

**Divided We Fall: Towards An Understanding Of Community  
Risk Assessment:  
A Case Study From The Lao PDR**

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*Much of the theory that embodies the framework for community risk assessments has been drawn from varying peripheral disciplines. Many potentially important factors such as the suitability of existing disaster management philosophies in differing contexts, the need for methodologies accessible to those with limited training and the development of appropriate indicators for monitoring the success of participation have been largely neglected. Further to these issues that relate directly to the risk assessment, issues surrounding the role of governments in risk reduction and the recognition of the importance of risk perception amongst communities were also encountered during the research process discussed below and have been examined in the context of developing appropriate methodologies. The importance of small-scale threats to the surveyed community was identified during the field study as well as the need for the de-professionalization of risk assessment procedures, particularly for areas that would not ordinarily receive attention from disaster management practitioners but that would benefit from the principles used in the discipline. The study concluded that the development of a more flexible methodology that had the ability to adapt to the multifarious contexts that the process is employed in is a key factor in ensuring the positive future development of the process*

**Key Words:** Community risk assessment methodologies; Laos; Participation

The assessment and analysis of risks facing communities is a fundamental element of disaster mitigation and preparedness activities. As the importance of risk reduction gains increased recognition among relevant authorities the need for more flexible and user-friendly methodologies for

assessing communities' risk, or better still, for enabling communities to assess their own risk, becomes similarly important. This paper will focus particularly on the assessment of social vulnerability and will outline the author's experiences in conducting a hazard, capacity and vulnerability assessment (HCVA) in Laos.

### Background

An analysis of the published evidence that provides the theoretical framework for a participatory community risk assessment quickly reveals the many aspects of both disaster management and development theory that are drawn upon. Indeed in the context of a community risk assessment and subsequent vulnerability reduction it is somewhat erroneous to speak of a separate disaster management theory and development theory as the two are very much intertwined in this area with vulnerability reduction essentially representing the first step in development.

One of the most influential texts to have been published in this area is *Rising From The Ashes: Development Strategies In Times Of Disaster* (Anderson & Woodrow 1998). It is an adapted version of their framework for capacity and vulnerability analysis (CVA) that was utilized in the case study presented here. Participatory methods are used to analyze vulnerability in its three dimensions—physical/material; social/organizational; and motivational/attitudinal as well as assessing capacity under the same dimensions. By combining this process with a hazard analysis a community risk profile can be drawn up.

Others have also documented their experiences and provided guidelines for a participatory approach to risk reduction. Von Kotze & Holloway drew from their experiences in southern Africa when they compiled *Reducing Risk* (1996) and provided a set of tools for community level risk analysis. While the methods may be relatively uncomplicated however the process of participatory risk assessment itself is highly dependent on the quality of the facilitator. Interestingly Kumar found that the quality of facilitation was better amongst those given less briefing about the methods than those who were more fully briefed (cited in Chambers 1994a:1438).

Still others favor a mixed approach, having a balance between the mainly qualitative approaches used in participatory rural appraisal (PRA) methods and more traditional quantitative methods such as questionnaire surveys. In an account of his experiences integrating these two approaches in a pastoral risk management project in Kenya, Barret highlighted the fact that the two approaches can behave reciprocally, "each enhancing the efficacy of the other" (2000: 4). In addition Barret noted that no one class of methods could be described as unconditionally superior to the other, rather the choice of method

was related to the research objectives, the nature of the subjects and the human and financial constraints on the project (2000, p.3).

The utilization and importance of PRA methods in risk and vulnerability analysis has been widely documented (Anderson & Woodrow 1998; Von Kotze & Holloway 1996; Bhatt 1998) though there appears to be a dearth of critical analysis such as has occurred in the wider debate over the participatory approach in the rural development arena (Chambers, Pacey & Thrupp 1989; Chambers 1994a, 1994b, 1994c; Stirrat 1996; Cooke & Kothari 2001). Such critical analysis is undoubtedly occurring within the implementing agencies but it remains largely hidden as 'grey literature' and not accessible to all. An example of this internal debate occurred in an examination of lessons learned by Oxfam Great Britain (GB) and its partners in the Philippines. Limitations that were identified with the use of PRA tools included the difficulty some participants had in following the process and the long periods of time spent demonstrating the methods to participants unfamiliar with the techniques (Oxfam GB 2002, p.14).

Another difficulty with the participatory approach concerns that of monitoring and evaluation. With increasingly rigorous donor demands the participatory approach is often inimical to the strict criteria for the assessment of projects (Mitchell 1997, p.33). One reason for this is the difficulty in quantifying many of the stated objectives of the participatory approach such as empowerment. Reconciling this issue will be important if more accurate assessments of impact are to occur. The issue of whether supposedly participatory approaches result in empowerment for the disenfranchised is one of the key areas of contention between the protagonists and antagonists in the debate over participation. While Cornwall and Fleming question whether true participation can possibly take place outside of existing power structures (1995, p.11) Scobie notes that assuming true participation does occur, then this is likely to change existing power structures—a process that also presents risks (1997, p.48). Such change however should be embraced rather than feared with support being provided to the affected parties during the transition phase and avoiding the creation of unrealistic expectations.

