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Balancing risk: village de-mining in Cambodia

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ABSTRACT *Informal mine clearance by villagers in Cambodia has been a controversial subject among mine action practitioners for the past decade. Discussions have centred on the ethical question of whether these villagers should be provided with training in de-mining techniques. This article explores the circumstances under which villagers conduct mine clearance. It suggests that the engagement of villagers in this high-risk activity largely results from a combination of their vulnerability to other risk factors and their ability to conduct basic de-mining. On this basis, it is suggested that the most effective way of addressing village de-mining is not through transferral of expertise or prohibition of such activity, but through a focus on the underlying vulnerabilities that force people intentionally to take risks.*

Throughout rural areas in Cambodia where there is heavy landmine contamination, a sizeable number of villagers deliberately enter suspect areas and undertake mine-clearance activities using the simplest of farming tools. Understated, informal and sporadic, the activities of these villagers provide a stark contrast to the smartly uniformed and equipped platoons of professional de-miners from humanitarian organisations who inch across the land with military precision. The villagers lack the sophisticated equipment of the platoons: without metal detectors, a hoe and a bamboo stick suffice to locate the mines. No first aid team stands by. And the only hope a village de-miner has of receiving medical treatment in the event of an accident is if other villagers hear the blast and come to assist.[1]

This article examines the local-level practice of village de-mining in Cambodia by focusing on the testimonies of village de-miners interviewed as part of a research study conducted by Handicap International Belgium (HI-Belgium) in 2000.[2] The fact that villagers are involved in mine-clearance activities has been noted and documented to a limited extent by mine action practitioners since the early 1990s,[3] but information pertaining to the motivations and risks involved was previously lacking. The HI-Belgium study set out to provide a more comprehensive insight into the motivations and practice of village mine clearance and to provide an assessment of the risks taken. The field research for the study was carried out from July 2000 until January 2001 within the provinces of Battambang and Banteay Meanchey and the municipality of Pailin.[4] Situated

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contiguously in northwest Cambodia, these areas share a border with Thailand and are considered among the most heavily mine-contaminated regions of the country.[5]

The research findings clearly illustrated that village de-miners in Cambodia demonstrate the inherent ability of people living in difficult and dangerous situations to draw on existing knowledge and skills to develop strategies of self-help. The presence of village de-miners forces recognition that, in contrast to their usual depiction as passive victims, communities affected by landmines are in fact active subjects, dealing with their own local situations on their own terms. Their attitude towards the risks involved in clearing landmines is very much one of balancing the risk of possible injury against other equally pressing problems and risks that they face on a daily basis.

By way of contrast, mine action organisations are in the business of risk elimination, a stance that derives from a Western conception of the landmine crisis and the development of international standards to guide interventions. As a result, village mine-clearance activities have been a source of anxiety and uneasiness for the humanitarian mine action organisations that have been operating in Cambodia since the early 1990s. This is partly because village de-miners are one group of civilians who appear blatantly to flout the 'don't touch' message of mine action, but also because questions perhaps have to be raised as to why local-level, unprofessional de-mining is occurring concurrently with the humanitarian mine action intervention. The debates about village de-mining within mine action circles have largely focused on the problematic issue of whether village de-miners should be trained, or at least provided with some safety equipment. Those advocating training village de-miners have met intense opposition from practitioners who believe that it would be impossible to maintain adequate safety standards. As a result, the sector continues to approach the village de-miner issue through an authoritative discourse on technical expertise, professionalism and safety.

This article contends that a more rigorous analysis of the circumstances of village de-miners reveals that the debate on training village de-miners is only one small part of the equation and has an overly narrow focus on technical expertise and safety. This has prevented mine action from addressing the problem in other ways. Rather than focusing purely on the risk aspects of village de-mining, the challenge for mine action is broader: to better acknowledge existing local-level capabilities and to better understand and address the vulnerabilities that make villagers susceptible to undertaking risky activities such as mine clearance. This requires mine action to complement its technical, risk-elimination focus with a more community-oriented approach (whereby communities are invited to play a more active role in defining and dealing with the mine problem in their locality) and to provide a more flexible clearance response integrated with broader development initiatives. Once the vulnerabilities that make people susceptible to the hazards of mines begin to be addressed, village de-mining and other high-risk activities will decline.

De-mining for survival

> All over the world huge numbers of ordinary, unremarkable people demonstrate a capacity to tenaciously endure and adapt, an unspectacular process which largely goes on outside the gaze of humanitarian agencies.[6]

For over 30 years Cambodia, situated in the heart of Southeast Asia, has had a chequered history of warfare, isolation and social turmoil. The use of landmines has featured prominently throughout the different periods. The utility and easy availability of landmines encouraged their use by the insurgent rebel forces operating in the peripheral forested areas during the early 1970s and by the opposing, ill-equipped Lon Nol government forces. From 1975 to 1979 the isolationist regime of Democratic Kampuchea brought a temporary halt to the civil war, although the Khmer Rouge still used landmines extensively, both for military purposes and to control the movements of the civilian population. During the 1980s the northwestern provinces became the main battlefield in Cambodia as the Vietnamese-installed government of the People's Republic of Kampuchea (PRK) strove to keep back the Khmer Rouge and the resistance forces of the KPNLF and ANS.[7] It was during this period that the 600-km K5 mine barrier was constructed by the PRK government in an attempt to seal the Thailand–Cambodia border against these resistance factions. Even following the United Nations-supported 1993 national elections, pockets of Khmer Rouge resistance remained, and seasonal offensives between the Khmer Rouge and government forces continued in the north and northwestern border areas.

