Community Studies in Practice

Implementing a New Approach to Landmine Impact Assessment with Illustrations from Mozambique

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The Manica pilot study, the basis for this report, was a joint project between Norwegian People's Aid–Mozambique (NPA–Mozambique) and the Assistance to Mine-Affected Communities (AMAC) project, which is based at the International Peace Research Institute, Oslo (PRIO). The AMAC project is grateful for financial support from the Norwegian Ministry of Foreign Affairs and the Canadian Department of Foreign Affairs and International Trade.

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This report is dedicated to Stephen Chasukwa, NPA's Deputy Programme Manager in Mozambique, who tragically passed away in a drowning accident in Tete in November 2000. Stephen was among the first to challenge AMAC to operationalize the community study approach. His wish that NPA staff in Mozambique be trained in the methodology has been fulfilled, but sadly he will not see the fruits of his insights.

FOREWORD

SARA SEKKENES
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The issues raised by the Assistance to Mine-Affected Communities (AMAC) project emphasize the essence of humanitarian mine action (HMA). Indeed, the question of how local communities – in terms of their social, political and economic composition – are affected by the presence of landmines is something HMA operators must understand in order to be able to contribute to safer living environments and improved livelihoods. With scarce resources, it becomes all the more important to know where and when mine-action interventions can do the most. Mine clearance is also an expensive activity, and we need to ensure a proper balance between cost efficiency and cost effectiveness, as well as full transparency, so that donated funds are used for the best of populations affected by mines.

During the last decade, Norwegian People's Aid (NPA) has engaged in HMA in a number of countries, including Angola, Bosnia, Cambodia, Kosovo, Iraqi Kurdistan, Laos and Mozambique. During this period, NPA mine-clearance operations have evolved to high levels of performance, particularly in the technical domain, where we have been part of research and development programmes at the forefront of HMA. Lesser attention, however, has been paid to the *why*s and *when*s of mine action.

Evidently, HMA is a relatively new 'discipline'. It is perhaps therefore understandable that the longer-term socio-economic effects on communities have received less attention in emergency situations, where re-establishing freedom of movement has been the highest priority. However, when a country has moved out of the immediate emergency stage, landmines can still constitute an enormous obstacle to the reconstruction of safe and productive livelihoods, as well as to the building of peace. Today, NPA fully acknowledges that technical expertise needs to be complemented with more thorough knowledge of the communities within which we intervene. Only then can our HMA activities have the best possible effect. Only then can we reach toward what the AMAC project terms a 'maximization of impact'.

In contrast with mine-affected communities, as HMA operators we will never be able to fully understand the ways in which landmines obstruct daily life. However, the Manica pilot study, which this report builds on, has provided a methodology that will

bring NPA closer to grasping where and when we can intervene to facilitate and make life easier and safer for our beneficiaries. The study has also provided HMA with an evaluative tool that can be used to strengthen the impact on affected communities, as well as to improve transparency in relation to donors.

HMA operates under a number of constraints: security, logistics, funding, seasonal weather conditions, technology, human resources, cultural aspects, etc. What the AMAC study points out is that, at any given time, understanding the host communities within which HMA operates is paramount. It is not we but those who live under the threat of mines who can determine whether HMA can have a positive impact and how we can maximize our interventions to achieve more.

EXECUTIVE SUMMARY

The purpose of this report is to examine findings and lessons learned from the Manica pilot study, which was a joint project between Norwegian People's Aid–Mozambique and the Assistance to Mine Affected Communities (AMAC) project, which is based at the International Peace Research Institute, Oslo (PRIO). The pilot study broke new ground in the fields of impact assessment and local capacity-building. The two goals of the study were to train Norwegian People's Aid (NPA) staff in the community study approach to impact assessment and to test the operationalization of the approach at the field level.

- The community study approach developed by the AMAC project is based on the notion that mine-affected people need to be placed at the centre of projects in Humanitarian Mine Action (HMA). AMAC thereby argues that the attention to technical aspects of demining should be coupled with better understanding of the communities within which demining takes place in order to ensure success.

- The AMAC project has focused its efforts on the development of an approach that attempts to thoroughly understand the dynamics existing in mine-affected communities in order to ensure that assistance is designed to meet the needs and activate the resources of affected people.

- The AMAC project has conducted a number of studies in mine-affected countries. Combined with extensive discussions with field personnel, these studies have formed the basis for the development and refinement of the methodology. Given this, the time was ripe to attempt to operationalize the methodology at the field level.

- In recent years, a variety of tools have emerged to respond to the impact-assessment needs of HMA. Whereas early discussions focused on developing one approach for all purposes, more recently the debate has come to focus on the strengths and weakness associated with different approaches and on how these approaches can be complementary.

- The community study approach is one such approach to impact assessment. It responds specifically to questions about impact at the micro level and is particularly relevant for the implementation period of demining projects. Moreover, the access

to information that allows differentiation between villages which otherwise have been categorized as equal can assist in priority-setting. Essentially, as we move from the emergency stage towards the development stage, identifying levels of impact becomes increasingly difficult, and thus community studies become relevant.

- In a country like Mozambique, where the majority of tasks have only a micro-level impact, where the number of accidents is rarely an accurate indication of impact level, and where communities have largely developed alternatives to using mined areas, the community study approach is very useful in the identification of priorities. Moreover, the need to ensure that impact materializes also requires a clear understanding of how the community functions and how operators might best adapt their work to suit a particular village. On this basis, the community study approach seemed an appropriate tool to fulfil NPA's needs.

- The AMAC approach to impact assessment had been used earlier by the project staff. However, the conducting of multiple studies simultaneously, where all research and analysis was carried out by staff members who did not have previous academic training, had not been done before. Indeed, the operationalization of the approach is a landmark development in the evolution of the AMAC project and its goals. It demonstrates both that the approach is effective at the field level and that it can be employed by non-academics.

- The nine cases reviewed serve to illustrate why detailed information is required. Two of the nine communities had been identified by the Impact Survey as high-impact cases, while a further seven were identified as medium-impact. However, the community study revealed substantial differences between cases belonging to the same category, differences that would be important in prioritization, as well as in the implementation period of an operation.

In conclusion, the Manica pilot study to a large degree countered the two main criticisms of the AMAC approach, namely the time-consuming nature of the investigation and the requirement for academically trained staff. However, the challenge now lies in being able to effectively train individuals working in mine action on a larger scale. As was the case with the Manica pilot study, future capacity-building engagements are expected to lead to further refinements of the approach.

Chapter 1

INTRODUCTION

How are local communities – in terms of their social, political and economic composition – affected by the presence of landmines? What are the human and social resources of individual communities affected by landmines? How can better knowledge of a community affected by landmines lead to improved operations in the field of Humanitarian Mine Action (HMA)? And, perhaps most important of all in the context of this report, what type of approach can be used for analysing communities affected by landmines and how can a methodology be operationalized at the field level?

This report is based on work conducted in Manica Province, Mozambique. The Manica pilot study was conducted during the spring of 2001 as a partnership between Norwegian People's Aid–Mozambique (NPA–Mozambique) and the Assistance to Mine Affected Communities (AMAC) project, which is based at the International Peace Research Institute, Oslo (PRIO). The goal of the venture was to explore the ability of demining organizations to employ the AMAC community study approach for impact assessment at the field level. This was the first time that AMAC's community study approach had been applied on a larger scale, with data collection and analysis conducted by the national staff of an HMA agency. Hence, this was also a major capacity-building exercise. The pilot study can be seen as a model to build on, and thus reflection on the lessons learned has considerable value for similar undertakings in the future.

The goal of the AMAC project is to increase understanding of communities affected by landmines through field-based research and to ensure diffusion of the project's findings to practitioners, policymakers and academics. In the past two years, the project has conducted in-depth studies of communities affected by landmines in a number of mine-affected countries and has gained extensive knowledge from operators working in HMA. The community studies have led to the development of an approach, including a methodological package, for studying the impact that landmines can have on individual communities.

Community Studies

The notion that improved assistance to mine-affected communities depends upon a deeper understanding of local responses to landmines – which is the basis for the AMAC project – is based on studies and practice in the humanitarian and development fields. Instead of viewing people in landmine-affected communities as passive victims,

the AMAC approach acknowledges their importance as active subjects. Lasting results are more likely to be achieved when outside assistance is sensitive to local capacities and empowers mine-affected communities. Within HMA, however, and particularly within demining, there has been a tendency to focus on technical aspects, while affected populations have been given considerably less attention.

Whereas there is a general recognition that landmines can have a severe effect on communities, there has been little documentation of the nature of this effect, other than the most obvious consequences, such as accidents and blocked access to land or roads. Existing documentation, which is based on survey data, has established effects at the level of the individual but does not examine how landmines affect the social fabric of communities. This is the case even though it is clear that an understanding of the interrelated social dynamics of affected communities is vital for any successful intervention. Similarly, it is important to examine the extent to which mine clearance triggers local social and economic development.

Communities build their own capacities for coping with the presence of landmines, for example by developing informal information channels for reporting on the presence of landmines and the risks associated with them, by adapting lifestyles to the mined environment or even by undertaking their own mine action. Local capacities should not be seen as a justification for withholding external assistance, and, in some instances, self-help activities should be discouraged owing to the threat they present. Nevertheless, it remains essential that organizations conducting interventions at the community level understand and pay due credit to local capacities. Disaster research has shown that the degree to which external interventions build on local capacities is decisive for their long-term success. One of the primary goals of the community study approach presented here is to enable better understanding of local capacities. At the same time, it remains imperative that the best possible security conditions are maintained both for those engaged in mine action and for the populations of mine-affected communities. In view of this, the aim to empower those who are hosting mine-action projects poses new challenges – for risk management in particular and for humanitarian aid policy in general. Currently, there are a number of approaches to assessing the impact of mines and demining. The challenge thus lies in using these varied approaches to the greatest benefit of affected communities. Fundamentally, AMAC maintains that successful interventions are contingent upon better understanding of social dynamics at the micro level.

In the early years of HMA, efforts to increase efficiency focused primarily on the development of new technologies. Research on a range of sophisticated technologies for dealing with mines is ongoing and valuable, but it is increasingly realized that the ‘silver bullet’ – the universally adaptable machine that speeds up clearance while lowering costs and maintaining safety standards – will not be found. Meanwhile, the discussion of how mine action is organized and how it interacts with mine-affected populations has started to gain prominence. This is a giant step forward since increased understanding of local capacities will serve to enhance the efficiency of mine-action programmes in the short term and their sustainability in the long term.

Military competence has formed the core of mine-action agencies. This has often implied a conventional military model of organization, with relatively little flexibility. It is clear that mine action is fundamentally a dangerous task requiring strict procedural standards, and any organizational practice that adds to flexibility at the cost of increased risk is unacceptable. However, change in the way an operation is conducted does not necessarily mean a lowering of technical standards. Indeed, some organizations have sought to find ways of modifying and adapting their *modus operandi* while keeping to strict safety precautions. The inclusion of the community study approach as an alternative system for understanding affected communities is a demonstration of both the shift in organizational practices and the adaptability of existing organizational structures.

The conduct of HMA, in this case with a focus on demining, depends on large amounts of information at a variety of levels, ranging from the national to the local. Strategic planning of demining requires information on the location of landmines and the impact of mined land, as well as knowledge of existing development and reconstruction plans. Yet HMA history shows that all too often the required information is not collected and the final level of analysis is bypassed.

Fundamentally, however, the information gathered and the analysis conducted need to reflect the capacities and needs of the population inhabiting the area in which the operation is implemented. Lack of information may lead to multiple difficulties. One example would be where failure to secure the trust and confidence of the affected population in the demining operation can negate most of the impact such an operation might have.[1] Any operation has two key parties throughout its life cycle: the operator and the affected community. With this in mind, the AMAC community study approach aims at providing information to ensure that the dynamics between these two parties are beneficial to all. Information on the way communities function serves to increase the potential for positive impact and decrease the potential for negative impact associated with demining.

The community study approach developed by AMAC rests on two conceptual foundations. First is the 'Do No Harm' concept as presented by Mary B. Anderson; second is the Capacity and Vulnerability Analysis (CVA) introduced by Anderson and Peter J. Woodrow. 'Do No Harm' is based on one basic assumption: that aid has the potential to do more harm than good. At the core of this lies the notion that providing assistance is not in itself necessarily beneficial for the recipient party; indeed the potential for harmful effects may outweigh the benefits rendered by the assistance provided. Moreover, some harmful or disadvantageous side effects of assistance will often be present, hence efforts must be made to minimize these. The 'Do No Harm' concept gained prominence in the latter half of the 1990s and has come to be a staple part of international policy debates. The AMAC community study approach has in part been developed as an effort to make this concept relevant at the field level.

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[1] Millard, Harpviken & Kjellman, 2001.

CVA draws attention to the tendency existing in postwar reconstruction efforts to base activities on needs assessments. CVA challenges needs-assessments rhetoric and practice in several ways: First, it contests the assumption that aid should re-establish the pre-conflict situation by focusing exactly on the vulnerabilities that existed before the conflict. Notably, these pre-existing vulnerabilities are often prominent on the list of factors that led to the conflict. Second, attention is drawn to the potential for increasing people's vulnerabilities through aid, particularly when assistance is provided with a short-term perspective on impact. Conventional needs analysis only examines the problems and weaknesses faced by affected populations, while CVA is concerned with their strengths and competencies. Principally, CVA argues that aid practitioners must work on the assumptions that all people possess capacities and that rooting assistance in these capacities is essential for ensuring positive outcomes.

Combining Methods

The conceptual foundations for the community study approach have been presented above. Here the practical compartmentalization of data-gathering is presented. The community study approach focuses on three distinctive fields of information: economic, human and social.[2]

The *economic* field is defined as the physical environment in which people operate. This is seen to include environmental aspects (such as deforestation linked to land pressure), natural resources (such as access to hunting or pasture), resources for cultivation (particularly forms of agriculture, including irrigation systems), production aids (ranging from household animals and tractors to factory production lines) and infrastructure issues (roads, markets, or public buildings).

The *human* field is defined as the capacities and vulnerabilities that are vested primarily in individuals. Here, the focus is on injuries and casualties (the direct health impact of landmines), health aspects beyond landmines (i.e. indirect effects, including issues such as access to drinking water and health facilities) and education (existing skills and competence, educational opportunities).

The *social* field is the one that is perhaps the least immediately accessible, but is also potentially the most rewarding, the field where genuinely new and important insights can be found. As defined here, it involves a range of issues: local institutions (including community leadership and consultative organs), social solidarity (local networks and solidarity), information channels and migration (particularly war-related migration and displacement, including repatriation). An analysis of the social field also needs to look at existing and potential conflicts, with a view to how these might be affected by aid interventions.

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[2] This is somewhat different from the framework suggested by Anderson & Woodrow; they operate with Physical/Material, Social/Organizational and Motivational/Attitudinal (Anderson & Woodrow, 1989: 12).

The methodological framework employed here relies on three primary data sources: group interviews, open interviews and surveys. These are complemented by a review of secondary documents, when available, and observations conducted during the course of the field visit. The three principal data sources will be briefly reviewed here. Methodological issues pertaining specifically to the Manica pilot study will be reviewed in Chapter 3.

Group Interviews

Two group interviews are conducted during each community study, one as an introductory meeting with the villagers and one as a closing meeting. The first serves to introduce the team, to explain the way in which the community study will be conducted, to ask for permission to work and to gain a first impression of the community situation. The second serves as a closing meeting, informing the villagers on preliminary findings and on future follow-up. It is essential that the community has a clear understanding of what will or will not take place after the study. Unfounded expectations can contribute to negative dynamics in the relations between the operator and the community once the operation is under way. The closing meeting is also of key importance for verifying the quality of the information gathered, which is particularly important in view of conflicting data. As will be discussed later, it is highly possible that information gained early on during the study contradicts data collected by other mechanisms at a later stage. This demonstrates one of the benefits of applying multiple data-gathering mechanisms. In order for the group meetings to be useful exercises, it is essential that the convener of the meetings is able to make the participants feel comfortable so that the whole group participates actively.

Open interviews

A number of comprehensive interviews with key informants are conducted. Key informants include local authorities and local residents. In cases where demining is ongoing, project implementers (i.e. management staff and deminers) are also interviewed. Local leaders can provide particularly interesting information, as can other residents that have somehow been directly affected by the mine problem. In other words, key informants are chosen strategically, by virtue of their holding particular insights into the issues under investigation. Their identification might be through existing documentation, through references from other key informers or through the survey. The use of interviews can, in some cases, translate into the use of information which is anecdotal. However, interviews are regarded as central to the work because they serve to provide an ‘inside’ and more detailed look into how villagers feel about the presence of mines, what the community needs and what the capacities are. Experience has demonstrated that, by and large, individual villagers delineate views of, and needs associated with, the mine problem that are similar to the needs and views expressed by other villagers from the same area. In practice, open interviews compose the largest portion of field data. The interviews are conducted by the researchers and

entail extensive and lengthy conversations; they do not follow a pre-established or standardized set of questions; instead, the list of issues addressed is continuously revised to follow up on new insights – or even hunches – that emerge throughout the data-collection process. This information-gathering technique can lead to the identification of key issues of concern or relevance in terms of the community's capacities and needs. The relative merits and drawbacks of group interviews and individual interviews has been a topic of discussion among methodology experts. AMAC's experience in working with mine-affected communities indicates that neither type of data is better than the other; rather, they are complementary and should be used in conjunction, whenever possible, in order to increase the overall validity of the study.

Survey

A standard survey is also employed in the community study approach. Surveys are primarily used to gather general, standardized information on the community being studied, but will also include questions about people's perceptions of the mine issue and the HMA project, if one is present.[3] AMAC uses a standardized survey that can be adapted to meet the needs of individual mine-affected countries. Basic modules of the survey cover household information and issues about community structure, while specialized modules are tailored to address, for example, the aspects of war-related migration that might be relevant to a specific community. For the surveys, respondents are primarily selected at random, while efforts are made to cover the whole geographical area of the village.

