

CLEARING THE PATHS TO PEACE: HUMANITARIAN DEMINING IN PEACE OPERATIONS

**A MONOGRAPH
BY
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ABSTRACT

CLEARING THE PATHS TO PEACE: HUMANITARIAN DEMINING IN PEACE OPERATIONS by MAJ John D. Nelson, USA, 39 pages.

This monograph discusses the necessity for conducting humanitarian demining during the initial stages of a peace operation in a region contaminated with landmines. The removal of landmines will be an essential task as part of a peace operation in order to return a region to peace and stability. This monograph explores how landmines affect all aspects of life within a region and demonstrates that for a peace operation to be successful removal of mines must be planned for early.

The monograph first examines the nature of the mine threat in regions that have emerged from conflict, and how the landmine has affected the economic life, repatriation of refugees, protection of humanitarian aid, and protection of peace forces. Next, the doctrine of peace operations was examined in light of this landmine threat. From this an essential task early in peace operations was determined to be demining. Next, landmine removal policy and doctrine, for the U.S. military, and U.S. Army specifically, was examined. A possible demining doctrine for U.S. Forces was proposed as a result of this examination. The role of Non-Governmental Organizations (NGOs) and Private Volunteer Organizations (PVOs) involved in demining was explored.

Finally, a case study was examined from Somalia. The criteria that was used to examine the case was that developed in the previous sections. Somalia demonstrated that peace operations, conducted in a region contaminated with landmines, will have to remove landmines as an essential task to ensure the success in the early stages. Somalia also demonstrated that the short term success of the demining program can be offset by the failure to hand the program to a self-sustaining local demining capability. That will ensure long term success.

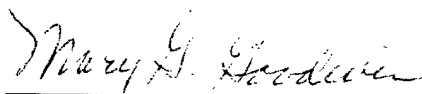
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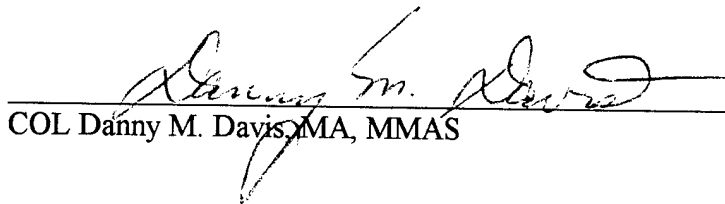
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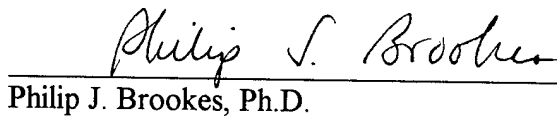
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I. INTRODUCTION

*“The extraordinary number of mines in the theater caused mine-clearing and marking operations to have an influence on all levels of the operation. Mines were the greatest threat to force protection and the success of the mission. The ability of TFE forces to conduct the mission without sustaining casualties communicated the proficiency and competency of NATO forces. Such a perception would be a major contributor to the successful fulfillment of the endstate.” CALL
Report: Drawing a Line in the Mud.¹*

Since the end of the cold war the United States military has participated in peace operations more frequently. Most often these operations have taken place in developing nations or regions. The combatants have waged war with very few resources, both human and financial. As a result, the belligerents have looked for the most cost efficient weapons to use in combat. The landmine is one such weapon. Low-cost, it can be used as an economy of force, terrain denial weapon, or as a weapon of terror to keep a civilian population in check. If the United States participates in peace operations in the future, in such a nation, then we must be prepared to remove the landmines as an essential task in returning the nation to normalcy and stability.

The landmine is the sentry that never sleeps or surrenders. After the belligerents agree to cease-fire, and return to their cantonments, the landmine is still there. The landmine waits to unleash its momentary violence and terror upon an unsuspecting victim. Often these victims are civilians, women and children. In order for the country to return to normalcy and stability, the landmines need to be removed.

The landmine will affect every facet of a nation emerging from a period of conflict. Displaced persons cannot return to their homes. Farmers will be unwilling to return to the

fields to resupply the nation's foodbasket. Peacekeeping forces will be hindered in their deployment. Villagers will be reluctant to go to cisterns to draw water. The reconstruction of this fragile nation will take place with the constant danger of the silent sentry in the background. Lives of farmers, relief workers, laborers, villagers and soldiers will be lost.² In order to achieve the objectives of the peace operation, the forces involved must quickly remove the landmine pollution within that nation.

Often the forces involved do not plan to reduce the landmine pollution prior to the peace operation. Instead they leave the demining to the Non-Governmental Organizations (NGOs) and Private Volunteer Organizations (PVOs). In cases where there are no NGOs or PVOs to conduct demining, contractors are brought in. In the early stages of the peace operation, none of these options may be available, due to the security situation in country.

The NGOs, PVOs, and contractors that routinely conduct demining as part of post-war reconstruction, may choose not to participate until the security situation improves. It is during this early phase of the peace operation that reducing the landmine pollution is most critical to the restoration of stability. Peacekeeping forces need to deploy, infrastructure needs repair, displaced persons need to be repatriated, farmers need to plant, for the restoration of stability. These activities would be hindered by the presence of landmines. In the initial stages of a peace operation, the forces conducting the operation may have no choice but to conduct demining until the security situation improves and NGOs, PVOs, or contractors are willing to take over the program.

The United States military have participated in peace operations in this decade with no doctrine for humanitarian demining operations. The Army has doctrine for mine

breaching and mine clearance. Both breaching and clearance operations are in support of military forces. Humanitarian demining is not. The intent of demining is to support the civilian populace of a foreign nation. In addition, in the National Defense Authorization Act for Fiscal Year 1996, United States Forces are allowed to train foreign nationals to conduct demining, but are forbidden to conduct demining except in cases of military necessity.³

If the United States is involved in a peace operation in a region that is plagued by landmines, and the intent of the operation is to return that region to stability, then what is the best course of action to remove the landmine infestation? Some would argue to let the local combatants remove the landmines that they planted. If there is a coherent local military force that can be directed to remove the landmines, then that would be the best solution. Often these forces splinter and disappear, leaving the peacekeeping force or the NGOs or PVOs to deal with the problem. Should the peacekeeping force then conduct initial demining if removal of landmines is a critical task to return the nation to stability?

Given that the United States Forces are prohibited from conducting demining, except in the case of military necessity, then if those forces are part of a peace operation should they consider demining a military necessity to return the nation to stability? This is the question that will be examined in this paper. In order to answer this question the following areas will be examined: the nature of the mine threat; the doctrine of peacekeeping operations and of mine clearance and humanitarian demining; the role of NGOs, PVOs, and commercial contractors in demining in peace operations. The United

States military operations in Somalia will be used to test these areas to determine the military necessity of demining.

II. THE NATURE OF THE MINE THREAT

"They are blind weapons that cannot distinguish between the footfall of a soldier or that of an old woman gathering firewood." Asia Watch⁴

The mine threat will present the peace force an obstacle that must be overcome in order to achieve the goals of the peace operation. In order to be equipped to deal with the landmine problem the peace force must first understand the mine threat it faces.

Mines, as we know them today, have been used by armies since World War One.⁵ Landmines are simple explosive devices with a mechanism, that when activated, will cause the device to detonate. This mechanism may be activated by a person's step, in the case of an anti-personnel mine, or a vehicle passing over the mine, in the case of an anti-tank mine. The amount of explosive in the mine will determine whether it is an anti-personnel mine or an anti-tank mine. The anti-tank mine will generally contain more explosive material. Landmines may be buried or surface laid. Many armies today have scatterable mines that are delivered by aircraft, artillery, or by specialized mine laying equipment. Scatterable mines, as the name implies, will not be laid in a discernible pattern. These mines have a self-destruct mechanism to destroy the mine after a specific period of time. Scatterable mines are generally surface laid.⁶

Armies will employ landmines in concert with other combat systems. Generally, landmines will be grouped together to form minefields. These minefields will be laid out in predictable patterns, mapped and marked to ease in removal during post-conflict operations. Most legitimate minefields will be approved by the next higher commander of the unit that laid the minefield. The minefield will support that commander's concept of the operation, and will be generally employed with other obstacles and covered by direct and indirect fire weapons. All friendly units within an area of operations will know the location and type of minefields nearby.⁷ Most legitimate minefields will not be placed near active civilian population centers. That is to say that, mines will not be knowingly placed near civilians to cause harm. Generally, these are the principles that govern the uses of landmines by conventional forces in mid-to high intensity conflict.

Internal wars, counter-insurgencies, and conflict between third world nations in the last thirty years have changed the way mines are employed. Vietnam was the first conflict in which United States forces faced this change in mine warfare. Mines were used by the Viet Cong to terrorize the civilian population. Mines were placed indiscriminately without regard to patterns. The Viet Cong mined roads nightly to interdict their use by friendly forces by day. Viet Cong forces fashioned mines out of wood and plastic to make them harder to detect. In Vietnam mines accounted for 16 percent of all ground force casualties. In the 1st Marine Division, in the last half of 1968, mines and booby traps caused 57 percent of all casualties.⁸

The change in mine warfare continued through the colonial wars in Africa. Insurgents used mines to make up for a lack of firepower. In this role, mines were used as

a substitute for artillery. Mines were easy to employ and inexpensive. Therefore, the insurgents and terrorists in those conflicts used mines often. Mines caused 50 percent of the casualties that the Portuguese forces sustained in Angola in 1970.⁹

During the Soviet invasion of Afghanistan mines were used extensively during the conflict. The tactics of mine warfare in intra-state conflict evolved to effect the civilian population. Mountain grazing lands, planted fields and irrigation infrastructures were mined, in an attempt to restrict the supply of food to the enemy forces.¹⁰ The insurgent and intra-state wars of the 1990s showed an increase in the use of undetectable mines, that is, mines with little or no metal content. There has been a tendency to use mines to deny enemy forces, and non-combatants, access to villages, bridges, schools, and utility systems.¹¹ Clearly the trend in the use of mines in conflict today is to target not only armed forces, but civilian populations.

