

**ARTICLE 4 DEADLINE: 1 AUGUST 2025**  
UNCLEAR WHETHER ON TRACK TO MEET DEADLINE

## KEY DATA

### CLUSTER MUNITION CONTAMINATION: MEDIUM

NATIONAL ESTIMATE

**6.62** KM<sup>2</sup>

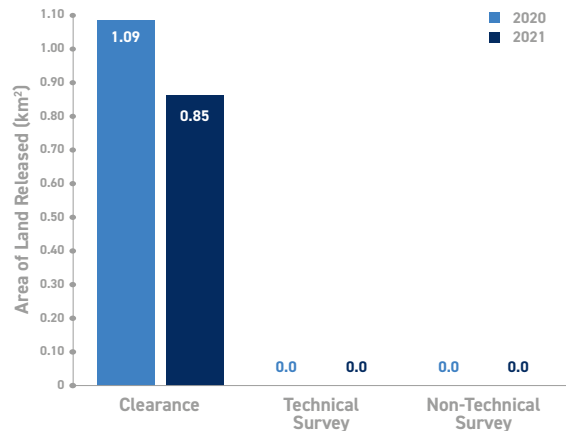
SUBMUNITION  
CLEARANCE IN 2021

**0.85** KM<sup>2</sup>

SUBMUNITIONS  
DESTROYED IN 2021

**466**

## LAND RELEASE OUTPUT



## KEY DEVELOPMENTS

In 2021, Germany cleared just over 0.85km<sup>2</sup> of cluster munition-contaminated area at the former military training facility at Wittstock. This was a 20% decrease in clearance output on the previous year, in part due to the required tender process for explosive ordnance disposal (EOD) operations which was conducted in 2021. The tender process did, however, result in a third clearance contractor joining the existing two contractors at Wittstock, with total clearance capacity having increased to between 180 and 200 personnel by the end of 2021. This should result in increased clearance output.

## RECOMMENDATION FOR ACTION

- Germany should improve its reporting by ensuring that its annual CCM Article 7 transparency report complies with the CCM requirements, by reporting the annual cluster munition remnants (CMR) clearance output for the reporting period rather than the cumulative total.

## ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2021)	Score (2020)	Performance Commentary
<b>UNDERSTANDING OF CMR CONTAMINATION</b> (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 former use in training of weapons at the site, and the significant amount of other explosive remnants of war (ERW), Germany has not been able to determine the extent and density of CMR more accurately.
<b>NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT</b> (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.
<b>GENDER AND DIVERSITY</b> (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, though women only make up a small proportion of the sector in Germany, particularly in EOD positions. With respect to the clearance contractors at Wittstock, only 7% of employees are women, and in the on-site project management and clearance supervision company, 25% of employees are women.
<b>INFORMATION MANAGEMENT AND REPORTING</b> (10% of overall score)	8	7	In its Article 7 reporting covering 2021, Germany reported the baseline of CMR as at the end of 2021 – a positive development on previous years in which its Article 7 reporting had continued to report the initial baseline (11km <sup>2</sup> ), without reducing it according to progress in land release to date. Germany continues, however, to report solely cumulative clearance output to date, rather than annual clearance output in its Article 7 reporting, as the CCM requires.
<b>PLANNING AND TASKING</b> (10% of overall score)	8	8	While Germany does not have a national mine action strategy, it does have a completion plan in place to address the remaining CMR contamination and it elaborates annual work plans, which it adjusts according to capacity and output.
<b>LAND RELEASE SYSTEM</b> (20% of overall score)	8	7	Germany increased its CMR clearance capacity from 140 as at the end of 2020 to between 180 and 200 demining personnel by the end of 2021, following a tender process and bringing on-board a third EOD contractor. Demining at Wittstock is primarily conducted manually. Technical survey and the full use of mechanical assets are not possible due to the elevated level of explosive ordnance at the site, which includes different types of UXO with varying spatial distribution of contamination, resulting from overlapping contamination from multiple weapon types.
<b>LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE</b> (20% of overall score)	5	6	In 2021, Germany cleared 0.85km <sup>2</sup> of cluster munition-contaminated area, a 20% decrease on the previous year. While clearance output in 2021 was below the annual target in its Article 4 deadline extension request, Germany further increased clearance capacity in the second half of 2021 to levels above those planned in the extension request, which should increase clearance output through to completion.
<b>Average Score</b>	<b>7.3</b>	<b>7.2</b>	<b>Overall Programme Performance: GOOD</b>

