Deutscher Initiativkreis für das Verbot von Landminen

Brot für die Welt, Christoffel Blindenmission, Deutsche Kommission Justitia et Pax, Deutsche Welthungerhilfe, Deutscher Caritasverband, Diakonisches Werk der EKD, EIRENE-International, Jesuiten Flüchtlingsdienst (JRS), Handicap International (Deutschland), Kindernothilfe, medico international, Misereor, OXFAM-Deutschland, Pax Christi, Solidaritätsdienst International (SODI), terre des hommes, UNICEF

LANDMINE MONITOR REPORT 1999: G E R M A N Y

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Content

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LANDMINE MONITOR REPORT 1999: GERMANY (detailed version)

BANNING ANTIPERSONNEL LANDMINES

Germany, a leader in the development of landmines since Second World War, because of enormous public pressure from NGOs and engaged citizens, began a shift in policy in 1994 to work toward a ban on AP mines. Its first step was a unilateral export moratorium on APMs that year; in January 1996 the government prolonged the moratorium indefinitely; in April 1996 the Federal Armed Forces (FAF) renounced the use of AP mines and in December 1997 the last AP mine stockpiles were eliminated.[1]

While taking these steps domestically, initially Germany favored international negotiations toward a ban within the framework of the CD and CCW over the Ottawa-Process. The government believed that negotiating within the CD and CCW would result in agreements of a more binding character and force internationally because all the main producers of landmines and all super power nations (i.e. USA, CIS and China) were convened in this bodies.[2]

With the lack of movement in the CD in Geneva in 1996, Germany warmed to the initiative of Canadian Foreign Minister Lloyd Axworthy to force the negotiation of a treaty banning APMs outside normal UN procedures.[3] In ban negotiations, Germany sought the inclusion of strong verification mechanisms and to make the definition of AP mines as narrow as possible to exclude AT mines and other mine-like weapons. Germany hosted an Ottawa Process-related conference near Bonn on 24-25 April 1997,[4] the focus of which was discussions of verification measures in the context of an international treaty banning APMs.

Prior to the beginning of the Ottawa Process, on 18 July 1996, then Minister of Foreign Affairs Dr Klaus Kinkel presented the government's "Seven-Point Action Program on Antipersonnel Mines."[5] He noted that "the Federal Government has taken action. In January 1996 it imposed a unilateral unlimited moratorium on all exports of anti-personnel mines. In April 1996 the Federal Armed Forces relinquished totally and unconditionally the use of anti-personnel mines. Existing stocks will be destroyed. The conference to review the UN Conventional Weapons Convention which ended on 3 May 1996 agreed on more extensive prohibitions and restrictions on landmines. This was not enough. I therefore propose a seven-point action program on antipersonnel mines."[6]

The essential elements of the action program included: 1. a call for an international ban on AP mines, 2. a summary of German efforts to help with mine clearance, 3. an outline of the contribution of the Federal Armed Forces (FAF) toward training experts in mine detection and clearance, 4. a request that NATO and WEU support efforts to clear mines, 5. a call for the speediest and widest possible application of the revised Mine Protocol adopted on 3 May 1996, 6. establishing that contributions of mine-afflicted countries to resolve their mine problems would be a criterion for support from German financial and technical cooperation programs, and 7. urging the United Nations to make mine clearance part of UN peace-keeping missions.[7]

This program demonstrated that the requests of many NGOs and of the mine afflicted countries influenced the policies of the government and it focused not only the disarmament aspect of a ban on AP mine but also on humanitarian mine action.[8]

Germany signed the Mine Ban Treaty at the Signing Conference in Ottawa on 3 December 1997. On this occasion in his speech to the delegates, then Foreign Minister Kinkel noted that the verification mechanism of the Mine Ban Treaty was a

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[1] Auswärtiges Amt, Referat Öffentlichkeitsarbeit (Ministry of Foreign Affairs, Division of Public Relations), Weltweite Ächtung von Antipersonenminen. Der Vertrag von Ottawa - Eine Herausforderung für die Zukunft (Worldwide Ban on AP Mines – the Treaty of Ottawa - A Challenge for the Future), June 1998, pp. 55.
[2] Interview with Jörg Alt SJ, 23 February 1999.
[3] Ibid.
[4] http://www.mines.gc.ca./english/documents/conference, p. 5, Bonn, Germany, 24-25 April 1997.
[5] www.auswaertiges-amt.de, Seven-Point Action Program on AP Mines, presented by Federal Minister of Foreign Affairs Dr Klaus Kinkel (English Version), Bonn, 18. July 1996.
[6] Ibid., p. 1.
[7] Ibid., pp. 1-3.
[8] Please find an assessment of these efforts under HUMANITARIAN MINE ACTION.

”great improvement.”[9] He also announced that Germany would hold a conference on modern demining technology in June 1998.[10] In concluding, he reflected on the post war situation in Europe after the Second World War, when ”80 % of the scattered mines were cleared after a few years, because there was the political good will and financial resources.”[11]

Within a week after signing the Ban Treaty the German parliament debated it.[12] All parliamentary parties agreed that the ban of AP mines is an important step toward a more humane world and that the parliament had to ratify the convention before summer of 1998.[13] But differences arose as to the nature of the role Germany had played within the Ottawa-Process. The Green Party and the Party of Democratic Socialism deputies disputed that the German government had played a leadership role since the government coalition parties - Christian Democratic Union/Christian Social Union and Liberal Democratic Party had failed to do anything about AT mines.[14] Both deputies also pointed out that the decisive pressure group for a ban of mines had been the NGO community, especially the German Initiative to Ban Landmines.[15] In contrast the deputies of Christian Democratic Union and Liberal Democratic Party stressed German efforts to ban AP mines since 1993: with the establishment of a mine documentary center followed by stopping all exports of AP mines in 1994.[16] Neither saw any chance to ban AT mines, as there is no international consensus to stop using AT mines, given their military utility. They concluded that, if at all, a ban of AT mines would be a long term goal.[17]

Another issue at question was if the government had provided enough funds to aid landmine survivors and for mine action. The deputies of governmental parties argued that the government had been spending a sufficient amount for these issues, including the provision of military demining technology.[18] But the deputies of the Green Party and Party of Democratic Socialism noted the difference between military and humanitarian demining and that the Government should focus its efforts on humanitarian mine action and decrease allocations for research and development of mines and military mine-clearance technology.[19]

The suggestion of the deputy of Social Democratic Party of to suspend all support to those states who are not willing to sign the convention met with approval of the government coalition.[20] This means that in support of the efforts of Germany to establish a strong verification mechanism within the Ottawa Treaty, German policy reserves the right to stop support for mine clearance and survivor assistance if a state does not sign the Ban Treaty or violates the its treaty obligations.

Finally, the Minister of Foreign Affairs summed up the government’s view of next steps: 1. To ratify the Convention as soon as possible and to urge non signatories to accede to the Mine Ban Treaty; 2. to support more mine awareness in the afflicted countries; 3. to offer extensive aid to the landmine survivors from the provision of prostheses to medical and social care; and 4. to intensify the research on demining technology.[21] The deputy of Green Party outlined the demands of party as follows: 1. To prohibit worldwide development, production and export of mines, including technology transfer of mines with self-destruct mechanisms; 2. to make public all research projects and exports, all military mission plans and all stockpiles within Germany; and 3. to be transparent in the destruction of all existing mines.[22]

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[9] www.auswaertiges-amt.de: Speech on the occasion of Signing Conference of ‚Convention on the prohibition of the use, stockpiling, production and transfer of antipersonnel mines and on their destruction, Speech of Federal Minster of Foreign Affairs in Ottawa, 3. December 1997; p. 1.
[10] Ibid., p. 2.
[11] Ibid., p. 2 f.
[12] http://dip.bundestag.de, DIP - Das Informationssystem für Parlamentarische Vorgänge (Information System on Parliamentary Proceedings), Deutscher Bundestag –13. Wahlperiode – 210. Sitzung, Bonn, den 11. Dezember 1997, (Plenary Protocol 13/210, Bonn, 11 December 1997), pp. 19189.
[13] Ibid., pp.19190.
[14] Ibid., p. 19190; p. 19195.
[15] Ibid., p. 10190; p. 19195.
[16] Ibid., p. 19191.
[17] Ibid., p. 19192; p. 19194.
[18] Ibid., p. 19192; p. 19195.
[19] Ibid., p. 19191; p. 19196.
[20] Ibid., p. 19194.
[21] Ibid., p.19197.
[22] Ibid., p.19190.

