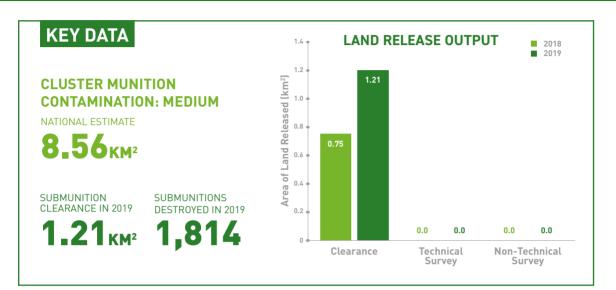
GERMANY



CLEARING CLUSTER MUNITION REMNANTS 2020

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



KEY DEVELOPMENTS

In 2019, Germany made solid process in clearance of cluster munition remnants (CMR) at the former military testing facility at Wittstock. Working with a capacity of 120 personnel, 1.21km² of contaminated area was cleared in 2019, a 60% increase on output in the previous year. In addition to submunitions, the site is also contaminated with a range of other explosive ordnance which has to be cleared along with the CMR.

RECOMMENDATIONS FOR ACTION

- Germany should assess ways in which it can speed up release of cluster munition-contaminated area, to ensure that it fulfils its Convention on Cluster Munitions (CCM) Article 4 obligations before its extended deadline of 1 August 2025. This could involve amending national legislation to allow international contractors to conduct clearance more quickly.
- For ease of reference, Germany should ensure that its annual Article 7 transparency report includes the amount of CMR contamination remaining at the end of the reporting period and the annual clearance output, rather than (or in addition to) the original CMR contamination and the cumulative clearance output.

ASSESSMENT OF NATIONAL PROGRAMME PERFORMANCE

Criterion	Score (2019)	Score (2018)	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 former testing of weapons at the site, and the significant amount of other unexploded ordnance (UXO), Germany has not been able to more accurately determine the extent and density of CMR.
NATIONAL OWNERSHIP AND PROGRAMME MANAGEMENT (10% of overall score)	8	8	There is now 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 a relatively high cost. German law prevents the contracting of overseas commercial clearance operators or non-governmental organisations (NGOs) for CMR clearance.
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, though women only make up a small proportion of the sector in Germany, particularly in EOD positions. At Wittstock, two woman hold an EOD licence, and a further eight female UXO specialists are engaged operationally – an increase on the previous year. The on-site project management and clearance supervision company employs one female engineer and three male engineers.
INFORMATION MANAGEMENT AND REPORTING (10% of overall score)	7	6	Germany has reported on progress to survey and clear CMR contamination in both its Article 7 reports and in its Article 4 deadline extension request. The request submitted and granted in 2019 was of a high quality, with clear annual milestones for clearance, through to Article 4 completion. However, in its Article 7 reporting, Germany should reduce the annual contamination baseline of CMR contamination, which has remained at 11km ² for several years, to reflect land released annually clearance as work progresses. In addition, Germany should report annual clearance output in its Article 7 reporting, as the CCM requires, and not solely cumulative clearance output to date.
PLANNING AND TASKING (10% of overall score)	8	8	Germany has a completion plan in place to address the remaining CMR contamination, with realistic annual clearance goals, based on forecast capacity and output.
LAND RELEASE SYSTEM (20% of overall score)	7	7	Germany is restricted from conducting technical survey or from using mechanical assets, due to the high level of explosive ordnance contamination at the site, which includes different types of UXO, with varying spatial distribution of contamination, resulting from overlapping contamination from multiple weapon types.
LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE (20% of overall score)	6	5	In 2019, Germany requested and was granted a five-year extension to its Article 4 clearance deadline until 1 August 2025. It plans to complete CMR clearance before the end of 2024, based on existing capacity and subject to available burnt area for clearance, favourable weather conditions, and the density of the contamination discovered. In 2019, it cleared 1.21km ² , a 60% increase on the previous year, but still below the annual target in its Article 4 deadline extension request.
Average Score	7.2	6.9	Overall Programme Performance: GOOD

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)) and Schollenberger Kampfmittelbergung GmbH (Celle)
- 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 2019, Germany reported 8.56km² of remaining cluster munition-contaminated area at a former Soviet military training area at Wittstock, Brandenburg, in former East Germany.¹