Another issue concerns the quest for gender sensitivity in risk management activities. Ariyabandu observes that while such a quest has been occurring in development projects for many years, gender sensitivity is an area that has been largely neglected in risk management projects (1999, p.27). Just as communities should not be portrayed as helpless victims in disaster situations, neither should women be portrayed as such within the community. Yet, as Enarson points out, people's strength and resilience in the face of disaster is a difficult issue to highlight given the constant stereotyping, especially by the media, of women as victims (2002, p.1). Rather Ariyabandu declares that the great strength displayed by women in extreme situations needs to be recognized for what it

is—a great asset. The “skills, resilience and appropriate coping knowledge” (Ariyabandu 1999, p.28) need to be recognized and incorporated into the emphasis on capacity building that should occur in the aftermath of a disaster.

Enarson highlights the continued occurrence of ‘gender-blind’ research that overlooks the differences and inequalities that are highly relevant, before, during and after disasters (2002, p.3). She continues by noting that “the world is not ‘gender-blind’ and our assessments of risk cannot be either” (2002, p.4), alluding to the unequal impact that disasters have on communities. How then can the blinkers be lifted and gender sensitive research be institutionalized? As Ho argues, it is not enough merely to achieve numerically balanced gender participation but rather to enhance the quality of participation (1996, p.11). Other indicators need to be developed therefore that will monitor the quality of participation and ensure that women are not muted in a male-dominated environment.

### **Case Study**

#### **Disaster Management In Laos**

Large-scale disasters typically receive the majority of attention and funding despite the recognized impact of smaller scale disasters with regards to the longer-term impacts on people’s vulnerability. Laos is no exception to this trend (Asian Development Bank 2001). Typically focused on those communities affected by inundation on the Mekong floodplain, disaster management activities in Laos have until recently ignored the plight of the ethnic minorities residing in the upland areas. While these ethnic minorities are relatively isolated from any large scale, rapid-onset hazards, their subsistence-based living is extremely vulnerable to many smaller threats such as human and animal diseases. In comparison, those living on the floodplain environs of the Mekong and its tributaries are relatively prosperous given the constant replenishment of their paddy fields, sometimes enabling up to three harvests per year in contrast with the single harvest of those cultivating in the uplands. As a result of this bias many mitigation programs have been created by government agencies, donors and non-governmental organizations (NGOs) in the more resource rich, floodplain communities rather than in the poorer, more vulnerable upland villages (Brahmi 2003, p.5). In cooperation with the National Disaster Management Office (NDMO) some NGOs have begun to implement disaster preparedness and mitigation activities in a very limited number of upland communities. It should also be noted that those communities that experience flooding on the Mekong floodplain should not be ignored but in reality the lack of resources available requires a system of prioritization and in such a system these communities do not represent the most vulnerable section of the population.

### **Thapangthong District, Savannakhet Province**

Savannakhet province, situated in central Laos and stretching from the highland border with Vietnam in the east to the banks of the Mekong in the west, captures a cross section of the country. Traveling east from the Mekong a gradual rise in altitude leaves the floodplains and low-lying paddy fields behind and enters the central districts of the province where a subsistence-based living is rapidly meeting with the external market economy.

Phoummaly and Xeku sub-districts are among the eight sub-districts that comprise Thapangthong. A total of eighteen villages are present within these two sub-districts and an overall population of 4389 people as of 2000 (Concern 2000, p.23). Two distinctive ethnic groups are represented in the area, Katang (part of the Lao Theung 'family') and Lao Loum. The Katang, who traditionally maintain an animist belief system, represent 91% of the population and speak their own language. The Lao Loum remainder are concentrated in the villages on the western side of the focal zone. Although their Buddhist beliefs have been somewhat diluted through their minority status and inter-marriage they continue to maintain a separate identity from their Katang neighbors (Concern 2000, p.24). Many of the villages are sited in the valley, alongside the recently improved road joining Thapangthong town to Toumlane town in the next province. The villages are surrounded by light forest and bush except where the land has been cleared for rice cultivation.

In 1996 the government selected Phoummaly and Xeku as being amongst the 62 most disadvantaged sub-districts in Laos and therefore to become focal zones, targeted with measures aimed at improving the livelihood security of the population. The activities of focal zone staff in the early phase of the project concentrated primarily on agricultural and livestock issues as well as health and education. In January 2000 the Capacity-building with Communities and Government (CAB-COG) project was launched as a joint initiative between an international NGO, Concern Worldwide, and the government. While the project initially focused on the building of capacities of government staff in the main areas of rural development, a more direct approach involving activities such as school construction and community development committees were embarked upon in the second year of the project. The CAB-COG project finished in early 2003 and its successor, the Thapangthong Rural Development Project (TRDP), will run for a further three years.

