# GERMANY

MINE ACTION REVIEW

CLEARING CLUSTER MUNITION REMNANTS 2024

**ARTICLE 4 DEADLINE: 1 AUGUST 2025**
EXTENSION REQUESTED TO 1 AUGUST 2030

## KEY DATA

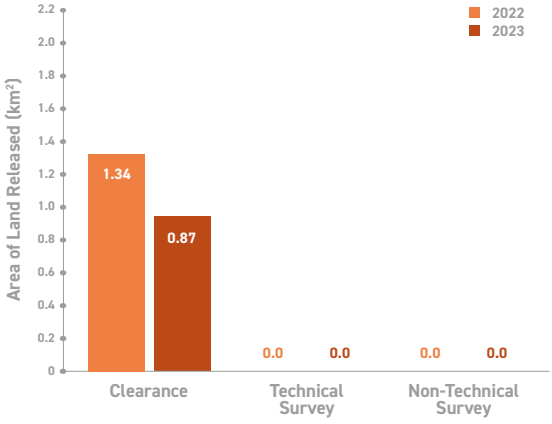
**CLUSTER MUNITION CONTAMINATION:** LIGHT

NATIONAL ESTIMATE
**4.4KM²**

SUBMUNITION CLEARANCE IN 2023
**0.87KM²**

SUBMUNITIONS DESTROYED IN 2023
**483**

### LAND RELEASE OUTPUT




## KEY DEVELOPMENTS

In 2023, Germany's clearance output decreased by a third compared to the previous year, primarily due to a reduction in the number of clearance personnel and the high levels of other unexploded ordnance (UXO) found. For the past five years, Germany has struggled to meet its clearance targets and is not on track to meet its current Article 4 deadline under the Convention on Cluster Munitions (CCM). Consequently, in 2024, Germany requested an extension to 2030. If Germany can sustain its current clearance capacity and ensure adequate areas are available for clearance, it should be able to achieve the new deadline being sought.

## RECOMMENDATIONS FOR ACTION

- **Germany should regularly update its CCM Article 4 planning based on annual outputs and provide updates on the progress of clearance at Wittstock in its Article 7 transparency reports.**
- **Germany should ensure that its second extension period should be the last.**

## ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

| Criterion | Score (2023) | Score (2022) | Performance Commentary |
|---|---|---|---|
| **UNDERSTANDING OF CMR CONTAMINATION** (20% of overall score) | 8 | 8 | Germany has a good understanding of the extent of its sole CMR-contaminated area in a former Soviet military training area at Wittstock in the east of the country. Due to the lack of detailed data on the use of weapons at the site and the significant amount of other explosive remnants of war (ERW), Germany has not been able to determine the exact extent and density of CMR. |

| Criterion | Score (2023) | Score (2022) | Performance Commentary |
|---|---|---|---|
| **NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT** (10% of overall score) | 8 | 8 | There is strong national ownership and commitment to release the sole CMR-contaminated area. Roles and responsibilities for clearance are clear, coherent, and entirely funded by the federal government, albeit at high cost. |
| **GENDER AND DIVERSITY** (10% of overall score) | 7 | 7 | There is equal access to employment for qualified women and men for explosive ordnance disposal (EOD), including of CMR, although women make up only a small proportion of the sector. At the end of 2023, 15% of all clearance personnel were female, a similar proportion to 2022. |
| **ENVIRONMENTAL POLICIES AND ACTION*** (10% of overall score) | 7 | Not Scored | Germany does not have a stand-alone environmental management policy or national mine action standard on the environment. However, strict environmental procedures are in place as the site is located within a special area of conservation and is afforded protections under German and European law. There are specific mitigation measures in place to preserve priority natural habitat types and limit the amount of controlled burning that can take place. |
| **INFORMATION MANAGEMENT AND REPORTING** (10% of overall score) | 8 | 8 | Germany submits timely and accurate Article 7 reports, and for the first time in 2023 included annual clearance figures as well as cumulative output. Once again, however, Germany still included only cumulative figures for the number of submunitions destroyed. |
| **PLANNING AND TASKING** (10% of overall score) | 7 | 7 | While Germany does not have a national mine action strategy, it has submitted a new completion plan to 2030 with annual targets for clearance. Germany also elaborates annual work plans, which it adjusts according to capacity and output. |
| **LAND RELEASE SYSTEM**** (10% of overall score) | 8 | 8 | Germany's clearance capacity decreased in 2023 following the termination of one of its three contractors and the very high levels of other UXO contamination found. Demining at Wittstock is primarily conducted manually due to the high levels of other ERW at the site, which restricts the use of technical survey and full application of mechanical assets. |
| **LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE** (20% of overall score) | 6 | 6 | In 2023, Germany cleared 0.87km$^2$ of cluster munition-contaminated area, two-thirds that of the previous year. It will not meet its first extended Article 4 deadline and has thus submitted a second request for an extension to 1 August 2030. If Germany can maintain its clearance capacity at current levels and provided there are enough areas to be cleared given the restrictions on controlled burning, it could meet its new deadline. |
| **Average Score** | **7.3** | **7.4** | **Overall Programme Performance: GOOD** |

