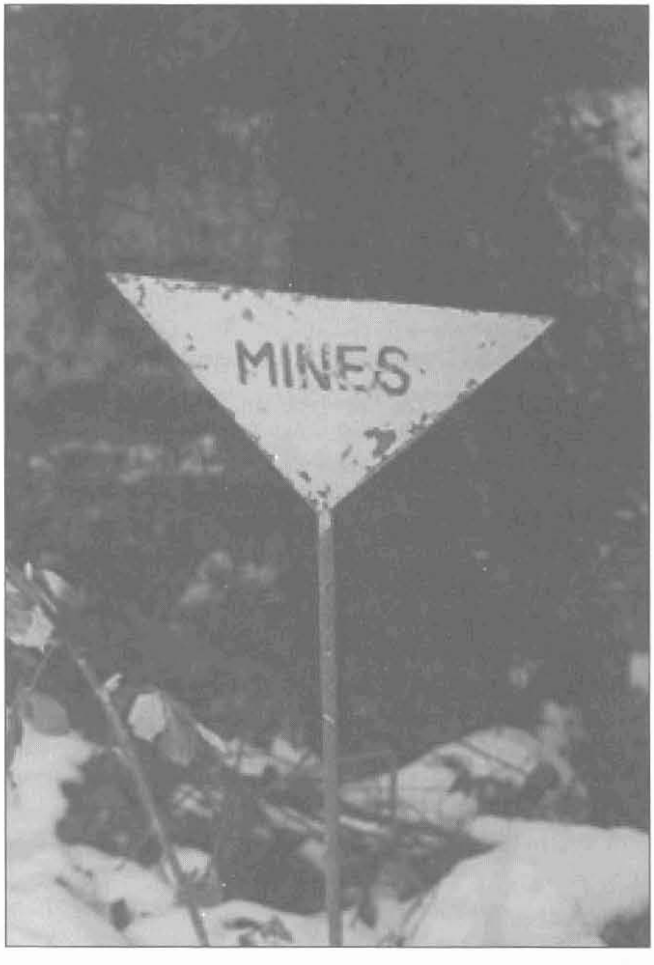


Promoting Effective Countermine Operations in Bosnia-Herzegovina

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Mines continue to be a major threat to reconstruction in Bosnia-Herzegovina.

