



Landmines and international business community: a political ecology perspective

Satyendra Singh

*Faculty of Business and Economics, Centre for Emerging Markets,
The University of Winnipeg, Winnipeg, Canada*

Abstract

Purpose – The two decades of civil war have left Angola plagued with about ten millions landmines, causing destructions to human conditions and communities. Thus, the purpose of this paper is to create awareness of the landmine-related problems among the business community and propose strategies to tackle them.

Design/methodology/approach – Using the theory of political ecology – an approach that represents an ever-changing dynamic tension between ecology and human change, and between diverse communities within society – this paper analyzes the political environment that led to the plantation of landmines and examines how the collective action of governments, nongovernmental organizations and businesses communities can create awareness, rehabilitate victims and support new technologies.

Findings – The findings suggest the following strategies to business communities to alleviate the problem of landmines: create landmine awareness in society and the business community; provide economic assistance to landmine victims for rehabilitation; and donate landmine excavators.

Practical implications – The practical implications for managers are that they can implement the strategies to improve the prevailing human conditions of the communities in Angola.

Originality/value – This study originally contributes in that it highlights the problems associated with landmines and brings them to the attention of international business community and proposes a three-pronged strategy to deal with them.

Keywords Angola, Communities, International business, Weapons, Explosives technology, Political systems

Paper type Conceptual paper

The world is too little aware of the waste of life, limb and land which anti-personnel landmines are causing among some of the poorest people on earth. – Princess Diana



Introduction

Landmines have been described as the curse of Africa (Moszynski, 1995). Angola is the most afflicted country in Africa with landmines laid over decades by Cuba, Portugal, South Africa, Angolan Government forces, and the National Union for the Total Independence of Angola (United States Department of State, 1994; Human Rights Watch, 1997). United Nations (UN) reports that over ten million landmines are scattered around the country. Since 1980, nearly 5,00,000 children have died directly or

indirectly; 1,00,000 Angolans died in battle; and 7,00,000 died of disease or famine as a result of the war. Yet, countries such as China, the USA and the USSR are reluctant to sign the Ottawa Treaty (1947) that bans the use of landmines. In fact, these countries are the largest suppliers of landmines (for details on landmine stockpiles, see History of Landmines, 2008). Countries opposing the ban believe that the use of landmines is an effective tool in resolving disputes, and thus an acceptable form of warfare.

However, we argue, consistent with the over 150 signatories to the Ottawa Treaty, that landmines are not an acceptable form of warfare and that its use should be banned. Given the dispute between governments and the loss of innocent civilian lives, it is surprising how little is known about creating awareness of the devastating impact of landmines among the business community. One of the reasons for this state of affair is the fact that previous African-based studies are either too socially oriented (Andersson *et al.*, 1995; Gildestad, 2001; Cain, 2007) or too government policy oriented (Okoroafo and Kotabe, 1993; Muuka, 1997; Singh, 2004) or too marketing activity oriented or practice oriented or small businesses (Samli and Kaynak, 1984; Dadzie *et al.*, 1988; Appiah-Adu, 2001; Dana, 2007). As a result, the topic of landmines received little or no attention in business literature, although programs to increase awareness about landmines are in place in affected communities (United Nations International Children Emergency Fund (UNICEF), 1993; United Nation High Commissioner for Refugees (UNHCR), 1994). Therefore, the purpose of this study is to create awareness of the landmine-related problems among the business community and propose strategies to tackle them.

To achieve the purpose, we focus on the Republic of Angola as it has the highest ratio of amputees per capita as a result of landmines. A landmine is a destructive weapon, which is laid under the ground or surface and is detonated or exploded when tread upon by human beings or animals. Landmines are of two kinds: anti-personnel and anti-tank. Anti-personnel mines explode with a low pressure (7-100 kg). So even if a child happens to tread on it, it explodes instantly. Thus, anti-personnel mines are the most dangerous lethal weapons as they are designed mainly to maim human beings. Owing to the scare of landmines, 30 percent of the Angolan population is displaced from their homes and land (Zegeye *et al.*, 1999). As a result, Angola struggles economically as the majority of its fields are covered in landmines, decreasing the country's ability to produce agricultural products. Further, when landmines are detonated, they contaminate the land and water and prohibit farmers from producing food. The food shortage leads to starvation and causes strain to the society and economy. Furthermore, even with the fertile lands and good rain, famine is killing people because of political instability and the presence of landmines (Pearce, 2002). Clearly, landmines produce famine and poverty and spread infections. These facts suggest that Angola provides appropriate grounds for discussing the issues relating to landmines.