The Ratification Process

Germany ratified the Mine Ban Treaty in several phases: The first phase was the transformation of the Mine Ban Treaty into national law on 12 May 1998.[23] The second phase was the development of implementing legislation.[24] The third phase was the deposit of the instruments of ratification at the United Nations in New York. Apparently, there was no vote against the ratification of the Treaty.[25]

The government bill presented to the Upper House contains a remarkable memorandum,[26] representing the official and binding policy of the German government and comments in detail on each article of the Mine Ban Convention. Generally the Convention is assessed 'to establish new standards within international law as there is set a sweeping prohibition of all types of AP mines accompanied by humanitarian measures.'[27] In accordance to this the use of AP mines is appraised 'to impair and to prevent reconstruction, to hinder repatriation of refugees and to threaten international personnel of UN missions and humanitarian relief organizations. On the long term the use of AP mines results in negative economic, social and structural effects on afflicted states and regions.'[28] Furthermore the significance of the Convention is read as an 'important step, no final mark. The quick and as worldwide as possible validity of the Convention still be the challenge even after the conference. Inseparable connects with this is the start of practical consequences within the sectors of mine clearance and landmine survivors assistance.'[29] Of interest is the reading of article 1, which the memorandum understands as follows: 'The commitments of the Convention concerns all AP mines of a State Party. In addition to this are also AP mines which are stored within foreign territory. A state party is possibly not accountable for those AP mines which another state keeps within the territory of a state party. If these AP mines are not under its authority and control, then the state party is not bound by law to destroy them.'[30] This argument is taken up again in the interpretation of article 4: 'Stocks from foreign armed forces do not come under definition of article 4 if they are not under one's authority and control of a State Party.'[31]

Comments on important article 6 are as follows: 'Article 6 contains essential provisions of the treaty: Their inclusion was decisive to get approval of many African and Latin-American states to join the Convention. Further more the regulation expresses one of the crucial requests of non governmental organizations. ... . Getting this passage NGOs and Third-World-Countries had their way above all, donor countries - among them the Federal Republic of Germany - made their countermove to demand not to impose inappropriate restrictions on provision of equipment and information for humanitarian purposes (paragraph 8).'[32] The important part of Germany within the negotiations on the Convention is seen by the commentary to lay down a strict verification mechanism: 'From the beginning the Government of the Federal Republic of Germany took the view that the Convention ... has important disarmament-oriented meaning and therefore verification has to be a central aspect to prohibit these weapons.'[33]

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[23] Bundesgesetzblatt Teil II (Federal Law Gazette, Part II), 11 May 1998, pp. 778, Gesetz vom 30.04.98 (Law from 30 April 1998).

[24] Bundesgesetzblatt Teil I (Federal Law Gazette, Part I), 09 July 1998, pp. 1778, Ausführungsgesetz zum Übereinkommen über das Verbot des Einsatzes, der Lagerung, der Herstellung und der Weitergabe von Antipersonenminen und über deren Vernichtung vom 3. Dezember 1997 (Law of application of the Convention on the prohibition of the use, stockpiling, production and transfer of antipersonnel mines and on their destruction from 3 December 1997).

[25] http://dip.bundestag.de, DIP - Das Informationssystem für Parlamentarische Vorgänge (Information System on Parliamentary Proceedings): Bundesrat Plenarprotokoll (Upper House of the Federal Parliament, plenary protocol) 721, 06 February 1998, p. 23B, 37C-38D; Bundestag Plenarprotokoll (Lower House of the Federal Parliament, plenary protocol) 13/219, 12 February 1998, p. 20061C-D20073C-20077D; Deutscher Bundestag (Lower House of the Federal Parliament), Document 13/10197, 25 March 1998; Bundesrat Plenarprotokoll (Upper House of the Federal Parliament, plenary protocol) 723, 27 March 1998, p. 148.

[26] http://dip.bundestag.de, Bundesrat, Drucksache 34/98, Gesetzentwurf der Bundesregierung vom 16.01.1998 (Upper House of the Federal Parliament, Document 34/98, bill of the Federal government from 16 January 1998).

[27] Ibid., p. 24.

[28] Ibid.

[29] Ibid., p. 25.

[30] Ibid., p. 26.

[31] Ibid., p. 28.

[32] Ibid., p. 28.

[33] Ibid., p. 29; p. 30.

The implementing legislation of the Mine Ban Convention (phase 2) was accomplished without any vote against it (according to available sources)[34] and came into force at 6 July 1998.[35] Remarkable is the passage which handles the breadth of application: "Offenses out of the territory of this law ... count as offenses irrespective of the national law of the scene of the crime, ... if the perpetrator is German."[36] This means: all persons with German nationality come under this law. That is a interesting juridical implication for German soldiers within future NATO operations since Turkey and the United States have still refused to sign the Treaty.

Ratification documents were deposited at UN on 23 July 1998.[37] With this the process of ratification within Germany was completed. One day after deposit, the Ministry of Foreign Affairs issued a press release which emphasized once again that 'One priority of German efforts within this issue [mine clearance] is the support of mechanical demining technology to clear mines faster and safer than before. It is absurd that humankind is able to fly to the moon while clearance of huge mine fields still is done by manual work!'[38]

The CCW

Germany ratified the revised Protocol 2 on Mines on 23 April 1997 and deposited its instruments of ratification at the UN on 2 May 1997.[39] Germany was one of the first states to do so, but also recognized - as noted by then-Foreign Minister Kinkel on the occasion of ratification that in the end, the Protocol is unsatisfactory as it does not include a general ban on AP mines worldwide.[40]

The CD

Germany's Commissioner for Disarmament and Arms Control, Ambassador Dr Rüdiger Hartmann, clearly summed up his government's position on the CD in Geneva on 30 July 1998: "The CD in our view has long failed to adequately address conventional weapons. One cannot ignore the fact that in recent years an increasing number of sub-regional and internal conflicts have taken place, in which small arms and light weapons as well as anti-personnel landmines have become major tools of violence. ... . Germany has consistently supported the goal of a complete ban of APL. ... . The primordial task is now to make acceptance of the Ottawa Convention or its objectives as universal as possible. We are aware that a number of states, including some large military powers and major regional powers with huge APL stockpiles and significant production capabilities, have decided not to adhere to the Ottawa Convention immediately. Many of them, however, have expressed their willingness to contribute to the resolution of the humanitarian aims of the Ottawa Convention by banning APL transfers. Germany therefore strongly supports the establishment of an Ad Hoc Committee on APL by the CD and an early start to negotiations on a universal ban on APL transfers. We should like to emphasize here that this agreement will have to be fully compatible with the Ottawa Convention and that it must not detract from its objectives."[41] This statement was renewed by Ambassador Hartmann in 25 March 1999.[42]

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[34] http://dip. bundestag.de, DIP - Das Informationssystem für Parlamentarische Vorgänge (Information System on Parliamentary Proceedings), Ausführungsgesetz zum Übereinkommen über das Verbot des Einsatzes, der Lagerung, der Herstellung und der Weitergabe von Antipersonenminen und über deren Vernichtung vom 3. Dezember 1997 (Law of application of the Convention on the prohibition of the use, stockpiling, production and transfer of antipersonnel mines and on their destruction from 3 December 1997).

[35] Bundesgesetzblatt Teil I (Federal Law Gazette, Part I), No. 43, 9 July 1998, pp. 1778.

[36] Ibid., p. 8.

[37] www.auswaertiges-amt.de, press release from 24 July 1998, Auswärtiges Amt: Deutsche und französische Ratifikationsurkunde zum internationalen Übereinkommen für das Verbot von Antipersonenminen in New York hinterlegt (Ministry of Foreign Affairs: German and French Ratification document on Conventon on Ban of AP mines is deposit in New York).

[38] Ibid., p. 1.

[39] http://dip.bundestag.de, DIP - Das Informationssystem für Parlamentarische Vorgänge (Information System on Parliamentary Proceedings), GESTA: XA012, Gesetz zum Protokoll II in der am 3. Mai 1996 geänderten Fassung und zum Protokoll IV vom 13. Oktober 1995 zum VN-Waffenübereinkommen (Law concerning protocol II, revised version of 03 May 1996 and protocol IV from 13 October 1995 concerning UN armament convention)

[40] http://www.auswaertiges-amt.de, press release, 2 May 1997.

[41] http://www.auswaertiges-amt.de, Third Session of the Conference on Disarmament 1998, Statement by the Federal Government Commissioner for Disarmament and Arms Control, Ambassador Dr Rüdiger Hartmann, Geneva, 30 July 1998 (Original version in English), p. 4.

[42] Statement by Ambassador Dr Rüdiger Hartmann, Commissioner of the Federal Government for Disarmament and Arms Control, Geneva, 25 March 1999.