In its latest Article 7 transparency report, covering calendar year 2019, Germany reported approximately 11km² of area suspected to contain CMR, unchanged from the original contamination level, despite clearance in 2017–19. However, while Germany did not specify the amount of remaining CMR contamination as at the end of 2019 in its Article 7 report, as required under the CCM, it did report the cumulative CMR clearance output at Wittstock to-date (2.44km²), allowing calculation of the remaining contaminated area as at the end of 2019.²

A wide range of Soviet-era submunitions have been found at Wittstock: A0-1 SCh, A0-1 M, A0-2.5, A0-2.5 RTM, A0-10 SCh, Sh0AB-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 2.5.³

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.⁴ From 2011 to early 2014, suspected CMR contamination was reported to total 4km^{2,5} In August 2014, however, Germany reported that the total suspected hazardous area (SHA) was actually 11km^{2,6} The increased estimate was ascribed to discovery of submunitions during non-technical survey across a wider area than previously reported.⁷ According to Germany, the dense vegetation cover and the special hazards posed by CMR and other explosive ordnance did not allow for technical survey.⁸

The entire Wittstock site, which extends over 120km², is heavily contaminated with various kinds of unexploded ordnance (UXO), in varying special distribution and overlapping contamination, as a result of use of the site for military training purposes in 1945–93.⁹ The 11km² 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.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 Once safely released, the site is due to remain part of a "nature protection area" in the Kyritz-Ruppiner-Heide, managed by BImA as part of the Europa NATURA 2000 site, under the European Union (EU) Habitats Directive.¹²

Persistent delay in initiating clearance of CMR at Wittstock until March 2017¹³ 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.¹⁴ 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.¹⁵

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.¹⁶ Owing to contamination from large items of UXO, the fire-breaks were created using an unmanned, remote-controlled caterpillar by an explosive ordnance disposal (EOD) contractor in 2016.¹⁷ This was completed in 2016, with the exception of a small forested area on the eastern edge of the SHA.¹⁸ In total, 14 ShOAB-0.5 explosive submunitions were discovered during site preparation, which lasted until the end of 2016.¹⁹

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.²⁰

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.²¹ 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.²² Commercial UXO clearance contractors are contracted and managed by the local branch of the Federal Forestry Agency, Bundesforstbetrieb Westbrandenburg.²³ The Regulatory Agency of the County of Ostprignitz-Ruppin is responsible for public security under the police law of the federal state of Brandenburg.²⁴

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.²⁵ Contracting foreign companies for CMR clearance in Wittstock is also not possible under German law.²⁶ This limits Germany's ability to upscale demining capacity by preventing the contracting of non-governmental organisations (NGOs) or overseas commercial expertise.

All CMR clearance costs are, though, paid for by the federal BImA. National funding to complete CMR clearance has been fully secured and is said to cover unforeseen cost increases. Clearance costs were expected to increase from 2021, due to price inflations expected as part of the new tender planned for commercial UXO clearance.²⁷ CMR clearance costs have increased from more than €1.6 million in 2017, to over €9.5 million in 2018, and over €11.5 million In 2019,²⁸ reflecting the upscaling of clearance operations. As at October 2018, total forecasted clearance costs to address CMR contamination at Wittstock were estimated to be more than €67 million, of which €60 million was budgeted for clearance by commercial contractors; €3 million for engineering costs; and €4.3 million for the disposal of ordnance.²⁹

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, who reportedly number fewer than 10.³⁰ At Wittstock, two woman hold an EOD licence (required under the state law on explosives), and a further eight were working operationally as UXO specialists in 2019 (up from one woman holding a licence and 5 female UXO specialists working operationally in 2018).³¹ The on-site project management and clearance supervision company employs four engineers: one woman and three men.³²

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).³³

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 2019,³⁴ Germany again reported cumulative clearance output for 2017–19, rather than the annual clearance output for the year, as the Convention requires.

Germany submitted 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. The request detailed progress in addressing CMR contamination, identified the extent of contamination remaining, and included a detailed and costed work plan covering the additional time sought, with measurable benchmarks for the extension period.