### **The Risk Assessment**

Three villages were selected in the region with the selection criteria including factors such as whether villages had been previously engaged in the

CAB-COG program; that they provided a broad geographical representation of the area; and the incorporation of villages where gender-balanced participation was envisaged more optimistically based on the activity of the national women's organization, the Lao Women's Union. Prior to carrying out the assessment the community was consulted to arrange a suitable time to visit the villages as periods of intense agricultural activity needed to be avoided so as not to impinge on the limited number of days when planting and harvesting can occur.

The process would typically include an introductory meeting between the assessment team and the participants followed by a session of group activities. A rice insufficient household analysis was also carried out in the villages. Following the collation of this information the findings were presented to the participants again and through the use of a matrix issues were categorized and prioritized.

### **Hazards**

The main hazards that were identified during the assessment included drought, human diseases, animal epidemics and agricultural pests. All communities surveyed were reliant on one rain-fed rice harvest annually. Many of the families already suffered a number of months of rice insufficiency even in years of adequate rainfall and so during years of drought such families may become almost completely rice insufficient.

Alongside drought human diseases were of prime concern to participants. Diarrhea and malaria in particular were cited as very serious threats. While these diseases could be seen as the symptoms of hazards rather than as hazards in their own right it is difficult to refer to just one source for some illnesses. Although no systematic health assessment was conducted at the time anecdotal evidence revealed that a number of deaths had already occurred in the previous weeks—two children under the age of five had died of malaria and three adults had died due to diarrhea.

Animals represent a vital source of labor power as well as being the predominant form of asset holding for the communities. Water buffalos are used for plowing the paddy fields and as the main form of asset holding. In one village participants recounted 1988 as a year when the entire village herd of 160 buffalo was killed by disease. Such a figure represents an astounding loss to the community.

Epidemics affect all domesticated farm animals, including cattle, chickens, pigs and ducks. In some cases epidemics have occurred among different animal types annually in recent years. For example in 2000 all the pigs died in one village and the following year all the chickens died. Foot and mouth disease was cited as one of the main epidemics affecting farm animals.

### **Individual/Household Vs. Community Risks**

When attempting to analyze the risks facing the Thapangthong residents it is important to bear in mind distinctions that may exist between risks facing the community and those that the individual households face. During the fieldwork this was made poignantly clear when rice-insufficient household assessments were conducted and then the results were contrasted with those obtained from the participatory group sessions. Whilst in group sessions the results highlighted some of the issues faced by the community, the rice-insufficient household analysis allowed for the recounting of experiences at the household level and subsequently for a much more alarming set of results. Such disparities between the results may be due to a number of factors such as a greater volume of input to the group sessions by the vociferous community elite in contrast to the ‘silent’ poor. In fact not just the silent but also often absent poor due to their time constraints given the enormous demand on their labor time.

### **From Barter To Banknotes—The Penetration Of The Market Economy**

Folkhard’s impact evaluation of the CAB-COG project (2003) bore the apt title “rice has a price now...”, reflecting the recognition amongst villagers of the creation of cash commodities where they did not previously exist. Evidence of the encroaching market economy abounds and is epitomized when one considers that eight months ago no shops existed in Xeku and Phoummaly sub-districts and now four are present. The penetration of the market into the sub-districts can be attributed to activities of both the focal zone and CAB-COG (now TRDP) projects and the increased awareness amongst communities of the potential of external technologies such as hand-tractors and Western-based medicine.

Such change requires adaptation and as the Katang find a foothold in the new context disparities may well emerge within the settlements in terms of access to resources and services. This issue of access is one that was highlighted during the HCVA process when results from group sessions were contrasted with those from the household analysis.

Interestingly the options that are envisaged by the community as methods by which to improve their livelihood security centered on expansion of paddy fields and increasing their rice yields. Given the communities’ experience with external traders however perhaps this is not so surprising. While the potential for exploitation of NTFP and timber by the communities will undoubtedly increase in the future, unless legal regulations are created and enforced, they remain relatively innocent in terms of dealing with external traders and thus lack significant powers of negotiation. While such innocence

will certainly give way to an increased ability to interact effectively with such traders as the communities become educated by experience, it is an area that merits attention. Perhaps through the establishment of cooperatives a better bargaining position could be achieved.

Although the access road to the district was greatly improved in 2002 there was considerable concern amongst the participants about the instability of the road's condition. The plethora of bridges that span the many streams and rivers along the route are frequently washed away during the monsoon season and the surface of the road itself is subject to erosion during this time. There is concern amongst the communities that the government will not maintain the road. If this situation did arise this could have significant implications for communities that are becoming increasingly reliant on access to external markets and vice versa.