The military situation in Cambodia has now stabilised following a process in which the Khmer Rouge were reintegrated into the Royal Government of Cambodia, but mines continue to impede the lives of many people living in former conflict zones. Villagers in rural Cambodia are to a considerable extent subsistence oriented and depend on agriculture for their livelihoods, supplemented by secondary activities such as fishing or the collection of forest products for consumption or sale. The presence of landmines in any area that offers potential income-generating or livelihood support complicates the household decisions and planning necessary to survival. Varying levels of vulnerability can intensify this situation for some households, creating a situation where many are forced to choose options they would not normally select.[8]

The vulnerability of many people living in the northwest of Cambodia has increased because of the long-term insecurity of the recent past. A large proportion of the population has been transitory as a result of the ongoing conflict, either as refugee populations and internally displaced persons or as military populations. Few have savings or assets, and many have no claim to land. The high population density in these border areas and the shortage of mine-free land means that many of these former transient populations are now settling in or near to mined areas. Many strategies employed by these vulnerable families involve intentional risk-taking, whereby villagers will enter known mined areas to collect resources such as firewood, mushrooms and grasses for thatching. One of the activities employed by some families living in mine-contaminated areas to help sustain household food security is mine clearance.

Many people who returned to their existing land and homes after the years of

warfare found that these had been mined during their absence, and have often undertaken mine clearance to enable their families to resettle in these areas and reclaim their land. In some areas villagers who returned to their homes in the early 1990s and began mine clearance no longer engage in de-mining activities because they now have enough land for their housing and agricultural needs. Noi and her husband, who live in a village in the Rattanak Mondol district of Battambang, are one such family. Rattanak Mondol district has long been considered one of the most heavily mined regions in Cambodia, but it is also an area where many villagers returned after the war because of its rich soils and former agricultural productivity. Often villagers returning to this area have spent a greater proportion of their lives outside their villages because of the intensity of fighting in the area. Noi and her family have been living in the village since 1979, although during the worst parts of the fighting they were frequently forced to flee to a neighbouring district. Noi explains that they have a small piece of *chamkar* land that her husband cleared of mines.[9] He also cleared 14 mines from their housing land. Despite the danger involved in her husband's de-mining activities, Noi explains that his ability to clear the landmines helped to improve their family situation and gave them a sense of security.

The lack of security people have over their land rights has led to increasing instances of land-grabbing, evictions and landlessness throughout Cambodia. For vulnerable families who have come to the border areas to settle, the situation in relation to land is often precarious. Land appropriation by speculators, large-scale operators and military and other powerful groups is increasingly playing a part in the perpetuation of landlessness, often forcing people to live on or near mined land. Pon, Hean, Vuthy and Voeun live in a village in Poipet commune, Banteay Meanchey province. The four men have been based in northwest Cambodia since the early 1980s, when they fled to refugee camps on the Thailand–Cambodia border and later enlisted with the army of the KPNLF to fight against the perceived Vietnamese occupation. After they left the army, the men and their families felt unable to return to their homelands in the south of Cambodia as they no longer had claims on land there.[10] Instead, they decided to stay in the northwest and came to live near Poipet town on the Thailand–Cambodia border. At the time the families arrived, Poipet was a small market town, but as peace and stability returned to Cambodia the border reopened and the town of Poipet began to boom economically. The accompanying spate of urban construction and the increased demand for land soon engulfed the village area where the families were living. In 1996 a senior military commander laid claim to this land, and the people who had settled there were forced to move. Along with other villagers, the men and their families came to live in their current village in an area next to the railway—an area contaminated with landmines.

The four men are now village de-miners. They learned how to lay and clear mines at a Thai military training centre while they were serving in the army. They have now put these skills to use so that they can clear land for their housing and farming needs, and so that they can safely enter the forest to collect firewood and supplementary food products. Sometimes they also clear mines for other villagers when they find them in their fields or along paths and tracks to the forest. They do not get paid for this; they just do it to help.[11] The men say that the advantage

of being able to clear mines is that they now have land for their house and for some crops, but they realise the high risks involved in their clearance activities. As Pon put it, 'If we are killed or injured by clearing mines, our wives would become widows and our children would have no future. We are also afraid that the powerful people will come and take away the land that we have cleared for our families.'