* New criterion introduced in 2024 to assess performance.
** The weighting of this criterion was previously 20% of overall performance score, but is now given a 10% weighting.

## CLUSTER MUNITION SURVEY AND CLEARANCE CAPACITY

### MANAGEMENT

- The Wittstock site is administrated and project managed by the Federal Forestry Agency as a subdivision of the Institute for Federal Real Estate (BImA), with support from the Central Office of the Federal Government for UXO Clearance and a consulting engineer.

### NATIONAL OPERATORS

- Commercial UXO clearance contractors: Röhll Munitionsbergung GmbH (Brandenburg (Havel)); Schollenberger Kampfmittelbergung GmbH (Celle); and SafeLane Global GmbH (Ludwigsfelde).
- On-site project management/clearance supervision company: IB Winkelmann.
- Destruction of CMR and other ordnance is the ultimate responsibility of the Brandenburg state explosive ordnance disposal (EOD) agency: KMBD.

### INTERNATIONAL OPERATORS

- None

### OTHER ACTORS

- None

## UNDERSTANDING OF CMR CONTAMINATION

As at the end of 2023, Germany reported 4.41km$^2$ of remaining cluster munition-contaminated area at a former Soviet military training area at Wittstock, Brandenburg, in former East Germany.[1] This is a reduction from the 5.28km$^2$ reported for the end of 2022,[2] the result of clearance in 2023.

Cluster munition remnants (CMR) were discovered "by chance" at Wittstock and declared at the CCM intersessional meetings in June 2011.[3] From 2011 to early 2014, suspected CMR contamination was reported to total 4km$^2$.[4] In August 2014, however, Germany reported that the total suspected hazardous area (SHA) was actually 11km$^2$.[5] The increased estimate was ascribed to discovery of submunitions during non-technical survey (NTS) across a wider area than previously reported.[6] According to Germany, the dense vegetation cover and the special hazards posed by CMR and other explosive ordnance precluded the conduct of technical survey over the SHA.[7] A wide range of Soviet-era submunitions have been found at the site: AO-1 SCh, AO-1 M, AO-2.5, AO-2.5 RTM, AO-10 SCh, ShOAB-0.5, PTAB-1, PTAB-1 M, PTAB-2.5 M, PTAB-2.5 TG, PTAB-10.5, ZAB 1-E, ZAB 2.5M, ZAB 2.5 S, and ZAB 2.5.[8]

The entire Wittstock site, which extends over 120km$^2$, is heavily contaminated with a range of unexploded ordnance (UXO) in varying spatial distribution and overlapping contamination as a result of use of the site for military training purposes in 1952–93.[9] CMR contamination is found in the area of a mock airfield within the site. This area was used by the air force for bombing practice and by the army for artillery firing exercises, as well as for general military exercises and training. Use involved a wide range of munitions over a period of four decades. Only general information on historical use of cluster munitions at the site is available and the degree of contamination from unexploded submunitions and other UXO is not known for a large part of the hazardous area.[10]

In early October 2011, ownership of Wittstock was transferred from the military to the federal government authority in charge of real estate, Institute for Federal Real Estate (BImA). BImA implemented a risk education programme that included marking the perimeter and preventing civilian access to the area, based on a "danger prevention plan".[11] Persistent delay in initiating clearance of CMR at Wittstock until March 2017[12] was ascribed to extensive preliminary work needed to prepare the area for CMR clearance.

