Disarmament and International Security Committee DISEC

Model United Nations of the University of Chicago

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CHAIR LETTERS

Hello Delegates,

Welcome to MUNUC 35 and the Disarmament and International Security Committee (DISEC)! I am very excited to be one of your Co-Chairs this year and look forward to a weekend of fantastic and substantive debate.

My name is Anna Falcone. Up until coming to the University of Chicago, I was born and raised in New York City. I am currently a second year at the University of Chicago majoring in Religious Studies and minoring in Classics. In terms of Model UN, I am a Chair for ChoMUN, our collegiate Model UN conference, and I compete with the University's traveling Model UN team. General Assembly committees are a personal favorite of mine, so I am very excited to be chairing this one. Beyond Model UN, I am involved with uchivotes and UC Dems which both work out of the Institute of Politics. In my free time, I like to watch a lot of TV, sometimes go to the gym, and hang out with friends whenever I can.

I am thrilled to be chairing this DISEC committee with Lucas and to facilitate a fun and respectful committee environment for delegates to work together, speak their minds, and come up with solutions to the problems laid out in the background guide. Both topics—unexploded ordinances and surveillance technology—are of critical importance. I hope that you use this background guide as a jumping board and explore the breadth and depth of both topics.

Lucas and I value collaboration and respect more than anything. Model UN is about cooperation and working together to create the best possible solutions to these problems. Simply talking over other delegates or deleting their work to gain control of a bloc will not look good on you. We want to make sure that everyone can have a good time in committee and feel like they can speak and contribute. Importantly, no discriminatory speeches or behaviors will be tolerated at this committee. Moreover, some of the issues that we will discuss are highly sensitive. Therefore, when you are crafting solutions and debating over ideas, please be mindful that they have real-world implications for the lives and livelihoods of many. I hope you are as excited about the conference as Lucas and I are! Please feel free to contact me if you have any questions.

Best,

Anna Falcone

afalcone@uchicago.edu

Hello Delegates,

Welcome to DISEC at MUNUC 35! I am incredibly excited to meet you all and work with you on pressing security issues facing the world today.

My name is Lucas Freitag, and I will be your other DISEC chair for this committee. I hail from the great far away land of the western suburbs of Chicago. I'm a current second-year at the University of Chicago majoring in Public Policy Studies and Political Science. Like Anna, I'm also heavily involved in Model UN, also serving as a chair for ChoMUN and competing on the traveling team. Outside of Model UN, I'm involved with the South Side Free Music Program as a guitar teacher. When I'm not doing Model UN-related activities, you can find me making coffee in my room, listening to music, and getting lost in Chicago. I am excited to be working with Anna and our moderator and assistant chairs during the committee to dive deep and come up with inventive solutions to these real-world problems.

The questions that we will address at this committee are not new, and there have been various attempts at resolving the issues. Nonetheless, these problems persist. Anna and I are looking for creative, unique, and effective solutions. Do not just think about policies already used in certain countries, but also consider more outside-of-the-box solutions you would like to see. We would encourage you to look at all angles and take risks in coming up with solutions. We also understand that being in a large General Assembly committee can be intimidating (both of us have been there), and we commend you all for taking this on. We encourage everyone to speak up during mods and unmods, and to try and bring all they can to the table.

If there are any questions or concerns, please reach out to either of us. We want to make sure that everyone has an enjoyable committee experience, and we want to facilitate that in whatever ways possible. See you in February!

Best,

Lucas Freitag, lfreitag@uchicago.edu

HISTORY OF COMMITTEE

The Disarmament and International Security Committee (DISEC) is the First Committee of the United Nations General Assembly. Initially established in 1945, DISEC is one of the six main bodies of the UN General Assembly which means that all 193 Member States of the UN can participate in its sessions. As seen through the title of the First Committee, the primary focus of DISEC is on debating and drafting resolutions that concern disarmament and security in the international community to address global challenges and threats to peace within these areas. This past year at the 76th session of the UN, the DISEC debate agenda covered such topics as nuclear weapons proliferation, the role of technology in international security, and stockpiling of conventional weapons.¹ The First Committee also has two bodies that report directly to it concerning disarmament: the Disarmament Commission (UNDC) and Conference on Disarmament (CD).² While any resolution passed by DISEC is not legally binding to UN Member States, resolutions of the First Committee still carry immense importance in the international community by providing direction and guidance in tackling these global threats to peace.

¹ Team, ODS. n.d. "ODS HOME PAGE." Documents-Dds-Ny.un.org. Accessed September 11, 2022. https://documentsdds-ny.un.org/doc/UNDOC/GEN/N21/254/64/PDF/N2125464.pdf?OpenElement.

² "United Nations Disarmament Commission – UNODA." n.d.

https://www.un.org/disarmament/institutions/disarmament-commission/.

TOPIC A: UNEXPLODED ORDNANCES IN FORMER CONFLICT ZONES

Statement of the Problem



Civilian humanitarian demining in Colombia³

The US Department of Defense defines explosive ordnance as "all munitions, weapon delivery systems, and ordnance items that contain explosives, propellants, nuclear materials, and chemical agents." This wide range of explosive devices becomes **unexploded ordnance (UXO)** when they are deployed, but as a result of either design or malfunction, do not explode for an indefinite period of time.⁴ UXO can remain a potential hazard even decades after deployment, with explosives from as far back as World War I still posing a hazard in some areas of Europe. UXO contamination is a problem that is not isolated to a particular area or country but spread throughout the world and as

³ "Civilian Humanitarian Demining Officially Begins in Colombia," accessed November 23, 2022,

https://www.unmas.org/en/news/civilian-humanitarian-demining-officially-begins-colombia.

⁴ Unexploded Ordnance: A Coordinated Approach to Detection and Clearance Is Needed, 1995,

https://www.govinfo.gov/content/pkg/GAOREPORTS-NSIAD-95-197/html/GAOREPORTS-NSIAD-95-

^{197.}htm#:~:text=Over%2060%20countries%2C%20developed%20and,landmine%20and%20other%20UXO%20contam ination.

such, UXO continues to remain a threat both near border regions and throughout countries in former areas of conflict, including large portions of Africa, the Middle East, Asia, and other countries.⁵

The threat presented by UXO is particularly dire compared to other forms of conventional weapons in that their targeting is indiscriminate and their activation is commonly accidental, as the victims of UXO are rarely combatants in conflict zones, but civilians and even children trying to rebuild their lives and communities in the aftermath of war. According to the Landmine Monitor, 2020 saw some of the worst casualty numbers from landmines and UXO in recent history, reporting 7,073 injuries or deaths in 54 countries or areas, of which 80% of casualties were civilian and at least half of all casualties were children.⁶

Antipersonnel mines, also known as landmines, are the most persistent and common threat of all varieties of UXO around the globe and as such are responsible for the majority of UXO-related casualties as well as the primary focus of global removal efforts. While exact numbers are difficult to determine, it is estimated that over 60 countries are still contaminated by UXO, with estimates of 110 million active landmines alone still deployed around the world.⁷ It is estimated that if no new mines are laid then it will take over 1100 years to remove all the world's active landmines.⁸ UXO removal is particularly difficult as landmines and other forms of explosives are often deployed in large amounts with no clear record of where they are located, making removal efforts difficult and costly. The cost of producing and deploying a landmine is just a couple of dollars, but the UN estimates that the removal costs for just a single mine including support and logistics is between \$300 and \$1000 USD.⁹ Not to mention, the human cost of a civilian accidentally triggering a landmine explosion is incalculable. When considering that landmines are typically scattered and

landmines/#:~:text=If%20demining%20efforts%20remain%20about,the%20world's%20active%20land%20mines

⁵ Programme, United Nations Development. 2013. "Landmine Clearance in Colombia." Flickr. March 8, 2013. https://www.flickr.com/photos/unitednationsdevelopmentprogramme/13542099445.

⁶ "Global Mine Clearance Delays and Elevated Casualties Define Year Greatly Disrupted by the Pandemic." *The Monitor*, Nov. 2021, http://www.the-monitor.org/media/3317433/LM2021-Press-Release.pdf.

⁷ "Facts about Landmines." Minesweepers, https://landminefree.org/facts-about-

landmines/#:~:text=Mines%20kill%200r%20maim%20more,every%205000%20successfully%20removed%20mines. * "Facts about Landmines." *Minesweepers*, https://landminefree.org/facts-about-

⁹ Louise Doswald-Beck, Peter Herby. "The Human Cost of Landmines." ICRC, 1 Jan. 1995,

https://www.icrc.org/en/doc/resources/documents/misc/57jmcy.htm.

buried at random over an area during periods of conflict, completely clearing an area of UXO remains a daunting task that carries with it the potential for immense financial and human costs.

When considering its impact on communities, the problem of UXO in former conflict zones extends far beyond the obvious association with explosion-related injuries and deaths. The presence of landmines and other forms of ordnance in an area also carries with them immense economic and environmental costs for the affected community. Understanding the multi-faceted nature and broader implications of this problem is vital to crafting actionable resolutions that tackle each and every component of the pervasive threat of UXO.

Community Health and Safety

As previously stated, the most visible consequence of UXO contamination in an area is the potential for injuries and death as the result of an accidental explosion. Due to the nature of UXO injuries, victims of UXO explosions are often left to contend with serious lifelong injuries and health problems including, but not limited to, the loss of limbs, blindness, and deafness, as well as the psychological trauma of experiencing or witnessing a UXO related injury. The International Committee of the Red Cross reported in 1992 that 27% of mine victims required amputation of the lower limbs. Additionally, only 18% of injuries were confined to the legs, with many victims receiving injuries to the arms, genitals, chest, eyes, and face.¹⁰ Victims of UXO often face tremendous difficulties in rejoining their communities due to a lack of access to treatment, disability and accessibility aids, as well as education and instruction on how to manage such injuries. UXO injuries are in many instances life-altering and it remains immensely difficult for victims to regain a sense of normalcy after suffering such an injury.¹¹

Other threats to a community affected by UXO include contamination of soil, groundwater, and surface water from the presence of heavy metals or chemical agents in UXO.¹² Furthermore, the very

¹⁰ Ibid.

¹¹ Milan. "Children and Landmines: A Deadly Legacy." UNICEF,

https://web.archive.org/web/20090905185944/http://www.unicef.org/french/protection/files/Landmines_Factsheet_04_ LTR_HD.pdf.

¹² "Military Munitions/Unexploded Ordnance." EPA, Environmental Protection Agency,

https://www.epa.gov/fedfac/military-munitionsunexploded-ordnance.

presence of UXO in an area can reduce the overall quality of life for those living in nearby communities. The threat of UXO instills fear and wariness in communities as individuals contend with the fact that vital everyday activities such as travel and farming, as well as children's playing, carry with them immense risks of a UXO explosion.¹³

Economy and Trade

UXO also creates numerous economic challenges as it stands as a persistent barrier in preventing communities from attempting to recover and regrow in the aftermath of conflict as areas affected by UXO contamination are unable to be used for construction, infrastructure, or agriculture.¹⁴ Many countries affected by UXO are often those with agriculture-based economies making farming for consumption or for business impossible as explosives are typically dispersed over a wide area. This effectively denies communities access to land that could be used to grow food or harness natural resources obtained by mining or access to water. This can also prevent access to sources of energy such as hydroelectric power as natural resources cannot be fully harnessed with UXO in an area.¹⁵ Furthermore, the presence of UXO can further prevent trade between regions as the threat it poses makes travel through affected areas especially risky or impossible, inhibiting economic growth that could be obtained by trade within a region and preventing communities from reaching one another.¹⁶ In Egypt, for example, where UXO was deployed decades ago during WWI and WWII without the consent of the Egyptian government, 22% of all land in the country remains contaminated by UXO, preventing the reclamation and repurposing of vital areas that could be used to increase economic growth and utilize natural resources.³⁷

¹⁶ "United Nations Mine Action Service (UNMAS)." YouTube, YouTube, 28 May 2010,

https://www.youtube.com/watch?v=qkCBfrTAToY.

