Sourcebook

on Socio-Economic Survey

GICHD | CIDHG

The Geneva International Centre for Humanitarian Demining (GICHD), an international expert organisation legally based in Switzerland as a non-profit foundation, works for the elimination of mines, explosive remnants of war and other explosive hazards, such as unsafe munitions stockpiles. The GICHD provides advice and capacity development support, undertakes applied research, disseminates knowledge and best practices and develops standards. In cooperation with its partners, the GICHD's work enables national and local authorities in affected countries to effectively and efficiently plan, coordinate, implement, monitor and evaluate safe mine action programmes, as well as to implement the Anti-Personnel Mine Ban Convention, the Convention on Cluster Munitions and other relevant instruments of international law. The GICHD follows the humanitarian principles of humanity, impartiality, neutrality and independence.

The GICHD provides advice and capacity building support, undertakes applied research, disseminates knowledge and best practices, and develops standards. The Centre aims to enhance performance and professionalism in mine action, and supports the implementation of the Anti-Personnel Mine Ban Convention, the Convention on Cluster Munitions and other relevant instruments of international law.

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CONTENTS

LISTS OF FIGURES, TABLES AND BOXES

FIGURES

TABLES

BOXES

FOREWORD

This publication highlights the progress that has been made in the domain of socio-economic survey within mine action. Mine action surveys have traditionally focussed on process and output indicators and data on hazardous areas. There is, however, increasing demand for collecting broader socio-economic data, and different approaches have evolved. These approaches allow mine action programmes to demonstrate development outcomes and evidence of value. There are several factors driving this increased demand, including issues of good governance and accountability as well as programme effectiveness, performance improvement and better outcomes for beneficiaries.

Socio-economic surveys focus on both the negative impact of mine/ERW contamination and the benefits of mine action for women, girls, boys and men, communities and livelihoods. This is in contrast to general and technical surveys, which focus on the nature, location and technical aspects of contamination.

This Sourcebook presents a compilation of socio-economic surveys, examining their varied purposes as well as the different approaches to the development of survey tool protocols. The compilation is intended to provide both guidance and inspiration for the implementation of field surveys that improve planning, priority-setting and reporting on results achieved.

This publication has two parts – a printed book and an accompanying CD which contains all of the resource documents which were used in the preparation of the Sourcebook on Socio-Economic Survey. It is available, to download or order, on the GICHD website www.gichd.org/publications.

This GICHD publication should prove to be a useful and informative basis for improved practice in this area.

Ambassador Stephan Husy
Director
Geneva International Centre for Humanitarian Demining

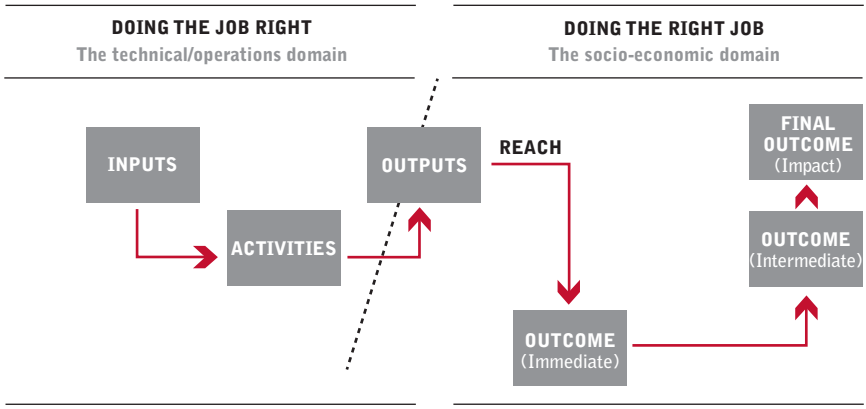
CD Contents:

1. PDF of printed Sourcebook on Socio-Economic Survey
2. Detailed description of relevant surveys (13 documents)
3. Resources (30 documents)

WHY A SOURCEBOOK ON SOCIO-ECONOMIC SURVEY?

Mine action surveys used to focus on process and output[1] indicators and data on hazardous areas. Now, 'frameworks' for collecting broader socio-economic data are being developed to allow mine action programmes to demonstrate development outcomes and evidence of worth. This is for two main reasons: first, issues of good governance and accountability; second, programme effectiveness, performance improvement and, ultimately, better outcomes for beneficiaries, as illustrated in Figure 1.

Figure 1 | Doing the job right versus doing the right job



From designing a mine risk education (MRE) intervention, to demonstrating the impact of mine action on communities, socio-economic surveys have become an important feature of mine action programmes. Unlike general and technical surveys that focus on confirming the nature, location and technical aspects of mine/ERW contamination, socio-economic surveys focus on the negative impact of mine/ERW contamination and the benefits of mine action for women, girls, boys and men, communities and livelihoods.

This Sourcebook features many types of socio-economic surveys that have been used to inform mine clearance, victim assistance, risk education and development activities. These surveys form a rich body of practice that can inspire mine action practitioners to implement field surveys that improve their planning, priority-setting and reporting on results achieved.

WHO IS THE TARGET AUDIENCE?

The purpose of this Sourcebook is to strengthen the capacity of mine action practitioners who design, undertake and manage socio-economic surveys in contaminated countries, or who need to use socio-economic data to inform their decisions. In particular, the Sourcebook seeks to assist practitioners to undertake socio-economic surveys that:

- identify community preferences
- prioritise contaminated areas and communities for survey/clearance
- assess developmental outcomes resulting from survey/clearance
- ensure released land reaches target beneficiaries and is used as intended
- strengthen accountability to affected communities, states and donors
- help better identify villages that are most at risk (eg limited coping mechanisms) or most vulnerable groups (eg new migrants who do not know the area very well)

The Sourcebook is not intended as a "how to" manual telling people what survey to use and how. Instead, the aim is to present an overview of the main issues to consider when planning and implementing surveys, analysing the survey data and using the findings.

HOW IS THE SOURCEBOOK STRUCTURED?

Part one of the Sourcebook examines the underlying purpose of these surveys and the different approaches used to develop the protocols around the survey tools. Part two of the Sourcebook consists of a reference CD that includes more detailed descriptions of the surveys explored in Part One and additional resource information.

ENDNOTES

[1] Outputs refer to what an organisation generates directly through its activities – the goods and services it produces (for example: workshops, training manuals, assessment reports, action plans, strategies). Outcomes refer to the likely or achieved short-term and medium-term effects of an intervention's outputs. Outcomes are a change in behaviour by people and organisations outside the project itself (e.g. beneficiaries; a partner organisation). Impacts are long-term, sustainable changes in the conditions of people and the state of the environment.

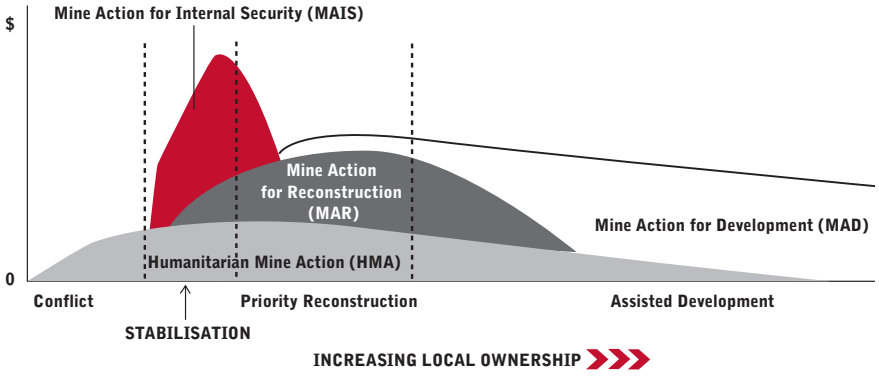
The first step in planning and designing a socio-economic survey is to clarify the purpose of the survey. This includes asking:

- what is the need the survey must meet – how will it be useful for the programme or organisation?
- have studies or surveys been conducted on the same issue before? Will this survey provide new data on the issue?
- how will the survey data and findings be used and by whom?
- how will this ultimately benefit mine/ERW affected communities?

A survey should only be conducted to meet a clear need; it should then contribute to knowledge-building and improve programme processes and outcomes.

Figure 2, the Programme Life Cycle for Mine Action, illustrates the different stages that a mine action programme typically goes through, and how information management needs and capacities shift over time in response to the changing context.

Figure 2 | The Programme Life Cycle of Mine Action[1]



Mine action typically occurs within four stages of a country's conflict and recovery process: conflict, post-conflict stabilisation, priority reconstruction and recovery and traditional development. During and just after the end of a conflict, obtaining good quality data can be very difficult. It is particularly challenging when faced with real concerns about physical security, political stability, logistical difficulties and the technical challenges of working with mobile populations. The focus of information management tends to be on gathering data quickly at the expense of accuracy. Information overload can also be problematic, with data coming in rapidly from many sources.

Once hostilities end and the situation in the country stabilises, the focus of mine action information management shifts to undertaking surveys in order to get a comprehensive "big picture" as quickly as possible. The aim is to collect better quality data about the nature of the contamination problem and/or the impact of that contamination on people. As the context shifts to post-conflict recovery and reconstruction, and eventually development, mine action programmes typically continue to focus on improving data quality and analysis. Gathering and analysing data for planning and for demonstrating results from mine action operations in terms of development outcomes become key.

In mine action, socio-economic surveys are typically undertaken for five purposes, each of which is discussed in greater detail in this chapter:

1. to monitor the impact of mine/ERW contamination and mine action operations
2. to assess the impact of mine/ERW contamination in terms of accidents and mine victims for the purposes of planning and delivering victim assistance
3. to assess the impact of mine/ERW contamination for prioritisation of demining and risk education
4. to examine high risk behaviour and the effectiveness of risk education initiatives
5. to understand how to promote sustainable livelihoods and recovery of mine-affected communities

Ultimately, surveys help mine action programmes generate data that informs decisions. The starting point is to find out which decisions mine action managers are forced to make with inadequate data and the likely consequences of those decisions. These answers should then help determine what data is most needed and which type of survey should be used to collect that data.

The table below, adapted from Mikkelsen,[2] describes the main types of surveys that can be used for mine action, noting their purpose, focus and the desired results.

Table 1 | Survey types and purposes

TYPE OF SURVEY	PURPOSE	EXAMPLES[3]	DESIRED RESULTS
Investigative research	To better understand a particular issue.	The village demining study (Bottomley); the study on local perceptions and response to risk (Uk)	Can help to inform policy or project/ programme design or evaluation or contribute to the design of further survey work.
Action research	To facilitate people to investigate, examine and under-stand issues relating to their own communities.	PRA/PLA activities conducted by MAG; CMAC CBMRR approach (Bottomley) SLA (Lord)[4]	Communities identify and prioritise problems and solutions so that action can be taken. Can also be used for local level monitoring.
Monitoring/ surveillance	Systematic and continuous collection, analysis and interpretation of information over time.	Lao National UXO Victim and Accident Survey (Boddington)	Information on trends over a period of time. Can help to inform project design (needs and requirements) and also to contribute to impact assessment.
Impact Assessment	Improving an intervention, a programme, policy, organisation or product and determining effects and effectiveness of actions. Usually conducted pre, during and post intervention.	Afghanistan KAPB (Hashimi); Durham evaluation framework; DDG IM approach; MAG Sudan IA tool; TIA NPA; Psychosocial impact of HMA, Sri Lanka	Collect baseline data, assess progress at regular intervals during project and after finish of project. Keep track of changes, justify resources, improve prioritisation and overall performance.

Different surveys exist for different purposes. Some are better designed for gathering data on the impact of landmines/ERW on communities, while others are better for assessing the impact of landmines/ERW on individuals and/or their livelihoods. Establishing the purpose of a survey is crucial for developing a protocol for the implementation of that survey. Below are more detailed descriptions of the key surveys used in mine action according to their purpose.

THE IMPACT OF LANDMINES/ERW ON COMMUNITIES

The Landmine Impact Survey

The Landmine Impact Survey (LIS) is perhaps the best known socio-economic survey in mine action. An LIS seeks to uncover the extent to which a country is affected by landmine contamination in terms of the number of communities affected, the intensity of impact and the number of Suspected Hazardous Areas (SHA) affecting these communities.

The LIS was innovative because it moved away from previous mine action surveys, which simply listed the minefields in a country, and instead focused on consulting affected communities themselves. The LIS defined the landmine/ ERW problem each community faced in terms of scale, type, location, hazard, infrastructure blockages and the socio-economic impact experienced. It is designed to support priority-setting and planning (both strategic and operational) by national authorities, mine action operators and donors. The LIS has met with varying degrees of success. The effective use of LIS data as a planning tool tends to increase when direct requests for an LIS come from national authorities rather than in response to donor requests (ie supply-driven), as was often the case in the early initiatives.

Box 1 | Making the Landmine Impact Survey a reality on the ground[5]

The LIS method has become commonplace in mine action programming. The first LIS was completed in Yemen in 2000. Since then, Landmine Impact Surveys have been conducted in 17 countries.[6] The most recent survey was concluded in 2009. The LIS has been used in countries where no prior information or mine action programme existed, such as Yemen and Thailand, and also in countries with well-developed mine action programmes and databases of mine information, such as Afghanistan and Bosnia-Herzegovina.

The LIS was initially defined through a global consultative process. Over several years, mine action stakeholders, including international NGOs and UN agencies, coalesced into the Survey Working Group (SWG), which is responsible for drafting and revising the protocols that govern the LIS methodology. The Survey Action Center (SAC) was established through the SWG to coordinate the LIS, provide technical support and mobilise donor support.

SAC often takes the lead role in approaching donors. Generally, SAC seeks a consortium of donors to maximise interest and increase the use of the survey results. At times, donors have approached SAC and made a commitment to fund an LIS for a particular country.

Typically, SAC serves as the prime contractor for the donor(s), but an ad hoc committee of the SWG recommends an implementing partner for SAC to subcontract to carry out the survey in the field. Ideally, the NGO implementing partner will work with the national mine action authorities to ensure full transparency and mutual support. UNMAS is asked to appoint an independent Quality Assurance Monitor to visit the LIS on a regular basis, ensuring adherence to the SWG protocols and that outputs meet high standards.