## 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: Röhl Munitionsbergung GmbH (Brandenburg (Havel)); Schollenberger Kampfmittelbergung GmbH (Celle); and SafeLane Global GmbH (Ludwigsfelde).
- On-site project management/clearance supervision company
- 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 2021, Germany reported 6.62km<sup>2</sup> of remaining cluster munition-contaminated area at a former Soviet military training area at Wittstock, Brandenburg, in former East Germany.<sup>1</sup> This is a reduction from 7.47km<sup>2</sup> as at the end of 2020,<sup>2</sup> and is due to the CMR clearance in 2021.

A wide range of Soviet-era submunitions have been found at Wittstock: 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 2.5 M, ZAB 2.5 S, and ZAB 2.5.<sup>3</sup>

CMR were discovered "by chance" at Wittstock and declared in June 2011, first at the Anti-Personnel Mine Ban Convention (APMBC) intersessional meetings and then a week later at the CCM intersessional meetings.<sup>4</sup> From 2011 to early 2014, suspected CMR contamination was reported to total 4km<sup>2</sup>.<sup>5</sup> In August 2014, however, Germany reported that the total suspected hazardous area (SHA) was actually 11km<sup>2</sup>.<sup>6</sup> The increased estimate was ascribed to discovery of submunitions during non-technical survey across a wider area than previously reported.<sup>7</sup> According to Germany, the dense vegetation cover and the special hazards posed by CMR and other explosive ordnance did not allow for technical survey.<sup>8</sup>

The entire Wittstock site, which extends over 120km<sup>2</sup>, is heavily contaminated with various kinds 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.<sup>9</sup> The 11km<sup>2</sup> of CMR contamination is in the area of a mock airfield within the site, which was used by the air force for bombing practice; by the army for artillery firing exercises; as well as for general military exercises and training. Usage 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 submunitions and other UXO is not known for a large part of the hazardous area.<sup>10</sup>

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 (BlmA). BlmA implemented a risk education programme that included marking the perimeter and preventing civilian access to the area, based on a "danger prevention plan".<sup>11</sup> Once safely released, the site is due to remain part of a "nature protection area" in the Kyritz-Ruppiner-Heide, managed by BlmA as part of the Europa NATURA 2000 site, under the European Union (EU) Habitats Directive.<sup>12</sup>

Persistent delay in initiating clearance of CMR at Wittstock until March 2017<sup>13</sup> was ascribed to extensive preliminary work needed to prepare the area for CMR clearance. Due to the dense vegetation in the contaminated area, Germany opted to burn the area in sections, to ensure an unobstructed view of the ground.<sup>14</sup> Preparation for burning and clearance in turn necessitated a desk study and creation of an evacuation and access road network in 2013–15, to make the SHA accessible for clearance operators.<sup>15</sup>

This was followed in 2015–16 by the creation and maintenance of an internal site-wide system of firebreaks surrounding and subdividing the area suspected to be contaminated with CMR, to prevent uncontrolled forest fires during prescribed burning of the CMR-contaminated area.<sup>16</sup> Owing to contamination from large items of UXO, the fire-breaks were created using an unmanned, remote-controlled caterpillar by an EOD contractor in 2016.<sup>17</sup> This was completed in 2016, with the exception of a small forested area on the eastern edge of the SHA.<sup>18</sup>

The prescribed burning of the first sections of the SHA started in 2017 and will continue 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.<sup>19</sup>