The issues of this study are rooted in the concept of the political ecology theory which is defined:

[...] as an approach that combines the concerns of ecology and political ecology to represent an ever-changing dynamic tension between ecology and human change, and between diverse groups within society at scales from the local and individual to the earth as a whole (Peterson, 2000).

This approach lends itself well to our study of landmines. Previously, several researchers have applied it to study conflict, landmines, and resources, among others

and have found the approach to be reliable and valid (Le Billion, 2001; Unruh *et al.*, 2003). In fact, the political ecology theory has emerged as a research agenda in third-world studies (Bryant, 1992).

This study contributes to literature in a number of ways:

- We highlight the problems associated with landmines and bring them to the attention of business managers, particularly in developed countries. Although some not-for-profit organizations have attempted to educate people in developed countries, their efforts have been unnoticed.
- From a methodological viewpoint, we apply the political ecology theory to analyze the situation relating to landmines in the context of businesses.
- From a managerial viewpoint, we recommend strategies for managers to help mitigate the prevailing situation in Angola.
- And finally, we focus on Angola which appears to have received little attention in African business literature except an article by Singh (2004).

We first provide a background to landmines in Angola, discuss the effects of landmines, review the pertinent literature, and apply the political ecology theory to the problems associated with landmines. In the remainder of the paper, we present implications for business managers followed by the conclusion of the study.

Background to landmines in Angola

In 1961, Angola witnessed a conflict when hundreds of Africans attacked a prison in Luanda to free the militants. Three major militant groups were fighting against the Portuguese Government, which occupied the country and controlled its vast natural resources. The three groups were the National Front for the Liberation of Angola (FNLA) (backed by China and Zaire), the Popular Movement for the Liberation of Angola (MPLA) (backed by Cuba, Russia), and the National Union for the Total Independence of Angola (UNITA) (backed by South Africa and the USA). The support from these superpowers contributed to the mass production and distribution of arms, which turned Angola's conflict into a major civil war that destroyed the country and its people. In 1974, China, Cuba, Russia, and the USA began shipping arms to Angola.

In 1975, the Portuguese Government convinced the leaders of the groups to sign an agreement proclaiming that they were the legitimate representatives of Angola. However, six months later, the leaders broke the agreement, and the fighting escalated. As a result, over 50,000 Angolans fled to Zambia, tens of thousands sought refuge in Zaire and over 1,00,000 got killed (Zegeye *et al.*, 1999). By this time, Russia and the USA had supplied over a billion dollars worth of arms to Angola and yet the worst was expected. Eventually, the MPLA gained control of the country, but the fighting further escalated. In the meantime, the FNLA disintegrated, but UNITA was still a force to be reckoned with. UNITA aimed at destroying properties under government control. They robbed and burned villages, killed citizens, and attempted to destroy economic development by planting landmines on farm paths and fields.

In 1988, Cuba, South Africa, the USA, and MPLA signed an agreement, which set deadlines for the withdrawal of all parties from Angola. The leader of UNITA was not invited to these negotiations because the MPLA did not want to give the leader a diplomatic recognition. While Cuba and South African both retreated from the conflict,

Russia continued to distribute arms to the MPLA. By this time, the MPLA owed Russia two billion dollars for the arms supplied (Zegeye *et al.*, 1999). In the meantime, the USA continued to aid UNITA and its policies. The fighting continued.