Lessons learnt

> An independent external evaluation of the LIS process found that, although NGOs led the establishment of the LIS process and wrote the Protocols, they have not used the data in the LIS to the extent that national authorities have.[7]

> The LIS process has had significant but limited success in terms of getting national authorities to think of community benefit as the intended outcome. 'Square metres', for example, remains a measure of output. Taking the community measure a step further, Afghanistan and Mozambique are now measuring outcomes in terms of whole districts removed from the threat of landmines.

> The survey in Afghanistan became the baseline for future LIS work. It resulted in the cancellation of almost 40% of the suspect land in the existing database. In contrast, the Bosnia-Herzegovina mine action programme relegated the LIS to an auxiliary set of data that augmented the pre-existing database.

> Increasingly, national authorities have embraced the LIS data for strategic and operational planning purposes. In countries where the national authorities did this, the outcomes have often been spectacular, including the release of large areas of land that had been recorded as SHAs and a baseline established against which to measure progress over time. In one country, LIS data has been used successfully to predict areas with the highest probability of future landmine accidents.

> Not surprisingly, the most important lesson is that a supply-driven LIS is less successful than an LIS that was requested, even demanded, by the national authorities. Several of the early LIS, in particular, were supply-driven by SAC and donors. These LIS were subsequently ignored as planning tools, unlike later LIS that were completed at the request of national authorities.

One of the main critiques of the LIS approach is the lack of a systematic process to update the data, particularly the socio-economic aspects, resulting in the data becoming outdated very quickly. In some countries, measures have been taken to compare post-clearance data with LIS data and to update the LIS. For example, the Mine Action Coordination Centre of Afghanistan (MACCA) and the Mine Clearance Planning Agency (MCPA) established Landmine Impact Assessment Teams (LIATs) to update the data from the Afghan LIS, check SHAs and provide information on newly-mined areas, as well as providing a basis for conducting Post-Demining Impact Assessments.[8]

Building on the LIS

As Landmine Impact Surveys started being used, national authorities and NGOs also developed their own methods. For example, Norwegian People's Aid (NPA) developed its Task Impact Assessment (TIA) tool toward the late 1990s in Angola.[9] TIA is employed in all NPA mine action programmes, building on the LIS if it has previously been conducted, and uses a different survey approach.

The specific purpose of TIA is to:

- actively involve local people in the process of collecting accurate information for clearance operations
- ensure that survey and clearance benefits intended target groups as much as possible
- assess the developmental outcomes resulting from clearance

TIA assists programme managers to identify landmine, cluster and ERW clearance priorities and assess the likelihood that clearance will result in positive developmental outcomes for the affected community.[10] For a more holistic approach, the Sustainable Livelihoods Approach[11] (SLA) is used to analyse all factors that influence people's lives and view tasks at the village- or community-level. This is achieved by conducting in-depth socio-economic surveys and attempting to avoid the heavy reliance on one particular indicator – such as economic wealth or mine victims – which can distort the focus of mine action. If all the SLA assets are not fully understood the importance of clearance may be underestimated and, conversely, the impacts overestimated.

TIA consists of three phases of surveying: pre-clearance, during clearance and post-clearance. The pre-clearance phase identifies problem areas, assesses needs and expected outcomes and prioritises areas for clearance, resulting in a decision on whether or not to undertake a given task. Following this, a Clearance Plan is produced, containing socio-economic and technical information required for each community task in addition to reflecting developmental considerations. During clearance, a TIA team checks that the needs of the community have not changed and that clearance remains appropriate. At the same time, the team assesses the relationship between the community and the clearance team and highlights any issues or misunderstanding linked to the intervention. After clearance, a comparison is then made between the actual outcomes resulting from clearance with the expected outcomes identified in the pre-clearance phase. It also helps promote community satisfaction and reflection on lessons learnt for the future.

Like TIA, Task Assessment and Planning (TAP), developed in Bosnia and Herzegovina,[12] is an example of survey first used to support mine action operations and planning at the task level. TAP consists of an assessment of suspected hazardous areas affecting each community that examines the potential benefits from demining suspected areas and the specific vulnerabilities of high risk groups. TAP was launched to connect socio-economic results obtained through the Landmine Impact Survey with operational mine action planning, particularly at the level of mine impacted communities.

In 2005, enhancements were made to the proposed TAP approach through a project focused on the development of Community Integrated Mine Action Plans (CIMAPs), which integrate mine action activities (ie clearance, technical survey, marking, mine risk education and victim assistance). This prioritised highly impacted communities rather than individual minefields for risk education, survey, marking and clearance.

The main differences between CIMAPs and the LIS include:

- more detailed focus on a single community than is possible in an LIS
- efforts to understand the different impacts on different social groups within a community
- efforts to understand the potential benefits accruing from different actions
- the development of plans for demining, MRE, etc to address the specific problems faced in each community

Box 2 | Risk assessment techniques for CIMAPs[13]

The CIMAP methodology[14] used in Bosnia and Herzegovina was divided into four phases: (1) secondary data collection and processing; (2) risk assessment in the mine-affected community; (3) assessment of needs and capacities in the mine-affected community; and (4) preparation of an integrated plan.

In a mine-affected community, risk assessment consists of the following four operations:

a) identification of hazardous locations, risk identification (mine and ERW hazards and fields where their socio-economic impact is manifested)

b) identification of affected population groups

c) risk evaluation and priority-setting

d) creation of a risk register

Risk identification starts with the identification of potential hazards, conducted through three levels of survey:

> systematic survey, which defines the suspected area according to its threat, size, shape and characteristics on the basis of the available information and secondary data

> general survey, which defines the risk area based on further measurement and collection of data about an area and its risk, without entering the risk area

> technical survey, which defines the mined areas; this involves entering the risk area using technical methods, reaching the minefield and defining the boundaries of the mined area for mine clearance

Group identification is carried out by survey teams that apply a series of simple, interconnected problem-solving and decision-making techniques such as brainstorming, cause and effect diagrams, weighting and a Pareto diagram[15]. The identification of affected population groups is needed for several reasons:

> a significant number of mine action operations use risk reduction methods that change the perception and behaviour of affected groups

> priority-setting, as part of the planning process, depends on an assessment of the threat exposure level of at-risk groups

> risk cannot be described without ascribing it to specific groups; the level of acceptable risk and resistance to the risk varies between population groups as well

Risk evaluation involves determining values for likelihood and consequences of the harm as a result of risk exposure. A survey team conducts the procedure using matrices designed for determining the risk level, hazard level and the level of impact on an affected group. The process for setting priorities also uses a matrix, which combines the scale of hazard level with the scale of benefit level. Apart from being used to set priorities within an affected community, this matrix may be used for defining priorities for any other risk location, whose demining is not connected with integrated mine action plans.

The creation of a **risk register** involves the completion of a form by survey team members progressively during survey activities. The form includes information on the description of the risk, the potential hazardous event, place of potential event, group at highest risk, potential consequence of a hazardous event, measures taken on risk control and level of risk and priority. A process of risk characterisation is then used to describe particular risks.

THE IMPACT OF MINES/ERW ON INDIVIDUALS

Assessing physical impact and victim assistance needs

The LIS and other impact surveys concentrated on mine-affected communities, but also collected information on victims of mine/ERW-related accidents. However, the LIS provided only a snapshot, with no provision to update and maintain data on victims, and did not provide in-depth information about victims.

To meet these needs, the Mines Advisory Group (MAG) established the Cambodia Mine/ERW Victim Information System (CMVIS) in Cambodia in 1994. It has since been managed by the Cambodia Red Cross and Handicap International Belgium (HIB) from 1995-2009 and, as of early 2010, by the Cambodian Mine Action and Victim Assistance Authority (CMAA). The primary activity of CMVIS is incident and casualty surveillance. CMVIS identifies, reports and records information on all mine/ERW accidents and incidents and mine/ERW casualties occurring in Cambodia. CMVIS also provides ongoing systematic data collection on mine/ERW casualties, including the number of survivors. Data is collected through an extensive volunteer network covering all 23 provinces.[16]

CMVIS uses two separate forms to collect data: a "Mine/ERW Accident/Incident Report" and a "Mine/ERW Casualty Report". The criterion used for identifying "casualties" is physical injury rather than, say, psychological trauma. The Casualty Report collects the following information on each casualty:

- age
- gender
- marital status
- number of children
- occupation
- contact details
- activity at time of accident (eg farming, walking, handling ordnance, by-standing, etc)
- type of injury
- emergency medical services received (type, by whom, delay in provision)
- mine/ERW awareness

In Lao PDR, which suffers from extensive unexploded ordnance (UXO) contamination from the conflict of 1964-73, the National Regulatory Authority (NRA) undertook a survey of UXO-related casualties in 2008. Prior to the

NRA survey, there were two sources of information: (i) a Handicap International – Belgium (HI-B) survey undertaken in 1997 which concluded there had been 10,649 victims (also described as accidents) between 1973 and 1996/7; and (ii) the national clearance organisation, UXO Lao, collected information about victims between 1999 and 2007, but this information was incomplete (eg no data had been collected between 1997 and 1998, and it had very partial geographical coverage) and amounted to 1,039 casualties. These figures indicated that there may have been approximately 14,000 casualties between 1973 and 2007. The NRA anticipated that the actual figures were double that amount because: the HI-B survey had only covered half of Lao PDR's population; the UXO Lao data collection was even more restricted than that; and the NRA survey would go as far back as 1964 when the conflict began. In the event the NRA survey revealed that:

- There were approximately 50,000 casualties in Lao PDR, who had had an accident with a UXO between 1964 and 2007 (and they had only covered 95% of villages)
- The quality control of 204 villages suggested that this figure was 22% below what it should have been.

Since many survivors may have moved away from contaminated areas from the start of the conflict to the date of the survey, it was clear Lao PDR needed a countrywide UXO victim and accident survey. This resulted in the 2006-2009 Questionnaire Survey Concerning[17] Victims of UXO Accidents with the goal of identifying all UXO casualties,[18] both living and dead. The specific objectives of the survey were to:

1. draw attention to areas of the country where concentrations of accidents have occurred and to address those areas as priorities for clearance and risk education activities
2. establish characteristics that appear to encourage high risk behaviour – activities at the time of accidents; occupation; sex and age of victim; detailed locations
3. enable victim assistance organisations to identify those in need of their services and be able to contact victims and make them aware of available services

Psychosocial impacts of mines/ERW

In addition to documenting physical injuries resulting from mine/ERW-related accidents, the mine action community has recently initiated research on the psychosocial impact of mine/ERW contamination (ie the psychological stresses and traumas in the social and economic areas of day-to-day life in affected communities). This reflects the recognition that responding to the psychological and socio-economic needs of mine victims is an essential part of restoring them to whole and productive lives.[19]

For example, the International Centre for Disaster Resilience (ICDR) and Vrije Universiteit (VU) in Amsterdam have developed a model for measuring the psychosocial impact of both landmine contamination and the intervention process of mine action. This model seeks to separate and identify the trauma caused by the fear of landmines from the continuing stresses on civilian populations under the general conditions of war. The model was designed based on a field trial in northern Sri Lanka. It measures the impact of mine action and the recovery of valuable 'human capital'[21] in individuals and communities that have endured armed violence.

ICDR and VU are specialised in setting-up and supporting psychosocial and mental health programmes in low-income countries, as well as evaluating such programmes. The research provided insights into the concerns and needs of both mine-affected communities and individuals and enabled refinements to the methodology to separate specific stressors in complex situations. It also allowed ICDR and VU to develop a model that could be applied in similar environments of political and military disorder and armed violence, coupled with fear and suspicion among local populations.

This model can be adapted for different uses. For example:

- to assess the effects of other weapons and the measurement of Armed Violence Reduction (AVR) interventions
- for planning purposes prior to the start of mine action interventions
- to monitor impact and track changes during mine action
- as part of an evaluation to measure the recovery (or deterioration) of the population after mine action

Understanding high risk behaviour

Previously, MRE was measured through outputs and short-term outcomes (for example, the number of sessions held and the retention of key messages by participants). This was appropriate for MRE organised in response to emergency situations. In recent years, particularly when dealing with high risk groups, MRE surveys have expanded to examine the medium- to longer-term impact of risk education on behaviour change, and not just the short-term retention of knowledge.

For example, MAG conducts MRE surveys as part of its community liaison approach in some of its country programmes. MRE surveys are typically incorporated in MAG's Quality Assurance/Quality Control activities, and ongoing community liaison activities. Specific Knowledge, Attitudes and Practices (KAP) surveys are also implemented as part of certain MRE projects.

In Sudan, MAG uses an assessment tool which includes a survey component designed to assess the impact of MRE activities. MAG staff in Sudan use MRE surveys to:

- gather baseline data as part of an ongoing needs assessment process
- measure the change in knowledge and attitudes of community members following MAG's MRE sessions
- identify trends in trusted sources of information
- obtain demographic information on beneficiaries in order to improve service delivery
- act as a monitoring tool for determining the quality of MRE sessions[22]

While MAG Sudan's MRE surveys measure the immediate retention of knowledge after an MRE session, they do not measure medium- to long-term knowledge retention or behaviour change. In Sudan, MAG delivers the MRE survey each time an MRE session is delivered. The survey is structured in two parts. Part one relates to the four key messages conveyed during the mine risk education session, with 11 questions posed to the same person before and after the MRE session. Part two of the survey involves ten questions that are posed only after the MRE session. The questions cover the beneficiary's background (whether the beneficiaries are/were refugees or internally displaced, or were present throughout the war), general information sources and the impact of contamination on the returnee process.

In countries where MAG delivers MRE, it uses different methods to assess the outcomes and impact of MRE, including KAP surveys and other methods to measure medium- to longer-term changes in knowledge retention and behaviour.[23]

In Afghanistan, the MACCA has conducted three KAP surveys (2004, 2005 and 2009). In the absence of relevant baseline information, MACCA carried out the first KAP survey in 2004 to assess the impact of MRE, to justify continued funding for MRE and to establish baseline information to compare the findings with future KAP surveys. It undertook a second survey in 2005. Beliefs were added – making it a Knowledge, Attitudes, Practices and Beliefs (KAPB) survey – to find out about people's perceptions of how injuries occur and who is responsible.