- 1 Article 7 Report (covering 2021), Form F. The remaining contamination reported in Germany's Article 7 report is slightly different to the 6,619,400m<sup>2</sup> of remaining contamination calculated based on the difference between size of the initial CMR contamination reported and the cumulative clearance output as at the end of 2021 and as reported by the Federal Foreign Office (email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2021).
- 2 Article 7 Report (covering 2020), Form F: calculated based on the difference between size of the initial CMR contamination reported and the cumulative clearance output as at the end of 2020; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2021.
- 3 Article 7 Report (covering 2021), Form F.
- 4 Statement of Germany, 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.
- 5 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 7 May 2018; and Statement of Germany, CCM Third Meeting of States Parties, Oslo, 13 September 2012; Article 7 Reports (covering 2012 and 2013), Form F.
- 6 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 4 August 2014.
- 7 Statement of Germany, First CCM Review Conference, Dubrovnik, 7 September 2015.
- 8 CCM Article 4 deadline Extension Request, 2019, (hereafter, CCM Extension Request 2019), p. 9.
- 9 Emails from official on the Desk for Conventional Arms Control, Federal Foreign Office, 7 May and 12 July 2018; CCM Extension Request 2019, 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 CCM Extension Request 2019, p. 9.
- 11 Statement of Germany, APMBC Intersessional meetings, Geneva, 23 May 2012; and CCM Article 7 Report (covering 2011), Form G.
- 12 APMBC Article 5 deadline Extension Request, 15 April 2013, p. 7; and CCM Article 7 Report (covering 2015), Form F.
- 13 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 5, at: <http://bit.ly/2DnYvGw>.
- 14 Article 7 Reports (covering 2015, 2018, and 2021), Form F.
- 15 CCM Extension Request 2019, pp. 16 and 36–37.
- 16 *Ibid.*, pp. 14, 16–17, and 36–37.
- 17 *Ibid.*, 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.
- 18 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 19 April 2017; and Article 7 Report (covering 2016), Form F.
- 19 CCM Extension Request 2019, p. 22.

## 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 an institution incorporated under public law and which is wholly owned by the federal government.<sup>20</sup> 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.<sup>21</sup> Commercial UXO clearance contractors are contracted and managed by the local branch of the Federal Forestry Agency, Bundesforstbetrieb West Brandenburg.<sup>22</sup> The Regulatory Agency of the County of Ostprignitz-Ruppin is responsible for public security under the police law of the federal state of Brandenburg.<sup>23</sup>

In Germany, the clearance and disposal of UXO is a security task that is 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.<sup>24</sup> Contracting foreign companies for CMR clearance in Wittstock is also not possible under German law.<sup>25</sup> 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.<sup>26</sup>

All CMR clearance costs are paid for by the federal BImA. National funding to complete CMR clearance has been fully secured and is said to cover unforeseen cost increases. CMR clearance costs have increased from more than €1.6 million in 2017, to over €9.5 million in 2018, to over €11.5 million in 2019,<sup>27</sup> and over €12.9 million in 2020,<sup>28</sup> reflecting the upscaling of clearance operations. CMR clearance costs in 2021 increased significantly up to nearly €21.4 million.<sup>29</sup> The increase had been expected due to price inflation as part of the new tender.<sup>30</sup>

## ENVIRONMENTAL POLICIES AND ACTION

According to Germany, environmental considerations are taken into account 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 with respect to environmental aspects during planning and execution of clearance work, to assure that negative effects are avoided. Germany has said that ideally, clearance operations result in positive developments for the environment, such as by burning of the heath. According to Germany, this helps fulfil the requirements of IMAS 07.13, according to which the original condition of the landscape is to be restored and, if possible, should be improved.<sup>31</sup> However, there are also environmental implications of vegetation burning, including the resulting carbon emissions.

## GENDER AND DIVERSITY

There is equal access to employment for qualified women and men for EOD clearance in Germany, but 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.<sup>32</sup> With respect to the clearance contractors at Wittstock, 7% of employees are women, including 16% of managerial/supervisory positions and 7% of operations personnel. In the on-site project management and clearance supervision company, 25% of employees are women, including 25% of the managerial/supervisory positions and 14% of operations positions.<sup>33</sup>

20 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 5.

21 Ibid.

22 Ibid.

23 Ibid., p. 6.

24 CCM Extension Request 2019, p. 12.

25 Ibid., p. 34.

26 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 24 June 2022.

27 Article 7 Report (covering 2019), Form I.

28 Article 7 Report (covering 2020), Form I; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2021.

29 Article 7 Report (covering 2021), Form I; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2022.

30 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 4.

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

32 Emails from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020 and 10 May 2021.

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

## INFORMATION MANAGEMENT AND REPORTING

Germany uses its own information management system to record the special distribution of CMR, including use of a geographical information system (GIS).<sup>34</sup>

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. However, in its Article 7 report for 2021,<sup>35</sup> Germany again reported cumulative clearance output for 2017–21, rather than the annual clearance output for the year, as the Convention requires.