In 1991, a Bicesse Accord was signed stating that all fighting would cease within a month and that elections would be held in 18 months under the supervision of the UN, a joint military commission with representatives from the MPLA, UNITA, Portugal, Russia, and that the USA would establish an army of 50,000 peacekeeping troops. Soon after the removal of landmines began, the new ones were still being planted until 1998. Angola was considered to be one of the most mine-infested countries in Africa. Mines were laid throughout the country for almost 25 years and little effort was made to map these minefields (Williams, 1995).

Size, scope, and costs of landmines

Landmines are easy to make, cheap to buy, and easy to implement. As landmines are primarily designed to maim people, many armies operate by the theory that wounding enemy fighters causes the enemy more problems than killing them outright. A dead soldier will not halt an advance, but a wounded one, by tying up medical and logistical capabilities and rescuers, may hinder morale and demand evacuation (Pearn, 1996). Using this theory, about 80-110 million landmines were planted around the world (Williams, 1995). Reliable figures do not exist, indicating the difficulty in assessing the gravity of the landmine problem (Purves, 2001). On average, 150 people – the majority being civilians – were killed or injured by landmines each week. Globally, about 3,00,000-4,00,000 landmine survivors face terrible physical, psychological, and socio-economic difficulties (Roberts and Williams, 1995). Landmines create ruinous effects on the human body; they drive dirt, bacteria, clothing, metal, and plastic fragments into the tissues, causing infections. The shock waves from exploding landmines can destroy blood vessels in the leg, causing surgeons to amputate much more than the site of the primary wound. It is estimated that it may cost as little as \$3 to produce a landmine, but the average cost of removing a landmine ranges from \$300 to \$1,000 (Andersson *et al.*, 1995). The high cost of landmine removal represents the immensity and complexity of the task. In fact, at the current rate of landmine removal, it would take up to 1,100 years to remove all the existing landmines threatening thousands of communities across the world (Kakar, 1995). Clearly, landmines are detrimental to land, lives, and economy.

The political ecology perspective

Recognizing that environmental factors are shaped by political issues, we apply the theory of political ecology to study the relationship between society and power, particularly from the perspective of the political economy (Bryant, 1992; Escobar, 1996), and develop a framework of the political ecology in the context of businesses that have relations between governments, nongovernmental organizations (NGOs), civil society, and other agencies (Giddens, 1984). Orssatto and Clegg (1999) refer agency to “the capacity to act significantly.” Thus, for the purpose of this study, we refer other agencies to business communities. The framework is applied to study the most emblematic of modern times and the devastating consequences of modernity – landmines. The landmines are the focus of the study and a test on whether collaborative actions of business communities can create effective strategies

by which ecology can inform and underpin the threat of landmines. For example, in the last of couple of decades, governments and NGOs have responded by adopting a mixed strategy such as education (UNICEF, 1993), refugee settlement (UNHCR, 1994), and banning the landmines (International Campaign to Ban Landmines (ICBL), 2008). Others – some businesses – have invested in developing safer technologies to clear landmine fields such as Hitachi (2005) and *Menschen Gegen Minen* (MGM), (2008), among others. Hence, the political ecology approach can help examine and explain the broader influences of landmines on recovery, particularly the impacts on agriculture, transportation and international investment, NGOs, and businesses within the economic, political, social, agricultural and ecological climate (Oppong and Kalipeni, 2006). The political ecology represents an attempt to develop an integrated understanding of how environmental and political forces interact to mediate social and environment change (Bryant, 1992).

Figure 1 shows the main elements of the adapted political ecology framework. It analyzes the political environment that led to the plantation of landmines, and examines how the collective action of governments, NGOs, and businesses can create awareness, rehabilitate victims, and support new technologies.

