

LANDMINES BETWEEN BANNING AND A WIDESPREAD USE

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Abstract: *The use of traps and landmines in military conflicts has its roots in antiquity. The evolution and continuous technological progress, recorded by humanity in all areas of economic and social life, had a special role in the development of new types of explosives with high destructive power, which in turn inevitably determined the diversification and improvement of landmines. Aware of the material damage, but especially of the loss of human life and trauma caused to personnel by landmines, most of the world's states have agreed to ban their use. However, recent or ongoing military conflicts illustrate a widespread use of landmines. Despite this, the international community must make every effort to ban the use of landmines.*

Keywords: landmines, ban the use of landmines, widespread use of land mine

1. Introduction

The use of landmines in military conflicts is not new, they have found their place on the battlefield in various forms since ancient times. Both military and international humanitarian law specialists consider planting/emplacement to be particularly harmful and dangerous both “because of their potential as indiscriminate weapons” [1] and because “they can remain active for many years after a conflict has ended” [1], which constitute real threats to the civilian population and the economy.

The latest studies show us that in more than 70 countries there are active landmines that annually cause approximately 15,000-20,000 deaths and also injure many more people. Worryingly, “approximately 80% of mine victims are civilians, and children are the most affected age group” [1].

The awareness of the danger represented by landmines led to the emergence of pressure groups, constituted in a global movement to ban landmines, which acted under the name

“International Campaign to Ban the Use of Landmines”. Their claims did not go unanswered, in 1997 the “Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction” was signed, also known as the “Ottawa Treaty”. “To date, 164 nations have signed the treaty, but that does not include China, the Russian Federation, or the United States” [2].

Despite efforts by the international community to ban the use of landmines, they continue to be widely used by both state actors and insurgent groups.

For this reason, within this article, an analysis will be made in which the efforts of the international community to ban the use of landmines will be contrasted with their use in recent conflicts. This analysis will be used to formulate theoretical courses of action to stop the use of mines.

2. The use of landmines in recent or ongoing conflicts

Croll Mike, in his work *“Landmines in War and Peace: From Their Origin to the Present Day”*, divides the use of landmines throughout history into three main phases [3].

In his understanding, the first phase is attributed to the ancient world when obstacles such as sharp pieces of wood buried in the ground, lily traps *“pits at the bottom of which were placed sharp logs arranged in a five-point pattern”* [3] or abatises *“fallen trees with pointed branches pointing outwards”* [3] ensured many of the functions performed by modern mines.

The second phase is placed between the rule of the Ming Dynasty in China (13th century - the first use being attributed to Lou Qianxia, in 1277, at the battle of Zhongdu [4]), and the American Civil War (19th century) when gunpowder represents combat component for making landmines/explosive traps.

The third phase, in which we are still today, is the one represented by the use of high explosives. The beginning of this phase is placed at the time of the appearance and development of trinitrotoluene (TNT) by the German chemical industry in 1863 [5].

But as neither scope nor space permit a detailed approach to each phase, the analysis will turn to the use of landmines in recent military conflicts.

To carry out this analysis, first of all, we must decipher the role of mines in the theory and practice of preparing and conducting combat actions/war, or more briefly said in the military art.

Military art considers minefields as explosive obstacles used mainly in the defense operation in order to:

- harass the enemy;
- slow down the enemy's offensive rhythm;
- prevent the enemy from conquering certain lands, which are relevant for the operation;
- channel the enemy in certain designated areas, for the purpose of engaging with fire;

- reduce the morale of enemy personnel by randomly attacking them.

Anti-tank mines, intended for removing the opponent's armored vehicles from the battle, and anti-personnel mines, intended to neutralize the opponent's manpower, are used in particular to create the minefields.

A brief review of the use of mines in military conflicts, from the second world conflagration to the present day, will be particularly useful in understanding the humanitarian, social, economic and other effects produced by them.

Sensing the effectiveness of mines in the fight against armor, the belligerents of the second world conflagration used them on a large scale, so that statistical data indicate that almost half of the equipment taken out of battle during this humanitarian disaster was caused by the effects of anti-tank mines [6].

The Cold War. With the end of the Second World War, two antagonistic NATO military blocs - the North Atlantic Treaty Organization (led by the USA - the “United States of America”) and the Warsaw Pact (led by the USSR - “the Union of Soviet Socialist Republics”) - appear on the international scene, resulting in the establishment of bipolarism within the power relations between states. The concern of NATO members about possible massive armored attacks by the Soviet Union led to the installation of anti-tank mines along the entire border with East Germany. This period is also known to be one in which new types of mines develop. If, until this moment, most of the anti-armor mines were of the anti-track and antipode type, during that period, the “off-route” mines with horizontal action, which were intended to hit an armored vehicle from the side and remove it from combat using a cumulative charge [7].