¹³ "United Nations Mine Action Service (UNMAS)." YouTube, YouTube, 28 May 2010,

https://www.youtube.com/watch?v=qkCBfrTAToY.

¹⁴ Armtrac Ltd. "Why the Disposal of Landmines Is Needed as Much as Ever." *Armtrac*, Armtrac Ltd, 23 June 2020, https://armtrac.net/minefield-clearance/why-the-disposal-of-landmines-is-needed-as-much-as-ever/. ¹⁵ *Ibid*.

¹⁷ Naira. "Egypt Continues to Suffer from WWII Landmines." Mada Masr,

https://www.madamasr.com/en/2017/04/04/feature/politics/egypt-continues-to-suffer-from-wwii-landmines/.

Disposal and Demining

As landmines and other forms of explosive ordnance are often deployed across a variety of terrains and wide areas, the removal of UXO poses an immense problem in and of itself that often carries with it great human and financial costs. UXO can be found buried in fields, forests, deserts, mountains, and areas with debris or difficult-to-traverse terrain. Each possible location presents different challenges for demining efforts, necessitating a variety of possible solutions to fully clear an area of UXO.¹⁸ Technological advancements have provided new ways of removing UXO, but are often prohibitively expensive or not suited to the type of clearance necessary to guarantee safety for a community.¹⁹ For this reason, demining and clearance are typically done by people, whether they are specialists or trained members of the community, in order to provide near total clearance over a wide area.²⁰ However, clearance by human hands carries with it substantial risk and it is estimated that for every 5000 landmines removed, one deminer is killed and another two are injured.²¹ Clearance of UXO is also an incredibly time-consuming task that requires precision and great care in the safe removal of ordnance which makes timely removal of landmines and other forms of ordnance incredibly difficult to achieve.

¹⁸ "Clearing Landmines and Explosives." *The HALO Trust*, ttps://www.halotrust.org/what-we-do/our-work/clearing-landmines-explosives/.

¹⁹ Armtrac Ltd. "Why the Disposal of Landmines Is Needed as Much as Ever." *Armtrac*, Armtrac Ltd, 23 June 2020, https://armtrac.net/minefield-clearance/why-the-disposal-of-landmines-is-needed-as-much-as-ever/.

²⁰ "Clearing Landmines and Explosives." *The HALO Trust*.

²¹ "Facts about Landmines." Minesweepers, https://landminefree.org/facts-about-

landmines/#:~:text=Mines%20kill%20or%20maim%20more,every%205000%20successfully%20removed%20mines.



Countries around the World Affected by Mines²²

²² Ibid.

History of the Problem

UXO dates back as far as the American Civil War, which was the first conflict to see the widespread use of explosive shells. Although rare, UXO can remain potent even after one hundred and fifty years, which means that regions that have not seen conflict in decades still can possess dangerous UXOs.²³ Because each conflict is different, no two countries have the same history of UXO, and so face different issues. However, that is not to say that every nation has experienced UXOs completely differently: by looking at a few examples, we can observe some similarities.

World War I and II



Map of Zone Rouge in France; zones marked in red were completely destroyed²⁴

The advent of industrial warfare in the First World War brought with it an unprecedented increase in the use of munitions. During the war, trenches on the Western Front stretched across the borders of Germany, France, and Belgium, with both sides employing heavy shelling. An estimated 1.5 billion shells were employed, many of which remain buried in the ground and are discovered in the annual "iron harvest" as farmers harvesting their crops dig up helmets, bullets, and, most dangerously,

²³ Kaplan, Sarah, and N. Kirkpatrick. "The Bombs beneath Us: Unexploded Ordnance Linger Long after Wars Are Over." The Washington Post, 25 Oct. 2021. https://www.washingtonpost.com/news/morning-mix/wp/2015/08/13/the-bombsbeneath-us-unexploded-ordnance-linger-long-after-wars-are-over/.

²⁴ Tinodela, Zone Rouge Map, Describing in Red Zones Completly Destroyed by First World War (d'après Guicherd, J., & Matriot, C. (1921). La Terre Des Régions Dévastées'. Journal d'Agriculture Pratique, 34, 154-6.), September 16, 2008, September 16, 2008, Zone_rougeRed_Zone_Map.jpg, https://commons.wikimedia.org/wiki/File:Red_Zone_Map.fr.svg.

shells and gas canisters.²⁵ In France, certain areas were deemed "Zone Rouge" by the government – areas in which human habitation is prohibited, and which today remain full of UXO. Gas shells containing mustard gas present the greatest threat, and still regularly kill deminers.²⁶

The even greater scale of the Second World War resulted in many more UXOs across an even broader array of nations. Aerial bombardment of major European cities left behind munitions of unprecedented sizes, such as a 1.8-tonne munition found in 2017.²⁷ The issue is particularly pronounced in Germany, which formed the *kampfmittelbeseitigungsdienst* to dispose of them, although the issue is also present in London as a result of the Blitz.

In addition to Europe, Japan also has a large number of WWII-era UXOs, particularly around Okinawa, which saw intense shelling near the end of the war. Even in 2020, the Japanese Self-Defense Forces carried out over 650 disposal missions, many of which included the disposal of underwater munitions, including mines and sunk ships.²⁸ Other nations in the Pacific, such as the Solomon Islands, or the Marshall Islands, also have continuing efforts to disarm UXOs.²⁹

²⁵ Beardsley, Eleanor. "WWI Munitions Still Live beneath Western Front." NPR, NPR, 11 Nov. 2007,

https://www.npr.org/2007/11/11/16131857/wwi-munitions-still-live-beneath-western-front .

²⁶ "Red Zone." National Geographic Society, https://www.nationalgeographic.org/article/red-zone/.

²⁷"Blockbuster' WWII Bomb in Frankfurt Forces Evacuation of 60,000." France 24,

https://www.france24.com/en/20170903-blockbuster-wwii-bomb-frankfurt-forces-evacuation-60000.

²⁸ "76 Years after Battle of Okinawa, Tons of Unexploded US Shells Lie Hidden beneath Ground." The Mainichi, https://mainichi.jp/english/articles/20210623/p2a/oom/ona/025000c.

²⁹ Eliseussen, Mette, and John Rodsted. "Special Report: Solomon Islands' Explosive Legacy." JMU Scholarly Commons, https://commons.lib.jmu.edu/cisr-journal/vol2o/iss3/7/.



Preparing the detonation of a US-made UXO at Taoun Village, Laman District³⁰

Case Study: Laos

As part of the larger Vietnam War, the United States dropped an estimated two million tons of explosives on Laos between 1964 and 1975 in an effort to prevent the flow of arms and troops through Laos into Vietnam.³¹ The war, which was focused primarily in Vietnam, Cambodia, and Laos, saw the United States implement enormous strategic bombing campaigns, and gave Laos the distinction of being the most bombed nation per capita. It is estimated that a third of all bombs dropped did not explode, making ongoing efforts of vital importance. UXOs are primarily comprised of cluster munitions, which are small anti-personal bombs, but also include large munitions and land

³⁰ Trade, Department of Foreign Affairs and. 2009. "AusAid Lao 0187." Flickr. February 10, 2009. https://www.flickr.com/photos/dfataustralianaid/10671981166.

³¹ "The UXO Problem ." Lao National Unexploded Ordnance Programme https://www.uxolao.org/the-uxo-problem/.

mines.³² UXOs can be found in 15 of the 18 provinces of Laos, with surveys placing the confirmed hazardous area (CHA) at over 1,100 km². Some estimate that the total area may cover up to 2,000 km².³³ It is estimated that 29,000 civilians have been killed since the end of the war as a result of UXOs, with another 21,000 injured.³⁴ Of those killed, approximately 40% were children, who are often the first to chance upon UXOs and who often do not understand what they have found.³⁵

The impact of UXOs, however, extends beyond the casualties they have caused. The most obvious impact is the cost of identifying and disarming them, as well as the associated costs of risk education and assistance to victims. There are no known summaries of the total costs of these efforts in Laos, but individual efforts offer insight into the scale. In 2013, Laos stated it required \$50 million to continue UXO clearance, and later proposals for clearance have ranged between \$62.5 million and \$400 million, depending on the size of the undertaking.³⁶ These substantial costs represent lost opportunities to invest in any number of other issues facing Laos.

UXOs also have an economic impact on local communities. One-quarter of all villages in Laos are affected by UXOs, which represents a significant impediment to agricultural activity.³⁷ Oftentimes, farmers fear extending their cropland because of the risk of running across UXOs or simply cannot do so because the land was contaminated, which leads to the underproduction of crops.³⁸ Injuries caused by UXOs lead to diminished economic productivity and can result in economic strains upon the victims' families.

At a local level, the economic impact of UXOs can have long-term ramifications on children's education. One study found that school-age children in regions with UXO contamination received 1.3

³³ "Lao PDR." Monitor, http://www.the-monitor.org/en-gb/reports/2020/lao-pdr/impact.aspx. ³⁴ *Ibid.*

³² Lao People's Democratic Republic. Support for the Institutional Strengthening of the National Regulatory Authority for the UXO/Mine Action Sector .

https://www.undp.org/sites/g/files/zskgke326/files/migration/la/aa6eeedcea9dcdf72b125ecf992dfa4f263401e54bc8dc50 aofacfdof96d5820.pdf.

³⁵ War Legacy Issues in Southeast Asia: Unexploded Ordnance (UXO). https://sgp.fas.org/crs/weapons/R45749.pdf. ³⁶ "Lao PDR." Monitor, http://www.the-monitor.org/en-gb/reports/2020/lao-pdr/impact.aspx.

³⁷ War Legacy Issues in Southeast Asia: Unexploded Ordnance (UXO). https://sgp.fas.org/crs/weapons/R45749.pdf. ³⁸ Soulineyadeth, Sopha. "Impact of Unexploded Ordnance (UXO) on Rural Communities' Livelihoods in Xiengkhouang Province, Lao PDR." https://doi.org/10.26686/wgtn.17008300.

years less of schooling than the national average.³⁹ This is often a result of children needing to drop out earlier to assist their families with farming. The reduced productivity UXOs cause means that families do not earn enough to support extended schooling for their children. In addition, children who are injured by UXOs may experience difficulties in school, either from being unable to walk long distances or from the emotional impact of such an injury.

Beyond the farming sector, UXOs pose significant obstacles in the development of all kinds of local projects, including roads, schools, and hydropower plants.⁴⁰ In conjunction with the other economic impacts, this makes it more difficult for people in UXO-contaminated regions to escape poverty, which in turn impacts the overall economic development of Laos.

Case Study: Egypt

The majority of the UXOs in Egypt are landmines dating from a roughly thirty-year period starting in 1940 and ending in the mid-1970s.⁴¹ The oldest of these landmines are from the Second World War when both Axis and Allies placed them in the Western Desert. Additional landmines in the Sinai Peninsula and Eastern Desert date from wars with Israel during that period, and it is also believed that some landmines have been added in recent years by various jihadist groups.

Although precise numbers are unavailable, by some estimates Egypt possesses more landmines than any other nation, with figures ranging from 16 million to 23 million total mines buried across the country.⁴² It is estimated that approximately 2,680km² of land along the North West coast is contaminated with landmines even after approximately 1,096km² were cleared following recent government and international efforts.⁴³ The case of Egypt highlights the difficulties with measuring the toll of UXOs, as independent investigations have found government figures to be inconsistent.

³⁹ Guo, Shiqi. "The Legacy Effect of Unexploded Bombs on Educational Attainment in Laos." *Journal of Development Economics*, vol. 147, 2020, p. 102527., https://doi.org/10.1016/j.jdevec0.2020.102527.

⁴⁰ War Legacy Issues in Southeast Asia: Unexploded Ordnance (UXO). https://sgp.fas.org/crs/weapons/R45749.pdf.

⁴¹ "Clearing the Mines 2020." *Mine Action Review*, https://www.mineactionreview.org/documents-and-reports/clearing-the-mines-2020.