### **Timber And Non-Timber Forest Products (NTFP)**

The potential for exploitation of the timber and NTFP resources surrounding the villages has certainly developed rapidly during the past couple of years. The sustainability of harvesting these resources, although being tackled at central government level, is not a relevant issue from communities' point of view. Participants expressed surprise when issues regarding the sustainability of such practices were posed; the forest is indeed an infinite resource according to the villagers. Increased harvesting however could soon require that much greater effort will be required for the same reward than at present as the resources close to the villages become scarce and gatherers have to wander further from the village.

In addition to the issue of sustainability is also the ability of individual community households to access these commodities. Disparities and polarization within the community may increase given the already over-burdened rice-insufficient households whose labor units are required for rice cultivation and food gathering to ensure their survival. It is rather the privilege of those with sufficient labor power, be it human, animal or mechanical, that can complete their tasks of food production and gathering and then have time to harvest these other resources.

### **Agriculture And Livestock—The Ever Present Danger**

Alongside rice cultivation, livestock provide a critical variable in determining the livelihood security of the villagers. Constituting both the primary source of labor power (water buffalo) and asset holding, the vulnerability of

the livestock maintains a direct correlation with the vulnerability of their owners. While the prevalence and importance of animal epidemics have been identified by both the focal zone and CAB-COG projects, attempts to deal with the issue to date have been largely unsuccessful. While a vaccination scheme was established animals were often already infected when they were inoculated and when they died anyhow villagers presumed that the vaccines rather than prevent disease actually brought it on. Reassurance now needs to be given to the communities if such a vaccination program is to be initiated again.

Similarly the issue of agricultural pests affecting the rice crop have been incorporated into the TRDP project activities in the form of an integrated pest management (IPM) program. The IPM program has however only recently been embarked upon and it is too early to detect its impact.

While the rice banks are generally regarded as a positive development by both the community and CAB-COG staff, growing disparities may emerge in the future due to access to the rice bank scheme. Since lending on the basis of the ability to repay rather than on the basis of need is a criterion of the 'new model' rice banks established by the CAB-COG team those who fall outside of this category will benefit little from the scheme.

### **Health And Access To Medicine—'You Can Look But You Can't Touch'**

The lack of an effective primary healthcare system available to all means that many diseases are left untreated or treated with sometimes-ineffective traditional remedies. Participants cited two illnesses in particular, malaria and diarrhea, as having a particularly significant impact on the well being of some community members. While attempts have been made to address both of these illnesses, through the distribution of mosquito nets and the provision of boreholes and water pumps, the lack of an effective awareness campaign with regards to health and sanitation issues means that such attempts are not being built upon a foundation of understanding.

In group sessions the dispensary was identified as a key development. Rice-insufficient household assessment again highlighted the disparities existing within the community. One interviewee chided the dispensary as merely sponging the head of a malaria-stricken child with water. The dispensary does in fact merely provide a diagnostic facility and then families must pay for the prescribed medicines. Since the poorest households cannot afford to buy Western medicines they see no point in attending the dispensary and instead usually resort to traditional medicines. In many cases interviewees said that the traditional medicine worked effectively. The effect of long-term illnesses such as cancer was also found to be extremely serious, not just for the infected

person but also for the household. In one instance a man's wife had fallen ill with cancer and in his effort to get treatment for her he sold his buffalo and then all of his paddy land. The household had not only lost its source of rice and their assets but since his wife could not work as the treatment was unsuccessful there was no one to collect NTFP for consumption, this being the responsibility of women in a household. Instead the household relied heavily on gifts of rice from family members and the income that the husband made as a temporary teacher in the primary school but during the summer break this source of income evaporated. Long-term illnesses not only incapacitate the patient themselves but also place an added burden on the household in terms of treatment costs.

### **A Reinforcement Of Power Elites?**

Although village development committees (VDCs) were established in CAB-COG 'model' villages these structures were essentially a re-labeling of existing male-dominated power structures with the communities (Folkhard 2003, p.23). The highly consensual nature of both Katang and Lao society however and the recognized authority of the two traditional forms of leadership, the Katang spiritual leader the Sanadee and the Government representation, the village chief, makes the establishment of other power structures a difficult task. One key aspect in determining the progressive nature of a community appeared to be heavily dependent on the presence of strong leadership. Where village chiefs were motivated and progressive there was a much greater chance of community development taking place.

### **Local Coping Mechanisms—An Analysis**

The coping mechanisms identified were aligned with the central problem that the communities encountered, that of insufficient harvests of rice to feed the household for the year. Such insufficiency was dealt with by using the resources present in their environment for consumption or as a means to generate income from which rice could be purchased. Wild taro and bamboo shoots were noted as being two forest plants that were particularly important during the 'rice gap'. Other strategies that were employed involved a reduction in food consumption and obtaining gifts of rice from other family members.