The legitimate use of mines is therefore characterized by detectability, proper marking, and scrupulous record-keeping of minefields. These actions will ease removal of mines by belligerent forces during post-conflict operations. However, the nature of the mine threat today is such that those norms are not necessarily followed. Mines will be targeted against the civilian population, their agricultural infrastructure, and infrastructure such as roads, utilities, water sources, and villages. Their ubiquity will preclude a nation from conducting the business of rebuilding itself after conflict.

Landmines have been used in most conflicts, conventional and unconventional within the twentieth century. The legacy of this use in 62 countries today is between 65 and 110 million landmines awaiting removal. In 1993, according to the United Nations,

80,000 landmines were cleared. During this same period 2.5 million mines were planted.¹² Chances are, that if a country is involved in conflict, it will have a problem with landmines.

The effects of landmine use in a country involved in conflict, or emerging from conflict, are devastating. Landmine use will effect every facet of a society. These effects may be grouped, for purposes of discussion, into two general areas, humanitarian, and economic. Landmine use in a given country will effect the region and the international community as well, which may be called diplomatic consequences.

The humanitarian implications of landmines in a given country are enormous and will strain that country's ability to cope with the effects. Most often, the country will require some form of outside assistance to work through the problem. Immediately following a conflict in a given region, displaced persons and refugees will want to return to their towns, villages, and homes. Their return is predicated on the security situation and the possibility of future stability within the nation. Landmines will be an impediment to both. Humanitarian aid in the form of food and medical care may not be provided if an area is inaccessible due to the presence of uncleared landmines.¹³

There are an estimated 20 million refugees in the world today. The United Nations' mandate to return those refugees home is hindered by the presence of landmines within former war zones.¹⁴ The reason refugees and displaced persons flee a warzone in the first place is to avoid a dangerous and unstable security situation in their homeland. Landmines placed on major refugee routes will make their travel dangerous. Returning home will be problematic for refugees, often the homes they left are booby trapped, the wells they got water from may be mined and the fields that they worked have minefields in

them. The displaced person or refugee will be reluctant to return to that situation, so they stay in the refugee camp. This problem presents the international community with an impediment to the repatriation of the refugee and displaced person population.¹⁵

This problem presented to the international community has many logistical and financial difficulties associated with it. Generally most returnees will require six to twelve months of assistance in both materiel and security. This will be the case when the returnee reaches his or her home. If landmines impede this process, the time required for the international community to support the returnee will increase. Due to the landmine infestation, delivery of needed materiel will take longer, become more expensive, and place relief workers in danger. The longer it takes to resettle refugees and displaced persons, the longer it will take to return that nation to stability and get on with the business of national reconstruction.¹⁶

All of this has economic consequences for the nation emerging from a period of conflict. This is due, not only to the large amount of refugees, and displaced persons not productively employed, but to the damage done to the economic infrastructure of the nation by the mere presence of landmines. Landmines targeted at the agricultural infrastructure of a primarily agrarian based nation will limit its resources available for post-conflict reconstruction. The placement of landmines on the national transportation infrastructure will impede the delivery of goods and services within the country. The consequences will be that this breakdown in transportation will affect the marketplace forcing the domestic suppliers to export their goods, if they can, or to cease operations.

As goods and services become scarce, prices will increase placing inflationary pressure on local currencies.¹⁷

In addition to the direct economic consequences on the markets within the nation infested with landmines, there are indirect economic costs. Medical costs associated with the victims of landmines are enormous. The surgical and post-surgical costs that are required to return a landmine victim to a somewhat productive life are staggering to a country that had little resources to begin with. The cost for prosthesis alone are large. A ten year old child injured by a landmine will require, on the average 25 prostheses over her lifetime with the total cost around \$3,125. For a nation with a per capita income of \$120, resources that are required to rebuild the country will not be available if there are a large amount of amputees as in Cambodia or Mozambique.¹⁸

The other main indirect cost to the nation is the cost of removing the mines. Estimates of the costs to remove the mines have ranged from \$200 to \$1000 per mine. A nation, such as Cambodia with an estimated 7-9 million mines spread throughout the country would face staggering costs to remove the mines. Without some type of international assistance, Cambodia would have to devote every dollar produced by its economy to eliminate its landmine problem and it would take five years to collect the funds to do so.¹⁹

The economic cost to the nations emerging from conflict is an impediment to the process of rebuilding, and returning to normalcy. Often these nations, in order to just survive, will require help from the international community. This assistance may be in the form of loans and grants from the World Bank, all the way to peace operations under the

supervision of the United Nations. This will not only place a burden on the nation requiring the assistance but on the international community.

The use of landmines may hinder the efforts of the international community. Peacekeeping forces will have to remove mines over roads that are critical lines of communications. Cantonment areas will have to be swept for mines, and, if any are found, will have to be removed. Zones of separations, such as the one between the warring parties in Bosnia-Hertzegovina, will have to be free of mines, for the protection of the peacekeeping forces directed to patrol them.²⁰ The parties involved in the conflict should, as a condition of peace, remove the minefields within their area of the zone of separation, however, sometimes this will not be possible and the peace force will have to perform the task.

In addition to the peacekeeping forces deploying in country, the humanitarian efforts of the NGOs and PVOs will require a certain amount of security in order to be effective. If the roads and villages in the area of need are mined, then those mines will have to be removed before aid can flow into the area. The relief workers may look to other means to reach the area requiring assistance. They may use aircraft to deliver aid. The airfields may also be mined. In Angola, a World Food Programme relief plane landed on an airfield contaminated with mines. As the crew stepped from the plane, they realized they were in a minefield. The pilot was killed and the flight engineer was severely wounded.²¹

The mine threat will provide the peacekeeping forces a hurdle that must be overcome before stability can return to a nation emerging from conflict. The peace forces

are likely to find mines used in a illegitimate manner. Minefields will not resemble any doctrinal pattern, they won't be marked, and they will be used to target the civilian population. Peace forces will have difficulty finding the mines because there will be very few, if any, minefield records and will have very little metal in them for the detectors to find.

The ubiquitous presence of mines will affect every aspect of the country. Agriculture and utilities will be affected. Refugees will be hindered in their return home. As a result, the country will have problems supporting such a large number of unproductive citizens. The economic consequences will be staggering causing inflationary pressures on the local currencies and market.

The international community will step in and try to help where it can. Even their efforts will be hampered due to the presence of the mines. Relief services and supplies will be stymied in their delivery to needy areas, due to mined roads and airfields in the country. Peace forces will, for their own protection, conduct mine clearing operations along the roads and villages of the nation. If the peace forces have to maintain a zone of separation between warring factions then that will need to be cleared of mines also. If there are no warring factions to remove the mines then the peace forces must be prepared to remove the mines.

III. A DOCTRINAL OVERVIEW OF PEACE OPERATIONS

"We are only now beginning to discover just how vital mine clearance is to every facet of United Nations operations" Kofi Annan, United Nations Under Secretary-General for Peace-Keeping Operations²²

The doctrine for all peace operations the United States Army participates in is contained in FM 100-23 *Peace Operations* and Joint Publication 3-07.3 *Joint Tactics Techniques and Procedures for Peace Operations*. These doctrinal publications will guide the planners and operators in the conduct of peace operations. Peace operations may be categorized into three general classes of operations which are: support to diplomacy, peacekeeping, and peace enforcement.²³ Demining will be essential in all three types of operations if the force conducting the operation finds itself within a region inflicted by landmines.

Support to diplomacy generally consists of three broad areas, peacemaking, peace building and preventive diplomacy. Military support to diplomacy will be the actions taken by the military that assist the diplomatic world in preventing conflict or lead belligerent actors to the peaceful settlement of a conflict.²⁴ Humanitarian demining will play an important role in all forms of peaceful settlement. Security assistance and mobile training teams sent to assist a nation in dealing with its landmine problem will be an important ingredient in the promotion of a stable environment in a region infested with landmines. This is the thrust behind the Clinton administration's policy to train and assist other nations in removing their landmine contamination.²⁵

Peacekeeping, according to FM 100-23 *Peace Operations* is:

...military or paramilitary operations that are undertaken with the consent of all major belligerent parties. These operations are designed to monitor and facilitate implementation of an existing truce agreement and support diplomatic efforts to reach a long term political settlement. The multinational force and observers (MFO) operation in the Sinai provides a classic example of a force conducting a PK operation.²⁶

Peacekeeping operations will generally fall into two categories; those used to monitor and observe truces and cease fires, and supervision of truces. Individual military personnel will participate in monitoring and observation operations, often under the purview of the United Nations. Military units will often be used in the supervision of truces. It is United Nations policy to conduct humanitarian demining as part of ongoing peacekeeping operations.²⁷ As a result, those involved in peacekeeping operations, with the United Nations, may find themselves involved with humanitarian demining.

Units involved in the supervision of truces generally are multi-national in composition. Often, these forces will place themselves between two belligerent parties to ensure compliance with a peace agreement. That peace agreement may stipulate the clearance of mines by both belligerents. If the belligerent parties refuse to remove the mines, or are unable to, then the peacekeeping force may be forced to conduct demining. FM 100-23 also calls for assistance activities, to include humanitarian assistance.²⁸ This may also include humanitarian demining. If mines are an impediment for the region to return to a secure and stable environment, then their removal will be critical to the success of the peacekeeping operation.