PLANNING AND TASKING

Germany has developed a national plan for the release of the CMR-contaminated area, as detailed in its extension request, with annual milestones for the release of areas confirmed or suspected to contain CMR. Based on current clearance projections of 1.5–2km² per year, CMR clearance is currently expected to be completed by the end of 2024, with associated documentation to be finalised in 2025.³⁵

A project coordination committee meets on a weekly basis with its core members and monthly 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.³⁶

Nature conservation requirements limit the controlled burning to a maximum of 200–300 hectares (2–3km²) annually, which, for safety reasons, is limited to few days per year. Germany plans to burn approximately 250 hectares (2.5km²) per year, to build up a reserve of burnt areas for clearance.³⁷ In 2019, an adequate amount of heathland was burned, to guarantee sufficient area for CMR clearance operations in 2020 and 2021.³⁸

Germany planned to clear some 1.2–1.4km² of CMR-contaminated area in 2020.³⁹ 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

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.⁴¹

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.⁴²

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.⁴⁷ Two commercial UXO clearance contractors won the public tender for CMR clearance at Wittstock: Röhll Munitionsbergung GmbH (Brandenburg (Havel)) and Schollenberger Kampfmittelbergung GmbH (Celle). On-site project management and supervision are provided by a separate company, which includes a consulting engineer.⁴⁸ As previously mentioned, disposal, whether through destruction or other means, is conducted by the KMBD.⁴⁹

CMR clearance commenced at Wittstock in March 2017, with nine personnel, which increased to forty in the summer of 2017, and to one hundred in April 2018. As of June 2018, capacity stood at 120 personnel, with an average daily clearance rate per person of between 50m² and 60m^{2,50} Capacity as at the end of 2019 remained at 120 personnel.⁵¹ 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 sub-surface clearance.⁴³ 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, to date 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.⁴⁴ The smallest target for detector sensitivity for clearance has been defined as a half sphere of a ShOAB-0.5 submunition.⁴⁵

Under state regulation on war material ("Kampfmittelverordnung"), the transport and disposal of explosive ordnance in Brandenburg state is the sole responsibility of the KMBD.⁴⁶

There are staff shortages for deminers in Germany, in particular for the specially licenced team leaders required by German law.⁵² The 150 demining personnel planned for deployment at Wittstock represent around 10% of the overall EOD personnel available in Germany.⁵³ In its Article 4 deadline extension request, Germany has assumed an annual effective clearance capacity of 140 demining personnel, who will each work 225 days a year.⁵⁴ While the current capacity of 120 is a significant increase since demining operations first started in 2017, it is still less than 140 personnel clearance capacity projected in Germany's extension request.⁵⁵ Germany did, however, expect to bring on board additional clearance personnel in 2020, increasing capacity to 135 deminers and then up to 140.⁵⁶

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 due to the presence of large quantities of air-dropped and shaped-charge munitions, which would pose a hazard to both the operators and the equipment.⁵⁷

LAND RELEASE OUTPUTS AND ARTICLE 4 COMPLIANCE

LAND RELEASE OUTPUTS IN 2019

A total of 1.21km² of CMR-contaminated area was cleared in 2019, with the destruction of 1,814 submunitions, all detonated in situ. No area was released by survey.⁵⁸

SURVEY IN 2019

No CMR-contaminated area was cancelled through non-technical survey or reduced through technical survey in 2019 or in the previous year.⁵⁹

CLEARANCE IN 2019

Germany cleared 1.21km² of CMR-contaminated area in 2019 and destroyed 1,814 submunitions.⁶⁰ Clearance output in 2019 was a significant increase on the previous year, when 0.76km² of CMR-contaminated area was cleared and 1,537 submunitions destroyed.⁶¹ The increase is due to a continued increase in personnel during 2018, which then remained constant throughout 2019.⁶²

Of the 1.21km² cleared in 2019, nearly 0.36km² was cleared by Röhll Munitionsbergung (Brandenburg (Havel)) and more than 0.85km² by Schollenberger Kampfmittelbergung GmbH (Celle). In addition to the 1,814 submunitions destroyed, 16,780 items of other UXO (grenades, rockets, fuses, etc.) and 18 metric tons of fragments were also found and destroyed during CMR clearance operations in 2019.⁶³

CMR clearance is subject to internal quality control (QC) by the commercial contractors and to external quality control by an independent engineering company of between 10% and 20% of each 50 x 50 metre clearance box.⁶⁴

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 has said that it is on track to complete CMR ahead of its Article 4 deadline.⁴⁵

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 2.44km² of CMR contamination has been cleared since clearance of CMR contamination at Wittstock commenced (see Table 1).

Table 1: Five-year summary of CMR clearance

Year	Area cleared (km²)
2019	1.21
2018	0.76
2017	0.47
2016	0
2015	0
Total	2.44

Germany predicts it will take between five years (meaning completion of clearance in 2023) and six years (completion of clearance in 2024), based on the estimated 980 hectares (9.8km²) 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 50–60m² per person per day. This corresponds to clearance of 1.5–2km² per annum. Reporting and documentation relating to clearance efforts are predicted to be finalised in 2025.⁶⁶

While clearance output of 1.21km² in 2019 was a significant increase on the previous year, when 0.76km² was cleared, it still fell short of Germany's planned clearance output, indicating that Germany may be falling behind target on its planned Article 4 implementation.