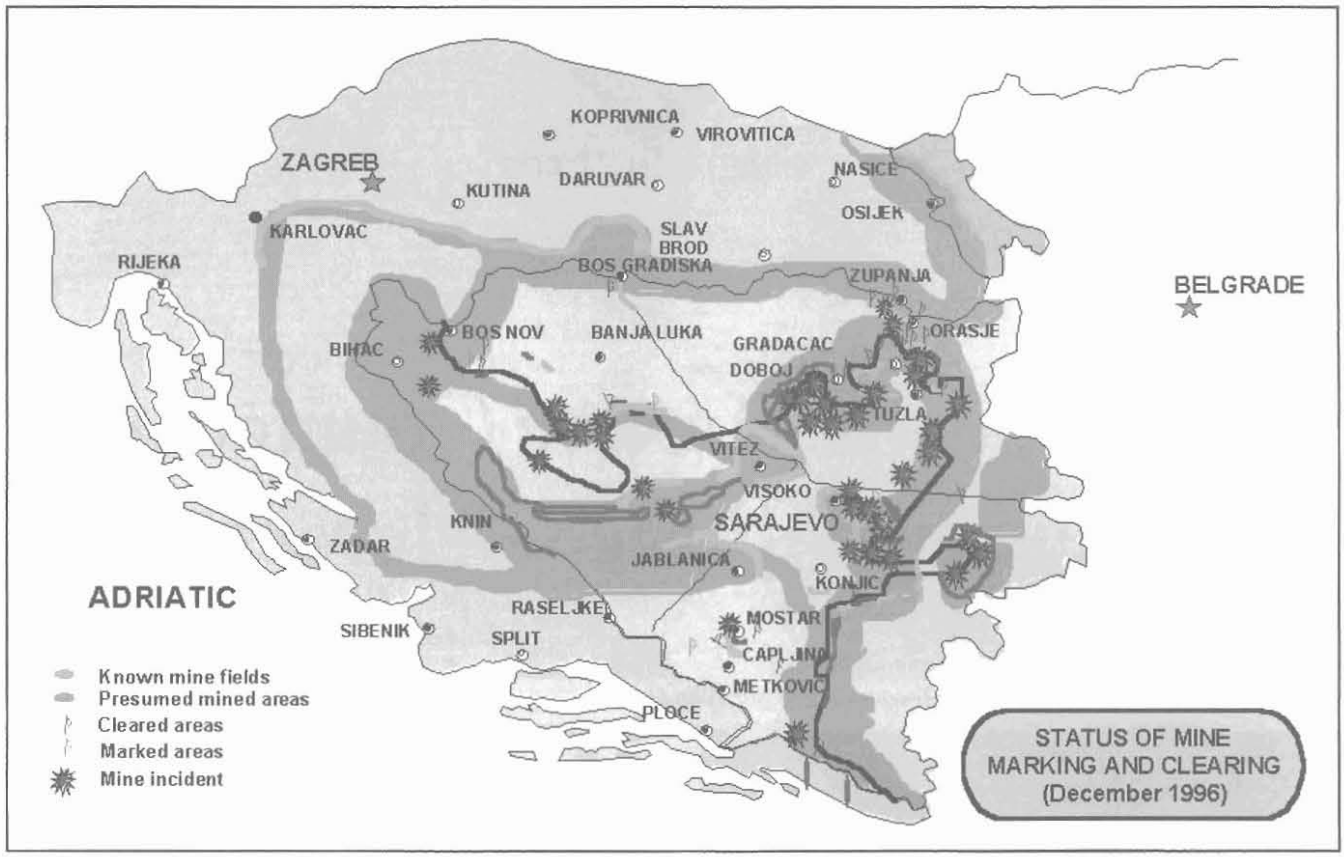
With an estimated 3 to 6 million mines and pieces of unexploded ordnance (UXO) left on the ground, the pervasive mine threat in Bosnia-Herzegovina continues to be a major obstacle to achieving lasting stability and furthering reconstruction efforts in the country. Mined areas include many roads, bridge sites, and industrial complexes, as well as nearly 22 percent of cultivable land. There are about 150 mines per square mile. Plans for every project to rebuild a bridge, grade a road, or repair a building must consider costly and time-consuming mine surveys and clearance operations.

Key to Stability

Within this environment, NATO's Stabilization Force (SFOR) has the mission to ensure peace and stability. From the start, the SFOR recognized that the mine threat had to be reduced to ensure the safety of the population and NATO forces and to encourage the international community's long-term support for reconstruction.

A fair amount of interest and investment exists in Bosnia for removing mines (referred to as *demining*). Among the organizations with a role in promoting countermine operations are the United Nations Mine Action Center (UNMAC), the SFOR (which works through the Chief, Combined Joint Engineer (CJENGR), Entity Armies (EA), governmental agencies, and nongovernmental agencies. Because the country lacks centralized direction and a national demining policy, the actions of these organizations often are uncoordinated and nonsupporting.

This article focuses on efforts of the SFOR CJENGR to develop and shape humanitarian demining programs in



Bosnia. The intent of these programs is to systematically reduce the mine threat, promote stability, and foster economic regeneration. We will outline the development of a theater-wide strategy to promote effective demining within the framework of peace support operations.

Terminology

Far from being a trivial exercise in semantics, the myriad of terms used to discuss mine-removal operations in Bosnia requires clear understanding. One of the CJENGR's first jobs was to work with the various participants and establish consistent terminology. The United States distinguishes between countermine operations (military breaching and mine-clearance activities in support of a mission) and humanitarian demining (the removal of mines as an end in itself). This distinction is not universally accepted within the theater's international community. Some key terms used in theater follow:

- ***Mine lifting.*** The removal of specific mines, as shown on a minefield record. It is not the systematic inspection of each piece of ground; it is the removal of known mines from a record. This technique often leaves unrecorded mines and UXO on the ground.

- ***Mine clearing.*** The systematic checking of each portion of ground to a particular standard. Most organizations in theater use a mix of manual and mechanical techniques, including probing, to conduct clearing operations.

- ***Humanitarian demining.*** A clearing standard that removes 99.6 percent of existing mines. In practice, mine-clearance techniques are discussed in terms of the "ability to produce a humanitarian standard." Probing at 10 cm^2 intervals can theoretically produce this result. The standard originated with the UNMAC, which has used similar standards in other parts of the world.