Peace Enforcement is the final type of peace operation enumerated in United States Army doctrine. According to FM 100-23 peace enforcement; “is the application of military force or the threat of its use, pursuant to international authorization, to compel compliance with generally accepted resolutions or sanctions.”²⁹ Peace enforcement may range from combat action with clear missions and defined endstates, all the way to restoration and maintenance of order and stability, protection of humanitarian assistance, guarantee or denial of freedom of movement, enforcement of sanctions, operating protection zones, and the forcible separation of belligerent parties. These latter missions may not be so clear nor the endstates so well defined.³⁰

In every type of peace enforcement operation conducted in a mine infested region, it will be essential that the forces start removing mines to ensure the success of the mission. In combat operations, removal of mines will be critical for the guarantee of mobility and protection of friendly forces. Vital to the restoration of order and stability, in a region infested with landmines, are the actions taken, in the early stages of a peace enforcement operation, to remove the landmine threat. To ensure the safe flow of humanitarian assistance, and freedom of movement along the roads and paths of a region, landmines will need to be cleared. This was seen during the United Nations Protective Force (UNPROFOR) operations in support of humanitarian assistance in Bosnia during 1992. A United Nations convoy leaving Gorade could not leave due to a minefield that had been recently placed. The French peacekeepers had to clear the mines before the convoy could travel to Sarajevo.³¹

Peace operations are often conducted in a environment of uncertainty that may seem like total chaos. The factors or variables that create this environment and cause peace operations to be so dynamic are discussed in FM 100-23 *Peace Operations*. These variables are level of consent, level of force, and the degree of impartiality. Humanitarian assistance is not considered one of the factors, but is mentioned as a consideration that commanders must be aware of, to ensure the successful conduct of a peace operation.³²

These variables will change depending on the type of peace operation the force will conduct. For instance, in peacekeeping the level of consent is greater than what is required for peace enforcement, while the level of force required to conduct peacekeeping will be less. Mine clearance, or demining, will be affected by the same variables. If there is a high degree of impartiality required for the mission, the peacekeeping force will not conduct demining on behalf of one side versus the other. However, if there is an ongoing humanitarian operation the peacekeeping force may conduct demining on behalf of a third party NGO or PVO to ensure freedom of movement. The force commander must consider these variables when conducting the mission analysis, and must analyze them when choosing a course of action in a peace operation, such as planning a demining operation.

There are other factors that one must consider when planning for, and conducting a peace operation, in a mine contaminated region. These considerations, taken in the whole, may require the peace operations force to conduct demining to ensure the success of the peace operation. These factors include: the prevailing culture; the type of conflict and the efficacy of the cease fire; the number, discipline, and accountability of the

belligerent forces; effectiveness of the government; degree of law and order; and the willingness of the population to cooperate.³³ Some or all of these factors may be such that the commander may have no choice but to conduct a mine clearance, or demining program in the initial stages of a peace operation. The key is that the force commander and staff must identify these factors before the operation begins so that they can design a force package to clear landmines. This operation should take place early, rather than try to conduct an ad-hoc operation later in the peace operation, after the force has lost some credibility with the people, local government, and warring factions.

The principles of stability, and support operations, the new moniker for Operations Other than War (OOTW), apply to peace operations as well. These principles; objective, unity of effort, security, perseverance, and legitimacy will be affected by the environment of a nation contaminated with landmines and will govern the operations launched to remove them.³⁴

Objective, which is defined to; "Direct every military operation toward a clearly defined, decisive, and attainable objective." is arguably one of the most dependent and guiding principles regarding demining in a peace operation³⁵. Objective will guide the direction and purpose of the demining effort. The successful attainment of the objective in a peace operation, in a mine infested region, may depend upon the success or failure of the demining effort. If a demining effort is not undertaken, it may ultimately affect all other aspects of the peace operation adversely.

The principle of unity of effort defined to; "Seek unity of effort in every operation.," compliments the principle of objective³⁶. In peace operations, all

organizations will work together for a common purpose. This will include, military, diplomatic, non-governmental, or private volunteer. In demining, working towards a common purpose is critical, since much of the demining effort in the world today is among NGOs and PVOs.³⁷ These organizations provide valuable insight and expertise to demining operations. When coordinated at the right phase of the peace operation, they can ensure the long term success of a demining program. The key is that the peace force must understand the constraints and limitations when working with NGOs and PVOs and plan accordingly.³⁸

The principle of security will be important to a successful demining operation. Security are those actions taken by the peace force to “never permit hostile factions to acquire an unexpected advantage.”³⁹ In demining, security is critical, since a favorable security situation will be required before a mine clearance or demining operation can take place.⁴⁰ Removing the landmines, will be critical to the security situation of the peace operation to ensure that the region returns to stability and normalcy, as seen in the previous section.

Perseverance will be critical in the long term success of a demining program, associated with a peace operation. Perseverance means to; “Prepare for the measured, sustained application of military capability in support of strategic aims.”⁴¹ Perseverance will be required when conducting a demining program in a country, such as Cambodia, with millions of mines spread across the countryside.⁴² Likewise, for a long term solution to disputes and conflict in regions, afflicted with landmine contamination, demining must be undertaken as an essential task to ensure peace and stability.

Finally, for the military force to be successful in a peace operation it must have legitimacy with the people, the government and the warring factions. Legitimacy is defined to be "...the willing acceptance by the people of the right of the government to govern or a group or an agency to make and carry out decisions."⁴³ If the people have fear of landmines in their villages and homes, and the contamination is not removed in a timely fashion, the peace forces may lose credibility placing the overall effort at risk.

The overall success of a peace operation, in a region infested with landmines, will be interdependent upon the success of a land mine removal program. All facets, and all types of peace operations will be affected and affect demining operations. The timeliness of a demining operation may set the tone for the overall long term success for stability and peace in a region contaminated with mines. This is why the United Nations has now linked its ongoing peacekeeping operations with demining operations. Ultimately, the long term solution to mine contamination in a nation rests with the nation afflicted but it may require help from the international community initially to plant the seed of success. Are military forces involved in peace operations the right tool to plant this seed?

IV. LANDMINE REMOVAL AN ESSENTIAL TASK IN PEACE OPERATIONS?

"During Operation RESTORE HOPE in Somalia, the Center of Gravity was the opening of roads and the establishment of freedom of movement for the people."CALL⁴⁴

During the mission analysis step of the deliberate decision-making process, commanders and staffs determine tasks that need to be accomplished to ensure the overall success of an assigned mission.⁴⁵ The deliberate decision making process is the tool that

commanders and staffs use to analyze tactical problems and determine the solution to those problems.⁴⁶ In planning for a peace operation the doctrine for the deliberate decision-making applies. Commanders and staffs must conduct mission analysis to ensure the success of the overall peace operation. This will occur at the tactical level through the operational and strategic.⁴⁷ In mission analysis, the essential tasks, which are the tasks that are essential for the overall success of the mission, must be identified.⁴⁸

Essential tasks are defined as those tasks essential to the overall success of the mission. This is compared to routine tasks. Routine tasks are those that need to be accomplished but are a matter of the inherent business of the unit. These tasks are normally contained in Standing Operating Procedures (SOPs), battle drills, or in Tactics, Techniques, and Procedures (TTPs).⁴⁹ Routine tasks are not essential tasks.

Essential tasks may, or may not be enumerated in the mission given to a subordinate commander. It is up to that commander and his staff to determine what is essential out of the mission analysis process. When the higher commander's order directs some tasks to be accomplished, these are specified tasks. During the mission analysis the commander and staff will also deduce some tasks, not specified by the higher order, but nonetheless, must be accomplished. These are called implied tasks.⁵⁰ All the tasks, both specified and implied, are then compared to the higher commander's purpose, intent, and the constraints imposed on the unit. The tasks that are not routine and are critical to the success of a peace operation, will be determined to be essential tasks.⁵¹

In a peace operation the process used to determine essential tasks is the same as in a conventional operation. The difference between conventional and peace operations are

the considerations and the emphasis. In peace operations the essential tasks may fall to the combat support or combat service support operators to accomplish.⁵²

Is demining, or mine clearance, an essential task for a force conducting a peace operation in a region contaminated with mines? This question needs to be asked by the commander and staff during the mission analysis portion of the deliberate decision-making process. The answer will shape the peace force design, and the priorities of the force during the conduct of the peace operation.

The answer is not quite so easy to find. As seen in the previous sections, the presence of landmines in a region will weave a web of interdependent causes and effects. If there is a displaced person problem, it may be related to a fear of the people to return to their villages and homes, which may be related to the presence of mines in those villages and homes. It may only be due to the fact that those refugees cannot travel the roads back to their villages because they are mined. That is why detailed mission analysis of the region, its people, the economy, and the directed peace mission is so important.

If the end state of the peace operation is to return the region to stability and normalcy, then demining may be considered an essential task. If the economy in the region is agrarian and the farmers can't work the fields, due to the presence of mines, then demining may be essential. If the commander and staff determine that demining is an essential task they must plan for the resources required and the methods to be used to remove the mine threat.

