



**WJUN**

**Establishing countermeasures to eradicate unexploded  
explosive ordnances (UXOs) in land and ocean  
environments**



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## Overview

Unexploded ordnances remain to be one of the most common and prevalent scars left across the globe caused by War, and are even outlined as such in SDG 18, developed for certain parts of the world (9, 20). This issue is prevalently seen in developing countries who have experienced the brunt of various conflicts, and remains to be so due to a variety of factors including a lack of funding and resources. Every year, hundreds are either severely injured or even killed due to this. Although many ordnances that are the causes for UXOs such as landmines and cluster bombs have become outlawed by international laws, the goal of eradication of such ordnances remains to be a monumental task which will require international cooperation if it is to be solved.

Unexploded ordnances are usually found in locations where conflict has occurred in the past, and were not recovered or removed afterwards. As a result of this, UXOs go through a process of erosion over time, causing it to become more sensitive to touch and other external stimulation (9). Because of this nature, UXOs present an immediate risk to local residents and fauna, even more so if it is located near major population centres. In terms of the total number of UXOs found, cluster bombs make up a significant portion likely due to its distinct ability to spread explosive components across a wide area (13). As such, explosives with a relatively high dud rate (the rate at which they remain unexploded) such as the aforementioned cluster bombs remain to pose a threat across generations (14).

Landmines are also a typical example of unexploded ordnances, and pose a significant threat to the locale, mainly due to their difficulty in identification of locations. Despite its prohibition by the international community, landmines continue to be used in conflicts across the world even today. It is estimated that there are up to 10 million landmines distributed across 64 countries, and millions continue to be placed every month (2). In particular, the nations of Africa are affected most severely with an estimated 30 million landmines present across 18 nations (2). Landmines, just by its mere presence, have major impacts in local communities. In one instance, the village of Mapulenge, located in Angola with a population of around 100,000 people at the time was deserted entirely for several due to reports of the region being mined (13). Similarly, remnants of underwater naval mines are also present across the globe.

The medical impacts of UXOs are particularly dangerous and deadly for those affected by it. In cases of injuries caused by landmines, only a small fraction of victims are able to reach medical attention (2), even more so in developing countries. According to the ICRC, in 1992, 27% of victims had to amputate their affected limbs and for 18% of people, the affected area



reached beyond the legs (1). Due to their abilities to maim or gravely injure an individual, UXOs present issues both economically and psychologically for local communities as well as its victims.

Impacts of UXOs extend beyond merely its health impacts on its victims. UXOs can cause environmental damage and degradation to local flora and fauna. Detonations of explosive ordnances can displace the fertile top layer of the soil, which can cause soil degradation as well as reduce its usability for agriculture (8). Additionally, detonation of such instruments of war can release chemicals into the local area, as well as during their degradation even when it remains unexploded (5, 8).

UXOs have also been shown to have measurable economic effects on the local community. According to the Lao National Unexploded Ordnance Programme, “there appears to be a significant correlation between the presence of UXO and the presence of poverty” (12). Thus, UXOs not only present various risks to local communities, they also can be a factor in poverty across countries.

Currently, various demining operations are being undertaken by local governments as well as international organisations such as the UN and the International Red Cross (8, 9). Due to their destructiveness and its difficulty, these operations often require international cooperation, especially in LEDCs as they lack access towards necessary resources.

## **Definitions of important terms**



### **Unexploded Explosive Ordnances (UXOs)**

Unexploded ordnances refer to any form of explosives that are left undetonated after its initial deployment (2). The term usually refers to military ordnances such as landmines and shells in the context of this report.

### **Landmines**

A type of explosive placed under the surface, and made to detonate upon contact with vehicles or persons (6). These types of explosive ordnances are often difficult to locate and defuse without proper training and equipment.

### **Naval Mines**

A type of mine placed beneath the water, usually in marine environments, made to detonate upon certain conditions such as detecting magnetic fields. These types of explosive ordnances are also often difficult to locate and defuse without proper training and equipment.

### **Cluster Munitions/Bombs**

A weapon consisting of a contraption which allows for dispersion of smaller, explosive munitions across a wider area (4).

### **CCW**

Acronym for “Certain Conventional Weapons.” Used to refer to conventional weapons that are considered inhumane, such as mines or cluster bombs (2).



