



## **A Mine-free Central America: How Can We Improve on Success?**

**by Carl E. Case [ Organization of American States ]**

*Since 1991, the Organization of American States has worked to eliminate the threat of anti-personnel landmines in the Americas. In 2010, the OAS Mine Action Program marked a major milestone toward that goal as Nicaragua completed its national demining plan to establish a once war-torn Central America as a mine-safe region. Notwithstanding the success of these efforts, it is important to understand what could have been done better to achieve mine-clearance goals more efficiently and effectively and how these lessons might be applied to other programs.*

After years of diplomatic, political and programmatic effort, Central America is finally considered mine-safe. Bearing in mind the instability and strife that wracked the region during the 1980s and the extensive use of landmines by military and insurgent forces, the elimination of the mine threat should be cause for celebration. However, to paraphrase Microsoft founder Bill Gates, success can be a poor teacher because it seduces smart people into thinking that they cannot lose. Setting aside the impulse for self-congratulation, the mine-action community ought to take a moment to reflect on how this achievement might have been brought about with a more efficient use of the considerable assets required or on how the final outcome could have been realized sooner. In reviewing the journey by which the Central American nations arrived at this milestone with the support of the OAS and the international donor community, there are some important lessons other mine-clearance programs can apply to ensure they achieve their clearance goals in the most effective way.

### **In the Beginning**

Six years before the Ottawa Convention cemented a commitment to rid the world of anti-personnel landmines, the OAS had conceived a vision to help the governments of Central America emerge from a decade of conflict by clearing landmines from their national territories. In response to a 1991 request from the newly-installed democratic government in Nicaragua, the OAS called upon the Inter-American Defense Board, a rarely-used military adjunct of the OAS, to study the mine problem in Central America and recommend a plan of action. Although the IADB's assessment focused primarily on Nicaragua, which was the most severely mine-

affected nation in the region, its staff also studied the landmine problem in Costa Rica, El Salvador, Guatemala and Honduras, all of which had seen the use of anti-personnel mines to some extent throughout the 1980s and had requested similar assistance.



**Officers from the Inter-American Defense Board during a 1991 visit to Nicaragua to assess the mine problem. Photo courtesy of William A. McDonough**

The IADB initially developed assistance plans for each country, with the exception of Guatemala, where the government was continuing to battle insurgent groups. Plans were based on the national military forces' mine-contamination information, which in most cases was incomplete, if not wholly inaccurate. Moreover, planning focused primarily on providing initial training and equipment to launch mine-clearance work without the intention of sustaining operations for an extended period of time. Without any significant operational experience in mine-clearance programs, and with few recent examples of programs in the world from which to draw important lessons, the IADB lacked a strong example on which to base clearance timelines.

By 1997, the OAS effort to support mine clearance in Central America had begun to take on a more structured look. The General Assembly, the main political body of the OAS, endorsed the work initiated by the IADB and created a special fund to accept contributions from donor countries to support what became known as the Assistance Program for Demining in Central America. The concept of support used in this program evolved beyond only training and equipping deminers from national armed forces to providing teams of international military supervisors. These teams allowed for quality assurance and certification of clearance work, while the OAS established a logistical and administrative structure to support operations in each country, as well as to continue fundraising efforts. In June 1997, the OAS General Assembly approved a resolution to "adopt as goals the global elimination of anti-personnel landmines and conversion of the Western Hemisphere into an anti-personnel-land-mine-free zone," aiming to complete mine clearance in Central America by the year 2000.<sup>1</sup>

| Country                | Initial Mine Estimate | Final Mine/UXO Count |
|------------------------|-----------------------|----------------------|
| Costa Rica             | 5,000 – 6,000         | 446                  |
| Guatemala <sup>2</sup> | 10,000 – 15,000       | 518                  |
| Honduras               | 15,000 – 20,000       | 2,405                |
| Nicaragua              | 115,000 – 120,000     | 179,623 <sup>3</sup> |

Table 1: Perception versus reality: mine estimates for Central America. "

## Defining the Problem

Despite having support from OAS political bodies and the Central American governments for an overall clearance goal, the magnitude of the task in Central America was never clearly established. The specific sizes and locations of mined areas as well as the mine densities in each of the affected countries varied widely. In Nicaragua, where the armed forces were responsible for planting the vast majority of mines, reasonably accurate records, including maps, were available. Although this information initially yielded a credible basis for clearance plans, military mine registries ultimately proved to be incomplete, as some installed minefields had never been recorded or their records had been lost.