V. LANDMINE REMOVAL DOCTRINE AND POLICY

"... as we move forward to prevent the minefields of the future, we must also strengthen the efforts to clear those that still exist today."
*President William J. Clinton*⁵³

The United States policy for landmine removal, either humanitarian demining or mine clearance, is derived from several sources. The first source is the National Command Authority the President and the Secretary of Defense. The second source is Congress which has the constitutional duty to regulate the land forces of the United States under Article I of the United States Constitution.⁵⁴ This policy is then translated into operational doctrine, for use by tactical units in the execution of their missions. There is policy and doctrine for the clearance of mines. There is policy for humanitarian demining. There is currently no doctrine for humanitarian demining.⁵⁵

The current policy on landmine removal during stability and support operations is described in a speech President Clinton gave on 16 May 1996 introducing the new U.S. Landmine policy. In this speech he directed the Department of Defense to expand its efforts to train and assist nations, plagued by mines, in their removal.⁵⁶ The implied direction of this policy offers U.S. assistance to other nations so they may solve their own landmine problem. This policy assumes there is a national government to work with, and a peaceful and stable environment.

The Congress exercises its authority to regulate the land forces through the enactment of the National Defense Authorization act for each fiscal year. In the National Defense Authorization Act for Fiscal Year 1996, the Congress limited landmine assistance

by members of the armed forces in support of humanitarian demining operations not associated with ongoing military operations. The policy is:

The Secretary of Defense shall ensure that no member of the Armed Forces, while providing assistance under this section that is described in subsection (e)(5), engages in the physical detection, lifting, or destroying of landmines (unless the member does so for the concurrent purpose of supporting a United States military operation); or provides such assistance as part of a military operation that does not involve the Armed Forces.⁵⁷

This means that members of the Armed Forces, providing assistance to a nation in other than a military operational context, shall not remove landmines. They may, however train the nationals of that nation to remove the landmines. But, peace operations, with the exception of support to diplomacy, are considered to be military operations.⁵⁸ Therefore, in peacekeeping and peace enforcement, members of the armed forces are not specifically prohibited from landmine removal.

There is proposed legislation in the House of Representatives, that addresses the problem of landmine removal around the world. The proposed *Landmine Removal Assistance Act* would direct the President to conduct a humanitarian program of landmine awareness, detection, and removal in conjunction with foreign governments, the United Nations, NGO's and PVOs. The bill would restrict the use of members of the Armed Forces in the same manner as the *National Defense Authorization Act*.⁵⁹

The United States Department of Defense has translated the policy, expressed by the National Command Authority, and the Congress, into doctrine for mine clearance, contained in FM 20-32 *Mine/Countermine Operations*.⁶⁰ There is no current doctrine for

humanitarian demining. However, the DOD has developed a strategic plan for humanitarian demining. The focus for the demining program of the U.S. Armed Forces lies primarily in the realm of support to diplomacy. It does not specifically address demining that may be conducted in conjunction with a peacekeeping or peace enforcement operation.⁶¹ In these types of operations mine clearance may be the more prevalent term used to describe landmine removal.

Mine clearance is defined in current doctrine as:

Clearing is the total elimination or neutralization of mines from an area. Breaching operations are usually conducted under enemy fires while clearing operations are not conducted under fire. Clearing operations can be conducted by engineers during war or after hostilities as part of nation assistance.⁶²

Clearing mines will be one of the major tasks undertaken by peace force engineers as discussed in FM 5-114 *Engineer Operations Short of War*.⁶³ The doctrine in both manuals does not differentiate between clearance operations, conducted for the purpose of force protection, or for those conducted on behalf of civilians. However, the Commandant of the U.S. Army Engineer School redefined clearing operations as: "...the removal of mines within the minimum area required for immediate military use."⁶⁴

Yet, clearance of mines for purposes other than immediate military use will be critical to the success of a peace operation. In Bosnia, the restoration of freedom of movement for commercial and civilian traffic along the main highways of the country was essential to the success of the mission. Mines were the greatest threat to the

accomplishment of this task.⁶⁵ The forces involved in a peace operation must work to remove the mine threat, both to friendly forces and to civilians, in a timely manner.

The United Nations and the NGO/PVO community have used the term demining interchangeably with the term mine clearance. The United States Military has not, as a result, there really is no accurate definition for humanitarian demining. For the purposes of this paper, demining may be defined as: actions taken to remove all landmines from a given nation or territory. The purpose of demining will be to return land to its original use prior to the conflict, and to eliminate civilian casualties caused by landmines⁶⁶.

A humanitarian demining program will generally consist of three parts: first, a mine awareness program; second, mine clearance activities; and finally, mine clearance training for local deminers, the three part program is essential to ensure that the peace force achieve success in removing the landmine threat. The primary focus of the program should be to transition operation of the demining to the local government, using local resources. This will ensure the program's long-term viability⁶⁷

Mine awareness programs serve the purpose of educating the local civilian population about the hazards associated with the presence of landmines in their country. The goal of the mine awareness program is to reduce the civilian casualties inherent in a country infested with landmines⁶⁸ A secondary benefit from the mine awareness program is that the local populace will be able to provide more information to mine clearance personnel on the location and types of minefields in the country.⁶⁹

In Bosnia-Herzegovina, the NATO IFOR units established an effective mine awareness program in the initial stages of JOINT ENDEAVOR. This was essential since

Bosnia-Herzegovina had, and continues to have, a large landmine problem. One of the initial steps taken by IFOR, was to send out civil affairs and psychological operations teams to conduct rudimentary mine awareness training in the schools and communities.⁷⁰ Later in the operations, with the aid of UNICEF and DC Comics, a Superman comic book was developed and distributed to the children of Bosnia-Herzegovina to warn them of the danger posed by landmines.⁷¹ While awareness is important in lessening the effects of the presence of mines, it still does not attack the root cause, for that a clearance program must begin in the initial stages of a peace operation and must be designed to continue on long after the peace forces leave the region.

The purpose of the mine clearance training program is to develop a local demining capability that can assume the demining tasks without outside technical assistance. This is the long term solution to the landmine problem in a region. The effort to remove landmines from a nation, afflicted with a severe landmine problem, may take decades⁷² The idea is like the old adage teach the man to fish rather than just giving him the fish. The success of the mine clearance training program is key to the transition from an initial demining program, associated with peacekeeping or peace enforcement, to a long term demining program, associated with support to diplomacy.

Mine clearance training has been conducted by the United States Special Operations Forces for several years, in Cambodia, and Afghanistan.⁷³ The United States Special Operations Forces have language and regional expertise, as well as the technical knowledge required to ensure that the mine awareness training program is effective. The primary methodology of their previous training programs has used a "train the trainer"

concept. In a "train the trainer" landmine clearance training program, the Special Operations Forces train local civilians, some with no previous experience as deminers, to be demining instructors. The Special Operations Forces are successful when a complete demining program, indigenous to the country, is in place, to include the proper administration of the program. This methodology will ensure the long term viability of the demining program.⁷⁴

Establishing a local mine clearance program will take time. Over the long term it is the preferred method to conduct landmine removal.⁷⁵ Yet this still does not deal with the problems that landmines pose in the initial stages of a peace operation, before the local program can build capacity. Therefore, it is essential that the peace forces be prepared to conduct minefield clearance, or demining, themselves. This is essential not only for purely military reasons; force protection, and freedom of movement for the peace forces, it is essential for humanitarian reasons.⁷⁶ United States military units acting as peace forces will need to have some type of doctrine to conduct demining operations.

Minefield clearance, or demining, as conducted by organizations involved in humanitarian demining, consists of the following four functions: location and identification of minefields; detection of mines within those minefields; disarming of the mines; and disposal of the mines⁷⁷ This dovetails with the United States Army doctrine for mine clearance, which calls for: reconnaissance of the minefield; detection of mines within the minefield; destruction of the mines; and proofing of the minefield after clearance.⁷⁸ Both the humanitarian demining procedure and the US doctrine for mine clearance will be

examined and perhaps a mixture of the two methods will form a proposed doctrine for demining by U.S. Forces involved in a peace operation.

Determining the location, and conducting reconnaissance of each minefield is critical in the early stages of a peace operation. This will allow the force to mark the minefields to preclude military and civilian casualties, and provide the force commander information to prioritize the initial clearing effort. This first task in demining may be very simple. If the combatants were disciplined in their use of landmines, there should be complete minefield records along with detailed maps. However, in peace as in war operations are never quite that simple. Most often, in peace operations, the belligerents will not have properly recorded or mapped minefield information. The peace forces will have to rely on an extensive human intelligence (HUMINT) effort to determine the location and size of the minefields in that region. This HUMINT should be collected by civil affairs, counter-intelligence, and other forces interacting with the local population and authorities. Other sources should include NGOs and PVOs working in the area.⁷⁹

United States Army doctrine does not specifically address the first element of demining. It may be assumed that this would be done for the peace force engineers as part of the intelligence process contained in Field Manual 34-130 *Intelligence Preparation of the Battlefield*.⁸⁰ In United States countermine doctrine, intelligence is key to the conduct of breaching operations, so one would assume that intelligence is key to clearing operations, given the risks involved.⁸¹ Yet, in the portion on mine clearance the manual author assumes that the force knows the location of all mines within the area of operations.⁸²

Knowledge of all minefield locations was not the experience of the IFOR engineers in Bosnia. For the thousands of minefields laid by the warring factions, records were mostly non-existent.⁸³ The IFOR engineers and other forces associated with IFOR had to find the minefields and determine their size and composition. This was done through a variety of HUMINT sources to include the belligerent forces, local civilians, the news media, and NGOs and PVOs.⁸⁴ The IFOR collected this minefield data and then further disseminated this information to subordinates through the use of an Ad-Hoc Mine Action Center. This was the central focal point for all mine related information.⁸⁵ Peace forces of the future should consider the use of a mine action center as essential, if they are operating in a region with an extensive landmine problem.