## 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.<sup>36</sup> Germany did, however, submit a detailed, comprehensive, and timely Article 4 deadline extension request, which was considered and granted by States Parties at the Ninth Meeting of States Parties in September 2019. Based on clearance projections of 1.5–2km<sup>2</sup> per year, CMR clearance was expected to be completed by the end of 2024, with associated documentation to be finalised in 2025.<sup>37</sup> Clearance rates envisaged in Germany's Article 4 extension request have fallen short of these projections, but annual, evidence-based work plans are elaborated which provide the basis for clearance, and which are adjusted if and when required (such as upscaling demining capacity).<sup>38</sup>

In 2022, Germany planned to clear 1.5km<sup>2</sup> of cluster munition-contaminated area, taking into account the increased capacity resulting from the tender process.<sup>39</sup> In its presentation at the CCM Intersessional Meetings in 2022, Germany said it planned to clear 2.2km<sup>2</sup> in both 2023 and 2024, and 0.72km<sup>2</sup> in 2025, based on the planned 200 clearance personnel.<sup>40</sup>

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.<sup>41</sup>

Nature conservation requirements limit the controlled burning to a maximum of 200–300 hectares (2–3km<sup>2</sup>) annually, which, for safety reasons, is limited to a few days per year. Germany plans to burn approximately 250 hectares (2.5km<sup>2</sup>) per year, to build up a reserve of burnt areas for clearance.<sup>42</sup> In 2019, an adequate amount of heathland was burned, to guarantee sufficient area for CMR clearance operations in 2020 and 2021.<sup>43</sup> Due to dry weather conditions it was not possible to burn any areas in 2020. However, in February 2021, 1.6km<sup>2</sup> was burned in the western part of the clearance site,<sup>44</sup> and a further 0.54km<sup>2</sup> was burned outside the contaminated area, to enhance security at the UXO-explosion site.<sup>45</sup> The positive effects of burning only last for up to two years before the heath grows back more densely than before.<sup>46</sup>

Germany planned to clear 1.2km<sup>2</sup> of CMR-contaminated area in 2021,<sup>47</sup> but fell short of the target, with only 0.85km<sup>2</sup> cleared in 2021. 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.<sup>48</sup>

## 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.<sup>49</sup>

34 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 16 April 2019.

35 Article 7 Report (covering 2021), Form F.

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

37 CCM Extension Request 2019, p. 3.

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

39 Ibid.

40 Presentation of Germany, CCM Intersessional meetings, Geneva, 16 May 2022.

41 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.

42 CCM Extension Request 2019, p. 35.

43 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.

44 Emails from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2021 and 10 May 2022.

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

46 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 22 June 2022.

47 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2021.

48 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 3.

49 Ibid., p. 2.

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.<sup>50</sup> These guidelines are updated on an ongoing basis, for instance to include new technical and safety aspects.<sup>51</sup>

The entire area suspected to be contaminated with CMR has been divided into 50 x 50 metre boxes, each of which is subject to prescribed burning, followed by subsurface clearance.<sup>52</sup> 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.<sup>53</sup> The smallest target for detector sensitivity for clearance has been defined as a half sphere of a ShOAB-0.5 submunition.<sup>54</sup>

Under state regulation on war material ("Kampfmittelverordnung"), the transport and disposal of explosive ordnance in Brandenburg state is the sole responsibility of the KMBD.<sup>55</sup>

## 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.

There are reportedly only around 1,500 people working in commercial ordnance clearance in Germany; mostly small enterprises, which are active regionally.<sup>56</sup> Two commercial UXO clearance contractors won the original public tender for CMR clearance at Wittstock: Röhl Munitionsbergung GmbH (Brandenburg (Havel)) and Schollenberger Kampfmittelbergung GmbH (Celle),<sup>57</sup> and a third contractor, SafeLane Global (Ludwigsfelde) also came onboard from late 2021, following a new tender (see below for more information).<sup>58</sup> On-site project management and supervision are provided by a separate company, which includes a consulting engineer.<sup>59</sup> As previously mentioned, disposal, whether through destruction or other means, is conducted by the KMBD.<sup>60</sup>