The 2004 and 2005 surveys confirmed the positive impact of MRE and the knowledge of risk in affected communities. They also identified the best mechanisms of information dissemination. The 2005 KAPB survey, which

included demining activities as part of the assessment, concluded that people understood MRE messages and valued them, and that MRE resulted in behaviour change and targeted the most vulnerable. The purpose of the KAPB+[24] survey of 2009 was to not only evaluate the current knowledge, attitudes and practices of the communities, but to also assess the impact of mine action services delivered to date and to determine how best to prioritise future mine action in Afghanistan. The KAPB+ also finally introduced gender as an explicit concern.

Box 3 | The evolution of the Knowledge, Attitudes, Practices and Beliefs (KAPB) Survey in Afghanistan[25]

Knowledge, Attitudes, Practices and Beliefs (KAPB) surveys used by MACCA in Afghanistan have evolved over time from 2004 to 2009, as have the underlying objectives that have come to underpin them. This box charts the evolution from KAP to KAPB+.

UNICEF and MACCA developed the first KAP survey in 2004 through consultations with Afghan implementers and MRE experts, as well as inputs from international advisors. MACCA conducted a review of existing survey tools, including KAP surveys from other country projects, to provide sample questions and ideas. The survey team designed the questionnaire to answer the question: "Does MRE have an impact?" Before implementing the survey, the survey tool was extensively field tested to ensure question quality and train future survey implementers and monitors.

With the assistance of UNICEF and international advisors, MACCA undertook a second KAPB survey in 2005. The survey was the same except that MACCA added questions about beliefs to obtain greater insight into the cultural context of Afghanistan and individual responsibility concerning the risk of mines. It also allowed the programme to compare data and see if there were significant changes in knowledge, attitude and practice.

Following a targeted pilot KAPB survey called Attitudes towards Mine Action: An Afghan Woman's Perspective, MACCA rolled out a new survey in late 2009. Given that the first two KAPB surveys did not fully respect issues of gender parity, this third survey, referred to as KAPB+, had a specific focus on women, men, girls and boys.[26] The third survey in 2009 provided MACCA with male and female perspectives on MRE, mine action prioritisation and the value of MRE and other mine action activities.

The overall purpose of the KAPB+ survey was to assess the situation of mine/ERW affected communities and people in terms of effectiveness and impact of demining and MRE programmes in Afghanistan. Specific objectives included:

1. assess the impact of demining and mine risk education activities on affected communities
2. collect data on the knowledge, attitudes, practices and beliefs of Afghans working and living in areas where mine action activities have a high impact
3. identify and recommend strategies for enhancing the effectiveness and impact of demining and MRE activities within the Afghan mine action programme
4. learn lessons and identify gaps in order to improve the effectiveness of demining and MRE activities, particularly with regards to obtaining the views of women and involving them in programme planning and data collection
5. analyse data and share it with relevant programme stakeholders
6. improve mine action programme activities

When undertaking MRE and KAPB surveys, it is important that sex and age disaggregated data (SADD) is collected and analysed. Ethnicity, too, is important, especially in areas where there are different groups and languages. The analysis of this data can assist in designing and tailoring MRE activities more effectively and responding to gender-specific high-risk behaviour and activities. For example, if SADD reveals that boys are involved in high-risk activities, such as herding cattle in contaminated areas, MRE sessions can be tailored so that separate group sessions are organised with boys. Role-play plus specific examples are used that correspond to the specific responsibilities of boys and their distinct exposure to risks.

THE IMPACT OF LANDMINES/ERW ON LIVELIHOODS

A recent development in socio-economic surveys has involved assessing the impact of mine/ERW contamination on the livelihoods of affected communities, often based on the Sustainable Livelihoods Approach developed by the UK Department for International Development. The Sustainable Livelihoods Approach provides an analytical framework (see Figure 3) that promotes systematic analysis of the underlying processes and causes of poverty. It proposes that livelihood outcomes are based on five classes of livelihood assets:

1. human assets: quantity and quality of human labour available (eg health, food security and diversity, ability to access education/send children to school regularly, time available to spend on income generating activities aside from subsistence farming, feeling positive)
2. social assets: ability to increase social networks, fulfil social and cultural obligations and gather information
3. financial assets: ability to purchase basic goods and services for house hold members and save small amounts
4. physical assets: access to basic infrastructure (schools, clinic, access road, market, wells) as well as tools
5. natural assets: access to forest, farm land and water sources

Figure 3 | Sustainable livelihoods framework[27]

H = Human Capital **S** = Social Capital **N** = Natural Capital **P** = Physical Capital **F** = Financial Capital

Sustainable Livelihoods Analysis is a method within the Sustainable Livelihood Approach for understanding the resources available to individuals, households and communities, as well as the constraints on and opportunities for using these resources for development. It places people and their priorities at the centre of development. Its intention is to empower the disadvantaged to build on their potential, support their access to assets and develop an enabling policy and institutional environment. The available levels and utilisation of the five sets of assets are influenced by the external political, institutional and legal environment. Together, people's assets and the external environment influence people's strategies in pursuit of outcomes that meet their livelihood objectives.

The use of this framework to assess the impacts of mine clearance helps to highlight the wider context in which the laying of mines and subsequent contamination has affected communities. It encourages integrated thinking about the benefits of demining and the broader development opportunities and constraints. Mines directly block access to natural and physical assets, removing crop and grazing land from use, obstructing the use of roads and access paths, preventing use of strategically placed buildings, etc. Yet the effects of mines also impact human assets. For example, mines affect health and education – directly, through injury, and indirectly, through loss of access to schools or clinics. They also affect financial capital, through loss of productive assets and assets that could be sold or used to secure loans.

In 2006, GICHD and the Yemen Executive Mine Action Committee (YEMAC) commissioned a post-clearance livelihoods survey in 25 villages in Yemen, conducted by the Natural Resources Institute. As with NPA's

Task Impact Assessment, the Sustainable Livelihood Approach was used as a basis for obtaining a holistic view of the situation in landmine-affected communities.

In Sudan, MAG uses an impact assessment (IA) tool[28] that draws upon elements of established tools, such as the Sustainable Livelihood Framework and the Livelihood Assets Status Tracking (LAST)[30], developed by Manchester University. The IA tool is designed to:

- provide tangible evidence of any long lasting and/or sustainable impact on people's lives as a result of mine action activities
- ensure accountability to beneficiaries and stakeholders for the use of mine action resources
- allow for the improved mainstreaming of mine action into development

MAG conducted initial field trials in June and July 2008 in South Sudan.[30] The first post clearance data was gathered six months after demining and analysed in April 2010.

Box 4 | Assessing the impact of ERW clearance on household livelihoods[31]

In 2009, MAG's country programme in Lao PDR developed an evaluation framework for assessing the impact of ERW clearance on household livelihoods. The purpose was to address the questions 'who benefits from ERW clearance, in what ways and in what contexts?' Subsequently, the framework was piloted in MAG's Iraq programme the same year.

The sustainable livelihoods framework proved to be a useful structure for understanding the impact of ERW clearance on household livelihoods. It also provided a holistic view of benefits derived from clearance. This was especially important in both Lao PDR and Iraq, where focusing only on economic benefits would not have captured the different ways in which households benefit from ERW clearance.

In Iraq, a sixth category of livelihood asset – cultural capital – was identified in the qualitative analysis; this emerged as a key benefit for households. Cultural capital in this context meant return to one's 'grandfather's land' and home village and traditional customs.

The livelihood framework combined with the realist perspective of evaluation[32] helped identify not only what happened but also contextual factors that affected the developmental benefits. In Iraq for example, a livelihood shock in the form of prolonged drought meant that, while households had initially benefited financially from post clearance land use, over the three year period much of this benefit was eroded. In Lao PDR on the other hand, access to markets was identified as a key mediating factor.

The development NGO CHF (formerly the Canadian Hunger Foundation) also uses SLA as part of its poverty alleviation projects in remote and upland areas of Vietnam, some of which are contaminated with unexploded ordnance.[33] CHF uses the Sustainable Livelihoods Approach to measure household assets and assess the percentage of assets that each household has in relation to what is available. By measuring the assets belonging to each family, CHF determines each family's potential livelihood. CHF teams then map out assets to determine how best to improve each aspect of a household's livelihoods. UXO clearance was used as one strategy to assist households that lack adequate assets. CHF worked with MAG, which typically cleared the villages prior to the start of the CHF projects, resulting in increased access to natural assets (eg crop land).

ENDNOTES

[1] A Guide to Socio-Economic Approaches to Mine Action Planning and Management, GICHD, Geneva, November 2004, p.19, http://www.gichd.org/fileadmin/pdf/publications/Guide_Socio_Economic_Approaches.pdf

[2] Britha Mikkelsen. Methods for Development Work and Research: A Guide for Practitioners. London: Sage Publications Ltd., 1995, p.219.

[3] Please see Part 2 of this Sourcebook (reference CD) for detailed descriptions of each of these examples.

[4] PRA is Participatory Rural Appraisal; PLA is Participatory Learning and Action ; MAG is Mines Advisory Group; CMAC is Cambodian Mine Action Center; CBMRR is Community-Based Mines Risk Reduction; SLA is Sustainable Livelihoods Analysis

[5] Landmine Impact Survey, Robert Eaton, Survey Action Center, August 2010, on Reference CD.

[6] For a listing and major attributes of each survey, see Annex A – Countries Surveyed in LIS, Robert Eaton, SAC, August 2010, on Reference CD.

[7] Scanteam, Analysts & Advisors, Evaluation of the Global Landmine Survey Process – Final Report, Oslo, February 2004, p. 35-36.

[8] Azarbaijani-Moghaddam, Sippi, Assessment of Post Demining Impact Assessment for the Mine Action Coordination Center of Afghanistan, MACCA, Kabul, March 2009 .

[9] Based on lessons learnt from implementing TIA around the world, NPA is in the process of developing a new impact assessment framework and guidelines.

[10] Norad, Evaluation of the Humanitarian Mine Action Activities of Norwegian People's Aid, Evaluation Report 6/2009, p. 33, http://www.norad.no/en/Tools+and+publications/Publications/Publication+Page?key=150570.

[11] The term 'sustainable livelihood' came to prominence in the early 1990s, drawing on advances in understanding of food insecurity during the 1980s. Much of the literature uses an adaptation of Chambers and Conway's (1991)[3] definition of livelihoods: 'A livelihood comprises the capabilities, assets and activities required for living. A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base'.

[12] The TAP initiative was initiated by SAC and involved Cranfield University (UK), Norwegian People's Aid, Handicap International, and Geospatial International.

[13] Community Integrated Mine Action Planning, Suzana Srnic Vukovic, September 2010, on Reference CD.

[14] All the forms used during the assessment and final report for the Community Integrated Mine Action Plan, as well as details about assessment and planning procedures can be accessed via the BHMAC web site: http://www.bhmac.org/en/stream.daenet?kat=19 or if inaccessible, under Laws and regulations document BHMAC Standing Operational Procedures for Mine Risk Education.

ENDNOTES

[15] A Pareto diagram is a type of chart that contains both bars and a line graph, where individual values are represented in descending order by bars, and the cumulative total is represented by the line. It is used to further process the results of a weighting technique. The percentages obtained by weighting present the level of mine risk impact on a certain group, and the cause of that impact lies in the nature of the affected group. The graphic presentation of results is the most important phase in the application of Pareto Diagram. See www.bhmac.org under Laws and regulations BHMAC SOP for MRE.

[16] Chivv Lim, Cambodia Mine Action and Victim Assistance Authority, Project Manager for CMVIS.

[17] The word 'concerning' is used rather than 'of', because many victims are deceased and were thus not directly involved in the survey

[18] Terminology is important: The Convention on Cluster Munitions at Article 2(1) defines victims as: '…all persons who have been killed or suffered physical or psychological injury, economic loss, social marginalisation, or substantial impairment of the realisation of their rights caused by the use of cluster munitions. They include those people directly impacted by cluster munitions as well as their affected families and communities'; The NRA defines UXO casualties as 'victims who were involved in an accident with a UXO and either died as a result or survived with injuries.' The NRA defines UXO survivors as 'people who were involved in an accident with a UXO, were injured and survived the experience: if such people have subsequently died, the death has not been as a direct result of the accident'; The NRA defines an accident as 'for the purposes of the NRA's National Surveys of UXO Victims and Accidents, an accident is an explosive event involving a UXO as a result of which at least one person was injured. UXO accidents in which damage or injury was caused other than to people are not included in the Surveys.'

[19] The Banning of Anti-Personnel landmines: The legal contribution of the International Committee of the Red Cross. Edited by Louis Maresca and Stuart Maslan. Cambridge Univerity Press. First Published 2000.

[20] The productive potential of human beings.

[21] Measuring the Psychosocial Impact of Mine Action: A mixed method approach, Graeme R. Goldsworthy, Erica M. Pasini and Hope Rosebaum, International Centre for Disaster Resilience (ICDR), Harvard University Medical School, Boston MA and Vrij Universetiet Medisch Centrum (VUMC), Amsterdam, the Netherlands, July 2010.

[22] MAG Sudan's Impact Assessment Tool, Louise Skilling, Regional Community Liaison Manager Africa and Americas, Mines Advisory Group, July 2010.

[23] Information provided by Ruth Bottomley, Community Liaison Manager Europe, Middle East and Asia, MAG, May 2011

[24] The "B+" refers to additional questions surrounding beliefs and interviewee recommendations which go slightly beyond the scope of traditional KAP surveys and were incorporated in this study.

[25] Knowledge, Attitude, Practice and Belief (KAPB) Survey – Afghanistan, Samim Hashimi with Susan Helseth, Mine Action Coordination Centre of Afghanistan, July 2010, on Reference CD.