The Report

This report is based on the conviction that an improvement of HMA practices must include successful capacity-building at the field level. The AMAC approach to impact assessment is based on field experience in conducting community studies and has evolved from an analysis of the most pressing needs of operators at the field level. Undoubtedly, there is a wide range of practical experience in HMA which has not been systematically documented or analysed but which could potentially lead to great improvements in the way HMA is generally conducted. Field experience is the most central resource available for ensuring that the tools developed respond to the requirements on the ground. There is therefore a consistent need for researchers to go to the field and spend time with practitioners, in order to document how the latter work and to learn from their experiences. With regard to this report and the work it is based on, it is clear that there are many organizations and individuals that possess knowledge that would have contributed to its improvement. The main priority here was to test, through a practical application, the validity of the community study approach. How-

[3] In some cases, special surveys might also be designed to address HMA practitioners' perceptions of their own work.

ever, since the development of training tools and the refinement of the approach and methodology is an ongoing process, we encourage comments on this work.

In addition to the present introduction, the report is composed of four chapters. Chapter 2 focuses on the usefulness of the community study approach as a complementary method of assessing impact. Chapter 3 examines the operationalization of the approach as a pilot study in partnership with NPA–Mozambique. Chapter 4 outlines the specifications of the methodology employed during the Manica pilot study and provides synoptic versions of the community studies. In the fifth and final chapter, the challenges facing impact assessment at the micro level and the future of local capacity-building in HMA are explored.

Chapter 2

COMMUNITY STUDIES IN CONTEXT

The community study approach has been criticized for being too labour intensive, as well as for requiring a level of analytical capacity that is beyond the abilities of operator staff. While the first criticism might be regarded as a valid one, there are a number of issues that must be considered in connection with it. First, we must acknowledge that demining, by and large, is a time-consuming task. There are very few situations where a delay of a couple of weeks would substantially delay the whole process, and in most cases the delay problem can be met by appropriate planning. Where demining often takes months to accomplish, the benefits (in terms of ensuring the greatest possible impact of the operation) of knowing the community by far outweigh the possible loss of time at the beginning of an operation. Exceptions to this may occur at the emergency stage, in cases where the reduction of accidents outweighs all other potential impacts simply because their number is too high to allow for delays of any sort and where it is possible to eliminate the whole mine problem by a short-term effort. However, it is rare that circumstances are such that the demining period is expected to be short and the casualties caused by the mines are so high that a poorly planned rapid response could be seen as acceptable. The second criticism of the community study approach focuses on staff capacity. This study is a first attempt to counter that critique. Indeed, the challenges associated with capacity-building are something we will return to throughout this report.

For some years, the scope of the landmine problem as regards impact has been mainly documented through large-scale surveys. Indeed, the need for surveys of this magnitude is evident. The Impact Survey conducted by the Survey Action Centre (SAC), which is based on former Survey Level One, is currently the most prominent example. However, it is important to recognize that large-scale surveys have limitations, as do all approaches to assessing impact. The key, therefore, is to find ways of using different approaches in complementary ways in order to maximize the benefits for affected populations.

The Objectives of Impact Assessment

Improving the planning and implementation of HMA is the central goal of impact-assessment methodologies. Identifying which approach to use at what time in the operational time scheme depends on the needs of the programme. In order to identify the principal goals, benefits and drawbacks of individual methodologies, and to highlight how

they complement each other, a review of the approaches currently applied in HMA is presented in this chapter.

A word of caution is necessary, however. As the demand for impact assessment increases, it is important that methodological systems are used for their individual qualities rather than to fulfil all impact-assessment requirements. It is therefore vital to understand what the goals of the individual systems are. If HMA is to strengthen its performance to the benefit of mine-affected communities, it is of paramount importance that we do not simply pay lip service to conducting impact assessment without realizing the individual strengths and weaknesses of the methodologies employed.

A second point that should be stressed here is cost: conducting impact assessment is an added cost for a mine-action operation. In its early days, HMA was conducted without thorough investigations into the impact of landmines, but this should not be regarded as sufficient reason to continue bypassing the need for impact assessment. While monetary cost is undoubtedly an issue we are all too keenly aware of, it is also important to ask whether we can afford to conduct operations that may injure rather than assist, or operations that may accomplish little beyond reducing the potential for accidents. As mentioned earlier, the use of any individual approach for the assessment of impact needs to be based on an analysis of the needs of the given programme. HMA is implemented at different stages of the reconstruction process: At one extreme, there may be an emergency stage, with an emphasis on short-term priorities; at the other extreme lies the development-oriented stage, where longer-term impact is dominant. It can be argued that key priorities are more easily identified at the emergency stage. This is so for a number of reasons, chief among them being the high probability of accidents. Moreover, it is often the case that certain tasks – such as the reopening of key transport routes or the clearing of areas for the resettlement of returnees – stand out as evident high priorities at this stage. However, as we move from the emergency stage to long-term development, establishing priorities becomes increasingly complex and requires more sophisticated approaches to impact identification.

The gradual transition from the emergency to the development stage often parallels the transition from a focus on tasks which have an impact at the regional or national level, such as the repair of key infrastructural elements, to a focus on tasks where the major impact is at the local level. The above description of the different stages can lead to the conclusion that, at the emergency stage, the understanding of the community is unimportant. This would be an oversimplification of the problem at hand. While it is true that tasks can be more easily identified at the emergency stage, an understanding of the host community is irrelevant only where there is no population living in the vicinity of the tasks to be carried out. Indeed, it is important to note that all macro-level tasks that take place in populated areas have an impact at the micro level, as, for example, where the clearance of a water-supply line for a major city is implemented close to populated villages.[1] Hence most macro-level tasks present the chal-

[1] For an example, see Millard & Harpviken, 2000, Chapter 7.

lenge of maximizing impact at multiple levels, which in part is dependent on a deeper understanding of host communities.[2]

In short, the ease with which high-priority tasks may be identified at the emergency stage should not be regarded as indicating that information on impact is not necessary. Absence of information will always translate into HMA operations that do not achieve their total potential. The sooner that impact-assessment information-gathering is institutionalized, the better the chances for building a good programme.

Table 2.1. Priority-Setting by Stage of Postwar Reconstruction*

	Stage 1	Stage 2	Stage 3
Overall Objective	Emergency	Short-term developmental	Long-term developmental
Main Impact by Level	National level (macro-level impact)	Regional level (often coordination with other aid initiatives)	Community level (micro-level impact)
Accident Potential	High	Low	Minimum
Impact Identification	Low difficulty	Moderate difficulty	High difficulty

* Table taken from Millard & Harpviken, 2000, p. 11

Moreover, for impact assessment to contribute to a thorough improvement of HMA practice, it must be integrated as a tool in the planning and implementation of projects. How to do this can be a challenge. Indeed finding ways of gathering data is only one part of the puzzle. Using the data effectively and in the most beneficial way is a different and equally complex challenge.

The UN International Mine Action Standards (IMAS), which are currently at the final stage of the drafting process, include four types of surveys: general, impact, technical and the hand-over documentation.[3] The first three should be conducted prior to an operation's launch, while the fourth takes place after the completion of a demining operation. The fact that the impact survey is regarded as a key component of the standards marks a new phase for international regulations in HMA and testifies to the continual changes taking place in this field.

It is notable that while the field of impact assessment in HMA is rapidly advancing, impact-assessment tools are primarily used for planning and prioritization at the programme level thus far, but have less to offer in guidance for planning and implementing individual tasks. Clearly, programme-level prioritization is key, but here the issue of complementarity between approaches becomes evident. The community study approach emphasizes the tailoring of individual projects to serve the maximization of impact, as well as monitoring and adjustment throughout the implementation phase.

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2 See Millard & Harpviken, 2000.

3 Drafts available at http://www.mineclearancestandards.org.

Beyond identifying priorities and planning operations, it is equally important to focus on the conduct of the operation and hand-over phases. Identification of impact and planning at the programme level does not guarantee that individual demining operations have an impact at the ground level. Returning to the example employed earlier in the report, confidence in demined land is not automatically present simply because demining has taken place. On the contrary, confidence has to be built. Moreover, it is important to realize that confidence-building and technical competence do not necessarily go hand in hand. While ensuring that an area is technically free of mines requires an understanding of the techniques that are most effective under the local topographic conditions, ensuring that confidence is built requires an understanding of the host community. Impact assessment, therefore, is not simply a priority-setting tool, but also needs to be an impact-maximizing tool. The challenge lies in finding the appropriate approach for responding to the different needs of individual operations. In turn, this can serve to ensure that organizations use their resources in the best possible fashion, while target groups are provided with the best possible service. Together, these factors can serve to ensure overall success.

In the following, a review of the four most prominent approaches to impact assessment is provided. These are: Rules of Thumb, Cost-Benefit Analysis, Composite Indicators and Community Studies.[4] These approaches differ from each other in fundamental ways, both in the data they generate and in the methodology they employ. Each approach has its own strengths and weaknesses. The challenge is to establish which one works best for a particular task or in a particular context and to identify how the different approaches can complement one another.

The Rules of Thumb Approach

The majority of operational programmes have used the so-called Rules of Thumb approach for setting priorities and planning operations. 'Rules of Thumb' is here used to describe a group of roughly defined, broad ways of assessing impact, rather than a consistent and clearly defined approach. Most commonly, a Rules of Thumb system emphasizes the use of a single dimension for task identification. Focus is often on the type of area mined, as when categorizing land into roads, residential areas or agricultural areas. This method relies on the premise that knowing the primary former use of an area mined will give sufficient indication of the economic impact caused by the presence of mines. Additional factors which play a role in this approach are official requests from organizations, such as NGOs or the UN. The underlying assumption is that if another organization has requested that the area be demined, then impact is guaranteed. While it may be true that there is potential impact in all the areas identified through this approach and that, in some, the impact may be realized, the principal weaknesses of the Rules of Thumb approach to impact assessment is its limited ability to engage with and represent the views of affected populations. This is compounded

[4] See Harpviken, Millard, Kjellman & Strand, 2001.

by an inability to assess impact at multiple levels. The employment of an often very simplistic tool overrules a few basic principles about understanding the way communities function. The system presumes that all residential areas, for example, hold equal or very similar value in terms of impact. This may be true in some cases, but such an assumption is largely misleading. Moreover, the potential for at least moderate success with such a system is reliant on specific individuals who have developed intuition through experience. While experience can add considerable value to operations, relying solely on past experience as a foundation for impact assessment may be too high a responsibility to place on any one individual, and this has implications for the organization involved, both in terms of how its staff practise their jobs and because it generates a high level of dependency on one person. Moreover, since the Rules of Thumb approach operates with broad categories, which are not necessarily easily distinguishable, it is vulnerable to the biases of the individuals making the decisions. The simplicity of the system may also lead decisionmakers to become focused on operational constraints rather than landmine impact. As the emergency stage ends and identification of impact becomes more difficult, the value of this system falls dramatically (see Table 2.1). In short, the Rules of Thumb approach may be used for initial priority-setting in an emergency phase, but it has little value at later stages in the reconstruction process.

The Economic Approach

The use of economic analysis as an impact-assessment tool in the field of aid and development is not new. Thus, it is now based on a substantial body of knowledge and well-defined analytical tools. Generally, the objective of this approach is based on predicting returns on specific types of investment. The most common methodology employed in HMA is Cost–Benefit Analysis (CBA). Economic analysis is able to include multiple factors in its assessments. The methodology employed by economic analysis may create templates that can be applied in a number of similar scenarios. Unlike other methodological approaches, economic analysis tends to focus on economic values rather than social implications. Notably, some analysts attempt to give non-economic factors an economic value so that they can be included in the analysis, as when casualties and injuries are represented in monetary terms.

Like the Rules of Thumb approach, the use of economic analysis at a general level is not well suited for securing the participation of the target population. The World Bank, however, has been exploring the opportunity to employ economic analysis as a basis for dialogue with target groups.[5] While this methodology does not assist in safeguarding impact at the local level, its value is considerable in the evaluation of a programme or a nationwide effort. The approach is most useful either before the commencement of a programme or after its completion. One of the visible values of the approach is its ability to differentiate between constraints and costs by calculating how flexibility regarding

[5] See Mine Action Centre for Afghanistan, 2001

constraints can reduce costs. Undoubtedly, economic analysis can have a role throughout the different stages from emergency to long-term development. However, given its principal focuses on economic impact, this approach should be regarded as complementary to others rather than the principal tool used to identify the impact of landmines on communities.

The Composite Indicator Approach

At present, the most influential methodology for impact assessment in HMA is the global Level One Impact Survey (LOIS) designed and conducted by the Survey Action Centre (SAC). The LOIS has largely become the international standard for basic impact-assessment surveys. The revised version of the UN International Mine Action Standards gives SAC a central role in the definition of standards for surveying impact. Moreover, the SAC methodological approach for survey and analysis has been integrated into the Information Management System for Mine Action (IMSMA), a database that assists in impact data analysis and decisionmaking. Currently, the integration of LOIS data into the IMSMA database has the support of both the UN and most major mine-action operators.

The LOIS methodology employs a composite indicator, the Mine Impact Score, as the key to impact assessment. The Mine Impact Score is composed of three types of variables: the nature of contamination, the activity prevented by presence of mines and the number of recent victims. The nature of contamination is identified by two variables: the presence of mines and the presence of unexploded ordnance (UXO). With regard to activities prevented by the presence of mines, a total of ten variables are covered, such as crop land, pasture, water-points, residential areas and other infrastructural elements. The number of mine victims is represented by a single variable. With the exception of the third indicator, all variables are binary. This means, for example, that the presence of mines or UXO has equal value in all cases, regardless of the scope of the problem. Similarly, open or blocked access to resources provides values of either one or zero. The specific importance of a particular resource to an individual community cannot be reflected. In contrast, the mine victim variable increases with the number of victims, though each individual victim is given the same value, regardless of, say, how long ago the accident took place. Neither the size of the mined area nor the number of mined areas affecting any particular community have any effect on the impact score.

The variables employed for LOIS are given an individual weight that can be changed or adapted to suit the goals of the individual user. Generally, the weighting system for an individual country survey is established through negotiations between the SAC and country representatives. While the sum of weights is constant, the weighting of individual factors is modified to ensure relevance to particular countries. In order to analyse the global threat of landmines, SAC needs to ensure that the results of individual country surveys are globally comparable.

On the whole, LOIS has become the basis for initial impact surveys in HMA. The approach attempts to include the participation of local communities by employing a rapid participatory appraisal technique, which ensures a level of local ownership and builds legitimacy for the survey. The survey's primary level of analysis is the affected community, but it includes a variety of information sources. The ultimate ambition of the survey is to provide comparable data on landmine impact at a global level.

Within the sequence from HMA priority-setting, via planning and conduct of operations, to hand-over phases, the survey is most useful at the early stages of a programme to provide a general idea of the levels of impact at a national level and to help in devising a national strategy. However, the information provided by the survey is often insufficient to be of use in the conduct of individual operations or to distinguish between seemingly equal communities. Therefore, the approach should not be used as the sole tool to guide conduct in the operational phase of individual projects.

The Community Studies Approach

Community studies, such as those employed by AMAC, aim to establish a more thorough understanding of the impact of landmines on affected communities. Community studies combine the use of several data collection methodologies: group interviews, unstructured interviews with key informants, standardized surveys, observation and document reviews. The analysis is based on a standard 'plan of inquiry', which outlines the issues covered by each community study. The plan of inquiry serves to structure the data-gathering and analysis. The approach is labour intensive and comparatively time consuming. The AMAC project has employed community studies for two principal objectives: first, to contribute to placing a broader understanding of impact at the core of the HMA debate; second, to introduce the community study approach into the operational structure of HMA organizations. The latter requires that the methodological package be adapted to fit the needs of individual operators and that operators have the capability to conduct studies independently. Capacity-building is one of the central aims of the project and the central focus of this report.

AMAC's community study approach attempts to assess the value of a wide range of factors pertinent to the individual communities studied. Unlike other approaches, which focus more directly on landmines, community studies examine such issues as the impact of landmines on migration and their role in relation to cultural or religious issues in order to assess impact as relevant to individual target groups. This approach has demonstrated that very few generalizations can be made regarding the impact of mines at the micro level. Hence, there is no blueprint for how to conduct an operation in order to ensure that impact is maximized. Community studies are demanding in both labour and analytical competence, and some have criticized the relevance of the approach for operators by suggesting that the costs outweigh the benefits. However, in terms of the representation of local interests, the community study approach is the most thorough. However, the simultaneous focus on community-level impact and maximization of impact makes the community study approach inappropriate for

identifying the level of impact at a country level. Thus, while the approach is useful at any stage between emergency and long-term development, it does not replace the other tools. By and large, it is useful as a complement to such methodologies as LOIS and as an operational tool to ensure the maximization of impact throughout the life cycle of demining projects.

Conclusion

Past experience in HMA has made it clear that HMA operations need to be rooted in thorough impact-assessment mechanisms. In the early years of HMA, the distinction between impact and output was largely overlooked. Today, this is slowly changing through a move away from square meters cleared or number of mines lifted to an understanding of the effects of the clearance operation. Now that some valuable approaches to impact assessment have been created, tried and tested, it is clear that the next step is to employ such tools on a regular basis in order to ensure the best possible results. The key is to recognize the usefulness of different approaches to impact assessment and to ensure that these approaches are used in a complementary fashion so that the target group is provided with the best possible service and impact is maximized. It is also essential that impact assessment is not only used at the priority-setting and planning stages, but throughout the demining process. At the same time, we must recognize that the prediction of impact does not in itself guarantee impact after the operation is completed. In order to maximize impact throughout the demining process, it will be necessary to develop more varied impact-assessment capacities at the level of individual organizations.