PRODUCTION AND NEW DEVELOPMENTS[43]

In the late fifties, the Armed Forces began to procure their first AP and AT mines, which they decided to procure under license from foreign countries.[44] The first AP mine procured by the FAF was a product of the Swedish company LIAB - the metal-free DM-11 AP mine whose explosive charge is strong enough to damage vehicles.[45]

This landmine was produced under license by Diehl, a German company with headquarters in Nürnberg/Röthenbach in its factory of Mariahütte (Saarland). According to government sources, the FAF bought a huge number of these landmines until 1964 at a cost of 19.2 million DEM.[46] Specific data is classified even though these landmines were removed from stockpiles in 1994. Knowing that around 1.27 million of these mines were sorted out still in 1994, and assuming that a landmine of this design would not be cost more than 6 or 6.5 DEM, the total number of procured mines could be estimated at three million.[47]

From 1962-1967 the company Industriewerke Karlsruhe (later: Industriewerke Karlsruhe Augsburg, IWKA) produced the DM-31 AP mine for the FAF. According to government sources these procurements cost 49.2 million DEM. The German government keeps the number of procured mines secret.[48] Assuming that the cost of the mine would be between 30 and 45 DEM, the total number of procured mines could be between one and one and a half million mines.[49] According to the Ministries of Foreign Affairs and Defense only 3,000 DM-31 mines have been retained for training purposes by the Federal Armed Forces.[50] This mine is a bounding device which, upon explosion of its bursting charge, showers the surrounding area with small fragments of chopped steel rod.[51]

The Armed Forces also has DM-39s[52] -- so-called "explosive charges" ("Sprengkörper"). The costs and number of these devices are unknown. DM-39 are designed to protect DM-11 and DM-21 AT mines from neutralization. In other words, this "explosive charge" (the DM-39 and DM-39 A1) is used as an anti-handling-devices.[53] If anybody tries to clear an AT mine fitted with DM-39 or DM-39 A1 a pressure release fuse is activated, causing an explosion powerful enough to detonate the AT mine.[54] Out of Germany these devices are classified as AP mines, e.g., U.S. Department of Defense Humanitarian Demining Database.[55] The plastic-bodied DM-39 is available in a sheet-metal version, the DM-39A1. For practice exercises both mines are available as training versions with active fuses and smoke charges. The nonmetallic practice mine is designated the DM-68 and the metallic version the DM-68A1.[56]

By 1967 the basic landmine stocks of the FAF were full and purchases were not necessary for the near future. Consequently efforts concentrated on research and develop of new types of mines and new methods of laying them.[57]

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[43] There is no detailed information available on production of landmines in Former East Germany. Therefore the following chapter concentrate its account on landmines in the Federal Republic of Germany. Just a chart of landmines produced in Former East Germany in the past is added at the end of the chapter. The author do not have any information on production in Former East Germany at the present. This has to be researched for the following LM report.

[44] Thomas Küchenmeister, "Gute Mine" zum bösen Spiel: Landminen made in Germany (Idstein: KOMZI-Verlag, 1995), p. 30.

[45] Ibid, p. 31.

[46] http://dip.bundestag.de, Deutscher Bundestag, Drucksache 13/1473 (German Parliament, Document 13/1473), 22 May 1995, p. 3.

[47] Thomas Küchenmeister (1995), pp. 30-31.

[48] German Parliament, Document 13/1473 (Deutscher Bundestag, Drucksache 13/1473), pp. 3-4.

[49] Thomas Küchenmeister (1995), p. 33.

[50] Federal Ministry of Defense, Bonn 14 February 1997.

[51] U.S. Department of Defense: http://www.demining.brtrc.com, data set DM-31.

[52] Besides the bomblet MUSPA, procured by the Federal Armed Forces in the nineties, these mines are defined as AP mine by the U.S. Department of Defense (http://www.demining.brtrc.com, data set DM-39), although the German government does not classify these weapons as AP mines.

[53] Deutscher Bundestag, Drucksache 13/1473 (German Parliament, Document 13/1473), p. 3; see also: Thomas Küchenmeister (1995), p. 35.

[54] Thomas Küchenmeister (1995), p. 35.

[55] U.S. Department of Defense: http://www.demining.brtrc.com, data set DM-39 and DM-39 A1.

[56] Ibid.

[57] Thomas Küchenmeister (1995), p. 37.

The company Industriewerke Karlsruhe (IWK, later: IWKA) developed for production a new, improved German AT mine, called the "Panzermine II." This metal bodied mine weighs less than 10 kilograms[58] and is scatterable by helicopter up to a height of ten meters.. A ignition canal exists at the bottom of the mine, which is able to be connected with DM-31 anti-handling-devices.[59]

Under the name DM-21 this IWK-development was procured by the Federal Armed Forces between 1980 and 1982. At this time this mine was produced by company Diehl, because IWK sold the facilities to Diehl just before procurement.[60] According to government sources, the cost of procurement amounted to 88.1 million DEM.[61] Assuming that in the early eighties the DM-21 cost about half that of the later, much more technically perfected DM-31 ATM, the costs per mine could be calculated at approximately 600 DEM. Thus the number of mines procured would be at least 150.000.[62]

The 1970s heralded a transition to significantly changed mine warfare equipment of the FAF. After development dating back to 1956, the Armed Forces introduced a weapon system in 1970 which has strongly influenced mine warfare doctrine of the FAF. This system was the LARS (Light-Artillery-Rocket-System - Leichte Artillerie-Raketen-System) rocket launcher, which also could be provided with warheads containing AT-1 mines.[63] From 1970 till 1972 the Federal Armed Forces procured 209 of these landmine delivery systems. According to government sources, the cost was 72.2 Million DEM.[64] Approximately 65 of these mine delivery systems are still in use.[65]

At the same time Nobel developed a warhead called ”Pandora”, which was able to hold six AT-1 mines. These mines were procured by the Federal Armed Forces in about 1978. The AT-1 is first generation scatterable mine. This plastic stake mine has a mechanical vibration fuse which responds to sustained pressure by driving over it. The mine is equipped with an anti-handling-device and a self-destruct mechanism.[66]

With its purchase of LARS the Federal Armed Forces were the first European NATO military force to possess an artillery supported landmine delivery system. The importance which was attached to this new technology is shown in the volume of purchases: According to government sources, between 1978 and 1980, 108.6 Million DEM were spent to buy 15,000 LARS-AT-1 rockets each fitted out with eight AT-1 mines.[67] Altogether a total of 120,000 AT-1 mines were produced by Diehl. According to Government sources these rockets were transformed to rockets for exercise purposes between 1990 and 1993.[68]

In the mid-1980s, the FAF began to renew their stocks of mines with landmines delivery systems and new AT mines. The most significant characteristic of these new mines is their ability to be scattered mechanically and by rocket launchers.[69]

The most important new acquisition in mine stocks of mines was the AT-2 mine, which was introduced in the eighties.[70] Government sources indicated that between 1981 and 1986 564.7 million DEM were spent on AT-2 mines, designed to be scattered by the LARS mine layer.[71] These acquisitions included 60,000 LARS-rockets each fitted with five new AT-2 mines from Dynamit Nobel for a total of 300,000 mines.[72] Between 1984 and 1992 763 million DEM were spent on AT-2

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[58] Ibid.
[59] Ibid., p. 39.
[60] Ibid., p. 38.
[61] Deutscher Bundestag, Drucksache 13/1473 (German Parliament, Document 13/1473), p. 4.
[62] Thomas Küchenmeister (1995), p. 38.
[63] Ibid., p. 39.
[64] Deutscher Bundestag, Drucksache 13/1473 (German Parliament, Document 13/1473), p. 7.
[65] Ibid.
[66] Thomas Küchenmeister (1995), p. 40; see also: U.S. Department of Defense: http://www.demining.brtrc.com, data set AT 1.
[67] Deutscher Bundestag, Drucksache 13/1473 (German Parliament, Document 13/1473), p. 8; see also: Thomas Küchenmeister (1995), p. 40.
[68] Deutscher Bundestag, Drucksache 13/1473 (German Parliament, Document 13/1473), p. 8.
[69] Thomas Küchenmeister (1995), p. 41.
[70] Ibid.
[71] Deutscher Bundestag, Drucksache 13/1473 (German Parliament, Document 13/1473), p. 4; see also: Thomas Küchenmeister (1995), p. 42.
[72] Thomas Küchenmeister (1995); p. 41.

mines usable with the ”Skorpion” mine layer system from Dynamit Nobel, as well.[73] At least 32,000 magazines of mines were procured each consisting of twenty AT-2 mines for a total of 640,000 mines.[74] And finally between 1993 and 1995, 783.6 million DEM were spent on AT-2 mines usable with the MARS/MRLS rocket launcher. [75] For this the Federal Armed Forces got 9,360 rockets each consisting of twenty-eight AT-2 mines, for a total of 262,080 mines.[76] This means from 1981 until 1995 a total of more than 2.11 billion DEM were spent for more than 1.2 million AT-2 mines.

The AT-2 is an armor-penetrating belly-attack mine that uses a shaped-charge of pressed RDX/TNT weighing 0.85 kg. The mine is cylindrical with soft vinyl cover. In addition to the explosive train, the system includes an impact sensor, fuse, timer, and lithium battery. Simultaneously a 500-mm sensor is deployed; its function is to sense vibrations caused by vehicle belly or track. The AT-2 is reported to be able to penetrate 15.0 to 20.0 cm of armor. Six selectable self-destruct times are available.[77]

From 1985 on the FAF procured the mechanical mine delivery system 85. It is a trailer with an integrated plough developed in Sweden, which allows the laying of the DM-31 AT mine on the surface or under the ground. The DM-31 was produced in Sweden by the company FFV. The DM-31 is a shaped charge ATM with a magnetic fuse. The fuse contains 2 magnetized balls that sit in a path under the edge of the mine lid functioning as an antilift device. The DM-31 can be laid mechanically or by hand.[78]

Government sources indicate 125,000 mines were procured between 1988 and 1992. [79] Information on the cost of these procurements is inconsistent. In information given to the parliament the Ministry of Defense specified the costs at 160 million DEM in 1995, while in the press the costs were quoted as 182.2 million DEM. Finally, at the time of order in 1985, the costs were calculated to be merely at 141.2 million DEM.[80]

In the early nineties, the DM-51 AP mines was acquired from the disintegrated Armed Forces of Former East Germany. With this mine the Federal Republic of Germany gained a so-called Claymore mine for the first time. According to government sources, some 33,000 mines were inherited from the former East Germany.[81]

The DM-51 is based on the Russian MON-50 AP mine. The MON-50 has a plastic body with rows of imbedded fragments on the side facing the target. Two variants exist, one with 540 steel ball bearing fragments, and the other with 485 cylindrical chopped steel wire fragments. The mine rests on two pairs of folding scissors-like legs. Because the mine can be articulated at the leg joints, the height of the fragment pattern can be adjusted. On the top center of the mine is a peep sight with a fuse well on either side. These fuse wells will accommodate a variety of fuses, including tripwire, breakwire, and command detonation.[82] Although there is no independent verification on destroying these mines, it has been assumed that they were eliminated in December 1997.