Detection of the mines within a minefield is the next step in a mine clearance, or demining operation. Once the peace force has determined the locations of the minefields then the next challenge is to detect every mine within each minefield. These two tasks may occur at the same time. That is, while one team may be conducting minefield survey and reconnaissance the other team may be conducting minefield detection in a previously identified minefield.⁸⁶

Ideally, minefield detection should occur with extensive minefield records and maps in hand. This may not always be possible. Even with extensive data on the location of mines within a minefield, shifting caused by frost action, or any moisture in the soil, may cause the mines to change their initial location. Therefore great care must be exercised by all personnel involved in the detection of mines within a minefield. Three tools should be used to determine the locations of individual mines; metallic mine

detection gear, non-metallic probes to find objects buried under the soil, and dogs to smell out the explosives. Each tool has its strengths and weaknesses, which is why they should all be used collectively, so they can compliment their strengths and limit their weaknesses.⁸⁷

United States doctrine has a similar approach to mine detection. The mines may be detected by hand, using a probe, or by detection device.⁸⁸ Dogs have not been mentioned in doctrine, however they have been used in Bosnia with great success.⁸⁹ U.S. doctrine calls for the marking of the mine in anticipation of destruction.⁹⁰

In neutralization and disposal of mines, previously detected mines are disarmed, collected and destroyed using explosives. The destruction, or disposal is completed using a batch method where many mines are destroyed together in a demolition pit. If a mine is too dangerous to be disarmed, it is destroyed in-situ with explosives.⁹¹ United States doctrine stipulates that all mines will be destroyed in-situ and the area that was cleared proofed by some means.⁹²

A proposed doctrine that blends the demining procedures, used by the demining community, and mine clearance procedures, described in Army doctrine, emerges. This proposed doctrine would be such that the peace force conducts an extensive survey, or collection effort on the location and size of the minefields within the area of operations. The force engineers armed with this information would go out and start detection and marking of individual mines within each identified minefield. Finally, each mine would be destroyed in-situ using explosives, and the area proofed by some means to ensure complete removal.

Conducting humanitarian demining during peace operations will be an essential task that must be completed to ensure the success of the peace operation. The overall policy from the NCA, and the Congress does not specifically prohibit U.S. Forces from conducting demining during peace operations. An effective demining program will encompass mine awareness training, mine clearance or demining in the short term by peace forces, and in the long term by local deminers trained in mine clearance. A proposed mine clearance, or demining doctrine in peace operations, would consist of locating minefields in the region; detection of the mines within each minefield; destruction of the mines by explosives in-situ; and followed by proofing of the area cleared. These actions, taken by United States Forces, involved in a peace operation, in a region with a large landmine problem, will be essential to the overall success of the mission.

VI. THE ROLE OF NGOs AND PVOs

"If there is not a mine clearance strategy developed over the winter to be ready by April '97... all activities related to the return of refugees to their homes as well as major reconstruction programs... will come to a grinding halt." George Focsaneanu Program Manager of the UN Mine action Center in Sarajevo.⁹³

Non-Governmental Organizations (NGOs) and Private Volunteer Organizations (PVOs) play a large role in demining. They are important part in solving the landmine crisis in a region in the long-term. These organizations conduct mine awareness training programs, demining training programs, and medical rehabilitation of landmine victims.⁹⁴ However, the use of NGOs and PVOs may be limited during the initial stages of a peace

operation due to their concerns for security, and the peace force concerns for impartiality. Delegating an entire demining program to an NGO or PVO, that do not share the same goals and objectives of the peace force may not promote the overall success of the initial peace operation.

The terms Non-Governmental Organization and Private Volunteer Organization generally describes organizations that are professional associations, foundations, religious groups, multi-national businesses, or just groups with a common interest in the humanitarian activity they are pursuing. They may be staffed with third country nationals or with personnel indigenous to the nation they are operating in.⁹⁵ If the security situation in a region is unfavorable, most NGOs and PVOs will not operate until the region stabilizes. Sometimes, the NGOs and PVOs will operate exclusively in parts of the country that they know are secure and their safety can be guaranteed.

The NGOs and PVOs that conduct demining will have the same security concerns as all NGOs and PVOs. If the security situation is unfavorable they will not want to operate in the country until such time as their safety can be assured. It will be these times, when the security situation is unfavorable, in the initial stages of a peace operation, that vital infrastructure, such as, roads, rail, and airfields must be cleared of landmines. The peace force may not have the luxury of waiting until an NGO or PVO arrives in a region to dismantle the minefield.

Even if the PVO or NGO is available, and the security situation is favorable, the peace force may still not want to use their services to conduct demining. This is due to the peace force wanting to preserve the perception of impartiality among the local

populace. If an NGO or PVO was perceived to favor one side over another, the peace force may be tainted if that NGO or PVO were to be used for demining operations. In Bosnia, TASK FORCE EAGLE did not offer assistance to, nor ask assistance from NGOs or PVOs in order to maintain the perception of neutrality.⁹⁶

There may be another reason that the peace force does not choose to use the NGO or PVO to conduct demining in the initial stages of a peace operation. The NGOs and PVOs have a different agenda, and a different set of priorities than the peace force.⁹⁷ The mission of the peace force may be to move refugees from one part of the region to the other. To do this, a route may need to be cleared of mines. The NGOs and PVOs conducting demining within the country may view the demining of agricultural land as more important to their mission. As a result, they may not want to clear the mines off the roads to allow for the transit of the refugees. The peace force will have to clear the mines off those routes if their mission is to be accomplished.

If the services of the NGOs and PVOs are not appropriate for use by the peace forces in the initial stages of the operation, when should they be used? The niche that the NGO's and PVO's may fill fall into the areas of long term solutions to mine infestation in a region. The NGOs and PVOs bring vast experience in dealing with mines and training local nationals to demine. In addition, the NGOs and PVOs are skilled at establishing, and administering demining programs, and then training the local nationals to take control of that administration.⁹⁸ Once the peace force has come and gone, the NGOs and PVOs will be training and working along with the local nationals to remove the mine threat from their country.

The peace force should not rely on the NGO or PVO to conduct demining in the early stages of a peace operation, even though they bring vast experience to the table. The NGOs and PVOs conducting demining may not be in the region due to security concerns. If the NGO and PVO is in the region, the peace force may not want to use them to conduct demining on behalf of the peace force, in order to insure the perception of impartiality among the local population. Even if this was not a concern the peace force may not be able to use an NGO or PVO to conduct demining because they may not share the same mission priorities as the peace force. The services of the NGO or PVO in demining should be reserved for the time when the peace force needs to transition their initial demining program into a long term effort.

VII. SOMALIA: A CASE STUDY IN DEMINING

*“Uncleared landmines present a severe hazard not only to the military combatants, but also to farmers, pastoralists, and urban dwellers.”
U.S. State Department publication⁹⁹*

The United States forces participated in peace operations, conducted under the mandate of the United Nations in Somalia from December 1992 through March 1994. A senior military leader observed recently that the types of operations United States forces are likely to face in the future are not “son of DESERT STORM, but rather stepson of Somalia and Chechnia.”¹⁰⁰ There is value in evaluating the operations of the United States forces, involved in mine clearance in Somalia during Operation RESTORE HOPE and UNISOM, since the Army is likely to face these types of operations in the future. There is

value in evaluating operations in Somalia to determine if demining was an essential task to ensure the success of the peace operation, and if so, was this task planned?

Operations in Somalia were featured in a third world nation, with an economy dependent on agriculture. The peace operation took place after a long period of civil unrest and instability. As a result of this instability, there were a large amount of displaced persons, which triggered the operation to stop the suffering. There were no organized armies, only warlords and undisciplined mobs fighting each other.¹⁰¹ These forces used landmines, and there were approximately 2 million mines scattered throughout the country, with the bulk primarily in the north.¹⁰² Mines were placed on the routes affecting the delivery of humanitarian aid. This was one of the major reasons for the deployment of UN sanctioned personnel into the region.¹⁰³

Somalia had been involved in conflict since the overthrow of the former President Siad Barre in early 1991. Prior to that, Somalia had been involved in a war with Ethiopia, along its northwest frontier in the early 1980s. The legacy of this long-term series of wars was a large amount of landmines.¹⁰⁴ These landmines were placed in standard pattern minefields in the north along the border with Ethiopia, however, elsewhere the landmine was used as a terrain denial weapon, or worse, a terror weapon, thus were scattered haphazardly. Mines were placed in farms without accurate records. Mines were even placed in homes to terrorize the local population. Mines were placed in wells and grazing lands by one faction as a reprisal against shepherds who were thought to favor an opposing faction.¹⁰⁵

Against this backdrop, the United Nations and Non-Governmental Organizations, such as the ICRC, were trying to provide humanitarian aid to millions of Somalis who had fled their homes and villages and were starving in refugee camps. The mines laid in the previous years of conflict were threatening the lives of the relief workers and those Somalis they were trying to help.¹⁰⁶ The United Nations initial solution was to provide money to NGOs and PVOs to conduct demining within Somalia.¹⁰⁷

As the security situation deteriorated in 1992 the United Nations found that in order for the NGOs and PVOs to get aid to the needy, "Corridors" or "Zones of Peace" had to be provided. Central to the success of these "corridors" or "zones" was an effective way to deal with mines placed in the area.¹⁰⁸ During the remainder of 1992 the security situation continued to deteriorate. This led to the deployment of United States Forces to deal with the security situation so that humanitarian aid could flow into Somalia.¹⁰⁹ One of the major tasks was to secure land routes to ensure the delivery of humanitarian aid.¹¹⁰ One of the stated tasks was:

It is also important that the Unified Task Force and UNISOM should begin the task of clearing mines and other munitions, especially where these prevent the use of roads, bridges and other facilities required for the efficient distribution of humanitarian supplies. This is a particular problem in the north.¹¹¹

Therefore it was clearly the intent of the United Nations to consider the removal of landmines an essential task to ensure the success of UNISOM to restore the flow of humanitarian aid to Somalia. Did the peace force, in this case the United States forces

participating in OPERATION RESTORE HOPE, also consider the removal of mines an essential task to ensure the success of the mission?

