysdUj3j>.

32 CCW Amended Protocol II Article 13 Report (covering 2021), Form D.

33 Ibid., Form A.

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

35 CCW Amended Protocol II Article 13 Report (covering 2021), Form G.

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

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

38 Ibid.

39 Ibid., Form C.

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

A pilot project using mine detection dogs (MDDs) in 2017<sup>41</sup> had concluded that dogs would not be a valuable tool.<sup>42</sup> However, after investigating and conducting further research into animal detection and behaviour, INMAA planned to conduct further trials.<sup>43</sup>

According to its website, part of INMAA's plan since 2020 has been to conduct mechanical and manual clearance of nearly 0.17km<sup>2</sup> across three minefields in the Golan Heights, and of 0.19km<sup>2</sup> in Naama Bell in the Jordan valley.<sup>44</sup> According to online media reports, as at March 2021, clearance in Naama Bell area was reported to be underway,<sup>45</sup> and as at February 2022, clearance was nearing completion at least in one of the sites in the Golan Heights (Mitzpe Gadot)<sup>46</sup> although the INMAA website still shows both sites as in planning.<sup>47</sup>

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## LAND RELEASE OUTPUTS AND PROGRESS TOWARDS COMPLETION

### LAND RELEASE OUTPUTS IN 2021

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The precise extent of release of anti-personnel mined area has not been reported for 2021. Israel does not disaggregate in its CCW Amended Protocol II reporting between release of mined area and clearance of battle area. Israel reported that the IDF had made "significant progress" in re-surveying mined areas in 2021, as well as in assessing the possibility of area cancellation, following completion of non-technical survey.<sup>48</sup> No details were provided.

In reporting under CCW Amended Protocol II, Israel stated that, in 2021, INMAA cleared approximately 2.65km<sup>2</sup> of land, destroying 13,370 mines and ERW,<sup>49</sup> an increase from the 1.28km<sup>2</sup> cleared in 2020, when 1,200 mines and items of ERW were reported destroyed. In addition, the IDF Engineering Corps cleared 0.56km<sup>2</sup> in 2021, destroying 140 mines and ERW,<sup>50</sup> an increase on the 0.18km<sup>2</sup> reported cleared in 2020 but a decrease on the 243 mines and ERW destroyed in the process.<sup>51</sup> Again, the available data are not disaggregated by type of mine. There was no reported clearance in the West Bank by The HALO Trust in 2021, as funding was not available.

### PROGRESS TOWARDS COMPLETION

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It is likely to take many decades to clear remaining anti-personnel mine contamination in Israel, even only in areas deemed not essential to Israel's security.

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41 Ibid.

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

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

44 Israel INMAA website, accessed on 6 July 2021.

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

46 "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>.

47 Israel INMAA website (Hebrew text), accessed on 28 July 2022 at: <https://bit.ly/3B7y1aM>.

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

49 Ibid.

50 Ibid.

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