[26] The 2009-2010 KAPB+ report can be accessed through: http://www.macca.org.af/en/MAPA_Reports.html

ENDNOTES

[27] UK Department for International Development, Key Sheets for Sustainable Livelihoods, May 1999, http://www.odi.org.uk/resources/download/2339.pdf

[28] The MAG Sudan impact assessment tool was developed by Philippa Copland, Community Liaison Manager (CLM) for Impact Assessment (IA), with support from MAG Sudan and MAG headquarters (HQ).

[29] Bond, R. and Mukherjee, N. (2002). Livelihood Asset Tracking Tool: An Impact Monitoring Tool. Journal of International Development, Vol. 14, pp. 805–815.

[30] MAG Sudan (2008) MAG Sudan Impact Assessment Manual. Manchester, UK. MAG

[31] Evaluation framework for assessing the impact of explosive remnants of war (ERW) clearance on household livelihoods, Joanne Durham, June 2010.

[32] Realist evaluation is another form of theory-based evaluation. Realist evaluation is not just satisfied in documenting what happened but also tries to also understand why.

Once the purpose of the survey is clear, the development of a survey tool (or protocol) can help guide the implementation of the survey, and clarify the goals, objectives, participants and methods that will be used. The survey tool serves as a master plan, outlining the key steps involved in the survey, such as who and what will be researched, how, when and where the survey will take place.[1] A range of considerations need to be taken into account, some of which are listed in Table 2.

Table 2 | Developing survey tools – key considerations

Primary purpose of survey	Investigative research; action research; monitoring or surveillance; impact assessment
Focus	Breadth (eg the entire country) or depth (eg sample communities)
Scope	A one off survey or an ongoing system
Unit of analysis	Individuals, households, groups, communities, projects, whole programmes, etc
Tools	Generic tools or task specific tools
Place	Where the data will be collected from
Time	Long term field work, rapid reconnaissance, exploratory work
Logistics and practicalities	Safety, access
People	Level of participation, languages, number and type of people required
Ethics and inclusion	Ensuring an ethical approach to data collection and inclusiveness in terms of gender, disability, ethnicity etc
Available resources	Funds, skilled people, equipment, salary, per diem, data analysis, transport, access to existing information

Box 5 provides a brief overview of the survey tool used for a survey of local perceptions and responses to risk in Cambodia and Lao PDR.

Box 5 | The 'Local Perceptions and Responses to Risk' survey tool[2]

In Cambodia and Lao PDR, as part of a Local Perceptions and Responses to Risk Survey,[3] researchers used different levels of investigation to produce a reasonably accurate 'risk picture' of the village. In this box, we briefly examine the survey tool and triangulation process.

Phase I: Preliminary desk based research and analysis

This initial phase entails a review of: ERW contamination maps; mine action agency data (areas cleared, MRE sessions conducted, etc); general accident and victim data; available reports on the prevalence of scrap metal trade and spontaneous or village demining; identification of NGOs working in the area and a review of their projects.

Phase II: Gaining an initial overview of the village

Once on site, the survey team meets with the village chief and other local authorities to introduce the team members, present the survey methodology and discuss its objectives. The main purpose is to work closely with the village chief and his/her counterparts to form an overall picture of the village in terms of the following:

a) village history, size and composition (native inhabitants or internally displaced people)

b) overview of local livelihood activities (agriculture, fishing, gathering forest products, scrap metal trade, etc)

c) village access to water, roads, markets, health centres, schools and nearest towns

d) major safety, political and economic issues at stake (eg landlessness)

e) the village's development priorities

f) positive results and the limitations of previous clearance activities (both those conducted by external agencies and by local people)

g) number and main causes of injuries and casualties for the past months/year/two years

h) number of ERW-associated injuries and casualties for the past months/year/two years

i) households or individuals (eg regular or occasional bomb hunters) who are particularly vulnerable to accidents

j) village risk ranking: according to the village authority, finding out which sources of risk are likely to pose the greatest challenges to the security of the village in social, economic and political terms

Phase III: Getting a closer picture with households

This phase involves conducting interviews with all households (if possible, or as many as the team thinks would provide a representative sample) as well as vulnerable individuals (for example, those who have been identified as being particularly vulnerable to ERW-related risks, such as single female heads of household, village deminers, children involved in salvaging scrap metal, internally displaced people).

Information collected during participant observation is essential for refining the village risk picture as people may find it easier to talk about issues that most affect their daily livelihood in a less formal setting. Data collected outside of formal interviews will help gauge whether the risk rankings provided (by the village chief and the head of household) are consistent and representative of the village's real risk situation.

If the survey team finds discrepancies or lack of coherence (for example UXO ranks 1st in terms of risk but there have been no UXO-related accidents or encounters for the past few years), then re-ranking the village sources of livelihood threats may be necessary to provide development solutions that are better tailored to the villagers' actual needs.

The following sections look more closely at considerations for developing a survey tool.

STAKEHOLDER CONSULTATION

Consultation with key stakeholders at the outset of developing a survey tool is important, particularly in terms of checking ideas and getting advice on methods and language. Stakeholder consultation helps ensure there is feedback from key people at every stage of the project's implementation. Consultation also gives those stakeholders greater ownership over the process and ensures their ongoing interest in the work. As a result, they will be more likely to take seriously the survey results and recommendations.

For example:

- the development of the Lao Victim Information System (LVIS) was done through regular contact and consultation with the Victim Assistance Technical Working Group that includes representatives of the government, UN and NGOs
- Danish Demining Group (DDG) set up a peer group to oversee the development of its Impact Monitoring tool
- the Afghan KAPB survey was conducted by MACCA but involved the Department of Mine Clearance, mine/ERW operators and the Afghan Ministry of Education

Although the LIS methodology was developed by the Survey Action Center (SAC) to support a standard methodology applicable worldwide, before launching an LIS, SAC conducts an Advanced Survey Mission to meet national authorities and stakeholders, and to ascertain the commitment and need for a survey.

ADAPTING TO THE LOCAL CONTEXT

The growing body of socio-economic surveys has allowed managers to use existing tools and practice rather than develop completely new designs. However, to ensure relevance and effectiveness, survey tools and methods must be adapted to the local context, including local needs, capacities and available resources.

The Lao PDR victim survey methodology employed a relatively well-tested and agreed upon format for the questionnaire. The format had already been used, with modest variation, in Cambodia (by the Cambodia Mine/UXO Victim Information System - CMVIS) and Azerbaijan (by the Azerbaijan National Agency for Mine Action). Viengprasith Thippasouda (NRA Victim Assistance Officer) and Michael Boddington (Victim Assistance Technical

Advisor) adapted the methodology for the context and requirements of Lao PDR. They researched approaches used in other countries and visited Cambodia to learn from the experience of CMVIS. They then presented their proposal to the Victim Assistance Technical Working Group (TWG).

DDG's Impact Monitoring tool is designed so that it can be adapted by DDG country programme staff to the local context, culture and locally accepted methods of collecting data. This reflects recognition on the part of DDG that the success of impact monitoring and its sustainability within DDG's country programmes rests not only with (expatriate) country programme managers or those in charge of Impact Monitoring, but also national DDG staff. One example of how DDG has taken local context into consideration is the decision to use software for impact monitoring that is already known and used by national staff, such as Excel. This facilitates data collection, entry and analysis, as opposed to using new software that requires additional training.[4]

Another example of this process of local adaptation is the research conducted by ICDR and Vrije Universiteit in Amsterdam on the psychosocial impact of mine action. Although the tool was derived from international instruments, they undertook an extensive process of adaptation through detailed analysis based on key informant interviews and focus group discussions to design a final questionnaire. The qualitative research prior to the actual quantitative survey allowed them to decide whether to exclude or include variables and to explore contributing factors to the main problem.[5]

CHOOSING BETWEEN QUANTITATIVE AND QUALITATIVE METHODS

Socio-economic surveys make use of a range of methods depending on the purpose of the survey and resources available. Methods differ depending, for example, on whether it is a rapid assessment or an extensive survey. Survey designers typically have to consider the trade-off between depth and coverage. Greater depth provides more detail and precision for a 'fine grained' picture of the contamination problem, but the need to cover all contaminated areas (ie get the 'big picture') means some depth may have to be sacrificed for greater coverage.

At this point, survey designers need to consider what sort of data is needed (for example, quantitative for numeric data and breadth, or qualitative for explanatory data and depth, or perhaps a mix of both). Generally, quantitative research methods are used when something needs to be measured, while qualitative methods are used when a question needs to be described and investigated in some depth.

Quantitative methods are useful, for example, when:

- the purpose of the survey is to confirm a particular hypothesis or finding, rather than to explore a new issue or aspect of an issue
- when trying to measure a trend, which is difficult with qualitative methods
- the concepts being measured are clearly defined and unambiguous, and there is only one approach to measurement

Qualitative research seeks to understand a given research problem or topic from the perspective of the local population involved. Originating from the disciplines of anthropology and ethnology, it examines human behaviour and the interaction of people with their social and cultural contexts. It requires the interviewer to engage with people through conversational interviews and to use careful observation of the context to generate the data.

Unlike quantitative methods that provide broad, numerical data, the data generated through the use of qualitative methods is rich in descriptive information and provides insight into the beliefs, attitudes, values and behaviours of the respondents. It helps to explain why and how things are the way they are. In mine action, qualitative research can be valuable in providing an insight into particular groups of people, for example specific high risk groups or groups that tend to be marginalised from mainstream mine action data collection, such as the poorest, people with disabilities or women.

Qualitative methods are also often used for policy and programme evaluations as they can better assess the perceptions of beneficiaries towards mine action interventions and provide insights into how and why certain outcomes were achieved, not simply what was achieved.

Qualitative methods are generally useful in situations where:

- no existing data exists or is available
- the most appropriate unit of measurement and analysis is not certain (individuals? households? organisations?)
- the survey is trying to identify why people behave in a particular way or hold specific beliefs[6]

A good example of qualitative methodology used for mine action is a study conducted by Handicap International Belgium (HIB) in Cambodia, described in Box 6. The study investigated the occurrence of informal demining conducted by villagers living in mine-affected areas, typically without protective clothing or medical backup and using rudimentary tools.

Box 6 | Studying village demining in Cambodia[7]

Between July 2000 and January 2001, HIB carried out a study[8] to investigate the occurrence of village demining in the heavily mine-contaminated region of northwest Cambodia. This study is an example of a socio-economic survey that addressed practical misconceptions and led to concrete reforms and projects.

Since the early 1990s, mine action practitioners have noted and documented, to a limited extent, the issue of villagers entering mine-contaminated areas to clear mines in Cambodia. However, there was no real understanding as to the motivations of these villagers, their perceptions of the risk, or knowledge about their clearance tools and methods. In addition, there was a great deal of controversy surrounding the issue of village demining. Mine action operators and the Cambodian Government had largely condemned village demining as a dangerous practice and believed that the village deminers would be reluctant to talk about their mine clearance activities.

Based on these factors, the survey used qualitative methods. This allowed the researchers to build a rapport with the respondents and obtain more in-depth information about village clearance activities and perceptions of risk.

For the village demining study, the research team needed to both identify the target areas in which to conduct the research and to find the appropriate informants within those areas. The team targeted specific provinces, districts and communes for the study based on the degree of mine contamination, the number of mine casualties resulting from tampering with mines and UXO, and direct information on the location of villagers undertaking mine clearance activities. They also checked the extent of mine clearance by formal mine action organisations, to achieve a balance between target villages that had benefited from mine clearance work and those that had not. They obtained this information through consultation with stakeholders and from national data on contaminated areas and mine incidents.

The team developed a short-list of villages based on the criteria and checked the village location on maps to ascertain the geographic situation of the villages and accessibility. During the study, they remained flexible in terms of the villages visited. Sometimes they discovered new leads that took them to villages not on the short-list. Alternatively, villages were not always accessible and some villages they had selected proved to have no evidence of village demining. In these cases, the team re-adjusted and other villages on the short-list were visited.

The team selected key informants mainly by asking each person interviewed to identify others who belonged to the target population. They asked subsequent respondents to refer other people who could potentially participate in the study. The major advantage of this form of purposive sampling is that it substantially increases the likelihood of locating the desired individuals in the population, particularly if such individuals would otherwise be difficult to locate and contact. Observation of living conditions also helped to identify villagers who were clearing mines, particularly if their housing or fields were clearly in suspect areas.

The majority of the key informants for the study were adult men, particularly men with former military experience, as this is the common profile of village deminers in Cambodia. Local authorities are also male dominated. However, the research also sought to obtain the opinions of women, both the female family members of village deminers and also other female residents living in villages where informal demining took place. Obtaining female perceptions on the risks either faced by their husbands or by people using informally cleared land was essential in gaining a balanced view on the subject.

Box 6 Contd | Studying village demining in Cambodia

The data generated through qualitative research included field notes, audio recordings, transcripts and, sometimes, visual records such as photographs. The findings of the village demining study were also presented at workshops with stakeholders. This further helped to refine the analysis as feedback was gained on the ideas being proposed by the researchers. In the end, the findings allowed the mine action sector to better understand local level realities and consider new ways of addressing the issue.

Quantitative data collection can be resource-intensive; qualitative data requires specific skills and can be detailed but may not provide a broad scope of information. The qualitative data collected, however, can sometimes be more compelling than statistics, especially in terms of explaining why a particular phenomenon exists. Quantitative data is good for describing what has happened, and for comparing individuals, communities, etc in terms of what has happened. Generally, quantitative data is not sufficient for understanding why things have happened as they have and why individuals, communities, etc are different. Qualitative data is good for understanding why things have happened the way they have. Qualitative data can take time, so the survey sample will often be smaller than where quantitative methods are used. A mix of quantitative and qualitative data will often give the best results. Stakeholder consultation can help clarify the preferences and needs of the target audience. If the resources required to design and implement a survey are limited, it may be necessary to determine if it is appropriate to undertake the survey with reduced resources, or whether it can be conducted on a smaller scale.

NPA's Task Impact Assessment is an example of how mixed methods are used to triangulate data. Triangulation is used when the purpose is to compare and contrast the different data sets or expand quantitative results with qualitative data. This is one of the most common reasons for using mixed methods. The purpose of triangulation is to obtain different data to answer the same question(s). It is also used to bring together the differing strengths and non-overlapping weaknesses of each method.