The effects of landmines on the economy

Landmines cause a significant barrier to social and economic development. It is difficult for people to travel to mine-affected areas. Farming is slowed down or halted, as fields contaminated with landmines are left uncultivated. The decreased agricultural productivity often results in communities being dependent on foreign assistance (Eaton, 2003). A recent study conducted in Afghanistan, Angola, Cambodia, Mozambique, and Bosnia-Herzegovina, which were only a few of the vast number of developing countries affected by landmines, indicated that landmines affected 43 percent of families engaged in food production and that landmines significantly reduced the average area of cultivation land per family, and that 50 percent of families did not farm because of landmine threats (Andersson *et al.*, 1995). When landmines

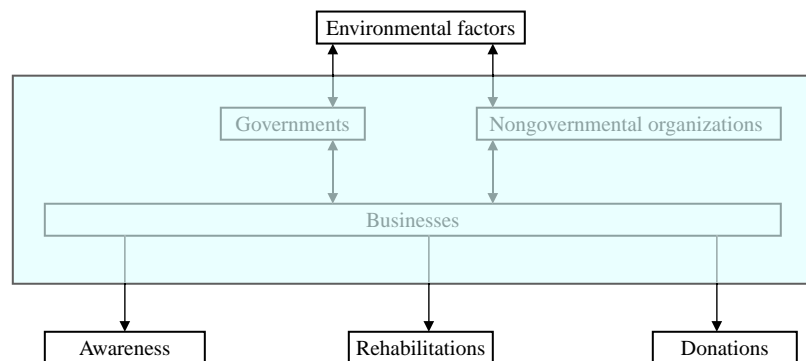
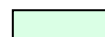


Figure 1.
The adapted political
ecology framework

 Denotes: Economy and business in a social context

Source: Author

explode, they contaminate ground water, which leads to contamination of drinking water, causing diseases and deaths.

Further, landmines reduce production and transportation of food because landmines are planted in productive fields and major roadways; it restricts the land available to the farmers. As a result, farmers have limited resources and therefore produce less food than necessary. Sometimes, people become so hungry that they take the risks of going in the fields in search of foods, or walking down unsafe roadways. In other instances, foods are available in major cities, yet people are not able to get to these cities because the roads are laid with landmines. Furthermore, the extensive mining of roads contributes to inflation, e.g. the price of a sack of grain rose by 25 percent because the mining of the road between Boroma and Zeyla increased the travel distance by 130 km. Clearly, the case for the use of landmines supports the main thesis of political ecology that resources can be degraded by human actors in various ways, either through the indiscriminate use of landmines or the direct overuse of resources in conflict-prone areas (Oppong and Kalipeni, 2006).

Literature review

A plethora of research has mainly focused on the impact of landmines on social issues such as health and disease (Oppong and Kalipeni, 2006), local community adaptation (Benini *et al.*, 2002), communities in general (Williams and Dunn, 2003), social costs (Andersson *et al.*, 1995), public health (Kakar *et al.*, 1996), socio-economic impact of mines (Gildestad, 2001; Cain, 2007), and land degradation (Blaikie and Brookfield, 1987), among others, whereas others have concentrated on the designing of a geographic information system for recording and mapping minefields (Sutherland, 1996; Craig and Elwood, 1998; Cinderby, 1999). Yet, another stream of research has devoted time and energy to banning landmines (Leahy, 1997), educating about human rights (Owsley, 1995) and getting rid of landmines (*The Economist*, 1997; Landmine Monitor Report, 2003). By contrast, some researchers have even advocated that banning is unnecessary (Chaloner and Mannion, 1997) and that counting landmines do not accurately measure the problems caused by landmines (Georghiades, 1998).

However, NGOs such as the UNICEF, Halo Trust, the ICBL, among others, support the majority view that landmines should be banned. In fact, UNICEF signed an agreement in 2001 on preventing the use of landmines in Angola and on educating civilians – mostly children – on the harmful effects of landmines. Unfortunately, it created a curiosity for children to seek out landmines, and thus the agreement lasted only until 2002. Along the same line, Halo Trust has a simple mission – getting mines out of the ground, now (Willoughby, 2008). Several organizations and humanitarians have the same mission, but very few are actively engaged in implementing the mission. By creating awareness against the use of landmines, Halo has managed to destroy over a million landmines, an indication that their mission is successful. Halo seeks to clear the land for people to build homes and create agricultural stability.

