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Cambodia: A Country Profile

Through the efforts of CMAC, Mines Advisory Group and HALO Trust, Cambodia is working to eliminate the hundreds of contaminated areas within its borders. Rohan Maxwell proposes changes in these operations to sustain removal efforts.

By Rohan Maxwell, Officer, Canadian Army

Background

In the late 1960s, communist insurgents known as the Khmer Rouge began operations against the central government of Cambodia, launching three decades of nearly continuous warfare. Vietnamese communists supported the insurgents, while the government came to be supported by the United States and South Vietnam. The fighting was exacerbated by the expansion of the Vietnamese War into eastern Cambodia, including a massive American bombing campaign against communist supply lines. Battlefields UXO was widely dispersed, while aerial-delivered UXO was concentrated in the eastern and central provinces (ref 1). According to the International Committee of the Red Cross (ICRC) (ref 2), about 10 percent of the mines in Cambodia were laid during this period—most in the central and southern provinces.

By 1979, the Ku Klux Klan, led by border provocations, drove into Cambodia, the fighting continued, the central government in April 1975. It was followed by 44 horrific months of Khmer Rouge rule, during which more than 1 million Cambodians died of starvation, disease and murder. Approximately 5 percent of the mines were laid under the Khmer Rouge regime, mainly in the Thai and Vietnamese border regions.

The second civil war began at the end of 1978 when Vietnam, geared by border provocations, drove into Cambodia, and the Khmer Rouge defectors. After a decade of fighting between the central government and its Vietnamese backers) and the Khmer Rouge (and various non-communist Cambodian groups formerly opposed to them), Vietnam withdrew its forces and peace negotiations began. With the concurrence of all parties, the United Nations, United Kingdom, Cambodia (INTAC) (ref 1) in order to supervise demobilization and conduct elections. The Khmer Rouge chose to resume fighting, and demobilization failed, but elections did take place and the central government gained greater international legitimacy. By 1993, the United Nations, United Kingdom, Cambodia (INTAC) (ref 1) had identified an area of contaminated land by the commander estimated that it would take 30 to 40 years to demine Cambodia (ref 1).

The Mines

Of all mines in Cambodia, 99 percent are AP, 68 percent blast, 26 percent fragmentation, and 5 percent area. The American bombing campaign against communist supply lines. Battlefield UXO were supported by the insurgents, while the government came to be supported by the United States and South Vietnam. The fighting was exacerbated by the expansion of the Vietnamese War into eastern Cambodia, including a massive American bombing campaign against communist supply lines. Battlefields UXO was dispersed, while aerial-delivered UXO was concentrated in the eastern and central provinces (ref 1). According to the International Committee of the Red Cross (ICRC) (ref 2), about 10 percent of the mines in Cambodia were laid during this period—most in the central and southern provinces.

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account for 63 percent of all victims, but 30 percent are children under the age of 18. Tampering causes 42 percent of casualties, including one-quarter of the men, three-quarters of the children and one-quarter of the women. Most of them fall victim to mines, but UXO accounts for 41 percent of all casualties, including 69 percent of children. There are, on average, 85 new victims each month, and 1 in 5 do not survive their injuries.

**Demining Organizations**

There are many humanitarian organizations that have conducted, supported or are presently contributing to demining operations in Cambodia (e.g., Norwegian People’s Aid (NPA), Handicap International (HI), World Vision, CARE) but this article will discuss only those that are currently conducting operations: HALO Trust, Mines Advisory Group (MAG) and the Cambodian Mine Action Centre (CMAC). HALO Trust has been working in the northwestern provinces of Barany Meanchey and Siem Reap since October 1991. Its

500 Cambodian staff are organized into 16 clearance teams working predominantly in the immediate vicinity of villages—houses, schools, water supplies, health facilities and paddy fields. HALO's demining operations are funded by the governments of the United Kingdom, the United States, Finland, Ireland and Japan, as well as the United Nations, the European Union (EU) and private donors in England and Japan. MAG Cambodia started work in 1992. Its mine action teams are presently concentrated in the northern and northwestern provinces of Preah Vihear and Battambang. Like the HALO teams, they normally work in proximity to villages. The 385 Cambodian staff (including 48 amputees and 46 woman deminers) and nine expatriates are supported by donors including the governments of the United Kingdom, the United States and Austria, as well as the Lutheran World Service and Church World Service.

CMAC evolved from the UNICEF Mine Clearance Training Unit in 1993. After initial funding difficulties, it expanded to a strength of 2,400 Cambodian staff and 50 expatriates. CMAC is a Cambodian agency, but it relies almost entirely on local and overseas donors and it is administered as a project of the U.N. Development Programme. Its annual budget has peaked at approximately $2 million, but the detailed work is carried out by the Land Use Planning Unit (LUPU). Each district has a District Working Group (DWG) which submits its demining requirements and priorities to the LUPU (and then to the PRDC based on input from the commune chiefs (who have in turn consulted their village chiefs). The PRDC then coordinates with the demining agencies to match resources to tasks, and the result should be a fully coordinated demining and development plan.

**The Planning Process**

In theory, demining efforts should be preceded by a systematic Level 1 Survey. Unfortunately, this is not the case in Cambodia. The current situation is complacent, and the planning process is currently being redefined. In concept, the provincial governments should set demining requirements and priorities. Where appropriate, NGOs and international organizations working in the province must also be involved in the planning process, as they normally provide the resources needed to put the demined land to best use. Demining agencies should provide technical advice—what can be done, and when it can be done—based on the set priorities. This concept places responsibility for land use where it belongs, Cambodia political structure at the provincial level includes the provincial governor and government, the subordinate district chiefs, the commune chief of each commune, the people’s union and the commune. The Provincial Rural Development Committee (PRDC) is responsible for setting the demining requirements and priorities for the commune (and to the PRDC based on input from the commune chiefs (who have in turn consulted their village chiefs)). The PRDC then coordinates with the demining agencies to match resources to tasks, and the result should be a fully coordinated demining and development plan.