Chapter 3

COMMUNITY STUDIES APPLIED

The community study approach, like other impact-assessment methodologies, is particularly relevant for a specific time and place in the demining process. If the mine problem is compartmentalized into a number of stages and units of analysis, community studies should take place after a large-scale survey has been carried out and before individual operations are undertaken. The approach focuses on the smallest unit of analysis and is able to provide the most detailed information at the micro level.

The experience of different methodologies and their interrelationships point directly to the issue of complementarity. The use of community studies to increase the potential benefit and decrease the potential negative effects of any one operation does not in any way eliminate the need for national impact survey data, for example. As will be discussed later, the studies conducted in Manica province, which form the basis of this report, could not have been carried out without impact survey information. All too often, impact-assessment methodologies are regarded as competing instead of complementary. The work that underlies this report testifies to the contrary.

The Role of Community Studies

Community studies provide an array of information that can assist demining operator organizations in numerous ways, from choosing the area to demine to ensuring that the demining has the maximum possible positive impact.[1] Currently, there are a number of impact-assessment approaches at the disposal of demining operators and planning institutions. The most frequently used approaches were reviewed in the last chapter. All of these approaches have a role at some level, and the main strength of the community study approach lies in providing information at the community or micro level. For example, once national strategies have been drawn up and one is confronted with two communities where the impact seems to be identical, where should scarce demining resources be applied? This type of issue cannot be addressed by a large-scale survey or nationwide analysis, which by their very nature have to make broad generalizations based on relatively rough data. However, a related question is why should one do community studies where priority-setting is not in question, where demining has already started or even after demining has been completed? As will be discussed

[1] See Millard & Harpviken, 2000.

throughout this report, the answer can be simple while embodying innumerable complexities: communities are different from one another. Therefore it is essential to recognize that knowing the unique character of a community will substantially contribute to improving the relationship between the operator and the community, which will assist in maximizing the benefit of the operation. For example, once a decision to undertake demining has been made, having information on the structure of the leadership system or on the most effective information-diffusing systems in that particular community will enable the operator to ensure that villagers are well informed of the goals and conduct of the operation. This can serve to effectively minimize the negative effects of lack of communication by encouraging adaptation to the way the community functions.

Past experience has demonstrated that HMA – and demining specifically – does not always have the impact that was expected. It is clear that identifying the impact of landmines does not guarantee that the operation to remove them will bring about predicted results. This is most evident in cases where cleared land remains unused after being handed over to the host community. There is a multitude of possible reasons for such a scenario. The first step in solving this puzzle is to recognize that demining in itself accomplishes one thing – it reduces the potential for accidents.[2] Beyond this reduction of accident potential, the extent to which demining will have an impact on a particular community is dependent on a variety of factors. First, the consequences of demining or the impact at the local level must be examined. For example, knowing that water is generally a scarce resource in one country does not mean that this is so for a specific community within that country. Similarly, the fact that agricultural land is mined does not mean that demining it will have larger impact. In fact, it may very well be the case that the local population has found alternative land which is more productive and do not intend to move back to previous farmland, even if this is closer to their homes. Second, on the assumption that demining the area would have an impact on the local population, one of the key issues determining the actual level of concrete impact is that of confidence in demined land.[3] The factors which determine the level of confidence in demined land are numerous and require that the operator understand the community within which it is working. Knowing where minefields are located and the general impact expected from demining or informing the population about the track record regarding the operator's clearance rates do not ensure that confidence is built at the local level. Knowing that a community might benefit from being able to use a specified road, as may be determined by an impact survey, does not translate into the use of such a road after clearance. Returning to the notion that communities are unique, we can say that the challenge of building trust requires demining organizations to understand local idiosyncrasies.

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2 Here it is important to recognize that there is always a chance, however slim, that mines have remained in the ground.

3 Millard, Harpviken & Kjellman, 2001.

Community Studies and the HMA Operator

The previous sections outlined how the community study approach is helpful and at what stage in the demining process. How can operators use it and why is the knowledge provided by community studies useful to them? These are somewhat different questions, to which this report will now turn.

First, some basic issues regarding priority-setting and planning in operational HMA must be reviewed. At the national level, the majority of countries have in place a nationwide body that coordinates or commissions national surveys, as is the case in Mozambique. Once survey data are available, the national coordinating body will draw some general prioritization categories from the information provided, for example sorting tasks as high, medium and low impact. This information will be provided to the different operators. At this stage, it is not clear from this information which of the tasks that are categorized as high impact are most important. Information on tasks that are difficult to carry out owing to constraints such as weather conditions may be wanting. Most importantly, it will be difficult to assess whether or not the task meets the guidelines identified by the operator agency for undertaking demining efforts. Regarding this last point, it important to recognize that humanitarian agencies have mandates that outline primary target groups for their projects. Because of this, it is important for agencies to ensure that if a project – in this case, demining – is undertaken, it will indeed benefit the target population. For example, conducting demining to enable the planting of crops for a wealthy government minister who will use the crops for personal economic gain is not generally regarded as a task that would warrant humanitarian intervention. While this scenario arguably does have an economic impact, most would agree that such a task is outside the guidelines defining humanitarian endeavours.

Given the above, community studies are first of use to operators in establishing whether or not a task designated to them should be undertaken. Once the decision to demine has been made, the information gathered throughout the preliminary community study becomes again useful. This information can guide the conduct of the operation and thus ensure the most positive outcome: impact-maximizing.

As mentioned earlier, impact-assessment discussions and approaches have by and large neglected the operational stage of HMA. How should HMA be conducted in order to ensure the best possible outcome? The earlier assumption, that if the right priorities were drawn no subsequent error could be made, has proven wrong. Therefore, training local staff in the gathering, analysis and understanding of socio-economic data becomes a necessity. It is clear today that the only people who can ensure that impact is maximized are the individuals who are conducting the operation. With regards to this particular task, it is of little value to have multiple skilled people at headquarters if the required knowledge does not also exist at the ground level.

The use of community studies requires that data be updated throughout the conduct of the operation. There may be things that were overlooked or that have become less or more important with time, and all of these factors should be considered while an

operation is under way in order to ensure that tasks are improved as the operation proceeds. From this angle, the use of qualified people from an organization separate from the individual operator to conduct impact assessment, people not in the field and not in close contact with field personnel, would defeat the purpose.

In order to quickly adapt to changing needs within operations, it is essential that individual NGOs have their own analytical capacity working at the field level, with people who are able to transfer their knowledge to field workers, including individual deminers. Having a large bureaucratic system to assess community needs and transfer information may in fact reduce the positive effects of using the community study approach. The community study approach is based on the ability to adapt to the individual community as quickly as possible, which in turn requires a high level of organizational flexibility.

In addition to being able to ensure that areas demined will benefit the predetermined target group and to adapt the operation to the needs of the affected population, the community study approach is also highly useful after an operation has been completed. Conducting post-demining assessments allows organizations to learn from their experiences and assess the level of impact that the operation had on the target group.

Faced with increasing demands from donors to report on the impact that a particular operation has had on the target group, operators must build competence in impact assessment in a thorough manner. Impact is not simply limited to the most evident factors, such as the reduction of potential accidents that can be achieved by the technically defined clearance of landmines. Identifying the in-depth impact of an operation requires investigating how the area is being used and the consequences of such usage. Employment of the land for agricultural production after demining translates into the usage of land, hence impact. However, there are other questions to be asked: How many families have been affected by the ability to use the land? How was the land distributed after demining? Such factors can give a better understanding of how the target community was affected by the clearance of landmines.

Under the current conditions, where there are far more mined areas across the globe than will be cleared in the near future, it is key that accident reduction and the establishment of access to land areas are not regarded as the sole indicators of impact. Rather, efforts should be made to ensure that the use of land has a cascading long-term positive effect on the development of the community affected by landmines.

It is important to recognize that communities affected by landmines are often also affected by other problems caused by conflict or low levels of post-conflict development. From this perspective, it is important that demining achieves as much as it can. Demining must regard itself (and ensure that others regard it) as doing more than removing weapons, as being a partner in the post-conflict transformative reconstruction process.[4]

[4] Millard & Harpviken, 2000.

Cascading the Data-Gathering Process

The Manica pilot study is a clear example of complementarity of approaches. In Mozambique, the Canadian International Demining Institute (CIDC) was responsible for implementing a LOIS. As has been mentioned earlier, the community study approach is not useful in identifying the nationwide scope of the mine problem or in drawing a national strategy, but can, if used, lead to drastic improvement in the operationalization of demining, particularly as regards impact-maximizing.

The conduct of community studies ideally requires that data on the presence of mines and the predicted impact, albeit general, be available in order to guide where studies should be conducted. The Manica pilot study relied on information from the CIDC survey to identify the target communities. The Manica pilot study served the dual purpose of training NPA-Mozambique staff while providing NPA with detailed information on the impact of landmines on individual communities and potential mechanisms that might ensure the maximization of impact. NPA had identified Manica province as an area in which it urgently required information on affected communities. Given these prerequisites, CIDC and the associated Wilkinson Group, as well as the Instituto Nacional de Desminagem (National Mine Clearance Institute [IND]), were approached for permission to employ excerpts from the survey data. After discussions, it was agreed that CIDC would provide information on the location of nine communities in Manica province which, after a preliminary review of data, were regarded as high or medium impact at the provincial level. At that level, the survey had identified two high impact areas. These were immediately identified as sites for community studies. The remaining seven medium-impact communities were identified from a larger number of medium-impact communities in a fashion that eased the logistics, given the need for continuous monitoring of all three teams of trainees.

Originally, a systematic comparison of the data gathered by CIDC and the community study approach was planned for this report. The goal of this would have been to illustrate more clearly how the different approaches complement one another. However, the CIDC survey data was not yet official at the time of writing, and hence the specific information on the individual communities surveyed was not made available to the authors. For this reason, the systematic comparison had to be excluded from this report.

Community Studies at the Operational Level: NPA-Mozambique

It has been argued that conducting a national level one survey, such as the recent one in Mozambique, should be sufficient to draw priorities at the national level and to conduct successful operations at the local level. Yet this is not true in its totality. While a nationwide impact survey is essential before any programme can commence, it remains unrealistic to expect any one impact-assessment approach to fulfil priority-setting, planning and impact-maximizing needs at all stages from emergency to development and at both the macro and micro levels of impact. Hence, it should be

reiterated that the use of various impact-assessment approaches should be coupled with a clear understanding of what each approach can do and what is needed at the time.

It is clear that, in recent years, impact has become one of the buzzwords of HMA. Yet it is also clear that there are multiple ways of measuring impact and ensuring operations have a positive outcome. Under these circumstances, NPA-Mozambique approached AMAC to propose a joint project to train local staff in the conduct and use of the community study approach. The goal of this study would be to train staff in the use of a methodology that would allow NPA-Mozambique:

- to ensure that all tasks undertaken benefit the identified target group in accordance with NPA's mandate as a humanitarian organization; and
- to ensure the maximization of impact of individual demining tasks.

For NPA it is important to ensure that their clearance operations have an impact at the local level and that they are able to maximize the impact or benefit to the population. This is true owing to the humanitarian nature of NPA as an organization, but becomes particularly pressing given the short time-span predicted for substantial funding of demining in Mozambique. Current predictions are that present funding, which sustains three large international HMA agencies in Mozambique, will be virtually terminated within the next four to five years. This means that it is imperative that current responses are applied in ways that will achieve the best possible outcome within this time-frame. This necessitates that the right priorities are set, that impact is continuously maximized and that solid capacities are developed locally.

Moreover, Mozambique is a country that is currently in the mid- to long-term development stage, where for the most part there is a high availability of land but the number of accidents is low. Furthermore, most accidents are not an indication that the local population does not know the location of landmines or were forced to use a particular area, In other words, accidents do not serve as an indication of impact, as defined more broadly. Additionally, the majority of macro-level impact tasks have been undertaken. Therefore, the majority of areas currently undergoing or awaiting clearance in Mozambique have a principal micro-level impact, and they are located in rural areas. Therefore, demining will principally increase social and economic living standards at the micro level only. Since people have, by and large, found ways to coexist with mines over the ten years since the end of the war, demining on its own does not guarantee that people will use areas after they have been cleared. Moreover, in many cases there is more than one mined area affecting the same village, and it may not be evident to outsiders which area should be demined first. Under these more complex circumstances, ensuring that demining has an impact and being able to maximize the positive impact of any one given operation requires a more in-depth understanding of the local conditions. Therefore, the community study approach seemed suited to the needs of NPA in Mozambique.

Capacity-Building at the Operator Level

As has already been mentioned, one of the principal criticisms of the community study approach has been the potential difficulty of making such a complex methodology employable by field staff. This criticism is founded on the notion that academically qualified individuals had used the methodology in the past and the employment of such methods would be too demanding for local staff with little or no academic training.

In the past, during independent community studies, AMAC has employed local surveyors who often had low levels of formal education. Indeed, the only formal qualification required to be a surveyor in an AMAC team has been the ability to read and write. Undoubtedly, training surveyors with such limited academic knowledge is a challenge: it has necessitated changing the way training is conducted and has required patience and time. While the survey might be relatively easy to explain and conceptualize for academically trained staff, this is often not the case with local villagers. However, the use of local surveyors has also proved to have considerable advantages. First, local surveyors know the villages well and are best able to identify a representative sample. This is particularly the case in countries such as Mozambique where houses are often dispersed and it is impossible for outsiders to know with certainty where the village ends or how many houses lie within its limits. Second, local surveyors are able to assist with the adaptation of the survey. The survey employed by AMAC has a number of questions that require village-specific information before the survey can be conducted, as did the survey employed during the Manica pilot study.[5] Questions C1–3, which are about local leadership, are an example of this (see Appendix 4). In the case of these questions, the structure of the local leadership must be identified and understood before the questions can be posed to individuals. For such reasons, the use of local surveyors has proved to be a substantial asset for research teams.

Undoubtedly, previous successes with local surveyors did not guarantee that the whole methodology could successfully be transferred to local operator staff. This was a concern held by AMAC project staff. At the same time, it was also clear that if the approach was not applicable at the field level it would rapidly become obsolete in its impact at the operational level. The conduct of community studies by researchers working on the project is minimal, owing to staff constraints and high costs. Moreover, the AMAC project was never established to respond to the field needs of multiple operators. The building of knowledge locally is not only a response to practical concerns, but is also seen as an ethical imperative.

From a theoretical perspective, the task of training local staff could be simply described as having three central goals:

- introducing staff to impact assessment and impact-maximizing,

[5] The Manica pilot study used a condensed version of the survey applied by AMAC in its independent community studies.

- training staff in the use of the methodological tools, and
- ensuring staff are able to analyse the data and write useful reports.

Part of the challenge lies in identifying the right trainees and conducting the classroom training. It is one thing to learn how to do something in the classroom; it is a very different thing to do it in the field. Given this and the fact that NPA would very much benefit from having field data on as many areas as possible, a curriculum was designed that would minimize the in-class training and conduct most of the training alongside the practical implementation in the field.

The formal training was limited to a one-week, nine-hours-a-day intensive course. Trainees quickly came to modify the way they envisioned mine action and its role at the community level. Parallel to this was training in impact assessment and maximization. In addition, detailed explanations on the use of the methodological tools were provided (see Appendix 2). After the in-class course, a four-week period elapsed before the field-study component was initiated. This was in order to allow trainees a processing period and sufficient exercises to practice their newly acquired skills. The second component of the study was the field-based studies.

For the field exercise, the ten trainees, all part of a year-long field supervisor course, were grouped into three teams. Each team was tasked with conducting individual case-studies. At the field level, all team members were required to learn and become proficient in the use of the different methodological tools (survey, interviews, observations, etc.). The teams were monitored on an ongoing basis and received support and advice, but the research itself was conducted by team members, not by teaching staff.

The practicalities of conducting and monitoring three simultaneous case-studies require considerable logistic support. Teams were working in areas which had been identified as mined by the CIDC survey but which had not undergone a technical survey.[6] In some cases, mined areas were marked, while in others they were not, and none of the marking could be treated as completely trustworthy since marking had been conducted to attempt to minimize the potential for accidents, not for demining purposes. Conducting community studies necessitates visiting households, particularly during the survey phase, when large distances are travelled, often on foot. In order to reduce the potential for mine accidents, teams were instructed to hire a local guide upon arrival at the village of study. Even so, in some cases, uncertainty regarding safe paths prevented teams from surveying localized areas within individual villages.

Beyond the security question, there was a need to establish camps for individual teams, which would stay for approximately ten days in a given locality. The logistics of ensuring clean water and wood or coal for cooking, to name a few examples, does consume time and energy. Unlike demining operations, which often have support staff who will ensure that the camp facilities meet the needs of demining staff, the

[6] The technical survey is normally conducted prior to clearance and aims at mapping technical and topographical aspects of the task in order to allow for operational planning. This survey is often combined with marking the perimeters of the minefield.

community study approach requires that external intervention is minimized, and the teams work largely alone.

The field component of the Manica pilot study was conducted from 29 March to 22 April and from 25 May to 2 June 2001**.** The first field trip, which led to the successful completion of six studies, two per team, was conducted during the rainy season. This placed considerable strain on the teams and the AMAC researcher monitoring the work. Due to time constraints, surveys and interviews had to take place under rough weather conditions, which made the work often difficult and at times exhausting. Despite this, the teams managed to successfully complete nine studies.

It is often said that data-analysis tools can only be as good as the data put into them. While this is undoubtedly true, it is equally true that data cannot serve their full purpose without being analysed. With this in mind, the completion of data collection in the field was only the halfway point on the journey to the required result. In order for the studies to be useful to the organization involved, in this case NPA-Mozambique, the information had to be appropriately analysed and written into report forms which were practical for operational use.