The status of mine-contaminated land in Cambodia is somewhat murky and, for those people who have decided to settle on mined land, issues over land tenure and ownership are complicated. Although officially state land, mined land often assumes the character of unclaimed land, a fact that draws many poorer families to settle in these areas, as does the belief that if land is mined other people will be less inclined to seize it. This belief has led some villagers to leave mines on the land deliberately where they settle to prevent it being taken by others. This is the case in Kabal Laan, an area in Battambang province consisting of bamboo thickets where 13 families have been living for eight months. The families make their living by cutting the bamboo to sell, and they have made clearings within the thickets and built houses from the bamboo. Cut bamboo is stacked at the roadside awaiting transportation to market. However, the whole area is littered with PMN-2 mines, and casings can be seen strewn over the land. The villagers have cleared the mines from their housing plots and from the paths to reach the bamboo, but they only clear the mines that directly impede their livelihood activities. As one of the village de-miners explained, 'Although I know there are mines all over the land, I do not de-mine in other places because this land is not ours. If I clear all this land I will be told to leave, as the owner is only afraid to live here when there are mines.'

Households may try to avoid undertaking high-risk activities such as mine clearance by looking for alternative means of income. Many villagers living in mine-affected areas close to the Thailand–Cambodia border have been drawn to the area for the very reason that alternative income-generation activities are possible, and often at least one family member will work as an itinerant labourer in Thailand. However, such work is notoriously high risk and unstable. In O'Chrou district in Banteay Meanchey province, many villagers cross the border into Thailand on a daily or longer-term basis to find labouring work in rice planting and harvesting, sugar-cane cutting or weeding. However, early in 2000 the Cambodian and Thai authorities decided to close the border crossings in the area because of an increase in robberies committed by armed gangs operating on both sides of the border and simmering border tensions. Unable to work in Thailand, the villagers were left with little choice but to eke out a livelihood from their surrounding natural resources, the majority of which are affected by mines. A village de-miner explained, 'I would like to stop clearing mines and look for work in Thailand, but now the border is closed and so I have to work in the mine-fields again. If I don't do it my stomach will be empty.'[12]

Villagers often claim that they have to clear mines because they cannot wait for mine clearance by mine action organisations. As with the majority of people relying on a subsistence livelihood, meeting food needs is a daily proposition, and to wait for mine clearance is often an unrealistic proposal. For those villages that have had clearance, it is a welcome intervention in terms of enabling them to

access resources and prevent accidents. As a woman in O'Chrou district commented, 'Now [the organisation] has come to clear the mines in my village on the housing plots. This is very important for me. If [the organisation] clears the land I can grow vegetables to sell.' However, for many villagers mine action is, at best, a fleeting intervention. Villagers may have seen mine-awareness posters or attended a presentation, or they may have glimpsed mine action vehicles passing along the road. The time between an organisation first visiting a village to survey and mark land, or to conduct mine-awareness training, and finally coming to clear land can be several years, and this lengthy wait is a source of frustration that often drives villagers to continue with their own clearance activities. As one village de-miner objected, 'If I wait for the clearance organisation to clear the mines in the village, my children will die of hunger'.

Village authorities, who are responsible for submitting requests for village clearance to the commune authorities, often express how difficult it is to request clearance effectively. As a village chief explained: 'We have reported about the mine problem many times, and used a lot of paper, but no one has come to clear. The mine clearance organisations pass through the village, but they do not stop.' The process highlights their feelings of being on the periphery, removed from the centres of decision making. The frustration at the slowness of the mine action response is understandable. Mines are a constant threat to villagers within their daily lives, and decisions are thus based on pragmatism.

Capacities and pragmatism

Paul Davies has suggested that the prolonged conflict in Cambodian history has led to a certain 'militarisation' of Cambodian social and cultural life, whereby civilian and military life have somehow become fused.[13] Perhaps what should be drawn from this notion is rather the need of a society affected by war somehow to engage and deal with the situation. The village de-miners working in the north-western provinces are, like the landmines they are clearing, a product of the long years of civil war that blighted much of that part of Cambodia, and their efforts to gain livelihood security through the clearance of mines often draws directly on their own experiences during the conflict. As one village de-miner in Samlot district, Battambang province, explained: 'I forced my mind to do the work when I was a soldier. No one could escape from the duty in military service. And today I also force myself to de-mine for rice fields and *chamkar*.'

The recognition that many villagers in Cambodia have long been involved in situations of warfare as civilians or soldiers is important in the study of the local-level reaction to the mine situation. Village de-miners, despite feeling that they have few options available to them, are taking an active role in their lives and drawing on their existing skills to improve their family situations. The majority of village de-miners are demobilised soldiers who learnt the rudiments of mine deployment and clearance during military service. As the village chief of Stung Bot village remarked, 'We have had over 20 years of war, and so everybody had been a soldier at some time or other'. The prominence of mine warfare during the Cambodian conflict meant that soldiers often learnt on the job by watching fellow-soldiers or by being taught informally. Others, especially Khmer

Rouge soldiers, also received specific military training in mine clearance and deployment techniques, particularly from Chinese military specialists. Officers of the resistance forces of the KPNLF and the ANS are reported to have received training from a British Army team drawn from the Special Air Service and from the Thai Army.[14] The long years spent at war have helped village de-miners become familiar with certain types of mine, the deployment tactics of the different factions and the types of terrain likely to be contaminated.