Modern, multi-functional submunitions -- mines like the MUSPA from Rheinmetall/Daimler Benz Aerospace/ Thomson-Dasa-Wirksysteme (TDW) -- testify to the ongoing development of mine technology. They are definitively designed to cause human casualties. Remotely deliverable with fighter jets or dispenser weapons, these mines can be deployed by the thousands and extremely quickly over long ranges, greatly enhancing the offensive aspect of mine warfare.

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[73] Deutscher Bundestag, Drucksache 13/1473 (German Parliament, Document 13/1473), p. 4.
[74] Thomas Küchenmeister (1995), p. 43.
[75] http://dip.bundestag.de, Bundesdrucksache 13/1473 (German Parliament, Document 13/1473), p. 4.
[76] Thomas Küchenmeister (1995), p. 43.
[77] U.S. Department of Defense: http://www.demining.brtrc.com, data set AT-2.
[78] U.S. Department of Defense: http://www.demining.brtrc.com, data set DM-31 AT.
[79] Federal Ministry of Defense, letter to Marcel Pott (Journalist), Bonn, undated (May 1995), as cited in Thomas Küchenmeister (1995), p. 45
[80] Deutscher Bundestag, Drucksache 13/1473 (German Parliament, Document 13/1473), p. 4; Federal Ministry of Defense, letter to Marcel Pott (Journalist), Bonn, undated (May 1995), as cited in Thomas Küchenmeister (1995), p. 45, "Wehrdienst" ("Military Service" - magazine), No. 185, 1985, as cited in Thomas Küchenmeister (1995), p. 45.
[81] Thomas Küchenmeister (1995), p. 46; see also: Deutscher Bundestag, Drucksache 13/1473 (German Parliament, Document 13/1473), p. 1.
[82] U.S. Department of Defense: http://www.demining.brtrc.com, data set MON-50.

The number of MUSPAs in stock is classified.[83] According to reliable estimates the number of procured mines MUSPA is 90,000 at a cost of around 210 million DEM.[84]

Even though the Ministry of Defense and its producers consider MUSPA to be a ”submunition,” the U.S. Department of Defense classifies the weapon as an AP mine: "The MUSPA is an antimeteriel / antipersonnel fragmentation minelet dispensed as a submunition from the former West German MW-1 weapon system. The mine is a heavy fragmentation munition with 2100 steel pellets as the primary lethal mechanism. Once it has been parachute delivered, the MUSPA self-rights and arms. An acoustic sensor then actively senses for an aircraft engine signature. A nearly identical submunition, the MUSA, differs only in that no fuse is present; instead it self-destructs at a preset time."[85]

From the mid-nineties on, German landmines producers have intensified their efforts to complete developments of more powerful high-tech mines and recently as European joint ventures. These new generation of mines continue to enhance the offensive aspect of mine warfare, which meets the requirements of military to make future warfare technology supported.

From 1996 to 1998 PARM 1 was offered by Daimler Benz Aerospace together with THOMSON (France) by joint venture with Thomson-DASA Armaments (TDA) or Thomson-Dasa-Wirksysteme (TDW)[86] Government sources indicated that 12,000 PARM-1s had been procured at a cost of 99.6 million DEM by 1998.[87] This figures differs from the information provided by DASA, which indicated a cost of 100.5 million DEM.[88]

The PARM-1 stand on an adjustable tripod, with 360 degrees of movement and an elevation of -45 to +90 degrees. A reel of fiber-optic cable is laid along the aimed line of sight, the timer is activated, and the mine is armed following a 5-minute arming delay. When the PARM 1 warhead is fired, a counterweight is ejected out the back and stabilizing fins extend to guide the warhead to the target. The warhead contains a shaped-charge lethal mechanism that penetrates the target with an impact of up to 40 km/h.[89]

After public pressure generated by shareholders of Daimler-Benz, the Director of Daimler Benz (now Daimler-Benz/Chrysler) Jurgen Schrempp announced in late 1998 that production of PARM-1 would be stopped by the end of the year as well as the development of PARM-2.[90]

But similar new high-tech mines are still under development in other European joint-ventures – such as the ARGES, developed by Dynamit Nobel (Germany)/Honeywell (Germany)/GIAT (France)/Hunting (Great Britain). It is a rival product of the PARM-2 and one of the most modern off-route mines offered to the European market. The one mine costs approximately 12,000 DEM. ARGES will be used as a standard NATO weapon, but is not expected to be introduced before 2000.

ARGES, like the PARM 2, is an autonomous, sensor-controlled anti-armor weapon, which destroys the target from the side with a hollow charge warhead. The acoustic alarm sensor of the ARGES mine, which can make out close- and long-range targets, can 'hear around corners' and therefore also be deployed in confined areas. A microprocessor calculates the distance, direction, speed and the length of the target vehicle. The length of the vehicle is crucial in deciding whether it is a combat target or not. ”The question of how reliably a differentiation on this basis between civilian and military vehicles will work hardly needs to be answered. Then the question of whether for example the ARGES mine can differentiate between various tank models was in fact answered in the negative by a spokesperson for the sensor manufacturers Honeywell (Germany), which also manufactures the PARM sensors. On the contrary, ‘no German soldier would be advised to even get close to an activated ARGES mine with his tank’”.[91]

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[83] Deutscher Bundestag, Drucksache 13/1473 (German Parliament, Document 13/1473), p. 8.
[84] Thomas Küchenmeister (1995), pp. 50-51.
[85] U.S. Department of Defense: http://www.demining.brtrc.com, data set MUSPA.
[86] This joint venture ended in early 1998 and TDW is again 100 % a subsidiary company of DASA (source: Soldat und Technik (Soldier and Technology), October 1998, p. 654).
[87] Federal Ministry of Defense, Bonn, undated (December 1997).
[88] KNA (Catholic News Agency), 29 May 1998.
[89] U.S. Department of Defense: http://www.demining.brtrc.com,data set PARM-1.
[90] RIB-Rundbrief (RIB information letter), No. 21, November 1998.
[91] Wilfried Telkämper (MdEP), Sterben in Zeitupe: Minen aus der EU (Dying in slow-motion: Landmines made in European Union), edited by Green Party within the European Parliament, Brussels 1997; English version manuscript of Thomas Küchenmeister, Landmines - made in Europe (unpublished manuscript), 1998.

Area defense mines, such as the COBRA area-defense mine from Rheinmetall Industrie, constitute another example in the "dynamic" high-tech mines category. Government sources indicate that 310 million DEM are projected to be spent on the system over the next few years and an amount on 45.0 million DEM has already been spent.[92] This mine symbolizes the future technology of European high-tech mines -- an autonomous, "intelligent", conflict robot ready for offensive deployment. It fulfills the highest military requirements and characterizes the transition from a static to a dynamic weaponry system.

Equipped with the SMart 155 munitions from the German companies Rheinmetall Industrie and Diehl, the COBRA is a ”top attack” weapon. The target is recognized through seismic and acoustic sensors and the mine when activated is fired to a height of approximately 150 meters. There, suspended from a parachute, it searches, finds and finally fires the sensor fuzzed munitions on the target over a radius of more than 300 meters. "False targets, e.g. light commercial vehicles, can therefore be reliably identified and not targeted" assure official sources of the Ministry of Finance. No comment is forthcoming on how the mine reacts to large commercial vehicles such as heavy goods vehicles, civilian buses or similar vehicles. Military publications report however that warnings should be issued against the current risks associated with this ambitious development, especially with remote delivery by missile.[93]

[92] Federal Ministry of Defense, Bonn, undated (December 1997).
[93] Thomas Küchenmeister, 1998.

