

## ANTI-PERSONNEL LANDMINES (APLS): A SOCIO-ECONOMIC AND HUMANITARIAN PERSPECTIVE

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### Abstract

*This paper aims to analyse the Socio-economic, Ecological and Humanitarian impacts of Anti-personnel landmines and holds that landmines are indiscriminate and have led to global humanitarian crisis especially in developing countries. It led physical and psychological trauma in victim's life and tear up social fabric of nation. APLs deny access to community resources, led to soil contamination, loss of productivity and threat to food security, loss biodiversity. They threat not only to present but also the future generation. Where there is fighting, one expects that people will be killed; however, in many parts of the world where fighting once took place and has since ceased people continue to be killed by discarded weapons of war. Anti-personnel mines which are described as buried terror and 'Weapons of Mass Destruction in slow motion' recognize no cease fire and after 'they maim or kill the children and also grandchildren of the soldiers who laid them.' Landmines, although typically not categorized with Weapon of Mass Destruction (WMD), are believed to have killed more people than nuclear and chemical weapons combined. In strictly military terms, landmines are cheap weapons. But a mine that originally costs US\$3, can require between US\$300 and US\$1000 to clear, and adds to enormous cost in humanitarian and environmental damage.*

**(Key words:** *Anti-personnel landmines (APLs), Humanitarian crisis, Weapon of Mass Destruction (WMD), Non State Actors (NSAs), Unexploded Ordinance (UXO)*

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## Introduction

Landmines are indiscriminate and pernicious weapons killing more civilians, innocent women, children and farm workers after a cease fire than during actual conflict. Landmines render the region infested by them useless for human habitation and activity. They displace population; create demographic pressure which destabilizes neighbouring regions. More over the victim of landmines have a greater problem of survival in agony and uncertain rehabilitation. Yet another ramification of the issue of landmines is their indiscriminate use by Non State Actors (NSAs) like insurgent, terrorists and extremist groups. Innocent are being terrorized, in the process denying them their fundamental right to work in their farm and fields without fear.<sup>1</sup>

The facts on the immense and unjustifiable human suffering caused by these 'hidden killers' are stark:

- ❖ Every year about 25,000 people are killed or maimed by APLs, in most cases years after the end of hostilities;
- ❖ Nine in ten victims are civilians;
- ❖ Every third victim is child;
- ❖ Those who survive will most likely never be able to live a normal life due to amputations, blindness or other serious lasting injuries;
- ❖ Thousands of square miles of productive lands for agricultural production cannot be used due to danger of mines;
- ❖ Social and economic development is severely hampered in mine affected countries;
- ❖ A simple mine cost less than \$3, its clearance however requires \$300 to \$1000 making demining a very costly and slow process.<sup>2</sup> Landmines have been used in warfare in the beginning of 20<sup>th</sup> century, designed to explode remotely or after being activated by the unwitting soldiers, jeep, tank etc. however, much like small arm, landmines have become victim of their own success.

Relatively cheap and versatile, landmines proliferated in later half of the 20<sup>th</sup> century. They could be used to protect bases from the attack, to add an extra line of defence on the frontline, or to hold territory without a large contingent of soldiers, who could then be deployed to other area of interest. However, removal of landmines when fighting was over was not a

priority in many of the war torn countries around the world. As a result, civilian casualties due to left over landmines began to mount at an alarming rate.

By the end of the 1990s, expert estimated that between 20,000 to 25,000 new casualties were incurred by abandoned landmines each year. Landmines are strewn some 75 countries, many of which do not have people and land to spare. As with other weapons, the cost of landmines is actually greater when its victim survives.

Medical expenses to repair or replace damaged or amputated limbs; wages that the person lose in the event they cannot be employed due to their injuries, the wage of the family members who must attend the victims of landmines rather than work; and the lost production of swath of land that are infested with abandoned landmines, all take the toll on the struggling nations. Farmers using contaminated land are usually already among the poorest of their society, hence they have no choice but to take the risk of using land ever, in many cases when they know that land is contaminated.