In Costa Rica and Honduras, mines were believed to have been placed either by Nicaraguan insurgent forces operating from their territories or by the Nicaraguan military in areas where borders were poorly defined or unmarked. Most of the available information was based on national military or security force archives about confrontations between the Nicaraguan government and irregular forces along its borders. Limited mine-risk-education campaigns in Honduran and Costa Rican territories bordering Nicaragua later led to some reports from local civilians about possible mined areas, but this source of information was never exploited systematically, nor was much effort made to undertake extensive survey work in the suspected hazardous areas.

Defining the extent of contamination in Guatemala proved even more problematic because few mines were used during its 35-year conflict. The primary threat was the result of unexploded ordnance on former battlefields about which few, if any, records existed. Consequently, the approach to the problem in Guatemala emphasized risk-education campaigns and the focused response of a small clearance team to reports that campaign promoters received from people living in the affected areas.

In this context, planning assumptions were based on what later proved to be highly inaccurate and often inflated estimates of the number of mines and areas to be cleared. Table 1 shows national estimates compared to the number of mines and UXO items actually cleared. Where no minefield records existed, estimates were more than 10 times higher than the actual number of mines. Initial Nicaraguan estimates were lower than the final tally because records

on several known minefields were not taken into account when the original clearance plan was developed and had to be included in operational plans as the program advanced.

In retrospect, the planning process for mine clearance in Central America was significantly flawed by the lack of clarity concerning each country's mine situation. However, planners at the time had few historical precedents and practically no doctrinal guidelines on how to develop mine assessments. Prior to the signing of the Ottawa Convention and the development of international standards, there was no clear roadmap for mine-action programs to follow. In subsequent years, this issue would come into greater focus as the OAS program—as well as other national, international and nongovernmental organizations—gained more practical experience in mine clearance.

### **Developing and Implementing Clearance Plans**

For the most part, planning decisions prior to 1998 were based more on resource constraints than on specific timelines or clearance projections. Although the OAS General Assembly had aimed to complete mine clearance in the region by the year 2000, this target was not based on a rigorous analysis of the situation or available capacity. By early 1998, Costa Rica had deployed 35 deminers, Honduras deployed 100 deminers and Nicaragua deployed or planned to deploy 400 deminers, but no serious programming had taken place to determine how long clearance work would actually take.

When Hurricane Mitch struck Central America in October 1998, the devastation it wrought and the uncertainty about its effect on mine contamination forced a more serious review of clearance plans, particularly in Nicaragua. Early in the review process it became clear that the goal of a mine-free Central America by 2000 was wholly unrealistic.

Post-Mitch planning, undertaken jointly by the Nicaraguan Army, the OAS program and the IADB took several previously neglected considerations into account. The overall number of mines and mined areas was revised as several large mined areas were added to the inventory of demining objectives. Increased interest on the part of international donors in helping the Central American countries recover from Hurricane Mitch translated into additional funding resources for clearance. A revised National Demining Plan for Nicaragua took shape, with an expansion in manpower to approximately 650 deminers supported by both mechanical and canine assets. The restructured plan contemplated the clearance of more than 135,000 mines in 991 mined areas throughout the country with completion projected by the end of 2004.

However, as Nicaraguan deminers began to concentrate efforts in Nueva Segovia and Jalapa departments, previously unrecorded mined areas were discovered in what proved to be the most contaminated areas along the Honduran border. Additional areas were identified primarily through community-liaison and risk-education campaigns carried out by the OAS or as a result of Technical Surveys of known minefields that identified previously unrecorded areas in the same vicinity. As clearance work began in remote zones with difficult access, the overall number of areas and the estimated number of mines to be cleared grew and the projected

completion date for all operations was postponed from one year to the next. By the time the National Demining Plan was finally completed in April 2010, it encompassed some 1,023 mined areas containing 179,623 mines.

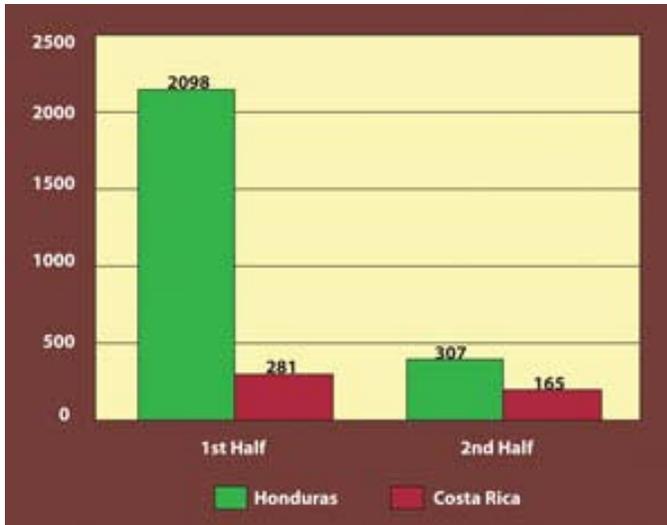


Figure 1: Mines/UXO in Honduras and Costa Rica  
Figure courtesy of Carl Case/CISR

Whereas the dimensions of the problem in Nicaragua were considerably underestimated, the extent of contamination in Honduras and Costa Rica was greatly overestimated. In both countries, initial clearance plans were based on the most reliable information available. Figure 1 illustrates that the first half of the period from the beginning of clearance operations until their completion resulted in significantly higher numbers of mines cleared than during the second half of the period. Even as clearance rates per deminer remained stable, the per-mine cost of operations sharply increased.

