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PATHWAYS TO A MINE-FREE WORLD: EVALUATING THE IMPACT OF THE OTTAWA CONVENTION AND THE CHALLENGES AHEAD

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1. ABSTRACT

With the negotiation and adoption of the Ottawa Convention in 1997, the international community embarked upon the global non-proliferation of anti-personnel landmines. The Ottawa Convention also formally titled *Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction* was signed in 1997 and entered into force in 1999. It is a landmark treaty prohibiting the use, stockpiling and production of anti-personnel mines. The convention also focuses on reduction of landmine uses, clearance of mine contaminated areas, stockpile destruction and assistance to victims. This article scrutinizes and evaluates the impact of the Ottawa Convention for almost three decades in achieving its intended purposes with emphasis on selected case studies of State Parties who made substantial progress and also analyses the role of international civil society and non-state actors. The object is to focus on data on landmine clearance and victim assistance along with legal analysis. The study will also emphasize on significant challenges that persist and emerge including the threat posed by Improvised Explosive Devices (IED), active deployment by non-state armed groups, underfunding for victim assistance and proposes forward-looking optimistic recommendations aiming at strengthening compliance, victim assistance framework and universalization of the convention, drawing on The 2025 Siem Reap-Angkor Action Plan.

2. INTRODUCTION

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2.1 BACKGROUND AND CONTEXT

A landmine is an explosive device intended to disable vehicles or to kill or injure persons, often designed to be detonated by the presence, proximity or contact of a person or vehicle. Mines are triggered by pressure, contact, and proximity or by a timed mechanism, and may detonate when stepped on, struck, or otherwise disturbed[2]. "Mine" means a munition designed to be placed under, on or near the ground or other surface area and to be exploded by the presence, proximity or contact of a person or a vehicle[3]. Landmines are used as defensive weapons to hinder the movements of an adversary or opposing military forces. Landmines are always set up in a hidden and camouflaged way to match their surroundings and making it difficult to be located by anyone[4]. Currently, there are over 600 types of mines and one among them is the anti-personnel mine which is designed to be detonated by the presence, proximity or contact of a person and is intended to incapacitate, injure or kill one or more people through detonation activated by stepping on trigger, tripwire, passage of time or by controlled means[5].

The early usages of mines can be traced back to the American Civil War, and its deployment and usage increased rapidly in World War I and World War II. Anti-personnel mines were first widely used in World War 2, and later they were used in various conflicts like the Korean War, Vietnam War, the first Gulf War and other conflicts[6]. These landmines used as weapons of war have caused profound humanitarian, economic and environmental consequences. The mines that were deployed in conflict zones were often left behind causing injury, incapacitation and deaths of people even after the hostilities were ceased. These mines would remain active for decades, causing indiscriminate casualties of the victims. Landmines not only created direct loss of life but also created long term economic and psychological consequences. Survivors of landmine explosion would face permanent disabilities and traumatic amputations making them unable to perform any work thereby creating an

[2] United Nations (2015) LANDMINES, EXPLOSIVE REMNANTS OF WAR AND IED SAFETY HANDBOOK. 3rd edn, UNMAS. 3rd edn. Edited by T. Enke. Available at: https://unmas.org/sites/default/files/handbook_english.pdf (Accessed: 07 September 2025).
[3] Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, art. 2(2), Sept. 18, 1997, 2056 U.N.T.S. 211.
[4] United Nations (2015) LANDMINES, EXPLOSIVE REMNANTS OF WAR AND IED SAFETY HANDBOOK. 3rd edn, UNMAS. 3rd edn. Edited by T. Enke. Available at: https://unmas.org/sites/default/files/handbook_english.pdf (Accessed: 07 September 2025).
[5] *Ibid*
[6] *A history of landmines*, ICBLCMC (2023), https://icblcmc.org/our-impact/a-history-of-landmines (last visited Sep 15, 2025).

economic burden and psychological effects. Unfortunately, most mine accidents occur in countries with limited medical facilities and rehabilitative resources and limited access to medical care[7].

In addition to devastating impact on individuals, mines also have severe social and economic impact on a nation, particularly trying to rebuild after an armed conflict where land covered with mines renders it unusable for the construction of roads, railway lines or even use the land for cultivation and agriculture[8].

2.2 EMERGENCE OF THE OTTAWA CONVENTION

Despite widespread use of anti-personnel mines in the Second World War, the 1949 Geneva Conventions only addressed issues of mine clearance, prohibiting expressly the forcible use of prisoners of war for such purposes. In the decades following after WW2 until the 1990s, the United Nations initiated the demining process as a part of its various peacekeeping operations. The UN peacekeeping forces conducted demining operations in various conflict prone regions of Egypt, Congo and Cambodia. The UN also set up the first humanitarian mission for demining in Afghanistan in 1988 to provide training to local Afghan volunteers to clean mines on their own[9]. In the 1970s, the International Committee of the Red Cross (ICRC) initiated discussions on the humanitarian consequences of conventional weapons, identifying landmines as requiring specific legal attention. This led to the 1980 Convention on Certain Conventional Weapons (CCW), and particularly Protocol II followed by a revised Amended Protocol II was adopted under the CCW framework which more strictly controlled and regulated the use of mines[10].