In 2009, MAG's programme in Lao PDR developed a post clearance impact assessment framework,[9] which used qualitative and quantitative data to complement each other. Each method provided different data that was analysed in different ways. The quantitative data was analysed using descriptive statistics to look at demographics, post clearance land use and scores on the livelihood impact measurement scale. Following this, statistical associations and differences were identified. The qualitative data was used to provide a more in-depth understanding of the impact of land clearance on respondents. It was also used to identify possible contextual and personal factors which might affect this impact.

When mixed methods are used for triangulation or to complement each other, both types of data collection and analysis are generally undertaken concurrently using method-specific tools. Data analysis tools might also be combined; for example, counting how many times a certain factor is mentioned in qualitative interviews or developing narrative descriptions of respondents from descriptive statistics. These types of designs are especially useful when a rapid assessment is required as they provide both depth and breadth.

Sometimes mixed methods are sequential. For example, if the aim is to develop a questionnaire of impact measurement scale, qualitative data might be undertaken first. The aim is to identify themes that can be used to inform questionnaire development. This is how the livelihoods scale in the example from Lao PDR was developed. This method is known as an exploratory or investigative design. Another sequential mixed method is called the explanatory design. In this design qualitative methods are used after a quantitative component to further explore an issue that is identified in the quantitative component. In both these designs, the different data collection methods and analysis are undertaken separately using the different tools of each.

Regardless of whether you have used a single or mixed method design, it is important that an auditable trail is kept so that another person could replicate the survey and arrive at similar conclusions.

TESTING THE SURVEY TOOLS

Before applying new survey methods nationally or across an organisation, they should be pilot-tested. Testing helps determine if the survey questions are fully understood by the interviewers and a sample of the respondents. It also helps determine if the data being collected is useful and if there are any questions which should be included or deleted before finalising the survey instrument. More specifically, testing can help identify:

- questions the interviewers or respondents did not understand or which were subject to different interpretations
- redundant or unnecessary questions
- how to better word questions[10]

For example, in Cambodia, to ensure that CMVIS's first Mine/ERW Victim Assistance Information Form was appropriate, CMVIS undertook a field pre-test in August 2008 in two provinces (Takeo and Kampong Speu). Handicap International and UNICEF participated in the field testing by observing interviews with victims. Minor information gaps were identified and the form was modified. The revised form was then circulated to victim

assistance agencies and other relevant organisations for final consultation. It is also useful to test new survey methods through a pilot project. In Bosnia and Herzegovina, the Community Integrated Mine Action Plans (CIMAPs) were initially launched as a pilot project in four mine-impacted communities within one municipality. However, the implementation of the plans could not keep up with their development. As a result, the Bosnia and Herzegovina Mine Action Center (BHMAC) had up to 70 community plans sitting on their desks, without the resources to implement them. BHMAC officials recognised this problem during the pilot phase and as a result the CIMAPs evolved into Municipal Mine Action Activity Plans (MMAAP) in 2009. Even though the major elements of the plans remain the same, the new municipal approach has given municipal authorities greater responsibility for plan implementation. Mine action activities are now planned in clusters; the mine problem is assessed for the entire municipality while activities are planned to address the threat on a municipal level.

THE UNIT OF ANALYSIS

Socio-economic surveys conducted in mine-affected areas can be undertaken at different levels or units of analysis (eg individual, household, community, district and so on). Working out which unit of analysis will be used for a survey depends on many things and is often one of the most strategic questions to consider.

At higher levels of aggregation, there may be indications, trends and patterns that are not witnessed at lower levels of aggregation. The household level is not simply defined by the sum of the views and actions of individuals in the household, it is also affected by the dynamics within the household (eg who controls the resources and who has voice in decisions). Similarly, community level outcomes are not simply the sum of all households in the community, but also the social stratification, pattern of resource endowments and institutions within the community (eg self-help community-based organisations, traditional leaders, religious leaders/institutions, etc).

A potential disadvantage of the sustainable livelihoods framework is its use of the household as the unit of analysis. From this perspective, the household is seen as taking care of resource management, sharing resources and daily activities to meet the primary needs of its members. This does not, however, take into account gender-based or intra-household differences. Further, family members may have migrated but still contribute to the original household's resource base.

The LIS has survey forms for individuals (eg victims), households and communities (as well as hazards). Similarly, the Afghan National Risk and Vulnerability Assessment (NRVA),[11] first undertaken in 2007-08, has forms for households, communities and districts.

An important issue is whether additional data is available and the level of aggregation of that data. For example, the large series of Living Standards Measurement Surveys are normally at household level. Most micro economic data is also at household or firm level. The advantage is that a survey at a higher level can focus on the things that 'emerge' at that level but not lower. For example, whether poor households benefit equitably from demining often depends on the village or district-level institutions (eg shura in Afghanistan) that resolve disputes over land rights, access to irrigation and so on. If that is a concern, then a community survey could be used to assess differences in these institutions across communities. Such a survey might identify some quick methods to assess whether the relevant institution in a community is dominated by the elites, and this could then be used to help determine demining priorities (ie go first to those villages with institutions that protect the rights of the poor).

In Vietnam, CHF applied the SLA technique at the village and household levels. Project teams organised a village meeting with the village head and elders. Through a village meeting, local people identified the poorest households in the village and assessed the level of poverty of these households through a participatory, transparent process. Following the village meeting, CHF teams interviewed a total of 559 households in order to determine their assets and potential household livelihoods. The project teams used a semi-structured questionnaire[12], which the village head and elders helped them to develop. During household interviews, the project teams asked all family members questions relating to the following:

- type of housing they occupy
- land they have access to
- type of crops cultivated, if any
- type of livestock owned, if any, and how they look after their animals
- incomes – either notional from the value of crops consumed within the family, or real cash incomes if the head of the family does occasional paid work
- aspirations
- immediate problems they may be facing

The project teams used the information to assist each family to develop a household development plan, which identifies the specific livelihood aspirations of each household. The household plans were used as a basis for developing Village Development Plans (VDP).

Another example of a village-level survey is the sustainable livelihoods analysis undertaken in mine-affected communities (often termed Landmine and Livelihoods surveys). In 2006, the Natural Resources Institute, YEMAC and GICHD conducted a post-clearance livelihoods analysis survey in former mine-affected communities in Yemen.[13] Following training in the theory and practical use of the survey tools, and agreement on logistics, the three mixed survey teams visited 25 villages in the mountains, mid-hills and coastal plain of Yemen.

STANDARD SURVEY METHODS

The use of standard survey methods based on international experience increases the comparability of data over time, across and within countries. While it is not always possible or suitable to have comparable data, the use of different methods makes the comparison of results difficult, a common problem in mine action. A typical challenge encountered in relation to non-comparable survey data is the use of different definitions of direct and indirect beneficiaries, which leads to significantly different numbers of beneficiaries between different mine/ERW operators or over time. Also common is a shift in scope; for example one survey covering one part of a country, and then another covers the entire country, or the use of different timeframes, eg full year versus partial year.

In Afghanistan, the Mine Clearance Planning Agency (MCPA) carried out a large socio-economic impact survey in 1999. In 2001, the World Bank undertook a cost-benefit study, which used different methods, despite also looking at the socio-economic impact of mine action. While the two surveys reached similar conclusions in important respects (they both concluded that demining had led to economic benefits that far exceeded costs), the results were remarkably different in others. For example, if the conclusions of the World Bank study were accepted, grazing land would receive very low priority for demining. Conversely, if the MCPA conclusions were accepted, grazing land would receive high priority.[14]

It is not always a problem when different surveys reach different conclusions; rather, it often creates a unique opportunity for learning. The fact that the findings are different in important ways means there may be something that has caused the different findings that neither survey had focused on or captured adequately. If so, identifying what is causing the different findings may lead to new understanding that could substantially increase performance of the programme.

Unfortunately, mine action organisations generally have not capitalised on these learning opportunities by undertaking follow-up surveys to clarify understanding on what truly accounts for the differences. In the case of the MCPA and World Bank surveys in Afghanistan, mine action organisations seemed content with the conclusions in both surveys that demining was a good economic investment. They never noticed or, perhaps, thought about how many of the more specific findings were so dramatically different.

ENDNOTES

[1] A Guide to Developing Knowledge, Attitude and Practice Surveys, World Health Organization, 2008.

[2] Survey of 'Local perceptions and responses to risk', Krisna Uk, May 2010.

[3] Sponsored by the Geneva International Centre for Humanitarian Demining, GICHD in partnership with CMAC and MAG.

[4] Impact Monitoring Manual, Danish Demining Group, 2010, p.10.

[5] For more information, see Part 2 for Goldsworthy, Graeme R., Erica M. Pasini and Hope Rosenbaum's description of their mixed method approach to measuring the psychosocial impact of mine action in Sri Lanka.

[6] Audience Dialogue, Quantitative or Qualitative Research, February 2006.

[7] Qualitative Research Methodology: A Case Study of the Handicap International Belgium study on Village Demining, Ruth Bottomley, June 2010.

[8] Funded by the European Commission Humanitarian Aid Office (ECHO).

[9] Evaluation framework for assessing the impact of explosive remnants of war (ERW) clearance on household livelihoods, Joanne Durham, 2010.

[10] A Guide to Developing Knowledge, Attitude and Practice Surveys, World Health Organization, 2008, p.29.

[11] Summary of the National Risk and Vulnerability Assessment (NRVA) – A Profile of Afghanistan, European Union, Central Statistics Organization (CSO) and the Ministry of Rural Rehabilitation and Development of the Islamic Republic of Afghanistan (MRRD) http://ec.europa.eu/europeaid/where/asia/documents/afgh_brochure_summary_en.pdf

[12] While a structured questionnaire uses formalised, limited set questions, a semi-structured questionnaire is more flexible. It allows new questions to be brought up during the interview as a result of what the interviewee says. The interviewer using a semi-structured questionnaire generally has a framework of themes to be explored.

[13] Post-clearance livelihoods analysis in Yemen, Barry Pound, Natural Resources Institute, University of Greenwich, Chatham, UK, 2010.

[14] See Box 9, p. 318 of Mine Action: Lessons & Challenges, GICHD, 2005

An important aspect in the survey design process is to consider who participates and who to include in the survey, particularly regarding the marginalised sectors of the population. This section examines how socio-economic surveys in the mine action sector have grappled with issues of participation, inclusion, 'do no harm' and informed consent.

PROMOTING PARTICIPATION

While surveys essentially seek to extract information, mine action practitioners have used participatory approaches as vehicles for empowerment and inclusion of beneficiary communities. Participatory Rural Appraisal (PRA) and Participatory Learning and Action (PLA) approaches have been used for a relatively long time in the development sector to enable effective interaction and planning with communities. However, it was only from the late 1990s that they began to be used within mine action. PRA/PLA is usually conducted at the community level, with the aim of gaining consensus from the community on particular issues that affect them. These methods can also be used with specific groups of people with similar characteristics, for example women or individuals identified as high risk takers, to analyse issues specific to them. Today, participatory approaches in mine action are more common, particularly in surveys, risk education and victim assistance.

While aiming to achieve community consensus, PRA/PLA activities are shaped and influenced by social processes, so there are bound to be dominant views prevailing that may not reflect the views of all the participants. Although the use of participatory approaches can encourage more women to attend sessions (they often see these activities as fun, less threatening and more easily accessible), men's views are still often dominant. Female facilitators are essential to try to encourage female participation, and activities can also be conducted with single sex groups to allow for a comparison of the concerns, roles, mobility levels and different viewpoints of men and women. Employing the use of visual tools helps to overcome barriers to participation such as low literacy levels. Mike Lord, former CHF Country Director in Vietnam, notes that confidential household interviews in Vietnam allowed women to express themselves much more clearly than in village meetings.

These approaches are based on the philosophy of bottom-up participation and empowerment, recognising that if local people participate in the development processes of planning, implementation and monitoring, they can progressively transform their own lives and surrounding environment. PRA and PLA are intended to stimulate a mutual learning process in which people from outside a community facilitate a process with people from inside the community to gather and analyse local knowledge and formulate plans

for action. The approaches help primary stakeholders, often poor or rural communities, to take control of the process, to assess local level issues, to find ways to identify and prioritise problems and challenges and to draw up practical action plans to address the challenges.[1]

Box 7 | Participatory Rural Appraisal (PRA)/Participatory Learning and Action (PLA) methods in Cambodia[2]

In 2000, the Cambodian Mine Action Centre (CMAC) developed the Community-Based Mine Risk Reduction (CBMRR) project, which involves the use of participatory methods to help communities and villagers define, analyse and address their contamination problems. This enables CMAC to help villagers to develop community action plans and assist with linking them to mine action, development and victim assistance services that can support the implementation of the plan and contribute to overall risk mitigation.

The MAG community liaison teams and the CMAC CBMRR staff are trained facilitators. Their job is to encourage the community to take the lead in defining the information to be provided and how that information will be used. The volunteer networks are trained to conduct the participatory activities within their villages, and the CMAC staff act purely as support and assistance to that process.

PRA/PLA use a variety of tools such as community maps, Venn diagrams, historical time lines, matrices and seasonal calendars to facilitate the sharing of information. The use of the tools and participation in activities help to act as a catalyst to support communities to collect, present and analyse their local knowledge. Unlike written material, which can often exclude people in areas where few people can read, visual materials ensure that everybody is involved and understands what is happening.

MAG was the first mine action operator to introduce participatory community approaches more broadly into its activities. It recognised that improved communication was needed between mine action operators and communities, and that affected people should be more involved in mine action decision-making processes.

MAG also first pioneered the concept of Community Liaison (CL) in Angola in 1996. CL was based on the belief that it would help enhance information exchange with communities and improve the quality of information collected to inform mine clearance operations. This would help to ensure that community priorities were better met and that mine action resources were deployed more effectively and efficiently. CL is now the approach used generally by MAG to collect and analyse information at the village level to identify and implement the most suitable solutions to the blockages and dangers caused by mines/ERW.

