Observations on Recent Changes in the Northwest Cambodia’s Mine/UXO Situation

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implementing partners, both national and interna-
tional. U.N., non-governmental and commercial
organisations and 8,700 people in mine action operations in support of the government’s programme. Over the years, participating organisa-
tions included: U.N. Mine Action Service; U.N. Development Programme; UNICEF; U.N. Office for Project Services; International Committee of the Red Cross; Agency for Aid and Relief; Ansar Relief Institute; Afghan Technical Consultants; British Broadcasting Corporation–Afghan Education Project; Danish Demining Group; Demining Agency for Afghanistan; HALO Trust; Handicap International–Belgium; INTERSOS; MECHEM; Mine Clearance Planning Agency, Afghanistan Mine Detecting and Dog Centre; Monitoring, Evaluation and Training Agency, Organisation for Mine Clearance and Afghan Rehabilitation, and RONCO Consulting. Technical assistance was also provided by Cranfield University, Mine Action Information Center and the Geneva International Centre for Humanitarian Demining.

In 2002, Afghanistan entered a new phase in its development during its transition to a more stable, internationa-
ly recognized state. Substantial economic and social development resources from international donors began coming into the country, while private sector activity increased at a rapid rate. As a result, demand for land and the value of land increased substan-
tially. Many infrastructural and social development projects were found to be in mine- and UXO-affected communities. Therefore, the tremendous increase in market prices challenged MAPA to both grow and adapt to new realities on the ground in Afghanistan. The mine action programme, in addition to the organisations providing technical assistance to the programme, has risen to this challenge.

The mine action programme has developed a new strategic plan for mine action in Afghanistan. This strat-
 egy accommodates Ottawa Convention timelines, in addition to the country’s urgent humanitarian and eco-

nomics needs. Paramount in the minds of most Afghans is a desire to reconstruct their country in an environ-
ment of peace and stability. This accelerated strategy is a cornerstone of the effort to promote stability in Afghanistan, free of deadly remnants of war and the suffering and economic paralysis they cause. For the new Afghanistan to emerge, donor support for both humanitarian mine action and reconstruction mine clearance efforts will be necessary: reconstruction mine clearance must occur in conjunction with other programmes in order to see sub-
stantial development.

See “References and Endnotes,” page 104

Changes in Suspected Mined Areas, 2000–2005

The observations in this article are based on data from three areas in Battambang province: the com-
munities of Andaeuk Haeb and Kantueu Muoy and Koeuk Choar village. In total, the three selected areas include 15 villages. All three communities are heavily mine- and UXO-contaminated areas located in interior parts of the province. The National Land Use Survey (NLUS) re-
ported in 2000 that there had been a total of 178 mine-
related injuries including 62 deaths since mines were first laid in these areas.

These locations were selected simply because they are the first areas for which new data has become available. The selection is not based on sampling techniques and therefore should not be used for extrapolation.

In 2000, the NLUS reported the 15 villages in these three communities had 38 suspected mined areas with an estimated area of over 1,200 hectares (3 square miles). As more information became available, some of these suspected mined areas were shown to be of vaster size. One new area was also discovered. The net result was a reduction in the suspected contaminated area by 27 percent to just over 900 hectares (3 square miles). The current status of these 45 SMAs is shown in Figure 1. Fifty-nine percent of all SMAs in the three commu-

nies were completely cleared in the last five years. An additional 42 percent were partially cleared. Only two SMAs were not cleared at all in this period. Further exami-
ation of the clearance activity shows that partially cleared SMAs are mainly of larger size, and only critical areas within them have been cleared.

Before the NLUS in 2000 there had been consider-
able clearance by the Cambodian Mine Action Centre and the Mine Advisory Group in these three com-

munities. But since 2000, there has been very little offical activity as the focus of attention has shifted to other areas of the province. Figure 2 shows that CMAC worked in only two SMAs and cleared 5 percent of the total cleared area; the Royal Cambodian Armed Forces worked in three SMAs and cleared 7 percent of the total area cleared; and MAG worked in only one in a cooperative effort with RCAF. The total area cleared by all three organisations has been about 50 hectares (124 acres). What is most surprising is that fully 96 percent of the SMAs that have been cleared or partially cleared have been worked on by community-based individual or groups (see Figure 2). This represents an estimated 91 percent of the area cleared of mines/UXO in the three communities in the last five years.