In 1993, international concern increased over impact of anti-personnel landmines on civilian population in conflict affected areas, a review conference of the convention was called and Protocol II was amended in 1996, which placed tighter controls but fell short of total prohibition, which was being advocated by the UN Secretary General, international civil society, International Committee of Red Cross and number of governments[11]. The work for

[7] Banning anti-personnel mines: The Ottawa Treaty explained, (1998).
[8] *Ibid*.
[9] Aisha Comms Team, *Together for mine action; a multilateral success story*, UNMAS, https://www.unmas.org/sites/default/files/History-of-mine-action/ (last visited Sep 15, 2025).
[10] Stuart Casey Maslen, *Convention on the prohibition of the use, stockpiling, production and transfer of anti-personnel mines and on their destruction* - main page United Nations, https://legal.un.org/avl/ha/cpusptam/cpusptam.html (last visited Sep 16, 2025).
[11] *Ibid.*

formulating the Ottawa Convention began in 1996 at the International Strategy Conference: Towards a global ban on anti-personnel mines held at Ottawa, Canada. At the conference, like-minded States interested in banning anti-personnel mines were called upon by the then-Minister of Foreign Affairs, Honourable Lloyd Axworthy, to adopt a treaty prohibiting and outlawing these type of landmines by the end of 1997[12]. This launched the "Ottawa Process" to ban anti-personnel landmines. Austria led efforts by drafting a convention text, supported by a core group of States. A key expert meeting was held in Vienna in February 1997, followed by a verification-focused meeting in Bonn in April. The Brussels Conference in June 1997 saw 154 states attend and 97 sign the Brussels Declaration, endorsing the Austrian text. The Diplomatic Conference in Oslo, September 1997, resulted in the formal adoption of the Mine Ban Treaty. It opened for signature in Ottawa in December 1997 and entered into force on 1 March 1999. The Convention was the first arms control treaty to include victim assistance, marking a milestone in humanitarian disarmament[13].

3. THE LEGAL AND OPERATIONAL FRAMEWORK OF THE OTTAWA TREATY: OVERSIGHT, OBLIGATIONS, AND COMPLIANCE

3.1 CORE LEGAL OBLIGATIONS

The foundational principle and the most important aim and objective of the convention is a total prohibition on the use, production, stockpiling, and transfer of anti-personnel mines directly or indirectly. The state parties are also obligated to not assist, induce, or encourage anyone in activities prohibited by the convention[14]. It also lays down the objective of obligating the State Parties to undertake measures to ensure the destruction of all anti-personnel mines in accordance with the provisions of the convention[15]. While Article 2 of the convention lays down the key operational definitions, Article 3 of the convention permits the retention of a limited number of anti-personnel mines solely for the purposes of training and the development and testing of detection, clearance and destruction techniques. A State must destroy all anti-personnel mine stockpiles it owns or possesses or that are under its jurisdiction or control “as soon as possible but not later than four years” after it becomes a

[12] Adoption of the convention, Anti-Personnel Mine Ban Convention, https://www.apminebanconvention.org/en/the-convention/history-and-text/history (last visited Sep 16, 2025).
[13] *Ibid.*
[14] Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, *Art. 1(1)*, Sept. 18, 1997, 2056 U.N.T.S. 211.
[15] Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, art. 1(2), Sept. 18, 1997, 2056 U.N.T.S. 211.

party to the Anti-Personnel Mine Ban Convention (Article 4)[16]. As per Article 5 each State party is obliged to ensure destruction or clear all emplaced anti-personnel mines in mined areas under its jurisdiction or control as soon as possible but not later than 10 years after it becomes a party to the Convention[17]. However, if a State Party is unable to comply in ensuring the destruction of all anti-personnel mines within the said time period, it can request an extension of the deadline under Article 5(3). The convention enshrines the principle of international cooperation and assistance for the destruction and clearance of mines. Article 6 provides for each state party to seek and receive assistance and to provide assistance if the state party is in a position to do so. It also provides for assistance to be provided by the United Nations System, NGOs, ICRC, and other international, regional, or national organizations in the rehabilitation as well as , social and economic integration of victims[18].

3.2 TRANSPARENCY AND COMPLIANCE

The state parties to the convention are required to submit detailed transparency reports to the UN Secretary General annually as per Article 7. The report should consist of details on national implementation measures, stockpile destruction, clearance progress, and location of mine clearance, numbers and types of mines destroyed, numbers and types of mines retained for training and development of destruction techniques, technical specifications, victim assistance, and many more. These reports help in ensuring transparency, accountability, and tracking the progress of implementation. Article 8 establishes a framework for compliance with the Ottawa Convention through consultation and cooperation among states and requests for clarifications from the state suspected of violation or non-compliance through the Secretary General. It can also authorize fact-finding missions to investigate alleged non-compliance with prioritizing transparency and sovereignty and enabling collective response through consensus at a formal meeting. The Convention ardently emphasizes ensuring transparency and compliance.