While not specifically stated in the mission planning section of the lessons learned report on OPERATION RESTORE HOPE, mines were a major consideration during force planning. Engineers arrived early in the operation in anticipation of the need to clear roads to ensure the flow of humanitarian aid out of Mogadishu. The Joint Force Commander used all his available joint engineer assets to ensure that the mines located within the region that could hinder the deployment of forces would be dealt with.¹¹²

The engineer forces involved with mine clearing operations during OPERATION RESTORE HOPE sustained no casualties while clearing mines. This was due in large part to accurate prediction of the mine threat using HUMINT sources and the use of local translators. Landmines were detected using U.S. Military landmine detectors, currently in the inventory, and by probing using hand held probes. Mines were mostly blown in place, except in populated areas, where the mines were defused, and then destroyed at a safe location. In addition to route clearance, there was some area clearance of mines from airstrips and relief areas. No agricultural land, homes, wells or other similar infrastructure were cleared of mines. That task was thought to be best left to contractors (meaning NGOs and PVOs) or local deminers.¹¹³

The operations by United States forces in Somalia during RESTORE HOPE demonstrated the necessity for mine removal as an essential task in a peace operation. The United Nations mandate ensured that United States forces conducting the operation consider the requirement for demining. Somalia is an example of the types of operations

that United States forces may find themselves operating in the future. There may be no local indigenous force that can be directed to clear the mines that they had placed. If there is a force it may not be willing, as is the case in Somalia, to remove those mines.

There were NGOs conducting demining in country who had been funded by the United Nations and by the United States, but were unable to remove the mines that were an impediment to the success of the mission. These NGOs may have had a different agenda, or may have been concerned for their own security. Therefore, the peace force should not rely on NGOs in the initial stages of a peace operation to conduct demining.

The aftermath of United States involvement in Somalia points to the fact that mines are still present in Somalia. There never was an effective transition from an initial demining program to a long-term demining campaign.¹¹⁴ The short term success of enabling the delivery of humanitarian aid to the outlying country was offset by the failure to return the agricultural lands to full production. Perhaps the peace force was concerned about "mission creep" and didn't want to expand its mine removal activity, whatever the reason, the legacy of mines for the Somali people will continue for many years to come.

VIII. CONCLUSION

"Mines pose a strategic, operational and tactical dilemma" CAIL.¹¹⁵

The United States military will increasingly find itself involved in peace operations in third world nation in which the use of the mine in past conflict has been prevalent. The landmine has been the weapon of choice in third world conflict for the past thirty years. The use of mines has been not only for terrain denial, but for the indiscriminate terrorism

of the local civilian population. The United States military, when planning for a peace operation, will have to consider, as part of mission analysis, whether the removal of landmines from key points within the region, is essential to the overall success of the peace operation.

The presence of landmines within a nation, such as Somalia, will effect every aspect of the nation's life. If the nation has an agricultural based economy, the presence of landmines in fields and grazing lands, will affect its ability to generate revenue after conflict and will affect its ability to provide capital to conduct the reconstruction of its infrastructure. If the region has a large amount of displaced persons, the return of those people to their homes and villages may be impeded by the mere presence of landmines.

In short, the nation will have a difficult road to negotiate in its return to stability and peace after conflict. The landmine will be a hindrance. The nation may never emerge from conflict, and as a result, will be a drain on the resources of the international community for years to come.

Peace forces given the mission to conduct a peace operation, within a region contaminated with mines, will be forced to deal with the mines. If the stated objective is to return the nation to peace and stability, the landmine will be an obstacle towards the achievement of that goal. In order to ensure the safety of its own personnel the peace force will have to remove the mine threat early. In order to return displace persons to their homes and villages the peace force will have to remove the mines from the roads leading to those villages. In order to ensure the smooth flow of humanitarian aid to

support those displaced persons the peace force will have to remove the landmines from the routes leading to the refugee camps.

Commanders and staffs planning a peace operation will have to conduct an extensive mission analysis before executing the peace operation. In that mission analysis essential tasks are identified. Essential tasks are those tasks that are vital to the success of the mission. If landmines are identified as a threat in the mission analysis, then the peace force must design its force composition to ensure that the force can deal with the threat. If removal of landmines is considered to be an essential task, as in Somalia and Bosnia, then the peace force must place its priority on the removal of that landmine threat.

The peace force in the future may not have the luxury that peace forces in Bosnia have today, in that, they can direct the belligerent forces to conduct demining of the minefields that they laid. More often, the peace force will face, what United States forces involved in OPERATION RESTORE HOPE faced, many armed factions that cannot be made to, or are unable to, remove their landmines within the region. Then the peace force will be required to conduct the operation.

Yet doctrine is not developed to deal with demining. The United States forces in Bosnia and Somalia improvised and adapted demining doctrine from current mine clearance doctrine. The national policy from the Congress and the President do not prohibit United States forces from conducting demining, in fact, demining is slowly emerging as a desirable policy objective. Joint or service component doctrine should be established that matches the experience of deminers around the world. Once that doctrine

is in place, then technical solutions for minefield mapping, survey, detection, and destruction can be developed

The peace force should not expect the combatants to conduct their demining for them, but should also not expect the NGOs and PVOs to conduct demining in the initial stages of a peace operation. As seen in Somalia, NGOs and PVOs, while they bring vast demining experience, often do not share the same goals and objective of the peace force. As seen in Bosnia, the peace force may not want the NGOs and PVOs to conduct their demining, because the peace force may want to maintain the perception of impartiality among the combatants.

If United States forces are conducting a peace operation, in a region contaminated with mines, it will be an essential task for their force engineers to conduct demining if the peace operation is to be successful at returning the region to peace and stability. United States Forces will be called on increasingly to conduct peace operations in the future, often in lands contaminated with mines. Commanders and staffs need to consider the necessity of demining to ensure the overall success of the mission.

ENDNOTES

- ¹ United States Army, Center for Army Lessons Learned, *Drawing a Line in the Mud: Establishing and Controlling a Zone of Separation*, (Fort Leavenworth Kansas: Center for Army Lessons Learned, May 1996), 2.
- ² Department of State, *Hidden Killers: The Global Landmine Crisis*, (Washington, D.C.: Department of State Publications, 1994), 2.
- ³ *National Defense Authorization Act For Fiscal Year 1996, Statutes at Large*, 110, sec 1313, 474 (1996).
- ⁴ Susan Ruel, *United Nations Focus. The Scourge of Land Mines. UN Tackles Hidden Peacetime Killers*, (New York: United Nations Department of Public Information, 1993), 2.
- ⁵ Richard H. Johnson, *Why Mines? A Military Perspective*, ed. Kevin M. Cahill, *Clearing the Fields: Solutions to the Global Land Mine Crisis* (New York: Human Rights Watch, 1995), 25.
- ⁶ *Ibid.*, 28.
- ⁷ *Ibid.*, 34.
- ⁸ U.S. State Department, *Hidden Killers*, 7.
- ⁹ *Ibid.*, 7.
- ¹⁰ Rae McGrath, "The reality of the present use of mines by military forces," in *Symposium on Anti-Personnel Mines Report Montreaux, Switzerland, 21-23 April, 1993*, by the International Committee of the Red Cross (Geneva: International Committee of the Red Cross), 9-10.
- ¹¹ Johnson, *Why Mines*, 35.
- ¹² U.S. State Department, *Hidden Killers*, 1.
- ¹³ *Ibid.*, 9.
- ¹⁴ Boutros Boutros-Ghali, "The Land Mine Crisis: A Humanitarian Disaster," *Foreign Affairs*, 73 (September/October 1994): 8-13.

- ¹⁵ U.S. State Department, *Hidden Killers*, 9.
- ¹⁶ *Ibid.*, 10.
- ¹⁷ *Ibid.*, 13.
- ¹⁸ Alain Garachon, "ICRC Rehabilitation Programmes on Behalf of War Disabled," in *Symposium on Anti-Personnel Mines Report, Montreaux, Switzerland, 21-23 April 1993*, by the International Committee of The Red Cross (Geneva: International Committee of the Red Cross, 1993), 81.
- ¹⁹ U.S. State Department, *Hidden Killers*, 14.
- ²⁰ Center For Army Lessons Learned, *Drawing a Line in the Mud*, iv.
- ²¹ Ruel, *The Scourge Of Land Mines*, 1.
- ²² Ruel, *The Scourge of Land Mines*, 4.
- ²³ United States Army, FM 100-23, *Peace Operations*, (Washington D.C.: H.Q. Department of the Army, 1994), 2.
- ²⁴ *Ibid.*, 2.
- ²⁵ U.S. President, *Public Papers of the Presidents of the United States*, (Washington, D.C.: Office of the *Federal Register*, National Archives and Records Service, 1996), William J. Clinton, 1996, 869-70.
- ²⁶ FM 100-23, 4.
- ²⁷ Boutros Boutros-Ghali, 11.
- ²⁸ FM 100-23, 6.
- ²⁹ FM 100-23, 6.
- ³⁰ *Ibid.*, 7.
- ³¹ United States Army, Center for Army Lessons Learned, *CALL Newsletter 93-8: Operations other than War Volume IV. Peace Operations*, (Fort Leavenworth, Kansas: Center for Army Lessons Learned, 1993) V-7.