⁴² Ibid.

⁴³ "Egypt." *Monitor*, http://www.the-monitor.org/en-gb/reports/2021/egypt/mine-action.aspx.

Government estimates state that prior to 2009 some 8,500 people were killed and another 7,700 injured by UXOs, although the yearly death toll has decreased significantly in recent years.⁴⁴ These casualties often occurred outside of known contaminated areas, and the majority of those affected had received no risk education. In short, the victims were unsuspecting.

Landmine and UXO removal efforts have encountered significant difficulties due to their age and location. Italy, Britain, and Germany have all provided WWII-era maps of landmines, but these are at best sketches of the general area in which landmines were placed, and decades of sandstorms and rain have erased reference points.⁴⁵ Additionally, the mines are often deep enough within the ground that they cannot be detected by conventional methods, making efforts more dangerous and time-consuming. Perhaps most importantly, the trigger mechanisms of many UXOs have corroded, and so a landmine that previously would have required the weight of a tank to detonate now only requires a human's weight.⁴⁶ This poses a threat not just to demining efforts, but also to locals or anyone unaware of the dangers buried beneath their feet.

One remarkable aspect of the UXO issue is the degree to which the public is unaware of it.⁴⁷ Mine awareness programs have been underfunded and unsuccessful, which has led to continuing UXO casualties in the country. Oftentimes those in contaminated areas receive no information about the locations of UXOs. Other public-facing programs, like victim assistance programs, are similarly limited, and the provision of prosthetic limbs or vocational training for those injured has come almost exclusively from NGOs.⁴⁸

⁴⁴ Egypt Landmine Problem: History, Facts, Constraints and Demining Techniques.

https://www.researchgate.net/publication/313904400_EGYPT_LANDMINE_PROBLEM_HISTORY_FACTS_CONSTRAIN TS_AND_DEMINING_TECHNIQUES.

⁴⁵ Ibid.

⁴⁶ Ibid.

⁴⁷ Mine Action Clearance: The Landmine Struggle Center and Arabic Mine Action Campaign. https://commons.lib.jmu.edu/cgi/viewcontent.cgi?article=2817&context=cisr-journal. ⁴⁸ *Ibid*

Case Study: Bosnia and Herzegovina

The breakup of Yugoslavia brought with it the Bosnian War, which lasted from 1992 to 1995 in one of the bloodiest conflicts since the end of World War II.⁴⁹ The conflict resulted in massive amounts of UXO, primarily consisting of landmines, with some cluster munitions as well.⁵⁰ It is the most mined country in Europe, with estimates placing the contaminated area at close to 2% of the nation's total area, even after 25 years of demining efforts.⁵¹ As recently as 2019, the complete extent of the landmines has not been mapped, although it is estimated that 70% of all UXO locations have been identified. Landmines remain a critical issue in Bosnia and Herzegovina. Ongoing demining operations have seen their projected end dates extended multiple times. Some half a million citizens are believed to live within regions contaminated or affected by UXOs, which amounts to 14% of the nation's population.⁵²

Since 1992, there have been 8,800 registered casualties as a result of UXOs, although only 1,600 of those have come since 1995.⁵³ In recent years, annual casualties have declined into the single digits, the majority of which have been deminers.⁵⁴ Most of the accidents that do not involve deminers have come as a result of agricultural work, as farmers tend to their crops or go into the forest to collect firewood. Those affected are principally of lower economic standing, and oftentimes knowingly ventured into contaminated areas because they had to support themselves.⁵⁵ Activities like hunting and fishing are also riskier, as overconfidence in the accuracy and precision of landmine maps has led to accidents. Migrants have been identified as another at-risk group due to their limited knowledge of contaminated zones and language difficulties in understanding signs.⁵⁶ As a result, the

5² Ibid.

⁴⁹ "Bosnian War." Encyclopædia Britannica, Encyclopædia Britannica, Inc., https://www.britannica.com/event/Bosnian-War.

⁵⁰ "Bosnia and Herzegovina." Monitor, http://www.the-monitor.org/en-gb/reports/2021/bosnia-and-herzegovina.aspx. ⁵¹ "Bosnia and Herzegovina: Southeast Europe: Activities: ITF Enhancing Human Security." *ITF.*

https://www.itf.si/activities/southeast-europe/bosnia-and-herzegovina.

⁵³ Bosnia and Herzegovina Mine Action Strategy. Bosnia and Herzegovina Council of Ministers,

http://www.bhmac.org/wp-content/uploads/2019/05/BiH-Mine-Action-Strategy-2018-2025.pdf.

⁵⁴ "Bosnia and Herzegovina." Monitor, http://www.the-monitor.org/en-gb/reports/2021/bosnia-and-herzegovina.aspx. ⁵⁵ *Ibid.*

⁵⁶Bosnia and Herzegovina Mine Action Strategy. Bosnia and Herzegovina Council of Ministers,

http://www.bhmac.org/wp-content/uploads/2019/05/BiH-Mine-Action-Strategy-2018-2025.pdf.

federal government and NGOs have embarked on mine awareness efforts directed specifically toward migrants.

Demining efforts first began after the war, with the number of parties carrying out demining operations rapidly proliferating. In 2002, these efforts were centralized under the Bosnia-Herzegovina Demining Center (BHMAC).⁵⁷ Despite being one of the longest-running demining programs in the world, BHMAC has continually encountered setbacks as a result of a lack of funding, and a government review in 2016 noted significant inefficiencies and concerns with the program.

The risk to deminers is significant, as it is in all demining operations, but the difficulties of the terrain exacerbate the issue. The landmines are primarily in areas with heavy vegetation and rocky terrain, which slows the pace of demining to about fifty square meters per day per deminer.⁵⁸ In the past, issues due to old equipment were prevalent. Those who become deminers often do so out of necessity, as they believe that it is the only way to earn a good salary.



Demining efforts in Bosnia-Herzegovina⁵⁹

⁵⁷ Ibid.

⁵⁸ United Nations High Commissioner for Refugees. "Bosnian Countryside Scarred with Landmines." Refworld, https://www.refworld.org/country,,UNHCR,,BIH,,,,o.html.

⁵⁹ "Soldiers of the 28th Division Engineers, Bosnia-Herzegovina, Dig up a Stable Area near Camp Bedrock, BIH, in Order to Stack Munitions That Are to Be Detonated during the Cooperative Blast Mission. Operation JOINT GUARD, 11 March 1997." 1997. The U.S. National Archives. March 11, 1997. https://nara.getarchive.net/media/soldiers-of-the-28th-divisionengineers-bosnia-herzegovina-dig-up-a-stable-830d0a.

Past Actions

History of Demining and UXO Clearance Efforts

The question of how to effectively clear UXO from contaminated areas has plagued affected countries for decades, with some of the earliest UXO removal efforts beginning in the aftermath of WWII and into the 1950s. However, many of these removal efforts were focused on clearing a path for military or peacekeeping operations and not total clearance for the reclamation of an area for use by nearby communities.

Amidst growing awareness of the threat presented by landmines and UXO, the UN began to carry out its first coordinated removal operations in the late 1980s and early 1990s in the nations of Afghanistan, Kuwait, and Cambodia, among others. These mine removal operations were among the first coordinated efforts between the UN, NGOs, and members of the affected areas to begin a true humanitarian mission to reclaim land contaminated by UXOs and improve the quality of life for those living in such areas. In many instances, as in Afghanistan, members of the local community were trained in UXO removal to assist in clearance efforts, providing communities with jobs as well as agency and independence in working to rebuild in the aftermath of conflict.⁶⁰

Mounting global concerns coupled with increased public pressure to address the issue of landmines and UXO saw the enactment of the **Ottawa Treaty** and the creation of the United Nations Mine Action Service (UNMAS) to better coordinate landmine removal operations around the globe and provide assistance and guidance to communities working to eliminate the threat of UXO.⁶¹

The Ottawa Treaty

Among the first and most successful international efforts to eliminate UXO was the enactment of the Ottawa Treaty, also known as the Anti-Personnel Mine Ban Treaty, in 1999 which outlined a series of requirements for countries to adhere to in working towards the elimination of UXO around

⁶⁰ Comms Team, Aisha. "Together for Mine Action; a Multilateral Success Story." UNMAS, https://www.unmas.org/sites/default/files/History-of-mine-action/.

⁶¹ UNMAS. https://www.unmas.org.en.

the world. As of this writing, 164 countries have ratified or acceded to the treaty, becoming States Parties to the Ottawa Treaty and agreeing to pursue the goal of eliminating **anti-personnel mines**. Notably, 32 UN Member States, including the United States, Russia, and China, have yet to ratify or accede to the Ottawa Treaty. Additionally, it is worth noting that the Ottawa Treaty only applies to anti-personnel mines and does not include other forms of UXO such as anti-tank mines, bombs, shells, etc.

The treaty terms broadly include halting landmine production and deployment, as well as the destruction of landmine stockpiles within four years of signing. The Treaty also requires signatories to clear all of their mined areas within their borders within ten years of signing, though nations can request extensions to this deadline as well as assistance from other States Parties. As of 2019, 20 years after the enactment of the Treaty, 33 states have reported landmine clearance within their territory in addition to the destruction of 55 million stockpiled landmines. However, due to the persistent nature of landmines, true total clearance remains a difficult objective to achieve as many nations still occasionally report discovering isolated landmines.⁶²

Though the Ottawa Treaty has brought about tremendous success in the area of mine removal, the path to the total elimination of UXOs around the world remains a difficult one and demands further international cooperation as well as new and innovative approaches to UXO clearance in order to be truly successful.^{63, 64}

The following case studies provide examples of existing UXO removal strategies and frameworks to inform the drafting of resolutions and provide examples of solutions that have been previously attempted around the world.

⁶² "Landmine Monitor 2019." *Monitor*, http://www.the-monitor.org/en-gb/reports/2019/landmine-monitor-2019/contamination-and-clearance.aspx.

⁶³ Convention on the Prohibition of the Use, Stockpiling, Production and Transfer of Anti-Personnel Mines and on Their Destruction. https://geneva-s3.unoda.org/static-unoda-site/pages/templates/anti-personnel-landmines-convention/APLC%2BEnglish.pdf.

⁶⁴ "Mine Ban Treaty." *The Monitor*, http://www.the-monitor.org/en-gb/the-issues/mine-ban-treaty.aspx.

Case Study: Angola

Angola accumulated a large number of landmines and UXOs through a decades-long period of civil war. Since 2002, efforts have been ongoing and successful, largely funded by the European Union and implemented by the **United Nations Development Program (UNDP)** and several NGOs. It thus presents an excellent case study for a national demining program.

The original end date for the program was 2013, but this was not met, and so contracts with 14 NGOs were extended through 2018.⁶⁵ Since then, it has once again been extended through 2025.⁶⁶ Rather than inefficiencies, delays, or cost overruns, the lack of funding was the primary driver behind the extensions. This is perhaps the most important lesson to be learned from past solutions: a lack of funding is an—if not the largest—obstacle which must be overcome. As is the case with many other nations, insufficient funding during the program has forced them to operate for much longer than intended, at the cost of lives and economic recovery.

From the outset the program was organized by a National Action Program, laying out the objectives to be accomplished, the relevant stakeholders, and the next steps. Important milestones included a Landmine Impact Survey and an Accident Survey, both of which provided the information needed to plan areas for clearance.⁶⁷ Nevertheless, there is still a lack of clear reporting on the number of UXO casualties. Creating and implementing land-release methodologies—criteria for when land would be declared safe for public use—was an important and highly successful aspect of the program.

The program also worked with local communities, aligning its plans with the needs of those affected.⁶⁸ Such consultations were critical because they gave respect and dignity to those affected, and maximized the impact of the program.

⁶⁵ Kukkuk, Leon. Angola - Final Evaluation of the Demining Action Vol III . 15 Aug. 2019,

https://www.academia.edu/40082959/Angola_Final_Evaluation_of_the_DEMINING_ACTION_VOL_III_Annex_FINAL . ⁶⁶ "Angola." Monitor, http://www.the-monitor.org/en-gb/reports/2020/angola/impact.aspx.