When coping strategies were discussed with two separate male and female groups the results were very interesting. Of the local coping strategies that women viewed as most important was the reduction in food consumption as a means to deal with the problem of rice-insufficiency. In contrast men thought

that this strategy was the least important one. As women bear the responsibility for preparing food for the household it can be argued that they are in the best position to judge the importance of such strategies. Such a finding may also point to a heightened vulnerability status amongst women if they are only reducing their own food consumption levels and giving the rest of the household their normal quantities of food.

Folkhard noted that the coping mechanism of kor kao had declined significantly in the last three years (2003, p.40). This was a traditional method of distributing rice equally amongst the community members until all rice stocks were exhausted. While such an occurrence means that rice-insufficient households are unable to rely on free gifts of rice from the village now and instead have to sell their labor and buy their requirements or receive loans from the rice bank, it also means that those producing a surplus of rice can improve their financial standing and consequently invest in such assets as hand-tractors.

### **Root Causes Of Vulnerability**

Lowland areas of the country inhabited by the Lao Loum have, historically, received the greatest attention from the Government of Laos in terms of development. Consequently ethnic minorities such as the Katang in the upland areas have received little support in terms of the provision of basic services such as health and education. While this particular area was designated a focal zone in 1996 and subsequently received attention in relation to the provision of basic services, much of the underlying problems with regards to the provision of such services and the acceptance of such by the community stems from the years of neglect as well as the top-down imposition of such services when the Government did attempt to do something.

The communal ownership of land outside of the paddy field has significant implications with regard to the spread of animal epidemics. While communities went to the trouble of erecting fences around the paddy field to stop the buffalo from trampling the rice seedlings there was no method used to corral the animals. As a result of this animals can mix together and since villages are in relative proximity to each other then epidemics can spread quickly through the animal populations.

While the penetration of the market economy has both positive and negative attributes associated with it, for the poorest section of the community such penetration may mean increased vulnerability, at least in contrast with the wealthier elite. The development of an economically tiered society would see these disparities grow and the ability of the poorer households to access the basic services may be prevented unless they are adequately considered.

### **Main Indicators Of Vulnerability**

The indicators of vulnerability can be used as a basis from which to predict loss or establish a monitoring system so that conditions can be constantly surveyed and interventions can occur in a timely and appropriate fashion.

The number of labor units present in a household in relation to the total number of persons in the household is an important ratio to consider in identifying the power of the family to generate the food and income sources that are required for that household to maintain its well being.

The number of months that a household is rice-insufficient is another key indicator of vulnerability. While this indicator could change somewhat or at least become more difficult to measure in the coming years as the market continues to penetrate and perhaps the purchase of rice becomes more commonplace as people begin to specialize in particular livelihoods this is still the foundational determinant of a household's ability to feed itself.

Another indicator that is important is the number of labor animals per household. This measurement not only highlights the probable workload of the labor units needed to cultivate their rice crop but also provides a measurement of the household's assets as water buffalo fulfill a dual purpose.

### **What Is A Disaster In This Context?**

The mainstreaming and integration of disaster management practices into development work is a topic discussed by many NGOs. While commitment to establishing such links and institutionalizing them is admirable, it is important that agencies do not become solely focused on achieving such goals at the expense of assessing the merit and potential effectiveness of such a process in each particular context.

The notion of disasters as unforeseen, overwhelming events that induce loss beyond the ability of the affected population to cope without external assistance is applicable in the context of the case study in Thapangthong district. While some of the problems the population encounters such as agricultural pests may fall more easily into the category of development activities such as integrated pest management program, the impact of some other hazards such as animal epidemics has been very significant at times in the past. The loss of an entire community's complement of water buffalo, as occurred in Nalao in 1988, represents a staggering loss of both labour power and household capital.

From the author's point of view the benefit of disaster management in the context of the development work that is being undertaken by the likes of the CAB-COG/TRDP team in Thapangthong is in providing rural development

workers with the principles of disaster management. The ability to identify hazards, capacities and vulnerabilities within the community is a vital tool that should be developed by those working with the communities. Indeed this initiative could be taken further and include self-assessment of such characteristics by the communities themselves.

### **The Universality Of Western-Based Philosophies?**

The vast majority of literature and research on disaster management has evolved within the confines of Western-based institutions and minds. Even within developing countries much of the thinking occurs amongst those in regional centers or among members of the dominant ethnic groups. In the context of Laos, for example, the Lao Loum inhabit the majority of government positions, both at central level and at local level. Thus when working at the local level in areas where the majority of the population belongs to an ethnic minority, their cultural background may have created very different perceptions in relation to development than those amongst whom they work.