4. IMPACT ASSESSMENT OF THE OTTAWA CONVENTION

4.1 GLOBAL REDUCTION IN USE AND STOCKPILING

[16] Stuart Casey Maslen, *Convention on the prohibition of the use, stockpiling, production and transfer of anti-personnel mines and on their destruction* - main page United Nations, https://legal.un.org/avl/ha/cpusptam/cpusptam.html (last visited Sep 17, 2025).
[17] *Ibid.*
[18] Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on their Destruction, art. 6 (para 3), Sept. 18, 1997, 2056 U.N.T.S. 211

The Ottawa Convention has drastically decreased the use and production of anti-personnel landmines and established strong international norms against their deployment. In 1999, it was estimated that there were over 250 million anti-personnel landmines stored in the arsenals of 108 countries, and by the end of 1999, 135 countries had signed or acceded to the treaty[19]. By the time of the treaty entering into force, 12 million stockpiled anti-personnel mines were already destroyed[20]. As of 2024, 164 countries are State Parties to the Ban Treaty; 161 nations do not stockpile anti-personnel mines, and out of these 94 State Parties have officially completed destruction of their stockpile, collectively destroying more than 55 million stockpiled anti-personnel landmines under the treaty[21]. Since the adoption of the Ottawa Convention, compliance among State Parties has generally been high with regard to the prohibition on the use of anti-personnel landmines.

Formerly major landmine-producing nations such as Italy destroyed its entire stockpile of 7.1 million mines, the largest stockpile destruction for its time and, the United Kingdom, which historically maintained a large stockpile of anti-personnel mines during the Cold War destroyed its entire stockpile of over 2 million mines well in advance of its deadline[22]. Subsequently, Turkmenistan destroyed its stockpile of over 6 million mines, and nations like Japan, Germany, Albania, Romania, and Sweden destroyed their stockpile of over a million mines[23]. Chile is another example, which destroyed its stockpile of mines 3 years in advance of its deadline[24]. Other major producers and exporters of these mines, such as Bulgaria, the Czech Republic, Brazil, Belgium, Hungary, and Croatia, have signed the treaty and stopped the production of these mines.

Despite the milestones achieved by the treaty through massive reduction in production and use of mines and with destruction of stockpiles by the state parties to the treaty, the non-state parties and non-state armed groups continue to produce and deploy anti-personnel mines. With expanding conflicts around the world, the objective that the mine ban treaty

[19] Landmine Monitor Report 1999: Toward a mine-free world, (1999).
[20] *Landmine stockpiles and their destruction*, Human Rights Watch (2020), https://www.hrw.org/news/2019/11/26/landmine-stockpiles-and-their-destruction#_ftn7 (last visited Sep 20, 2025).
[21] International Campaign to Ban Landmines, Landmine Monitor 2024 31 (Geneva: ICBL-CMC, November 2024).
[22] Landmine Monitor Report. 2004, (2004).
[23] *Landmine stockpiles and their destruction*, Human Rights Watch (2020), https://www.hrw.org/news/2019/11/26/landmine-stockpiles-and-their-destruction#_ftn7 (last visited Sep 20, 2025).
[24] *Ibid*.

seeks to achieve is coming under threat. Russia has extensively used anti-personnel mines in Ukraine since its invasion, which has been causing casualties and contamination of land. North Korea and South Korea continually use anti-personnel mines along their borders, the Iranian revolutionary guard corps has been alleged to use anti-personnel mines, and the Myanmar armed forces also used anti-personnel mines[25]. Non-state armed groups have also used these mines in the territory of state parties like Benin, Burkina Faso, DRC, Niger, and Nigeria and in the territory of non-state parties like Pakistan, Palestine, and Myanmar[26]. The use of anti-personnel landmines in the territory of State Parties shows that these states need to emphasize more on national implementation measures within their powers to enforce the provisions of the treaty.

4.2 CLEARANCE OF MINED AREAS

The Landmine Monitor in its first report in 1999 reported that "landmines are a global problem, but the exact magnitude of the problem is difficult to measure"[27]. The landmine monitor in its early years of reporting faced numerous challenges and hindrances in gathering accurate information regarding mine clearances and the amount of area of mine clearances due to reasons such as lack of adequate cooperation and willingness of state-parties in transparently reporting data, inadequate or non-existent reporting of data at some places due to inaccessibility of terrain and political sensitivities, and lack of technology, methodology and, mechanisms in the early years. However, significant progress was achieved within the first decade of the Ottawa Treaty entering into force. From the entry of the treaty into force in 1999 to the year 2009, at least 1100 km^2 of mined areas have been cleared in over 90 countries, along with the destruction of over 2.2 million emplaced anti-personnel landmines[28]. In the years 2009 to 2013, 973 km^2 of mined area was cleared, and over 1.4 million anti-personnel mines were cleared[29]. In the subsequent years from 2014 to 2018, total clearance of mines was estimated to be 800 km^2 with at least 661,491 landmines were destroyed[30]. In the recent 5 years from 2019 to 2023, about 935.3 km^2 total mined area was

[25] International Campaign to Ban Landmines, Landmine Monitor 2024 (Geneva: ICBL-CMC, November 2024).
[26] *Ibid*
[27] Landmine Monitor Report 1999: Toward a mine-free world, (1999).
[28] Landmine Monitor Report 2009 Toward a Mine-Free World, (2009).
[29] Landmine Monitor 2014, (2014).
[30] LANDMINE MONITOR 2019, (21st Annual Edition ed. 2019).

estimated to be cleared, and 706,663 anti-personnel mines were destroyed[31]. Under the mine ban treaty, 33 states have cleared all the anti-personnel mines in their territories since 1999[32].