Therefore, upon return to headquarters, trainees were instructed in how to categorize data in a way that would ease analysis and the writing of reports, which have now been completed and submitted. While the quality of the data and analysis is good, language precision has been a problem in the reports. In this type of report, it is imperative that issues are clearly explained so that a third person will easily understand what are often complex issues. Nonetheless, it is encouraging to note that the information-gathering itself functioned well and that the output was relevant to the needs of the organization (see Chapter 4).

Upon completion of the training, NPA-Mozambique identified a team of three trainees to create an impact-assessment unit. This unit will employ the community study approach at all three stages of demining operations (pre-demining, during demining and post-demining). The goal of this unit is

> to provide NPA-Mozambique Mine Action Unit with information on socio-economic impact at the micro level. This will include study reports on potential tasks for priority-setting purposes, evaluation reports of ongoing tasks and post-clearance evaluation reports. The unit will be responsible for conducting studies, report write-up and briefing to both management and field staff. The objective of the unit is to provide NPA–Mozambique Mine Action Unit with sufficient information regarding socio-economic impact, which will assist in decisionmaking.[7]

Currently the unit is being piloted for a six-month period. The level of usefulness will depend on a variety of factors, but particularly on the provision of appropriate follow-up and support to the team, as well as changes within the operational structure to allow for the inclusion of information gathered by the impact unit. The difficulties in creating

[7] Norwegian People's Aid–Mozambique, 2001.

such a unit at the organizational level, where none has existed before, should not be underestimated. This is compounded by the fact that such a way of envisioning mine action is relatively new at the international level, so it is difficult to use past experiences as benchmarks for success. NPA will be evaluating the impact-assessment unit at the end of the six-month pilot period.

Lessons Learned

In many ways, the Manica pilot study can be regarded as a success. The staff were trained and were able to conduct community studies and analyse the data appropriately.[8] Through practical demonstration, the pilot study countered the criticism that individuals with little academic training and no social science research experience would be unable to use the approach. However, some important lessons on transferring knowledge and/or capacity-building at the local level can be drawn from the study.

It was clear from the onset that training staff with little academic background would require a new set of training tools. The trainees, for example, had no experience with the use of surveys, interviews or indeed observations as a means of gathering data. They had little understanding of the most basic concepts associated with ensuring data reliability. While this was overcome by reviewing some simple concepts and practising the skills, the more complex challenge was changing the way in which the trainees regarded HMA. Reconceptualizing HMA and its role within the framework of socio-economic impact has been a challenge at all levels, from policymaking to operations. Working with staff that has years of HMA experience, one of the initial challenges is to engage them in a dialogue that ultimately widens their perspective of HMA generally and the impact of mines specifically. This was largely achieved by using examples, based on previous AMAC case-studies, of what it is that socio-economic impact analysis seeks to find.

Perhaps one of the most fundamental lessons learned from training local staff in the conduct of community studies has been the importance of attention to detail. For a field researcher, the concept of 'detail' seldom exists: there simply is no information that is disregarded at the outset. While there may be information that bears no fruit or hunches that lead to nothing, this is not an assessment that is made immediately after receiving such information, but rather after close examination of it. The tasks of surveying and interviewing require that individuals are attentive to detail and precise in their note-taking, the latter being an issue which is often complicated by the use of interpreters.[9] As is

[8] It is important to note that the approach employed by AMAC for its independent studies is somewhat more complex that that employed in this study, this is because AMAC uses the information for a variety of purposes, among these, to write academic work requiring data that is not immediately useful for operators.

[9] While the trainees were all Mozambican nationals, interpreters were often required. In Mozambique, there are dozens of locally spoken languages, and often team members were not sufficiently proficient in these to be able to conduct community studies without interpreter assistance.

most visible in the survey, a number of questions require that the surveyor understands exactly what type of information is needed. This can be achieved by investing considerable time in the training phase to ensure that surveyors understand both the process and the desired goal.

In research, as in other fields, individuals have distinct strengths and weaknesses, and while it is true that skills can be taught, it is equally true that some individuals are better suited to certain tasks than others. Therefore it should come as no surprise that while some trainees were particularly proficient at conducting open interviews, others excelled in the survey, and still others mastered the art of observation. For an impact unit, of course, the challenge is to find individuals that can develop proficiency in all skills. Together with field experience, the role of the individual's character traits should not be underestimated in relation to successful data-gathering in the field.

Another issue of high importance when training in a new field, such as impact assessment, is that trainees realize their roles, responsibilities and the consequences of errors they might commit in the field. Unlike a deminer, who may have to face a mine accident in the event of an error, the consequences of erroneous socio-economic assessment are not immediately visible. A poorly conducted impact assessment may lead to wrong priority-setting or to errors in the conduct of an operation. Ultimately, this may mean that a given operation has no impact. When impact assessment is viewed in this way, it becomes clear that the emphasis on conducting proficient assessments is paramount. Quality assurance in impact assessment is quite complex. At the same time, the gathering of wrong data, lack of attention to detail, or indeed incorrect analysis of data can have severe consequences. To give some possible examples, the belief that an operation will yield no impact may cause a donor to suspend funding; the wrong area might be prioritized; or nothing might be achieved beyond a reduction in the potential for accidents. Given this, ensuring the quality of data gathered is paramount. But how can data quality be assured? They key lies in training the right staff in the right manner. Identifying staff who are able to learn the methodology is one challenge, but a much bigger challenge is training staff to conduct community studies as instructed when no one is present to supervise, when the climatic conditions are unfavourable or when part of the team is ill and unable to work. Under these conditions, the prevention of error is closely related to the commitment of the staff. Such commitment is directly linked to understanding what both positive and negative effects of particular actions can be. Organizations employing community studies, or any other methodology, should not only place high demands on those who gather the data but also provide them with the support and follow-up they require.

Conclusion

It is clear that impact assessment is a difficult exercise. The problems are exacerbated by the need to carefully examine the role and goals of individual approaches and the needs of individual cases before a method is chosen. At the operator level, this problem is further aggravated by the need to conduct impact assessment on an ongoing

basis, which requires that capacity is built at the local level. The impact-assessment issue does undoubtedly increase the complexity of conducting demining in the field; however, the rewards that come from conducting thorough assessments justify the level of investment required. Here we have discussed the value of a specific approach at the operator level: community studies. While there are difficulties in operationalizing the community study approach, it is also clear that the methodology does prove a useful tool in the field and provides information which is a valuable resource in the conduct of HMA operations.

Chapter 4

COMMUNITY STUDIES IN PRACTICE: A REVIEW OF CASES

Training operator staff to conduct community studies in areas where demining may take place, is ongoing or has been completed presupposes that we can answer the following questions in a satisfactory fashion: What is the value to operators of the information gained from conducting community studies? How can such an approach be operationalized at the field level? These two questions have been at the centre of the discussion thus far. Here, the cases that were studied during the Manica pilot study are presented. The length constraints of the report do not permit extensive reviews of each case. Therefore, a synoptic version of each community study is presented to illustrate the practicalities associated with the two key questions outlined above.

Case Studies

As its name indicates, the Manica pilot study was conducted in Manica province (capital: Chimoio), which lies in the centre of Mozambique and has an estimated population of 940,000. The province borders four others – Tete to the north, Gaza and Inhanbane to the south and Sofala to the east – while the border with Zimbabwe lies to the west. Manica is characterized by its mild climate and extensive woodlands. The climate is particularly conducive to varied agricultural production. The Beira Corridor, which stretches from Zimbabwe to the port of Beira (capital of Sofala province) and is a major transport route, crosses the centre of the province. Additionally, the petroleum pipeline along the Beira corridor and the dam at Rovue River (see Case-Study 6), which provides electricity for the province as well as for Beira, contributed to the strategic importance of the province during the conflict in Mozambique.[1] NPA is responsible for humanitarian demining in Manica, as it is in Tete and Sofala provinces.

The community studies which follow were conducted in areas where there is an indicated need for future demining. Three of the selected communities – Pidanganga, Josina Machel and Chichira – have hosted demining operations in the postwar period. The landmines present in 25 de Junho and in Mugoriondo were identified by the preliminary findings of the CIDC survey as having a high level of impact on the

[1] Christie, Iain, 1996.

community; the seven other cases were in the medium-impact category. All of the case-studies closely followed the community study approach outlined earlier in this report. This involved two group meetings, one at the start of the visit and one at the end. Each study included a minimum of 30 surveys and 5–8 key interviews. In addition, teams were instructed to conduct systematic observation trips in the village and to hold daily team meetings to discuss findings. In all cases, local staff were hired to serve as guides. In some cases, these individuals also served as interpreters, which was often necessary because of the diversity of language and dialect.[2]

Table 4.1: Location and Impact Score*

Manica Pilot Study Village Name	CIDC Village Name	Administrative Post	District	CIDC Impact Score
25 de Junho /7 de Abril	25 de Junho	Inchope	Gondola	High
Zona Mugoriondo	Zona Mugoriondo	Machipanda	Manica	High
Pindaganga Centro	Pindaganga Centro	Amatongas	Gondola	Medium
Mpucuta	Chodzure/Thuzure	Matsinho	Gondola	Medium
Chichira	Sede-Munhinga	Sussundenga	Sussundenga	Medium
Doeroi	Doeroi	Inchope	Gondola	Medium
Josina Machel	Josina Machel	Macate	Gondola	Medium
Chitui	Chitui	Machaze	Machaze	Medium
Guinhanipoto	Nhamatua	Cantadica	Barue	Medium

* Note that the Manica pilot study and the CIDC in part used different location names for the same communities.

Case-Study 1: 25 de Junho[3]

Community Background

The village of 25 de Junho is part of the administrative post of Inchope, district of Gondola. In the eastern part of 25 de Junho there is a small sub-village called 7 de Abril. During the war, a large part of the population moved to 7 de Abril for security reasons. 7 de Abril is closer to the main road and to the railroad station, which was guarded by Zimbabwean soldiers during the war.

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2 The case-study reports in this chapter are synoptic versions of the case-studies conducted. The reports that were written by the trainees cover the information here in more detail and have additional sections addressing such issues as confidence-building mechanisms that may be implemented if the task is undertaken and explorations into how impact may be maximized in individual cases. Additionally, the format of the reports by the trainees is more closely related to the plan of inquiry (Appendix 3).

3 Data-gathering conducted by Maxwel Gopani, Claudia Gasteni and Jose Njirazafa.

The majority of people from the area did not flee during the war. Prewar population figures are not available for 25 de Junho, although it is estimated that between 1,875 and 2,000 people currently inhabit the area. At present, population density does not appear high, but villagers maintain that the population is steadily increasing. The population increase is due to immigration of people from Beira, who come to the village and settle, often on a semi-permanent basis, in order to be able to harvest charcoal.

There are two minefields in the village, both of which were laid by the Zimbabwean troops towards the end of the war, between 1990 and 1992. The villagers explained that the mines were laid by the Zimbabwean troops who felt uncertain of the success of the Rome negotiations and wished to protect the petroleum pipeline that extends from Zimbabwe to the port of Beira. One of the minefields is located in the eastern part of 7 de Abril; a second is located in the middle of the village. In addition to the two minefields, there are two small areas with UXO. All areas affected by landmines or UXO are marked, but no respondent was able say with certainty who had conducted the minefield marking.

According to respondents, there have been no postwar accidents involving civilians, neither from mines nor from UXO. The only postwar accident involved a Frelimo (Mozambique Liberation Front) soldier who was attempting to disarm a mine at the time. Two additional accidents involving Frelimo soldiers are reported to have taken place during the war. A third accident that took place during the war involved an animal.

The village has had no mine-awareness training, and out of 36 survey respondents, 11 stated that they neither had information on mines nor knew their locations. The remaining respondents explained that they received information on landmines from friends, neighbours, the village secretary or the *mfumo* (traditional leader), either through informal conversations or at village meetings. According to survey responses, the most pressing needs of the village are a hospital, a school, formal employment, a market, water pumps and latrines.

Economic Field

It appears that land is not a scarce resource. Land is used mostly for housing and for subsistence agriculture. No respondent cultivates more than three hectares, and only 7 of the 36 respondents cultivate less than two hectares. This is a point worthy of note because the mined area is estimated to be no larger than 5 hectares in total. While the administrator from the post in Inchope maintained that the mined area was formerly used for agricultural purposes, most respondents assured the team that the minefield had never been cultivated.

Maize and sorghum are the most commonly cultivated crops, but millet, rice, sweet potato, banana, papaya, sugarcane and seasonal vegetables are also grown. Crop cultivation is dependent on rain irrigation and is not affected by landmines. No one in the areas practises fishing, but some hunting does take place. Even though hunting involves travelling some 5 km from the village, hunters in the area maintained that they

had never encountered mines while hunting. There is considerable deforestation in the area. Despite this, wood resources continue to figure highly as an income generator. Charcoal production and wood harvesting for sale are the chief income-generating activities for villagers and indeed one of the chief causes for the increase in population, as mentioned earlier. As with hunting, the villagers report that charcoal production is not in any way affected by the presence of mines. Most villagers own chickens, ducks and goats. They also explain that they used to rear pigs, but that an epidemic from December 2000 to January 2001 killed the majority of these. The animals are mainly raised for household consumption, but in some cases they are sold. Villagers confirm that no animal has ever been involved in a mine accident.

Drinking water is attained from either local wells or from a nearby river. It seems that the area does not have a water contamination problem. Notably, the village has a relatively organized system for taking care of the water pumps. Access to drinking water is not affected by the presence of landmines.

The village has a small market and two grocery shops. Most essential goods can be found at the market or the local shops. Within the village, people mostly travel by foot, while hand-pulled carts are employed to transport charcoal and agricultural products. The population uses public transport for travel to nearby cities, but charcoal buyers tend to use the train as a means of transporting the goods. No transport artery is affected by the presence of landmines.

Human Field

People inhabiting the area seem to feel relatively safe with regard to the presence of mines. The two minefields have been formally marked, and the local population has marked the areas containing UXO with makeshift markings. It appears that the population's high level of knowledge of the danger of mines is derived from having lived in close proximity to the military for many years.

The villagers depend on the services provided by Inchope Health Post, which is 3 km away. However, the health post has no surgical facilities. In the event of a mine accident or other serious medical emergency requiring evacuation, the health post relies on the ambulance from the Gondola District Hospital or on passing vehicles. Malaria, diarrhoea and sexually transmitted diseases (STDs) are the most common health problems affecting the population in the area. Aside from treating common diseases, the health post sometimes organizes health education for the local population. However, this service is primarily targeted at people who use the health post's services. In cases of epidemics, the health post sends health educators to the villages. This means that there exists a network of people that have experience in information dissemination at the village level, but their competence has not been tested.

The majority of children attend the school close to the administrative post, some 3 km away from the village. This school provides education up to seventh grade. Soon after the war, mine awareness was introduced into the educational curriculum, but this

was stopped in 1998. Neighbouring towns have education facilities providing further education, but few children continue education because they lack the financial means.

Social Field

The village has two parallel leadership systems, one traditional and one governmental. The governmental system is lead by a president, and has a secretary for each *bairro*, both of which are elected positions. Although the secretary reports to the president and the president to the local administrator, the secretaries seems to hold the most important role at the village level as regards the daily running of the village. Subordinate to the secretary were found *chefe de dez casas* (chief of ten houses) and *chefe de cinco casas* (chief of five houses). These latter positions are not elected, but are assigned by counting houses: the heads of household of each tenth and fifth house become responsible for the surrounding houses.

The traditional leadership system is headed by the *mfumos,* who work with the secretaries of the *bairros*. In 25 de Junho, the *mfumo* is subordinate to the secretary. The secretary resolves the majority of civil conflicts, although the *mfumo* is also able to resolve conflicts, but only when permitted by the secretary. Criminal cases are reported directly to the local police. Aside from conflict resolution, both the secretary and the *mfumo* are responsible for land allocation. The area seems to be mostly populated by members of Frelimo, which explains why the secretary seems to be regarded as more important than the traditional leadership.

There are five different religious representations in the village. It appears that the majority of the population attends one of the churches, and that the churches provide a good support network. At the village level, the most evident demonstration of collective mobilization is within the churches, as demonstrated in the construction of the church buildings and in the financial support provided to church members at times of hardship. Another example of collective work is the existence of a committee responsible for maintaining the water pumps. Moreover, friends, relatives and fellow congregation members are the individuals relied upon for support. However, most respondents also stressed that they are financially independent and self-reliant.

Conclusions

The population has knowledge of where mines are located. The presence of mines seems to have no economic impact upon the community. If the population increases drastically, there might be some land pressure, but here it must be remembered that the minefields are relatively small, and thus the gains from mine-free land will be minimal. No demining has taken place in the area, and no official mine-awareness classes have been given, although the secretary and *mfumos* use public meetings to remind people of the presence of mines. If demining were undertaken, the land is likely to be used for agricultural purposes. Given the size of the minefield, the expected impact is likely to be low. However, the proximity of the mines to the inhabited areas does pose a potential threat, particularly with newcomers.

Case-Study 2: Doreoi[4]

Community Background

Like 25 de Junho, the village of Doeroi belongs to the locality of Inchope, district of Gondola. The population of the village is estimated at 2,337. Most of the population fled during the war, but the great majority of these have returned. Both Renamo (Mozambique National Resistance) and Frelimo mined the area, and mines are located in two different *bairros*: La Luta Continua and Metuchira. In La Luta Continua, the mines are located in farmlands and between the main road and the railway. There is also some UXO in private farmlands. In Metuchira, the mines are located along the petroleum pipeline that extends from Zimbabwe to the port of Beira. Additionally, there are some mango trees that are surrounded by mines, and hence the fruit cannot be collected. In the same village, there is a path which is not used because of the presence of mines.