CMR clearance began at Wittstock in March 2017 with nine personnel. This increased to 40 in the summer of 2017, and then steadily over the following three years to 140 by the end of 2020.<sup>61</sup> Due to European public procurement law, a

new tender for the EOD was required to be issued in 2021, for the period 2021–25. Three companies were contracted as a result of the tender – two of which commenced from August/September and were the same existing contractors from the original tender, and the third was a new contractor (SafeLane Global GmbH) which began in October 2021. As a result, clearance capacity had increased to 180–200 full-time personnel by the end of 2021.<sup>62</sup> Germany said that the reason for the increase in EOD capacity was in order to ensure the timely completion of cluster munition clearance at Wittstock. Germany believes that the maximum clearance capacity at Wittstock has now been reached, due to necessary safety and security precautions.<sup>63</sup>

There are staff shortages for deminers in Germany, in particular for the specially licenced team leaders required by German law.<sup>64</sup> In its Article 4 deadline extension request, Germany assumed an annual effective clearance capacity of 140 demining personnel, who will each work no more than 225 days a year.<sup>65</sup> While the new tender resulted in increased capacity from August 2021, basic works in the interim had to be postponed due to the tendering process, the adjustment of clearance efforts, and COVID-19 measures.<sup>66</sup>

50 CCM Extension Request 2019, p. 12.

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

52 CCM Extension Request 2019, p. 25.

53 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 2.

54 Ibid.

55 2019 CCM Extension Request, p. 12.

56 Ibid.

57 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 5.

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

59 Germany, Extension Request Report – Answers to the Analysis Group, 8 February 2019, p. 5.

60 CCM Extension Request 2019, p. 12.

61 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020; and Statement of Germany on Article 4, Second CCM Review Conference (Part 1, virtual meeting), 25–27 November 2020.

62 Article 7 Report (covering 2021), Form F; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2022.

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

64 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 12 July 2018.

65 CCM Extension Request 2019, p. 33.

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

**Table 1: Operational clearance capacities deployed in 2021<sup>67</sup>**

Operator	No. of manual CMR clearance teams	Total deminers (average)*	No. of dog teams (dogs and handlers)	No. of mechanical assets/machines**	Comments
Röhl Munitionsbergung GmbH (Brandenburg (Havel))	6 to 8	70 deminers and supervisors + 6 support personnel	0	3	Previously 60+6 under old contract. New contract commenced from August/September 2021.
Schollenberger Kampfmittelbergung GmbH (Celle)	6 to 8	70 deminers and supervisors + 6 support personnel	0	3	Previously 75+6 under old contract. New contract commenced from August/September 2021.
SafeLane Global GmbH (Ludwigsfelde)	4 to 5	20 deminers and supervisors, increasing to 40 deminers and supervisors + 5 support personnel	0	2	New contractor, no previous contract. Commenced in October 2021, after a delay due to additional training necessities.
<b>Totals</b>	<b>16 to 21</b>	<b>180–200 deminers</b>	<b>0</b>	<b>8</b>	

\* Excluding team leaders, medics, drivers, etc. \*\*Excluding vegetation cutters and sifters

Testing of detectors to determine whether different detectors could achieve better results and tests on whether ShOAB-0.5 submunitions could, in fact, be transported,<sup>68</sup> was postponed until 2022, due to the tender process, training of new personnel, and protection measures due to COVID-19.<sup>69</sup>

Subsurface CMR clearance at Wittstock is conducted only manually. According to federal guidelines, while mechanical clearance would be possible for clearance of CMR, it is not possible at Wittstock. This is due to the large-calibre munitions present (large quantities of air-dropped and shaped-charge munitions), which would pose a hazard to both the operators and the equipment. Mechanical clearance is also limited due to environmental regulations as Wittstock, as it is part of a nature reserve.<sup>70</sup>

## LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE

### LAND RELEASE OUTPUTS IN 2021

A total of almost 0.85km<sup>2</sup> of CMR-contaminated area was cleared in 2021, with the destruction of 466 submunitions. No area was released through survey.<sup>71</sup>

### SURVEY IN 2021

No CMR-contaminated area was cancelled through non-technical survey or reduced through technical survey in 2021, or in the previous year.<sup>72</sup>

67 Ibid.

68 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 16 June 2021.