Due to contamination from large items of UXO, fire-breaks were created using an unmanned, remote-controlled caterpillar by an explosive ordnance disposal (EOD) contractor in 2016.[13] This was completed that year with the exception of a small, forested area on the eastern edge of the SHA.[14] The prescribed burning of the first sections of the SHA started in 2017 and continues periodically to prepare land for clearance. It requires special meteorological conditions to keep the fire under control, and, as such, prescribed burning can only take place on a few days each year.[15]

## NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT

Germany has full national ownership of its land release efforts. The Wittstock site is administrated and project managed by the Federal Forestry Agency as a subdivision of the BImA. The BImA is wholly owned by the federal government.[16] The Federal Forestry Agency's responsibilities include project coordination and control, risk management, and budget planning. Support is provided by the Central Office of the Federal Government for UXO Clearance and a consulting engineer.[17] Commercial UXO clearance operators are contracted and managed by the local branch of the Federal Forestry Agency, Bundesforstbetrieb West Brandenburg.[18] The Regulatory Agency of the County of Ostprignitz-Ruppin is responsible for public security under the police law of the federal state of Brandenburg.[19]

1 CCM Article 7 Report (covering 2023), Form F.
2 Article 7 Report (covering 2022), Form F; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 25 May 2023.
3 Statement of Germany, Anti-Personnel Mine Ban Convention (APMBC) intersessional meetings (Standing Committee on Mine Action), Geneva, 21 June 2011; and Statement of Germany, CCM intersessional meetings (Clearance and Risk Reduction Session), Geneva, 28 June 2011.
4 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 7 May 2018; Statement of Germany, CCM Third Meeting of States Parties, Oslo, 13 September 2012; and Article 7 Reports (covering 2012 and 2013), Form F.
5 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 4 August 2014.
6 Statement of Germany, First CCM Review Conference, Dubrovnik, 7 September 2015.
7 CCM Article 4 deadline Extension Request, 2019, p. 9.
8 Article 7 Report (covering 2021), Form F.
9 Emails from official on the Desk for Conventional Arms Control, Federal Foreign Office, 7 May and 12 July 2018; 2019 Article 4 deadline Extension Request, p. 11; Statements of Germany, First CCM Review Conference, Dubrovnik, 7 September 2015; CCM Eighth Meeting of States Parties, Geneva, 3–5 September 2018; and Article 7 Report (covering 2021), Form F.
10 2019 Article 4 deadline Extension Request, p. 9.
11 Statement of Germany, APMBC Intersessional meetings, Geneva, 23 May 2012; and CCM Article 7 Report (covering 2011), Form G.
12 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, at: http://bit.ly/2DnYvGw, p. 5.
13 2019 Article 4 deadline Extension Request, p. 19; email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 19 April 2017; and Article 7 Report (covering 2016), Form F.
14 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 19 April 2017; and Article 7 Report (covering 2016), Form F.
15 2019 Article 4 deadline Extension Request, p. 22.
16 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 5.
17 Ibid.
18 Ibid.
19 Ibid., p. 6.

In Germany, clearance and disposal of UXO is a security task under the control of the police and administrative legislation and is therefore the responsibility of the respective federal states. Almost all federal states have set up a corresponding state agency for EOD for these tasks. In Brandenburg, this is the KMBD (an abbreviation for, in English, the Brandenburg state war material disposal service), which is part of the Brandenburg police. Under German legislation, the federal government is not allowed to maintain an agency for EOD.[20] Contracting foreign companies for CMR clearance in Wittstock is also not possible under German law.[21] SafeLane Global, an international commercial clearance contractor, has been registered and operational in Germany since 2018 and was therefore eligible to bid for the tender.[22]

All CMR clearance costs are paid for by the federal BImA and national funding to complete CMR clearance has been fully secured.[23] CMR clearance costs have increased substantially from just over €1.6 million in 2017 to €32.1 million in 2022 and down to €29.6 million in 2023.[24] In its second Article 4 deadline extension request, Germany forecasts that average annual spending will be around €30 million, meaning that €150 million will be required in total for 2024 to 2028 with the spend in 2029 estimated to be up to €20 million. This differs considerably from the estimates made for the 2019 extension request because the projected duration of the clearance operation is significantly longer; costs in general have risen significantly because of inflation and personnel costs; and the need to employ more technological interventions.[25]