The Korean Peninsula War (1950–1953), fought between the North Korea – “Democratic People's Republic of Korea” and the South Korea – “Republic of Korea” is another example of the widespread use of land mines. The steep terrain, narrow

valleys, the existence of extensive areas covered by forests, as well as the lack of developed road infrastructure favored the use of mines to achieve military goals by the belligerents. A consequence of the use of land mines was to reduce the effectiveness of tanks in battle.

The lack of registration of minefields, as well as their defective marking, constituted a real obstacle for all parties in conflict. At the same time, it should be mentioned that this conflict also involved other states such as the USA, the People's Republic of China, and the USSR. The conflict ended with the signing on 27 July 1953 of an armistice and the establishment of a demilitarized zone (DMZ) to serve as a buffer zone between the two states.

NPR (National Public Radio/US) reporter Anthony Kuhn reports that following the conflict on the peninsula, the approximately 150-mile strip that represents the DMZ is littered with landmines - while some have been removed, several hundreds of thousands have still remained [8].

The Western Balkans was the scene of bloody inter-entity confrontations in the 90s of the last century that resulted in the dismemberment of the former Socialist Federal Republic of Yugoslavia.

As a consequence of the use of anti-personnel mines in the conflict in the former Yugoslavia, in the period 1991-1995, six hundred victims were registered on the territories of Bosnia and Herzegovina and Croatia. Also, in the territory of the Kosovo region, between 1998 and March 1999, dozens of victims were registered due to anti-personnel mines.

More than two decades after the end of the conflicts, landmines affect large areas of Kosovo, Croatia and Bosnia-Herzegovina [9].

Conflicts in the Middle East. The Middle East is an area that throughout history has been torn by multiple conflicts, but the most significant for our study are the Iraq-Iran war (September 1980-July 1988), the Gulf War (August 1990-February 1991) and the war against the Islamic State (2014-

2020). All these conflicts, which took place between 1980 and 2020, contributed to the existence of a huge number of landmines on the territory of Iraq, as such this state is considered to be the “*most landmine-saturated country in the world (1,208.85km²)*” [10]. For example, during the Gulf War, “*the US placed 117,634 mines, of which 27,967 were anti-personnel mines, and 89,667 were anti-armor mines*” [11].

The invasion of Ukraine. During the conduct of the so-called “Special Operation” by the Russian Federation on the territory of Ukraine, starting in February 2022, “both Russian and Ukrainian forces used land mines. Ukrainian officials claim that Russian forces have planted thousands of landmines or other explosive devices during their withdrawal from Ukrainian cities, including in civilian areas” [12]. “Russian forces have used seven types of antipersonnel mines in at least four regions of Ukraine: Donetsk, Kharkiv, Kiev, and Sumy” [12]. The use of anti-personnel mines by a state (the Russian Federation) “that has not signed the 1997 Mine Ban Treaty on the territory of a party to the treaty (Ukraine) represents an unprecedented situation” [13].

As was stated in the study, landmines are also used in the so-called “guerrilla war”. In these types of unconventional confrontations, the use of mines presents several characteristics, the most significant of which are:

- defending a position or area;
- the areas where mines were planted are not marked;
- mines are not planted within minefields but are planted as isolated mines or within mine groups;
- planted mines are not covered by fire support.

The South African Border War is the most eloquent example of the use of mines in guerrilla warfare. The use of landmines by Namibian insurgents resulted in “the development of the first dedicated armored

vehicles for mine protection in South Africa” [14]. During the subversive actions, “the insurgents used both anti-tank mines to disrupt South African military convoys” [15] as well as anti-personnel mines to discourage efforts to detect and remove them. To counter the tactics used by the insurgents the South African military developed a V-hull vehicle capable of providing mine protection “even if a mine was detonated” [14]. Thus, South Africa is widely credited as the first country to develop a vehicle with a V-shaped hull for armored vehicles that dissipates the blast caused by anti-armor mines thereby protecting the crew [14].

3. Impact of landmines use

Beyond the effects produced during military conflict, landmines produce effects long after it has ended. These types of weapons can be found in various places (on roads, agricultural land, forests, in schools, etc.) and prevent the normal development of the social and economic life of a community. As can be seen from fig. 1 a significant area of the globe is contaminated by the presence of land mines [16].