⁶⁷ Kukkuk, Leon. Angola - Final Evaluation of the Demining Action Vol III . 15 Aug. 2019,

https://www.academia.edu/40082959/Angola_Final_Evaluation_of_the_DEMINING_ACTION_VOL_III_Annex_FINAL ⁶⁸ *Ibid*.

Collaboration presented a major failure. The program funded several NGOs and organizations but did not develop reliable communication between them. Additionally, objectives for landmine clearance and redevelopment were kept separate.⁶⁹ That is, the demining program did not address developing new infrastructure for economic opportunities, while the redevelopment program did not address UXOs. These two issues are related, and so the program missed the mark by not addressing them. Coordinating demining and redevelopment would have allowed for better prioritization, such as the demining program clearing land that was then converted into a hospital. Instead, the demining program spent effort clearing land that was not immediately beneficial, and the redevelopment program faced delays because of **contaminated land**.

The program is representative of other demining programs: supported and funded by foreign nations, marked by numerous project extensions, and mostly, but not entirely, succeeding in the narrow goal of reducing UXOs. Long-term support for victims is absent, as is strong data on the results. In essence, it is a fairly good solution to the problem, and its organizational model is known to be reliable, but it is by no means a perfect answer.

Case Study: Mozambique

Suffering from nearly 30 years of conflict between 1960 and 1992, Mozambique witnessed the deployment of landmines and explosives throughout an extended period of intense conflict. These explosives were planted primarily in areas containing electricity pylons or railway viaducts to deny access to key locations which further hindered Mozambique's ability to rebuild following its years of conflict.⁷⁰

Mozambique's road to landmine clearance was an arduous one, having failed to meet its goal of complete removal by 2009 per the ten-year clearance deadline established by the Ottawa Treaty. Mozambique received an extension on its timeline as well as assistance from the UN, various NGOs, and humanitarian groups, although a lack of funding and government support slowed clearance

⁶⁹ Ibid.

⁷⁰ Gutierrez, Pablo, et al. "How Mozambique Was Cleared of Landmines – A Visual Guide." *The Guardian*, Guardian News and Media, https://www.theguardian.com/world/ng-interactive/2015/sep/17/how-mozambique-was-cleared-of-landmines-a-visual-guide.

efforts.⁷¹ Finally, in 2015, Mozambique celebrated its first year without any landmine casualties and announced that it had successfully cleared all known landmines, removing 171,000 landmines and destroying 37,818 stockpiled mines. The clearance of mines in Mozambique opened up numerous economic opportunities in the form of transportation, agriculture, and access to energy, enabling Mozambique to continue its rebuilding and development efforts.⁷²

While Mozambique's clearance status in 2015 marks an important milestone and victory for UXO clearance efforts around the world, it is not the end of the threat of explosives in the country. Due to the persistent nature of UXO, isolated landmines and explosives will continue to be found well into the future, necessitating the importance of long-term solutions and vigilance in combating the threat of UXO.

 ⁷¹ "Mozambique: Demining Is Not a Never Ending Story." *ReliefWeb*, 27 Oct. 2009, https://reliefweb.int/report/mozambique/mozambique-demining-not-never-ending-story.
 ⁷² *Ibid*.

Possible Solutions

Short Term Solutions

The implementation of immediate and actionable solutions is vital in mitigating the immense harm presented by UXO to communities in the early stages of recovering and rebuilding following conflict. Such short-term solutions include, but are not limited to, demining and UXO removal, risk and safety education, and immediate medical care. These solutions have, in many instances, been implemented in some form or another as part of various UXO removal efforts around the globe and will be further discussed in this section. Comprehensive resolutions will see delegates make use of both existing solutions as well as coming up with innovative and new ideas to address every facet of the immediate threat presented by UXO.

Demining and UXO Removal

Clearance of UXO from an area remains the first and foremost priority in assisting affected communities in rebuilding in the aftermath of conflict, for as long as UXO exists in an area it presents a clear and present danger to the safety and wellbeing of those living nearby. While there are many possible methods and tools that can be used for demining, some of which will be outlined below, effective resolutions will take into consideration the variability of UXO contamination by location and recognize that due to issues of cost, terrain, time, and availability of labor that there is no one size fits all solution to UXO removal.

Manual clearance done by human hands is the most readily available and accessible method of clearing UXO where trained personnel use small hand tools to dig through terrain, search for, and remove UXO by hand. This method can also help provide members of the affected community with a stake in clearance efforts as they can be trained in identifying and removing UXO, providing jobs, and allowing them to assist in clearance efforts. The clear drawbacks to manual clearance include

the immense risk to human life from an accidental detonation, the potential for human error and the immense amount of time required to utilize existing manual clearance methods.⁷³

Metal detectors are among the most commonly used tools to assist in searching for and identifying UXO in contaminated areas to support manual clearance. Metal detectors are incredibly cost effective, take relatively little skill to operate and are easily transportable from area to area. However, metal detectors also come with several drawbacks: different varieties of terrain may make it difficult or impossible for a metal detector to accurately find UXO, in addition to the fact that shrapnel or other metal debris can potentially be mistaken for UXO if only using a metal detector.⁷⁴



Landmine clearing in Democratic Republic of Congo⁷⁵

Animals, particularly dogs, have long played an important role in the clearance of UXO dating back to WWII. Their sense of smell allows them to sniff out the chemical compounds contained in UXO and alert their handlers of the location so that the explosives can be safely removed. Additionally, due to the small size of the breeds used in clearance dogs do not weigh enough to set off an

74 Ibid.

⁷³ Gibson, Jacqueline MacDonald, and J. R. Lockwood. 2003. "Alternatives for Landmine Detection." Www.rand.org. January 1, 2003. https://www.rand.org/pubs/monograph_reports/MR1608.html.

⁷⁵ Photo, United Nations. 2006. "Landmine Clearing Efforts in Democratic Republic of the Congo." Flickr. October 17, 2006. https://www.flickr.com/photos/un_photo/3311479081.

explosive, reducing the overall risk of clearance operations.⁷⁶ However, training dogs to be used in UXO clearance is a costly process that requires multiple months of specialized training and acclimation to the environment where the dog will be working. Dogs are also not always able to accurately identify the location of UXO as difficult climate and terrain, as well as the presence of multiple explosives in a region, can confuse them and as such are not suitable for clearance of particularly high-risk areas. In addition to dogs, some organizations have in recent years begun training rats to search for landmines as well as utilizing honeybees to identify locations in which UXO is present, though these solutions, while innovative, are relatively unproven and may not be suitable for most clearance operations.^{77 78}

The usage of mine plows or flails consists of utilizing a heavily armored vehicle, most commonly a tank or armored truck outfitted with such devices, to overturn or purposely detonate UXO as a means of clearing an area. This method is favored for military applications as it allows for the clearing of a straight lane through a minefield, but is less suitable for complete clearance of entire areas and difficult terrain which is often what is needed to provide safety to an affected community. Additionally, such equipment is costly and is often difficult to transport, making it especially difficult to deploy without sufficient funding or in remote areas.

While innovation in the field of UXO clearance is relatively slow, there have been several advancements and experiments in detection and removal technology over the past several decades. Imaging and locating technology such as Ground Penetrating Radar (GPR) and X-ray Backscatter can be used to determine more exact locations of underground UXO to aid in removal efforts. Furthermore, drones outfitted with cameras, radar and other devices can be used to survey an area and establish where UXO may be located and potentially even be used to defuse explosives remotely from a safe distance. While all of these new technological solutions show much promise, they are

 ⁷⁶ "Mine Detection Dogs." *Modern Dog Magazine*, https://moderndogmagazine.com/articles/mine-detection-dogs/18027#:~:text=Karrman%20says%20the%20dogs%20are,enough%20t0%20set%20it%20off.
 ⁷⁷ "Mine Detection Dogs." *Modern Dog Magazine*, https://moderndogmagazine.com/articles/mine-detection-dogs/18027#:~:text=Karrman%20says%20the%20dogs%20are,enough%20t0%20set%20it%20off.
 ⁷⁸ Gerstner, Ed. "Lasers, Landmines and Honeybees." *Nature Physics*, 2005, https://doi.org/10.1038/nphys103.

often expensive and experimental, and in the case of drones, carry with them the potential to be weaponized or present privacy concerns.⁷⁹

Risk and Safety Education

Educating community members in areas where UXO is a threat, especially children, in how to properly identify, respond to, and avoid UXO is an important step to reduce the immediate hazard presented by explosives. This includes learning how to identify various types of UXO and establishing systems by which community members can report on known locations of UXO so that they can be safely avoided until they can be removed. The results of proper risk and safety education in dealing with UXO are immediate and can allow a community to begin reconstruction even while UXO remains in the ground.^{80 81} Such an education could also include training members of the community to assist in removal efforts, providing job opportunities as well as agency in working to remove UXO from their communities. Effective resolutions should consider that while an important stop gap solution, risk and safety education is not a substitute or replacement for the complete removal of UXO. Education curriculums should include information on the long-term social and economic consequences of UXO as well.⁸²

Urgent Medical Care

Even with proper education and information, the unfortunate reality of UXO contamination in an area means that explosives related injuries will continue to be an ever-present threat until complete UXO removal is achieved. As previously mentioned, UXO injuries leave victims with grievous injuries that demand immediate medical attention. Proper first aid and evacuation from the area in which the explosion occurred are vital steps to stabilize and care for victims of UXO immediately after an injury. For this, stockpiles of emergency medical supplies including bandages and antibiotics are a

⁷⁹ "Clearing Landmines with the Help of Drones." *MKD Project*, https://cordis.europa.eu/article/id/422614-clearing-landmines-with-the-help-of-drones.

⁸⁰ "UXO Education and Awareness." *World Education*, 18 Oct. 2021, https://worlded.org/uxo-education-and-awareness/. ⁸¹ "Comprehensive Mine Risk Education." *https://Laos.worlded.org*, https://laos.worlded.org/projects/uxo-education-and-awareness/#:~:text=Funded%20by%20the%20U.S.%20government,protect%20themselves%20and%20their%20peers. ⁸² DURHAM, JOANNE, et al. "Effective Mine Risk Education in War-Zone Areas—a Shared Responsibility." *Health Promotion International*, vol. 20, no. 3, 2005, pp. 213–20. *JSTOR*, http://www.jstor.org/stable/45152818. Accessed 1 Aug. 2022.

must for immediate treatment. To have the greatest odds of surviving UXO injury, victims must be transported to a hospital to undergo emergency procedures including amputations and blood transfusions. Furthermore, proper and timely medical intervention can improve a victim's prospects for survival and rehabilitation.⁸³

As many communities affected by UXO are often far away from hospitals or lack sufficient medical resources, effective resolutions must consider how to increase access to emergency medical aid, through possible avenues including, but not limited to, the construction of hospitals, increased access to emergency transport, and the training of specialized surgeons, in addition to coming up with ways to supply the vital medical resources that are needed in the immediate treatment of a UXO injury.⁸⁴

Long Term Solutions

The struggles of those affected by UXOs do not cease when UXOs are gone, so support must be provided. Additionally, without action to end the use of landmines and other such UXO, the issue will continue to return.

Medical Care

Those injured by UXOs require physical rehabilitation not just in the months after an accident, but for the remainder of their lives. Prostheses must be replaced, especially if the victim is a child, and continued medical care is necessary to maintain health.⁸⁵ Such treatments are available only at large hospitals and rehabilitation facilities, which are often located far from contaminated regions. Establishing programs for transporting patients, or opening new rehabilitation centers, are necessary if all victims are to be treated. Improvements in surgeons' knowledge of proper techniques for UXO injuries are also needed in some countries, as a lack of familiarity with best practices has

⁸⁴ Walsh, Nicolas E, and Wendy S Walsh. 2003. "Rehabilitation of Landmine Victims--the Ultimate Challenge." Bulletin of the World Health Organization 81 (9): 665–70. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2572531/.
⁸⁵ Caring for Landmine Victims. https://www.icrc.org/en/doc/assets/files/other/caring-landmine-victims-0863.pdf.