The theory on the progression of vulnerability, as presented in *At Risk* (Blaikie et al 1994, p.22), is an example of the difficulty in synchronizing theory with practice. While the model itself serves as a very useful illustration of how vulnerability is created it is very difficult in practice to categorize the findings into unsafe conditions, dynamic pressures and the root causes of vulnerability.

The drive towards the creation of bottom-up interventions, be they in disaster mitigation or development activities has been occurring for many years now, yet perhaps it needs to be recognized that the theory is still very much imported from external sources and as such its relevance in each context needs to be examined carefully.

### **The Empowerment Process—Myth Or Reality?**

Advocates of participatory approaches have claimed one of the chief benefits to emerge from the use of PRA techniques as being the empowerment of the participants. The empowerment would enable participants to identify issues for themselves and devise internal solutions that could be supported, if necessary, by external agencies.

Assessing the extent or impact that such an internally driven process has is of course a difficult task. In the context of the risk assessment conducted in Phoummaly and Xeku sub-districts it is rather irrelevant given that any analysis of empowerment resulting from the process would have to occur at a later date and indicators would have had to have been established to measure pre-

and post-assessment levels of community involvement in this regard. This is of course a problem that is endemic in programming, particularly with programs concerning disaster mitigation or preparedness activities, given the often short timeframe of the project itself, not to mention the brevity of research assignments.

Indeed the recognition of the limits of community involvement itself in a risk assessment is an issue often glided over in this era of participation hype. The increased recognition of the importance of social vulnerability in recent years is to be praised but this process should not venerate the lay-person's perception to the extent that the skill and knowledge of specialists are disregarded. Rather the two need to be balanced against each other so that triangulation can occur and a closer assessment of the reality be established. There are many facets to an assessment and used together they provide a holistic view of the situation. A study that focuses almost exclusively on social vulnerability should not purport to be providing a holistic picture but rather be advertized as an important component of a wider assessment.

Criticizing the lack of a holistic approach is a simple task whereas finding the resources to conduct an all-encompassing approach is not. Given the limited resources that are available in general for preparedness activities as well as the limited resources of most projects, resources made available need to be maximized. One method whereby this could possibly be achieved as well as adding to the skills base of the local staff and community members is through deprofessionalizing the activities involved. Deprofessionalizing, as mentioned earlier in this paper, is particularly important in the area of disaster preparedness. Rural development workers, for example, could be trained in the principles of community-based disaster management and local volunteers could also be trained and a dissemination of the knowledge could occur. Not only would a greater number of people have knowledge of the means to identify important issues and mobilize communities to respond but also they may, in the longer term, prove to be more effective than external 'experts' given their in-depth knowledge of the area. One issue that is vital however is the recognition of how important it is to provide any training in disaster management within the context of local development issues. Without being tied down to a recognizable body of knowledge the trainees may find the principles of disaster management difficult to relate to and implement into practice.

### **Government Responsibilities—Where Should The Power Lie?**

In the case of the Lao PDR the establishment of a formal disaster management office and a committee occurred in 1995. The National Disaster

Management Committee (NDMC) is an inter-ministerial policy making and coordination body while the National Disaster Management Office (NDMO) is subordinate to the Ministry of Labor and Social Welfare. This would appear to be a flaw in the Government's policy on disaster management. The main threats identified in Laos consistently point to the high vulnerability of agricultural production and domestic livestock in particular. If any Ministry should bear the sole guardianship of the NDMO the Ministry of Agriculture would appear to be the more appropriate. The nature and spectrum of any disaster however demands an efficient coordinating body to plan for and oversee the implementation of response and recovery activities. If the NDMO took an independent position at inter-ministerial level, coordinating the various actors whilst maintaining an aerial view of the various activities within the Ministries and making appropriate adjustments, the response to events could ideally be more effectively managed.

### **Good For All? The Impact Of Development Activities In Thapangthong**

Measuring the impacts, positive or negative, of the development activities in a region such as Thapangthong district is quite a complex task, if indeed it is possible given the resources allocated for such evaluations. The lack of statistical data present in such environments means that assessors frequently rely on the community's perception of whether or not program activities were successful or not. While the importance of perception needs to be accounted for, its subjective nature remains and as such, for a more accurate evaluation to occur, there is a real need for relevant quantitative analysis.

For development workers, the lack of resistance amongst the communities in the case study towards the introduction of new practices and technologies coupled with the highly consensual nature that is characteristic of Lao ethnic groups is perhaps a rather unique situation. Where persons could afford to use Western medicines they purchased them and for those who did not use them the reason was not distrust of new technologies but rather because they could not afford to purchase them. The issue of access to the services and technologies that are being introduced to the sub-districts by the two development authorities is a key issue. This issue requires careful monitoring if the creation of large disparities within the community is to be avoided.