CL aims to increase community participation at all stages of the mine action intervention: before, during and after clearance. CL teams are small, mobile and work closely with affected communities, using a variety of participatory data collection techniques to ensure all voices, particularly the most vulnerable, are heard during the mine action process. Many of the CL teams use PRA/PLA methodologies to ascertain community priorities for clearance, to identify high risk households and individuals, to discuss post-clearance development plans and to assess the outcomes and impact of MAG's work.

In 2000, the Cambodian Mine Action Centre (CMAC) developed the Community-Based Mine Risk Reduction (CBMRR) project. Studies on intentional risk taking in Cambodian villages had highlighted that those communities often felt disempowered by agencies that acted to define the problem for them rather than working collectively to better understand local level complexities and to find solutions acceptable to both parties. The CBMRR project aimed to put village populations living in contaminated areas at the centre of the mine action process, through a network of local-level committees at village, commune and district level, and through the use of PRA/PLA methodologies. Using PRA/PLA activities to help the networks and communities to define, analyse and address their contamination problems, CMAC helps villagers to develop community action plans and assists with linking them to mine action, development and victim assistance services that can support the implementation of the plan and contribute to overall risk mitigation.

Participatory methods may not be the most appropriate method in all communities and cultures. The decision about whether or not to hold a participatory exercise should always be negotiated with affected communities themselves. Communities may not be responsive or willing to participate for various reasons. Post-war communities often lack cohesion and people are frequently more transitory. Participatory activities may not be deemed appropriate, and some people, particularly those who have been living in refugee camps for long periods of time, may be used to being dependent on outside interventions and may be reluctant to take a leading role.

It may also be difficult to motivate people to become actively involved in programmes aimed at improving community development rather than individual interests. Communities may not want to participate freely in PRA/PLA activities if they have already had a bad experience or the results of the activities remain negligible to them. In areas where there is a lot of development assistance, communities could be called on frequently to participate in PRA/PLA activities, which they could come to see as a waste of their time if there are no tangible outcomes.

Social class, caste or divisions in communities may also act as a barrier to meaningful community participation and consensus, and in some societies men may be reluctant for women to be involved in such activities. Ensuring the participation of the poorest people is often difficult, not because they feel the work would not be of use to them, but because they lack the time and resources.

Interviewers reading questionnaires tend to gain confidence and speed over time. However, a danger peculiar to participatory methods arises when facilitators become very familiar with the tools, and there is a tendency for them to skip over the participatory principles and go straight to the task of collecting information. This may be the case if facilitators have become jaded in conducting PRA or they are under time constraints. The approach then becomes more of a rapid appraisal, with no real element of participation, no building of confidence or trust, and with no interest in strengthening the villagers' ability and interest in running their own affairs. The activities become routine and devoid of real meaning.

ENSURING AN INCLUSIVE SURVEY

In all societies, communities and families there are different groups and interests. When conducting a socio-economic survey, it is important to understand the differences and relationships which exist between these different groups, otherwise there will always be a tendency to exclude the interests and concerns of those who are less visible, less powerful and less assertive.

Including a range of opinions and knowledge from different people in the survey process is important to ensure survey credibility, relevance and inclusiveness. Including certain sections of communities, particularly the poorest and most vulnerable, is often challenging and requires careful planning. Frequently members of a community are prevented from participating in an activity because of physical, institutional or cultural barriers and the prejudices of individuals. This exclusion may happen knowingly, perhaps because of the greater influence of powerful groups within communities or due to cultural restrictions. Hashimi and Helseth, for example, note that, in Afghanistan, cultural restrictions are often a barrier and impair the ability of all-male survey teams to gain access to women and girls.[3]

Exclusion also often occurs unknowingly. Women, the disabled or chronically ill and the very poor are often unintentionally excluded in surveys simply because they are too busy to attend, feel they have little to contribute to discussions about mine action or lack the confidence to participate in meetings. More powerful and assertive members of a community may also not be aware of the needs, capabilities and skills of the less powerful and assertive.

Lord, for example, discusses how, during SLA exercises in Vietnam, many women asked for adult literacy classes even when village heads had previously insisted that all the adults in the village were literate. This indicates that men may not know about the needs, work or interests of women.

Language may, for certain ethnic groups, act as a barrier to full participation, and the choice of location may prevent people with disabilities from joining. Boddington mentions that for the LVIS survey, the NRA employed interpreters who could translate questions into different ethnic languages if required. Similarly, language was a key implementation challenge for MAG's post ERW clearance impact assessment. Given Lao PDR's ethno-linguistic diversity, in some areas, local translators were required for both the qualitative and quantitative components. Translators also need training and can be a source of bias if not properly trained. Agreeing on translation of questions and selecting terms that were understood easily by the respondents was also time consuming with the team checking and rechecking with a local reference group and local key informants a number of times. In quantitative surveys poor translation or poorly understood questions will result in inaccurate results.[4]

As part of efforts to promote inclusive survey design, consideration also needs to be given to the training, make-up, values and attitudes of the survey team to ensure they also actively promote inclusion. Having a culturally and gender diverse survey team can help to ensure that the opinions of females and males of different ages are taken into account.

Both MAG CL and CBMRR teams are trained to ensure that a cross-section of people from all socio-economic levels within affected villages is involved in activities. Often this is particularly important to ensure that the poorer families or newcomers are included in the sessions as they are the ones most affected by mine contamination but are least likely to attend more formal meetings with the community. Women, and particularly female headed households, are another important group, not only because they make up half the population, but because they are often affected by mines and ERW in different ways to men because of their gendered roles and responsibilities, and specific vulnerabilities.

Methods and tools for collecting data can have a big impact on the inclusion, or not, of more vulnerable members of society. It is important therefore to consider possible barriers that may prevent certain groups from participating and to deliberately plan how these barriers will be addressed. Questions should be asked regarding:

- which tools and approaches could make the groups feel more comfortable?
- where should the interviews take place?
- what time of day and which season will be more convenient for people?

Participatory tools such as the PRA/PLA tools described by Bottomley are designed to facilitate greater levels of participation and inclusion in survey processes. Using visual tools helps to overcome barriers such as low literacy levels. Lord also noted that confidential household interviews allowed women to express themselves much more clearly than in village meetings.

MAINSTREAMING GENDER AND DIVERSITY CONSIDERATIONS

Gender considerations also need to be taken into account during key stages of the survey process. It is generally accepted that women, girls, boys and men are affected differently by mine/ERW contamination due to their distinct gender roles. For example, because of the tasks typically assigned to them (in some contexts these could be grazing, herding, etc), boys move around in different areas to those where women and girls typically carry out their tasks (eg firewood and water collection, cooking, etc). Due to their different exposures, the different groups also hold distinct information related to contamination. This might in turn result in different survey/clearance priorities. Therefore, when implementing socio-economic surveys it is essential to reach out to, and actively consult with, all groups in affected communities.

It must be noted that in some contexts, it is not culturally appropriate for women to talk to men outside of their families. For example in Afghanistan, data collection focuses on the male members of affected communities. Given that Landmine Impact Assessment Teams (LIATs) consist of all-male teams, it is difficult for them to gain access to women and interview them. Some communities allow elderly women to be interviewed, as well as teachers and students, but others do not. This means that the impact assessment information collected by LIATs does not reflect the views and concerns of all members of the community, particularly women and girls. Using gender-balanced or all-female survey teams can help facilitate access to women and girls, and enable the collection of information from them.[5] Both MAG and DDG use mixed sex survey teams and train their enumerators to interview women alternately with men and/or to hold focus group discussions separately with women and men.

Mainstreaming gender throughout survey processes is vital to the accuracy of data collection and for obtaining a comprehensive picture of both contamination and priorities for clearance. Sex and age disaggregated data (SADD) is broken down to distinguish between women, girls, boys and men.

SADD is relevant to mine action since it enables practitioners to:

- identify and understand differences, distinct capabilities, responsibilities needs and priorities of women, girls, boys and men
- mainstream gender throughout project phases (planning, design, implementation and monitoring and evaluation)
- provide unbiased evidence for the formulation of policies and measures; if statistics do not reflect the relevant gender issues, policies and measures might not be appropriately tailored and could perpetuate or worsen inequalities
- monitor and evaluate policies and measures with respect to gender
- raise awareness, persuade policy makers and promote changes

The management (collection, storage and analysis) of SADD enables the detection and analysis of gender-related differences, which can influence the planning, prioritisation, implementation and monitoring/evaluation of mine action operations.[6] In this way, the collection and analysis of SADD can also help answer the following, more broad set of questions:

- who is affected?
- who participates?
- who benefits?
- who is excluded?

SURVEY ETHICS

Conducting a socio-economic survey requires a certain level of [7] "intervention" in society. Despite efforts on the part of mine action organisations to remain neutral and impartial, the reality is that mine action activities, including survey, affect the context in some way. Surveys can unintentionally cause harm to respondents at many different levels, and this is particularly true for vulnerable individuals from affected communities, such as those suffering from psychological disorders brought about by trauma, or those living in conflict zones. For example, interviewing mine/ERW victims[8] can cause psychological stress. There may also be the possibility of exposing respondents to social ostracism or political repercussions, as could have been the case with the village deminers described by Bottomley.

The potential for harm should be considered in the design of all surveys, and measures should be put in to place to ensure that people participating in the survey do so in an informed and consensual manner. The well-being of survey participants should always be the top priority. Survey designers and implementers need to constantly assess these potential risks against the potential benefits of conducting a survey.

For example, the researchers of the ICDR and Vrije Universiteit took into account the fact that people in conflict zones with mental health problems or those suffering from other psychological disorders brought on by continued exposure to traumatic events are problematic subjects to question or to obtain accurate information from. Many studies have shown they demonstrate Acquiescence Response Set (ARS) which essentially occurs when respondents perceive themselves to be less well educated or have lower incomes than the assessors or questioners, resulting in the respondents giving answers they believe will earn them praise or reward. They will acquiesce about their conditions and the interventions meant to help them in order to portray themselves as 'better' or 'recovering'. In effect, this means that this inflates agencies' perceptions of the positive outcomes of their interventions in change behaviour.[9]

ICDR and Vrije Universiteit researchers used the following three means to minimise the occurrence of ARS:

1. avoiding high profile, high visibility monitoring and evaluation visits with, for example, white vehicles emblazoned with logos and personnel in clothing bearing mine action organisation logos; do not undertake any other activity linked to mine action when present (eg handing out publicity material)

2. embedding reference to landmines or ERW in the context of the questionnaires, which allows us to isolate landmines and ERW from other stressors
3. initially apply a 15 point ARS assessment scale to potential respondents to screen for a prevalence of the condition[10]

Guaranteeing anonymity and confidentiality also helps protect the well-being of informants, particularly if the survey subject matter is sensitive. By guaranteeing anonymity and confidentiality, the surveyor agrees not to use the name of the survey respondent and instead use pseudonyms or codes to identify respondents. This is particularly an issue in qualitative research where the personal experiences and stories of people are collected and documented.

Often people will only feel confident enough to talk to survey staff and researchers if they know that their names will be concealed. Boddington explains that in Lao PDR, the national authority responsible for the mine/ERW victim and survivor database requires stakeholders seeking information about victims to enter into a confidentiality agreement so that the rights of the victims are protected.

Surveyors should be careful not to pass on seemingly inconsequential information about one respondent to another during the survey process as this can also lead to a breakdown in trust between surveyor and respondents. It is also important to ensure that photographs taken during the research and used in subsequent reports and presentations do not reveal the identity of participants who have been guaranteed anonymity.

Having a code of conduct in which staff are trained before the survey begins can help ensure the survey is administered in an ethical manner and avoids harm. Some standards and protocols on working with vulnerable human subjects already exist, for example Goldsworthy refers to the 1977 Helsinki Principles.[11] There are other research protocols and ethics developed by social scientists and anthropologists that can also be referred to when developing ethical codes for survey. Agreed standards for survey ethics help ensure the needs and concerns of the people being studied are put at the forefront.

Paying incentives during survey, for example, is often seen to be an ethically dubious practice, as it may encourage people to participate in a survey when they would otherwise decline. It may also bias replies to be pleasing, raise expectations and set a precedent for any future research or survey. With qualitative research, the longer time required for interviews or participatory activities often seems to merit the need to somehow repay the participants for their time, particularly if there are no immediate benefits that will accrue to those participants. The provision of tokens of appreciation, other than money, may be suitable; for example, sharing photographs, providing snacks or soft drinks, or giving people lifts by car. Certainly incentives should never be offered before participation in a survey as this opens up the process to bias and participation for the wrong reasons. Sharing the results of the research with participants also helps to ensure that people feel their participation was worthwhile and the views valued.

There is also often a risk that surveys, or any interaction with mine-affected communities, will give them false hope, particularly in situations where they are marginalised and receive limited, if any, outside support. It is therefore important that survey teams clearly and consistently communicate with community representatives and members during all stages of the survey.[12] Survey ethics also concern the conduct and behaviour of survey teams when they are carrying out field research. Surveyors should be trained to:

- respect the opinions of their informants
- always act in a culturally appropriate way
- ensure that they do not take advantage of village hospitality when staying in communities for an extended period of time
- contribute adequately to their upkeep

- recognise that gathering information from local people takes them away from other activities and so interviews and meetings should be arranged at times that suit the participants, not the surveyors.
- not raise false expectations about what assistance local people can expect to receive if they participate in the survey

OBTAINING CONSENT

A crucial step in the survey process is obtaining informed consent. Informed consent and voluntary participation mean that potential survey respondents understand what it means to participate in a particular survey or study. Informed consent allows participants to decide, of their own accord, whether they want to participate in the study based on a clear understanding of why the survey is being conducted, how the information will be used and whether there are any possible implications. This can help establish trust between the surveyor and the participant.

The process of obtaining informed consent should be sensitive to local norms, customs and sensitivities. In contexts where surveyors are from organisations providing some form of assistance, it is important to ensure that consent or refusal to participate in the survey is not interpreted as being linked to the assistance.[13]

Informed consent often begins with seeking formal permission from community leaders or other gatekeepers to conduct the survey or research in their community. The leaders may then be able to facilitate a community meeting where interested people can learn about the research and ask questions.