Even more surprising to those of us involved with pro-
viding assistance to Battambang MAPU is that, in total, 45 of the 45 SMAs in these three communities have ei-
ther been completely cleared or partially cleared between 2000 and 2005. An estimated total of almost 550 hectares (2 square miles) has been cleared of mines/UXO in the same period (see Figure 3).

One result of these findings is the Battambang MAPU will try to compile a complete inventory of the mine history of all SMAs in the province. It is likely, by some time in 2006, the Battambang MAPU and others in northwestern Cambodia will have such data available to them. Assistance with this effort is being provided from the “Task Assessment and Planning—Decision Support at MAPU’s” project, funded by the Canadian International Development Agency and working in collaboration with the Australian government’s Overseas Aid Program (AusAID)-funded project “Capacity Building for Mine Action Planning.”
Observations on Recent Changes in the Northwest Cambodia’s Mine/UXO Situation

Based on recently acquired data from selected areas in Battambang province in northwestern Cambodia, the authors offer a preliminary report on what appear to be very significant shifts in the nature of the mine/unexploded ordnance situation. The new data is used to make comparisons between the situation in 2000 and the current situation. Next, they offer evidence of how locally based initiatives appear to have become the predominant driving force of mine action in the selected areas.

by Michael Simmons, Moe Vianna and Soun Chao | Geospatial International Inc. | and Neum Chay Rourn | Battambang Mine Action Planning Unit

Changes in Suspected Mined Areas, 2000–2005

The observations in this article are based on data from three areas in Battambang province: the communities of Andauk Haeb and Kanteu Muoy and Kruok Choeur village. In total, the three selected areas include 15 villages. All three communities are heavily mine/UXO-contaminated areas located in interior parts of the province. The National Level One Survey (NL1S) reported in 2000 that there had been a total of 178 mine-related casualties including 62 deaths since mines were first laid in these areas.

These locations were selected simply because they are the first areas for which new data has become available. The selection is not based on sampling techniques and therefore should not be used for extrapolation.

In 2000, the NL1S reported the 15 villages in these three communities had 38 suspected mined areas with an estimated area of over 1,200 hectares (5 square miles). As more information became available, some of these suspected mined areas were shown to be of varied size. One new area was also discovered. The net result was a reduction in the suspected contaminated area by 27 percent to just over 900 hectares (3 square miles). The current status of these 45 SMAs is shown in Figure 1. Fifty-three percent of all SMAs in the three communities were completely cleared in the last five years. An additional 42 percent were partially cleared. Only two SMAs were not cleared at all in this period. Further examination of the clearance activity shows that partially cleared SMAs are mainly of larger size, and only critical areas within them have been cleared.

Before the NL1S in 2000 there had been considerable clearance by the Cambodian Mine Action Centre and the Mines Advisory Group in these three communities. But since 2000, there has been very little official activity as the focus of attention has shifted to other areas of the province. Figure 2 shows that CMAC worked in only two SMAs and cleared 5 percent of the total cleared area; the Royal Cambodian Armed Forces worked in three SMAs and cleared 7 percent of the total area cleared; and MAG worked in only one in a cooperative effort with RCAF. The total area cleared by all three organizations has been around 90 hectares (124 acres). What is most surprising is that fully 86 percent of the SMAs that have been cleared or partially cleared have been worked on by community-based individuals or groups (see Figure 2). This represents an estimated 91 percent of the area cleared of mines/UXO in the three communities in the last five years.

Even more surprising to those of us involved with providing assistance to Battambang MAPU is that, in total, 43 of the 45 SMAs in these three communities have either been completely cleared or partially cleared between 2000 and 2005. An estimated total of almost 550 hectares (2 square miles) has been cleared of mines/UXO in the same period (see Figure 3).