We can further understand the impact and progress of the treaty by analyzing the mine clearance progress achieved by some selected countries, which are as follows:-

1) **Cambodia**: - As of February 2025, Cambodia has cleared over 3300 km^2 of landmine-contaminated area across its 15 provinces since the inception of its mine clearance campaign[33]. Cambodia has destroyed over 1 million mines and, in 2024 alone it cleared 273 km^2 of area and destroyed over 17,000 anti-personnel mines[34]. This significant progress has created a positive impact on the quality of life of the people with enhanced safety and lower risks of mine explosions. Previously mine-contaminated areas are transitioned to housing land, infrastructure development, agricultural and farming areas, thereby focusing on productivity and sustainability, which has impacted over 50,000 Cambodians[35] . Despite the significant success, Cambodia acknowledged in 2024 that it won't be able to fulfill its Article 5 clearance deadline and, it will request for extension[36].

2) **Mozambique**: - Mozambique officially declared itself mine-free in 2015 after years of intensive mine clearance efforts. It was one of the most heavily mined nations, and thousands were killed by landmines. The Halo, an NGO dedicated to the mine clearance efforts said it has cleared more than 171,000 mines from over 1,100 minefields in Mozambique in over 22 years[37]. The impact of mine clearance was felt

[31] International Campaign to Ban Landmines, Landmine Monitor 2024 (Geneva: ICBL-CMC, November 2024.

[32] Mary Wareham &KanaeDoi, *Mine ban treaty faces significant threats*, Human Rights Watch (2025), https://www.hrw.org/news/2025/03/30/mine-ban-treaty-faces-significant-threats (last visited Sep 27, 2025).

[33] *Cambodia's significant milestone in landmine clearance efforts*, Human Progress (2025), https://humanprogress.org/cambodia-marks-significant-milestones-in-landmine-clearance-efforts/#:~:text=Mar%2014%2C%202025,From%20Construction%20&%20Property. (last visited Sep 27, 2025).

[34] *Ibid*.

[35] *Apopo commemorates 10 years of clearing landmines in Cambodia* • apopo, APOPO (2024), https://apopo.org/clearing-landmines-in-cambodia-10-years/?v=13b5bfe96f3e (last visited Sep 27, 2025).

[36] Cambodia's significant milestone in landmine clearance efforts, Human Progress (2025), https://humanprogress.org/cambodia-marks-significant-milestones-in-landmine-clearance-efforts/#:~:text=Mar%2014%2C%202025,From%20Construction%20&%20Property. (last visited Sep 27, 2025).

[37] Mozambique declared free of landmines, Mozambique Declared Free of Landmines | Arms Control Association, https://www.armscontrol.org/act/2015-10/news-briefs/mozambique-declared-free-landmines (last visited Sep 27, 2025).

from rural communities to urban areas and rendered land for the use of agriculture and infrastructure and ensured the people could live free of the fears of landmines.

3) **Angola: -** Angola was heavily littered by landmines as a result of a long civil war that ended in 2002. The littered mines killed and injured thousands. With the help of Halo Angola over 120,000 landmines were destroyed and about 975 minefields still need to be cleared. These efforts have made previously contaminated areas safe for agriculture, housing, and development projects[38]. The estimated contamination in Angola has decreased by 70 percent as per an initial assessment, which has raised the expectations for Angola to clear its landmines by the end of 2025[39].

4.3 REDUCTION IN CASUALTIES

With the inception of the Ottawa Treaty leading to a drastic decrease in the global stockpile, production, and use of landmines, along with a vast amount of areas around the world being cleaned and declared free from mine contamination, has caused a sharp decline in the casualties caused by anti-personnel landmines. Mine casualties include people killed and injured due to detonation of landmines by proximity, presence or contact of a person or vehicle. There is an evident downtrend in the number of casualties caused by anti-personnel mines since the Ottawa Treaty came into force in 1999. There is a substantial reduction in casualties from 25,000 casualties in the early to mid-1990s to about 5,000 casualties recorded by the previous landmine monitor[40]. For the period of 1993 to 2023, the landmine monitor recorded 159,445 mine casualties, of which 45,959 people were killed, 109,270 were injured and remaining 4,216 casualties was not reported if they survived[41]. In the year 1999, the Landmine Monitor reported 9,807 casualties, which was the highest ever recorded by the monitor and in 2013, 3,459 casualties were recorded, and which the lowest number of mine