The Demining Community

Several groups are involved in demining activities throughout Bosnia.

Stabilization Force

Across the theater, the SFOR (primarily combat engineers) removes mines using military techniques. Because mine removal is a risky operation, the SFOR developed a rather conservative policy that reflects their force-protection concerns. Demining by the SFOR takes place only when it—

- Supports freedom of movement or training the SFOR (e.g., it is in the interest of the force).
- Is approved by the nation executing the mission.
- Is approved by the SFOR commander.

Entity Armies

According to the Dayton Accords, the three EA (also known as the Former Warring Factions) are responsible for ensuring the timely marking and removal of mines and UXO in the country. Until spring 1997, this effort was lackluster for several reasons:



Humanitarian demining requires painstaking and careful probing.

- ***Incomplete information.*** A 1996 study by United Kingdom Royal Engineers operating in Bosnia's Multinational Division Southwest indicated there was a less than 60-percent correlation between minefield records and mines on the ground. Since mines were employed by all forces at all levels (from well-trained, corps-level engineers who produced detailed, highly accurate records to embattled infantry platoons with "back-of-the-envelope" diagrams), a wide disparity exists in the accuracy and clarity of reports. Many minefields never were recorded or marked.

- ***Lack of training.*** Due to post-hostility demobilization, the EA lost much demining expertise and mine-clearing equipment.

- ***Lack of will.*** Although never explicitly stated, a lack of willpower on the part of the EA to conduct mine-removal operations is evident—particularly in certain areas. It is clear that some mined areas are still considered viable for use in the event hostilities recommence. Thus, targeting specific areas for EA demining activities meets with resistance.

According to the Dayton Accords, the EA will record, mark, and lift minefields. These actions are monitored by the SFOR. Monitoring involves verifying that EA forces remove the density (number) of mines shown on minefield records or the number of mines the EA claim are in a minefield.

United Nations Mine Action Center

The United Nations has charged the UNMAC to coordinate the efforts of all civilian demining activities in Bosnia. Staffed by civilians with a wealth of demining experience, the UNMAC does not physically take out mines. Instead, the UNMAC performs the following functions:

- ***Maintain minefield information.*** The UNMAC maintains the minefield database, which lists all known and suspected mined locations.

- ***Certify demining companies and teams.*** A major task is to review the training documentation and techniques used by demining organizations and certify their competency. The UNMAC gives demining organizations a "seal of approval" but does not take responsibility for their demining actions.

- ***Synchronize demining activities.*** The UNMAC attempts to synchronize the activities of various demining organizations within the country to ensure that the "right" areas are addressed at the right time.

International and Nongovernmental Organizations

Numerous agencies and groups, including commercial deminers, are involved in mine-removal operations in the region. They profit from the extensive demining requirements associated with reconstruction. Normally led by experienced personnel from outside Bosnia, these organizations employ civilians and former soldiers of the EA. The UNMAC certifies the techniques used by private companies hired by both local governments and other agencies, such as the U.S. Agency for International Development (USAID). Some agencies, such as USAID, routinely budget the cost of hiring deminers in their projects.

In addition to the commercial demining companies, some U.N.-certified volunteer organizations come to Bosnia to contribute to the demining effort.

Obstacles to Success

Initially, the mine-removal community did not agree to accept a specific standard. The UNMAC focused on endorsing clearance to a humanitarian standard (99.6 percent). The EA originally conducted only mine-lifting operations because that was the extent of their capabilities. As far as the UNMAC was concerned, the EA did not conduct any recognizable humanitarian demining operations. Although the EA removed mines from minefield records, the UNMAC believed that mined areas must be cleared to a humanitarian standard in order to be considered "safe." In practice, the UNMAC position nullified the clearance activities of the EA and fostered a lack of confidence in mine lifting as a viable method for clearing well-recorded minefields.

Reliable data concerning the location, composition, and extent of minefields in Bosnia are lacking. Even though the EA are charged to turn over all minefield and UXO records, many of the minefields are either unrecorded or the records are not released. Many of the records turned over to the SFOR and the UNMAC are inaccurate and incomplete, and record management is a continuing problem. At the start of

1997, minefield records were kept at the Multinational Divisional level, the SFOR level, and with the UNMAC. In addition, several independent databases were kept by other organizations, such as the World Bank.