According to villagers, there have been four mine accidents in the area, of which two took place during the war. One of the postwar victims was a child who was trying to take firewood from the mined area; the second was a military officer trying to detonate a mine.[5] After these accidents, the local leadership held a community meeting to formally inform the people in the area of the mined areas. Moreover, the mined areas have been marked, and this has increased knowledge of the location of mines.

Before the war, Doeroi is reported to have been a highly populated village with houses in close proximity to one another. After the war, as mentioned above, former inhabitants returned, and the number of newcomers has steadily increased. The land in the area is highly productive, which serves to explain the consistent increase in the population. Villagers believe that the number of newcomers will continue to increase, eventually causing land scarcity.

It appears that Handicap International (HI) had a team conducting mine awareness in the area. Beyond this, the local administration and leadership have been responsible for information diffusion regarding mines. Of the 30 survey respondents, 13 confirmed that they had attended mine-awareness lessons. A hospital, a school and water pumps were identified as the principal needs of the village.

Economic Field

Like 25 de Junho, the village of Doeroi is based on a subsistence economy. The majority of the population cannot ascertain the size of their landholdings, but it is noteworthy that land availability seems not to be an issue of concern at present. The village secretary is responsible for land allocation, and it is made clear that people do

[4] Data-gathering conducted by Clemente Ciro Justino, Joaquim Saene , João Sozinho Cherminaga and Afonso Diamone Afonso.

[5] Due to the geographical proximity between 25 de Junho and Doreoi, it is possible that the second accident described here is the same as was described in the above case-study.

not own land per se, but are given the right to cultivate land for household consumption. The majority of villagers primarily cultivate maize, cassava and sorghum. Banana, mango, papaya, orange and lemon trees are also cultivated. Crop irrigation is dependent on rainfall. It seems that no one uses artificial methods to irrigate their crops. This, coupled with the availability of land, means that the mines are not a hindrance to farming. Some of the people in the area get drinking water from the nearby river, while others dig private wells. The latter group tends to do so through fear of contaminated water. The mines do not affect the water supply.

Neither fishing nor hunting is common practice in the area, although it seems that younger people in the village occasionally fish in the nearby river. Neither hunting nor fishing is hindered by the presence of mines. Villagers tend to have small animals, such as chickens, ducks and pigeons. The animals are sold when there is a need for cash, but mostly they are used for household consumption. As in 25 de Junho charcoal production is a principal income-generating activity. In addition, villagers also sell bamboo and firewood.

There is no market in the area, although the roadside of the Beira–Chimoio highway is used to sell charcoal, wood and in some cases agricultural products, such as bananas. In addition, there is a small store that sells household goods, but the majority of the population travel to Chimoio or Beira for purchases. Transport within the village is either by foot or bicycle; most families use the latter. Public transport is used for travel outside the village to nearby towns or cities. Landmines affect no essential transport artery in the village.

Human Field

During the war, Doeroi Sede was regarded as a safe area owing to the heavy military presence there. In 1992, the military garrisons were abandoned, but the mines remained. People in the area say they know where the mines are located, but there is some local concern that newcomers or business people coming to purchase goods could have an accident and refuse to return to the area.

The villagers use either the health post in Inchope, as do the inhabitants of 25 de Junho, or they use the hospital in Gondola. The most common diseases found in the village are malaria, diarrhoea, and STDs. Additionally, health activists provide preventive health workshops, but the frequency of these is not known. Again, this means that some kind of information-diffusion system exists.

There is a local school in Doeroi that offers first and second grade education. If children are to continue their education, they must go to the school in Inchope first, and later to Gondola for grades six to ten. The survey indicated that the majority of families do not send their children to school after they finish second grade. The school in Doeroi includes some mine awareness in its curricula. Despite the difficulties in attending school for children, it seems that the general level of literacy among adults is relatively high.

Social Field

As in 25 de Junho, there is a traditional and a governmental leadership structure. In Doeroi, the president of the area is the link between the village and the administrator; he is also responsible for taxation. The secretary is the link between the president of the village and the different *bairros*. He is also in charge of land allocation and responsible for informing newcomers of the mine threat. At the traditional level, there is a *regulo* whose chief tasks are traditional ceremonies, such as rain-calling. As in 25 de Junho, in Doreoi there is also a *mfumo*, who works along side the secretary and also serves as a link to the *regulo* of the area.

As in 25 de Junho, Doreoi has a number of different churches. It appears that most people attend one of the local churches. By and large, the churches seem not to interfere with traditional practices, although some churches prohibit their members from seeking assistance from *curandeiros* (traditional healers). The extent to which this regulation is respected by villagers is unclear. The churches seem to provide a key support network for their members. With regard to collective mobilization, the most evident example is the building of the school, which was destroyed during the war.

Conclusion

The population from Doeroi maintained that the mines do not pose a threat to their livelihoods. However, concern was expressed over the threat mines pose to visitors. The area depends largely on the sale of charcoal. Hence, if a buyer were to step on a mine, this could lead buyers to stop visiting the area. This, however, is not a huge threat because most villagers try to sell their charcoal by taking it to the main road.

The people living in *bairro* La Luta Continua asserted that they would like to use the mined area to harvest bamboo for house construction and the like. It does not appear, however, that a use for the mined areas in Metuchira has been predetermined. It should be noted that it was impossible for the team to visit *bairro* Metuchira since, owing to the rainy season, the route to the area was impassable.

Case-Study 3: Mpucuta.[6]

Community Background

Mpucuta is in Matsinho administrative post, Gondola district. The village is situated some 17 km from Matsinho. The local leadership and villagers estimate the number of huts at 3,051. The 1997 census, on the other hand, estimates the number of the village's inhabitants at 760. Population density appears low, and houses are dispersed.

[6] Data-gathering for this case was conducted by Fernanda M. Sabonete, Francisco Alberto and Ernesto Moyo.

Both before and after the war, the majority of village inhabitants have been Renamo supporters, which causes considerable conflict. It appears that, in contrast with other villages, the traditional and governmental leadership systems have not been able to find a constructive way of cooperating.

During the war, Renamo had two military bases in the area, and Frelimo allegedly planted mines in order to restrict Renamo's movement. During the war, some Renamo soldiers are said to have had accidents, but no local inhabitant has ever been involved in a mine accident. The minefield appears to be relatively large. It covers some kilometres along the road to Pungue River. The mined area has been marked, allegedly by an Italian NGO. The marking was done in accordance with information provided by the local villagers. The reference points used were primarily sites where UXO was found. It is interesting to note that the majority of the population claims to have no knowledge of the precise location of the minefield.

Before the war, the road which is currently mined was used by MADEMO, a company harvesting wood in the area. People from the village used the same road. Given the presence of mines, MADEMO created a parallel road, which is now also used by the population. Therefore, it seems that the presence of mines has little impact on the local population. No formal mine awareness is reported to have taken place in the area. It is important to note that villagers identify a health post, a school and transport as the chief needs of the village.

Economic Field

The village operates on a subsistence economy system, primarily based on farming. All households have land for cultivation. The majority of villagers cultivate maize and mapira. Some villagers also produce banana, sugarcane and papaya. A limited number of respondents cultivate sunflower or tobacco for sale. The latter is cultivated with support from buyers who supply pesticides and are reimbursed for the costs of the pesticides when they buy goods. Villagers maintain that the returns from such trade are low because the buyers control the market and have control over the setting of prices.

As in most of the cases reviewed here, the inhabitants of Mpucuta rely on rainwater for the irrigation of crops. As regards water for household consumption, people largely rely on local wells. The water used has caused the outbreak of diseases. Hence, a delegation of community facilitators was sent to the village from the health post to educate people on how to treat water. The health-work delegates work in coordination with the local health post at Matsinho. In addition to preventive health workshops, the health post also provided chlorine to treat water. Undoubtedly, access to clean water is an issue of concern in the area, but this problem has no connection with the mine threat.

The majority of the people in Mpucuta do not rely on fishing, either as a food source or as an income-generating activity, owing to the distance to the river from the village. Some hunting is conducted, mainly of small animals since the hunting of larger animals requires licence. It seems that neither activity is affected by the presence of landmines.

As in 25 de Junho and Doeroi, the population also sells charcoal and wood for income generation. Here, selling charcoal is considerably more difficult because the charcoal needs to be transported to Chimoio by the villagers. The most frequently used method of transport within the village and to Matsinho are bicycles, but villagers also travel by foot. It is noteworthy that there is no form of public transport between Mansinho and Mpucuta. Additionally, unlike in the other villages studied, villagers in Mpucuta maintain that they need to have a licence in order to sell their goods in Chimoio; otherwise they risk confiscation of goods.

The great majority of the population have animals such as chickens, goats, pigs and, in some cases, cattle. The cattle are used for transport and for ploughing fields. Moreover, animals are also used for income generation, but this particularly pertains to smaller animals since no one in the village seems to have the means to raise large herds of cattle. Individuals who have no animals seem to have no individual ways of responding to sudden needs for cash.

Currently, there is no market in the area. It is alleged that people in the area often do not have cash to purchase products, though there are a couple of shops which sell essential household goods. The lack of cash, however, is associated with a strong sense of economic solidarity, whereby villagers in need of cash are able to borrow from other villagers. The readiness to provide cash support is based on a collective awareness that cash is difficult to come by.

Human Field

The great majority of the villagers state that they do not fear the mines in the area. There have been two fatal mine accidents in the area, both of which occurred during the war. In addition, an individual lost three fingers after tampering with UXO. It appears that the general security situation in the area is quite good, despite the absence of a police station. The traditional leaders solve the majority of problems. If these efforts fail, the secretary is informed and he makes arrangements for people to be transported to the police station in Matsinho.

Mpucuta has no local health post. The closest facility is in Matsinho, which is 16 km from the village. As mentioned earlier, there are no forms of public or regular transport from Mpucuta to Matsinho, so individuals must rely either on bicycles, feet or ox-pulled carts. Like the Inchope health post, Matsinho does not have evacuation facilities. In cases where a patient must be transferred to the provincial hospital, they must pay for either public road transport or the train, which occasionally travels through the area.

The most common diseases identified in Mpucuta are malaria and diarrhoea. The latter is one of the central reasons why the health post started providing chlorine to villagers. The majority of villagers use the services of the health post. Approximately half of the survey respondents also stated that they use the services of traditional healers.

There is no government school facility in Mpucuta. The closest school is in Thurudzi, which is about 8 km from the area. The school has first and second grades, after which children can attend school in Matsinho. Given the distance to the school, the population of the village built a local school, a teacher was found and the families pay 5000 Mt (US$ 0.25) per month for each child. At the time of the study, the school was closed because the teacher was ill. It is unclear whether or not mine awareness is provided through the education system.

Social Field

Like the two previous villages, Mpucuta also has a dual leadership system. The secretary is directly affiliated to the Frelimo party and is elected by party members only. The *regulo* heads the traditional leadership system. In contrast with 25 de Junho or Doeroi, the *regulo* of Mpucuta also has official contact with the administrative post and is responsible for tax collection, even though the secretary is the official link to the local government post. The *mfumo* is subordinate to the *regulo*, but is elected by the local population, unlike the *regulo*. The principal roles of the *mfumo* are land allocation and conflict resolution.

There are four churches in the area. It seems that people have chosen churches in accordance to the support they provide and allowances they give. For example, it seems that religions which do not impose food restrictions on their members are the most popular. Again, the churches serve as a constant source of social support. In Mpucuta, there are some clear examples of collective mobilization, including the building and running of the school.

Conclusions

In the case of Mpucuta, a transport artery was mined, but since a road parallel to the old road has been made, the mines appear to pose few problems for the local population. It is notable that some villagers allege to using/entering the area suspected of mines on a regular basis. This contributes to the local belief that the mine problem is not severe. Notably, entering the minefield is not done out of necessity, but rather out of scepticism regarding the presence of mines.

While the locals would like the mines to be removed, mine removal is not in itself one of their priorities. There is a potential for accidents, particularly since people are entering the mined area. On the other hand, conducting demining in the area should be done with care to prevent potential animosity from the villagers, who rank demining quite low in the priority list. In this case, options other than demining could perhaps be explored, particularly since the impact is potentially low and the mine-suspected area large.[7]

[7] In some cases, villagers can feel that their power and their ownership of a village is overruled when assistance does not match their needs.

Case-Study 4: Pidanganga[8]

Community Background

Pindanganga Centre is in the locality of Amatongas, Gondola district. It is approximately 35 km southeast of the town of Gondola. The population is estimated at 11,085. The villagers live in huts scattered throughout the area but close to their farmland. Both Frelimo troops and Zimbabwean soldiers occupied the area in the early years of the war. Later, Renamo took control and established a number of garrisons, including a training centre. The latter prompted numerous air raids, which contributed substantially to the large amount of scattered UXO in the area. The landmines, on the other hand, were laid by Renamo to protect its garrisons. One of the principal factors contributing to Renamo's wish to stay in the area was the high fertility of the land, hence the supply of food from local agriculture.

The area does not have a minefield per se, but rather scattered mines and UXO. The majority of villagers do not know the location of the mines or UXO, but this is understandable given that both the mines and the UXO are located in private land.

Soldiers from the United Nations Operation in Mozambique (ONUMOZ), as well as teams from the Zimbabwean company MINETECH, have conducted some explosive-ordnance disposal (EOD) in the area. Nonetheless, the amount of UXO remaining appears substantial. The UXO is particularly threatening during the dry season, when new land is ploughed.

There are two trained mine-awareness educators in the area. They were active until 1999, but have not been active since because they are no longer remunerated. They explained to the team that most of the areas with UXO or mines had been marked but the markings have been destroyed by fire. The majority of the villagers have attended mine-awareness lessons.

About half of the survey respondents fled during the war. It appears that people chose to return to the area even though they were well of the presence of mines and UXO. This may be directly linked to the high fertility of the land in the area. It appears that people who did not flee the area were somehow affiliated to Renamo and enjoyed a degree of protection.

There has been one postwar mine accident in the area, and this involved three individuals who were hunting at the time. Two of these were fatally injured. The village population regards a hospital as the top priority.

Economic Field

The villagers depend on agricultural production as their chief income-generating activity. They primarily plant maize, sorghum. bananas, beans, tomatoes, sugarcane, yams and various types of vegetables. Fruits are also grown in the area, including mangoes,

[8] Data-gathering conducted by Maxwel Gopani, Claudia Gasteni and Jose Njirazafa.

oranges, tangerines and papaya. Crops are both for household consumption and for sale. In addition to relying on rainwater, some crops are planted in the lowlands close to water sources to enable manual irrigation. This ensures a steady supply of vegetables during the dry season.

People in the area practise fishing in small streams nearby. Additionally, some villagers travel as far as 45 km to Pungue River to fish. Most of the fish is for household consumption, although in some cases it is also sold. The government, in an attempt to discourage fishing, has started to fine those who fish for sale. Additionally, the majority of villagers also practise hunting. During the dry season, the bush is burned and dogs are used. During the rainy season, traps are the chief hunting method. Like fishing, hunting for commercial purposes is prohibited. Moreover, the dry season method of hunting is also prohibited because it causes considerable environmental destruction and leads to uncontrolled fires. It is noteworthy that hunting is practised despite the threat of UXO. Interestingly, hunters state with pride that they have found UXO while hunting and have not been troubled by it. The perceived high level of security in relation to mines might be linked to the fact that the only accident in the area was caused by tampering with a mine and also to the fact that people in the area depend on hunting as a source of game. Hence, they have learned to live with the mines and give the impression of not fearing them.

The population use wood resources for both construction and charcoal production. This has resulted in heavy exploitation of wood resources in Pidanganga. In 2000, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ), a German organization working in coordination with the Ministry of Agriculture and Rural Development, launched a project to control the use of natural resources in the area. There are more than a hundred species of trees and shrubs which are of value to traditional healers. Since hunting and charcoal production is essential for people in the area, special areas were designated for local use. The effect that this will have on charcoal sale unknown. The majority of families own household animals, and most households have chicken and goats. Pigs are also found, but more rarely.

The majority of the population access clean drinking water from private wells. The exception to this is people who live in the vicinity of the school, where a pump was built by Concern Worldwide in 1997 when they were building the school: the pump was built to ease the construction process. There is no shortage of drinking water in the area. The village has a small market which sells essential household goods. In addition, there is a corn exchange, which underlies the prominence of agricultural production in the area.

Within the village, most people travel by foot or use bicycles. There is a high number of bicycles in the area, and these are mainly employed to transport goods such as charcoal or agricultural products from farmland to the point of sale. Public transport for travelling outside the village is available. Moreover, a number of vehicles frequent the village in order to buy agricultural products on a regular basis.

Human Field

The community's perception of security in relation to the landmines seems quite positive. While there is a lot of UXO scattered in individual farm fields, people have chosen to remain in the area and cultivate land. However, this may be more because considerable time and energy has been invested in banana and sugarcane plantations than because they indeed feel safe. Burning the land is employed as a UXO-destruction mechanism.

Villagers have access to one health post some 15 km away. The health post is only capable of providing assistance for minor ailments. The most common diseases are malaria, bilharzia and STDs. Preventive health education is provided to those who visit the health post. However, when there is the threat of an epidemic, the health post staff organize health brigades to visit the village. Public transport is employed in cases of evacuation.

Pidanganga Centre has a primary school covering grades one to five. The school was constructed in 1997 by Concern Worldwide, an international NGO. The community was effectively mobilized to assist in the building of the school. After grade five, children can attend further education in either Gondola or Amatongas. As in other cases, the ability of children to further their education is directly linked to their families' economic situation. None of the survey respondents or interviewees have children attending school outside the village.