The wide use of APLs has created a global humanitarian crisis. Attempts to estimate the number APLs in the ground around the world have been made by countries reporting under the 'Ottawa Convention'. But counting the number of mines in the ground does not accurately measure the problems that landmines cause.

The most meaningful measure of landmines' effects is the amount of high-priority land where mines are hidden. This land could be farmed, is socially and economically valuable, or is vital to the movements of people nearby. Risk of death or injury limits its use, and the community cannot use a field whether it hides two mines or 10,000. Any attempt to count the number of mines laid around the world can only be an estimate, so Mine Action Group (MAG) now focus on the humanitarian crisis that landmines cause. The deadly seriousness of the landmine story is in the numbers of people affected by landmines, especially the estimated tens of thousands of new direct and indirect victims each year. Landmines cause huge barriers to social and economic development in some of the world's poorest countries.

Since 1975, there are estimated to have been more than a million landmine casualties mostly civilians, and many among them children. Landmines that do not kill immediately, instead severely maim their victims, causing trauma, lifelong pain and often, social rejection.

Worldwide, some 300,000 to 400,000 landmine survivors face terrible physical, psychological and socio-economic difficulties.<sup>3</sup>

**Impact of Mine blast injuries:** Mines/Unexploded ordinance (UXO) injuries have two main impact. *First*, they affect the lives of the causality and their family; *secondly* they have impact on the medical infrastructure of the affected countries. The main economic affect on the victim is the limiting of the ability to earn income to support themselves and their family. After suffering an injury the ability of injuries, the causality may suffer psychological damage. Female casualties are regarded as particular vulnerable as the extensive physical damage can severely limit their chance of marriage. Even when married at the time of accident, organizations specializing in mine victim assistance report that it is common for husband to desert the causality.

The effects are not limited to their causality or their victim or their immediate families. Treating landmines injuries drains the local medical infrastructure of developing countries, as these sort of wounds inevitably become infested and usually require 2-3 operations to debride the wounds of debris and necrotic tissue. Traumatic amputation of one or both legs will require prosthesis or a wheel chair if they are to regain their mobility and in case of prosthesis, will need an intensive physiotherapy to learn how to use the artificial limbs. Furthermore, amputees will require new limbs every 2-3 years as the old wear out. When the casualties are children, the situation is exacerbated as growing children will need their limbs adjusted or replaced several times each day. The United Nations estimated that the minimum average cost of lifetime rehabilitation of landmine victim is US\$3000. For the people of developing and underdeveloped countries which are victim of landmines contaminations like Cambodia, Afghanistan, Laos etc this is far beyond from his or her dream. For 40,000 people in Cambodia, means an added \$120 million in just paying surgery and rehabilitation.

A nation already struggling to provide basic health care service, cannot take the extra burden on intended national resources.<sup>4</sup> The landmines effect includes the denial of land for production, the destruction of irrigation canals and ditches, ponds, rivers. These areas are key strategic places for heavy mining. The loss of domestic animals to mines in many cases most families own are just one or two animals, their whole livelihood is wiped out in just one blast. The denial to orchards and wooded areas reducing access to fruits, food, firewood, building

material, loss of land for housing or old residential areas, causing further displacement of peoples and homelessness contribute to that age old development concept of rural-urban migration. Schools are closed as a result of mined playground accident. Bridges, roads, railways, airstrip, power lines and rendered completely useless, especially as they are the key targets of mining in any way of situation.

In countries likes Cambodia rural development are indirectly affected. Demining is considered to be the first stage of their development programme both in budgetary and international donors have had to be convinced that demining in mine contaminated countries is as much as development objectives as basic health care, education, clean water and food security. The mines apart of social fabric of families, loss of parents result in increase in street children. These children in turn are much more likely to be sexually assaulted, exploited, sold in prostitution or recruited for the military right way (Child soldiers).

Although the effects of landmines are relatively easy to outline, they are less easy to quantify. Keeping accurate statistics is one of the least urgent of concerns to a country in conflict or barely recovering from it. However, with the renewed focus on the problem of landmines, efforts are increasingly being made to more systematically analyze the impact of landmines. Most of the countries contaminated today by landmines are countries with the fewest resources available to respond to the socio-economic consequences of that contamination. For the most part, the most severely affected countries are also rural and agricultural societies. Within those societies, it is the subsistence farmer, nomads and their herds, and fleeing refugees and the displaced who most often are affected, those sectors of the society who must rely most on their physical fitness for basic subsistence and who can least afford the care necessary to treat landmine injuries.