The way in which village de-miners clear mines reflects the needs, the levels of skill and also the tools available to carry out the activities. Mine clearance is not a full-time occupation for most villagers, but rather a strategy that is employed as and when needed. A pattern emerges of villagers undertaking mine clearance mainly in the dry season, the time when farmers are clearing land for cultivation or villagers are undertaking excursions to forage or scavenge from open-access resources such as forests and wetlands to compensate for dwindling rice supplies. Many de-miners also state a preference for clearing in the dry season because the undergrowth is dry, making it easier to see mines on or near the surface. It is also believed that the hard ground makes it less easy to trigger a deeply buried mine should one be accidentally stepped on.

The majority of village de-miners use basic farming or household implements to clear mines.[15] Usually a hoe or a bamboo stick is used to prod for the mines, and the soil is excavated from around the mine using a knife. Village de-miners generally only clear mines from parts of land where mines are believed to have been laid or where mines directly pose a barrier to access, resulting in a 'patch-work' type of clearance. Access to resources is prioritised over the complete safety of land, and relatively large areas will go unchecked if they are thought to be uncontaminated or do not pose a barrier to access. Many farmers who suspect that there are mines on their land will actually burn the land before searching for mines in the belief that the heat from the fire may detonate some of the mines and burn tripwires.

Village de-miners frequently disarm mines when they remove them from the ground to make the mines safer to handle and to allow them to collect several mines together before disposal.[16] When they collect the mines together, village de-miners often place them in visible places, such as on top of tree stumps or hillocks, or surround them with thorn bushes or wooden stakes to prevent other villagers touching them. Burning is the most common disposal method. Firewood is placed beneath and around the mines, and dried grasses are placed over the top. The fire is lit by making a fuse of dried grass, which allows the de-miner time to light the fire and leave the area before the fire takes hold.

A few village de-miners interviewed during the HI-Belgium study admitted to being 'addicted' to clearing mines, which can perhaps be attributed to the adrenaline provided through participating in a dangerous activity. Their military knowledge and background sometimes gives these local-level de-miners a false sense of confidence, which could lead to carelessness in clearance activities, a trait that was observed on a few occasions.[17] However, the majority of village de-miners do attempt to practise a certain degree of self-regulation and caution to reduce the likelihood of injury both to themselves and to others. This includes not clearing mines when they are drunk, ill or tired, or when other people are present,

and only removing and neutralising mines that they are familiar with. Village de-miners rarely claim that the land they have cleared is fully safe, and many fear that there are still mines in the ground that they have not been able to find. Land is regained through slow and careful cultivation practices in the years following clearance.

Despite the overwhelming need for mine-free land, villagers involved in clearance activities rarely sell their mine-clearance services to others.[18] Many village de-miners expressed concern that if they cleared land for somebody else they would be accused if an accident later occurred on that land, or that if they themselves were injured during the de-mining it would be difficult to claim compensation or financial assistance. These grey areas in terms of responsibility and accountability appear to be strong factors in dissuading the majority of villagers from clearing mines from the land of others.

Village de-miners put themselves at risk because they enter minefields, because they clear mines by eye and with basic equipment, and because they handle mines. However, the HI-Belgium study found that the incidence of accidents is not as high as one might expect. Of the 111 village de-miners interviewed directly or indirectly through their families, 96 had not sustained injuries from their clearance activities, although some had injuries dating to their time as soldiers. Fifteen village de-miners had sustained injuries, often scarring to the chest, loss of fingers or eye injuries. It was a common remark from village de-miners that they felt they were more likely to be seriously injured by accidentally stepping on a mine than through the process of de-mining.[19]

The village de-miner training debate

Although it is clear that villagers have been clearing mines in Cambodia since long before mine action officially arrived with the United Nations peacekeeping mission in the early 1990s, village de-mining activities have only been debated since the arrival of these organisations. Village de-mining has become an issue seen in relief against the outside interventions, defined through the lens of professional mine action, and as such it loses its definition as something that is in fact independent and autonomous which predates mine action. The debates surrounding village mine-clearance activities in Cambodia have been argued within the framework of reference of professional mine action, contrasting village clearance activities with mine action perceptions concerning skills, training, risk and safety.

The first documented account of village mine-clearance activities in Cambodia was compiled in 1993 by Adjutant Philippe Houliat, a mine-clearance practitioner serving as a supervisor and instructor with the French contingent of the Mine Clearance Training Unit of the UN mission. Working in the heavily mined province of Banteay Meanchey in northwest Cambodia, Houliat came across the activities of a number of Cambodian villagers involved in the detection and removal of mines located in the areas surrounding their villages. Using basic question guidelines, he interviewed five village de-miners, photographed their clearance methods and compared their techniques to those used in professional mine action.[20] A month after these initial surveys, Houliat drew up a plan for a

three-day training course for village de-miners in which trainees would learn about mine identification, mine marking, basic survival and rescue techniques, and, controversially, de-mining and mine disposal techniques.[21] The trainees would be provided with a de-mining kit consisting of a prodder, a trowel, a spade, marking signs, red string, keys to neutralise mines and notebooks to register de-mining or marking operations. Demonstrating a genuine concern for the work of village de-miners, Houliat believed that such a course would enable village de-miners to carry out, for the benefit of their community, limited mine-clearance operations in the vicinity of their villages.