## GENDER AND DIVERSITY

Although there is equal access to employment for qualified women and men for EOD clearance in Germany, women only make up a small proportion of the sector, especially in terms of the number of qualified female EOD technicians with a licence for commercial EOD.[26] In 2023, as Table 1 illustrates, the proportion of women in operational roles was between 11% and 14%, while IB Winkelmann, the on-site project management/clearance supervision company had 33% female staff.[27]

**Table 1: Gender composition of operators in 2023[28]**

| Operator | Total staff | Women staff | Total managerial or supervisory staff | Women in managerial or supervisory positions | Total operational staff | Women in operational positions |
|---|---|---|---|---|---|---|
| Röhll Munitionsbergung GmbH (Brandenburg/ Havel) | 87 | 12 (14%) | 6 | 1 (17%) | 81 | 11 (14%) |
| Schollenberger Kampfmittelbergung GmbH (Celle) | 76 | 10 (13%) | 6 | 2 (33%) | 70 | 8 (11%) |
| IB Winkelmann | 6 | 2 (33%) | 6 | 2 (33%) | 0 | 0 |
| **Totals** | **169** | **24 (14%)** | **18** | **5 (28%)** | **151** | **19 (13%)** |

## ENVIRONMENTAL POLICIES AND ACTION

The clearance site is located within a special area of conservation in the Kyritz-Ruppiner-Heide, the largest contiguous area of heather-rich habitat in Germany managed by BImA as part of the Europa NATURA 2000 site, under the European Union (EU) Habitats Directive.[29] Germany does not have a stand-alone environmental management policy or national mine action standard (NMAS) on the environment in place. However, environmental considerations are considered in the federal "Guidelines for the Clearance of Explosive Ordnance". At Wittstock, close coordination is reported to have been established with relevant and responsible authorities including conservation authorities with respect to environmental aspects during planning and execution of clearance work, to assure that negative effects are avoided.

20 2019 Article 4 deadline Extension Request, p. 12.
21 Ibid., p. 34.
22 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 24 June 2022.
23 2024 Article 4 deadline Extension Request, p. 58.
24 Article 7 Report (covering 2023), Form I; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 25 May 2023.
25 2024 Article 4 deadline Extension Request, p. 58.
26 Emails from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020 and 10 May 2021.
27 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 27 June 2024.
28 Ibid.
29 APMBC Article 5 deadline Extension Request, 15 April 2013, p. 7; and CCM Article 7 Report (covering 2015), Form F.

Special emphasis is placed on preserving priority natural habitat types. For example, restoration efforts in areas previously characterised by shifting dunes aim to restore these regions to their original dune habitat state upon project completion. Whenever feasible, synergies between clearance efforts and nature conservation are leveraged. In instances where these synergies are not possible, additional funding is allocated to ensure compliance with conservation laws.[30]

The burning of the heath is a necessary step before any clearance can take place, and strict environmental regulations are enforced. These regulations include conducting the burning outside bird-breeding seasons, and when the ground fauna, such as insects and lizards, are in their hibernation habitats. The burning, followed by the ploughing of the topsoil, deprives the vegetation of nutrients, which contributes to a NATURA 2000 objective to preserve the native flora as it has adapted to dry, nutrient-poor soil conditions.[31] However, there are also environmental implications of vegetation burning, including the resultant carbon emissions.

Nature conservation requirements limit the controlled burning to a maximum of 2–3km$^2$ annually, which, for safety reasons and environmental concerns, is limited to a few days per year. Germany plans to burn approximately 2.5km$^2$ per year, to build up a reserve of burnt areas for clearance.[32] In 2023, however, unfavourable weather conditions prevented any controlled burning. The areas that have already been burned were expected to be cleared by the middle of 2024. If controlled burning is not feasible, it could result in a significant reduction in the clearance rate, or potentially stop operations altogether.[33] The positive effects of burning only last for up to two years before the heath grows back more densely than before.[34]

Another aspect of environmental protection is associated with EOD. Only explosive ordnance that is too hazardous to transport is destroyed on site, primarily consisting of cluster munitions and certain types of bombs. The remaining explosive ordnance will be disposed of by the clearance service "in a skilled and environmentally responsible manner."[35] While energy supplies are currently maintained by generators, Germany is making plans to replace these generators with solar panels.[36]

## INFORMATION MANAGEMENT AND REPORTING

Germany uses its own information management system to record the special distribution of CMR, which includes a geographic information system (GIS).[37]

Germany provides regular updates on its progress in Article 4 implementation, both in its annual Article 7 reports and in statements at the Meeting of States Parties. In its Article 7 report for 2023, Germany included annual clearance figures as well as its cumulative output from 2017 for the first time. Once again, however, Germany included only cumulative figures for the number of submunitions destroyed.