Social Field

Pidanganga has a dual leadership system. The government branch of the government is led by the president, a government employee, who is the direct link to the administrative post and is appointed by the government. The secretary is his subordinate and is elected by the population. The president is responsible for land allocation, when this is to be used for commercial purposes. The *regulo*[9] reports to the president. The *chefe da povoaçao* is directly subordinate to the *regulo* and also serves as the link between the *mfumo* and the *regulo*. The *mfumo* is responsible for individual *bairros* only. The traditional government structure is primarily responsible for traditional ceremonies, conflict resolution and information diffusion. In addition, the *mfumo* is responsible for allocating land and is also able to withdraw land rights if a family is regarded as troublesome.

There are two churches in the village, and most people interviewed attend church. Interestingly, they also actively take part in traditional ceremonies. As in most of the other cases, the churches are able to successfully mobilize the community for collective work. Most respondents say that the villagers are reluctant to work collectively outside the churches.

[9] In Amatongas, the *regulo* is also referred to as the *mambo.*

Conclusion

Although the population maintains that it lives freely despite the mines, the existence of scattered UXO and mines poses a threat to many locals. Villagers say that they are able to practise farming as usual, but they hesitate to increase their fields for fear of hitting UXO or mines. This is particularly because there is no specific minefield; rather, mines and UXO are scattered through out the village and surrounding areas. While the economic implications of the mines and UXO might be minimal, the social implications (free and safe access) are quite considerable.

Case-Study 5: Chitui[10]

Community Background

Chitui is a locality of Bassane, district of Machaze. Chitui is located 9 km west of Machaze district along the road to Mossurize district, Zimbabwe and South Africa. The population of Chitui is estimated at 1,015. According to the surveys, many people in the area were displaced during the war, but the population is currently increasing, though slowly. The area was heavily affected by the war. The attacks on the village prompted soldiers to mine the area to protect infrastructure and the population.

In Chitui, the mines are located along paths and in areas of dense vegetation, which are alleged to be farmland. Most notable is a ring of mines that encircles the centre of the village. There is also some scattered UXO. It appears that there have been five reported mine accidents since the end of the war. All accidents seem to have taken place when people were gathering wood in close proximity to the village centre.[11] Additionally, an elephant also stepped on a mine close to the village. Notably, none of the accidents mentioned took place in recent years. With the exception of some rudimentary mine-awareness workshops given to children at the school, no mine-awareness programmes have been conducted in the village. Most people said that the mines do not pose a threat once their location is known.

The respondents stated that the principal needs of the village are a hospital, a school offering higher grades and a water pump for clean drinking water.

Economic Field

The community seems to rely on agriculture for subsistence. However, a substantial number of the inhabitants in the area have relatives working illegally in South Africa, who occasionally return with cash or goods for sale. Most people have land for

[10] Data-gathering conducted by Clemente Ciro Justino , Joaquim Saene and João Sozinho Cherminaga.

[11] There was some confusion regarding the exact dates of the accidents mentioned.

cultivation. The most common crops are maize, sorghum, beans, sweet potatoes, bananas, peanuts, papaya and cashew nuts.

Rainwater is the principal source of irrigation. Clean drinking water is not readily available. Most villagers get their drinking water from nearby streams, which are contaminated, often causing diseases. The village has a water pump, but it is currently not functioning. There is some confusion as to whether or not the water pump is situated inside or outside the minefield. Yet the unavailability of clean water cannot be attributed to the presence of mines. In fact, it seems that water pump has not been in operation for decades.

Most people in Chitui do not fish, because there are no rivers in the vicinity. Hunting is also impossible in nearby areas. Some people from the village do hunt, but must travel great distances to do so. However, wood resources are available, and in some cases these are used both for income generation and for household needs, for example as firewood or construction material. Most households have small animals: goats, ducks and chicken. These are sold on a needs-basis only. As in previous cases, none of these activities are hindered by the presence of mines.

In Chitui, there is a market where essential goods are sold. Villagers reported that unavailability of cash made it impossible to sustain a larger market. Within the village, people often travel by foot or bicycle. Since the village is along a main road, public transport to nearby towns and cities is available on most days of the week.

Human Field

People do not perceive landmines as a dramatic threat to their security. However, the fact that people have learned how to live with the presence of mines should not be regarded as an indication that demining is not a necessity. In the case of Chitui, a belt of mines surrounds the centre of the village, placing villagers at a considerable risk when they travel between the centre of the village and their homes. This is also a threat to children who attend school in the village centre.

There is a health post in a nearby village, but this can only treat outpatient ailments. The village lacks facilities to deal with possible mine accidents. If evacuation is necessary, the only option is to employ passing public transport. The hospital in Machaze, however, does have facilities to treat mine victims and other more complicated cases. Currently, there is a preventive health education programme that involves unpaid trainers at the village level. The health post, which is responsible for the programme, maintains that this initiative is a success. The most common diseases being reported are STDs, malaria, coughs, skin infections and diarrhoea. Not only is drinking water not suitable, sanitation standards at the village level are also poor.

There is one school in Chitui, which provides education up to fourth grade. When the students finish fourth grade, they can continue education in either Machaze or Espungabera. Further education requires that parents are able to provide the necessary financial support. During the closing meeting, the majority of the local family representatives stated that their children would be sent to school outside Chitui to further

their education. Currently, classes at the Chitui school include some kind of mine-awareness teaching, in the form of ten-minute seminars provided by the teachers on a weekly basis. While this is a good initiative, the teachers have never received any training in mine awareness. Additionally, on one occasion, a theatre group working with mine awareness visited the school.

Social Field

Like all other villages visited, Chitui has two local leadership systems. The government system is led by a president, who is elected by party members on a yearly basis. The duties of the president include administration of the village, village mobilization and conflict resolution. The *chefe da povoaçao* is subordinate to the president. Like the president, the person holding this position is also elected on a yearly basis. In addition, there are some voluntary positions as assistants to the *chefe da povoaçao* and unofficial police. The *chefe da povoaçao* seems also to serve as a link between the president and the *regulo*. The *chefe da povoaçao* is in charge of the allocation of land and conflict resolution. The role of the *chefe de povoaçao* seems to be of key importance in the routine running of the village. For his part, the *regulo* leads the traditional system of leadership. Unlike the president, the *regulo* holds an inherited position. The main responsibilities of the *regulo* are conflict resolution, organizing the population, maintaining traditional practices and allocating land. The *nduna* assists and serves as an advisor to the *regulo*. In Chitui, local village leaders seem to be reliable for information-diffusion purposes.

The majority of the population attends the same church. The church also seems to serve as an information-diffusion body. Collective mobilization seems to most often take place as part of church activities or prompted by the church. It is noticeable, however, that there seems to be little community initiative for collective mobilization in Chitui. The dominant attitude is to expect collective welfare issues to be resolved through an outside response, and this may be a result of Chitui's having hosted a number of assistance organizations in recent years. People seem, for example, to believe that they should be paid to work on infrastructure that will be for the use of the community. The fact that a Food-For-Work project is operating nearby may further contribute to this.

Most people do not have outside sources of economic support in times of need. It seems that the villagers sell crops or animals when they need cash unexpectedly. As in all of the other cases, family and neighbourhood were identified as the foundations for people's social support network.

Conclusion

The people in the village stated that the area, if demined, would also be used for agriculture, but the dense forest vegetation in the minefield suggests that other areas would be more easily cultivated. Even though no accidents have taken place in recent years – primarily because people seem to know the location of the mines – the threat

posed by mines continues to appear quite high, particularly since the ring of mines surrounding the centre of the village lies very close to the school and the shops. While the villagers maintain that no activity is prevented by the presence of mines, some aspects of their lives could be benefited by demining. In addition to reducing the risk of physical harm, it is evident that demining would free some wood resources.

Case-Study 6: Josina Machel[12]

Community Background

Josina Machel is part of Maconha locality, Macate administrative post, Gondola district. The village is located some 54 km south of Chimoio. The population was estimated at 4,684 habitants by the 1997 census. There is a dam and an electric power plant some 8 km from the village. The power plant is operated by Sociedade Hidroeletrica do Ruvue (SHER), Eletricidade de Moçambique.

The area was heavily affected by the war. A garrison of government soldiers was placed in the area, and in the late 1980s an additional military garrison, manned by the Tanzanian army, was established to protect the water dam and the power plant. During the war, the villagers moved to the proximity of the power plant to take advantage of the protection offered by the presence of the military garrisons. According to soldiers currently living in the area who assisted in mine planting, mines were laid in small minefields and along areas that were suspected of being paths used by Renamo. Both the Mozambican and Tanzanian armies laid mines on both sides of the bridge as a defensive tactic. During the war, both soldiers and civilians in the area suffered mine accidents.

One of the mined paths provides access to an area which is reported to be highly productive agriculturally. Some villagers allege that parts of their farmland are mined, and hence that their productivity is limited. Additionally, the administrator of the local administrative post in Macate has stated that the mines restrict access to some areas with banana plantations. There are mango, banana, orange and lemon trees in the mined area, which was used for varied agricultural production before being mined. Therefore it is likely that demining will have an economic impact.

The locals seem to have a good knowledge of the location of mines, but there has been no mine-awareness programme in the village. NPA conducted a demining operation in the area in mid-1997, and, GACODECO (Gabinete de Coordenação da Desminagem em Gondola) has marked the remaining mined areas, according to the local administrator, with Italian sponsorship. The principal humanitarian needs identified by villagers are a school and a hospital.

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[12] Data-gathering for this case was conducted by Fernanda M. Sabonete, Francisco Alberto and Ernesto Moyo

Economic Field

The inhabitants of Josina Machel depend on a subsistence economy based on agricultural activities, primarily crop production. The local *regulo* distributes land. At the end of the war, there were some land conflicts regarding land ownership and use. The following method was employed to solve these conflicts: Individuals who were gone for less than ten years were allowed to return to their previous land, and the occupiers of the land at that time had to find alternative land. If the owner of the land had been gone for more than ten years, the individual using the land would have to pay the formal owner 8000 Mt (US$ 0.40) for every fruit tree on the land.

The area is regarded as highly productive in agricultural terms. Most survey respondents say they have large pieces of land for crop production. The principal crops cultivated in the area are maize, mapira, cassava, beans and vegetables, in addition to fruit such as bananas, mangoes, oranges, tangerines and lemons. As in all other villages, except for Pidanganga and Chichira, villagers rely on rainwater for irrigation. As for drinking water, there are a number of operational water pumps in the area. In addition, some households have private wells. Availability of clean drinking water seems not to be a problem.

People from the village fish in the local rivers, but only for household consumption. Additionally, hunting is common, but again purely for household purposes. Similarly, wood resources are only used for household consumption. Most families have household animals, such as chickens and goats, but these too are for the household only. For the majority of villagers, selling crops is the primary source of cash. Animals are only sold on a needs basis. None of the economic activities seem to be hindered by the presence of mines. Within the village, people tend to travel by foot. There is public transport to nearby towns, but bad road conditions make this kind of transport infrequent and unreliable.

Human Field

Most people in Josina Machel feel that the mines do not prevent them from conducting their routine tasks. With two exceptions, all survey respondents affirmed that they did not frequent areas close to the minefield. During the war, there were some accidents involving military personnel. After the war, some civilians were also involved in accidents. Some of the postwar accidents were fatal, while others caused minor injuries. The postwar accidents involving civilians seem to have taken place primarily when individuals were ploughing their farmland.

The closest health post is by the power plant, some 8 km away. Some villagers say they do not use the health post simply because the distance is too great. When an individual seeking medical assistance arrives at the health post, the power plant company provides evacuation facilities if needed. The most common diseases that the health post treats are malaria and, occasionally, diarrhoea. The health post provides health education for individuals who seek medical assistance, but does not conduct workshops in the surrounding rural areas.

There is a local school, which was built by the SHER company. The school has grades one to five, after which students wanting further education must go to either Macate or Sussundenga. As in the previous cases, parents need to be able to finance the cost of further education.

Social Field

As in other cases reviewed above, Josina Machel has a dual leadership system at the local level. There is one local president, who is responsible for collecting taxes from individuals and for issuing permits to run shops and to use bicycles. The *regulo* is responsible for holding traditional ceremonies and for land allocation. The *mfumo* is subordinate to the *regulo*, and his role is primarily to assist the *regulo*. The *mfumo*'s chief duty is to arrest people who have committed crimes and to take them to the *regulo*. Additionally, there is a community court, which is in charge of solving problems such as chicken robbery, social conflicts and the like. This court has a locally elected judge who works together with a group of local elders. If the local court and the *regulo* fail to solve the problem, the case goes to the local president, and from there to either the administrative post or the police.

The majority of the villagers are members of the local church. There seems to be some collective mobilization in the area through the church. Local solidarity is mostly demonstrated when villagers assist newcomers to get settled into the area; in some cases, villagers provide housing for newcomers until they have their own places to live. The same applies to assistance for villagers in the event of hardship, such as death in the family.

Conclusions

The area was seriously affected by the war, primarily on account of the infrastructural importance it holds. The mined areas are dispersed, and, according to the soldiers who mined the areas, the minefields are small. If demined, the area would free up fruit trees and perhaps some farmland. The amount of land that can be freed for farming is uncertain, but the value of the fruit trees might be regarded as substantial. It is not certain who would have access to these trees. This should be investigated prior to demining to prevent possible conflicts at the community level. The current threat to humans seems to be minimal because, for the most part, villagers do not frequent the mined area. While not confirmed with certainty, it seems highly plausible that the accidents that occurred after the war took place before the NPA demining operation. This could suggest that people did not know where the mines were before the arrival of the demining unit. It should be noted that the area that was previously demined by NPA is currently in use.

Case-Study 7: Mugoriondo[13]

Community Background

Mugorionde is a *bairro* in Machipanda administrative post, Manica district. It is located close to the border post to Zimbabwe, 83 km west of Chimoio City. The area is known to be of strategic importance for black-marketeers, who cross the border illegally to purchase and sell goods.

It is estimated that the area has 458 households. The population is steadily increasing owing to the strategic commercial location of the area, which was not heavily affected by the war. The mines in Mugorionde were laid sometime between 1976 and 1977. This was first done by the Rhodesian government, to make it harder for the Mozambican government to supporting the liberation movement in Rhodesia, but later a parallel minefield was planted on the Mozambican side of the boarder. The area has claimed a large number of victims, both during the Renamo–Frelimo war, as people tried to escape into Zimbabwe, and after the war, which primarily affected people crossing the border illegally. The exact number of victims is unknown, but, of all the areas visited during the pilot study, this village has had the largest number of mine accidents in recent years. Here, in contrast with other villages visited, the mines pose a considerable threat to economic activities, most of which are illegal. There has been no form of HMA assistance in the area.

Economic Field

Unlike all other villages studied, Mugorionde is not principally dependent on agriculture. Local people are dependent on a combination of illegal trespassing over the border to Zimbabwe and agriculture. Availability of land does not seem to be a problem in the area, even though land is not regarded as very fertile. The most common crop is maize, which is cultivated by most of the survey respondents. Additionally, beans and some fruit trees are grown. As in most other villages visited during this study, rainwater is the only source of crop irrigation. Household water is not a scarce resource in Mugorionde owing to the presence of various streams and rivers, which provide water for bathing, washing and cleaning dishes. Additionally there are three water pumps for household consumption, of which only two are currently functioning. The water pumps seem to have been built by an NGO named Agua Rural. It appears that the whole village has a sufficient supply of clean water, and the water supply is in no way affected by the presence of mines. People from Mugorionde do not fish or hunt, because neither resource is available. Wood is also a scarce resource. Two months before the community study, a government ruling was implemented, prohibiting people from cutting firewood in a number of areas surrounding the village. At the moment, wood

[13] Data-gathering for this case was conducted by Francisco Alberto, João Sozinho Cherminga and Clemente Ciro Justino.

seems to be available for household use, but it is not known how long this will last. Despite this scarcity, wood resources, mainly in the form of firewood, are also occasionally used for income generation. In Mugorionde, many of the respondents have animals, such as chicken, goats and, in some cases, cattle. As in other villagers, smaller animals are sold to generate income on a needs basis.

In Mugorionde village, there are a number of small shops selling essential household goods, fruits and vegetables. There is a larger market situated 6 km away from the village, near the main road linking the border with Chimoio. Transport is not readily available within the village. It seems that most villagers travel by foot within the village and to the main road (6 km away); from there, public transport to Chimoio is readily available. The unavailability of transport within the village is not linked to the presence of mines.

Human Field

The area has had numerous landmine accidents. The accidents involve either villagers or outsiders who cross the border illegally. It is apparent that border-crossing is of key importance economically. Aside from the mines, the general level of security in the area is good.

The closest health post is located at Machipanda village, some 5 km from Mugorionde *bairro*. The health post has neither surgical facilities nor the ability to evacuate patients. In the event of mine accidents, victims are first evacuated to the nearby city of Manica and later to Chimoio. In Manica, an ambulance is available, but making contact is a difficult procedure. In some cases, patients are evacuated using public transport. It is noteworthy that villagers say that, when accidents occur, the victim is transported either to the health post described above or to medical facilities in Zimbabwe. This depends on the exact location of the accident in relation to the closest medical facility. The latter option is preferred because the medical facilities are better. The most common diseases in Mugorionde are malaria, diarrhoea and respiratory infections.

There is a local school, which provides classes up to fifth grade. Children can attend the nearby school in Machipanda if they wish to continue their education. It is unclear whether or not mine-awareness lessons are provided at the school because it was not possible to interview a school representative during the field visit.