⁸³ Caring for Landmine Victims. https://www.icrc.org/en/doc/assets/files/other/caring-landmine-victims-o863.pdf.

significant negative effects.⁸⁶ In some nations, disability pensions have been established, which help diffuse the recurring costs of care and the lost job opportunities.⁸⁷

The psychological effects of UXOs are long-lasting, particularly for those injured. Adjusting to life without a limb, or with another injury, is difficult and many feel isolated from their community as a result.⁸⁸ Victims of UXOs are much more prone to anxiety and depression, and many report that even after they have adjusted to the feeling of not having a limb, they still feel alienated from their families and friends. Successful recovery requires a victim to reintegrate into society, and so programs must be comprehensive rather than merely focusing on rehabilitation.⁸⁹ Employment is another key aspect, as it enables victims to feel they are once again productive members of society. Challenges to employment include accessibility, both in the workplace and in transport, as well as discrimination and physical limitations.⁹⁰

The Economy and UXOs

The economic harms of UXOs are clear: formerly productive land is lost, development projects slow out of fear of encountering UXOs, and children attend less schooling on average. Addressing these harms, however, requires more attention to detail than simply removing UXOs. Prioritizing certain areas over others, employing local communities, and combining efforts with development projects are all important steps in revitalizing economies disrupted by UXOs.

Not all land is created equal, and some is more valuable than others. Prioritizing high-value agricultural areas can lead to significant improvements in local food security and income, as farmers once again can use land which was previously lost.⁹¹ Doing so requires not only the identification of key agricultural zones but also an understanding of the areas in which local communities operate.

https://www.unmas.org/sites/default/files/evaluation_report_of_mine_action_programme_of_afghanistan.pdf.

⁸⁶ Ibid.

⁸⁷ "30 Years of Impact: An Evaluation of the Mine Action Programme of Afghanistan ." UNMAS,

 ⁸⁸ Ferguson, A. D., Sperber Richie, B., & Gomez, M. J. (2004). Psychological factors after traumatic amputation in landmine survivors: The bridge between physical healing and full recovery. Disability and Rehabilitation, 26(14-15), 931–938.
 ⁸⁹ Ibid.

⁹º Ibid.

⁹¹ "30 Years of Impact: An Evaluation of the Mine Action Programme of Afghanistan ." UNMAS,

https://www.unmas.org/sites/default/files/evaluation_report_of_mine_action_programme_of_afghanistan.pdf.

Clearing land which is too far from communities or roads can cause additional hardship to farmers who would need to travel uncomfortably far. Although the land must ultimately be cleared, one must not forget that the ultimate goal is assisting those affected, and hence collaboration with local communities to assist in economic development is important. Agriculture is just one of the many types of land which are worth prioritizing, and other examples, such as mines, or forested areas should be prioritized, depending on the specific local needs.⁹²

Adopting a community-based demining (CBD) approach is useful in economic development. One facet of CBD is recruiting and training deminers from communities in contaminated areas, in particular, those affected by UXOs in the form of injuries.⁹³ Demining programs often begin with primarily foreign deminers, but the long-term nature of these projects offers time to transition to local deminers. The income from demining supports the local economy and offers another avenue to support affected communities. Recruiting female deminers also presents the opportunity to address wage inequality and improve access to resources.⁹⁴

Collaboration with reconstruction or development efforts is important, as oftentimes these efforts can be unexpectedly halted by the presence of UXOs. Not only is supporting development an important objective, but in many cases, it is the most important, as in many nations the victim rate from UXOs is primarily due to people attempting to gather resources to support themselves from contaminated areas.⁹⁵ Most development, even in contaminated areas, is not hindered by mines, and hence development programs rarely reach out first to demining efforts. A proactive outreach approach is necessary, as is an understanding of what information is relevant to development programs, for providing too much information can have the same result as not providing any. Effectively utilizing the resources of the demining program to survey and clear areas for future development requires ongoing communication.⁹⁶

⁹²Ibid.

⁹³ Ibid.

⁹⁴ The Socioeconomic Impact of Employing Female Deminers in Sri Lanka. June 2020,

https://www.gichd.org/fileadmin/GICHD-resources/rec-documents/Socioecon_Study_SLK_Report_FINAL_full.pdf. ⁹⁵ Cisr-Jmu. "INTEGRATING MINE ACTION WITH DEVELOPMENT." *JMU*, 1 Aug. 2022, https://www.jmu.edu/cisr/. ⁹⁶ *Ibid*.

Banning Landmines

With the passage of the Ottawa Treaty, significant progress has been made toward the prohibition of landmines, but a number of countries have yet to sign it. Even some countries which are party to the treaty have yet to destroy their landmine stockpiles or have retained significant quantities, ostensibly for training purposes.⁹⁷ The complete adoption of the treaty would bring with it the near-total destruction of landmine stockpiles. Article 8 of the treaty establishes fact-finding missions for investigating landmine use by signatories but remains unutilized as the international community has put enforcement on the back burner.⁹⁸ To actually be effective, the treaty must receive greater support, or an entirely new method of enforcing the ban must be developed. At the same time, there is little which can be done if a nation refuses to comply with the treaty, and hence persuasion is of the utmost importance. Developing further consensus, and, more importantly, convincing landmine-producing nations to cease production, is the only way to end the use of landmines.

Preventing IEDs and Nonstate Actor Landmines

Non-State Actors (NSAs) such as guerilla groups also use UXOs, making them one of the principal causes behind modern-day landmine usage.⁹⁹ Preventing access to munitions and landmines offers an obvious first step, but the prevalence of improvised explosive devices (IEDs) means that oftentimes this is not possible. The difficulty in preventing the use of landmines by NSAs lies in their lack of official recognition: it is already difficult enough to convince a major nation to cease using landmines, much less an NSA which cares little for the opinion of the international community. Despite this, some progress has been made through developing agreements directly with NSAs. Agreements against landmines have often been developed during ceasefire or truce negotiations.¹⁰⁰ Additionally, direct agreements with NSAs have been successful in the past, notably through the work of the NGO Geneva Call. The reasoning behind an NSA agreeing to cease using landmines

https://www.icrc.org/en/doc/assets/files/other/icrc_oo2_o7o2_ottawa_explained.pdf.

http://www.icbl.org/en-gb/problem/why-landmines-are-still-a-problem.aspx.

⁹⁷ "Disarm: Finish the Job." ICBL, http://www.icbl.org/en-gb/finish-the-job/disarm.aspx.

⁹⁸ Banning Anti-Personnel Mines. 1998

^{99 &}quot;International Campaign to Ban Landmines - Why Landmines Are Still a Problem: Problem." ICBL,

¹⁰⁰ Gleditsch, K. S., Hug, S., Schubiger, L. I., & Wucherpfennig, J. (2016). *International Conventions and Nonstate Actors. Journal of Conflict Resolution*, 62(2), 346–380.

varies, but oftentimes it comes as a way of claiming legitimacy.¹⁰¹ Finding other methods of convincing NSAs to ban landmines, without conferring any kind of international recognition on them, is necessary to prevent future use. At the same time, the importance of incremental progress must not be discarded. Even if NSAs do not wish to ban landmines, talks must begin to ensure that areas with landmines are recorded and marked so civilians are aware.¹⁰² Similarly, efforts should be made to prepare agencies willing to dispose of landmines, or clear contaminated areas. If an NSA becomes willing to reduce its stockpile, action should be taken immediately, lest the munitions are used again.

¹⁰¹ Ibid.

¹⁰² "Humanitarian Engagement with Armed Groups and De Facto Authorities." Geneva Call, 15 July 2022, https://www.genevacall.org/.

Bloc Positions

While UXO is nearly universally agreed to be a massive humanitarian issue and threat to civilian life, there exist tense disagreements on if and how such explosives that result in UXO should be used around the world. These arguments are largely divided between nations that have signed the Ottawa Treaty and nations that haven't, though there also exist nations that are unable to sign the Treaty or may be reconsidering their membership to it. The blocs to be outlined are meant to be representative of the real positions taken by UN member states on this issue, but during committee, they should serve only as a guide to the relative position a country takes on this issue rather than an absolute stance on the topic of UXO.

Ottawa Nations

In total, 164 nations have signed the Ottawa Treaty and agreed to its terms of halting production and deployment of landmines as well as committing to removing all deployed landmines worldwide.¹⁰³ While united in their commitment to the Treaty terms, nations within this bloc have their own objectives and levels of involvement in clearing landmines. The signatories include a diverse array of developed and developing nations, each of which possesses different resources and experiences to commit to Treaty objectives.

Under the Treaty terms, nations who have the resources and knowledge are asked to assist other nations in their clearance and removal efforts.¹⁰⁴ This is of particular importance as many of the nations currently working to remove landmines from their land may often lack the resources and funding to do so effectively and in compliance with the Treaty's removal timeline without some form of external assistance either from other Treaty members or NGOs. It is also worth noting that this bloc includes nations that have since been declared free of landmines whose expertise and experience in clearance and rebuilding in the aftermath of conflict could provide valuable lessons for future clearance efforts in other areas around the world.

¹⁰³ "The Ottawa Convention: Signatories and States-Parties." *The Ottawa Convention: Signatories and States-Parties* | *Arms Control Association*, https://www.armscontrol.org/factsheets/ottawasigs. ¹⁰⁴ *Ibid*.

Non-Ottawa Nations

³² nations have not signed the Ottawa Treaty, including a majority of the permanent UN Security Council members such as the United States, China, and Russia.¹⁰⁵ There exists greater nuance within this bloc regarding individual nations' positions on UXO and their adherence to the Treaty terms. Some of these nations, such as the United States, actually supported the Ottawa Treaty while it was being drafted, but now cite national security concerns or the strategic importance of explosives as reasons why they are unable to agree to the full treaty terms.¹⁰⁶ Other nations have completed the removal goals as outlined in the Treaty on their own without acceding to it, but remain unable or unwilling to meet all of the other Treaty terms. Some nations continue to produce or deploy explosives in conflict for which acceding to the Treaty remains an impossibility.¹⁰⁷

Nations in Conflict

In light of conflicts and geopolitical tensions, some nations may find it necessary to deploy explosives that will inevitably create UXO. For instance, South Korea, a nation that has yet to sign the Ottawa Treaty and will likely remain unable to, has deployed countless explosives along its border with North Korea as a means of protecting its borders. However, it is worth noting that this deployment of explosives is not of the indiscriminate variety seen during periods of war, but is carefully laid out in the interest of protecting South Korea's sovereignty. Furthermore, other nations forced into conflict or in close proximity to war may reconsider their membership to the Ottawa Treaty as such circumstances may make the deployment of explosives a necessity in order to protect their nation and citizens.

¹⁰⁵ Ibid.

¹⁰⁶ Schrepferman, Will. "The United States and the Ottawa Treaty." *Harvard International Review*, 30 Dec. 2019, https://hir.harvard.edu/all-mine-the-united-states-and-the-ottawa-

treaty/#:~:text=Although%20America%20supported%20the%20development,between%20North%20and%20South%2 oKorea.

¹⁰⁷ "Middle East/North Africa Non-Signatories." *Human Rights Watch*,

https://www.hrw.org/reports/1999/landmine/WEBME3.html.

Glossary

Anti-Personnel landmine – often referred to as **landmines**. "Explosive devices designed to be detonated by the presence, proximity, or contact of a person."¹⁰⁸

Contaminated land – area with UXOs. Can also refer to areas with chemical contamination or pollution from UXO.

Non-State Actor – an entity that "(A) exercises significant political power and territorial control; (B) is outside the control of a sovereign government; and (C) often employs violence in pursuit of its objectives."¹⁰⁹

Ottawa Treaty – a 1997 UN treaty banning and eliminating anti-personnel landmines. Also known as the Anti-Personnel Mine Ban Treaty.