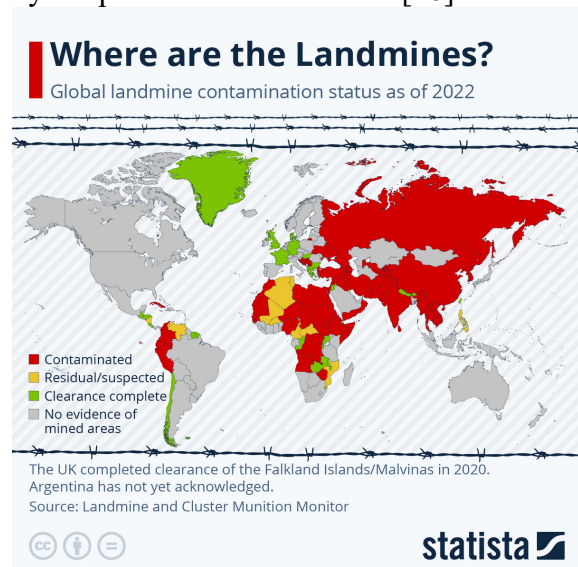


Figure 1: Spread of landmines around the globe -2022

Analysis by Landmine & Cluster Munition in 2019 indicates that the number of deaths “caused by landmines and explosive

remnants of war (ERW) has increased alarmingly” [17] in recent times - fig. no. 2. This trend is largely the result of increasing conflicts as well as the increasing use of improvised explosive devices (IEDs). A regrettable thing is represented by the fact that “most of the registered victims are civilians, half of whom are children” [22].

Mine/ERW casualties annually (1999–2018)

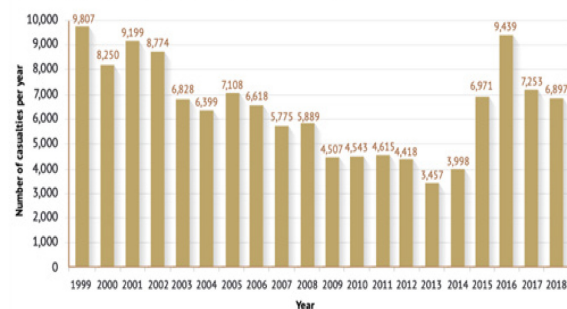


Figure 2: Mine/ERW casualties annually (1999-2018)

The threats posed by the presence of mines can have devastating effects on communities that want to return to normal life after the end of conflict. Because of this, large areas of agricultural land cannot be cultivated or remain uninhabited, causing real environmental, economic and social catastrophes.

The production of natural disasters in areas where mines have been planted can have serious consequences for the demining process.

Presence of mines can also cause land degradation. Asmeret Asefaw Berhe, in his study entitled “*The contribution of landmines to land degradation*”, classifies land degradation into five groups: “denial of access, loss of biodiversity, disturbance of micro-relief, chemical composition and loss of productivity” [18].

Denial of access. One of the most serious problems associated with the use of landmines is represented by the prohibition of access to vital resources for the support of life (e.g. water). The simple presence of a single mine can discourage the development of agricultural works or the flow of water or food supplies that are strictly necessary [18]. At the same time, the

reconstruction works of schools and hospitals can be delayed, which constitutes a major premise for population migration to urban centers with direct consequences in the overcrowding of cities, as well as increasing the risk of the spread of diseases [19].

Biodiversity loss. Mines are a real danger to biodiversity since the effects of their detonation can seriously affect the local vegetation and fauna. Moreover, the population relocated due to the conflict may end up in a situation where they can no longer ensure their subsistence and resort to hunting animals for food. This phenomenon can become very dangerous, as indiscriminate hunting can affect endangered species and destroy their natural habitat [19].

Chemical contamination. Chemical products resulting from the explosion or degradation of land mines are extremely harmful to the environment and to life in general because they are toxic in small amounts, can persist for a long time, and are also soluble in water [19].

Therefore, toxic chemical compounds can permeate the soil, can be found in surface or underground water, affecting the local vegetation and fauna, and the most serious consequence is the fact that they can accumulate in the human body causing serious diseases, some with lethal effect.

4. The international community's efforts to ban the use of landmines

Aware of the serious consequences produced by the use of mines, the international community is making sustained efforts to ban them. Thus, the member countries of the United Nations Organization - UN signed in Geneva, on October 10, "*the Convention on the Prohibition or Limitation of the Use of Certain Conventional Weapons*" was signed, in which "Protocol II refers to the prohibition of mines, booby-traps and other explosive devices". Furthermore the initiative of certain governments (Canada, Norway, Mozambique and South Africa) in

collaboration with "the International Campaign to Ban Landmines - ICBL" to amend Protocol II led to the adoption and signature in 1997 of the "*Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction*", known as the "*Ottawa Treaty*".