Procurement of landmines within Former West Germany				
Name/Type	**Total of procured pieces** (in million)	**Total costs** (in million DEM)	**1999 US-Dollar million equivalent** [94]	Current Situation
DM-11 AP	[95]*3.0	[96]**19.2	10.9	[97]***eliminated
DM-31 AP	*1.5	**49.2	27.9	***eliminated (3,000 stored for training purposes)
DM-21 AT (AHD is possible)	*0.15	**88.1	50.0	[98]****stored
AT-1 (AHD is possible)	*0.12	**108.6	61.7	**discarded and changed into warheads for exercise purposes
AT-2 (AHD is possible)	*1.2	**2.111.0	1.199.4	****stored
DM-31 AT	*0.125	**160.0	90.9	****stored
DM-39 AP (AHD)	Not available figure	Not available figure	-	approximately stored
DM-51 AP (MON 50)	**0.03	Not available figure	-	***eliminated
MUSPA AP (submunitions)	*0.09	*210.0	119.3	****stored
MIFF (AT mine, AHD is possible)	*0.125	*250.0	142.0	****stored
Off-route AT PARM-1	[99]*****0.012	*****99.6	56.6	****stored
Off-route AT PARM-2	planned: *0.05	for research and development *ca. 278.0	157.9	*****under development [100]******stopped since end of 1998
Surface defense mine COBRA	-	total planned for research and development *****310.0	176.1	*****under development

[94] Exchange rate: DEM 1.76 = US-$ 1.
[95] *Thomas Küchenmeister, (1995), pp. 51-52.
[96] ** Deutscher Bundestag, Drucksache 13/1473 (German Parliament, Document 13/1473).
[97] *** Auswärtiges Amt, Referat Öffentlichkeitsarbeit (Ministry of Foreign Affairs, Division of Public Relations), June 1998.
[98] **** Federal Ministry of Defense, Bonn, 14 February 1997.
[99] ***** Federal Ministry of Defense, Bonn, undated (December 1997).
[100] ******RIB-Rundbrief (RIB information letter), No. 21, November 1998.

Production of Landmines of Former East Germany[101]				
Name/Type	**Total of procured pieces** (in million)	**Total costs** (in million DEM)	**1999 US-Dollar million equivalent**[102]	Actually situation
PM 60 / AT mine	Not available figure	Not available figure	-	Not available
PMP 71 / AP mine	Not available figure	Not available figure	-	Not available
POMZ-2 / AP mine	Not available figure	Not available figure	-	Not available
POMZ-2M / AP mine	Not available figure	Not available figure	-	Not available
PPM-2 / AP mine	Not available figure	Not available figure	-	Not available
TM-46 / AT mine	Not available figure	Not available figure	-	Not available
TM-62P3 / AT mine	Not available figure	Not available figure	-	Not available
TMN-46 / AT mine	Not available figure	Not available figure	-	Not available

TRANSFER

German landmine exports are classified, so verifying them is difficult. Official answers from the government usually confirm transfers already known to the public.[103] Detailed inquiries by members of parliament to the government about landmine exports are mostly responded to that the information is classified.[104] The rare documents released contained only one detailed information on: the supply of twenty AP-2 mines to the Armed Forces of the Netherlands on 17 September 1993.[105] Further questions on supplies of landmines are not answered as being classified, even if the export has been confirmed: Between 1985 and 1990 three authorizations for a total of 262 landmines are specified, and between 1991 and 31 July 1995 ten authorizations for a total of 45,139 landmines.[106]

With this official information, it is not possible to reconstruct or estimate German landmine exports. But inconsistencies in the official information has been uncovered: According to the magazine ”Wehrdienst,” 87,024 AT-2s were delivered to United Kingdom in 1995.[107] So the official answer of the government on authorizations for about only 45,139 landmines between 1991 and 1995 is untrustworthy.

In spite of the difficulties in obtaining data on exports of landmines, the following transfers of landmines seem certain:

[101] All data from U.S. Department of Defense: http://www.demining.brtrc.com.
[102] Exchange rate: DEM 1.76 = US-$ 1.
[103] Thomas Küchenmeister (1995), p. 117.
[104] http://dip.bundestag.de, Bundesdrucksache 13/2252 (German Parliament, Document 13/2252), pp.1-2; see also: http://dip.bundestag.de, Bundesdrucksache 13/2432 (German Parliament, Document 13/2432), p. 4.
[105] Bundesdrucksache 13/2252 (German Parliament, Document 13/2252), pp. 3-4.
[106] Bundesdrucksache 13/2432 (German Parliament, Document 13/2432), pp. 1-2.
[107] Wehrdienst (magazine: Military Service) as cited by Thomas Küchenmeister (1995), p. 119.

1. Until 1994 Italy received MIFF, MUSPA and MUSA mines, together with one hundred MW 1 submunition dispensers for the combat aircraft Tornado.
2. In 1994 Finland got probably more than 100,000 TM-62 AT mines from the stockpiles of the former Armed Forces of East Germany.
3. At the end of 1990 and beginning of 1991, the United Kingdom obtained four Skorpion mine delivery systems and 15,000 AT-2 mines as German military support for the Gulf War. These weapons were returned after the war.
4. Also during Gulf War, Israel got around one hundred of several types of landmines from stockpiles of the former Armed Forces of East Germany to use for research.
5. In the same context and for the same purposes, the United States obtained 552 PMP 2, TM 46 and TM 63 mines (all from the Former East Germany). Later, additional mines were provided.
6. Saudi Arabia received twenty AT mines in 1996.[108]
7. In 1997 Norway procured 468 Mars rocket launchers fitted with AT-2 warheads from Germany.[109]

At first glance, it seems that German landmines have only delivered to NATO-related countries or to so-called ”secure countries.” But there are clear indications that German landmines were found even in those countries which are not part of NATO and which recently have fought or are still engaged in armed conflict. In answer to the question of how DM-11 AT mines could shown up in Somalia and DM-31 AP mines in Angola, the German government answered on 5 September 1995, that no permission for such transfers had been given, so they do not know how these transfers could have taken place.[110] However, these are examples that national prohibitions of weapons do not work if arms are developed and produced by multilateral joint ventures. In these cases, arms suppliers can select - according to various national legislation - which country is preferred for transferring their weapons. This should have been considered when Germany first enacted its unilateral moratorium on the export of AP mines in 1994.[111]

That the ban of AP mines in Germany is full of loopholes could also be demonstrated through the dealings with U.S. stockpiles and transfers of AP mines within Germany. Stockpiling and transfers of U.S. AP mines are still allowed within Germany. The German government argues that according to the ”Status on Forces Agreement” (SOFA), weapons of foreign forces within Germany are not covered by German law and control.[112]

[108] All data from Thomas Küchenmeister (1995), p. 119.
[109] www.auswaertiges-amt.de, Report of international conventional arms transfers, 1997.
[110] Bundesdrucksache 13/2252 (German Parliament, Document 13/2252), p. 3.
[111] Auswärtiges Amt, Referat Öffentlichkeitsarbeit (Ministry of Foreign Affairs, Division of Public Relations), June 1998, p. 55.
[112] Spiegel, 21/1998, p. 20; see also: Federal Ministry of Defense, Bonn, 02.12.1997; ”Wie alle andern Waffen unterliegen auch die US Landminen aufgrund obiger Bestimmungen nicht der Kontrolle der Bundesrepublik Deutschland.” ("Due to regulations mentioned above [SOFA; M.H.] US landmines like all other weapons do not fall under control of the Federal Republic of Germany.")

Use of landmines from Former West Germany[113]		
Name/Type	NATO-related using Countries	Using Countries (non NATO-members)
DM-11 AP	Former West Germany, France	Somalia
DM-31 AP	Former West Germany, Sweden	Angola, Zambia
DM-21 AT (AHD is possible)	Not available	Not available
AT-1 (AHD is possible)	Not available	Not available
AT-2 (AHD is possible)	Former West Germany, United Kingdom, France, Italy Norway[114]	-
DM-31 AT	Not available	Not available
DM-39 AP (AHD)	Former West Germany	-
MUSPA AP (submunitions)	Former West Germany, Italy	-
MIFF AT (AHD is possible)	Former West Germany, Italy	-
PARM-1 Off-route AT	Former West Germany, Sweden	-

[113] All data (with one exception) from U.S. Department of Defense: http://www.demining.brtrc.com.
[114] www.auswaertiges-amt, Report of international conventional arms transfers, 1997.