Similar to Halo but much larger in size, the ICBL is an association of over 1,400 groups in more than 90 countries that work locally, nationally, and internationally to remove the existence of landmines. The association launched a campaign with the support of six NGOs: Handicap International, Medico International, Human Rights Watch, Mines Advisory Group, Physicians for Human Rights, and the Vietnam Veterans of America Foundation. The focus of the campaign is to:

- initiate a worldwide ban on landmines;
- support the needs and rights of landmine survivors; and
- provide substantial demining and risk education to individuals living in high-risk areas.

In recognition of its achievements, the campaign was awarded the Nobel Peace Prize in 1997.

Further, there are four working groups that address the landmine situation:

- (1) The Mine Action Working Group (MAWG), formed in 1998, serves as the focal point for addressing issues concerning mines. Later, MAWG joined forces with other working groups of the ICBL to encourage full implementation of the Mine Ban Treaty. The main members of the group have mainly been project-implementation organizations such as Handicap International, Mines Advisory Group, Mines Clearance Planning Agency, Norwegian People's Aid, Medico International, and Vietnam Veterans of America.
- (2) The Mine Risk Education Sub-working Group focuses on the mine-risk education and acts as a resource to the ICBL.
- (3) The Treaty Working Group (TWG) focuses on taking the lead in developing and carrying out the ICBL's strategies and actions relating to the disarmament component of the Mine Ban Treaty, as well as dealing with other mine-focused international bodies and mechanisms. The Human Rights Watch manages the TWG.
- (4) The Working Group on Victim Assistance (WGVA) group is committed to increasing the level and quality of programs intended to improve the condition of landmine survivors throughout the world. Specific goals of the WGVA are to:
 - promote a wide range of activities that meet the needs of landmine survivors; and
 - support the rights of landmine survivors to secure enhanced levels of financial support from the Victim Assistance Programs (ICBL, 2008).

Implications for managers

Based on the political ecology perspective, we recommend the following three-pronged strategies to business managers to alleviate the problem of landmines:

- (1) create landmine awareness in society and the business community;
- (2) provide economic assistance to landmine victims for rehabilitation; and
- (3) donate landmine excavators.

Landmine awareness in society and the business community

The issue of creating landmine awareness is not at the forefront of global politics or studies, though programs such as adopt-a-minefield is effective in raising funds in countries such as the USA, Canada, and Sweden. The campaign has hosted over 4,000 benefit dinners in 50 countries in the last six years to raise four million dollars to donate to the cause. Given, the cost of removing a landmine between \$300 and \$1,000, and with ten million landmines to remove, significantly more funds are needed.

We encourage managers to create awareness about the landmines in the country of their operations and among their employees and ask them to donate for the noble cause. It should be noted that even when these landmine fields get cleared, it takes years for the soil to be fertile. As a result, landmines are perceived as a major threat to the people and economy. Yet, others see it as a potential business venture with a great financial gain through political control.

A non-profit group called LandminesBlow (landminesblow.org) focuses solely on raising awareness of landmines and their devastating effects by giving presentations to schools, organizations, business groups, clubs, and associations, among others. As the group targets specific groups of people, it is too small to make a major impact on politics or on the removal of landmines. We ask managers to sponsor similar groups.

Economic assistance to landmine victims for rehabilitation

Le Billion (2001) asserts that armed conflict during the Cold War and the post-Cold-War period is increasingly characterized by a specific political ecology, closely linked to the geography and political economy of natural resources, which adversely affects people's livelihood and health. Several organizations have attempted to assist the people with the post-war struggle to lead normal lives. Over one-third of the population is displaced due to the destruction of land, property, and hospitals. In many instances, even when patients reach medical facilities, they seldom receive proper care because blood supplies, surgical instruments, X-ray films, anesthesia, and antibiotics are unavailable. Approximately, one-third of surviving landmine victims requires amputations and a disproportionately large amount of healthcare resources (Coupland, 1996). The surgeries required by landmine injuries are particularly traumatic to children. As a child grows, the bone at the amputation site grows more than surrounding tissue and frequently requires reamputation, often with severe psychological impact on the child and the child's kin (Roberts and Williams, 1995). Thus, availability of medical facilities has to be increased. Further, the standard of living needs be improved, and approaches have to be formalized to meet the post-conflict needs and to mitigate the resurgence of conflicts (Berhe, 2005). With the assistance from the World Bank and International Monetary Fund, the past decade has seen the systematic implementation of Staff Monitor Programs that has led Angola, to some extent, to sustainable development (Singh, 2004). Certainly, political instabilities create constraints on the efforts of these international organizations (Cain, 2007). Not surprisingly, landmine casualties frequently overwhelm existing medical and rehabilitation services, as they require lengthy stays in crowded hospitals, multiple major surgeries, and large quantities of blood. As political issues and economic status are interrelated, businesses can play a significant role in providing assistance to landmine victims to rehabilitate them.