Early in 1997, uncoordinated efforts resulted in discrete mine-removal activity, but there was no systematic approach to clearing areas tied to reconstruction or the priorities of other lead organizations, such as the United Nations High Commission for Refugees and the Organizations for Security and Cooperation in Europe.

SFOR Campaign to Promote Effective Demining

Ultimate responsibility for formulating and continuing an effective humanitarian demining program is not an SFOR responsibility. The civilian leadership—both U.N. and national authorities—are ultimately responsible for the success of an effective countermine program. However, the climate in late 1996 and early 1997 was such that SFOR determined it *had* to take the lead in jump starting a country-wide demining program.

When developing a campaign plan, the CJENGR determined that a major goal of the campaign must be to promote effective demining activities. To accomplish this goal, the CJENGR established several initial objectives:

- Develop the EA humanitarian demining capabilities.
- Foster mine-awareness programs.
- Synchronize demining activities.
- Strengthen the position of the UNMAC as the leader in demining activities.
- Encourage greater participation by international organizations.

Developing Entity Army Capabilities

For various reasons, EA demining activity was at a virtual halt by December 1996. Not only were the EA not conducting viable mine-removal activities, they did not possess valid plans to begin mine-removal operations. Therefore, the CJENGR took several steps to re-energize the EA:

- ***Link mine-removal activity to movement and training.*** The commander of SFOR has authority to take actions necessary to ensure EA compliance with the military provisions of the Dayton Accords, including the requirement to conduct demining. A major step was to firmly link EA privileges—notably their ability to train and move their forces—to evidence of demining activities. This step provided excellent motivation for the EA to initiate demining activities.
- ***Make the policy concrete.*** The EA and subordinate multinational divisions were unclear as to what constituted successful demining activities. The CJENGR clarified demining policies and spelled out concrete objectives and requirements in the COMSFOR-endorsed *Instructions to Parties*. A companion document, not given to the EA, is Campaign Directive 21, *Countermine Operations*, which provides additional guidance on administering activities to monitor demining.
- ***Review EA plans.*** The EA were required to produce detailed plans outlining how and where their mine-removal assets would be used. The CJENGR took the ini-



The damaged Lipovac railroad bridge was demined by the Entity Armies in the summer of 1997 and repaired by USAID later that fall.

tiative to recommend adjustments to the plans to ensure an adequate pace and priority of demining. In addition, emphasis was placed on demining areas targeted for reconstruction.

- ***Support bilateral initiatives for equipment and training.*** Several bilateral initiatives emerged, notably one initiated by the U.S. Department of State's Demining Commission (USDC). The USDC sponsored countermine training for about 450 EA soldiers that focused on clearing mines to a humanitarian standard (vice mine lifting). The CJENGR recognized this training as a great opportunity and developed strict requirements for compliance.
- ***Promote certification through the UNMAC.*** One problem with EA mine-removal operations was the lack of recognition they received as credible deminers. With the enhanced training provided by USDC, the CJENGR and UNMAC worked to gain recognition for EA mine-clearing activities.

Fostering Mine Awareness

To foster mine awareness, the CJENGR supported the SFOR's information campaign to make the local population cognizant of the mine threat. The campaign focused on developing posters and making radio broadcasts to describe the mine threat.

The information campaign on mine awareness was also directed at the international community to encourage support for demining and reconstruction activities. A major initiative was to develop brochures outlining current successes and shortcomings. These brochures were distributed at a World Bank donors' conference and other meetings.

The CJENGR established a training team to enhance mine awareness among the SFOR and local organizations. The team consists of several highly trained mine experts, who are available to conduct briefings and training on mine awareness.

Synchronizing Efforts

The CJENGR chaired a series of meetings throughout the spring of 1997 with the UNMAC, the United Nations High Commission for Refugees, the World Bank, and other interested parties. Dialogue at these meetings tied demining activities to reconstruction efforts, proposed refugee-return programs, and supported pending municipal elections in various sectors. The goal was to ensure that demining occurred in high-payoff areas.

During these meetings, the role of the EA evolved within the total mine-clearance scheme. Although the UNMAC refused to recognize the EA capability as viable to achieving a humanitarian standard (even with the USDC-sponsored training), the UNMAC agreed to incorporate EA mine removal in their overall assessment of mined and cleared areas. Additionally, the UNMAC recognized that EA mine removal at any level was preferable to no action and supported using the EA to lift and clear high-density minefields.