Landmines generally cause extensive injury. The majority of nonlethal casualties results in traumatic or surgical amputation. Mine explosions injure either by the blast itself or by driving dirt, bacteria, clothing, and fragments of the mine deep into the wound, often causing severe secondary infection. The shock of the explosion and the debris pushed high up into the tissue and bone can result in higher amputations than the actual site of the wound itself. Mine casualties generally require more time in the hospital, more operations, and more blood than other types of

war related injury. Injury is frequently caused to other parts of the body, including the genitals, arms, chest, and face.

The economic impact on landmine victims and their families is profound. In Cambodia, for example, where most social services are theoretically free, the majority are now provided on a fee for service basis. Mine victims reported having to pay for transportation to the hospital, an admission charge, bed charge, and fees for medicines and blood. The family must also attempt to overcome the loss of earnings both for the mine victim and whoever takes care of the casualty during the stay in the hospital. Over half the families interviewed in a landmine survey in villages near LoC (J&K) reported going into debt as a result of the accident. Families reported having to exchange or sell gold Jewellery, bicycle, land, tree or animals to pay for costs related to landmine incidents.<sup>5</sup>

The war wounded, particularly landmine victims, place an inordinate drain on human and material resources, which only adds to the generalized disequilibrium that occurs between preventive and curative medicine during armed conflict. Evidence indicates that diseases that may have been under control before the conflict may be reintroduced during conflict because preventative measures often collapse during the fighting. Widespread sowing of landmines can make it impossible to carry out vaccination campaigns and other preventative health care programs.

Landmine victims place an inordinate strain on what are usually bare minimum medical services throughout the developing world; for those who survive the blast and require rehabilitative services, the cost to societies with limited resources is staggering. Without assistance, the cost of an artificial limb for most amputees is prohibitive. The ICRC reports that an adult's prosthesis must be replaced every three to five years; for a child, still growing, it must be changed every six months. Thus, a 10 year old child with a life expectancy of 40 or 50 more years would need 25 prostheses at a total cost of \$3,125. Even where international agencies provide prosthetic devices without charge to mine victims, often the family cannot afford the time and effort to take the amputee for rehabilitation.

The impact on the individual victim and on the family is life changing. When multiplied by the hundreds or thousands or tens of thousands as in countries severely contaminated by

landmines such as Afghanistan, Angola, Cambodia, or Mozambique, the life of the community and the society at large is also forever changed.<sup>6</sup> Yet the socio-economic impacts of landmines are more far reaching than the obvious direct effect of the maiming or killing of those who trigger landmines. When an entire country becomes the theatre of battle and much of the population the target, landmines sown by the tens of thousands over a national territory leave a deadly legacy. The mining of agricultural and grazing lands can lead to dislocation and increased malnutrition as populations are no longer able to provide for their own survival.<sup>7</sup>

In Afghanistan, 37 percent of families interviewed in a survey reported that they would be able to grow more crops if it were not mined; the total additional land that could be cultivated is 135 percent of the area currently under cultivation. For nomad families, 63 percent report having lost at least one animal to Landmines; the number killed is equal to 53 percent of current flocks. Another study found that 361,135 animals have been killed by Landmines in Afghanistan; the total direct value of the loss of the animals, not including the loss of productivity resulting from their having been killed, is over \$60 million.<sup>8</sup> Similar are the situation on border area of India especially with Pakistan, severe situation is on LoC which is yet to be demined.