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

70 CCM Extension Request 2019, p. 15; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 22 June 2022.

71 Article 7 Reports (covering 2020 and 2021), Form F; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2022.

72 Ibid.



## CLEARANCE IN 2021

According to clearance data Germany reported to Mine Action Review, a total of 853,000m<sup>2</sup> of cluster munition contaminated area was cleared in 2021 (429,000m<sup>2</sup> cleared by Röhll Munitionsbergung (Brandenburg (Havel)) and 424,000m<sup>2</sup> cleared by Schollenberger Kampfmittelbergung GmbH (Celle)), with the destruction of 466 submunitions. A further 24,502 items of other explosive ordnance (grenades, rockets, fuses, etc.) and 30,380kg of fragments (each of which was generally lighter than 100g) were also found and destroyed during CMR clearance operations in 2021. In addition, 265,030kg of scrap metal was removed in 2021, mainly consisting of smaller parts of ammunition (e.g. fragments without explosives, such as tails of rockets) and parts of vehicles. In addition, a further 299,000m<sup>2</sup> was cleared by operators in 2021 outside the CMR-contaminated area, for reasons of fire protection and in order to allow for clearance at the contaminated sites.<sup>73</sup>

As in previous years, Germany did not report the 2021 annual clearance output in its Article 7 report, but instead reported the cumulative output as at the end of 2021, from which it is possible to calculate the annual output by calculating the difference between the output (and number of submunitions destroyed) as at end of 2021 and the output (and number of submunitions destroyed) as at the end of 2020. Based on this

calculation, Germany cleared 850,600m<sup>2</sup> of CMR-contaminated area in 2021, destroying in the process 466 submunitions either in situ or in a nearby demolition site.<sup>74</sup>

There is a slight difference between the total of cleared contaminated area in 2021, reported by the Germany to Mine Action Review (853,000m<sup>2</sup>) and the annual 2021 clearance total calculated by comparing the difference between Germany's Article 7 reports from 2020 and 2021 (850,600m<sup>2</sup>). Germany explained that this difference is due to rounding of figures, as well as corrections to final clearance data.<sup>75</sup>

Clearance output in 2021 was a 20% decrease on the previous year, when 1.09km<sup>2</sup> of CMR-contaminated area was cleared and 971 submunitions destroyed.<sup>76</sup> Germany said that the decrease was because the cluster munition-contaminated areas cleared in 2020 were more heavily contaminated by other forms of ERW than those addressed previously; the tender process undertaken in 2021; and the impacts of the COVID-19 pandemic (illness or quarantining of operators).<sup>77</sup>

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.<sup>78</sup>

## ARTICLE 4 DEADLINE AND COMPLIANCE



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 believes it can complete clearance by its deadlines, though it is currently behind its planned clearance targets. The EU-required tender of the clearance companies in 2021 reduced clearance output during the tender process, but led to increased overall clearance capacity by the end of 2021.

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 4.38km<sup>2</sup> of CMR contamination has been cleared since clearance at Wittstock commenced (see Table 2).

**Table 2: Five-year summary of CMR clearance**

Year	Area cleared (km <sup>2</sup> )
2021	0.85
2020	1.09
2019	1.21
2018	0.76
2017	0.47
<b>Total</b>	<b>4.38</b>

<sup>73</sup> Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2022.

<sup>74</sup> Article 7 Reports (covering 2020 and 2021), Form F; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 16 June 2021. The figure is calculated from the difference between cumulative clearance output as at the end of 2021 and cumulative clearance output as at the end of 2020.

<sup>75</sup> Emails from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May and 24 June 2022.

<sup>76</sup> Statement of Germany on Article 4, Second CCM Review Conference (Part 1, virtual meeting), 25–27 November 2020; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2021.

<sup>77</sup> Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2022.

<sup>78</sup> CCM Extension Request 2019, p. 28.