One result of these findings is the Battambang MAPU will try to compile a complete inventory of the mine history of all SMAs in the province. It is likely, by some time in 2006, the Battambang MAPU and others in northeastern Cambodia will have such data available to them. Assistance with this effort is being provided from the “Task Assessment and Planning—Decision Support at MAPUS” project, funded by the Canadian International Development Agency and working in collaboration with the Australian government’s Overseas Aid Program (AusAID)-funded project “Capacity Building for Mine Action Planning.”

Clearance of Suspected Mine Areas (SMAs) 2000–2005

Responsibility for Clearance 2000–2005 (by number of SMAS)

Andauk Haeb Commune 20
Kanteu Muoy Commune 11
Kruok Choeur Village 8

Number of SMAS

Total SMAs
Cleared since 2000
Partly Cleared since 2000
No Clearance since 2000

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<tr>
<th>Responsibility for Clearance 2000–2005 (by number of SMAS)</th>
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<td>CMAC 5%</td>
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Community 86%
Informal Demining

The existence (and even prevalence) of community-based mine action initiatives is not a new phenomenon. As long ago as 1999, the Landmine Monitor reported on village demining in Cambodia. Beth Borrowley of Handicap International in her article “Returning Life to Field and Forest: Mine Clearance by Villagers in Cambodia,” identified how village deminers work in Cambodia. This information was further expanded in her book Crossing the Divide: Landmines, Villagers and Organizations (published in 2005). Most recently, Handicap International has published the report “Villagers and Organizations: Informal Demining” recently, Handicap International has published the report “Villagers and Organizations: Informal Demining” in Cambodia. This information was further expanded in her book Crossing the Divide: Landmines, Villagers and Organizations (published in 2005).

The intended result of mine action is to improve the safety and economic conditions and to make the area more accessible to farmers and families. The indicators that measure changes mines/UXO have on the livelihoods of rural populations in the three communities. These indicators are the number of families reporting some restriction on access to farmland for farming, access to water supplies and access to forests for the purpose of foraging or collecting firewood. Overall, as shown in Figure 5, the 15 villages reported 58 percent fewer families with restricted access to farmland. There are no families reporting access to water supply as a problem in 2000; 2003 and 2004, there were three deaths but only one mine-related injury in the two communes, for a total of four casualties. Five years later, in 2005, there were six deaths and eight mine-related injuries in the two communes for a total of 14 casualties. Four families with restricted access to farmland. There are no indicators that measure changes in socio-economic conditions in the 15 villages have been made by community-based mine clearance initiatives.

Informal Community-Based Mine Action Safety Issues

Battambang Mapu staff, during their field research, identified individuals and groups of individuals (village demining teams) that have delivered community-based mine action initiatives in the three communities. We conducted interviews in 2005 with some of these individuals in one of the villages included in the area. We conducted interviews in 2005 with some of these individuals in the villages included in the area. We conducted interviews in 2005 with some of these individuals in the villages included in the area. We conducted interviews in 2005 with some of these individuals in the villages included in the area. We conducted interviews in 2005 with some of these individuals in the villages included in the area. In all the SMAs cleared of mines/UXO by village demining teams, there have been no reports of mines being found subsequent to the demining work being completed and there have been no reported accidents in these areas.

The intensity of community concerns with safety issues increased significantly during the demining work. One accident was reported in the 15 villages in the last two years; this accident involved a person untrained in mine clearance crossing trees. In the two years before the NL1S in 2000, there were three deaths and one injury reported during informal demining activities in the 15 villages. This apparent improved safety record may indicate an increased sophistication in informal community-based demining over the last five years. The intensity of community concerns with safety of land cleared of mines is indicated by the elaborated procedures for quality assurance and handover that are knowledge of the location of suspected mined areas. It is the impression of the Cambodian authors of this paper that the most significant contribution to these dramatic improvements in socio-economic conditions in the 15 villages has been made by community-based mine clearance initiatives.