The proposal opened up a heated debate within the mine action sector in Cambodia. Opposition to the proposal voiced by other mine action practitioners was framed in terms of risk and safety. The main concern raised by de-mining agencies was the dilemma of having two perceived standards: that of the professional de-mining teams and that of the village de-miners. This was seen largely in terms of the 'unconventional methods' used by village de-miners compared with the regulated procedures and safety standards followed by the de-mining teams. Major P J Curry, a technical adviser to the Cambodian Mine Action Centre (CMAC), responded to advocates of village de-miners by concluding: 'On the surface it would appear that to teach villagers anything beyond the current mine awareness doctrine is irresponsibility bordering on criminal. If CMAC were to teach villagers that they were capable of *demining*, that would indeed be criminal.'[22]

The debate about training village de-miners is important for our analysis here. Although the concerns raised by both sides in the debate are legitimate, they also have to be placed firmly in the context of the mine action view. Village de-mining was considered from the viewpoint of Western conceptions of expertise, risk and safety. The knowledge, skills and techniques of the village de-miners were set in contrast to those of the professional de-miners, and the risks taken by village de-miners in carrying out mine clearance were defined through the international mine action definition of acceptable risk. The debate revealed that the way in which the landmine risk is perceived by mine action practitioners differs from the way it is perceived by village de-miners working at the local level. As Efthihia Voutira *et al* explain, 'givers and recipients of aid may share concern with the elimination of the immediate effect of crises, but they do so from different cultural perspectives'.[23]

Perceptions of risk

Mine action is in the business of risk elimination. For mine action, *risk* is a key term where mines are the hazard and people are the elements at risk. For risk to be reduced, exposure to the hazard must be minimised, either by removing the hazard or by keeping the elements at risk away from the hazard. For clearance platoons this is achieved through stringent safety measures and international operating procedures that detail the manner in which specific mine-clearance operations are conducted, helping to ensure that professional de-miners are exposed to the minimum amount of risk despite the dangerous nature of their work. For villagers living in mine-contaminated areas, mine action attempts

to reduce and mitigate risk through the process of clearance, through the marking of land awaiting clearance and through mine-awareness education to alert populations to the danger of mines. The emphasis on the safety of both the land cleared and the local population who will use that land remains the main banner under which humanitarian mine action defines and distinguishes itself.

In terms of Western standards of humanitarian de-mining, village mine clearance is perceived as a hazardous, high-risk and inadequate practice with no set clearance standard. However, perceptions of what counts as a risk can vary between different cultural settings, as well as between communities or individuals within the same setting. For many villagers living in mine-affected areas the problem of landmines has to be seen as only one part of the sum of problems and hardships that they face on a daily basis. Villagers are often surviving on minimum resources, and risk is always present in their lives. Risk cannot be avoided, but is dealt with by the balancing of livelihood strategies, with the benefits of one activity balancing the constraints of another. Village de-miners frequently acknowledge the risks involved in mine clearance and, as former soldiers, most have had first-hand experience of the damage that mines can do. However, the risk of sustaining a mine injury may be relative to other fears such as disease, malnutrition, eviction and land insecurity, and each villager has to weigh the expected gains of a certain activity against possible risks and losses. As Deborah Eade explains, 'for people who are living in poverty and on the margins of society, the difference between normal life and what outsiders define as a crisis may be marginal'.[24] This viewpoint is endorsed by the wife of a village de-miner in Battambang province who commented: 'Today my family earns a living by doing farming. As far as risk is concerned I think it is very dangerous for a man to work as a village de-miner. But if my husband does not clear mines my family will have no rice fields and we will have no way to make money to support the family.'

Mine action, which focuses so heavily on the absolute risk of landmines as hazards, tends to neglect the risks related to the social and economic vulnerability of many individuals and communities living in mine-contaminated areas. Through the imposition of the dominant risk-elimination narratives of mine action, encouraging villagers to abandon high-risk activities and to await clearance by de-mining platoons, local-level coping strategies may effectively be denied and vulnerabilities increased. If the capacity of the mine action sector in Cambodia were such that it could meet all the needs of all the people living in mine-contaminated areas, this approach would perhaps be acceptable. However, the current approach encourages dependency on an outside intervention that is unable to meet the demand. As a deputy village chief in the border area of O'Chrou district in Banteay Meanchey province explained: 'Now with all the laws banning people from cutting down trees and clearing mines it makes it very difficult for people to live.[25] They have to rely on labouring [in Thailand]. But when the Thai border closes, what can people do?'

The risk potential of being injured or killed by a landmine may vary according to both the presence of the hazard (the landmine) and the vulnerability of the individuals or communities living in proximity to that hazard.[26] This vulnerability may be mitigated to varying degrees by existing capacities possessed by

these communities or individuals. When mine action organisations mark land as contaminated, for example, the organisation is dealing directly with the absolute risk of mines as hazards and is effectively isolating the population from that risk. However, if villagers need to access the resources in that area to meet their livelihood needs, they will continue to take risks by entering the mined area to mitigate the risk of being unable to provide for their food security needs. This is a function of vulnerability. For a household the ability and courage of a family member to clear landmines to allow access to either agricultural land or other forms of common property resources confers a distinct advantage over households which are unable to clear mines.