In 2018, Germany predicted that it would take between five years (meaning completion of clearance in 2023) and six years (completion of clearance in 2024), based on the estimated 980 hectares (9.8km<sup>2</sup>) 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<sup>2</sup> per person per day. This corresponds to clearance of 1.5–2km<sup>2</sup> per annum. Reporting and documentation relating to clearance efforts are predicted to be finalised in 2025.<sup>79</sup>

Clearance output of 1.09km<sup>2</sup> in 2020 and 1.21km<sup>2</sup> in 2019 was a significant increase on the previous years, but still fell short of Germany's planned clearance output of 1.2–1.4km<sup>2</sup> in 2020<sup>80</sup> and the annual clearance target of 1.5–2km<sup>2</sup> per year in its extension request, indicating that Germany had started falling behind target on its planned Article 4 implementation. Clearance output in 2021 dropped to 0.85km<sup>2</sup>, as a result of a planned tender process, which disrupted clearance. However, clearance resumed in August and September 2021, and an additional third EOD operator commenced in October 2021, bringing the total number of clearance personnel from 140 as at the end of 2020, to 180–200 by the end of 2021. This should enable Germany to reach its targets.<sup>81</sup>

Germany acknowledges that the desired increase in clearance output could not be achieved as quickly as planned in 2021, due to delays associated with the tendering process; necessary training of new personnel; the effects of the COVID-19 pandemic; and an additional 299,000m<sup>2</sup> of land outside the cluster munition-contaminated area having to be cleared as part of fire protection measure in order to allow for clearance at the contaminated sites. But it still considers itself to be on track to meet its deadline, because of the significantly higher number of personnel now employed; substantially increased budgets in 2021 and 2022 (approx. €13 Million in 2020, €21.4 million in 2021, and €27 million in 2022); increased use of mechanical assets; and an assumed decline in the impact of the COVID-19 pandemic.<sup>82</sup> Based on the planned 200 EOD personnel, Germany planned to clear 2.2km<sup>2</sup> in 2023; 2.2km<sup>2</sup> in 2024; and 0.72km<sup>2</sup> in 2025.<sup>83</sup>

Potential obstacles that could impact Germany's ability to meet its new deadline of August 2025 include the very high levels of CMR and other UXO contamination that may be encountered.<sup>84</sup> Germany's clearance plan also assumes that a sufficient amount of controlled burning is able to take place to meet the planned clearance output, which has so far been the case. There is also the potential for the planned clearance schedule to be negatively impacted due to meteorological conditions, in particular, extended periods of frost, resulting in frozen ground that cannot be cleared.<sup>85</sup>

Due to extensive hygiene measures and controls, the COVID-19 pandemic did not result in any significant impairment of Germany's CMR clearance operations in 2020 or 2021.<sup>86</sup> Germany did report, however, that COVID-19 led to increased staff absences or staff in quarantine in 2021, the effects of which were only partly compensated by the reserve personnel kept on hand.<sup>87</sup> Germany took measures to adapt its clearance programme since early February/March 2020, including by ensuring that:

- Employees of the two demining companies are only allowed to meet in justified exceptional cases.
- Permanent clearance teams have been formed within the two companies. Personnel exchanges are only possible in exceptional cases.
- The clearance teams use separate and permanently assigned rest and sanitary facilities. These are disinfected after use.
- Most project meetings take place via video conference.

In addition, the usual measures (such as social distancing rules and public health rules) are observed and their compliance is monitored. If COVID-19 were to be brought onto the site, it is assumed that due to the separation of clearance teams, operations would only be partially affected. However, Germany also noted that the further course of the pandemic in Germany cannot be predicted.<sup>88</sup>

## 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 Federal Center for Explosive Ordnance Disposal, which is responsible for clearance at Wittstock, would be the responsible authority to deal with such new contamination.<sup>89</sup>

<sup>79</sup> CCM Extension Request 2019, pp. 33 and 37.

<sup>80</sup> Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.

<sup>81</sup> Article 7 Reports (covering 2020 and 2021), Form F.

<sup>82</sup> Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2022.

<sup>83</sup> Presentation of Germany, CCM Intersessional meetings, Geneva, 16 May 2022.

<sup>84</sup> Email from official from the Desk for Conventional Arms Control, Federal Foreign Office, 7 May 2018; and CCM Extension Request 2019, pp. 35 and 36.

<sup>85</sup> CCM Extension Request 2019, pp. 3, 34, and 36.

<sup>86</sup> Emails from official on the Desk for Conventional Arms Control, Federal Foreign Office, 21 September 2020, 10 May 2021, and 10 May 2022; Statement of Germany on Article 4, Second CCM Review Conference (Part 1, virtual meeting), 25–27 November 2020; and Article 7 Reports (covering 2020 and 2021), Form F.

<sup>87</sup> Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2022.

<sup>88</sup> Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 21 September 2020.

<sup>89</sup> Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 10 May 2022.