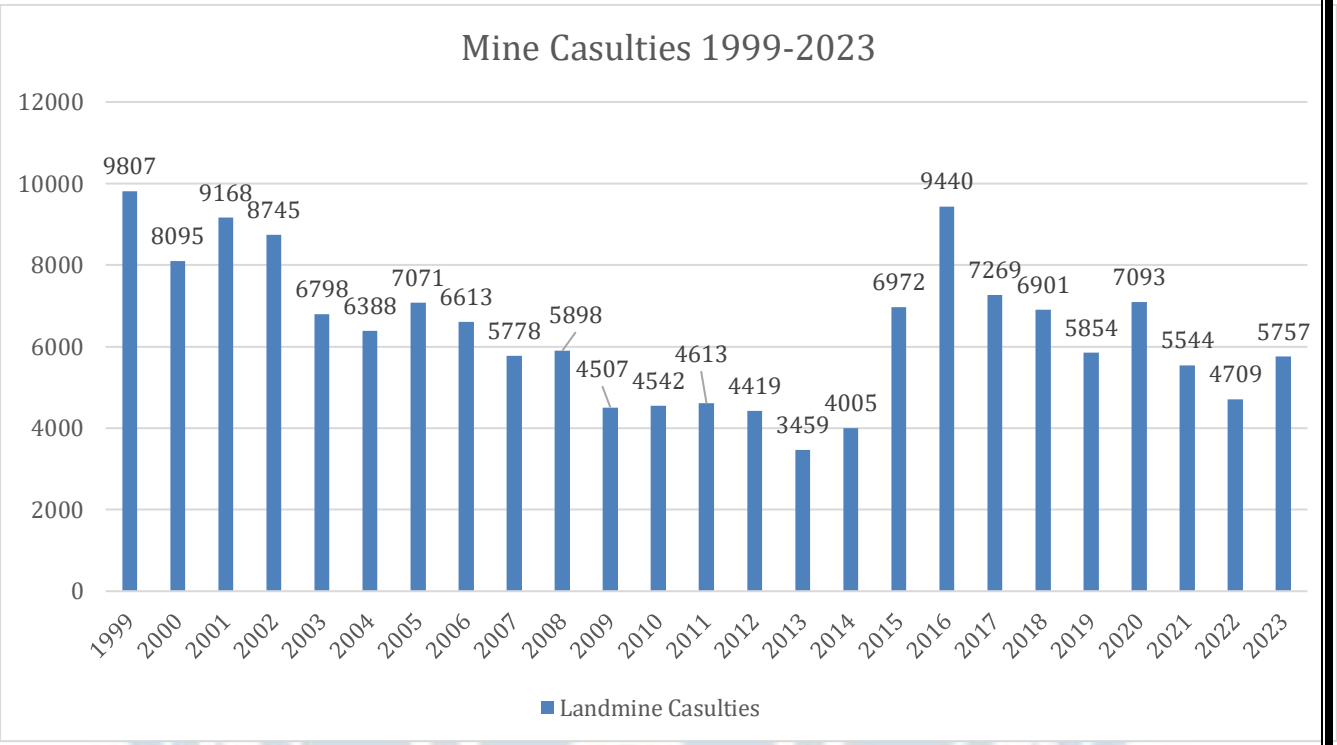
[38]Adf, *Angola reports significant progress in Clearing Civil War-era mines*, Africa Defense Forum (2025), https://adf-magazine.com/2025/05/angola-reports-significant-progress-in-clearing-civil-war-eramines/#:~:text=War%2DEra%20Mines,Angola%20Reports%20Significant%20Progress%20in%20Clearing%20Civil%20War%2DEra%20Mines,still%20need%20to%20be%20cleared. (last visited Sep 27, 2025).

[39] Angola, Norwegian People's Aid, https://www.npaid.org/mine-action-and-disarmament/where-we-work/angola#:~:text=Consequently%2C%20the%20estimated%20contamination%20in,completion%20deadline%20of%20December%202030. (last visited Sep 27, 2025).

[40]*25 years of global efforts to eradicate landmines and empower lives*, ICBLCMC (2024), https://icblcmc.org/our-impact/25-years-of-global-efforts-to-eradicate-landmines-and-empower-lives (last visited Sep 27, 2025).

[41] International Campaign to Ban Landmines, Landmine Monitor 2024 (Geneva: ICBL-CMC, November 2024).

casualties was caused in a year[42]. The Casualties caused by mines throughout the years since the inception of the Ottawa convention is displayed in the graph below:



*International Campaign to Ban Landmines, Landmine Monitor 2024 (Geneva: ICBL-CMC,November 2024).

Landmine casualties spiked again in 2015 after a few years of low casualties. This was primarily due to increased conflicts in Afghanistan, Syria, Libya, and Yemen. In 2023, 5,757 people were either killed or injured by landmines, representing a 16% increase in casualties. This can be attributed to conflicts like the Russian invasion of Ukraine and the intensification of the brewing civil war in Myanmar. 84% of casualties were civilians and of those 37% were children[43].

4.4 VICTIM ASSISTANCE AND REHABILITATION

The Ottawa Convention mandates state parties to provide assistance to mine survivors through continual medical care and rehabilitation, psychological support, and social and

[42] *Ibid.*
[43] Hi, *Landmines: 22% more victims in one year*, Hi (2024), https://www.hi.org/en/news/landmines--22--more-victims-in-one-year#:~:text=High%20number%20of%20casualties%20for,all%20civilian%20casualties%20in%202023. (last visited Sep 28, 2025).

economic integration. It aims to reduce death rates and improve psychological well-being along with the inclusion of victims in the society. The key pillars or components of victim assistance are as follows:

- Data collection and needs assessment with referral to emergency and ongoing medical care; physical rehabilitation, including prosthetics and assistive devices;
- Psychological and psychosocial support;
- Social and economic inclusion, along with education;
- The development or adjustment of relevant laws and policies[44]

These services work at their best when they are delivered and provided in a comprehensive, integrated, and consistent manner.As of 2024, at least 38 States Parties are recognized as having responsibility for significant numbers of mine victims[45]. Various victim assistance efforts have been undertaken, such as timely emergency medical response, which includes field trauma response, emergency evacuation, and immediate medical care. Many times it becomes challenging to access medical services in nations with jeopardized healthcare systems. In nations such as South Sudan, Ukraine, and Yemen healthcare system has deteriorated and been undermined by ongoing conflicts, which has resulted in a lack of essential medical services[46].