Refugee resettlement, and that of IDPs, is also affected by landmines because the mining of road systems can impede and endanger repatriation and resettlement. Even when mined roads are cleared so that people can return home, the problems continue. For example, in Cambodia, the U.N. High Commission for Refugees (UNHCR) repatriated more than 330,000 refugees without a mine related casualty. Yet landmines still had an overwhelming impact on the repatriation process. UNHCR's original plan called for each family to receive two hectare of land so that they would, hopefully, be self sufficient in the newly rebuilding society. After several land availability surveys, because of the severe contamination by landmines in the four provinces near the border with Thailand to which the majority of refugees wished to return, the UNHCR had to redraft its plan for repatriation. By March of 1992, when the movement of refugees actually began, it announced that land had been found for just 5,500 families, eight percent of the refugee population. Ultimately, less than half that number actually received land. Over 85 percent of the returnee population received cash grants and food support for 400 days.

The mining of transportation systems can also disrupt the flow of goods and services. The mining of dams and electrical infrastructure can seriously reduce the ability of a country to generate power. The main power plant in Mozambique, and one of the most important in Southern Africa, is located at the Cabora Bassa Dam in Tete province. The power transmission lines were damaged in the war and many of the pylons mined. The impossibility of repairing the mined electrical lines reduced its output to less than one percent of capacity and forced an increase in the country's imports of electricity from \$1 million in 1980 to \$10 million in 1988. In short, the extensive mining of a country affects the right of its people to development. Landmines and cluster munitions causes injuries that have extremely serious physical, psychological and social consequences.

### **The Human Impact**

In 50 percent of cases the traumatic consequences are fatal. The damage done to the body by these weapons is not only caused by the explosion itself but also by the earth, bacteria, pieces of clothing and fragments of metals and plastics that find their way in to body tissue. Not only they lead to amputation of the limb(s) affected but they may also cause permanent damage to hands, arms, genitalia, face, eyes and ears especially among children because of their short stature. Mutilation may limit person's physical capacities, which in turn prevents them from playing a part in social life of their community.

- Survivors encounter physical difficulties following the trauma.
- Disability reduces the person's chance of getting married, having children and finding work. Also the negative social attitudes towards disabled people lead to exclusion.
- Local communities are scared to use fields and roads or send their children to school.
- Communities often have to choose between poverty, starvation and dehydration or risk their lives by cultivating dangerous fields.
- The number of peoples with disabled increases in already impoverished countries.
- The return of refugee and IDP is hindered.<sup>9</sup>
- Being disabled the survivors face a loss of income. If they were earner, the whole family may face extreme poverty. Relative may also have to stop working to look after him or her.



- Most survivors cannot afford expensive medical treatment. Families may face the dilemma i.e. receive no treatment or sell their possession (property).

#### **The Impact on Socio-Economic System**

- The presence of landmines and UXO prevent communities from using their land, restricting agricultural production and rural development.
- The national economy is also affected as countries face an increased need for medical and rehabilitation services and decrease in accessible farmable land.
- They also lead to a lack of economic development, as trade with in rural communities, between urban centre and country side and between neighbouring states is disrupted when their borders are mined or contamination with cluster bombs.
- They obstruct to natural resources, raw material and development of transport network.<sup>10</sup>

#### **Impact of Antipersonnel landmines (APLs) and other Explosive Remnants of War (ERW) on children**

Where there is fighting, one expects that people will be killed; however, in many parts of the world where fighting once took place and has since ceased people continue to be killed by discarded weapons of war.<sup>11</sup> [Landmine and other ERWs](#) represent ‘an insidious and persistent danger’ to children affected by war, says a new UN report on the impact of armed conflict on children. Landmines are killing, injuring children and sometimes even making them orphans. Children account for one in every five landmine victims in many mine affected countries. According to the research work done by ICBL about 15,000 to 20,000 people are killed or maimed by landmines every year. In Cambodia alone children account for up to 50 percent of landmines casualties, according to the Cambodian Red Cross. The 2003 LIS says that in Somalia children account for more than 55 percent of total Landmines victims. On LoC in J&K children accounts about 20 percent of the victims. Children are often miraged by the intriguing and colourful appearance of landmines and other ERWs. Children are far more likely to die from landmine injuries than adults. Adding more to the misery, it is estimated that about 85 percent of child victims of landmines even die before reaching the hospital. Children, particularly those living in refugee camps and displaced children returning home, are always in particular danger of landmines because they are most likely to be unaware of the dangers of playing in or traversing

hazardous areas and fell prey.<sup>12</sup> Landmines causes gut wrenching injuries. Children may lose their sight or hearing; lose fingers, toes and limbs; suffer injuries to their genitals. They also suffer psychologically from the trauma of a landmine injury. Without adequate medical treatment, children injured by landmines are often pulled out of school. They face limited future prospects for education and employment and are often perceived as a burden to their families.<sup>13</sup>