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, including different spatial distributions and potentially higher levels of contamination than expected and addressed to date.⁶⁷ 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 metrological conditions, in particular, extended periods of frost, resulting in frozen ground that cannot be cleared.⁶⁸

As previously mentioned, there are also challenges posed in acquiring suitably qualified personnel for clearance, which could potentially lead to staffing shortfalls. EU procurement requirements will likely require new tendering of the clearance at Wittstock in 2020, which could further impact the number of personnel available.⁶⁷ Germany confirmed that a new tender for CMR clearance was planned in 2020.⁷⁰

As at September 2020, the COVID-19 pandemic had not had any specific impact on Germany's CMR clearance operations. Germany has, however, taken 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. Germany does not expect the COVID-19 pandemic to affect the output of clearance operations in 2020. 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.⁷¹

- 1 CCM Article 7 Report (covering 2019), Form F; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.
- 2 Ibid
- 3 Article 7 Report (covering 2019), 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; and CCM Eighth Meeting of States Parties, Geneva, 3–5 September 2018.
- 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: bit.ly/2DnYvGw.
- 14 Article 7 Reports (covering 2015 and 2018), 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. 4.
- 20 Ibid., p. 22.
- 21 Germany, Extension Request Report Answers to the Analysis Group, 8 February 2019, p. 5.
- 22 Ibid., p. 5.
- 23 Ibid., p. 5.
- 24 Ibid., p. 6.
- 25 CCM Extension Request 2019, p. 12.
- 26 Ibid., p. 34.
- 27 Germany, Extension Request Report Answers to the Analysis Group, 8 February 2019, p. 4.
- 28 Article 7 Report (covering 2019), Form I.
- 29 CCM Extension Request 2019, pp. 3 and 39.
- 30 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.
- 31 Emails from official on the Desk for Conventional Arms Control, Federal Foreign Office, 16 April 2019 and 31 July 2020.
- 32 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.
- 33 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 16 April 2019.
- 34 Article 7 Report (covering 2019), Form F.
- 35 CCM Extension Request 2019, p. 3.

- 36 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.
- 37 CCM Extension Request 2019, p. 35.
- 38 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.
- 39 Ibid.
- 40 Germany, Extension Request Report Answers to the Analysis Group, 8 February 2019, p. 3.
- 41 Ibid., p. 2.
- 42 CCM Extension Request 2019, p. 12.
- 43 Ibid., p. 25.
- 44 Germany, Extension Request Report Answers to the Analysis Group, 8 February 2019, p. 2.
- 45 Ibid
- 46 2019 CCM Extension Request, p. 12.
- 47 Ibid.
- 48 Germany, Extension Request Report Answers to the Analysis Group, 8 February 2019, p. 5.
- 49 CCM Extension Request 2019, p. 12.
- 50 Ibid., pp. 3 and 30.
- 51 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.
- 52 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 12 July 2018.
- 53 CCM Extension Request 2019, pp. 33 and 34; and Statement of Germany, CCM Eighth Meeting of States Parties, Geneva, 3 September 2018.
- 54 CCM Extension Request 2019, p. 33.
- 55 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 16 April 2019.
- 56 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.
- 57 CCM Extension Request 2019, p. 15.
- 58 Article 7 Report (covering 2019), Form F; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.
- 59 Article 7 Reports (covering 2018 and 2019), Form F; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.
- 60 Article 7 Reports (covering 2018 and 2019), Form F: calculated based on the difference between cumulative clearance output as at the end of 2019 and cumulative clearance output as at the end of 2018; and email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.
- 61 Article 7 Reports (covering 2017 and 2018), Form F. Calculated based on the difference between cumulative clearance output as at the end of 2018 and cumulative clearance output as at the end of 2017.
- 62 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.
- 63 Ibid.
- 64 CCM Extension Request 2019, p. 28.
- 65 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.
- 66 CCM Extension Request 2019, pp. 33 and 37.
- 67 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.
- 68 CCM Extension Request 2019, pp. 3, 34, and 36.
- 69 Ibid., pp. 33 and 34; and Statement of Germany, CCM Eighth Meeting of States Parties, Geneva, 3 September 2018.
- 70 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 31 July 2020.
- 71 Email from official on the Desk for Conventional Arms Control, Federal Foreign Office, 21 September 2020.