What this analysis suggests is that the mine action sector requires a shift in thinking from a preoccupation with the actual physical risk posed by landmines to a consideration of the other risk factors prevalent in the lives of those living in mine-affected areas. There is a need for mine action to strike more of a balance between the exigency to accommodate safety and quality-assurance concerns, and the need to understand and address the vulnerabilities that lead to high-risk activities such as village de-mining. As James Lewis suggests, 'by attending to vulnerability, the effects of all potential hazards can be accommodated to some degree—from the point of view of the victim's potential to survive and recover'.[27]

Moving forward

The emphasis on risk and safety has continued to form the main basis for discussion of village mine-clearance activities among mine action practitioners. As a result, the solutions that have tentatively emerged for village de-mining are still framed in terms of the transferral of expertise, the assumption being that gaps in knowledge 'may be overcome with efforts such as extension, technical assistance and training'.[28] Proponents of training village de-miners have argued that this would directly confront the problem of village de-miners working with substandard tools and techniques. Theoretically, trained village de-miners would be a relatively low-cost option for mine action, as villagers could receive a token salary and would be able to remain in their communities while working, thus avoiding any expensive accommodation and transportation costs. However, the majority of mine action agencies active in Cambodia have been opposed to the formal facilitation of village de-mining because they believe it cannot be made acceptably safe under any conditions.

What is more to the point is that debate of this nature essentially removes the issue from the context of the village. Many villagers who are clearing mines are doing it in order to access land and resources for their own individual livelihood purposes. To remove them from this activity would not be a long-term solution and in fact may raise questions about the creation of an unsustainable capacity when the mine action agencies finally withdraw. Moreover, despite the obvious initial enticement of the perceived high salary of working for an agency, several of the village de-miners interviewed during the HI-Belgium research said that they did not want to be trained in de-mining. As one village de-miner in Pailin succinctly replied, 'I do not want to improve my mine clearance, nor attend a training course, but I want the organisation to clear the mines in the village. If I

attend a training course on mine clearance my family will die of hunger.'

The focus on risk and safety has not only led to an overemphasis on the technical side of mine action: in many cases, it also has led to a somewhat didactic approach whereby villagers are treated as passive audiences rather than active subjects. The assumption that village de-miners are foolhardy, irresponsible people has tended to be relatively widespread, frequently endorsed by the negative portrayal of high-risk groups in mine-risk education. In addition, participation in the mine action process has been relatively cursory, the extent of village involvement often reduced to answering questions on a socioeconomic survey, being employed to place permanent markers or attending mine-risk education presentations. It is clear that there is a need both for mine action to become more accountable to the people it seeks to help and for those people to be allowed to play a greater and more active role in mine action, on the premise that awareness and understanding on both sides works best when communities are actively involved. People such as village de-miners who undertake high-risk activities can become key resource people for mine action interventions because of their knowledge of both the local mine problem and the main people at risk. However, it is important not only to extract information from those who are affected by mines, but also to provide it to them. The lack of access villagers have to reliable information concerning mine action activities has not only undermined the capacity of villagers to realise the options available and determine their own interests, but has also often resulted in villagers continuing with high-risk activities such as mine clearance. Mine action practitioners need to embrace a more community-oriented approach to their work, whereby they take on the role of facilitator and listener, thus gaining a better understanding of the local-level situation and ensuring that interventions actually begin to make more of a positive difference in the lives of those living in contaminated areas.

For such a system to work the voice of the people needs to be not only heard but also heeded, with more decision-making power placed in the hands of those living in the contaminated areas rather than around the planning table in agency headquarters. In many cases this requires a move to a more flexible clearance response that can better attend to village requests, not unlike a fire brigade.[29] As Steve Brown has suggested, 'The key to achieving the breakthrough lies in a risk management process with a more realistic, some might say pragmatic, approach to mine clearance using existing resources and technology'.[30] For village de-miners, access to resources tends to be the priority over complete safety of land, and generally villagers only clear mines that directly block their access to an area. By doing this, villagers are able to remove nuisance mines relatively quickly and easily and to continue with their daily activities. This is a method that differs greatly from the traditional mine-clearance approach, which relies heavily on large platoons of de-miners who methodically clear every inch of large areas of land. The idea of quick-response, mobile teams that can carry out partial mine clearance, focusing on small priority tasks for villages, can provide for risk-reduction assistance in what would otherwise by a high-risk environment while helping to reduce livelihood vulnerabilities by facilitating access to resources. In effect, such quick-response teams would be clearing areas of land that might otherwise be cleared by village de-miners. These teams could also be

employed to provide quality-assurance checks on land already cleared by villagers, thus freeing up more land in accordance with the standards required by mine action.