Promoting the UNMAC

It is important for the UNMAC to be the recognized leader in the long-term mine-removal program in Bosnia for several reasons. First, the UNMAC is charged with this role by both the United Nations and the London Agreement of January 1997. The London Agreement specifies the UNMAC as the lead agency in orchestrating mine-removal operations throughout the country until the Bosnian Commission on Demining is established. Second, as a prime agent of the United Nations, the UNMAC must have the confidence of the international community. Also, because the SFOR's charter is limited, that agency should not be the demonstrative leader in the long-term, mine-removal program.

Promoting the UNMAC took two forms. First was the consolidation of mine databases. As late as December 1996, the SFOR and the UNMAC maintained separate databases of information on mined areas. Most of the information in the SFOR database came from the EA through subordinate units, while the UNMAC received its data through civilian agencies. After publicly proclaiming the UNMAC as the lead agency, the SFOR reformatted its database to ensure compatibility with the UNMAC's database and transferred all information to it. To ensure a smooth transition, the CJENGR established a liaison cell at the UNMAC to assist in data collection and transfer. By March 1997, the data transfer was complete and the UNMAC, assisted by the SFOR cell, was in the lead.

The second form of promoting the UNMAC was to create situations where that organization could demonstrate its leadership, such as at countermine working groups. Whenever possible, the CJENGR supported and promoted these meetings. While they did not always produce concrete results, the meetings served to maintain dialogue within the demining community.

Encouraging Support from International Organizations

The long-term success of mine-removal operations in Bosnia hinges on the commitment of the international community to resource the effort. Through loans for either humanitarian demining or as part of reconstruction projects, the eventual clearing of most land mines will happen only if the international community establishes an indigenous, sustainable program.

The CJENGR seeks ways to encourage support. One way is through direct contact with organizations working in Bosnia, such as the World Bank. For example, the CJENGR asked the World Bank to provide loans to support additional dog mine-survey teams to increase the tempo of clearance verification. A practical problem with this sort of funding is that it requires loans to the Bosnian government, making it necessary to convince Bosnian leaders to accept the loans. (This problem is also prevalent in many construction loans, but that's another article.)



Examples of the numerous mines and UXO that litter the Bosnian countryside.

Development of a viable information campaign that targets the international community is instrumental in garnering support. By working with the SFOR's information campaign, the CJENGR produced pamphlets and flyers to alert the international community of mine-removal successes and to solicit assistance.

A Success Story

The SFOR's efforts improved the overall mine situation in Bosnia. An example is EA demining at the Lipovac and Kalavac bridges along the Tuzla-Brcko Railway.

A major initiative in the region was to re-establish a viable commercial rail system. Among the sections of rail line targeted for reconstruction was the section between Tuzla and Brcko, which would link with rail systems in Croatia and Hungary. Funded by USAID, the construction involved local contractors and NATO troops. Two bridges along the line at Lipovac and Kalavac were critical. These bridges had been severely damaged during the war and were heavily mined. To reduce the cost to USAID, SFOR decided to pursue demining using EA soldiers trained by the USDC. Direct coordination with contractors executing the construction established that this plan was acceptable, and the area was demined.

This example illustrates the relative success of the SFOR CJENGR initiatives. With increased training and multi-agency coordination, the EA conducted humanitarian mine clearance in direct support of civil reconstruction. The initiative could not have occurred several months earlier.

An Uncertain Future

Humanitarian demining in Bosnia-Herzegovina is not nearly as effective as it could be, despite the outstanding efforts of the SFOR and other agencies. Although the CJENGR's efforts were positive, mine-clearance operations will be ongoing for many years and will be successful only if the international community continues to provide funding. Mine clearance is very expensive, both in terms of training and contracting. Costs can be minimized by targeting areas that yield the greatest benefit for reconstruction. Nonetheless, it will take countless millions of dollars and years of effort through a sustained program to make mine clearance a success.

More importantly, government leaders in Bosnia-Herzegovina must actively support mine clearance. They must turn over minefield records, actively pursue mine removal by the EA, and prove to the international community that they are committed to removing the mines. In short, they must make the country safe for its own people.

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