The treaty began to take effect on the ground on 1 March 1999, does not include anti-tank mines, command-action mines or cluster mines, and focuses specifically on the prohibition of anti-personnel mines. The main reason why only anti-personnel mines are banned is that they, compared to anti-tank mines, are designed to be triggered by any movement or by exerting a force of only a few kilograms on them. Thus, it is considered that the greatest potential risk, for people and animals, after the military conflict has ended, is the presence of anti-personnel mines on the ground.

If at the time of adoption there were only 122 signatory countries of the convention, today there are 164 which represent more than 80% of the member states of the United Nations. It should be noted that all EU member states are signatories to the convention. The States Parties agree to:

- no use of anti-personnel landmines (AP);
- not to manufacture, produce, acquire, stockpile, retain and transfer AP mines;
- do not support, encourage or suggest in any way any organization to participate in activities prohibited by the Convention" [21].

Despite broad international support for the Ottawa Convention, there are countries that manufacture and/or use anti-personnel landmines and refuse to abide by the Convention. "Six of these countries — China, India, the Republic of Korea, Pakistan, Russia and the United States — together can stockpile tens of millions of anti-personnel landmines, which some armed non-state actors continue to use, stockpile and store" [21]. Since its entry into force until now, in order to boost the implementation of the provisions as well as

to adapt support measures for countries affected by anti-personnel mines, the convention has undergone 4 revisions.

Beyond the contribution of states to ban the use of landmines, civil society plays an important role.

ICBL was formed in October 1992 from “six NGOs: Handicap International (now Humanitarian and Inclusive), Human Rights Watch, Medico International, Mining Advisory Group, Doctors for Human Rights, and Vietnam Veterans of America Foundation” [17]. ICBL represents an organization that includes more than 100 countries globally, which carries out intense activity for “the full universalization and implementation of the Anti-Personnel Mine Ban Treaty” [17]. Together with its “founding coordinator, Jody Williams, it was awarded the Nobel Peace Prize in 1997 for its efforts to achieve the Mine Ban Treaty” [17].

The European Union represents another actor on the international stage that supports the implementation of the “Ottawa Treaty”. This provides support in order to reduce the threats represented “by landmines and explosive remnants of war” [20]. The support offered by the European Union “covers all key aspects of mine clearance, risk education, victim assistance, stockpile destruction, capacity building, mine detection and mine clearance technology research and development” [20].

In the last four years, the European Union contributed “€2.6 million to implement the Oslo Action Plan” [20]. It will take various measures to promote the universality of the Convention and support countries by organizing stakeholder dialogues at national and/or regional levels.

The combined efforts of the signatory states, as well as those of civil society, led to the demining in 2020 of a land area of 146 km², in which more than 135,000 anti-personnel mines were planted. That means potentially 135,000 lives protected [16].

Landmine Monitor estimates that there are 110 million mines buried in the ground

worldwide, with an equal number waiting to be laid or destroyed. Cost of removing them all: \$5 billion to \$100 billion [16].

5. Conclusions

As presented in this study, which does not represent an exhaustive approach to the field, mines represent a real and persistent danger to the normal development of social and economic life.

In light of what is presented in this study, a justified question arises: is there a solution to the global problem of anti-personnel mines and ERW?

Legally speaking, the answer to the question is yes, as the 1997 Mine Ban Treaty (officially known as the “Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction”) provides the best framework for governments to implement actions appropriate to the provisions of the document. In this sense, the states that accede to the treaty must undertake, immediately, the prohibition of the use, production, stockpiling and transfer of anti-personnel mines. Another obligation of the signatory states is the obligation to destroy all anti-personnel mines in their possession within four years of accession. At the same time, they must take measures for the demining of the entire territory within ten years.

The existence of the legal framework does not solve the problem, the international community must continue to make sustained efforts to induce states such as Russia and China to sign the treaty.

Supporting and recognizing the efforts of international donors, international agencies and NGOs is another effective means of combating the scourge of anti-personnel mines.

There is also a need to find synergy between the different dimensions of mine action, especially in terms of humanitarian and development aspects, including by strengthening the local component and

participation in projects in the field, in order to better respond to the needs of those directly affected.
Last but not least, the international

community must strongly condemn the use of anti-personnel mines by states, insurgent and terrorist groups or other non-state actors.