UNDP – United Nations Development Program. Its objective is eradicating poverty and assisting in sustainable human development.

Unexploded Ordnance (UXO) or **explosive remnant of wa**r – any "military ammunition or explosive ordnance which has failed to function as intended."¹¹⁰

¹⁰⁸ "International Campaign to Ban Landmines - What Is a Landmine | Problem | ICBL." 2019. Icbl.org. 2019. http://www.icbl.org/en-gb/problem/what-is-a-landmine.aspx.

¹⁰⁹ "Non-State Actor ." Legal Information Institute,

https://www.law.cornell.edu/definitions/uscode.php?width=840&height=800&iframe=true&def_id=22-USC-1357447846-657893730&term_occur=999&term_src=title%3A22%3Achapter%3A73%3Asection%3A6402.

¹¹⁰ What Is UXO" Department of Defence, https://defence.gov.au/UXO/what/.

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TOPIC B: EVOLUTION OF SURVEILLANCE TECHNOLOGY FOR SECURITY PURPOSES

Statement of the Problem

With the advancement of technology in the digital age, methods of surveillance have grown and changed in unimaginable ways. People can be watched, tracked, and recorded without their knowledge. The scale of surveillance has expanded as digital surveillance does not require the same manpower that physically following someone does. Surveillance technology can bring about a host of different problems as it can not only invade someone's privacy but also facilitate human rights abuses. It is crucial to draw the lines between where surveillance technology can help protect people and where it starts to hurt them instead.

The newest and most used type of **surveillance technology** is artificial intelligence. The advancement of artificial intelligence has allowed governments to track people through a variety of means including facial recognition, social media, and aerial surveillance. This technology, while now widespread, often has flaws and remains fairly unregulated. New facial recognition technology used by police departments misidentifies African American or Asian individuals 10 to over 100 times more than white men. However, there are not many restrictions on how these technologies can be used.¹¹¹

Additionally, the UN warns that surveillance technology can be used to silence individuals and invade their privacy. Specifically, the UN is concerned with how surveillance technology can be used to intimidate journalists and human rights defenders into censoring themselves. They call for nations and companies to regulate how surveillance technology can be used so that it can best serve the purposes it is meant to without being used in harmful ways. These regulations should both look at how governments are using surveillance technology as well as how companies are surveilling their customers and storing private information.¹¹² In 2019, David Kaye, the UN Special Rapporteur on

¹¹¹ Steven Feldstein and David Wong, et al. "New Technologies, New Problems – Troubling Surveillance Trends in America." *Just Security*, 17 Nov. 2020, https://www.justsecurity.org/71837/new-technologies-new-problems-troubling-surveillance-trends-in-america/.

¹¹² "Pegasus: Human Rights-Compliant Laws Needed to Regulate Spyware || UN News." *United Nations*, United Nations, https://news.un.org/en/story/2021/07/1096142#:~:text=Surveillance%20software%20has%20been%20linked,cause%20 people%20to%20censor%20themselves.

Freedom of Opinion and Expression, called for a pause on the international sales of surveillance technology until regulations were put in place. He described how this technology can allow already oppressive governments to further invade the privacy of their citizenry, allowing for further human rights abuses to be carried out. Additionally, he described how one of the reasons these practices have not been stopped is the secrecy around how they are used, calling for more transparency in the field of surveillance technology.¹¹³

Artificial Intelligence Surveillance

Artificial Intelligence (AI) has further developed the surveillance technology world. AI has now become a part of our everyday lives. While some AI does look like what we might think of in the movies, there is also AI technology in things like Siri, self-driving cars, or simply email spam filters and Netflix recommendations. AI has become such an inherent part of our lives that we don't even realize how integral of a role it plays. The goal of AI is simple, to get a computer to think; however, at this moment the technology can only really react to the world in front of it and retain a limited amount of memory.¹¹⁴

The lack of legal privacy protections has also left populaces without any knowledge of how surveillance technology is being used. In Myanmar, all laws around citizens' privacy and security have been temporarily lifted leaving their populace vulnerable. Many protesters are worried that government surveillance is leading to their arrests. While this is not confirmed in any way, it is leading people to cover their cameras for fear that they might be watched due to the lack of legal protections around surveillance technology. While this technology might not have been used to track protesters, it most definitely holds the capability to do so, and questions around how the military and police should be able to access this information are becoming imminent.¹¹⁵

¹¹³ "Digital Surveillance's Threat to Human Rights." International Bar Association,

https://www.ibanet.org/article/CEE365AB-CC04-4E2C-91F6-D5F4D353A0A0.

¹¹⁴ "Artificial Intelligence." BuiltIn, https://builtin.com/artificial-intelligence.

¹¹⁵ Auto, Hermes. "Fears of 'Digital Dictatorship' as Myanmar Deploys Artificial Intelligence." *The Straits Times*, 19 Mar. 2021, https://www.straitstimes.com/asia/se-asia/fears-of-digital-dictatorship-as-myanmar-deploys-artificial-intelligence.

Facial Recognition

Facial recognition combined with other forms of surveillance is one of the most common uses of artificial intelligence in surveillance technology. These systems are being used by police departments in order to track people and predict crimes. For example, the NYPD has been using its algorithm PredPol to aid in policing using both facial recognition and aerial surveillance. These technologies are fairly unregulated leading to possible abuses of such technology. In 2020, companies like Amazon, IBM, and Microsoft had halted selling facial recognition technology to police.¹¹⁶



Automated license plate readers in Manhattan¹¹⁷

However, not all places are being held accountable for how they use facial recognition software. Russia has one of the largest growing networks of closed-circuit television (CCTV) cameras in the world. Moscow in particular is ramping up their use of facial recognition technologies instead of placing regulations on how they can be used. They are looking to expand how people can be searched for by including filters for gender, race, or age. Additionally, these cameras are now supposed to have silhouette recognition. The "silhouette" is something that is supposed to uniquely capture the height, size, and clothing of a person to allow for better tracking when the person's face cannot be seen. While this technology is meant to promote safety in Moscow, there are major

¹¹⁶ Steven Feldstein and David Wong, et al. "New Technologies, New Problems – Troubling Surveillance Trends in America." *Just Security*, 17 Nov. 2020, https://www.justsecurity.org/71837/new-technologies-new-problems-troubling-surveillance-trends-in-america/.

¹¹⁷ "Caught in the Spotlight." 2020. Urban Omnibus. January 9, 2020. https://urbanomnibus.net/2020/01/caught-in-thespotlight/.

concerns over both privacy and effectiveness. Facial recognition technology itself is already faulty and can often give incorrect identifications. With Moscow expanding the technology without regulating it, these concerns will persist. Furthermore, this technology is already used against people who are protesting the government, so any increase in such technology will lead to greater suppression of dissent. Facial recognition technology has the power to suppress free speech and expression as well as protesting as it allows governments to track any such activities.¹¹⁸

Borders

Al along with other sensors are being used to monitor country borders. For example, the United States border with Mexico has a "virtual wall" made up of this Al and sensor technology. This wall tracks who is entering and exiting the country at different times, even to the point where the technology can identify people in their cars crossing the border. This technology collects tons of data on who is coming in and out and stores it in government databases. Areas within a 100-mile zone are considered to be part of the border, meaning that this surveillance is not only watching the physical border, but can also track people in the surrounding communities storing data about their movements.¹¹⁹

 ¹¹⁸ "Russia: Broad Facial Recognition Use Undermines Rights." Human Rights Watch, 15 Sept. 2021, https://www.hrw.org/news/2021/09/15/russia-broad-facial-recognition-use-undermines-rights.
 ¹¹⁹ "Surveillance Society': Has Technology at the US-Mexico Border Gone Too Far?" The Guardian, Guardian News and Media, 13 June 2018, https://www.theguardian.com/technology/2018/jun/13/mexico-us-border-wall-surveillanceartificial-intelligence-technology.



Security operations at the US border¹²⁰

Border surveillance is also taking in other forms. Europe is currently developing the technology iBorderCtrl, which is meant to be a type of video lie detector test. While it is debated whether this technology actually works, the idea is that the camera and AI can pick up on 'micro-expressions' to determine whether someone is telling the truth or not. However, the producers of this technology have refused to give information on many key issues, such as the ethical and privacy implications, data collection methods, as well as how the technology will work to prevent profiling and stigmatization. While the people producing the technology claim that this information is not public because these issues are related to the commercial side of the technology, there are concerns about the viability of such technology and whether it would only work to falsely accuse people of lying, especially women, people of color, older people, children, and people with disabilities, who the technology might misjudge.¹²¹ Furthermore, this technology goes beyond just evaluating the expression of the person but also cross-checking them with law enforcement databases and Twitter accounts in order to create a full risk profile. This technology essentially is supposed to guess

 ¹²⁰ "U.S. Border Patrol Conducts Enhanced Security Operations." 2020. Defense Visual Information Distribution Service.
 February 1, 2020. https://nara.getarchive.net/media/us-border-patrol-conducts-enhanced-security-operations-9f8990.
 ¹²¹ "IBORDERCTRL - Transparency Complaint against Secret EU Surveillance Research 'IBORDERCTRL." Patrick Breyer, 28 Feb. 2022, https://www.patrick-breyer.de/en/posts/iborderctrl/.

whether a person will engage in criminal activity by their facial expressions and their online footprint.¹²²

Social Media

One of the last major uses of AI technology is social media. AI can scan millions of social media posts to determine how people are going to act. For example, during BLM protests, AI technology allowed police departments to track and watch protests as they were happening. Beyond simply looking through posts, companies like Google store information on the whereabouts of people who use their devices. Google has a database called Sensorvault, which does just this, collecting and storing the locations of their users. This information can then be used by police departments in the future to investigate crimes.¹²³

These concerns stretch beyond the United States as well. It is believed that intelligence agencies in Saudi Arabia have used surveillance technology to track opposition to the government by finding the personal information of these dissenters through their Twitter accounts. In this situation, social media is being directly used to collect the personal information of people who are speaking out against the government. Spies have proven they can break into a social media site that is thought to be somewhat secure in order to collect all sorts of data. This goes beyond what is publicly posted and into what is thought to be private.¹²⁴

COVID

The COVID-19 pandemic has brought in a new wave of surveillance technology. Many countries have implemented apps that allow for better contact tracing amid the pandemic. These apps tend to use tracking information for a variety of uses. The most basic use of the tracking data is to inform people

¹²² "EU-Funded Technology Violates Fundamental Rights - about:Intel." *About*, 22 Apr. 2021, https://aboutintel.eu/transparency-lawsuit-iborderctrl/.

¹²³ Steven Feldstein and David Wong, et al. "New Technologies, New Problems – Troubling Surveillance Trends in America." *Just Security*, 17 Nov. 2020, https://www.justsecurity.org/71837/new-technologies-new-problems-troubling-surveillance-trends-in-america/.