Social Field

The leadership structure in this community is quite complex. The village has been divided into two administrative sections: Cedula A and Cedula B. People living in Cedula A have a dual government system, like the other villages studied. In Cedula B, however, the population relies solely on the governmental leadership structure. The secretary is elected by party members and holds the highest-ranking position in the governmental leadership structure. The principal role of the secretary is to serve as a

link between the village and the administrative post. The deputy secretary is directly subordinate to the secretary and is elected in the same manner. His principal tasks are to fulfil the role of the secretary when the latter is absent, to diffuse information among the population and to solve small disputes. *Chefe de dez casas* are subordinate to the secretary. They are appointed by the elected staff with approval from the villagers living in the houses for which the individual is responsible. The *mambo* is the principal traditional leadership representative in the area. He is subordinate to the *regulo*, but, since the *regulo* lives very far away, the *mambo* carries out the duties of the *regulo*. It appears that his main tasks are traditional ceremonies such as rain-calling and witchcraft.

In Mugorionde, there are a few different types of churches, but it appears that the Catholic Church is the most influential. Family members most often provide both social and financial support to each other. However, the churches are also a source of social and economic support. It seems the secretary is the chief promoter of collective mobilization. He credits himself with organizing the population to purchase collective plates and cutlery for common celebrations, for example. Additionally, the community has organized a football team, which is quite successful in the region, it is claimed.

Conclusions

In Mugorionde, landmines seriously affect people's livelihoods. There seems to be sufficient land for cultivation, but the area is not particularly fertile. The principal source of income comes from illegally crossing the border to Zimbabwe, taking goods back and forth for sale. The area is dependent on this type of trade for subsistence. In contrast with other villages studied in Mozambique, here people have knowledge of the mines but are forced to enter the mined area for economic reasons. Also, the number of accidents seems to provide a clear indication of impact at the local level. The population does regard landmine removal as a priority. However, demining is expected to cause considerable controversy because the government seems reluctant to allow the removal of mines. Landmine removal, argue local authorities, would increase the illegal trafficking that is currently taking place.

Case-Study 8: Chichira[14]

Community Background

Chichira is located in the locality of Munhinga, Sussundenga district. It is estimated that there are 407 households in the village. The area has a very low population density. It is composed of dispersed houses, and each household is close to its own cropland. Like most of the villages visited during the Manica pilot study, Chichira was

[14] Data-gathering for this case was conducted by Ernesto Moyo , Maxwel Gopani and Joaquim Saene.

heavily affected by the war in the 1980s. By 1982, most of the people had fled the area and relocated in Sussundenga, 23 km away. Frelimo forcibly removed villagers who chose to stay in the area because these were thought to be Renamo collaborators. After the war, some of the population returned, and population numbers have been steadily increasing, owing to the fertility of the soil and land availability. These two factors make the area relatively attractive to newcomers.

Mines were laid between 1980 and 1992 along trails and under trees believed to be resting areas. Both Frelimo and Renamo are suspected of having laid landmines in the area. The mined areas are in Chichira and Chicuizo villages. There are three main mined locations: The first area suspected of being mined is in front of the school, next to the road linking Dombe and Sussundenga. Second, there is a suspected area 4 km from the school, along the same road. The third suspected area is next to *Machamba do Povo* (the People's Field). There have been numerous mine accidents involving cars on the road linking Dombe and Sussundenga; other accidents have primarily involved soldiers. However, there has only been one mine accident since the end of the war. The absence of accidents involving civilians during the war can be attributed to the fact that the majority of people fled the area. In addition, it appears that soldiers who remained in the area informed the returning population about the location of the mines, hence the low incidence of mine accidents in the postwar period.

It appears that the majority of the population do not know the location of the mines in the area. If people do know about the locations of mines, most often this is in relation to the mines near the school. Here it is important to note that individuals were observed entering the minefield in front of the school during the stay in the village. When asked about this, they assured the team that they had knowledge of the mined area. There have been no mine-awareness programmes in the area. However, some villagers attended official mine-awareness workshops while they were in Sussundenga. Villagers maintain that the area has never received any humanitarian assistance, although team members believe that a demining agency worked on road clearance after the war. A better school building, a health post and a larger market in which to sell local produce are the chief needs identified at the village level.

Economic Field

In Chichira, all inhabitants have sufficient land for cultivation. Land is reported to be very fertile. The principal crops cultivated are maize, sorghum, bananas, beans, tomatoes, onions, garlic, sesame and sugarcane. Fruit trees are also common, primarily mango and papaya. Crops are cultivated for both household consumption and for sale.

The majority of crops rely on rainfall for water, but some vegetables are planted in lowlands along streams and benefit from manual irrigation during the dry season. The ability to have a steady supply of crops is important because crops provide the main source of income for the population. Villagers depend on wells for household water consumption. Families either have individual wells or share a well with neighbouring houses. The mines have no impact on access to drinking water. There is no fishing in

the area, nor is there any hunting in the area, reportedly because of the absence of game animals. None of the activities related to agriculture are affected by the presence of landmines.

However, landmines may present a threat with regard to wood resources, which are primarily employed for household use, such as for firewood and building construction. While there appears to be substantial safe forested area, it appears that one minefield's proximity to the road has prompted some villagers to risk an accident in exchange for quick and easy access to wood.

The majority of the population have animals, with goats and chicken being the most common. There have been no reported accidents involving animals. As in all the other villages studied, the diet is based on vegetables and grain produced by individual households for personal consumption. However, dry fish is purchased in Chichira and used as part of the staple diet on an ongoing basis. For the most part, household animals are not consumed, but rather serve as an income-generating source when necessary. This is because the cost of dry fish is lower than that of household animals.

There is a small market in the area, which sells essential household goods and has a steady supply of dry fish. During the harvest season, the market is also used to sell crops. Farm crops are also sold to businessmen that frequent the area, but owing to the low price received, most villagers prefer to travel to the provincial capital and sell their crops there. Bicycles and walking are the most common means of transport used within the village, but public transport is available for travel to nearby towns and cities. Public transport is readily available because the village is along a principal road linking two larger provincial towns (Sussundenga and Dombe).

Human Field

It appears that mines do not pose a consistent treat to the population living in the village. This is so even though some of the minefields are in close proximity to inhabited or transited areas. In fact, some individuals seem to feel remarkably comfortable with the presence of mines and even seem not to regard them as particularly dangerous. The fact that individuals go into the mined area to harvest wood, even when it can be easily found elsewhere, demonstrates this.

The closest health post is in Munhinga locality, some 13 km away. The health post can only treat minor ailments. The closest hospital is in Sussundenga. Preventive health education workshops are provided on a regular basis, demonstrating the existence of some experience of information diffusion at the local level. Malaria and bilharzia are the most common diseases in the area, owing to a lack of mosquito nets and the fact that people often bathe in stagnant water. There is a local school, constructed by the parents of attending students, which provides education up to fifth grade. About half of the survey respondents do not send their children to school because they do not have the means to pay for the school fees. Moreover, females are often kept outside the educational system because it is believed that the school system promotes behaviour which will make them undesirable to potential suitors.

There is no formal mine-awareness teaching in the school. However, teachers do alert children to the presence of the minefields, of which one is situated across from the schoolyard, and they urge children not to touch unidentifiable objects. The teachers have not received any formal training on mine awareness.

Children who complete fifth grade must travel to Munhinga or Sussundenga for further education. While children undergo a selection process before they can continue studying, the parents of the pupils are responsible for the costs associated with further education, including transport costs, school fees and school materials. About half of the population cannot read or write. The majority of those who can read and write came from Dombe, where a missionary school was located.

Social Field

Like other villages studied, Chichira has a dual leadership system. Members of the government party elect the secretary on a yearly basis. His principal duties are linked to the Frelimo political party. The *regulo*, a traditional leader, is primarily responsible for conflict-resolution activities. The key position at the village level seems to be that of the *chefe da povoaçao*, who is appointed by the *regulo* and in charge of land allocation, community mobilization and conflict resolution. While this is an appointed post, the *chefe da povoaçao* is often a member of the *regulo*'s family. The *chefe da povoaçao* is also tasked with withdrawing land rights from people regarded as troublesome to the community. Land allocated to individual families can be inherited thereafter.

The majority of survey respondents attend church. The church seems to be a highly respected institution in the area. The church building is often employed for village meetings. The building of the church, school and common wells are the most evident demonstrations of collective mobilization. Collective mobilization at the village level is often coordinated by the *chefe da povoaçao*. In cases of need, neighbours and friends are often entrusted with requests for economic assistance.

Conclusion

The landmines appear to pose no hindrance to economic development in the area. However, the potential for future accidents may be increasing. The principal minefield is currently in a dense forest located close to the school. During the field visit, the team observed villagers going into the mined area to gather wood. This behaviour may in future lead to accidents and induce children to enter the mined area. This situation is aggravated by the strong dependency on wood resources for firewood and construction materials. The closeness of the minefield to the school, church and road makes it an easy area to access for wood collection. Moreover, one of the mined areas has mango trees and is in close proximity to the road, which may lead people passing by to enter the minefield unwittingly. This case serves as an illustration of how individuals over time may lose respect for mines. Here, while the economic impact of the mines is

quite low, from a social perspective the demining task needs to be seriously considered in order that potential accidents might be prevented.

Case-Study 9: Guinhanipoto[15]

Community Background

Guinhanipoto village is part of the locality of Nhampassa, district of Catandica. This village is situated 3 km away from the main road linking Tete City and Chimoio. The village is some 21 km north of Catandica City. The Guinhanipoto village has approximately 55 houses in total. The majority of the population currently inhabiting the village came to the area after the conflict. For the most part, they were refugees returning from either Zimbabwe or Malawi. The majority of the original population were displaced during the war. When they returned to the area, they settled in a neighbouring village, Chindengue.

There was a Frelimo military garrison in the village during the war, and the troops mined the area. The mines were primarily laid along the road to Nhamatua, a neighbouring village, and by the side of a local bridge. The purpose of the mines was to prevent transit for Renamo combatants. In addition to the mines, there is also some scattered UXO. There have been only two reported accidents in the village, and both took place during the conflict. A grinding mill, a school and a health post are the top humanitarian-assistance priorities identified through the survey.

Economic Field

People who returned to the area after the war have returned to use the land holdings they previously occupied. Most of the population of Guinhanipoto cultivate the land. They principally produce maize, cassava, sweet potato and sorghum; mango, banana, papaya, orange and lemon trees are also common. The sale of maize is the principal income-generating activity practised in the area.

People in Guinhanipoto use streams to irrigate their crops during the dry season (though the characteristics of the soil mean that it requires little irrigation) and rely on rainfall during the rainy season. Drinking water comes either from the local stream or from wells built by individual households. There seems to be a steady supply of clean drinking water. People in Guinhanipoto practice fishing for household consumption, but there is no hunting because game animals are not available in the area. Wood resources are only employed for household purposes, mainly for firewood and building construction. Most people have household animals, such as chicken, goats, pigs and pigeons. Animals are sold for income generation when this is necessary. None of these activities seem to be affected by the presence of mines.

[15] Data-gathering for this case was conducted by José Ernesto Njirazafa, Afonso Daimone Afonso and Fernanda Maria Sabonete.

There is no market in the village. However, there are some small shops which sell essential household goods along the main road. People wanting to sell their crops take their goods to the main road for sale. Within the village, most people travel by foot, but some have bicycles. Public transport is possible from the main road to nearby towns and cities. A timber company is working in the village and employs some local villagers. This was the only village visited where formal employment was made available to the local population, albeit only for small numbers. The manager of the timber company explained that it is essential to employ local people to prevent possible mine accidents.

Human Field

The population of the village seems well aware of the location of the mines. Most of the population in the village are people who have returned from refugee camps, and most of these received mine-awareness training in their respective camps. The local leadership also informs the population of dangers associated with the presence of land mines, primarily addressing those who have not received mine-awareness training. There have been no reported accidents in the area. Former soldiers who have remained in the area have diligently informed people of the location of landmines. This may be the chief preventive action against accidents. There is no health post in Guinhanipoto. The closest medical facility is some 9 km away. The most common diseases are malaria, diarrhoea, skin diseases, lung infection and STDs. Preventive health education is provided at the health post only. However, in cases of epidemics, campaigns are organized at the district level to alert people who do not use the health facility. There is no school in Guinhanipo; students go to school in Chindengue, which is about one hour's walk from the village. The school at Chindengue was built in the colonial era, between 1973 and 1974; it remained in use during the war between Frelimo and Renamo, and covers grades one to five. Mine awareness has been introduced into the regular curriculum at the school. Further education is available in the nearby city of Cantandica, but is dependent on family resources.

Social Field

Guinhanipoto has, like all other villages visited, a dual government system. There is a secretary and a deputy secretary, both elected by local Frelimo party members. This is part of the non-traditional leadership system. Their chief responsibilities involve party issues and conflict resolution.

The traditional leadership system is composed of the *regulo*, who holds a hereditary position and is entrusted with traditional ceremonies and caring for the general well-being of the community. Additionally, there is a *mfumo*, who is elected by the community. The *mfumo* has been charged with informing the population of the presence of mines. Moreover, he is also responsible for solving conflicts that the secretary is unable to resolve. Notably, if neither the secretary nor the *mfumo* succeed at solving a

conflict, the matter is sent to the police at Cantandica. Both the *mfumo* and the secretary are responsible for land allocation.

The most visible examples of collective mobilization are the building of housing for the local teacher, the donation of crops for rain ceremonies and the collective construction of church buildings. Unlike in other villages, at least half of the respondents in Guinhanipoto do not go to church. For those that do, it appears that the role of the church is by and large similar to that encountered in other villages. Most people rely on relatives or neighbours for support. However, it is also worth noting that people in the village describe a low degree of mutual trust, asserting that villagers do not support each other in time of crisis because they cannot rely on the same being done for them in similar circumstances.

Conclusion

The mines in the village seem not to have a great negative effect on people's livelihoods. The road to Chindengue is mined, but an alternative road has been opened. The mines located close to the bridge cause no threat because the area has no importance to the population and hence is avoided. However, some paths within the village are suspected of being mined. If these were demined, this might substantially ease the transit between different households. From this regard, the mines that are blocking small paths might be the only ones that have a significant effect on the way people live. Notably, the removal of these would not affect the economic condition of the village but would make travel to nearby villages, including transit to the school, considerably easier. This could contribute to an increase in the level of attendance at the school.

General Findings

The community study approach, as discussed earlier, is not the only response to impact assessment. Indeed, it is only useful for specific purposes and requires that other work is conducted beforehand. For example, community studies can be employed after a National Impact Survey has been carried out, as was done during the Manica pilot study. In this section, a review of findings pertinent to data-gathering mechanisms is made. This serves to illustrate why, at the community study level, it is crucial that different methods are employed to gather data.

The Issue of Accidents

As we know, mine accidents are a clear indicator that mines are present and a potential indicator that the mines have a social or economic impact. The presumption with regard to the latter is that the population either does not know where the mines are or has no choice but to use the mined land. Moreover, accidents are the most visible impact of mines, and they are a reminder both that mines were planted and of their gruesome effect.

The presence of a demining organization in a particular village may have some unintended positive consequences for villagers that go well beyond the direct impact of the mine-action operator's activities. It may lead to an increase in cash in the area, which might translate into local commercial development; to access to transport for villagers; to access to medical personnel; and even to the potential arrival of other humanitarian agencies. In view of this, even if a community experiences little impact from the mines, people may realize that having a demining team present has other positive effects. Under these circumstances, it should not come as a surprise that the number of accidents is at times inflated.

During the Manica pilot study, the number of accidents reported during the initial group interview was often higher than what was confirmed through surveys, individual interviews and at closing meetings. This illustrates the need for multiple data-gathering mechanisms to ensure as precise information as possible. A further problem encountered was loose, unspecific responses in group meetings and interviews. The word 'many', for example, was used in relation to mine accidents to describe a variety of different scenarios, including many accidents at some stage; many accidents generally, but not necessarily at the location being studied; the respondent has met many victims throughout his lifetime; there were many accidents during the war; and so on. Interestingly, with the exception of Mugoriondo, none of the areas visited had an extensive track record of accidents involving civilians in the recent past. Chitui and Josina Machel villages had a number of accidents after the war, but these seem to have declined drastically after the villagers learned the location of the mines.

Additionally, in particular relation to Mozambique, it has been found through community studies that the number of mine accidents is very seldom a good impact indicator. In most cases – with the exception of the Mugoriondo case-study and the period following the peace agreement, where large numbers of refugees were returning to Mozambique – accidents do not indicate that people are forced to use the land or that they are unaware of the existence of mines. Under these conditions, employing accidents as a chief indicator of impact in Mozambique would be simplistic. This again serves to illustrate the need to understand the dynamics of an area as regards its social and economic livelihoods and the impact of mines in relation to these.

Local Leadership and Information Diffusion

Villages often have different administrative systems, which means that understanding the way one specific village functions does not permit assumptions be made about other villages. This is so even when similar titles are employed. For example, the role of a *regulo*, *chefe da povoaçao* or *mfumo* are not the same in all villages. Moreover, the level of respect given to the traditional versus the government leadership seems to vary a great deal. This means, for example, that identifying key individuals for the diffusion of information requires careful investigation. As is visible in the cases above, most communities studied in Manica had leadership systems where the individual positions have equal titles; nonetheless, the nature of the various roles tend to vary. The

body that is most representative of the village or the most effective in diffusing information tends to vary greatly. In Mpucuta, the number of people who attended the opening meeting was quite small. It was later explained to us by the secretary that, when he called a meeting, people tended not to come because his request was invalid without the endorsement of the *regulo*. In Mpucuta, this is believed to be related to the fact that the majority of the population support the Renamo party and hence have more affinity with the *regulo* system than with the government leadership structure. In Mugoriondo, it was found that one part of the village, Cedula A, relied on both the government and the traditional system, while another section of the village, Cedula B, relied only on the government leadership structure. In other words, for one part of the village it was important that any kind of intervention respected and related to two leadership structures, while in the other part of the village relating to the traditional system would be superfluous. Under these conditions, half of the village would inevitably be disregarded if someone worked in Mugorionde and only contacted the traditional structure. On the other hand, if the government structure were chosen as the point of contact, villagers from Cedula A would regard this as offensive to their traditional practice. These examples serve only to illustrate the complexities involved in dealing with community structures.