Landmines devastate the lives of children by killing or maiming their parents or caregivers. When mothers are maimed or killed, children are less likely to receive adequate nutrition, to be immunized or to be protected from exploitation. When fathers fall victim to landmines, children are often forced out of school and into work to supplement family income.

The cost of providing long-term care for child landmine victims can be prohibitive. Rehabilitation clinics are often too far away or too expensive to access. Uncleared landmines prevent access to reconstruct homes, roads, schools, health facilities and other essential services.

Landmines and UXO violate nearly all the articles of the 'Convention on the Rights of the Child i.e. a child's right to life, to a safe environment in which to play, to health, clean water, sanitary conditions and adequate education.<sup>14</sup>

### **Long Term Social Consequences of Landmines**

**1, The Impact on Families:** Where the victim has been the principal family breadwinner, the family economy will rapidly run down and desperate measures begging, prostitution, or crime may be invoked to maintain survival. The injury of any family member will divert attention from the daily struggle for existence and will reduce the capacity of the family to respond to change and, within their milieu, to retain some measure of that control basic to health. Despair is not a characteristic commonly attributed to rural subsistence societies; the grinding demands of daily labour require a steady courage, but a sudden and major decline in family fortunes and a threat to its resilience is inevitable in the face of a land mine injury. It is necessary to recognize what the presence of landmines 'does psychologically to whole communities that are used to providing for themselves, used to being independent, who have lost the ability to provide for themselves, to provide for their families and to be part of the larger community.'

**2, Public Health Burdens:** At a regional level, the diversion of scarce resources to the succour of mine victims reduces the potential for long term health improvement and promotion whether immunization of infants, safe sex campaigns, malaria control programs, construction of safe water supplies, or training of village level health personnel. The cost in Afghanistan of providing

prostheses over a period of 40 years for a child injured at age 10 has been estimated as almost half of a normal lifetime income for a worker in that country. Even in the absence of landmine injuries there are significant social and public health consequences. Infectious diseases move freely (e.g., in Cambodia up to one quarter of the population were infected with malaria and a similar number with tuberculosis, but health teams are restricted to safe areas. The forced removal of wide tracts of arable land from productive use further lowers standards of living, reinforcing latent fears and contributing to population displacement with all its attendant risks of local hostility and disruption. The reconstruction of railways, bridges, and roads following cessation of conflict is impeded; internal markets fail to function effectively; prices remain abnormally high; schools remain closed.

Landmines infestation increases the likelihood of the following.

1. Water born diseases, when access to safe drinking water is cut off by mines;
2. Malnutrition, when mine block access to arable land;
3. Infectious diseases, because vaccination teams avoid heavily mined areas;
4. Due to scarcity of resources and equipment to test blood supplies in mines-affected countries, they are not always free from infectious agents;
5. The increased frequency of blood transfusion favours the spread of syphilis, malaria, hepatitis and HIV.<sup>15</sup>

After leaving the hospital, a mine survivor will need to rebuild his or her life. To do this, the mine survivor will first need to recover his or her mobility, and then reintegrate society and the economy. Physical rehabilitation and socio-economic reintegration are closely linked needs. Enabling a person with disability to walk and move about is in itself a great achievement. But it is also an indispensable condition for the person's participation in family and community life, work and education.

Physical rehabilitation involves physiotherapy and fitting with artificial limbs (prostheses) or with devices to support a malfunctioning limb (orthoses), as well as providing other orthopaedic appliances such as crutches and wheel chairs. Disabled mine survivors require physical rehabilitation for the rest of their lives.