The following should be communicated to potential respondents using appropriate language and at an educational level that they can understand:

- the purpose of the survey
- who is carrying out the survey (and the mandate of the organisations involved)
- what is expected of the research participant, including the amount of time likely to be required for participation
- expected risks and benefits
- the fact that participation is voluntary and one can withdraw at anytime with no negative repercussions
- how confidentiality will be protected

ENDNOTES

During the survey in Sri Lanka, the ICDR/Vrije Universiteit assessor teams verbally invited potential participants identified during sampling to participate in their own language and then read a complete description of the process. They then asked for the person's mark or signature. In Lao PDR, respondents interviewed for MAG's assessment of the impact of ERW clearance on household livelihoods gave their consent using their thumb print as most were illiterate.

Oral consent can also be used, particularly when the survey has minimal risk, or when a signed consent form would have implications for a loss of confidentiality. In some communities, people may feel wary of official documentation and be unwilling to sign. The survey team should document the time and date that oral consent is provided to ensure that there is a record of the process.

ENDNOTES

1 PRA and PLA Approaches: A case study with examples of participatory approaches employed by MAG and CMAC in Cambodia, Ruth Bottomley, Mines Advisory Group, June 2010.

2 PRA and PLA Approaches: A Case Study with examples of participatory approaches employed by MAG and CMAC in Cambodia, Ruth Bottomley, June 2010.

3 Knowledge, Attitude, Practice and Belief (KAPB) Survey – Afghanistan, Samim Hashimi and Susan Helseth, Mine Action Coordination Center of Afghanistan, 2010.

4 Evaluation framework for assessing the impact of explosive remnants of war (ERW) clearance on household livelihoods, Joanne Durham, 2010.

5 The importance of recruiting and deploying gender-balanced survey teams has been highlighted by the UN's Gender Guidelines for Mine Action Programmes, and the Swiss campaign to Ban Landmines' Gender and Mine Action Programme. Gender and Landmines. From Concept to Practice, Swiss Campaign to Ban Landmines, 2008.

6 The UN Gender Guidelines for Mine Action Programmes, explicitly point out the significance of collecting SADD and the Cartagena and Vientiane Action Plans of the Anti-Personnel Mine Ban Convention and the Convention on Cluster Munitions respectively, present specific action points related to the need of collecting data disaggregated by age and sex. United Nations, Gender Guidelines for Mine Action Programmes, March 2010, p.29. The Cartagena Action Plan 2010-2014 includes Action #25: "collect all necessary data, disaggregated by sex and age. The Vientiane Action Plan stipulates in Action #22 "collect all necessary data, disaggregated by sex and age.

ENDNOTES

[7] Mikkelsen, Britha, Methods for Development Work and Research: A Guide for Practitioners. London: Sage Publications Ltd, 1995, p.31.

[8] In this context, we use the broadened definition of a mine/ERW victim based on that contained in Article 2 of the Convention on Cluster Munitions, which includes affected families and communities and thus indirect victims as well: "...victims means all persons who have been killed or suffered physical or psychological injury, economic loss, social marginalisation or substantial impairment of the realisation of their rights caused by the use of cluster munitions. They include those person directly impacted by cluster munitions as well as their affected families and communities." (Article 2)

[9] See for example "Acquiescence in needs assessment studies of the elderly". R J Calsyn, L A Roades, D S Calsyn. The Gerontologist (1992) Volume: 32, Issue: 2, pp: 246-252. PubMed ID: 157732

[10] Measuring the Psychosocial Impact of Mine Action: A mixed method approach, Graeme R. Goldsworthy, Erica M. Pasini and Hope Rosebaum, International Centre for Disaster Resilience (ICDR), Harvard University Medical School, Boston MA and Vrij Universetiet Medisch Centrum (VUMC), Amsterdam, the Netherlands, July 2010. This methodology remains the intellectual property of the authors and principals. They can be contacted via the GICHD Strategic Management Section.

[11] For more information, see the "WMA Declaration of Helsinki - Ethical Principles for Medical Research Involving Human Subjects," adopted in Seoul, Korea in 2008.

[12] Goodhand, Jonathan, "Research in conflict zones: Ethics and accountability", Forced Migration, Review 8, August 2000.

[13] Ford, Nathan, Edward J. Mills, Rony Zachariah and Ross Upshur, "Ethics of conducting research in conflict settings", Conflict and Health, 2009, p. 3-7.

Socio-economic surveys are best viewed as projects, often with substantial budgets, rather than as simple one-off activities. From initial concept, to mobilisation of resources, to final reporting, surveys need to follow the project cycle and require extensive operational planning. This section presents experiences with survey project management and addresses the issue of capacity building and training. It also touches upon the challenges of access and security which are common in post-conflict, contaminated survey areas.

MANAGING AND COSTING SURVEYS

Among socio-economic surveys, the LIS is the most ambitious and costly of all. LIS are carried out and supervised by the Survey Action Center using local partnership with a national implementing partner. Implementation of the LIS protocols is then monitored by a partner appointed by UNMAS. An LIS typically takes over a year and a half to design, conduct and report on, and costs on average two million US dollars. An LIS budget can be as low as $120,000 USD over three months, as seen in Mauritania in 2006, or as high as $6.8 million USD over three years, as seen in Angola.

Implementation involves on average 75 nationals under the supervision of two to four international experts. According to Eaton, "[LIS] work requires fanatical attention to planning, training (and retraining), and well organised logistics – all else is secondary."

Another example of a large scale survey is the Lao National UXO Victim and Accident survey. Its implementation involved the recruitment of 20 Provincial Victim Assistance Technicians from provincial government staff, 143 District Enumerators from the District Department of Health staff, and four Quality Assessment Consultants. In addition, ten Data Entry Clerks and four Data Verification Clerks were subcontracted. Other staff inputs included an Information Technology (IT) Officer, the IT TA and other staff of the IT Unit, plus management input from senior staff of the NRA, financial control by the NRA Finance Unit and assistance from the NRA Administration and Logistics Units (including use of drivers for field visits). The total cost of the Lao National UXO Victim and Accident Phase 1 Survey was $264,000 USD, excluding the staff cost of the NRA Victim Assistance Officer, Victim Assistance Technical Advisor and Victim Assistance Technician, who designed and supervised the survey.

Some surveys are considerably smaller. For the ICDR/Vrije Universiteit psychosocial survey in Sri Lanka, eight moderators were used, and organised in teams of two. The brevity of the instruments meant that one assessor pair could interview one respondent in about 20-25 minutes. In one village, 64 people were interviewed in one working day using two teams (four assessors), arriving in the field at 09:30 and departing at 17:30.

In order to apply the SLA in Vietnam, CHF appointed a project manager, who then recruited a project team and arranged with the local government for staff from the District Agricultural Extension Centres to be seconded to the project. The main people consulted were the families themselves. The project team worked in conjunction with district and commune staff. The team worked with ten individuals in each village of approximately 100 families, and tried to complete everything in two days. The project team usually comprised three to four people who received salaries from CHF, while the local government staff members were paid allowances.

Faced with what is in fact a large project, organisations implementing socio-economic surveys have had to put in place management systems and dedicate resources the same way they would for project activities. For example, the Lao PDR UXO National Regulatory Authority partly relied on a suitable existing network of civil society partners for collecting data for the Lao National Victim and Accident Survey, rather than directly employing all enumerators as members of the survey team. The provincial and district enumerators were however recruited and paid by the NRA for the duration of the survey. Mobilising financial resources at critical times is also a challenge. Although money may be available, procedures sometimes prevent funds from being released, and it is often difficult to get funds out to provinces and districts in a timely manner.

Using participatory approaches is relatively cost effective as there is no outlay on expensive equipment. Local natural materials or simple stationery can be used, the main input being the need for high quality staff with good data collection, analysis and facilitation skills and empathy when working with communities. However, the approach takes time to implement properly, especially if it has to be organised to fit around the schedules of communities. Villagers are often too busy during planting and harvest seasons to participate and so activities have to be scheduled for periods when villagers have more free time. Achieving genuine community participation and ownership does take time and does not always fit well with traditional project or funding cycles.

MOBILISING INTERNAL RESOURCES

Many surveys, when they are less ambitious in scope, rely on staff within the implementing organisation. These staff are set up as a specific team or tasked with a broader CL and MRE mandate. The average cost of these internally organised surveys is more difficult to estimate. Although they may not have a specific budget line, internal surveys are not free as they require staff time, resources and administration. The financing comes from a mix of activity and support budgets rather than one explicit budget.

The first TIA completed in Sri Lanka by NPA involved four members of staff over a period of four months. Following this, NPA created a permanent TIA unit within the Sri Lanka country programme. In order to spread lessons learnt and expertise on the conduct of TIA, NPA organised a TIA advisor from Sri Lanka to adapt the approach for Ethiopia and to train staff from the Ethiopian Mine Action Office (EMAO).

For MAG Sudan, all three components of its impact tool (minefield/SHA, spot task and MRE survey) are implemented by a CL team. In the case of the spot task survey, impact assessment may also be carried out by a member of the clearance team. In the African context, a CL team usually consists of three experienced CL Officers that have been trained in CL, MRE and impact assessment under the supervision of a CL Manager. Implementing the MRE and spot task surveys can easily be incorporated into the work of the CL teams. However, to implement the SHA survey in Sudan, a whole CL team (and the resources required to deploy the team) has to be dedicated, and therefore funded, to implement the survey.[1]

Even when a socio-economic survey does not use an outside implementing partner, it may require substantial external technical assistance. In Yemen, a post-clearance livelihood study was undertaken by three teams of five people, each comprising: a social scientist, a female surveyor, two male surveyors (from YEMAC) and a driver. The three teams were coordinated by an experienced international livelihoods consultant;[2] all other members were Yemeni nationals. Three vehicles were used in the field study, and accommodation and food were required in the field for the three week period. No specialised equipment or facilities were required. Specialist knowledge of participatory methods was required of the three social scientists, and the three female surveyors had some previous experience with community studies. However, the male surveyors had no prior experience with socio-economic surveys. In addition to the consultant and the three teams, support was given by YEMAC HQ staff, YEMAC field demining teams and the GICHD. Donors and government officials were involved in the feedback meetings. The total cost was approximately $100,000 USD, half of which was dedicated to in-country costs.

THE SURVEY PROJECT LIFE CYCLE

The main phases involved in designing, planning and implementing a survey will vary depending on a range of factors. The following are examples from past surveys.

Box 8 | The project cycle of the Lao National UXO Victim and Accident Survey[3]

Implementing the Lao PDR Questionnaire Survey Concerning Victims of UXO Accidents involved the following practical project stages.

1. **Defining data to be collected:** This took place over a period of 12 months, which included a pilot project. The forms were then modified accordingly.
2. **Selecting a survey network:** As it was to cover the entire country, the survey needed an existing network of representatives at district or lower levels. The Ministry of Health mandated the NRA to use the National Rehabilitation Centre (NRC). The interview and selection process took 11 months.
3. **Pilot project:** The survey teams carried out a pilot project in Sepone and Vilayboury districts in Savannakhet province, which took one week to complete.
4. **Making adjustments:** Because of the pilot, the methodology was significantly changed. The victim and accident forms were amalgamated into one single document, and another form was prepared for collecting data at the village level. Adjustments took four months, mainly because of the consultation required.
5. **Training Provincial Victim Assistance Technicians (PVAT):** An initial training workshop in the survey methodology took place with the 20 PVAT over a period of one week. One month after the survey started, the PVATs returned to the NRA for feedback and retraining, which lasted one week.
6. **Training District Enumerators (DE):** The DEs were trained through seven regional training sessions. Each training session took two days and the entire process took just over one month.
7. **Implementing the Survey:** As soon as the training was completed, DE were instructed to start the survey by visiting all individual villages in their districts, interviewing the village chief and elders, obtaining names of casualties of UXO accidents now living in the village and proceeding to interview those casualties. The survey started in February 2008 and was completed by October 2008; a period of nine months.
8. **Supporting PVAT and DE:** Throughout the survey period, the Victim Assistance (VA) Officer and the VA Technician made frequent visits to the field to work with the PVAT and the DE and reinforce the methodology.
9. **Quality Assurance:** To assess the accuracy achieved by the DEs and to validate the results of the Survey, the NRA VA Unit identified two villages in each district for resurvey by the four QAC. The validation exercise was done over a four-month period.
10. **Selecting a database system:** The selection phase took ten months[4] because of the indeterminate nature of IMSMA at the time (upgrading from Version 3 to Version 4).
11. **Data Entry:** Entering the 50,000 casualty forms and 9,000 village forms into the LVIS was contracted out to data-entry firms. This proved a large job, with almost 60,000 forms requiring entry and verification, and took 14 months to complete.
12. **Reporting:** The National Survey of UXO Victims and Accidents Phase 1 Report was issued in February 2010, and acts as a guide to stakeholders on the range of reports available and the manner of specifying such reports.
13. **Follow-up Continuous Data Collection (Phase 2):** The NRA has now implemented a completely new survey system that requires all DFP to contact every Village Chief in the district and ask whether there has been any UXO accident in the period since January 1st 2008.[5]

The timeline for the YEMAC post-clearance livelihoods analysis survey was as follows:

1. planning and preparation: one week (consultant)
2. reconnaissance of three villages: one week (consultant and two Yemeni nationals)
3. training in use of methods: one week (two consultants)
4. field study of 22 villages: three weeks (three teams of five)
5. analysis and reporting: three weeks (consultant)
6. feedback meetings: one week

Similarly, DDG's Impact Monitoring surveys take approximately four weeks, and consist of the following phases:

1. training of staff (one week)
2. data collection (one to two weeks)
3. data entry (one week)
4. data analysis (one week)

Minimum sample size requirements and the use, or not, of focus group meetings will determine the number of respondents to interview and how quickly this number can be secured during the data collection period. DDG's previous field experience indicates that a trained enumerator can, on average, complete eight to 12 questionnaires during one day's work. This figure will vary due to other factors, which will influence the speed of data collection (such as population density, climatic conditions, travel distances between locations, willingness of respondents to participate and efficiency of the enumerators). The guideline from the DDG Impact Monitoring manual is that if the number of questionnaires required during data collection is less than 500, then the staff required would be anything from eight to 12 people (eg ten enumerators filling in ten questionnaires each per day, which equals 100 questionnaires total per day). However, if the number of questionnaires required during data collection is more than 500, but less than 1,000, then the staff required would be approximately 20 people.