- ³² FM 100-23, 6.
- ³³ *Ibid.*, 14.
- ³⁴ *Ibid.*, 15.
- ³⁵ *Ibid.*, 15.
- ³⁶ *Ibid.*, 16.
- ³⁷ U.S. State Department, *Hidden Killers*, 43.
- ³⁸ FM 100-23, 16.
- ³⁹ *Ibid.*, 16.
- ⁴⁰ United States Army, FM 20-32, *Mine/Countermine Operations*, (Washington, D.C.: H.Q. Department of the Army, 1992), 8-1.
- ⁴¹ FM 100-23, 17.
- ⁴² U.S. State Department, *Hidden Killers*, 18.
- ⁴³ FM 100-23, 18.
- ⁴⁴ Center for Army Lessons Learned, *Peace Operations*, IV-3.
- ⁴⁵ United States Army, FM 101-5, *Staff Organization and Operations*, (Washington, D.C.: HQ Department of the Army, 1984), 5-8.
- ⁴⁶ *Ibid.*, 5-4.
- ⁴⁷ FM 100-23, 31.
- ⁴⁸ FM 101-5, 5-8.
- ⁴⁹ *Ibid.*, 5-8.
- ⁵⁰ *Ibid.*, 5-8.
- ⁵¹ *Ibid.*, 5-8.
- ⁵² FM 100-23, 31.

- ⁵³ U.S. President, 870.
- ⁵⁴ U.S. Constitution, art. 1, sec. 6.
- ⁵⁵ This is supported from a survey of the current engineer doctrine in FM 20-32 *Mine/Countermine Operations*, and FM 5-114 *Engineer Operations Short of War*.
- ⁵⁶ U.S. President, 870.
- ⁵⁷ *National Defense Authorization Act for Fiscal Year 1996*, sec 1313.
- ⁵⁸ FM 100-23, 111.
- ⁵⁹ Congress, House, *Landmine Removal Assistance Act*, 104th Cong., 2nd sess., H.R. 3725; available from <http://thomas.loc.gov/cgi-bin/query/z?c104:H.R.3725>; Internet; accessed 11 September 1996.
- ⁶⁰ FM 20-32, 8-5.
- ⁶¹ United States Department of Defense, *Humanitarian Demining Program Strategic Plan*, (Washington D.C.: U.S. Department of Defense, 30 September 1994). I.
- ⁶² FM 20-32, 8-5.
- ⁶³ United States Army, FM 5-114, *Engineer Operations Short of War*, (Washington, D.C.: H.Q. Department of the Army, 1992.), 6-7.
- ⁶⁴ Clair F. Gill, "Clear the Way," *Engineer*, 26 (March 1996): 1.
- ⁶⁵ United States Army, Center for Army Lessons Learned, *Operation JOINT ENDEAVOR Bosnia-Herzegovina TASK FORCE EAGLE Initial Operations, Initial Impressions Report*, (Fort Leavenworth, Kansas: Center for Army Lessons Learned, May 1996), 132.
- ⁶⁶ U.S. State Department, *Hidden Killers*, 32.
- ⁶⁷ United Nations General Assembly, *Assistance in Mine Clearance Report of the Secretary-General*, (New York: UN General Assembly, 1994), A/49/357, 14.
- ⁶⁸ U.S. State Department, *Hidden killers*, 35

- ⁶⁹ Paul Jefferson, "An Overview of Demining, Including Mine Detection Equipment," in *Symposium on Anti-Personnel Mines Report Montreaux, Switzerland, 21-23 April 1993*, by the International Committee of the Red Cross (Geneva: International Committee of the Red Cross), 129.
- ⁷⁰ United States Army, Center for Army Lessons Learned, *Operation JOINT ENDEAVOR Bosnia-Herzegovina TASK FORCE EAGLE Continuing Operations Initial Impressions Report*, (Fort Leavenworth, Kansas: Center for Army Lessons Learned, September 1996), 79-80.
- ⁷¹ Associated Press, "Bosnia minefields still hiding dangers after year of peace," *Baltimore Sun*, 6 November 1996, 31.
- ⁷² U.S. State Department, *Hidden Killers*, 33.
- ⁷³ *Ibid.*, 32.
- ⁷⁴ *Ibid.*, 32.
- ⁷⁵ United Nations, *Assistance in Mine Clearance*, 14.
- ⁷⁶ *Ibid.*, 14.
- ⁷⁷ Patrick M. Blagden, "Summary of United Nations Demining," in *Symposium on Anti-Personnel Mines Report Montreaux, Switzerland, 21-23 April 1993*, by the International Committee of the Red Cross, (Geneva: International Committee of the Red Cross), 119.
- ⁷⁸ FM 20-32, 8-6.
- ⁷⁹ Blagden, "Summary of United Nations Demining," 119.
- ⁸⁰ United States Army, FM 34-130, *Intelligence Preparation of the Battlefield*, (Washington, D.C.: H.Q. Department of the Army, 1994), 6-6-6-8.
- ⁸¹ FM 20-32, 8-2.
- ⁸² *Ibid.*, 8-6.
- ⁸³ Center for Army Lessons Learned, *TASK FORCE EAGLE Continuing Operations*, C-7.
- ⁸⁴ Center for Army Lessons Learned, *TASK FORCE EAGLE Initial Operations*, 57-74.

- ⁸⁵ Center for Army Lessons Learned, *TASK FORCE EAGLE Continuing Operations*, C-7.
- ⁸⁶ Blagden, "Summary of United Nations Demining," 120.
- ⁸⁷ *Ibid.*, 120.
- ⁸⁸ FM 20-32, 8-6.
- ⁸⁹ Center for Army Lessons Learned, *TASK FORCE EAGLE Continuing Operations*, C-7.
- ⁹⁰ FM 20-32, 8-6.
- ⁹¹ Blagden, "Summary of United Nations Demining," 120.
- ⁹² FM 20-32, 8-6.
- ⁹³ Associated Press, "Bosnia Minefields," 31
- ⁹⁴ U.S. State Department, *Hidden Killers*, 42.
- ⁹⁵ FM 100-23, 15.
- ⁹⁶ Center for Army Lessons Learned, *TASK FORCE EAGLE Initial Operations*, 104.
- ⁹⁷ FM 100-23, 27.
- ⁹⁸ U.S. State Department, *Hidden Killers*, 43.
- ⁹⁹ U.S. State Department, *Hidden Killers*, 17.
- ¹⁰⁰ Non-Attributable to senior military leader addressing the School of Advanced Military Studies, Academic Year 1996-1997.
- ¹⁰¹ United States Army, Intelligence and Threat Analysis Center, *RESTORE HOPE Soldier Handbook*, (Fort Belvoir Virginia: Intelligence and Threat Analysis Center, December 1992), 64-68.
- ¹⁰² U.S. State Department, *Hidden Killers*, 11.
- ¹⁰³ United States Army, *RESTORE HOPE Soldier Handbook*, 68.

¹⁰⁴ The Arms Project, A Division of Human Rights Watch and Physicians for Human Rights, *Landmines: A Deadly Legacy*, (New York: Human Rights Watch, 1993), 223.

¹⁰⁵ *Ibid.*, 23.

¹⁰⁶ United Nations Security Council, *The Situation in Somalia: Report of the Secretary General Addendum, Consolidated inter-agency 90-day Plan of Action for Emergency Humanitarian Assistance to Somalia*, (New York: United Nations Security Council, 21 April 1992), S/23829/Add1, 7.

¹⁰⁷ *Ibid.*, 8.

¹⁰⁸ *Ibid.*, 16.

¹⁰⁹ United Nations Security Council, *Letter Dated 17 December 1992 from the Permanent Representative of the United States of America to the United Nations addressed to the President of the Security Council*, (New York: United Nations Security Council, 17 December 1992), S/24976 2-3.

¹¹⁰ *Ibid.*, 2.

¹¹¹ United Nations Security Council, *The Situation in Somalia Report of the Secretary General submitted in pursuance of paragraphs 18 and 19 of Security Council resolution 794 (1992)*, (New York: United Nations Security Council, 19 December 1992), S/24992 9.

¹¹² United States Army, Center For Army Lessons Learned, *OPERATION RESTORE HOPE Lessons Learned Report*, (Fort Leavenworth Kansas: Center For Army Lessons Learned, 15 November 1993), VII7-8.

¹¹³ *Ibid.* VII13-16.

¹¹⁴ The Arms Project, *Landmines: A deadly legacy*, 231.

¹¹⁵ Center for Army Lessons Learned, *TASK FORCE EAGLE Initial Operations*, 134.

BIBLIOGRAPHY

BOOKS

- The Arms Project, A Division of Human Rights Watch, and Physicians for Human Rights. *Landmines: A Deadly Legacy*. New York: Human Rights Watch, 1993.
- Cahill, Kevin M, ed. *Clearing The Fields: Solutions to the Global Land Mine Crisis*. New York: Council on Foreign Relations and Basic Books, 1995.
- Davies, Paul, and Nic Dunlop. *War of the Mines: Cambodia, Landmines and the Impoverishment of a Nation*. London: Pluto Press, 1994.
- Heininger, Janet E.. *Peacekeeping in Transition: The United Nations in Cambodia*. New York: The Twentieth Century Fund Press, 1994.
- Human Rights Watch Arms Project and Human Rights Watch Africa. *Landmines in Mozambique*. New York: Human Rights Watch, 1994.
- The International Committee of the Red Cross. *Symposium on Anti-Personnel Mines Report Montreaux, Switzerland, 221-23 April, 1993*. Geneva: International Committee of the Red Cross, 1993.
- U.S. Department of State. *Hidden Killers: The Global Landmine Crisis*. Washington, D.C.: Department of State Publications, 1994.