Of particular importance in development work is that vulnerabilities are not increased by project activities, as outlined by Anderson's infamously titled *Do No Harm* (1999). In Thapangthong district both the affected communities and the development workers acknowledged the short-term negative impact that their policy of community contribution to school construction had on the poorest members of participating communities. As part of its development activities

the CAB-COG project had begun constructing primary-level schools in the original six pilot villages in 2000. The CAB-COG project though at this stage was not implementing such activities on a grants-based approach but rather as one, which required community contribution. While some materials were supplied all the timber had to be provided by the community. The provision of such was divided up amongst the different households in the community and for the poorest member of the community this labor time represented a substantial contribution from a section of the community that had little time for activities other than those concerned directly with supplying food to the household. Although it can also be argued that while vulnerability may have been increased amongst the poorest sections of the community in the short term, the longer term benefits of a having a school educating the children will outweigh the short term negative impacts. The illustration however serves as a reminder of the need to be vigilant in assessing the impact of activities and ensuring that vulnerabilities are not exacerbated or created.

### **Gender—The Need For Sensitivity**

As noted already, the findings of the HCVA point to significant differences in perceptions between men and women and the impacts of hazards, especially human illness. These findings then support the volumes of literature that highlight the differing experiences of men and women with regards to hazards and their impact as well as levels of capacity and vulnerability.

The adoption of gender-sensitive activities needs to be implemented sensitively. Ostracizing the male-led authority structures would be pointless and defeating the overall objective. In fact resistance to more gender sensitivity in the development activities occurring in the project area may be negligible. One male group of participants in one village declared that the lack of female participation in primary-level schools was one of their greatest concerns. Many of the development activities have nonetheless benefited the women substantially. The provision of water pumps and boreholes in villages has reduced women's workload in terms of the daily collection of water for the household. Similarly, birthing huts that are used as a result of the belief that to give birth within the village will anger the spirits are traditionally located far from the village. The construction of such huts in closer proximity to the village now means that the threat to the mother and child's health can be reduced. Women have also begun to travel more and can be seen traveling to Thapangthong town to trade at the market thus providing an outlet from the confines of domestic activities and a personal involvement in the market economy.

### **Institutionalizing The Role And Recognition Of Local Coping Mechanisms**

During the review of secondary sources it was noted that there is an increased awareness amongst risk management professionals of the importance of strengthening appropriate local coping mechanisms when devising risk reduction activities. While a number of indigenous coping mechanisms were identified during the risk assessment, information was lacking in detail and if appropriate coping mechanisms were to be identified and strengthened, more detail would be required. This issue highlights the dilemma of the risk assessment that seeks to have a minimum impact on the community during the research phase by attempting to be as rapid as possible and not encroach on valuable labor time while at the same time achieving as much detail as is possible. The identification of local coping mechanisms is arguably a relatively slow process in comparison with establishing levels of resources, key threats and even perceptions of the community. As the local coping mechanisms are internalized, the community itself may frequently be unaware of its importance and consequently fail to identify them as important strategies. Indeed in many situations it may only be by in-depth observation and focused analysis that many of these strategies can be identified. This will no doubt be an area of increased research in terms of marrying the existing rapid assessment methods with the need to create more detailed information if interventions are to be correctly targeted and appropriate indigenous coping strategies identified and strengthened.

### **Standing In Their Shoes—Ways Of Seeing And The Perception Of Risk**

Unless those threats that are most important to the community are addressed then a disinterest and lack of ownership, due to a top-down approach being used, may well result. The evidence from the HCVA findings would appear to support this theory.

Certainly with regard to health and sanitation issues the lack of latrines was long seen as a major threat to the communities' well being by members of the CAB-COG team and Government staff. The CAB-COG team envisaged the provision of latrines for each household but the expense would have to be met in part by the households themselves. From the communities point of view this was regarded as an unnecessary cost given the size of the forest where they would ordinarily go to excrete. Eventually the CAB-COG team reluctantly abandoned the idea and such an occurrence should be embraced for maintaining the ethos of 'bottom-up' development. While the provision of latrines may be a very real need and an act that would reduce the occurrence of some illnesses, unless the communities support the scheme then such

schemes will be regarded as being imposed upon them. After continued rapport is established between the development organizations and the communities then perhaps proposals for such schemes could be aired again.

Similarly the failure of certain activities such as poorly timed vaccination programs has led to a distrust of some new technologies. Overall however the development staff in Thapangthong were in agreement with the communities on many of the issues that the community identified as potential threats.

### **Analyzing The Risk Analysis**

While the previous sections have outlined some of the issues encountered during the field study the participatory community risk assessment framework itself still needs to be critiqued. The following paragraphs will examine if the risk assessment, in this case using the HCVA system as outlined earlier, achieves what proponents of the process argue it does.