¹²⁴ Abrougui, Afef. "Digital Authoritarianism in the GCC and Its Broader Regional Consequences - Issues on the Frontlines of Technology and Politics." *Carnegie Endowment for International Peace*, 19 Oct. 2021,

https://carnegieendowment.org/2021/10/19/digital-authoritarianism-in-gcc-and-its-broader-regional-consequences-pub-85511.

of potential COVID-19 exposures in their everyday lives. Others like Bahrain's "BeAware" app are used to alert the government when a person breaks their mandatory quarantine or isolation period. These types of apps and programs have been utilized all over the world. However, there are also major controversies over the uses of these apps. For example, Singapore has launched its "Trace Together" app which is meant to be used as a contact tracing app. However, despite the government's initial promises, the app's data is also being utilized in police investigations for certain crimes. These tracking apps which have now become quite widespread can have many uses other than tracking COVID.¹²⁵

Similar things have been happening in India. Over 100 million people in India have downloaded their COVID tracking app Aarogya Setu. This app tracks people to provide contact tracing methods, as well as being necessary for people to travel throughout India on public transit. This app collects tons of user data, more than might seem necessary. The nature of the app brings up concerns about how much surveillance data is necessary and how much is deemed too much. Additionally, India has been using drones for COVID surveillance to collect data about where people are. These drones have very little privacy regulation, therefore, making the data vulnerable. COVID surveillance in particular can bring up concerns about data privacy when surveillance is deemed necessary for public health and safety. Is a government responsible for protecting the data it collects?¹²⁶

International Trade

These new developments in surveillance technology have created new markets for those selling this technology. Companies based in the United States and China are the largest distributors of surveillance technology worldwide. American-based companies are present in around thirty-two countries worldwide while Chinese-based companies are present in sixty-three countries, with most countries using a mixture of both American and Chinese technology.¹²⁷ These relationships bring into question whether companies can be held responsible for the manner in which their technology is

¹²⁵ "Technology Is Enabling Surveillance, Inequality during the Pandemic." *Human Rights Watch*, 19 Oct. 2021, https://www.hrw.org/news/2021/03/04/technology-enabling-surveillance-inequality-during-pandemic. ¹²⁶ "Digital Surveillance and the Threat to Civil Liberties in India." *Giga*, https://www.giga-

hamburg.de/en/publications/giga-focus/digital-surveillance-and-the-threat-to-civil-liberties-in-india.

 ¹²⁷ Feldstein, Steven. "The Global Expansion of Al Surveillance." *Carnegie Endowment for International Peace*, 17 Sept.
 2019, https://carnegieendowment.org/2019/09/17/global-expansion-of-ai-surveillance-pub-79847.

used. If a company sells surveillance technology to a country or government using it to commit human rights abuses, can that company be held responsible for those abuses? Cisco Systems is already facing a lawsuit in both Maryland and California over their sales of surveillance technology that is being used to commit human rights violations.¹²⁸

These issues extend far beyond just the United States and China. Al technology is being used and sold all over the world. AnyVision, a company based in Israel, is another big name in surveillance technology. After going through a scandal in 2019 when the technology was allegedly being used to surveil Palestinians in the West Bank, AnyVision has tried to market itself as ethical surveillance technology by admitting that there are many issues in facial recognition technology. This technology can have helpful uses as heat detections can allow the technology to track potential COVID cases, especially in large crowds at events. However, it has been very difficult to find what ethical surveillance might mean. AnyVisions acts as an example of how companies can try to mitigate the harm of surveillance technology, but governments still might have to do the heavy lifting with legal protections.¹²⁹

Thinking more about international sales, there are many instances where surveillance technology developed in the United States, China, and Israel is being used in Latin America. These technologies are being used in many countries with few regulations or restrictions on how they can be implemented. In Argentina, surveillance technology in the form of surveillance balloons and thermal cameras in airports, is being used to collect data for their biometric database. Both the Brazilian government and many private businesses in Brazil are using surveillance technology. The uses can range from public safety efforts to simply tracking school attendance. Ecuador is now using its camera systems to track political opposition. This technology that is being made halfway around the world is having a large impact on the lives of people in Latin America. Do the companies and

¹²⁸ Lynch, Jennifer, et al. "Surveillance Technologies." *Electronic Frontier Foundation*, https://www.eff.org/issues/mass-surveillance-technologies.

¹²⁹ Lunden, Ingrid. "AnyVision, the Controversial Facial Recognition Startup, Has Raised \$235m Led by Softbank and Eldridge." *TechCrunch*, TechCrunch, 7 July 2021, https://techcrunch.com/2021/07/07/anyvision-the-controversial-facial-recognition-startup-has-raised-235m-led-by-softbank-and-

eldridge/?guccounter=1&guce_referrer=aHRocHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAMnMCkU-LYaZx166W2sOGROipiQ1l3IqMmHN1ISy9gTONoiwjVTAF_L7wRrtBMJ1ISoHDtVRkr7ET26ckX1WjtgEpFmslHM6_J2ICP2 n9yQhJMuiESyDMWEXwaWzdFWzldwwZLCpIuRXkzy8_BDoALf-uCNyfPi4-IY8UZz6Pt6S.

countries exporting these technologies have a responsibility to think about how their technologies will end up being used?¹³⁰

¹³⁰ Alarcón, Ángela. "Report Unpacks the Shocking State of Mass Surveillance in Latin America." Access Now, 9 Aug. 2021, https://www.accessnow.org/mass-surveillance-in-latin-america/.

History of the Problem

Artificial Intelligence

Artificial intelligence (AI) technology is rapidly advancing surveillance technology around the world. In particular, **AI Global Surveillance (AIGS)** tools are being adopted by a number of nations and actors in order to track and surveil citizens. While these technologies are adopted in order to accomplish important policy objectives such as security, they are also exploited to violate human rights. The ability to these technologies to be used for good and harm makes their international regulation all the more difficult. As new surveillance technologies are developed, governments are exponentially gaining new capabilities to monitor the lives of their citizens. As of 2019, at least seventy-five nations are actively utilizing AI technologies for surveillance purposes including smart city and safe city platforms, facial recognition systems, and smart policing.

China and the US are major drivers of AI surveillance worldwide with technology from certain Chinese companies supplying AIGS in at least sixty-three countries. In order to encourage purchases of their products, Chinese products typically include loans to further incentivize government purchases to countries which would not otherwise be able to afford these technologies. Nations such as Kenya, Laos, Mongolia, Uganda, and Uzbekistan have all benefitted from such product pitches.¹³¹ The United States has quite a few companies active in this space. AIGS technology supplied by US firms is present in at least thirty-two countries. Other nations with liberal democracies—France, Germany, Israel, and Japan—are also playing important roles in proliferating this technology. However, it's been argued that democracies are not taking adequate measures to monitor and control the spread of sophisticated technologies linked to a range of violations or "bad actors."

Liberal democracies are major users of AI Surveillance. It has been found that 51 percent of advanced democracies deploy AIGS systems. Additionally, "37 percent of closed autocratic states, 41 percent of electoral autocratic/competitive autocratic states, and 41 percent of electoral democracies or illiberal democracies deploy AI Surveillance technology."¹³² While AI surveillance is not inherently

 ¹³¹ Feldstein, Steven. "The Global Expansion of AI Surveillance." *Carnegie Endowment for International Peace*, 17 Sept.
 2019, https://carnegieendowment.org/2019/09/17/global-expansion-of-ai-surveillance-pub-79847.
 ¹³² Feldstein, Steven. "The Global Expansion of AI Surveillance." *Carnegie Endowment for International Peace*.

bad for citizens, nations with autocratic tendencies are more likely to exploit AI surveillance than nations with greater democratic leanings. Countries with extensive histories of human rights abuses are already leveraging AI surveillance to reinforce repression. But no country, irrespective of government type, can be considered safe from exploiting AI.



MAP 1 Al Surveillance Technology Origin

Al surveillance technology origin (as of 2019)¹³³

Digital Surveillance and the COVID-19 Era

While the groundwork for the modern surveillance state was laid well before the pandemic, the response of governments and companies to the COVID-19 pandemic laid the foundations for the current surveillance state. The advent of smartphone apps which aggregate geolocation and biometric data in order to streamline contract tracing, quarantine, and health status has increased the amount of user data governments have access to in the present. While these technologies were oftentimes rolled out with good intentions, much of the data that was only supposed to be shared during the pandemic is still being collected by governments and companies because these

¹³³ Ibid.

technologies never had proper oversight or safeguards against their potential exploitation.¹³⁴ Nowadays, police and private companies are exploring advanced technologies like facial recognition and thermal scanning to keep employees safe. Perhaps more concerning are the predictive tools also being explored by some companies without any scrutiny or resistance. Many countries have not enacted meaningful regulations to monitor the collection, sharing, or storage of biometric data by public or private organizations. Simply put, governments and companies have access to massive amounts of data which can be used for both safety and exploitative purposes.

While contact tracing in the form of digital monitoring programs, such as apps on smartphones, has played a vital role in managing the pandemic, it is also prone to lack of oversight. Parties misusing the information collected may not be held accountable, which makes the basic rights of many people much more vulnerable. This issue becomes even more pressing when we consider the extent to which our personal information may be collected and compromised. It is said that with complex data analytics, highly intimate information can be attained, such as political ideologies, sexual orientation, gender, religious beliefs, etc. It is not hard to imagine how these data may be utilized in countries where one may be discriminated, monitored, or punished because of their identities, opinions or beliefs.¹³⁵ To prevent similar events from happening, it is important for developers to adhere to principles for **privacy-by-design** to ensure that privacy considerations and protections are an integral part of a tool's architecture and software.

 ¹³⁴ "False Panacea: Abusive Surveillance in the Name of Public Health." *Freedom House*,
 https://freedomhouse.org/report/report-sub-page/2020/false-panacea-abusive-surveillance-name-public-health.
 ¹³⁵ "False Panacea: Abusive Surveillance in the Name of Public Health." *Freedom House*.

Past Actions



Self-portrait through surveillance technology¹³⁶

The Pegasus Spyware Scandal of 2021

One major example of how these types of surveillance can be misused is the Pegasus Spyware Scandal of 2021. "Military-grade spyware licensed by an Israeli firm to governments for tracking terrorists and criminals was used in attempted and successful hacks of 37 smartphones belonging to journalists, human rights activists, business executives" and others.¹³⁷ Their phones were on a list of more than 50,000 numbers in countries known to surveil their citizens whilst also being known to have been clients of the Israeli firm, NSO Group, the worldwide leader in the growing—and largely unregulated—private spyware industry, their investigation found.¹³⁸

A journalism nonprofit based out of Paris, Forbidden Stories, along with Amnesty International gained access to the list and shared it with news organizations who did further research and analysis. According to a forensic analysis conducted by Amnesty's Security Lab, more than 1,000 people in

¹³⁶ States, Peter Merholz from Berkeley, CA, United. 2004. "Self-Portrait through Surveillance Technology." Wikimedia Commons. May 15, 2004. https://commons.wikimedia.org/wiki/File:Self-portrait_through_surveillance_technology_-_Flickr_-_peterme.jpg.

¹³⁷ Dana Priest, Craig Timberg. "Private Israeli Spyware Used to Hack Cellphones of Journalists, Activists Worldwide." *The Washington Post*, WP Company, 19 July 2021, https://www.washingtonpost.com/investigations/interactive/2021/nsospyware-pegasus-cellphones/.

¹³⁸ Ibid.

more than 50 countries on four continents were identified, including human rights activists, journalists, business executives, as well as politicians and government officials and members of royal families.¹³⁹ The personal numbers of several heads of state and prime ministers also appeared on the list.

Experts argue that the widespread use of spyware has emerged as a leading threat to democracies. For instance, journalists under surveillance can hardly gather sensitive information while protecting themselves and their sources; those in power can easily anticipate campaign moves of lower-rank or less established politicians; human rights workers may expose the people whom they try to help to renewed abuse by the government.¹⁴⁰

This specific case calls into consideration several important questions with regard to who is at fault in situations like this one. Should individual companies be held accountable for the technology which they are creating and selling? Or should it be up to each individual state actor as to what they choose to allow their private companies to sell (or purchase)? Should we then be holding individuals responsible for how they use the technology and not the companies themselves? Or should that be an issue that we leave up to individual governments, as what happens on their land is their business? In this case, do we prosecute Pegasus or Israel for allowing this breach to happen? Or is it actually the fault of the nations utilizing the spyware, having nothing to do with where it came from?

The UN's Response

In response to the Pegasus scandal, a group of UN-appointed experts called for all sale of surveillance technology to come to a halt. They were concerned that this sector, without proper regulation, may operate as "a human rights-free zone." "We are deeply concerned that highly sophisticated intrusive tools are being used to monitor, intimidate and silence human rights defenders, journalists, and political opponents ... Such practices violate the rights to freedom of expression, privacy, and liberty, possibly endanger the lives of hundreds of individuals, imperil media freedom," these experts said in a statement.¹⁴¹ Similar proposals and concerns were raised by a May

¹³⁹ Ibid.

¹⁴⁰ Ibid.