Identifying the Needs of a Community

It is interesting to note that, with the exception of Mugoriondo, none of the villages studied identified demining as their chief priority as regards external assistance. Moreover, in all cases, villages expressed the wish to host a demining agency. This was even the case in Mpucuta, where they clearly did not feel that the mines were a hindrance or that demining was a necessity, but where they were quite open about the fact that hosting an HMA agency could have substantial positive side effects (for example, the road would have to be improved for evacuation, and transport would be available).

In short, with the exception of Mugoriondo, the requests for demining assistance were never coupled with a detailed explanation of the impact the mines had on people's daily lives. In fact, villagers often maintained that the mines posed no threat and that their economic situation would not improve if demining were undertaken. This can demonstrate both that over the years villages have found coping mechanisms that make the impact of mines seem less significant and that people have developed a high tolerance for living with mines and the threats they pose. This is a double-edged sword, however: while coping mechanisms are necessary, there is a fine balance between coping and forgetting that the threat is present. The latter seems to have been the case in Chichira, where individuals were seen entering the minefield to harvest wood even though the resource is readily available in safe areas. Similarly, in Mpucuta and Pidanganga, villagers entered suspected areas and assured the respective teams that the danger was minimal or nonexistent. On the one hand, they may have been right: maybe the number of mines is indeed small and the probability of activating one

minimal. However, since there is no way for either the research teams or the villagers to know this with certainty, these actions may simply serve to demonstrate their willingness to take risks. In all three cases, there had been very few or no accidents involving civilians. This behaviour may suggest that villagers develop a false level of security when the incidence of accidents is low or when accidents have only taken place as a consequence of tampering.

The relatively low impact of landmines in the villages studied is not surprising given both the amount of time that has elapsed since the end of the armed conflict and the subsistence economy which is practised in all areas visited. At the micro level, irrespective of mines, the expected economic development is minimal. This, coupled with the need in the postwar period to find survival mechanisms, led villagers to look for and find alternatives to using mined areas. Therefore, in the majority of cases, understanding social implications – including security in the village and distances to education and health facilities – is more pressing.

On the whole, the community studies do suggest that most of the villages visited do not have an immediately pressing need for demining. There are many reasons for this, not least being that this area of Mozambique does not have land-availability constraints and that many have been able to find alternatives to mined areas. However, this is not intended to suggest that HMA be halted. On the contrary, it is here suggested that alternatives to the removal of mines be also explored. Earlier in this report, the financial constraints facing the Mozambican HMA enterprise were outlined. Under these conditions, it is essential that the removal of mines is not seen as the only response to the presence of mines.

Conclusion

This chapter has provided brief reviews of the nine case-studies conducted during the Manica pilot study. The aim of these reviews has been to provide the reader with an idea of what is embodied in a community study. While the wealth of information gained from a community study could fill volumes, here the principal issues that are of concern to demining agencies are outlined in brief.

In addition, this chapter has examined some of the trends that became visible from the nine cases. Above all, the chapter demonstrates that local staff can be effectively employed to use the community study approach, and this has great implications for mine action globally. The ability to use this approach at the operational level presents operators with a challenge: that of understanding the communities in which they work in order to strengthen their own operations.

Chapter 5

THE CHALLENGES AHEAD

The Manica pilot study was the first attempt at making the community studies approach to impact assessment in HMA a useful tool to operators through the training of local staff to conduct data-gathering and analysis. The study was a success: it proved that the capacity to conduct community studies can be developed at the local level, and it proved the relevance of community studies in terms of providing the foundations for well-informed HMA interventions at the field level. The Manica pilot study was a great learning experience for everybody involved.

Community Studies

As an approach to impact assessment in HMA, the use of community studies is still in its infancy. Objections to community studies have been raised on the basis that the approach is expensive in terms of time and money, as well as demanding in terms of competence. At the same time, community studies are unique in offering a comprehensive picture of mine-affected communities, laying the foundations for dealing with the impact of landmines and humanitarian mine action in a holistic manner. At the most general level, we must overcome the expectation that removing weapons left behind by the armed conflict will enable communities to return to a prewar situation. Not only do armed conflicts have their causes in the prewar situation, but the conflicts themselves also introduce changes in the composition of communities that make such a return impossible. Even if we focus more narrowly, on landmines alone, we notice that mines must be understood against a backdrop of war-related change – liberating land that has been mined does not guarantee that it will be returned to the same user or used for the same purpose as was the case before the eruption of conflict.

Community studies are open in their approach. This allows them a larger degree of adaptation to local particularities, a larger degree of dialogue with local populations. A major strength of the community study approach is the adaptability to all stages of an HMA programme. However, its full potential can only be realized if the knowledge gained through community studies leads to a change in the way demining staff relate to communities hosting mine-action operations. Community studies allow mine-action agencies, along with other humanitarian actors with which they may coordinate, to ensure that the impact of operations is maximized, through ensuring that inputs are relevant and in no way threaten existing capacities and resources at the local level. It follows from the openness of community studies that they are well suited for

organizational learning – they allow new questions to be asked and make possible new ways of exploring the varied and interacting impacts of mine action.

Impact Assessment

In this report, we have focused on the complementarity of impact-assessment approaches, outlining how the strengths of one can be used to compensate for the weaknesses of another. It is important that we recognize what different approaches can and cannot do if we are to be able to use them to their full potential. Although there are currently a number of different approaches to impact assessment, we must not lose sight of the fact that each of these can be further developed and improved. Indeed, achievements made in recent years should not be regarded as the end of the process. Our abilities to better respond to the needs of communities affected by landmines can only improve as we accumulate knowledge through time and through experience in the use of different methodological tools.

Impact assessment is a key to better HMA. The employment of impact-assessment tools at all stages of the demining process can help ensure that the potential of each demining operation is fully realized.

Capacity-Building

Maximizing the impact of HMA is closely linked to the ability to build a lasting capacity at the national level. Impact assessment needs to be an aspect of all operations, from the pre-planning to the post-completion stages. This means that HMA agencies must have competent staff at the field level, and a basic understanding of impact issues must permeate the whole organization. There is a need to be prepared for a reduction in the presence of international staff in HMA organizations. This further underlines the need to develop lasting capacities that can continue to ensure that scarce organizational and monetary resources for HMA are used appropriately.

Since its initiation in 1999, the AMAC project has found experienced practitioners on the ground to be its best source of ideas and inspiration, together with people living in mine-affected communities. Practitioners have willingly shared their rich experiences of the strengths and weaknesses of conventional HMA and have assisted in the development of the community studies approach. The engagement in focused capacity-building is a new and productive venue for exchanging such experiences. Here, experienced mine-action practitioners spend considerable time confronting new angles on an activity they know well and engage in applying these new angles in practical analysis. Inevitably, this triggers further reflection, which leads to constructive feedback and critical comments on existing modes of impact assessment.

Final Remarks

Over the past couple of years, impact assessment has become a central concept in HMA. In humanitarian assistance generally, there is a tendency for fashionable concepts to be quickly replaced, or at least to be made so hollow that they are unrecognizable. For impact assessment to maintain its credibility within HMA, we need to continue to build capacities at the field level. Ultimately, we need to continue to improve impact-assessment tools, drawing on experiences from the field, strengths and weaknesses demonstrated by other methodologies and approaches, and ongoing reflection by HMA practitioners.

Appendix I

LIST OF FIELD RESEARCH PARTICIPANTS

1. Afonso Daimone Afonso
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4. Claudia Gasteni
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8. Jose Njirazafa
9. Fernanda Maria Sabonete
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Appendix II

TRAINING COURSE

Training Module: Components

Conceptual Overview

This component of the module will examine the different concepts we need in order to understand impact. It will include a review of the terminology used by AMAC, but most importantly it will apply this terminology to the realities found in the field.

Methodological Overview

The focus of this part of the module is on the methodological approach used by AMAC. What tools do we have at our disposal? How are the tools developed so that they are applicable? How do we create tools that respond to our needs? And, finally, how do we analyse the data we have?

Operational Overview

This component of the module will bring together the conceptual and methodological backgrounds. The goal of this component is to be able to test, modify and retest the tools developed and skills learned.

Training Method

- Lectures
- Case-studies: review of practical examples
- Simulations

The module was developed to include a combination of training methods throughout the training period.

Topics Covered

Introduction to the Course

Introduction to Field Assessment
Field Exercise: Through the Looking Glass
Methodology: How To Narrow the Field of Enquiry

Introduction to Impact
Concepts: Examining the Effects of Landmines on Communities

Introduction to HMA Assistance
Concepts: Demining and Its Effect on Communities

Placing HMA Within the Broader Framework for Assistance
Concepts: Mines Are One of Many Issues

Identifying Priorities: The Use of Socio-Economic Indicators (Macro–Micro)
Concepts: What Are the Key Issues?
Methodology: Whom Do We Ask and What Do We Ask?

Maximizing Impact: Working with the Community
Concepts: Understanding the Community in which We Work
Methodology: What Do We Ask and Whom Do We Ask?

Introduction to the Methodological Tool Box
Methodology: Making It Locally Applicable

Introduction to Observation
Concepts and Methodology: What Do We See and How Can We Use It?

Introduction to Written Surveys
Concepts: What Do We Ask?
Methodology: How To Ask?

Introduction to Open Interviews
Concepts: When Does a Conversation Become Useful Data?
Methodology: Having a Conversation and Using a Conversation?

Using the Tools at Our Disposal
Concepts: A Review of the Plan of Inquiry

Understanding the Community
Concepts and Methodology: What Do We Mean by Community?

Getting To Know People
Concepts and Methodology: How Does Each Person Live?

Getting To Know the Community
Concepts: How Does a Community Function?

A Review of Economy
Concepts and Methodology: What Is Economy and How Do We Understand It?

Review of Concepts and Tools

Introduction to Data Analysis
Concepts and Methodology: What To Do with the Information We Have?

Introduction to Data Analysis: Observations, Interviews and Surveys
Concepts and Methods: How To Draw the Rough Picture?

Introduction to Data Analysis: Interviews and Surveys
Concepts and Methods: How To Fill in the Details?

Introduction to Presenting
Methods: Writing up the Report

Appendix III

MANICA PILOT STUDY: PLAN OF INQUIRY

Methodology
Field visit period
- Case selection
- Access/door-opener
- Staff (surveyors/translator)
- Constraints/practical difficulties
- Data
  - *No. of survey respondents*
  - *No. of primary respondents*
  - *Documents*

Community Background
Village geographical composition (with maps)
Population
Population density
War history
Mine-problem history
Minefield – size and location

Economic Field
Agriculture
- *Land (per household)*
- *Land rights/ownership*
- *Land tenure system*
- *Type of crops grown*
- *Fruit trees*
- *Irrigation/access to water*

Fishing
Hunting
Wood resources
Animals
Household water
Diet
Markets
Transport (within/outside)
Employment
Income
Use of cash
Economic implications of landmines

Human Field
Perceptions of security
Injuries directly caused by mines
- *Victim profiles*
- *Evacuation facilities*
- *Surgical facilities*

Health
- *Access to medical professionals*
- *Access to health education*
- *Most common diseases*
- *Access to clean drinking water*
- *Sanitation*

Education
- *Educational infrastructure and materials*
- *Teachers*
- *Access to school during war*
- *Access to higher education*
- *Mine awareness in education*
- *Attitudes to education*
- *Literacy rates*

Social Field
Local institutions
- *Local leadership*
- *Conflict-resolution mechanisms*

Religion
Tradition of collective mobilization
- *Common resources*
- *For private benefit*
- *Recreational mobilization*

Local solidarity
- *Social support*
- *Economic support*

Shift in community composition
Family composition

The HMA Operation
Knowledge about operation
Confidence in operation
Economic importance
Mine awareness
Potential use of land
Other humanitarian needs of the community

Appendix IV

MANICA PILOT STUDY: SURVEY

Number of form:.....
Name of area:.....
Number/code of area:.....
Survey level 1 priority number:.....
Status of NPA operation:.....

A. Respondent Personalia

1. What is your name?.....…

2. Where is your house?:.....

3. Where were you born?.....

4.What kind of work do you do during the week?
Agricultural θ Formal Employment θ Other θ

5.Describe:.....
.....
.....

6. Can you read and write? Yes θ No θ

7. What is your age?.....

8. Do you have a wife/husband/spouse? Yes θ No θ

9. How many sons and daughters do you have in total?.....

10. How many of your sons or daughters are married?.....….….....

11. How many of your sons and daughters are under age 15?.....

12. Do your younger children go to school? Yes θ No θ

13. List the people (relationships you have to them) who live in this home with you?

Relationship	Number
Parents	
Parents of spouse	
Spouse	
Children	
Spouse of children	
Brothers	
Sisters	
Uncles	
Aunts	
Cousins	
Nephews	
Friends	
Other	
Other	
Other	
Other	

B: Household Economy

1. Does your family use land? Yes θ No θ

2. Does your family rent land? Yes θ No θ

3. Does your family own land? Yes θ No θ

If YES to question 1, 2 or 3

4. How much land do you cultivate annually?.....
.....

5. How much land do you use in total?.....
.....

6. What kind of crops do you cultivate annually?.....
.....

7. When do you cultivate your crops?.....
.....

8. Do you sell any of your crops? Yes θ No θ

9. If YES, when do you sell crops?.....

10. Does the household have animals? Yes θ No θ

11. Do you sell any of your animals? Yes θ No θ

12. If YES, why?.....

13. What other sources of income do you and your spouse have?.....
.....
.....

14. If you, your wife/husband or your children need cash, where do you get cash from?.....
.....

15. What do you use cash for?.....
.....

C: Local Structure, Village

1. How many households are there in (*locality*)?.....

2. What do you see as the main responsibilities of the (*designation of local leader*)?
.....

3. What do you see as the main responsibilities of the (*designation of local leader*)?
.....

4. What do you see as the main responsibilities of the (*designation of local leader*)?
.....

5. If your wife or children do not have money, who could you ask for a loan?
.....

6. List the 3 people that you trust the most, and the type of relationship you have to them?

	Name of Person	**Type of Relationship**	**Place of Residence**
1			
2			
3			

D: Migration

1. Have you been permanently displaced to a different homestead during the war?
Yes θ No θ

2. Did you flee for shorter periods of time? Yes θ No θ

If YES, continue.
If NO, go to question D8.

3. Where did you go?.....

4. What were the major reasons that made you decide to move during the war?
.....
.....

5. Have you returned to your original home? Yes θ No θ

6. If YES, when did you return?.....

7. What were the main reasons that made you come back to your home?
.....
.....

Remaining questions are for ALL respondents

8. Did a large number of the population of this area flee during the war?
Yes θ No θ

9. Has most of the population that fled during the war returned?
Yes θ No θ

10. Do you think that people that have not returned will return to this area?
Yes θ No θ
If YES, explain?.....
.....

E: Assistance

1. What are the 3 things (*location*.....) needs the most?

1	
2	
3	

2. Do you know about any aid agencies that work or have worked in (*location*)?
Yes θ No θ

3. If YES, which ones?.....
.....

4. How would you get in contact with humanitarian agencies?.....
.....

F: Landmines and UXO

1. Where are the mines located in (*location)?*.....
.....

2. Who first told you about the landmines?.....
.....

3. Has the family had any economic problems due to landmines or UXO?
Yes θ No θ

4. If YES, describe:.....
.....
.....

5. Are there any roads or paths that you do not use because of landmines?
Yes θ No θ

6. If YES, describe:.....
.....

7. From whom do you receive information about landmines and UXO?
.....

8. Does anyone in the area have knowledge of where the mines were laid?
Yes θ No θ

9. If YES, who?.....

10. Has anybody from the local community done anything to deal with the problem of landmines? Yes θ No θ

11. If YES, who?.....

12. Are there things that you your wife and/or children do not do due to the fear of landmines? Yes θ No θ

13. If YES, describe:.....
.....

14. Have you or anyone in your family attended (any mine-awareness) lessons?
Yes θ No θ

15. If YES, what was the most important thing that was said at these meetings?
.....
.....

16. Do you know anybody who was injured or killed by a mine?
Yes θ No θ

17. If YES, describe (where, when and how did the accident happen?):.....
.....
.....

18. Do you go to (*mined locality*)? Yes θ No θ

19. If YES, what for?.....
.....

20. What would a demining organization have to do, in addition to demining, for you to use the mined area again?.....
.....
.....

21. What was the mined area used for before being mined?.....
.....

22.Who owns the mined area?.....
.....

G: Health and Religion

1. Have you ever gone to any kind of a traditional doctor?

Yes θ No θ

2. Have you ever gone to a hospital?

Yes θ No θ

3. Do you go to church?

Yes θ No θ

4. If YES, which church?.....
.....

Date:.....

Interviewer:.....

Duration:.....

Assessment of Interview:.....
.....
.....
.....

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GLOSSARY

Aldeia	House conglomerate; village
Bairro	Subsection of village or city
Capulana	Piece of cloth with multiple purposes, often employed by women as clothing (usually skirt, but also headdress)
Chapa	Private vehicle used for transport of people for a charge
Chefe	Traditional administrative figure (responsibilities vary)
Curandeiro	Traditional healer and/or spiritual guide
Mambo	Traditional administrative figure (responsibilities vary)
Machamba	Land used for agricultural production
Mfumo	Traditional administrative figure (responsibilities vary)
Chefe da Povoaçao	Administrative figure (responsibilities vary)
Nduna	Traditional administrative figure (responsibilities vary)
Povo	Population
Regulo	Traditional administrative figure (responsibilities vary)