States Parties can improve accessibility of services by ensuring that existing service providers have the capacity to make referrals to appropriate health and rehabilitation facilities. Similarly, by taking a holistic approach to assistance, health and rehabilitation service providers can provide referrals to others who can support the inclusion of victims[47]. Rehabilitation is provided to the victim, which includes physiotherapy, providing of devices such as prostheses and orthoses, and provision of wheelchairs, which helps the victim to restore or improve their mobility and engage in daily activities[48]. According to Landmine Monitor 2024, Angola, Iraq, Colombia, Cambodia, Somalia, Jordan, Nigeria, and many other nations have undertaken some or other measures pertaining to advancing rehabilitation of victims.

[44] International Campaign to Ban Landmines, Landmine Monitor 2024 (Geneva: ICBL-CMC, November 2024).
[45] *Ibid.*
[46] *Ibid.*
[47] *Ibid.*
[48] *Ibid.*

Psychological and psychosocial support is also provided to the victims. This encompasses professional counseling, peer support groups, individual peer-to-peer counseling, sports, and recreational activities. Such provisions were provided to survivors in Cambodia, Ethiopia, Algeria and South Sudan[49]. Despite various victim assistance efforts for the survivors, various struggles prevail due to severe underfunding from international contributions for mine action.

4.5 NORMATIVE INFLUENCE ON INTERNATIONAL LAW

Ottawa Convention has exerted significant influence on the development of international law pertaining to weapons and arms control. The Mine Ban Treaty serves as a model and inspiration for various other international laws, including the Convention on the Rights of Persons with Disabilities, the Convention on Cluster Munitions, the Treaty Prohibiting Nuclear Weapons, and most recently the Political Declaration on the Use of Explosive Weapons in Populated Areas[50].

The Convention established strong norms against the use of mines and influenced non-signatory nations too. Over time even major non-signatory nations made progress on decreasing the stockpile of anti-personnel landmines. Although the US is a non-state party, in a treaty review conference, it announced that it prohibited the production of anti-personnel mines and its stockpile has been significantly reduced[51]. The US also adopted the policy of using mines only in the Korean peninsula and adheres to the provisions of Ottawa Convention outside the Korean peninsula[52]. Another major non-state party, China stated that it held fewer than 5 million mines, which is a massive decrease from the 110 million mines which it held for a long time[53]. Hence, the treaty has been successful to a good extent in dramatically decreasing the use and stockpile of anti-personnel landmines around the world and successfully establishing norms against the use of mines. Nevertheless, the persistent use

[49] *Ibid.*
[50] *25 years of global efforts to eradicate landmines and empower lives*, ICBLCMC (2024), https://icblcmc.org/our-impact/25-years-of-global-efforts-to-eradicate-landmines-and-empower-lives (last visited Sep 28, 2025).
[51] *Landmine stockpiles and their destruction*, Human Rights Watch (2020), https://www.hrw.org/news/2019/11/26/landmine-stockpiles-and-their-destruction#_ftn7 (last visited Sep 20, 2025).
[52] *U.S. Landmine Policy*, U.S. Department of State, https://2009-2017.state.gov/t/pm/wra/c11735.htm#:~:text=This%20means%20that%20United%20States,of%20the%20Republic%20of%20Korea. (last visited Sep 28, 2025).
[53] *Ibid.*

of mines by Russia in Ukraine and by armed groups in Myanmar highlights the fragility of these norms in high-intensity conflicts.

5. PERSISTENT AND EMERGING CHALLENGES

5.1 NON-STATE PARTIES

The Ottawa Mine Ban Convention faces significant challenges, with one of them being non-ratification of the treaty by major nations like the US, China, India, Russia, and many other nations from the Middle East, North Africa, and Asia. Therefore these nations continue to produce, stockpile, and use anti-personnel mines. According to Landmine Monitor, the following States produced anti- personnel mines: Armenia, China, Cuba, India, Iran, Myanmar, North Korea, Pakistan, Russia, Singapore, South Korea, and Vietnam. Of these states, India, Iran, Myanmar, Pakistan, Russia, and South Korea appear to be actively producing anti-personnel mines[54]. In fact, Russia continues to research, develop, and produce anti-personnel mines and also modify them to be deployed by drones thereby completely disregarding international law and norms[55]. The Myanmar armed forces, Iran, North Korea, and South Korea have used anti-personnel mines too. The treaty also does not address or provide solutions to the problems of a non-state party using anti-personnel mines against a State party. For example Russia a non-state party has extensively used anti-personnel mines in its invasion of Ukraine which is a State party[56].

In 2025, Ukraine suspended its obligations under the Ottawa Convention on the grounds of defending itself against Russia which is not a state party to the convention has extensively used anit-personnel mines as a method of war against Ukraine. Therefore,Ukraine justified its departure on the grounds that the prohibition on anti-personnel mines placed it at a tactical disadvantage in defending its territory against Russian aggression and decided to withdraw from the treaty in order to protect its land, citizens, sovereignty and defense of the

[54] International Campaign to Ban Landmines, Landmine Monitor 2024 (Geneva: ICBL-CMC, November 2024).
[55] *Ibid*.
[56] AshwiniSitancataNaik, *Security versus compliance with International Humanitarian Law? revisiting the 1977 Ottawa Convention in Contemporary Europe*, International Law Observer (2025), https://internationallawobserver.eu/security-versus-compliance-with-international-humanitarian-law-revisiting-the-1977-ottawa-convention-in-contemporary-europe (last visited Sep 28, 2025).

state from Russian aggression[57]. The withdrawal has impacted significant the normative implications and challenges its universal binding.