MAGAZINES, PERIODICALS, AND NEWSPAPER ARTICLES

- Barry, John, and Tom Masland. "Buried Terror." *Newsweek* (8 April 1996): 24-25.
- Battersby, John. "Gingerly Steps Toward Demining the Globe." *The Christian Science Monitor*. (5 October 1994): 6-7.
- "Bosnia minefields still hiding dangers after year of peace." *Associated Press in Baltimore Sun* (6 November 1996): 31.
- Boutros-Ghali, Boutros. "The Land Mine Crisis: A Humanitarian Disaster." *Foreign Affairs*. 73 (September/October 1994): 8-13.
- Carruthers, A.R., and J.E. McFee. "Landmine Detection: An Old Problem Requiring New Solutions." *Canadian Defense Quarterly* (June 1996): 16-18.
- "Clearing a Path to Peace." *Jane's Defense Weekly* 17 (16 May 1992): 856-858.

- Fabry, Laurence. "Learning to Live with Mines." *Refugees*. 96 (November 1994): 16-18.
- Gander, Terry, Mark Hewish, and Leland Ness. "Disposing of the Threat." *International Defense Review* 28 (October 1995): 47-52.
- Greczyn, Mary. "Warring Sides in Bosnia Still Laying Mines Amid Peace Talks." *Defense Week*. (20 November 1995): 1.
- Hewish, Mark, and Leland Ness. "Mine Detection Technologies." *International Defense Review* 28 (October 1995): 40-45.
- Jean, Barbara. "Clearing the Perilous Road to Peace." *IDR Extra* 1 (February 1996): 1-7.
- King, Colin. "Land Mines in Cambodia-Part 1." *Jane's Intelligence Review* 7 (June 1995): 273-276.
- King, Colin. "Land Mines in Cambodia-Part 2." *Janes Intelligence Review* 7 (July 1995): 311-314.
- "Land Mines: One of the Most Serious Impediment to the Resumption of Normal Life." *DHA News*. Special Edition 93 (January/February 1994): 20-21.
- "Land-Mine Planting Outpaces Clearing." *St. Louis Post Dispatch*. (30 October 1994).
- Meldrum, Andrew. "On Deadly Ground." *Africa Report*. (July-August 1994): 55-59.
- Mulliner, Noel. "Cambodia: UK's Substantial Contribution." *Army Quarterly & Defence Journal* 125 (January 1995): 20-29.
- O'Malley, T. J. "Seek and Destroy-Clearing Mined Land." *Armada International* 1 (February-March 1993): 6-15.
- "On Deadly Duty." *Maclean's* 107 (1 July 1994): 52-53.
- Pengelley, Rupert. "MEDDS: Detecting the "Undetectable" Mine." *International Defense Review* 26 (February 1993):131-132.
- Pengelley, Rupert. "South Africa Hones Land-Mine Sweeping and Disposal Techniques." *International Defense Review* 26 (February 1993):134-135.
- Robinson, John. "Army Sets up Special Mine Tracking Center." *Defense Daily*. (14 February 1996): 224.

Robinson, John. "Pentagon to Dispatch Mine Database to Bosnia." *Defense Daily*. (14 February 1996): 226.

Roos, John G. "The Unending Menace: Military Countermine Efforts Are No Solution." *Armed Forces Journal International* 131 (July 1994):15-16.

Sage, J. W. "Antipersonnel Mines-Military Utility, and Humanitarian Considerations." *Royal Engineers Journal*, 42-44.

"Special Report-The Mine Conundrum." *Janes Intelligence Review* 00 (1 December 1995).

Starr, Barbara. "Defusing the World Landmine Threat." *Janes Defense Weekly* 25 (14 February 1996): 19-21.

"Sweep Up After the Storm." *Jane's Defense Weekly* 17 (9 May 1992): 821-822.

"USA Takes First Step in Banning Anti-Personnel Mines." *Janes Defense Weekly* 25 (22 May 1996): 3.

Vernier-Palliez, Claudine. "Avec ces Héros Français Qui Déminent le Cambodge." *Paris Match*. 2417 (21 September 1995). 3-6.

Webster, Donovan. "One leg, One Life at a Time." *The New York Times Magazine*. (23 January 1994): 27-58.

MILITARY MANUALS AND GOVERNMENT DOCUMENTS

Field Manual 5-114, *Engineer Operations Short of War*. Washington D.C.: HQ Department of the Army, 1992.

Field Manual 7-98, *Operations in a Low Intensity Conflict*. Washington D.C.: HQ Department of the Army, 1992.

Field Manual 20-32, *Mine/Countermine Operations*. Washington D.C.: HQ Department of the Army, 1992.

Field Manual 34-130, *Intelligence Preparation of the Battlefield*. Washington D.C.: HQ Department of the Army, 1994.

Field Manual 100-20, *Military Operations in Low Intensity Conflict*. Washington D.C.: HQ Department of the Army, 1990.

- Field Manual 100-23, *Peace Operations*. Washington D.C.: HQ Department of the Army, 1994.
- Field Manual 101-5, *Staff Organization and Operations*. Washington D.C.: HQ Department of the Army, 1984.
- J.T.F EAGLE, "Mine Awareness Tactics, Techniques and Procedures Handbook." Undated.
- Levert, C.N.. "Canada's Mine Clearing Experience in Low and Mid-Intensity Operations." Paper presented at Panel IX Partnership for Peace Session, 14 December 1995.
- U.S. Army, Center for Army Lessons Learned. *Drawing a line in the Mud: Establishing and Controlling a Zone of Separation*. Fort Leavenworth, Kansas: Center for Army Lessons Learned, May 1996.
- U.S. Army, Center for Army Lessons Learned. *CALL Newsletter 93-8: Operations Other Than War Volume IV. Peace Operations*. Fort Leavenworth, Kansas: Center for Army Lessons Learned, 1993.
- U.S. Army, Center for Army Lessons Learned. *Operation JOINT ENDEAVOR Bosnia-Herzegovina TASK FORCE EAGLE Initial Operations, Initial Impressions Report*. Fort Leavenworth, Kansas: Center for Army Lessons Learned, May 1996.
- U.S. Army, Center for Army Lessons Learned. *Operation JOINT ENDEAVOR Bosnia-Herzegovina TASK FORCE EAGLE Continuing Operations, Initial Impressions Report*. Fort Leavenworth, Kansas: Center for Army Lessons Learned, September 1996.
- U.S. Army, Center for Army Lessons Learned. *OPERATION RESTORE HOPE Lessons Learned Report*. Fort Leavenworth, Kansas: Center for Army Lessons Learned, November 1993.
- U.S. Army, Intelligence and Threat Analysis Center. *RESTORE HOPE Soldier Handbook*. Fort Belvoir, Virginia: Intelligence and Threat Analysis Center, December 1992.
- U.S. Congress. House. Committee on National Security. *Response to the Landmine Threat in Bosnia: Joint Hearing Before the Committee on National Security Subcommittees on Military Procurement and Military Research and Development*. 104th Cong., 2nd Sess., 24 January 1996.
- U.S. Congress. House. *National Defense Authorization Act for Fiscal Year 1996. Statues at Large* 110 (1996).

U.S. Congress. House. *Landmine Removal Assistance Act*. 104th Cong., 2nd Sess, H.R. 3725; available from <http://thomas.loc.gov/cgi-bin/query/z?cc104:H.R.3725;> Internet; accessed 11 September 1996.

U.S. Department of Defense, "Humanitarian Demining Policy." June 1996.

U.S. Department of Defense, *Humanitarian Demining Program Strategic Plan*. Washington D.C.: HQ Department of Defense, 30 September 1994.

U.S. President. *Public Papers of the Presidents of the United States*. Washington, D.C.: Office of the *Federal Register*, National Archives and Records Service, 1993-. William J. Clinton, 1996.

U.S. Department of State. *Hidden Killers: U.S. Policy on Anti-Personnel Landmines*. Remarks by Sec. Warren Christopher. U.S. Department of State Dispatch 6 (6 February 1996): U.S. Department of State 1996.

ADDITIONAL SOURCES

International Committee of the Red Cross. *A Perverse Use of Technology Mines*. Geneva: International Committee of the Red Cross, 1992.

Blagden, Patrick. "UN De-Mining Efforts." Interview by Michael Littlejohns. *World Chronicle*, no. 541 (15 February 1994).

Ruel, Susan. *United Nations Focus. The Scourge Of Land Mines. UN Tackles Hidden Peacetime Killers*. New York: United Nations Department of Public Information, 1993.

United Nations. General Assembly. *Assistance in Mine Clearance: Report of the Secretary General*. 6 September 1994.

United Nations. Security Council. *Resolution 728. Adopted By the Security Council At Its 3029th Meeting on 8 January 1992*. 1992.

United Nations. Security Council. *Resolution 717. Adopted By the Security Council At Its 3014th Meeting on 16 October 1991*. 1991.

United Nations. Security Council. *The Situation in Somalia: Report of the secretary-general Addendum, Consolidated inter-agency 90-day Plan of Action for Emergency Humanitarian Assistance to Somalia*. 21 April 1992.

United Nations. Security Council. *Letter Dated 17 December 1992 from the Permanent Representative of the United States of America to the United Nations addressed to the President of the Security Council.* 17 December 1992.

United Nations. Security Council. *The Situation in Somalia Report of the Secretary General submitted in pursuance of paragraphs 18 and 19 of Security Council resolution 794 (1992).* 19 December 1992.