Informal Village Demining in Cambodia: An Operational Study1 by Michael L. Fleisher. Further, the NL1S also showed that, between 1998 and 2000, nine of the 15 villages in our selected area had reported to community-based mine action to help solve their mines/UXO-related problems. CMAC and MAG were active in seven of these villages, but in each of these villages, the community itself also undertook supplementary community mine action work. The assumption in the Cambodian mine action community seems to be that such community-based initiatives are a relatively minor contribution to the overall demining effort and at best are an addition to activities of the four major “official” Cambodian mine action organizations: CMAC, the Royal Cambodian Armed Forces, HALO Trust and MAG. Clearly the initial data available for the three communities reported in this paper challenges this assumption and suggests that, at least in these areas, the most significant mine action driving force informal, community-based initiatives.

Socio-economic Change

The intended result of mine action is to improve the life of affected communities. To assess whether or not such improvements have taken place, the NL1S created easily measurable socio-economic indicators. The NL1S report of the results for these indicators for 2000. The Battambang Mapu has recently obtained new data for some of these indicators. The indicators that we report here measure change in mine-related casualties and access to land and water resources.

Mine-related casualties. To measure the dangers associated with mines, data from the Cambodian Mine Victim Information System was used to compare the number of people killed and injured in the two years immediately preceding the NL1S in 2000 and the two years prior to 2005. Data for casualties related to mines for Kamkom Muoy and Andaeuk Haeb communes is used in this analysis. A dramatic reduction in the number of human casualties was found (see Figure 4). In 1998 and 1999 there were six deaths and eight mine-related injuries in the two communes for a total of 14 casualties. Four years later, in 2005 and 2006, there were three deaths but only one mine-related injury in the two communes, for a total of four casualties.

Access to land and water resources. We selected three indicators that measure changes mines/UXO have on the livelihoods of rural populations in the three communities. These indicators are the number of families reporting some restriction on access to farmland for farming, access to water supplies and access to forests for the purpose of foraging or collecting firewood. Overall, as shown in Figure 5, the 15 villages reported 58 percent fewer families with restricted access to farmland. There are no families reporting access to water supply as a problem in 2000; 2003 and 2004, there were three deaths but only one mine-related injury in the two communes, for a total of four casualties.

In all the SMAs cleared of mines/UXO by village demining teams, there have been no reports of mines being found subsequent to the demining work being completed and there have been no reported accidents in these areas. Similarly, although we only interviewed one landowner in the village, he also reported no accidents and no mines found after demining of five hectares (12 acres) that are now intensively farmed.

During the demining work, one accident was reported in the 15 villages in the last two years; this accident involved a person untrained in mine clearance crossing trees. In the two years before the NL1S in 2000, there were three deaths and one injury reported during informal demining activities in the 15 villages. This apparent improved safety record may indicate an increased sophistication in informal community-based demining over the last five years. The intensity of community concerns with safety of land cleared of mines is indicated by the elaborated procedures for quality assurance and handover that are knowledge of the location of suspected mined areas. It is the impression of the Cambodian authors of this paper that the most significant contribution to these dramatic improvements in socio-economic conditions in the 15 villages has been made by community-based mine clearance initiatives.
reported by contracted village demining teams. These procedures include handover certification by commune and district officials, quality assurance with metal detectors in the presence of these officials and other community representatives, and ploughing of the newly cleared land before handover.

During demining activities, both contracted village demining teams and the landowner described somewhat similar procedures. These procedures had been learned from employment in the armed forces and seemed to have been implemented in a disciplined manner. There have been no reported incidents during these demining activities.

The one accident reported seems to have occurred during what would describe as spacial, incremental, unplanned and informal demining in contrast to the disciplined and carefully planned activities of the village demining team. It is in such situations that it is to be most expected that accidents are likely to occur.

Removal and destruction of mines/UXO discovered by community-based mine action initiatives is often by arrangement with “official” organizations. This arrangement promotes safety by reducing risk from tampering with stored mines/UXO and risks associated with a road project. When the Provincial Land Authority requested the Provincial Land Authority to assist with a road project, a local land owner with ties to the district chief asked the charity to assist with a road project. When the Provincial Land Authority requested the Provincial Land Authority to assist with a road project, a local land owner with ties to the district chief asked the charity to assist with a road project. When the Provincial Land Authority requested the Provincial Land Authority to assist with a road project, a local land owner with ties to the district chief asked the charity to assist with a road project. When the Provincial Land Authority requested the Provincial Land Authority to assist with a road project, a local land owner with ties to the district chief asked the charity to assist with a road project.