## Timeline of key events

### **September 1997 Anti-Personnel Mine Treaty/Ottawa Convention**

The convention was concluded on 18 September 1997, and signatory nations agreed to the cessation of the use, production, stockpiling, and transfer of anti-personnel mines. The treaty came into effect on March 1st, 1999, and currently over 130 states are signatories (2).

### **November 2003 Protocol on Explosive Remnants of War adopted**

The protocol was discussed by the CCW Group of Governmental Experts in 2002-3, and was later adopted by the Meeting of the States Parties on CCW in November of 2003. The convention entrusted various responsibilities, namely entrusting nations to take actions to prevent UXOs, with the goal of minimising risks from UXOs (3).

### **December 2008 Convention on Cluster Munitions comes into effect**

The convention prohibited its signatories from producing and possessing cluster munitions, and entrusted the general secretaries with various responsibilities such as production of reports and organisations of conferences amongst signatories. The convention became open for signature on 3 December 2008 in Oslo, and came into force in August of 2010 (4).



## Position of key nations

### Lao People's Democratic Republic

After experiencing years of conflict within its regions, Laos has been the target of aerial bombings by nations such as the United States during the Vietnam War. Because of this, Laos today has one of the highest counts of UXOs throughout its country. Due to its LEDC status as well as the sheer number of UXOs present, the issue of UXOs remains prevalent across various parts of the country. The country has undertaken various measures in removing UXOs, including making it one of their national sustainable development goals alongside UN ones as well (12).

### Kingdom of Cambodia

Cambodia has endured various civil wars and conflicts throughout the 20th century. This has resulted in Cambodia also being one of the most mined nations on Earth. Due to recent developments in technology, the country has been able to demine safely and efficiently over the years (8). Despite this, the country continues to struggle with completely eradicating UXOs, like Laos.

### Russian Federation

Russia has collaborated with various nations such as Laos, in demining operations and is a signatory of the 2008 Convention on Cluster Munitions (18). In recent years, Russia has engaged in various conflicts with nations such as Ukraine. Russia has repeatedly used cluster munitions in its campaign against Ukraine, which is a major cause of UXOs and can have long-lasting effects, despite their signature in the 2008 Treaty (7).

### Federal Republic of Nigeria

After decades of conflict, Nigeria has become one of the nations most affected by UXOs, particularly with makeshift ones (12). This has hindered Nigerians' access to necessary infrastructure, as well as slowed down humanitarian aid particularly in the North (12). Organisations such as UNMAS have cooperated with the local government in committing these issues recently, although it remains a major point for the country (12).



## **UNMAS**

An organisation established by the United Nations in 1997. The organisation's goal is to eradicate mines across borders as well as UXOs. They work to coordinate policies and standards with relevant nations alongside demining operations. UNMAS has worked with various nations in the past to coordinate operations (3).



## Suggested solutions

To solve the root problem caused by UXOs, the issue of lack of access to resources by, who tends to be the LEDCs most affected, must be addressed. To accomplish this, there are various routes that nations worldwide could take. For one, nations could work together under International Organisations such as the International Red Cross or the aforementioned United Nations Mine Action Service and coordination of necessary resources and personnel to nations lacking. This would not only make the demining process more efficient, but could also lead to further cooperation between the providing nations. Alternatively, nations could provide assistance independent of coordination by international organisations. This would also have the benefit of improving efficiency.

It is also important to consider the costs associated with the presence of UXOs while they exist. For instance, affected nations must take into consideration the victims of UXOs. In this case, the relevant nations could provide or get assistance from international organisations such as the Red Cross or Doctors without Borders. This will allow nations without consistent medical resources to provide the help that victims will need with recovery.

In addition, to prevent further environmental degradation from taking place, technologies for detecting UXOs could be utilised in areas surrounded by wildlife and nature, so that they can be removed readily before they can cause major impacts. Regardless of the method, it is necessary to ensure that the region's natural life remains protected from UXOs, and to ensure future economic activities such as agriculture remain possible. The protection of flora and fauna is important even more so if it is around known habitats of endangered species.

To conclude, a comprehensive solution to address UXOs will need to address not only completely removing UXOs from various nations but also the social issues that arise due to the presence of UXOs which can go as far as defining the quality of life for many.



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