The analysis of perceptions of risk and of the underlying vulnerabilities that place people in situations where risk is a factor of everyday life suggests that the value of mine clearance is reduced if it exists in a vacuum. Simply clearing the land of mines does not guarantee that risk will be mitigated, development opportunities seized and vulnerabilities reduced. It has become increasingly clear that mine action cannot work alone but is required to better integrate with other organisations and institutions involved in development initiatives, including land-use planning and titling, community-based micro-projects and advocacy. Increased integration with development initiatives has several benefits. It can allow mine action to tap into the knowledge of development practitioners who often have far more experience of working in a participatory manner with local communities. Development organisations can provide support, activities and services that can begin to address food security and livelihood needs before, during and after de-mining, and to work towards ensuring that once land is de-mined it remains with the intended beneficiaries. Working in an integrated manner with other organisations and institutions with different specialisations, mine action can move towards better addressing the broader set of problems faced by villagers living in mine-affected areas.

In conclusion, village de-miners in Cambodia demonstrate that there exist capabilities that are being utilised by people at the village level to deal with the environment in which they live. These capabilities should not be ignored or castigated because they contradict the dominant justification for mine action in terms of risk elimination. Instead, these activities should serve to inform mine action practitioners of both the capacities and the vulnerabilities existing in mine-contaminated villages, and should also encourage reflection on the strengths and weaknesses of mine action interventions in relation to such capacities and vulnerabilities.

Notes

[1] This paper concentrates specifically on villagers who '*doh min*' or 'clear mines'. This Khmer term refers to those villagers who carry out a relatively comprehensive mine clearance, involving entering mined areas, prodding the ground, extracting the mines and disposing of them through dismantling and burning. Other villagers living in mined areas often take actions to deal with mines but would not necessarily class their activities as 'de-mining'. For example, villagers may pick up mines they can see and move them out of their way or burn them *in situ*. In this paper, removal of UXO is not included within the definition of de-mining.

[2] R Bottomley, *Spontaneous Demining Initiatives: Mine Clearance by Villagers in Rural Cambodia*, Phnom Penh: Handicap International Belgium, 2001.

[3] The ICBL *Landmine Monitor Report*, New York: Human Rights Watch, 2000, p 389, provided figures for the area cleared of mines by village de-miners from 1993 to 1999 based on information obtained from the main mine action organisations working in Cambodia. Out of a total of 154 737 761 m^2 of land cleared, villagers were estimated to have cleared 69 780 000 m^2, 45% of the total.

[4] The research study by Handicap International Belgium (HIB) used a dominantly qualitative approach. In-depth semi-structured interviews were conducted with key informants and combined with participatory information-collection techniques such as ranking exercises, time-lines and participant observation. Ninety-four village de-miners were interviewed in a total of 45 villages in the provinces of Banteay Meanchey and Battambang and Krong Pailin. Other key informants included village

authorities, families of village de-miners, other villagers and the staff of mine action and development organisations. To complement and cross-check the qualitative data, a questionnaire was sent out to 12 mine- and/or UXO-affected provinces with the aid of the network of Cambodian Red Cross (CRC) data-gatherers working for the CRC/HIB Cambodian Mine/UXO Victim Information System (CMVIS).

[5] The three areas selected for the qualitative research are considered to be among the four most heavily contaminated in terms of landmines and battlefield ordnance, and the greater part of mine/UXO clearance resources in Cambodia are focused on these areas. The southeastern and northeastern provinces have greater contamination by aerial-delivered ordnance, largely dropped during the 1969–73 US bombing campaign against Vietcong bases. The extent of humanitarian mine action intervention in these provinces is minimal. The HIB study questionnaire covered some of these provinces.

[6] D Summerfield, 'The social experience of war and some isues for the humanitarian field', in J P Bracken & C Petty (eds), *Rethinking the Trauma of War*, London: Free Association Books, 1998, p 33.

[7] In 1979 the Vietnamese installed the People's Republic of Kampuchea government, but by 1982 the Coalition Government of Democratic Kampuchea had been formed on the border. The coalition involved an alliance of two non-communist resistance factions, the Khmer People's National Liberation Front (KPNLF), led by Son San, and the Royalist Sihanouk National Army (ANS). Recruits for the resistance factions were often taken from the refugee camps on the border, where many people had fled following the perceived Vietnamese invasion.

[8] SCVCS, 'Crossing borders: norms, vulnerability and coping in Battambang Province: Report #5', Phnom Penh: AFSC, UNICEF, IDRC, 2000. Page 1 defines vulnerability as 'the lack of buffers against difficult situations such as hunger and sickness, physical abuse, battering and incapacity, unproductive expenditures and exploitation'.

[9] *Chamkar* is the Khmer word for garden farming or the cultivation of land other than rice paddies.

[10] Following the war and the forced displacement of the Khmer Rouge years, thousands of internally displaced people within Cambodia and refugees living in camps on the Thai side of the border had to be repatriated or settled. Many families returning from the border after repatriation found that their former land had since been distributed to other families.

[11] The HIB study found that many of the village de-miners interviewed did help to remove isolated mines for other villagers without receiving payment. However, they often reported that they gained a certain amount of respect among the village population because they carried out such work.