Further, the treaty faced drawbacks in 2025 when Poland, Lithuania, Estonia, Finland, and Latvia announced intentions to withdraw from the convention or have taken parliamentary steps toward withdrawal from the mine ban convention, expressing increased security concerns posed by Russia[58]. This withdrawal sets back on the achievements of the objectives set by the treaty and hampers its global relevance. The absence of powerful states, continued use by these states and withdrawals by state parties undermine the normative strength of the convention.

5.2 USE OF ANTI-PERSONNEL MINES BY NON-STATE ARMED GROUPS (NSAGs)

Another significant and persisting challenge posed to the Ottawa convention is the use of anti-personnel mines by non-states armed groups. This includes use by terrorist organizations, rebel groups, insurgent factions, separatists and others. Groups such as the Revolutionary Armed Forces of Columbia, fighters of various Palestinian militant groups, Maoist insurgents in India, the Baloch Liberation Army in Pakistan, number of ethnic groups of Myanmar, various groups in the Sahel region and many other NSAGs have used anti-personnel mines in at least 12 States according to Landmine Monitor 2024. However, since 1997, at least 70 NSAGs have committed to halt the use of anti-personnel mines[59]. In spite of its significance, the Ottawa Treaty provides no opportunity for NSAGs to express their willingness to abide by its norm and hence global norm such as the ban of anti-personnel mines, must also apply for NSAGs in order to achieve a mine-free world[60].

5.3 EMERGING THREATS POSED BY IMPROVISED EXPLOSIVE DEVICES (IED)

[57] *Statement of the MFA of Ukraine on the decision to suspension from the Ottawa Convention | Ministry of Foreign Affairs of Ukraine*, Ministry of Foreign Affairs of Ukraine, https://mfa.gov.ua/en/news/zayava-mzs-shchodo-rishennya-pro-vihid-ukrayini-z-ottavskoyi-konvenciyi (last visited Oct 31, 2025).

[58] *Five European states withdraw from Mine Ban Treaty*, Human Rights Watch (2025), https://www.hrw.org/news/2025/07/01/five-european-states-withdraw-from-mine-ban-treaty (last visited Sep 28, 2025).

[59] International Campaign to Ban Landmines, Landmine Monitor 2024 (Geneva: ICBL-CMC, November 2024).

[60] Stefanie Herr, *Binding non-state armed groups to international humanitarian law: Geneva call and the ban on anti-personnel mines: Lessons from Sudan*, PRIF (2010).

Another significant gap in the Ottawa Convention is its limited applicability to the growing threat posed by Improvised Explosive Devices (IEDs). IEDs are "homemade" explosive weapons that are designed to cause death or injury. Improvised mines are IEDs that are detonated by the presence, proximity, or contact of a person or a vehicle[61]. It may also incorporate lethal, destructive, harmful chemicals designed to destroy, distract or incapacitate. These IEDs have created a significant harmful impact in nations like Afghanistan, Iraq, Syria, Mali, and others with thousands of casualties. While the Convention's definition focuses on function (detonation by presence/proximity/contact), states and commentators differ on whether improvised explosive devices fall within the scope. The Convention defines an anti-personnel mine as any device designed to explode due to the presence, proximity, or contact of a person, and which is capable of injuring or killing. Importantly, the Convention does not differentiate between manufactured mines and those of an improvised nature. If an IED is designed to detonate when triggered by a person, it falls under the definition of an anti-personnel mine regardless of how or where it was made[62]. IEDs such as pressure-plate devices, tripwires, and other types that activate through human contact are therefore covered by the Convention. These improvised mines are often constructed using everyday materials and can be just as deadly and indiscriminate as factory-made mines[63]. Hence, it's fair enough to state that State parties to the Convention are required to fulfill their obligations, whether it's improvised or manufactured mines.

5.4 FUNDING AND POLITICAL WILL

Another major primary challenge for the Ottawa Convention is lack of consistent and insufficient funding by major donors. A large portion of the international funding is focused and directed on specific conflict zones with less support reaching deeply affected regions, leading to uneven distribution of funds. According to landmine monitor 2024, international donors provided $798.3 million for funding mine action with 5 donors- US, Germany, Norway, Japan and EU-contributing 72% of the total funding[64]. Though the total international contributions for mine action have increased, the funding of the same for deeply affected

[61] LANDMINE MONITOR 2019, (21st Annual Edition ed. 2019).
[62] Amoeschler, *IEDs and the Mine Ban Convention: A Minefield of Definitions?* Humanitarian Law & Policy Blog (2025), https://blogs.icrc.org/law-and-policy/2019/09/17/ieds-mine-ban-convention/ (last visited Sep 28, 2025).
[63] *Ibid.*
[64] International Campaign to Ban Landmines, Landmine Monitor 2024 (Geneva: ICBL-CMC, November 2024).

regions has been dwindling. Despite the increased international funding, no African nation was in the list of top 10 recipients of international funding. Ukraine alone received $308 million which was 39% of all international donor funds, while African countries, including Chad, Ethiopia, Mauritania, Niger, Nigeria, and Senegal, received a combined total of just $19 million over five years (2019–2023), representing less than 1% of global mine action funding[65]. The Landmine Monitor 2024 reveals that victim assistance and rehabilitation programs are underfunded, with only 6% of the total international contribution for mine action allocated for the same. Disproportionate funding to deeply affected regions due to focus on high-profile conflict and severe underfunding of victim assistance hampers the pursuits of the Convention. Without more balanced donor engagement with proportionate and reasonable funding for affected regions and a renewed political will to support underserved regions and increased support for victim rehabilitation, the global effort to eliminate landmines and assist survivors will remain incomplete.