Landmine excavators

Businesses need to invest in developing new efficient and effective technology to detect and destroy landmines. Some businesses have focused on excavation machineries, which dig up and blow up mines without any contact with human beings. Hitachi manufactures these excavators that act as huge front-end loaders with giant cutters attached to them. By remote control, an operator can maneuver and direct the excavator from a safe distance while the machine digs up and essentially blows up the

mines. In fact, UN uses these machines to combat mines. Other companies such as De-Mining Systems (DMS) and MGM Operations have developed similar tools to aid the fight against landmines. De-mining, like Hitachi, uses a remote control system (DMS, 2009), which is similar to a tractor in both appearance and function. It includes clearing attachments on both the front and back, yet it can also be used as a tractor. Similarly, MGM Operations have developed the Wolf, Grader, and Mulcher (MGM, 2008). We ask managers to donate these machines to landmine clearing organizations.

Conclusion

The purpose of this paper was to create awareness among the business community of the gravity of the problem prevalent in Angola, and to recommend strategies to alleviate the problem. Using the political ecology perspective, we recommend businesses to: create landmine awareness in society and the business community; provide economic assistance to landmine victims for rehabilitation; and, donate landmine excavators. We believe that the issue of landmines in the world is underrated. Although the banning of landmines will be ideal, it may not be possible in the near future. However, if businesses work together and view this problem as a corporate social responsibility, the growth, development, and prosperity can be achieved. We recommend that awareness about landmines be raised. By letting people know about the devastating effects of landmines, support can be gathered to eliminate and outlaw landmines as an inhumane form of warfare. Another recommendation is to rehabilitate the landmine-affected people. Clearly, landmines endanger people and deprive them of livelihood. With no safe land to farm, these people are unable to make their livings, particularly if their income is solely dependent on farming. We suggest that businesses partner with non-for-profit organizations to create resources – time, money, or food – to rehabilitate these people. Assisting these people should result in a better economy and standard of living. Finally, we recommend generating funding for the development of new technology that can eliminate existing landmines at a faster rate. By investing in new technology, safer and more effective means of landmine removal can be used. We ask managers to donate landmine removal machineries to land clearing agencies. Given, Angola has the highest ratio of injured people to the general population, business managers cannot ignore the severity of the issue of landmines. Any study of African ecologies that ignores landmines as a critical factor is bound to be incomplete (Oppong and Kalipeni, 2006).

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About the author

Satyendra Singh is a Director of Centre for Emerging Markets, and Associate Professor of Marketing and International Business in the Faculty of Business and Economics at the University of Winnipeg, Canada. His interests lie in the area of emerging markets with particular emphasis on Asia and Africa. He has published in journals such as *Thunderbird International Business Review*, *Industrial Marketing Management*, *Journal of Services Marketing*, *Services Industries Journal*, *Journal of Global Marketing*, and *Journal of African Business*, among others, and presented papers at international conferences such as *American Marketing Association*, *British Academy of Management*, *European Marketing Academy*, among others. He is the author of *Handbook of Business Practices and Growth in Emerging Markets* (World Scientific, 2009), *Business Practices in Emerging and Re-emerging Markets* (Palgrave, USA, 2008), and *Market Orientation, Corporate Culture and Business Performance* (Ashgate, UK, 2004). He is editor-in-chief of *International Journal of Business and Emerging Markets*. Satyendra Singh can be contacted at: s.singh@uwinnipeg.ca

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