[12] In February 2003 the whole length of the Thailand–Cambodia border was closed again because of a dispute between the two countries. A recent brief survey conducted by the NGO ZOA found that about 25% of the population in Poipet commune in Banteay Meanchey province will 'be in a situation where they have no resources left, no work, nothing to eat'. ZOA, 'Understanding the impacts of the border closure in Poipet', unpublished paper, March 2003.

[13] P Davies, *War of the Mines: Cambodia, Landmines and the Impoverishment of a Nation*, London: Pluto Press, 1994, p 19.

[14] R McGrath & E Stover, *Landmines in Cambodia: The Cowards' War*, New York: Asia Watch & Physicians for Human Rights, 1991, p 125.

[15] A small minority of village de-miners do have access to metal detectors, normally bought second-hand from Vietnam or rented from military contacts. Wealthier landowners may also clear large areas of land using tractors or bulldozers, although generally these landowners do not classify as village de-miners because they are not resident within the village.

[16] Disarming refers to the act of deactivating a mine by removing the fuse or detonator.

[17] In the mine action world, it is often assumed that village de-miners believe in the powers of various 'magic devices' that are said to protect the owner from harm. Village de-miners often do have such totems, often acquired during their military days, but the majority of village de-miners interviewed during the HIB research said that they no longer had any confidence in these charms. This is not to say that belief in such totems has been discarded completely, rather it continues to a lesser extent, alongside the realisation that safety is also linked to safe practice, care and attention.

[18] The HIB study found that 67% of the village de-miners interviewed cleared only for their own purposes.

[19] Recent statistics help to clarify this issue further. The CMVIS *Monthly Mine/UXO Victim Report*, Phnom Penh: CRC and HIB, December 2002, provides a 12-month report on activities by type of explosive (January 2002–December 2002). During 2002 12 people were recorded as being injured or killed while tampering with landmines (the definition of tampering includes de-mining, in addition to activities such as fishing or recycling explosives). This figure can be compared with the 79 people injured or killed while farming, 97 while collecting wood, and 97 while travelling. These figures seem to suggest that more people are injured or killed by landmines while carrying out livelihood activities in high-risk areas where de-mining has not taken place than are killed while carrying out de-mining

activities. However, many more people are killed or injured through tampering with UXO, usually in order to sell the scrap metal. Although UXO incidents are less frequent than mine incidents, they tend to claim more victims.

[20] Adjutant P Houliat, 'Processes used by the surveyed demining villagers to remove and neutralise discovered mines', unpublished paper, Phum Sdao, Banteay Meanchey, 16 April 1993; Houliat, 'Testimonies of Cambodian farmers volunteering as de-miners', unpublished paper, 5 May 1993; and 'Anti-Personnel PMN-2 mine removal and destruction by non-professionals', unpublished paper, Phnom Penh: MCTU/UNTAC, 10 May 1993.

[21] Adjutant P Houliat, 'Training session for de-mining villagers', unpublished paper, Phnom Penh: MCTU/UNTAC, June 1993.

[22] P J Curry, 'Concept paper: village self-protection against mines', unpublished paper, Phnom Penh: CMAC, 28 November 1994; original emphasis.

[23] E Voutira, J Benoist & B Piquard, 'Anthropology in humanitarian assistance', *Network on Humanitarian Assistance*, Vol 4, Luxembourg: European Communities, 1998, p 2.

[24] D Eade, *Capacity-Building: An Approach to People-Centred Development*, Oxford: Oxfam GB, 1998, p 166.

[25] Cambodia signed the Ottawa Mine Ban Treaty on 3 December 1997 and ratified it on 28 July 1999. On 28 May 1999 a domestic law to 'Prohibit the Use of Anti-Personnel Mines' was passed by the National Assembly. The law bans the production, use, possession, transfer, trade, sale, import and export of anti-personnel mines and provides criminal penalties, including fines and imprisonment, for offences committed. ICBL, *Landmine Monitor Report*, p 381. The HIB research found that in some places villagers were aware of this law and were afraid to de-mine, whereas in other areas knowledge of the law did not appear to have filtered down to village level.

[26] See J Twigg & M R Bhatt (eds), *Understanding Vulnerability: South Asian Perspectives*, London: Intermediate Technology Publications, 1998, p 6 for common equations representing hazard, risk and vulnerability.

[27] J Lewis, *Development in Disaster-Prone Places: Studies of Vulnerability*, London: Intermediate Technology Publications, 1999, p 8.

[28] E Crewe & E Harrison, *Whose Development? An Ethnography of Aid*, London: Zed, p 132.

[29] This approach to the clearance of landmines draws on the success of the Explosive Ordnance Disposal teams (EOD), small mobile teams deployed by all the agencies working in Cambodia to remove UXO, ammunition and stockpiles. These teams are able to respond directly to village requests to remove UXO.

[30] S Brown, 'Mine action: the management of risk', *Journal of Mine Action*, 3 (1), 1999, at http://www.hdic.jmu.edu/hdi/journal/3.1/features/risk_brown.htm.