A child that steps on APLs today may need up to 35 prostheses in his or her lifetime. Yet few mine affected countries have self sufficient and sustainable physical rehabilitation facilities for persons with disabilities. Existing physical rehabilitation centres are often located in capital

cities far from the areas where mine injuries occur. Travel to the centres may be too expensive or too insecure for those in need of services. In some countries, large numbers of amputees have never received rehabilitative care.

In others, when an artificial limb is broken or no longer fits, the patient can wait months or even years for its replacement. This experience can be as traumatic as losing one's leg all over again. Socio-economic reintegration can enable the disabled person to resume his or her life as a full member of the community. The psychological trauma and loss of self esteem that disabled mine survivors experience can be eased through family and psycho-social support, community acceptance and employment, restoring a person's feeling of productivity and dignity. Mine survivors consistently say that their top priority is to become productive community members and contribute to supporting their families. Vocational training and the creation of employment opportunities are therefore crucial tools to help mine survivors rebuild their lives.

Yet most mine survivors live in low income countries that have few or no resources for employment programmes aimed at persons with disabilities, let alone for psycho-social support. In some communities, disabled persons are socially stigmatized, making their prospects for reintegration even more difficult. In too many cases, patients leave physical rehabilitation centres to become beggars and to be neglected by their families and communities.

Like all persons with disabilities, mine survivors should benefit from legislation and public policies that protect disabled persons. Legislation and public policies should protect mine survivors and other disabled from discrimination and ensure that they have equal access to public facilities, social programmes and educational and employment opportunities. Victim assistance is more than just a medical or rehabilitation issue; it is also a human rights issue. But many affected states lack adequate legislation to protect the rights of mine survivors and other disabled.

Additional challenges to ensuring functioning health and social services systems for war wounded and other persons with disabilities in mine affected countries include the lack of accurate data on the number of victims and where they are located victim surveillance through data collection is a useful tool to indicate the scale and nature of casualties, in order to manage assistance effectively. The fact that large numbers of victims live in rural areas where access to health facilities is limited or non-existent. The inability of assistance agencies to reach mine victims and other war wounded due to insecurity caused by ongoing threats, conflicts or tensions. The lack of priority given to health care in many mine affected countries, leaving health care

systems weak, with little or no planning or capacity building, and no systematic training of first aid and hospital staff.<sup>16</sup>

### 3, Environmental Impact of landmine

The risk of over cultivation in unmined areas is high. Forests are felled and cleared in a desperate search for alternative sources of income when traditional agricultural areas cannot be used. Health, economy, and environment are intimately linked. Not only is land rendered unsafe to cultivate through the use of landmines, but the very structure of fragile soil may be impaired. An assessment of the use of landmines in the Gulf War revealed irreversible damage to ecosystems, including prolonged direct damage through shattering or displacement of soil and increased vulnerability to wind and water erosion. The severe and long term effect of landmines on land usage, on water supply and on infrastructure make them the most toxic of all manufactured pollutants.<sup>17</sup>

Landmines are one of the most environmentally destructive aftermaths of war facing the world today. The barely chronicled global landmine problem has transcended both humanitarian and sociological concerns to bring about environmental damage. Disruption of land's stability, pollution and loss of biodiversity constitute major ecological repercussions of landmine crisis. This qualitatively integrates ecological, social, economic and political variables that play a role in creating and perpetuating a serious land degradation problem in landmine-affected regions. The complexity of the landmine problem and interrelationships between the issues surrounding the degradation and management of landmine-affected environments is highlighted below.

The former Secretary General of the UN, 'Boutros Boutros Ghali,' acknowledged the scourge of landmines as one of the most atrocious global problems of our times. Landmines stand out from other forms of warfare, because of their very persistent, indiscriminating and uncontrolled nature. The global landmine calamity has transcended both humanitarian and sociological concerns to bring about environmental damage.<sup>18</sup>

### Conclusion

Landmines are devastating to all level of society i.e. individual, family, community, and nation. The social-economic and other humanitarian impact of landmines have outweighed their military utility in warfare. They tear up the social fabric of nation, threatening not only to present but also the future generation. They hinder the development process, led to loss of biodiversity, soil

contamination and threat to survival by denying access to the resources. Landmines utility can in no way justified because of their everlasting and indiscriminate nature.

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