Use of landmines from Former East Germany[115]	
Name/Type	Using Countries
PM 60 / AT mine	Former East Germany, Egypt, Eritrea, Ethiopia
PMP 71 / AP mine	Former East Germany, Somalia, Eritrea, Ethiopia
POMZ-2 / AP mine	Afghanistan, Angola, Bulgaria, Cambodia, China, Cuba, Eritrea, Ethiopia, Former East Germany, Former Soviet Union, Iraq, Libya, Nicaragua, Somalia, South Africa, Mozambique, Namibia, Vietnam, Zambia, Zimbabwe
POMZ-2M / AP mine	Afghanistan, Angola, Bulgaria, Cambodia, China, Cuba, Eritrea, Ethiopia, Former East Germany, Former Soviet Union, Iraq, Mozambique, Namibia, Nicaragua, North Korea, South Africa, Vietnam, Zambia, Zimbabwe
PPM-2 / AP mine	Angola, Cambodia, China, Egypt, Eritrea, Ethiopia, Former East Germany, Iraq, Mozambique, Namibia, Somalia, South Africa, Zambia
TM-46 / AT mine	Afghanistan, Angola, Bulgaria, Egypt, Eritrea, Ethiopia, Former Soviet Union, Former East Germany, Iraq, Israel, Mozambique, Namibia, Nicaragua, South Africa, Zimbabwe, Somalia, Cambodia, Zambia,
TM-62P3 / AT mine	Egypt, Former Soviet Union, Poland
TMN-46 / AT mine	Afghanistan, Angola, Bulgaria, Cambodia, Egypt, Eritrea, Ethiopia, Former Soviet Union, Former East Germany, Iraq, Mozambique, Namibia, Nicaragua, Poland, South Africa, Somalia, Zambia,

STOCKPILING AND DESTRUCTION

According to official information from the government, the Federal Armed Forces finished the elimination of all of their AP mines in December 1997.[116] Therefore, according to their own information, the FAF destroyed around 1.7 million AP mines. This elimination was carried out by private companies, observing environmental standards, at a cost of 4.2 million DEM.[117] The exact names of the companies, their methods of destruction or their kinds of environmental standards are not available. No independent efforts were made to verify stockpile numbers and destruction. A number of 3,000 DM-31 AP mines are retained, under the jurisdiction of the Ministry of Defense, for train demining personnel and to test demining technology.[118]

USE

There is no evidence of new use of AP mines in Germany. But – as mentioned above – a unknown number of MUSPA submunitions/bomblets are still in stockpiles, which the US Department of Defense considers to be AP mines. Germany also reserve the right to use AT mines with anti-handling devices, such as the AT-2. Furthermore the area defense mine COBRA is still under development, and will be fitted out with anti-handling devices.[119] This is of concern as the diplomatic record of the Oslo treaty negotiations shows that governments consider that such devices, if they explode from innocent, unintentional acts, are considered to be APMs and thus, illegal under the Mine Ban Treaty.[120]

[115] All data from U.S. Department of Defense: http://www.demining.brtrc.com.
[116] Auswärtiges Amt, Referat Öffentlichkeitsarbeit (Ministry of Foreign Affairs, Division of Public Relations), June 1998, p. 57.
[117] Europäische Sicherheit (European Security), 3/1998, editor: Verlag E.S. Mittler & Sohn GmbH, p. 5.
[118] Federal Ministry of Defense, Bonn, 14 February 1997.
[119] Ibid.
[120] International Campaign to Ban Landmines, Statement to the Closing Plenary of the Oslo Diplomatic Conference on a Treaty to Ban Antipersonnel Landmines, 18 September 1997.

HUMANITARIAN MINE ACTION

Funding

Funding for mine action programs comes from different ministries. The principal budget for mine action is under the Ministry of Foreign Affairs. The projects it supports include the following:

- concrete projects of mine and UXO's clearance,
- training of local demining personnel,
- strengthening national mine clearance structures with the support of German experts,
- testing of modern mine clearance technology and detection/sensor technology,
- procurement of technical equipment for mine clearance,
- supporting of mine awareness projects within afflicted communities.

One of the important goals of the policy of the Ministry of Foreign Affairs is support for the development of modern mine clearance technology to speed up mine clearance operations.[121] The Foreign Ministry also supports the use of dogs to detect mines in some regions. This technique, according to the Foreign Ministry, is very effective and cheap. Therefore they would like to strengthen mine detection by using dogs in Afghanistan and other suitable regions.[122]

It remains to be seen, if the current Minister of Foreign Affairs Joschka Fischer will stop the policy of the former Minister of Foreign Affairs Dr Klaus Kinkel, who also supported companies which made profit on producing landmines in the past. One such is the NGO 'Stiftung Sankt Barbara'(Foundation Sankt Barbara), which has been supported by the Ministry of Foreign Affairs in 1996, 1997 and 1998.[123] Behind this NGO stands among others the 'Förderkreis der Wirtschaft Sankt Barbara e.V.' ('Circle of economical supporters of Sankt Barbara'), which is composed of individuals and twelve large-scale enterprises, among them several firms which are well known as armament industry. Patron of the supporter circle is Dr Klaus Kinkel.[124]

The companies, which are combined in the 'circle of economic supporters of Sankt Barbara', either develop mine clearance technology or have interest in mine clearance for future investments. Against this background it is clear, why Stiftung Sankt Barbara's internal report on Angola in 1997, which notes that the organization could be contact point for German investors. Further more it is argued in this report that mineral resources like gold, oil and copper could be important for the German economy. The behavior of NGO 'Stiftung Sankt Barbara' is therefore assessed correctly by the German public as "economic promotion under false flag of charity".[125]

In this context the support of mine clearance technology like "Rhino" and "Minebreaker 2000"has also to be considered. In 1997 the Ministry of Foreign Affairs supported the field testing "Rhino" in Cambodia.[126] This mine clearance device has been developed by the company MAK-System, which belongs 100 % to the joint-stock company "Rheinmetall Industrie"[127], which is the former producer of MUSPA submunitions and a developer of new COBRA area defense mine. This is one example of "double dipping," in which landmine producers want to make profit twice – to make money on the problem they helped create. The second example is the mine clearance device 'Minebreaker 2000', whose trial in the field in Bosnia-Herzegovina was also supported by the Ministry of Foreign Affairs in 1998. "Minebreaker 2000" was developed by Flensburger Fahrzeugbau Gesellschaft (FFG), which belongs to the armament company Diehl.[128] An internal report on the result of the trail in Bosnia-Herzegovina says that the conditions after the mine clearance operation were more difficult than before. Instead of destroying the landmines, the 'Minebreaker 2000' ploughed the landmines into the ground – partly damaged -- which makes the landmines more dangerous than before.[129]

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[121] Federal Ministry of Foreign Affairs, Bonn, 2 February 1999.
[122] Ibid.
[123] Federal Ministry of Foreign Affairs, Bonn, 17 September 1997; Federal Ministry of Foreign Affairs, Bonn, 2.February 1999.
[124] "Im Mäntelchen der Nächstenliebe. Wem hilft die deutsche Hilfsorganisation 'Stiftung Sankt Barbara' im südlichen Afrika: Minenopfern oder Rüstungs-Unternehmen." ("Sailing under the flag of charity. Who aids the German NGO 'Sankt Barbara Stiftung' within southern Africa: mine victims or armament industries?"), Kölner Stadtanzeiger, 17 February 1998.
[125] Ibid.
[126] Federal Ministry of Foreign Affairs, Bonn, 2 February 1999.
[127] www.rheinmetall.com/html/struktur.htm (promotion of the company itself).
[128] http://www.diehl-gruppe.de/diehl_1.htm; see also "Das Geschäft der Allesfresser" ("The deal of omnivores"), Süddeutsche Zeitung, 5 November 1998.
[129] "Das Geschäft der Allesfresser" ("The deal of omnivores"), Süddeutsche Zeitung, 5 November 1998.

Additionally, the Ministry for Economic Co-operation and Development provides funds for demining and survivor assistance in the context of overall development of a region.[130] The Ministry of Foreign Affairs plays the lead role in funding for humanitarian demining. Therefore the Ministry for Economic Co-operation and Development supports only projects with components of survivor assistance. These measures are concentrated on physical and psychological therapy as well as orthopedics and fitting of prostheses.[131] In its assistance for landmine survivors, the Ministry for Economic Co-operation and Development favors efforts to reintegrate landmine survivors into social and economic structures and to support the acceptance of landmine survivors within the society.[132]

Support for humanitarian mine action is concentrated on the technical aspects of mine clearance and on mine awareness of the afflicted communities. In comparison with this, survivor assistance and development oriented mine action have less support. To say it in figures, between 1993 and 1998 the Ministry for Economic Co-operation and Development support amounted to around 31.22 million DEM (around US$17.94 million), while the Ministry of Foreign Affairs allocated 54,23 million DEM (around US$30,81 million) over the same period.

[130] Federal Ministry for Economic Co-operation and Development, Bonn, 15. January 1999.
[131] Ibid..
[132] Ibid..