This process is still being developed. The key is to ensure that planners and staff at all levels develop the required level of technical expertise—for example, the use of geographical information systems (GIS)—as well as management, organizational and planning skills. In the areas where the former did not exist, the latter did its best to eliminate those who possessed such skills, planning and organizational structures were being rebuilt very nearly from scratch, and it will be some time before the concept outlined above can be completely implemented. Land titling must also become more reliable if demined land is to be put to its intended use. Finally, accurate survey data is still required, and to this end a national Level 1 Survey has been finally initiated, with funding from the Canadian government.

National coordination between the demining agencies was until recently a CMAC responsibility. However, the agencies did not have normal work in proximity to each other, and CMAC and the demining NGOs normally concentrated on different types of tasks. There was little call for coordination in the field and, for planning purposes, MAG and HALO worked closely with selected communities and agencies, while the task of working with the provincial governments fell largely to CMAC. In 2000, as part of the response to the CMAC crisis, a national demining authority was created. The Cambodian Mine Action Authority is developing policies to regulate the operation of commercial demining companies and to conduct quality assurance checks on all demining agencies. In secretariat general envisions the commercial companies undertaking mine clearance tasks unsuitable for humanitarian organizations. It is anticipated that the first such operation will be officially licensed in March.

**Demining Operations**

Manual demining is the primary method in use in Cambodia. The equipment is typical for the job (cripple feelers, vegetation cutters, mine detectors, prodders and excavating tools, varying suits of protective equipment), as are the physically and mentally arduous conditions deminers face daily. Rates of pay are high by Cambodian standards: $160 a month for a beginner CMAC deminer, in a country where the per capita monthly income is about $23. These wages and...
The mechanical vegetation cutters described above are either operational or show promise; in contrast, the two mechanical demining systems that have been evaluated (both by CMAC) have enjoyed less success. The first is the Site RA-140 flail, originally designed to clear scatterable mines from hard surfaces or standard mines from open terrain. After extensive trials, it has been concluded that this system cannot clear terrain to meet required standards. Only about 80 percent of the mines (at depths of 5 to 20 cm) are detonated or rendered inoperable, and there is a significant risk that some mines could be cleared from the minefield into previously safe areas. In addition, the system lacks mobility. The Finnish government, though, remains willing to underwrite the costs of deploying and operating two systems, so CMAC uses them as vegetation cutters. They enjoy reasonable success in this role, particularly against thick bamboo, but they continue to encounter mobility problems.

The second system is RHINO, a tracked vehicle equipped with two heavy counter-rotating drums mounted laterally, one above the other, on the front of the chassis. This adapted agricultural system is designed to till the soil to a depth of 20 cm, crushing all mines and UXO between the drums. At a weight of 48 tons (without the 14 ton tiller unit attached), it was very difficult to deploy RHINO to test sites during its trials. Cutters and flakhted trails of the required capacity are not easily procured in rural Cambodia, and it was sometimes necessary to make route improvements in order to move the system. Once on site, the machine worked reasonably well when essentially tracked excavators with brushcutters in place of the excavator buckets.

Conclusion

Cambodia remains a heavily mine and UXO-contaminated country with an extremely high rate of related casualties. Humanitarian demining will remain a high priority for at least another decade, and while the demining NGOs can probably be relied upon to stay the course and successfully nationalise their operations, the capability lost by the CMAC suspension must be replaced. There are various options—retain CMAC, create several smaller organisations, divert funding to NGOs—but all require continued international support. Unfortunately, the recent difficulties with CMAC have made many donors justifiably wary. The solution is not to reduce or withdraw funding, but rather to continue to insist on fundamental changes to the way in which demining funds are managed and demining operations are planned and conducted.

References

1. Hidden Victims: The Global Landmine Crisis. U.S. Department of State, Bureau of Political-Military Affairs, Office of Humanitarian Demining Program, Washington, D.C., September 1998. In addition to information on mines and UXO distribution, this document contains an estimate that 1 in 235 Cambodians is an above-ground victim from other sources ranging from 1.250 to 1.250. Figures in this document suggest that 36 percent of casualties are male.

2. Berghderg, Italia. 130 Million Landmines Deployed Worldwide. Jaxt at Perimeter (en Coopet, Prom and Sand BOOKs Ltd., Berkeley, 2000. This book was sponsored by the Gennevilliers-based Pro Victims Foundation. EIRC estimates concerning the worldwide-binding field and during periods are on page 25. U. S estimates of the number of mines are cited on page 24-25, drawn from two accuracy-general's reports in 1994 and 1997. IMUL Landmine and UXO estimation on the number of mines and the time required to clear them are on page 57-59. The cited figure of 3,000 sq. km of contaminated land is on page 27, drawn from CMAC's November 1998 monthly progress report. Further discussion of contaminated land is on page 28 and 29. 57.5 sq. km of cleared have resulted from the clearing of 15,000 km per year on page 58.


4. Author's notes while employed with CMAC from June 1999 to June 2000. These include notes from various documents such as mental maps and various reports.


8. Cambodia Mine Incidence Database Project. "Monthly Mine Incident Reports," May 2000, and other mine incident reports. In addition to this document, there is a significant number of casualties that are not recorded.