## PLANNING AND TASKING

Due to the fact that cluster munition contamination is limited to Wittstock, Germany does not have a national mine action strategy for CCM Article 4 implementation.[38] Germany's second Article 4 deadline extension request, submitted in 2024, includes annual clearance projections of approximately 0.82km$^2$ in 2023; 0.80–0.90km$^2$ per year from 2024 to 2028, and 0.40–0.50km$^2$ in 2029, with associated documentation to be finalised in 2030.[39] Detailed planning of the specific sections of the CMR-contaminated area to be cleared is not possible beyond annual planning because it is determined by the location of areas that have been burnt, which in turn is contingent on weather conditions on the day of burning.[40]

Germany has committed to continuously monitoring targets by comparing planned objectives with actual clearance. This process will identify discrepancies, enabling appropriate measures to be taken.[41] Evidence-based annual work plans guide clearance operations and are adjusted as necessary, such as by increasing demining capacity.[42] A project coordination committee meets on a weekly basis with its core members, and each month with an extended group, to assess the status of clearance progress as well as the quality of clearance, costs, and milestones compared to the project plans. Fortnightly reports are disseminated to document clearance and progress.[43]

30 2024 Article 4 deadline Extension Request, p. 20.
31 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 18 July 2023.
32 2019 Article 4 deadline Extension Request, p. 35.
33 2024 Article 4 deadline Extension Request, p. 50.
34 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 22 June 2022.
35 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 18 July 2023.
36 2024 Article 4 deadline Extension Request, p. 44.
37 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 16 April 2019.
38 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2022.
39 2024 Article 4 deadline Extension Request, p. 56.
40 Ibid.
41 Ibid.
42 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2022.
43 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 3; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.

# LAND RELEASE SYSTEM

## STANDARDS AND LAND RELEASE EFFICIENCY

CMR clearance in Germany is conducted in accordance with German federal legislation and legislation of the state of Brandenburg, occupational safety standards of the German Statutory Accident Insurance Association (Deutsche Gesetzliche Unfallversicherung, DGUV), and the construction technical guidelines on UXO clearance of the federal government (Baufachlichen Richtlinien Kampfmittelräumung des Bundes). According to Germany, federal and state legislation is binding and takes precedence over the application of international health and safety or technical standards.[44]

The "Guidelines for the Clearance of Unexploded Ordnance on Federal Properties" are the legal basis for the clearance of UXO on federal government properties and thus apply to action on the Wittstock site. In addition, site-specific work instructions, approved by the KMBD, include detection of UXO (instruments and their use); handling of submunitions and other UXO (on-site transport, storage, and disposal); and documentation.[45] These guidelines are updated on an ongoing basis, for instance to include new technical and safety aspects.[46]

Although Germany does not have NMAS in place, it references the International Mine Action Standard (IMAS) 07.14 on risk management in its 2024 Article 4 deadline extension request as Germany plans to develop a risk register based on IMAS 07.14 guidelines.[47]

The entire area suspected to be contaminated with CMR has been divided into 50 x 50 metre boxes.[48] CMR clearance started in an area where the occurrence of CMR was known from earlier finds and was conducted outwards in 50 x 50 metre boxes. According to Germany, CMR have been found in almost every parcel cleared, and therefore technical survey has not been deemed useful thus far. Germany has declared that if, during future clearance, areas are often encountered which do not contain CMR, the method of land release will be changed to technical survey.[49] The smallest target for detector sensitivity for clearance has been defined as a half sphere of a ShOAB-0.5 submunition.[50]

Under state regulation of war material ("Kampfmittelverordnung"), the transport and disposal of explosive ordnance in Brandenburg state is the sole responsibility of the KMBD.[51]