Funding of Ministry of Foreign affairs (AA)				
YEAR	**SUPPORTED COUNTRY**	**TYPE OF ASSISTANCE**	**AVAILABLE RESOURCES IN DEM**	**1999 US-Dollar equivalent**[133]
1992	Nicaragua	Procurement of wireless sets and fixed and removable stations for demining staff of OAS (Organization of American States).	[134]*100,000	57,471
Subtotal 1992			*100,000*	*57,471*
1993	Mozambique	Supporting of the program "Mine Awareness Instructor Training in Mozambique and Neighboring Countries" of UNCHR for refugees out of Malawi, Zimbabwe, Tanzania. This Program was executed by Norwegian People's Aid. Cost includes expenses for 6 educator of NPA, education of about 450 people (teachers and military and medical persons) of the refugees camps and education material for schools. Furthermore donating 8 mine detectors from Ex-NVA (Former Army of GDR) to UNCHR.	*590,000	339,080
Subtotal 1993			*590,000*	*33,.080*
1994	Afghanistan	Provision of 2 demining tools (MSG 75) to UNCHR	*no specification	-
	Georgia	Support of UNCHR to educate refugees in Georgia. Developing, producing and distributing leaflets, brochures and posters by "Norwegian Refugee Council".	*70,000	40,229
	Cambodia	Support of NGO Halo Trust for demining of a 120.000 sq. m area in the province Pursat. Financing of 20 deminer and 12 Ebinger mine detectors.	*250,000	143,678
	Mozambique	Support of commercial firm Gesellschaft für ProjektCoordination mbH (in cooperation with UNOHAC and UNOMOZ) to create and manage a three-month project for protection of the civilian population. The program includes 5 foreign experts to document and mark mine fields, to educate local demining personnel, to supervise demining teams of those complete the demining education. Also two experts to local personnel to deactivate mines and UXO's and one physician to educate local ambulance technicians in first aid for mine victims.	*476,491	273,845
Subtotal 1994			*796,491*	*457,753*
1995	Afghanistan	Supporting of UNOCHA for the demining education center in Jalabad/Afghanistan. Donation of 200 protective outfits (incl. boots) of the Federal Armed Forces.	*485,000	288,690
		70,000 DM for mine awareness program in Kabul.	*70,000	40,229
	Angola	Support of the Demining Program of UNAVEM III. Provision of Ebinger mine detectors.	*55,000	31,609
		Provision of protective gear and 5 demining trainers (foreign experts).	*205,300	117,988
	Bosnia-Herzegovnia	One expert to evaluate the possibilities of demining in Mostar.	*no specification	-

[133] Exchange rate: DEM 1.76 = US-$ 1.
[134] *Federal Ministry of Foreign Affairs, Bonn, 22 November 1995.

YEAR	SUPPORTED COUNTRY	TYPE OF ASSISTANCE	AVAILABLE RESOURCES IN DEM	1999 US-Dollar equivalent
1995	Mozambique	Support of commercial firm Gesellschaft für ProjektCoordination mbH (continuation of 1994 program mentioned above for further three months).	*360,000	206,896
		Support of a commercial firm for new demining technology (no details). Supervision of UN and Mozambican authorities. Provision of transportation devices from Federal Armed Forces.	*850,000	488,505
	Nagorno-Karabach	to NGO HALO-Trust for mine detection tools and protective gear.	*60,000	34,482
	Cambodia	Support of NGO Halo-Trust. Provision of 5 Ebinger mine detectors.	*25,000	14,367
		Provision of 20 mine detectors (Ebinger) to Cambodian Mine Action Center (CMAC).	*100,000	57,471
Subtotal 1995			*2,210,300*	*1,270,287*
1996	Afghanistan	Support of the Mine Dog Centers (MDC) in the emergency program of UNOCHA. Provision of mine detection tools for MDC and replacement parts for motor lorries.	[135]**3,980,757	2,287,791
	Angola	Support of NGOs ”Stiftung Sankt Barbara” (SSB), ”Menschen gegen Minen” (MgM) and Norwegian People’s Aid (NPA).	**3,832,597	2,202,641
	Azerbaijan	Support of a commercial firm and NGO Halo Trust. Provision of German mine detectors and mine protective gear..	**47,740	27,436
	Eritrea	Provision of German mine detectors.	**58,324	34,716
	Ethiopia	Provision of German mine detectors.	**82,896	49,342
	Georgia	Support of NGO Halo-Trust	**723,263	415,668
	Guatemala	Support of the parliament-initiated project to remove consequences of military conflicts. Education of Guatemalan experts for clearing mines and UXO’s.	**376,645	216,462
	Honduras	Support of a commercial firm and OAS. Provision of German mine detectors.	**49,985	28,727
	Cambodia	Support of a commercial firm and NGO Cambodian Mine Action Center (CMAC). Supporting of extension and management of CMAC, provision of German mine detectors and mine protective gear.	**1,268,135	728,813
	Laos	Support of commercial firm Gerbera. Education of indigenous personnel to clear mines and UXO’s. Organizing of national structures for mine clearance.	**1,728,085	993,152
	Mozambique	Support of commercial firms GPC and Walter Krohn resp. UN. Continuation of mine awareness program. Supporting building up and management of data base of the national demining commission (firm GPC). Financing tests of ”Krohn’sche Fräse” (firm Walter Krohn). Supporting the Trust Funds of UN to establish mechanical demining in Mozambique.	**4,868,301	2,797,874
	Nicaragua	Support of national demining and mine awareness program of the national government.	**810,000	465,517

[135] **Federal Ministry of Foreign Affairs, Bonn, 17 September 1997.

YEAR	SUPPORTED COUNTRY	TYPE OF ASSISTANCE	AVAILABLE RESOURCES IN DEM	1999 US-Dollar equivalent
1996	South Sudan	Support of NGO Halo Trust to clear mines and UXO's.	**23,500	13,505
1995-1996	Angola	Support of mine clearance program within the scope of UN peace keeping measures	**1,687,815	958,985
Subtotal 1996			*17,850,228*	*10,625,135*
1997	Afghanistan	Support of UNOCHA and mine dog center. Supporting education of indigenous demining personnel. Co-financing the German chief technical advisor of Mine Dog Center. Supporting the management of Mine Dog Center including demining of an area of 1,400 ha.	**3,647,650	2,096,350
	Angola	Supporting of commercial firm Gerbera and NGOs "Menschen gegen Minen" (MgM) resp. "Stifung Sankt Barbara" (SBS). Provision of a German Demining expert to supervise Angolan demining teams. Supporting Demining projects of MgM and SBS in the provinces Bengo and Benguela.	**2,185,809	1,256,212
	Bosnia-Herzegovina	Support of commercial firm Flensburger Fahrzeugbau Gesellschaft (FFG, subsidiary firm of DIEHL) and UN Mine Action Center. Supporting the tests of mechanical deminer "Minebreaker 2000" (FFG). Co-financing the strengthening of the demining personnel within the UN Mine Action Center with 2 demining experts of the Federal Armed Forces.	**1,240,000	712,643
	Guatemala	Supporting of commercial firm GPC. Carrying out of mine awareness program.	**374,421	215,184
	Cambodia	Support of Cambodian Mine Action Center and commercial firm MAK-System (subsidiary firm of RHEINMETALL), Supporting the building up of 5 demining teams. Supporting test of mechanical demining vehicle "Rhino" (MAK-System). Taking over the transport costs of explosives for Cambodian Mine Action Center.	**1,098,910	631,557
	Laos	Support of commercial firm Gerbera for training of indigenous demining teams. Supporting German experts (Fa. Gerbera) for demining projects. Taking over the transport cost of fitting out these projects (fitting out donated by German Ministry of Defense).	**1,683,103	967,300
	Mozambique	Support of commercial firm GPC. Supporting the building up of a data base of the national demining commission. Education of indigenous personnel to clear mines and UXO's	**689,288	396,142
	Angola and East-Slawonia	Support of mine clearance programs within the scope of UN peace keeping measures	**1,211,782	688,512
Subtotal 1997			*12,130,963*	*6,892,5961*

YEAR	SUPPORTED COUNTRY	TYPE OF ASSISTANCE	AVAILABLE RESOURCES IN DEM	1999 US-Dollar equivalent
1998	Afghanistan	Supporting the Afghan NGO "Mine Dog Center" (MDC) to educate and to use dogs for mine detection. Cooperation with German Dog Education Center of the Federal Armed Forces. Supporting the "Female Children awareness" program of the Afghan NGO "OMAR." Support of a mechanical demining project of NGO "OMAR." Provision of 55 detector tools for demining program of UNOCHA.	[136] ***5,120,000	2,942,528
	Angola	Support of the national demining department with German experts as Supervisors for local mine action teams. Support of demining projects of the NGO "Menschen gegen Minen" in the province Bengo and of the NGO "Stiftung St. Barbara" in the province Cunene. Provision of detectors to the German NGO "DEMIRA".	***3,500,000	2,011,494
	Bosnia-Herzegovina	Support of the field test of the mechanical demining vehicle MINEBREAKER 2000 in cooperation with German NGO HELP in Sarajevo. Support of the UN Mine Action Centers (from July BH MAC) in Sarajevo with demining experts from Federal Armed Forces. Support of demining projects with demining equipment and contribution to the demining and survivors funds.	***1,480,000	850,574
	Georgia/ Abkazia	Transportation of mine protected vehicles for the UN mission. Provision of demining equipment to the NGO Halo Trust.	***1,070,000	614,942
	Cambodia	Support of building of an education office for clearing of UXOs at the national demining department CMAC	***550,000	316,091
	Croatia	Support of a demining project of DPKO. Supporting a demining project in Pacrac	***1,020,000	586,206
	Egypt	Provision of detection tools to clear mines in the western desert.	***680,000	390,804
	Laos	Promotion of the project of commercial firm GERBARA to clear mines and UXOs.	***2,010,000	1,155,172
	Mozambique	Support of the national demining department CND with one German Technical Advisor and one physician to provide medical aid for the local demining teams. Supporting the field test of a ground based radar detection system of the commercial firm TRICON. Supporting the field test of a multi-sensor detection method to detect mine fields from the air. Supporting the mechanical demining project of UN in 1999.	***2,310,000	1,327,586
	Somalia	Provision of detection tools and devices to perform a mine survey within the framework of the UNDP-program.	***270,000	155,172
	Tschetschenien	Education of demining experts in Germany (January 1999).	***20,000	11,494
	Vietnam	Support of a Mine Action project of the NGO "Solidaritätsdienst International" (SODI).	***870,000	500,000
	Unrestricted		***70,000	40,229
Subtotal 1998			*18,970,000*	*10,902,298*
TOTAL from 1993 - 1998			**54,235,797**	**30,815,793**

[136] ***Federal Ministry of Foreign Affairs, Bonn, 2 February 1999.