Conclusion

Early results of data collected by the Battambang MAPU in 2005 concerning mine clearance are very encouraging. A large portion of the SMAs in the selected areas have been cleared of mines and are now safe and in productive use. Socio-economic impacts of mines/UXO in the areas have declined dramatically. “Official” mine action has been minimal in the 15 villages during the last five years. Most of these socio-economic improvements are believed to be attributable to informal community-based mine clearance initiatives. Over 500 hectares (2 square miles) have been cleared of mines/UXO in five years, more than 90 percent by community-based mine action initiatives.

Injuries and deaths from mine/UXO accidents in the selected area have decreased from 14 to four during the comparable two-year periods. The number of families denied access to agricultural land has decreased by 58 percent, despite an increasing population. Safety issues related to the cleared land after demining and also during the demining process are exemplary. There have been no reported mine-related accidents on land that has been cleared by community-based mine action initiatives. Only one accident has been reported during unplanned activities.

The sophistication of contracted group mine action is remarkable and the results are impressive. In one instance, a process for local community verification of clearance work has been developed. Although contracted mine clearance of this type maybe a unique situation in Cambodia, its success may stimulate similar initiatives that complement “official” demining.

This report is based on data collected in 2005 by the MAPU in Battambang and it compares this data with data collected by the NL1S in 2000. Currently, this data is only available for selected areas in Battambang, but the MAPU is attempting to prepare a comprehensive inventory. With this new data, it is possible for the first time to quantify the changes in mine-contaminated areas in Cambodia.

The analysis presented in this paper and our conclusions are the opinions of the authors and do not necessarily present the views of GeoSpatial International Inc., the government of Cambodia, the Royal Government of Cambodia, GeoSpatial International Inc., or the government of Canada.

see “References and Endnotes” page 104

Mr. Le Phu, 48, was killed instantly and his daughter seriously injured in June 2005 when, according to Clear Path International and Vietnamese officials, an 81-millimeter (3-inch) mortar exploded in Huong So commune of Hue city in central Vietnam. Le Phu’s young daughter was killed instantly and his daughter seriously injured in June 2005 when a mortar round hit his house. In this case, the mortar round hit his house.

By developing mine risk education and training materials specific to regions and countries, the Golden West Humanitarian Foundation tries to help prevent landmine casualties. Yet deaths and injuries from human interactions with explosive remnants of war continue to occur for many reasons.

- By Alan R. Vosburgh | Golden West Humanitarian Foundation

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Observations on Recent Changes in Northwest Cambodia’s Mine/UXO Situation, Simmonds, et al. [from page 24]

Endnotes

1. Landmine Impact Survey, which is common in use in most other parts of the world.


The War Goes On, Vosburgh [from page 27]

Endnotes

1. In the United States this conflict is referred to as the Vietnam War.


Claiming the Future, Siisavath [from page 29]

Endnotes


4. 1 square kilometre is equal to about 0.386 square mile.


6. 1 hectare equals approximately 2.5 acres.

Developing Alternatives: The Locality Demining Model in Cambodia, Leighton [from page 35]

Endnotes

1. Michael Morice in his report, Tempering: Deliberate Handling and Use of Live Ordnance in Cambodia (MGI, Handicap International Belgium, Norwegian People’s Aid, 2004), recognizes that deliberate handling occurs amongst the most vulnerable families with the least traditional economic opportunities such as generation of income through livestick or land ownership. For online text of this report see http://www.magi.org.uk/mag/en/cambodia/tempering.pdf.

2. Review of the locality demining model was undertaken by Pie Wilgen for MAG.

3. As observed by MAG Cambodia’s technical operations manager, Gary Fenton.


5. 1 square kilometre is equal to about 0.386 square mile.

6. 1 hectare equals approximately 2.5 acres.


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