References List

- [1] “Demining”. United Nations. Archived from the original on September 3, 2017. Retrieved March 19, 2019, <http://www.un.org/en/sections/issues-depth/demining/index.html>, accessed 05.04.2023.
- [2] States parties to the convention, “The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction. Archived from the original on March 6, 2016. Retrieved March 19, 2019, <https://www.apminebanconvention.org/states-parties-to-the-convention>, accessed 05.04.2023.
- [3] Croll M. Landmines in War and Peace: From Their Origin to the Present Day (Kindle ed.). Casemate Publishers, 2008, p.5. ISBN 9781844685011.
- [4] Croll M. Landmines in War and Peace: From Their Origin to the Present Day (Kindle ed.). Casemate Publishers, 2008, p.35, ISBN 9781844685011.
- [5] Croll M. Landmines in War and Peace: From Their Origin to the Present Day (Kindle ed.). Casemate Publishers, 2008, p.79, ISBN 9781844685011.
- [6] Land mine. Available from: https://en.wikipedia.org/wiki/Land_mine, accessed 10.04.2023.
- [7] Carol F. Minele inteligente din Ucraina, Monitorul Apărării și Securității, 30 mai 2022, <https://monitorulapararii.ro/minele-inteligente-din-ucraina-1-43211>, accessed 10.04.2023
- [8] Anthony K. Hundreds Of Thousands Of Landmines Remain From Korean War But Serve No Purpose, National Public Radio, august 27, 2019, 4:18 PM <https://www.npr.org/2019/08/27/754811189/hundreds-of-thousands-of-landmines-remain-from-korean-war-but-serve-no-purpose>, accessed April 20, 2023.
- [9] Landmine&Cluster Munition Monitor, Yugoslavia, Interview with Bogunovic; also interview with Savic and Jovanovic, <http://archives.the-monitor.org/index.php/publications/display?url=lm/1999/yugoslavia.html>, accessed April 20, 2023.
- [10] Gwladys F. (November 27, 2019). “Global death toll of landmines rises due to mines laid by militants”. www.reuters.com. Archived from the original on April 8, 2020, accessed April 20, 2023.
- [11] “Landmines in Iraq: Questions and Answers”. www.hrw.org. Archived from the original on January 26, 2021, accessed April 20, 2023.
- [12] “Ukrainian officials say retreating Russian forces left booby traps including explosives in car trunks, washing machines, and under dead bodies”. Business Insider, accessed April 20, 2023.
- [13] Background Briefing on Landmine Use in Ukraine, June 15, 2022 <https://www.hrw.org/news/2022/06/15/background-briefing-landmine-use-ukraine>, accessed april 20, 2023
- [14] Camp S. & Helmoed-Römer H. (November 2014). Surviving the Ride: A Pictorial History of South African Manufactured Mine-Protected Vehicles. Pinetown: 30 Degrees South. pp. 19–34. ISBN 978-1-928211-17-4.
- [15] “Namibia”. Landmine and Cluster Munition Monitor. Archived from the original on August 3, 2020, accessed April 20, 2023.

- [16] Landmine Monitor 2022 (Report). International Campaign to Ban Landmines and Cluster Munition Coalition. November 17, 2022. p. 1. Archived from the original on November 6, 2021, accessed April 23, 2023.
- [17] Landmine Monitor 2018 (Report). International Campaign to Ban Landmines and Cluster Munition Coalition. November 20, 2018. pp. 49–51. Archived from the original on November 6, 2021.
- [18] Berhe A.A. (August 7, 2006). “The contribution of landmines to land degradation”. *Land Degradation & Development*. 18 (1): pp.1–15. doi:10.1002/ldr.754. ISSN 1085-3278.S2CID 5848182.
- [19] Newman R.D. & Mercer M.A. (July 19, 2013). “Environmental Health Consequences of Land Mines”. *International Journal of Occupational and Environmental Health*. 6 (3): pp. 243–248. doi:10.1179/oeh.2000.6.3.243. ISSN 1077-3525. PMID 10926729. S2CID 20819737.
- [20] Comunicat de presă, Consiliul UE se preocupă de amenințarea pe care o reprezintă minele și resturile explozive de război, 19 februarie 2021, <https://www.consilium.europa.eu/ro/press/press-releases/2021/02/19/ottawa-convention-council-addresses-the-threat-of-mines-and-explosive-remnants-of-war/>, accessed April 23, 2023.
- [21] *The Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction*. Archived from the original on March 6, 2016. Retrieved March 19, 2019.
- [22] Deaths from landmines are on the rise – and clearing them all will take decades, Published: November 15, 2021 4.22pm CET, <https://theconversation.com/deaths-from-landmines-are-on-the-rise-and-clearing-them-all-will-take-decades-171848>, accessed April 23, 2023.