Funding of Ministry for Economic Co-operation and Development (BMZ)				
PERIOD	**SUPPORTED COUNTRY**	**TYPE OF ASSISTANCE**	**AVAILABLE RESOURCES IN DEM**	**1999 US-Dollar equivalent[137]**
1994 - 2000	Angola	Technical Cooperation / survivor assistance: Support of the center of physical therapy and rehabilitation in Luanda	[138]*10,782,000	6,196,551
1996 and 1997	Angola	Emergency Aid / survivor assistance: Supporting the center for rehabilitation in Luena/Moxico	*1,712,000	983,908
		mine clearance	*250,000	143,678
1998 (planned)	Angola	Emergency Aid / survivor assistance: Support of the center for rehabilitation in Luena/Moxico	*800,000	459,770
1993 and 1997	Cambodia	Technical and Financing Cooperation / survivor assistance	*942,000	541,379
1996 and 1997	Cambodia	Technical and Financing Cooperation / mine clearance: e.g. extension of rural paths	*2,190,000	1,258,620
1995 - 1997	Laos	Financing Cooperation / survivor assistance: Reconstruction of the national road, clearing of UXO's and training of demining personnel	*773,233	444,386
not specified	Mozambique	Technical and Financing Cooperation / mine clearance: Especially programs for reconstruction of national roads	*1,884,000	1,082,758
not specified	Mozambique	Emergency Aid: rural reconstruction program within provinces Manica and Sofala	*1,000,000	574,712
1998 (planned)	Mozambique	mine clearance: not specified	*490,000	281,609
1993 - 2000	Vietnam	Technical Cooperation / survivor assistance: Center for Orthopedics	*10,400,000	5,977,011
TOTAL from 1993 - 1998			**31,223,233**	**17,944,386**

[137] Exchange rate: DEM 1.76 = US-$1.
[138] *Federal Ministry for Economic Co-operation and Development, Bonn, 15 January 1999.

Mine Clearance Within Germany

From 1961 until 1985 the Former German Democratic Republic laid approximately 1,322,700 mines along the German-German frontier. In 1985 Former East German leader Erich Honecker agreed to clear the mines in return for a financial aid package from West Germany. These mines would be cleared by soldiers of the GDR from 1985 on, but after reunification of Germany the scrutiny of the mine protocols showed that the elimination of 33,864 mines had not been verified. Since 1995, some 943 of these mines were found by German mine detection teams. It is estimated that 17,992 of the mines, which are shown to have been laid but not verified as having been cleared, are so called wood box mines, PMD-6 (”Holzkastenminen”). As it is likely that most of them deteriorated completely, there is currently no search underway for these mines. Regarding the rest of the 17,992 mines which were not founded, it is believed that most of them have been triggered by weather influences or game and that in fact they are already cleared and the documentation of the soldiers of Former East Germany was deficient.[139]

By 30 March 1995, 83.1 million DEM (around US$47.76 million) had been earmarked for the mine detection of the former German-German frontier in 1994-1995.[140] On 5 December 1995, a press release of the Federal Ministry of Defense announced that all mine affected areas on the old east-west divide had been cleared and that the last zone, near the Bavarian town of Hof, was reopened to the public. In the press release the total cost for mine clearance as well as for dismantling former frontier fortifications was put at more than US$142.04 million.[141]

CONCLUSION

”Classical” AP mines were manufactured in the former West Germany until the end of 1960s. There are reliable indications that these mines were not just exported to Nato-related countries but also to crisis areas, even though government officials do not confirm these exports or do not know or do not want to know how these exports took place. Currently, landmines defined as ”submunitions” are exported, although neither the German government nor the producers will provide any information on this. According to an article in the magazine ”Military Technology,” ”the Hellenic Air Force has decided to equip the bulk of this combat aircraft (...) with the AFDS stand-off weapon, developed an manufactured by DASA-LFK. The relevant contract was signed in late July [1998], but its financial amount and the number of systems were not unveiled.”[142] The AFDS (Autonomous Freeflight Dispenser System) is a further derivative version of the DWS-39 (Dispenser Weapon System), which could be armed with submunitons MIFF, MUSA, MUSPA, STABO, MJ 1, MJ 2.[143] It has to be assumed that the munitions for the Dispenser System will be delivered, too.

Provision of funds for landmines and landmine dispenser systems are subject to a cycle of research and development followed by procurement. For example in 1990-1995 a total amount of 2,367.6 million DEM (US$1,345.2 million) was spent for the procurement of landmines, while in the same period an amount of 34.5 million DEM (US$19.6 million) was allocated for research and development of landmines. From 1996-1998 ”just” an amount of 107.0 million DEM (US$60.8 million) was spent for the procurement of landmines, while 67.7 million DEM (US$38.5 million) was spent on research and development. This means at the present, Germany is in a phase of research and development of new landmines (especially the area defense mines COBRA and ARGES) and it is foreseeable that an extensive procurement will follow in the near future.[144]

As mentioned above the Ministry of Foreign Affairs has supported companies involved in humanitarian mine action which are also involved in the production of landmines. It has to be monitored if the new government continues this policy or not. Also it has to be monitored if the recent coalition agreement to pursue a worldwide ban of landmines will be realized.[145] Up to now the Federal Minister of Foreign Affairs Joschka Fischer took the initiative and asked for the possibility of a ban of AT mines, as well, but the Federal Minister of Defense Rudolf Scharping signaled that the Federal Armed Forces are not

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[139] http://dip.bundestag.de, Bundesdrucksache 13/1023 (German Parliament, Document 13/1023), p.1.
[140] Ibid, p. 2.
[141] Federal Ministry of Defense, Press Release, 5 December 1995.
[142] Military Technology, MILTECH, 10/98, p. 108.
[143] Magazine of manufacturer DASA, edited by REPORT VERLAG, Bonn and Frankfurt a.M., undated (1998).
[144] According to a report of KNA (Catholic News Agency) from 29 May 1998 ARGES will go into production in 2005. But it seems that ARGES is already produced: According to governmental sources of Norwegian Defense Department a contract was signed for AGRES in 1997. The contract sum is said to be around 65 million. DEM (around US$ 36.9 million) (source: odin.dep.no/fd/publ/anskaffelser/eng/contracts.html).
[145] Coalition agreement of Social Democratic party and Alliance 90/Green Party, Bonn, 20 October 1998.

willing to give up the use of AT mines.[146] In this connection it has to be mentioned that up to now over 700,000 people in Germany have signed the demand to ban all landmines without exceptions.[147]

The actual draft of the 1999 German budget does not raise much hope: While for procurement and development of mines and mine clearance technology an amount of over 60 million DEM (over US$34.1 million) is planned, for humanitarian mine action just 20 million DEM (US$11.3 million) has been allocated[148] - although the Social Democratic Party of Germany had demanded 30 million DEM (US$17 million) when they were an opposition party.[149] The German Government – the former as well as the recent - has apparently a lack of good will. Since comparing the distribution within the period of 1993-1998 for procurement, research and development of landmines and for mine clearance at the former German-German frontier it is conspicuous that in the same period comparatively ”peanuts” were contributed for humanitarian mine action:

Use of funds in the period 1993 - 1998		
title	**funds in million DEM**	1999 US-Dollar million equivalent[150]
procurement, research and development of landmines	[151]1,207.6	686.1
mine clearance and dismantling frontier fortifications at the former German-German frontier	[152]250.0	142.0
humanitarian mine action	[153]85.4	48.5

[146] Welt am Sonntag, 24 January 1999.
[147] AP (Associated Press), 25 February 1999.
[148] Junge Welt (Young World), 1 March 1999.
[149] http://dip.bundestag.de, DIP - Das Informationssystem für Parlamentarische Vorgänge (Information System on Parliamentary Proceedings), Deutscher Bundestag – 13. Wahlperiode – 210. Sitzung, Bonn, 13/210 vom 11.12.1997, (Plenary Protocol 13/210, Bonn, 11 December 1997), p. 19194.
[150] Exchange rate: DEM 1.76 = US-$ 1.
[151] Deutscher Bundestag: Drucksache 13/1473; 13/1023; 13/11322 (German Parliament, Document 13/1473; 13/1023; 13/11322).
[152] Federal Ministry of Defense, Press Release, 5 December 1995.
[153] Federal Ministry of Foreign Affairs, Bonn, 22 November 1995; Federal Ministry of Foreign Affairs, Bonn, 17. September 1997; Federal Ministry of Foreign Affairs, Bonn, 2 February 1999; Federal Ministry for Economic Co-operation and Development, Bonn, 15 January 1999.