## OPERATORS AND OPERATIONAL TOOLS

In Germany, site clearance (search, discovery, identification, recovery, and preparation for handover to state agencies for demolition) is typically conducted by commercial contractors that meet the requirements of the law on explosives. Two commercial UXO clearance contractors won the original public tender for CMR clearance at Wittstock: Röhll Munitionsbergung GmbH (Brandenburg (Havel)) and Schollenberger Kampfmittelbergung GmbH (Celle).[52] A third contractor, SafeLane Global (Ludwigsfelde), was hired in late 2021, which led to an increase in capacity in 2022, but their contract was terminated on 1 January 2023.[53] In 2023, there were 190 personnel on site, compared to 212 in 2022, and of this 160 were operational clearance staff. In 2023, Germany operated with 10 clearing squads (each comprising five manual clearance teams) totalling 100 EOD technicians, 10 "Verantwortliche Personen" (i.e., supervisors or managers), and 13 excavator squads with about 50 personnel. The remaining 30 individuals work in storage facilities and site management.[54]

The process of clearing CMR at Wittstock involves controlled burning of vegetation followed by subsurface clearance to process the upper soil layers. In areas highly contaminated with ferromagnetic metal objects, which has increased in extent during clearance, the procedure involves controlled burning and the clearance of larger munitions, followed by volume clearance using screening buckets. The screening buckets are attached to armoured excavators, which are operated under the supervision of licensed personnel via video monitoring.[55]

According to federal guidelines, while mechanical clearance would be possible for CMR, it is not possible at Wittstock. This is due to the large calibre of some of the munitions present (large quantities of air-dropped and shaped-charge munitions), which would pose a hazard to both the operators and the equipment. Tilling can also lead to widespread environmental contamination with explosive compounds, a type of pollution that is explicitly prohibited under German environmental legislation.[56]

44 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 2; and CCM Article 4 Extension Request 2024, p. 16.
45 2019 Article 4 deadline Extension Request, p. 12.
46 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2022.
47 2024 Article 4 deadline Extension Request, p. 48.
48 2019 Article 4 deadline Extension Request, p. 25.
49 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 2.
50 Ibid.
51 2019 Article 4 deadline Extension Request, p. 12.
52 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 5.
53 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 25 May 2023.
54 2024 Article 4 deadline Extension Request, p. 41.
55 Ibid., p. 21.
56 Ibid., pp. 20–21; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 22 June 2022.

# LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE

## LAND RELEASE OUTPUTS IN 2023

More than 0.87km$^2$ of CMR-contaminated area was cleared in 2023, with the destruction of 483 submunitions. No area was released through survey.

## SURVEY IN 2023

No CMR-contaminated area was cancelled through non-technical survey or reduced through technical survey in 2023, or in the previous year.[57]

## CLEARANCE IN 2023

The clearance total in Germany's Article 7 report for 2023 was 872,500m$^2$ while the figure provided directly to Mine Action Review (see Table 2) was 873,000m$^2$. Clearance involved destruction of a total of 483 submunitions, which occurred either *in situ* or at a nearby demolition site.[58] Output was a 35% decrease from the 1.34km$^2$ of CMR-contaminated area that was cleared in 2022 when 1,187 submunitions were destroyed.[59]

**Table 2: CMR clearance in 2023[60]**

| Operator | Area cleared (m$^2$) | Submunitions destroyed |
|---|---|---|
| Röhll Munitionsbergung GmbH (Brandenburg/Havel) | 512,000 | 86 |
| Schollenberger Kampfmittelbergung GmbH (Celle) | 361,000 | 397 |
| **Totals** | **873,000** | **483** |

CMR clearance is subject to internal quality control (QC) by the commercial contractors and to external QC by an independent engineering company of between 10% and 20% of each 50 x 50 metre clearance box.[61]

## ARTICLE 4 DEADLINE AND COMPLIANCE

CCM ENTRY INTO FORCE FOR GERMANY: 1 AUGUST 2010

↓

ORIGINAL ARTICLE 4 DEADLINE: 1 AUGUST 2020

↓

FIRST EXTENDED DEADLINE (5 YEARS): 1 AUGUST 2025

↓

**SECOND EXTENDED DEADLINE SOUGHT (5 YEARS): 1 AUGUST 2030**

**NOT ON TRACK TO MEET ARTICLE 4 DEADLINE (EXTENSION REQUESTED)**

Under Article 4 of the CCM, Germany is required to destroy all CMR in areas under its jurisdiction or control as soon as possible, but not later than its extended deadline of 1 August 2025. Germany has requested a five-year extension to this deadline to 1 August 2030, the second extension it has requested.