Nicaraguan deminers working in steep terrain in Nueva Segovia department.  
Photo courtesy of PADCA



These developments took place from early 2001 through 2003, a period when International Mine Action Standards were in their early stages of development and concepts such as Non-technical Survey and Land Release were not widely established. Nonetheless, the same principles described in the recently published IMAS 08.204 and 08.215 were applied in both Costa Rica and Honduras to clear numerous suspected hazardous areas and lend a methodology to support these programs in meeting their clearance goals. By mid-2002, joint OAS-IADB-Costa Rican survey work along the Nicaraguan border released the remaining SHAs, enabling Costa Rican authorities to declare their program complete in October of that year. In Honduras, Non-technical Surveys were complemented by Technical Survey using mechanical clearance equipment in an area of Choluteca department that had been flooded during Hurricane Mitch. After six months of Technical Survey and the discovery of only one nonfunctional, metallic mine at a depth of 1.5 meters (4.9 feet), Honduran authorities concluded that the remaining risk was tolerable enough to permit them to conclude their clearance effort.

### **Applying the Lessons Learned**

There is no doubt that initial planning assumptions for clearance programs throughout Central America were affected by poorly developed mine assessments and estimates. Even in Nicaragua, where minefield records were more reliable, the original clearance goals that envisioned completion in 2000 and then 2004 were not realistic. On the other hand, overestimation of the magnitude of the problem in the other Central American countries, and a lack of methodical survey and assessment, never brought the extent of the problem into focus so that clearance goals could be defined. In hindsight, extensive survey work should have been accomplished at least as early as 1999 following Hurricane Mitch, but it was not seriously considered until mine-clearance rates dropped dramatically and the continuing high cost of demining large areas to find few mines forced adoption of an improvised land-release process.

The importance of these lessons is that they can be used in other programs where the lack of a clear picture on mine contamination can thwart planning efforts and discourage donor support. The OAS program, while proud of its role in supporting the achievement of the long-standing goal of a mine-safe Central America, has recognized the need for defining the extent of each affected country's mine problem. The OAS is taking the lessons learned from its prior experience and broadly applying them in Colombia, where reports of mines placed by illegal armed groups are widespread but offer little focus for clearance operations. Working with national authorities, the OAS program in Colombia has made Non-technical Survey, Land Release, and overall mine assessment and planning primary points of focus. Based on the valuable experience gained in Central America, it is feasible to develop a coherent set of national priorities and plans that can reduce the time and the resources needed to address the problem in Colombia.

## Biography

**Carl E. Case** is Director of the Office of Humanitarian Mine Action at the Organization of American States. He has 15 years of experience working in mine action, including as the Senior Advisor for conventional weapons destruction in Iraq with the Office of Weapons Removal and Abatement in the U.S. Department of State's Bureau of Political-Military Affairs (PM/WRA) and as a demining Technical Advisor with the Inter-American Defense Board. Prior to joining the OAS in 2000, he served more than 26 years in the U.S. Army as an infantry officer.

## Endnotes

1. Organization of American States. General Assembly. AG/RES. 1411 (XXVI-O/96), "The Western Hemisphere as an Antipersonnel Land-Mine-Free Zone." 7 June 1996.
2. The only minefield reported in Guatemala, located at Tajumulco Volcano, was cleared in 1997 by demobilized insurgents under the supervision of the United Nations Verification Mission in Guatemala prior to the initiation of Guatemala's National Demining and UXO Destruction Plan in 1998. For additional details see United Nations Security Council Report S/1997/432, "Report of the Secretary-General on the Group of Military Observers Attached to MINUGUA," 4 June 1997.
3. Note: The final clearance number for Nicaragua includes mines reported by the Nicaraguan Army as "certified," which refers to the number of mines in military records for minefields that have been cleared.
4. *IMAS 08.20: Land Release, First Edition*, UNMAS (10 June 2009).
5. *IMAS 08.21: Non-technical Survey, First Edition*, UNMAS (10 June 2009).