6. PATHWAYS FORWARD

The Siem Reap-Angkor action plan 2025 was adopted by the fifth review conference of the State parties to the Ottawa Convention which provides a roadmap or framework for the period of the next 5 years and also offers a baseline or indicators to measure the progress and try to address the shortcomings of the Ottawa Convention. The various recommendations provided can be understood from below.

6.1 STRENGTHENING MONITORING AND COMPLIANCE

The action plan stresses the importance of complying with all the provisions of the conventions with unwavering commitment. Action 46 of the Angkor action plan directs all the State parties at the time of known or alleged non-compliance to undertake all necessary measures and investigate to prevent any instances of such non-compliance again and provide information on the situation to all the state parties in a transparent and comprehensive manner[66]. Action 47 of the plan directs the State parties who are fulfilling their obligations of destruction of stockpiles, mine clearance and retaining of mines to submit regular Article 7

[65] *AU expresses deep concern as Africa faces growing challenges for mine action* - Amani Africa (2025), https://amaniafrica-et.org/au-expresses-deep-concern-as-africa-faces-growing-challenges-for-mine-action/?print=print#:~:text=There%20are%20concerns%20that%20shifts,continental%20mechanism%20for%20mine%20action. (last visited Sep 28, 2025).

[66] Siem Reap–Angkor Action Plan 2025–2029, Draft Rev.1, APLC/CONF/2024/WP.23/Rev.1, United Nations (2024).

transparency reports, and if a country fails to report for two years in a row, then the president of the convention will step in to assist. This will be measured using the indicator on the percentage of state parties submitting article 7 transparency report on updating information on implementations of obligations. Action 49 directs those state parties that have not fulfilled their article 9 obligations to fulfill the same, that is, to pass a national law implement legal and administrative measures to implement the obligations of the convention[67].

6.2 ENHANCING VICTIM ASSISTANCE FRAMEWORK

The Part VII of the action plan provides a set of actions that can improve victim assistance more effectively, with emphasis on equality, equity, and the basis of human rights. It directs the affected state-parties to set up a government body which will lead and coordinate victim assistance and focus on integrating victim assistance into national policies, budgets, and laws. It should also create a national disability action plan that is measurable and inclusive. The action plan further directs the countries to ensure its ministries include the rights of the mine victims in the national frameworks on education, health, jobs, and development. Countries should also provide effective and efficient context-specific emergency medical care to new casualties and improve national capacity through training and Ensure mine victims have access to psychological and psychosocial support services, including to mental health, peer-to-peer support, community support, and other available services[68]. It recommends including the safety and protection of mine victims in its national humanitarian response and preparedness plans and strengthening efforts to ensure social and economic integration of the mine survivors with the removal of all forms of barriers and improving effective participation[69].

6.3 ENGAGING NON-STATE PARTIES THROUGH DIPLOMACY

The Part III of the Siem Reap-Angkor action plan 2025 stresses the urgency to get all those countries on board who are not state parties to the convention to ratify the convention or at most abide by the norms established by the convention to ban the use, production, and stockpiling of anti-personnel mines. It suggests the nations to intensify efforts and use all avenues at the global and regional levels to promote the ratification of the convention and participation in the work of the convention, observance of the convention's norms and

[67] *Ibid.*
[68] *Ibid.*
[69] *Ibid.*

objectives through political and military dialogues, high-level engagement and cooperation, and assistance with states not party to the convention[70]. The success of these efforts will be measured through various indicators such as the number of states parties that report on efforts to promote ratification/accession by States not party, number of new ratifications/accessions to the Convention, number of States not party submitting voluntary Article 7 reports, and number of States not party participating in informal and formal meetings of the convention[71].

7. CONCLUSION

The Ottawa Convention has achieved significant success with advanced global efforts and substantial reduction of use, production, and stockpiling of anti-personnel landmines with a huge amount of mine clearances around the world. It has even been reflected in the reduction in casualties with provisions for victim assistance and rehabilitation. It has undeniably transformed the global approach to humanitarian disarmament by stigmatizing the use of anti-personnel landmines and fostering unprecedented cooperation among States, international organizations, and civil society.

The Convention now stands at a critical juncture. With various persistent threats and challenges, such as continued use, stockpiling and deployment of anti-personnel mines by non-state parties and non-state armed groups, withdrawal of Ukraine and other eastern European states due to security concerns, severe underfunding for mine action; and emerging threats of improvised explosive devices, the aim of a mine-free world is still distant from reality. The mentioned prevalent issues pose a serious threat universality and normative strength of the treaty by slowing the momentum of progress intended to achieve mine free world.These developments reflect the pressing need to reconcile humanitarian obligations with legitimate security concerns in contemporary conflicts.

The Siem Reap-Angkor Action Plan 2025 provides actionable strategies to strengthen compliance, enhance victim assistance, and engage non-state parties diplomatically. Sustained political will, international cooperation, and equitable resource allocation remain essential to uphold the Convention's objectives, protect civilians, and ensure that the vision of a global mine-free world becomes a tangible reality.

[70] *Ibid.*
[71] *Ibid.*