After extensive and lengthy preliminary work for preparation of the site for clearance, including survey and a creation of a fire protection system, Germany finally began CMR clearance in March 2017. A total of 5.36km$^2$ of CMR contamination has been cleared in the last five years (see Table 3).

**Table 3: Five-year summary of CMR clearance**

| Year | Area cleared (km$^2$) |
|---|---|
| 2023 | 0.87 |
| 2022 | 1.34 |
| 2021 | 0.85 |
| 2020 | 1.09 |
| 2019 | 1.21 |
| **Total** | **5.36** |

57 Article 7 Reports (covering 2023 and 2022), Form F.

58 Ibid.

59 Article 7 Report (covering 2022), Form F.

60 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 27 June 2024.

61 2019 Article 4 deadline Extension Request, p. 28.

In its 2019 Article 4 deadline extension request, Germany predicted that clearance would take between five and six years (meaning completion between 2023 and 2024), based on the estimated 9.8km$^2$ of remaining CMR contamination as at the end of 2018, and an estimated annual clearance capacity of 140 personnel, working 225 days per annum, at a clearance rate of 50–60m$^2$ per person per day. This corresponds to clearance of 1.5–2km$^2$ per annum. Reporting and documentation relating to clearance efforts were predicted to be finalised in 2025.[62]

But Germany has not been able to meet the annual planned clearance outputs as set out in its 2019 Article 4 deadline extension request. Germany stated that the obstacles which impeded its ability to meet its 2025 deadline include the very high levels of other UXO contamination being found. The screening process of every UXO and piece of scrap metal that is detected considerably slows down clearance of the area.[63] Germany also has difficulty hiring and retaining staff at Wittstock due to the peripheral location of the site and a lack of trained personnel from which to recruit from. Germany's clearance plan also assumes that a sufficient amount of controlled burning can take place to meet the planned clearance output and due to the ongoing drought and high temperatures in the area there are various fire protection works that must take place alongside clearance as well as the need for frequent scheduled breaks for staff. There are also long lead times for new equipment and replacement parts which results in unplanned downtime.[64] These are all legitimate circumstances, which will continue to pose challenges for Germany and could potentially prevent it from completing by the next five-year extended deadline.

Germany's predicted clearance calculations are based on 190 personnel working 225 days a year with an average clearance rate of 20m$^2$ per day, resulting in an annual clearance output of 855,000m$^2$.[65] However, as detailed in the section above, Operators and Operational Tools, Germany operated with around 160 clearance personnel in 2023.[66] Germany then re-calculated its clearance calculation in its response to the request from the Article 4 Committee to 24.4m$^2$ per day giving an annual output for 160 staff of 878,400m$^2$ which is in line with its clearance output for 2023.[67] Germany told Mine Action Review in June 2024:

> So far, we have always calculated average performance per person based on all those working on the site. It is not practicable to calculate this figure on the basis of the number of clearance personnel only, as clearance output depends equally on the presence and efficiency of site management personnel, documentation, quality assurance, as well as supporting staff (e.g. equipment maintenance, cleaning). … The daily clearance performance determined by the number of all employees is an average value that represents a realistic order of magnitude with a certain margin and thus preferable to a costly and time-consuming evaluation of the personnel actually deployed in the fields on a daily basis.[68]

If Germany can sustain its current clearance capacity and avoid running out of areas to be cleared due to limited controlled burning, which is restricted to a few days each year and dependent on meteorological conditions, it should be able to meet its second extended deadline.

## PLANNING FOR MANAGEMENT OF RESIDUAL CONTAMINATION

Germany is not aware of any further cluster munition contamination beyond Wittstock, but if, contrary to expectations, contamination does become known in the future, the responsible authority would depend on the ownership of the area in question. For any federal property, the BImA responsible for clearance at Wittstock would be the authority to deal with such new contamination.[69]

62 Ibid., pp. 33 and 37.

63 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 25 May 2023; and online meeting, 15 June 2023.

64 Article 7 Report (covering 2022), Form F; and CCM Article 4 Extension Request 2024, p. 49.

65 2024 Article 4 deadline Extension Request, p. 54.

66 Ibid., p. 41.

67 Email response to Article 4 Committee, 10 June 2024.

68 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 27 June 2024.

69 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2022.