The ultimate objective of the risk analysis is to provide an understanding of how unsafe conditions were constructed and to highlight those exposed to them. One key finding to emerge from the case study relates to the levels of risk analysis, from the individual to the household and then to the community. Researchers using the HCVA tool need to be aware that risk assessments conducted at these different levels will yield different results. It must be clear to researchers at what level they wish to obtain information from and to what detail. Household analysis, for example, is a time-consuming process, for household members and researchers alike. Yet household analysis can hide disparities in relation to potentially vulnerable groups such as women, children and the elderly. A combination of activities such as focus group discussions, meetings with key informants and selective household analysis probably achieves the best balance between comprehensiveness and efficiency. If the risk assessments merely examine these issues on a community-wide scale, such as that of village level, any mitigation measures that are designed as a result of the risk analysis may not tackle, or even worse, may exacerbate the problems experienced by the most vulnerable sections of the community.

In conducting social research, especially such as community risk assessments where people are discussing the threats and problems that they face, it is imperative that false expectations are not created. Many may argue indeed that unless specific mitigation tasks will be embarked upon after the risk assessment is completed then the research should not be carried out. This is an area that requires careful attention, with a monitoring system to gauge accurately the community's sentiment, being of vital importance. Indeed it could be argued that agencies should refrain from engaging in such pieces of research altogether and avoid such intrusion unless the dialogue is followed by relevant action.

The difficulty of achieving gender-balanced participation arose for two reasons in particular. Firstly the assessment was conducted several weeks later than originally planned and as a result the monsoon rains had already begun by the time the HCVA was underway and the women were occupied in the production of seedlings for the paddy fields. Secondly when the women did come for the group meetings, unless the group was separated into male and female groups the women would remain very shy and would make no contribution to the debate. This was certainly not due to lack of opinions or apathy amongst the women because once separated they were extremely vociferous on issues that they deemed important. The separation of groups along the lines of gender also provided valuable insights into the different perceptions of both groups with regard to the priority of coping mechanisms, the importance of varying food sources and the health problems affecting the community. It was generally considered by the research team that women had a far more comprehensive and accurate assessment of the type and priority of the aforementioned issues. Such comprehension and accuracy was attributed to the role they played in domestic activities, particularly in relation to the cooking of food and that they were responsible not just for themselves but also their children.

Several PRA tools were used during the HCVA process. Of particular importance were the time-line, matrix tables, focus group discussions, and variations of the seasonal calendar. One method that is extensively cited in the literature as being very useful is hazard mapping. Only in one instance was a map drawn by participants and this was purely a physical representation of the layout of the village, not a graphic description of the hazards facing the community. When the activity of hazard mapping was explained participants declared that it would not be possible to map the hazards in their village as most of the hazards did not occur at any one location but like animal epidemics for instance, were present wherever the cattle roamed—everywhere. While some blame could perhaps be placed on the research team for failing to put enough effort into creating a coherent explanation of the process, the hazard map activity may also be inappropriate for such communities and the environment they live in.

The matrix table, usually used by the research team to get the participants to rank the results obtained from focus group discussions, was particularly valuable for establishing priority amongst a number of different items. Seasonal calendars were used in assessing food, income and health issues and these factors varied during the year. While in many cases groups identified a similar overall list, the placement of these topics on the calendar often varied between groups, although not usually by a significant amount. As mentioned previously, such tools provided a very useful set of data and were of particular service when comparing the results from gender split groups.

One of the crucial aspects to ensuring the success and smooth operation of the HCVA is the necessity of conducting a pilot study. Such a study must be done in the project area itself and ideally just before the actual study is carried out. The pilot study will help establish which PRA tools will be most effective in eliciting particular types of information as well as identifying other threats to the process and hopefully then being able to avoid or at least be aware of these issues as the study unfolds.

Another point in relation to the practical operation of the HCVA is the importance of daily meetings for the research team to discuss new findings and identify any problems and propose solutions before the issues escalate. A decent proportion of the time needs to be dedicated to such meetings especially if translations need to occur also.

### **Conclusion**

Several key issues that arose in the case study then have been supported by previous research. While many of the issues have been highlighted and discussed amongst the theorists the efficiency with which such debate is being transferred to the front-line is still found wanting. This transfer of knowledge is not a one-way process however and academics need to be able to recognize the practical limitations of their theory once it is operationalized by NGOs. Closer cooperation between academics and practitioners on these issues is necessary for progress to occur. Another vital area in relation to the transfer of knowledge is the development of organizational learning and then the dissemination of this learning not only within the organization but also between others who are engaged in similar activity. This latter form of knowledge sharing has traditionally been quite weak given the reluctance of agencies to expose themselves to criticism from external parties and donors in particular. Yet unless the experiences are recorded and shared this very valuable information will be resigned to the past resulting in lessons lost and the recurrence of mistakes in the future.

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