¹⁴¹ Dana Priest, Craig Timberg. "Private Israeli Spyware Used to Hack Cellphones of Journalists, Activists Worldwide."

2019 report (A/HRC/41/35) by the then UN Special Rapporteur on Freedom of Opinion and Expression. The international community, however, failed to pay attention.¹⁴²

Further commenting on the Pegasus spyware scandal, the UN-appointed experts said, "Given the extraordinary audacity and contempt for human rights that such widespread surveillance shows, if the denial of collusion by the NSO Group is to have any credibility at all, the company must disclose whether or not it ever conducted any meaningful human rights due diligence in line with the UN Guiding Principles on Business and Human Rights and publish fully the findings of any internal probes it may have undertaken on this issue."¹⁴³ Additionally, they demanded that Israel fully disclose its review of the NSO Group's export transactions.

Effectively, the UN decided to focus on an individual State's responsibility to maintain its human rights obligations and regulations on its own private companies and corporations. Overall, the UN focused almost exclusively on the State's responsibility to manage situations like this rather than on individual buyers or sellers. That said, they could have focused on many other actors that could have been deemed culpable, being the selling company and parent nation, the purchasing state, and/or the purchasing private actor.

¹⁴² Ibid.

¹⁴³ Guiding Principles on Business and Human Rights - OHCHR.

https://www.ohchr.org/sites/default/files/Documents/Publications/GuidingPrinciplesBusinessHR_EN.pdf.

Possible Solutions

International Coordination and Cooperation

One of the current issues in regulating surveillance technology at the moment is the lack of coordinated international regulation. One of the best ways to hold nations accountable is to ensure that the international community is on the same page regarding what the rules and regulations concerning surveillance should be. This would allow the UN and individual nations to create international systems of accountability that would make the use of surveillance technology more ethical.¹⁴⁴

There are many different ways in which this could be done to best tackle the problems at hand. One method would be creating an international code of conduct that is signed by member states of the United Nations. This code of conduct could include laws and regulations on surveillance technology that countries agree to implement to make surveillance more ethical. Additionally, this type of code of conduct could include some sort of benefit, such as a trade benefit, that would come along with signing in order to encourage nations to actually implement these regulations and sign on. However, there is one major concern with this kind of solution. Many worry a code of conduct that is mostly "voluntary" and "non-binding," as many are, will not actually solve the situation, as countries could then make promises they have no intention of keeping. Code of conduct type solutions have to have both an incentive to join, and some sort of enforcement piece that would disincentivize nations breaking the code.¹⁴⁵

Take facial recognition technologies, for example. There are many ways to regulate and control this kind of technology as there are many uses. One solution could simply outlaw all commercial and general government uses of facial recognition stating that it should only be used for law enforcement, and that law enforcement must be incredibly transparent with how they use facial recognition. Another solution could be more intricate, stating that facial recognition can be used in

¹⁴⁴ Gildea, Ross James, and Federica D'Alessandra. "We Need International Agreement on How to Handle These Dangerous Technologies." *Slate Magazine*, Slate, 7 Mar. 2022, https://slate.com/technology/2022/03/dual-use-surveillance-technology-export-controls.html. ¹⁴⁵ *Ibid*.

commercial and general government settings, but only with warnings posted, whereas law enforcement does not have to post warnings. A third solution could mostly focus on whether facial recognition data is stored, and who can access such stored data. More solutions could look more closely at the specific places and uses of facial recognition, is it being used in transit for a specific purpose, or in high-traffic areas such as sports games? Additionally, solutions could look into specific oversight and how to ensure that regulations are being followed. These types of regulations could also be used more broadly to look at different types of surveillance technology other than facial recognition.¹⁴⁶

Another possible solution would be more focused on trade and curbing this technology before it gets into the hands of governments. Instead of placing regulations on how governments can use surveillance technology, there can be regulations placed on the trade of AI and other surveillance technology, especially technology that allows governments to invade the privacy of their citizens. These controls could be a certain ban on manufacturing and selling certain types of technology, or they could place more specific regulations on which countries can obtain certain technologies based on an assessment of the ethicality of their uses.¹⁴⁷ This method has been carried out by the European Union. The European Union oversees and regulates the international sales of dual-use (both military and civilian use) nuclear, chemical, and biological weapons. This allows the EU to control how these technologies are being sold and curb possible misuses in order to help ensure international peace.¹⁴⁸ However, this type of solution requires international cooperation because it depends on these types of regulations being passed and implemented in the countries that house surveillance technology companies. If the standards vastly differ from country to country the trade regulations will not prevent unethical uses of surveillance technology.

¹⁴⁶ "Facial Recognition Technology: Responsible Use Principles and the Legislative Landscape." *Facial Recognition Technology: Responsible Use Principles and the Legislative Landscape* | *Center for Strategic and International Studies*, 4 Aug. 2022, https://www.csis.org/analysis/facial-recognition-technology-responsible-use-principles-and-legislative-landscape.

¹⁴⁷ Gildea, Ross James, and Federica D'Alessandra. "We Need International Agreement on How to Handle These Dangerous Technologies." *Slate Magazine*, Slate, 7 Mar. 2022, https://slate.com/technology/2022/03/dual-use-surveillance-technology-export-controls.html.

¹⁴⁸ "Exporting Dual-Use Goods." *Trade*, https://policy.trade.ec.europa.eu/help-exporters-and-importers/exporting-dualuse-goods_en.

Surveillance Post COVID

Since the beginning of the COVID-19 pandemic, many countries have launched major surveillance programs that are meant to curb the spread of the virus. While the specifics of the programs range, they are all meant to use surveillance to track the spread of the virus, enforce quarantines, and contact trace. While some of these apps had false starts or were suspended due to privacy violations, many countries still use contact tracing apps today. Additionally, some places have switched to the Google/Apple system, the exposure notification system.¹⁴⁹ If contact tracing apps for COVID and maybe more broadly as a public health measure are deemed necessary, then improvements might need to be made, like ensuring that the technology has no bugs, and ensuring that unnecessary data is not stored. Additionally, there may come a point where COVID is less of a threat and these apps might need to be phased out. These apps could either be entirely gotten rid of or adapted if another major virus arises. Considering whether contact tracing apps are the future of public health, or a violation of privacy, might lead to different solutions.¹⁵⁰

Regulation on Data Collection

Currently, about 80% of countries worldwide have legislation or draft legislation concerning data protection and privacy, while 15% of countries have no protections at all.¹⁵¹ In addition to internal legislation done by countries, one solution may be implementing larger international policies, especially concerning how data is exchanged between countries and companies. **Data protection policies** should specifically outline the regulations of what is considered allowed and ethical and what is not. These policies should outline who is responsible for ensuring that all parties are following in line with the set-out rules, and what might incentivize people to join or discourage people from breaking the agreement.¹⁵² Data protection policies might look into how data is

¹⁴⁹ "Why Some Countries Suspended, Replaced, or Relaunched Their Covid Apps." n.d. MIT Technology Review. Accessed September 10, 2022. https://www.technologyreview.com/2020/12/23/1015557/covid-apps-contact-tracingsuspended-replaced-or-relaunched/.

¹⁵⁰ Singer, Natasha. 2021. "Why Apple and Google's Virus Alert Apps Had Limited Success." *The New York Times*, May 27, 2021, sec. Business. https://www.nytimes.com/2021/05/27/business/apple-google-virus-tracing-app.html.

¹⁵¹ United Nations Conference on Trade and Development. 2021. "Data Protection and Privacy Legislation Worldwide | UNCTAD." Unctad.org. 2021. https://unctad.org/page/data-protection-and-privacy-legislation-worldwide.

¹⁵² "Data Protection Policy: 9 Things to Include and 3 Best Practices." n.d. Cloudian. https://cloudian.com/guides/data-protection/data-protection-policy-9-things-to-include-and-3-best-practices/.

collected, stored, and used later on, and specifically how mass surveillance data is stored and used. For example, India has regulations on how companies can collect, process, and store the personal information of their customers.¹⁵³ These laws deal with what happens once the initial surveillance data has been collected, and how that data can be used.

¹⁵³ "Law in India - DLA Piper Global Data Protection Laws of the World." n.d. Www.dlapiperdataprotection.com. Accessed September 11, 2022. https://www.dlapiperdataprotection.com/index.html?t=law&c=IN&c2=.

Bloc Positions

Surveillance technology has greatly impacted how the world works, and while each country might have slightly different opinions on the technology and goals for its use, some countries share more similarities than differences, especially in terms of their positions in international trade networks. Some countries are huge suppliers of surveillance technology, while others are mainly buyers. These trade networks might change the goals of certain countries in the types of policies they want and are able to make. Additionally, there are some countries that have not really entered the surveillance technology market yet and may have certain reasons for not doing so.¹⁵⁴

Countries that Supply Surveillance Technology

Countries that mainly supply and sell surveillance technology have a unique opportunity to regulate the production of such technology. They might be able to mainly focus on regulations that curb what sort of technology can be produced, how technology can be sold, and to whom that technology can be sold. However, there may be concerns over limiting exports. For example, the EU has implemented regulations that are meant to curb human rights abuses committed with EU-made surveillance technology. These regulations prevent EU-based companies from selling surveillance technology to governments that might commit human rights abuses with such technology. This sort of solution allows regulation on the part of the supplier.¹⁵⁵

Countries that Buy Surveillance Technology

On the other side, many countries almost exclusively import and purchase surveillance technology. These countries may have different focuses for their regulations, mainly focusing on the usage of such technologies. Instead of limiting how it can be sold, they may focus more on regulations on how technology can be used for both commercial purposes as well as in law enforcement. For example, New Zealand has laid out laws concerning how the police can use surveillance. They have set out

 ¹⁵⁴ Feldstein, Steven. "The Global Expansion of Al Surveillance." Carnegie Endowment for International Peace, 17 Sept.
 2019, https://carnegieendowment.org/2019/09/17/global-expansion-of-ai-surveillance-pub-79847.
 ¹⁵⁵ "EU: Robustly Carry out New Surveillance Tech Rules." 2021. Human Rights Watch. March 25, 2021.

https://www.hrw.org/news/2021/03/25/eu-robustly-carry-out-new-surveillance-tech-rules.

regulations stating when surveillance devices can be used, when a warrant is required for such actions, and how long data can be stored. These sorts of regulations focus more on the internal impacts of surveillance on a country and may lead to wider international agreements on such regulations.¹⁵⁶

Countries without Surveillance Technology

The third major category might be countries that do not already use surveillance technology, but that may want to begin to implement such technologies. These countries would be able to build their surveillance technology uses with regulations that focus on preventing abuses and creating ethical uses of such technology. These countries would be able to think about regulations with a blank slate, and not have to pull back on anything they are already doing. They could push to shape how surveillance is developed.

¹⁵⁶ "Surveillance Powers." n.d. Community Law. https://communitylaw.org.nz/community-law-manual/test/surveillance-powers/.

Glossary

AI Global Surveillance (AIGS) technology – surveillance tools that utilize AI, usually to monitor, track, and surveil citizens across a municipality, state, or country¹⁵⁷

Artificial intelligence (AI) – technologies that can leverage data to perform tasks that would typically require human intelligence

Data protection policies – legal and other protections designed to protect data that is collected and used by a government, corporation, or other organization

Privacy-by-design – design principle in the development of data-tracking technologies which take the protection of data that is acquired by the product into consideration

Surveillance technology – technologies that are used to monitor, track, and otherwise follow citizens or customers in physical and digital environments

¹⁵⁷ Feldstein, Steven. "The Global Expansion of Al Surveillance."

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rer_sig=AQAAAMnMCkU-

LYaZx166W2sOGROipiQ1l3lqMmHN1lSy9gTONoiwjVTAF_L7wRrtBMJ1lSoHDtVRkr7ET26ck X1WjtgEpFmslHM6_J2lCP2n9yQhJMuiESyDMWEXwaWzdFWzldwwZLCpluRXkzy8_BDoALf -uCNyfPi4-IY8UZz6Pt6S.

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