CAPACITY BUILDING AND TRAINING

Preparedness and capacity of fieldworkers greatly affect survey data quality and consistency. Key skills required, particularly for data collection, include:

- good communication skills in the local language(s) and a thorough understanding of the local culture, including the most appropriate way in which to access respondents
- strong interviewing, listening and note-taking skills. For example, qualitative researchers involved in the Handicap International Village Demining Study in Cambodia needed to be able to not only take careful note of interviews, but also simultaneously respond to information given by respondents, and explore unexpected topics and ideas as they arose out of the interviews
- knowledge of participatory methods

Adequate training of survey team members before data collection begins is critical. Data collectors should also be trained in the specific data collection tools used for the evaluation to avoid interviewer bias, where error is introduced due to the way questions are asked and their responses recorded.[6] Survey team members should understand the basic principles and methodologies involved in surveys, and understand why the survey is being undertaken. For example, survey teams involved in the Lao National UXO Victim and Accident Survey were trained based on the survey manual developed specifically for the survey.

In 2009, the Mine Action Coordination Centre of Afghanistan (MACCA) commissioned an evaluation of its Post Demining Impact Assessment process.[7] The evaluation highlighted several capacity-related issues, which included the need to:

- improve the capacity of Landmine Impact Assessment Teams (LIATs) to engage with affected communities in a more participatory manner, and enhance their focus on social aspects of impact assessment as opposed to just economic analysis
- ensure greater gender sensitivity in data collection by making more effort to obtain the views of women and girls in affected communities
- strengthen the framework for analysing Post Demining Impact Assessment (PDIA) data and feeding it into prioritisation and programme planning
- improve data collection techniques and overall capacity of LIATs
- strengthen understanding among LIATs and MACCA staff about the purpose of impact assessment and how to use it to strengthen organisational learning and priority-setting
- improve PDIA information collection in order to better assess whether land is being used as intended, and if not, why

As part of efforts to strengthen staff capacity to undertake impact monitoring, DDG has prioritised the training of DDG HQ and country programme staff in impact monitoring as described in Box 9.

Box 9 | Capacity strengthening for Impact Monitoring: DDG's approach[8]

When DDG released its Impact Monitoring (IM) Manual in 2009, their primary focus was the training of national staff and partners, and anchoring institutional knowledge at DDG's headquarters in Copenhagen. The implementation of DDG's approach to Impact Monitoring required capacity to collect, analyse and use data.

Data collection capacity

Data collection can potentially be done by any staff member regardless of their area of expertise. During the pilot test of the IM manual, deminers, as well as mine risk education staff and dedicated survey teams collected data. Anyone can learn this – but what is important is to keep the acquired skills within the trained team. The field test of the IM Manual indicated that the most obvious teams to use for data collection are CL or MRE teams since they normally have stronger contact with communities due to the nature of their work.

However, DDG's chosen approach of using local staff to collect and enter data has some weaknesses. Though comprehensive training has been carried out in most of the DDG country programmes, knowledge is often lost or temporarily forgotten until a dedicated DDG trainer can carry out refresher training.

Strengthening data analysis and use

Analysing and using data also requires specific skills and capacity, primarily at management level, be it internationals or nationals. DDG's IM tool uses software already recognised by national staff, such as Excel, so that they can conduct as much of the data collection, entry and analysis as possible, rather than introducing new software that they will need special training to be able to use.

At the moment, this level is the least implemented in the DDG impact monitoring process. DDG's bottom-up approach for developing the Impact Monitoring tool has proven its value, but DDG acknowledges that it has not sufficiently engaged the management teams in DDG programmes in how to actually use this IM tool and monitor it in the field. The result is a situation where there are doubts about 'ownership' and who is really making sure the process is implemented and further consolidated.

Feedback and learning the other way around

While the lack of adequate skills and educated staff is sometimes a constraint, DDG acknowledges that it has to work within the local context and use available human resources. Moreover, staff turnover (both national and international) affects the consolidation of institutional knowledge of the Impact Monitoring process.

At the same time, learning and capacity building have also happened the other way around, where country programmes' experience has supported the evolution of the methodology. DDG's Impact Monitoring methodology works, but there are limitations in the generic format as laid out in the manual. DDG has struck a balance between using a rigorous methodology and being realistic about what it can effectively implement at field level. An attempt was made to make the manual relatively simple and user-friendly but it does not perfectly suit all contexts and works better in some contexts than others.

ICDR/Vrije Universiteit designed its system for simplicity of operation and ease of application in the field given the time, cost and security constraints that many mine action organisations face. They found that personnel from MRE teams and psychosocial workers adapt extremely well, especially those undertaking post-clearance assessments. The personnel received one week of 'conversion' training for the specific instruments being applied to their study. Training included role-play, pilot testing, participant observation and instructions on how to react during difficult interview situations. In Sri Lanka, they received similar training from UNDP, so the researchers anticipated that these personnel would adapt quickly. It is important that country nationals be used where possible and it is advantageous if they are familiar with the area, the people and, of course, the cultural nuances. The mine action experience they already possessed had the added benefit of making the research team multi-skilled.[9]

Field testing of survey tools is a useful and important process as it helps ensure that the survey teams have the capacity to implement the survey and use the required tools.

Local capacity for data analysis is typically low in conflict-affected contexts. For example, in the case of the Afghan KAPB survey, international expertise was brought in to support data cross-checking, analysis and reporting due to a lack of in-house capacity.

DEALING WITH ACCESS AND SECURITY

Gaining access to contaminated areas and communities and ensuring their safety and the safety of survey staff are paramount factors in planning for socio-economic surveys. It is necessary to carefully consider who you interview and what you discuss in order to avoid putting communities at risk. It is important to consider the local conflict dynamics in order to make informed security decisions and ensure that both the survey and the survey teams "do no harm"[10].

Apart from security issues raised by mine/ERW threats, broader security threats, inherent in work in post-conflict or fragile states, remain. For example, in Afghanistan, survey teams have had limited access to some areas due to ongoing insecurity. Apart from security concerns, other factors which affect survey implementation in Afghanistan include the season (eg the north-eastern part of the country is mountainous and inaccessible during parts of the year).

There are also access issues inherent to work in developing countries with little infrastructure. Lao PDR is a very mountainous country and much of the UXO contamination is located in remote, upland areas. Getting to some villages can involve a day's walk from the nearest motorable road, while accessing other villages require expensive boat journeys. There are still areas of Lao PDR where travelling alone can be dangerous and District Enumerators require accompaniment for safety reasons. These factors make it difficult to use standard costing and require flexibility on requests for additional funding in special circumstances. When conducting the Lao UXO Victim and Accident Survey, UXO contamination was a problem for the survey team. Even in remote areas, sensible behaviour (such as remaining on well-established paths) is all that is required to avoid danger. However, the survey team still faced the issue of getting assessors in the field at the appropriate time. In Lao PDR, this meant that survey work should be carried out during the dry season from October to May, but bureaucratic delays postponed the survey to February and continued throughout the rainy season (May to October) when accessibility to remote areas becomes increasingly difficult.

ENDNOTES

1 MAG Sudan's Impact Assessment Tool, Louise Skilling, Regional Community Liaison Manager Africa and Americas, MAG, 2010.

2 An additional colleague specialising in sustainable livelihoods and gender participated in about half the survey.

3 The Lao National UXO Victim and Accident Survey, Michael Boddington, Technical Advisor, Victim Assistance, Lao UXO National Regulatory Authority (NRA), May 2010.

4 All references to time periods in this section are elapsed time: many of the activities described ran concurrently

5 Since the Phase 1 Survey was carried out during February-October 2008, we do not have complete data for that year.

6 Evaluation framework for assessing the impact of explosive remnants of war (ERW) clearance on household livelihoods, Joanne Durham, 2010.

7 Azarbaijani-Moghaddam, ibid.

8 DDG's approach to Impact Monitoring, Bodil Jacobsen, Programme Coordinator, Danish Demining Group, July 2010.

9 An important potential contribution to the efficient use of staff is the possibility of 'skill mix' changes. Skill mix is a relatively broad term, which can refer to the mix of staff in the workforce or the demarcation of roles and activities among different categories of staff. Skill-mix changes may involve a variety of developments including enhancement of skills among a particular group of staff, task substitution between different organisations, delegation up and down and innovation in roles. Such changes may be driven by a variety of motives including intervention and project innovation, shortages of particular categories of worker (especially in conflict and post-conflict areas), quality improvement and a desire to improve the cost-effectiveness.

10 The Do No Harm approach tries to ensure that international humanitarian development assistance in conflict settings is done in a way that avoids doing harm and exacerbating conflict.

After designing a socio-economic survey, mobilising resources and carrying it out, it is time to obtain the results. In this brief section, we tackle the often overlooked but crucial steps of data management and analysis. These are the stages in the survey process that will transform data collected through survey forms into actual information ready for use. A persistent challenge for all mine action socio-economic surveys is the actual use of the data produced and taking practical action and achieving policy and practice change based on the evidence generated.

MANAGING DATA, CREATING INFORMATION

Making practical use of survey data requires skills and expertise in data analysis. This issue is a particular challenge for mine action programmes and organisations with limited statistical and analytical expertise. The way in which quantitative data is analysed will depend to a certain extent on the questions the survey is trying to address. It is useful to develop a test plan prior to the survey to outline the purpose and key survey questions to be answered and the analytical methods used.

In Afghanistan, quantitative data analysis proved to be the greatest challenge with the first KAP survey. Although information collection was straightforward, the skills required to consolidate and report on findings were not available nationally. MACCA recruited an international consultant to analyse and report on the findings of the second KAPB and also to do the comparative analysis that formed the rationale of the second survey, as described in Box 10.

Box 10 | Getting results out of surveys in Afghanistan[1]

In Afghanistan, all KAPB surveys were done with the support of international expertise for the data cross-check, analysis and reporting components.

Data analysis is carried out by:

- looking at the number of people who responded to each question and comparing those numbers to a specific answer and to those who answered they do not know; this provides a degree of understanding of percentages of people who are informed, who are not informed and what they know or don't know (how many know versus how many do not know and how many know what)
- comparing previous years' answers to the new survey data (variants in understanding from year to year)
- showing abnormalities or exceptions to certain circumstances (in a province where there are no mines and no mine clearance operations, some people felt they were not informed well and that mine action activities were not operating sufficiently)

One of the lessons from the data was the need to identify gaps and improve MACCA priority-setting. Identifying gaps highlights areas in which improvements can be made, including changes in outreach or methodologies of training. MACCA found that media plays a more important role in terms of raising awareness among affected communities than was previously thought. MACCA also recognised that gender does play a role in priority-setting and that greater effort to reach out to all sectors of society is important to ensure all voices are heard. The KAPB pilot confirmed our priority-setting activities, but highlighted the need to review our planning processes.

The Afghan KAPB data was used to tell the programme whether what they do is being done well, if people understand and whether the methodologies are good. The initial findings of the KAPB+ survey reveal that MRE messages are being received through the projects that are implemented. However, greater community involvement is required to ensure that clearance activities are targeted according to the needs and priorities of the people. Specific survey findings included:

- people receive MRE information about the dangers of mines and ERW
- people understand the dangers, warning signs, etc
- people say the information influences their behaviour
- clearance priorities are considered good
- benefits of mine clearance are good
- sufficiency of mine clearance is lacking in that there are still mines
- community involvement in mine action is required for proper prioritisation

When DDG collects data from the field for Impact Monitoring purposes, it is entered into an Excel spreadsheet which DDG staff use to extract basic data and support easy-to-understand analysis for DDG programmes. Data entry and cross tabulation of key questions can be conducted by a national if the person has been trained and has the required skills. The final analysis and use of the information that emerges is the responsibility of the programme managers (national and international staff). DDG reflects the findings in quarterly reports, DDG's website and in general information exchange with communities, donors and key stakeholders.

Similarly, MAG Sudan has provided its staff with accessible information management solutions. MAG's CL Managers analyse the information gathered for SHA surveys from meetings and household surveys, using a standard MAG information management tool, and calculate an impact score. This impact score, in addition to other qualitative information on expected land usage, alternatives, suitability, constraints and target groups, is discussed and documented in a prioritisation report. The purpose of the prioritisation report is to allow CL Managers and Technical Field Managers to assess clearance tasks and prioritise them. When MAG enters data from MRE surveys into an information management spreadsheet, MAG country staff generate graphs which display the change in knowledge before the MRE session, to immediately after the session.

Qualitative approaches also have their own set of challenges. Qualitative data consists of words, observations and descriptions. The open questions used in qualitative surveys allow the respondents to say what they think and to give more than one answer. The resulting raw data may be in the form of interview transcripts from interviews or focus group discussions, field notes, diary notes, secondary data or photographs. As such, analysis of qualitative data is often considered more problematic than the analysis of quantitative data because there is less standardisation in the data and it cannot be easily dealt with using computer analysis.

A key aspect of qualitative data analysis is that it is an ongoing process that should take place throughout the data collection process. Both Bottomley and Uk note how analysis began during field work, which enabled them to respond to emerging themes as the research progressed. An initial review of secondary data can begin the analysis as it can help to identify some initial ideas, concepts and themes that can be tested during the data collection in the field. It can contribute to the development of the data collection tools and inform the questions to be asked. As data is collected, the survey team should be thinking about the emerging themes and testing ideas against observations in the field.[2]

After each interview it may help to write a summary of the interview including information on the place, the participants, the method, the content and any emerging theme. These summary notes can then be attached to the transcripts for reference. In addition it is often beneficial to allow time to start typing up the interview transcripts while in the field. This not only helps to ensure the survey team keeps on top of the job of transcribing the interviews, but it also helps to familiarise the survey team with the interview and again it can help to identify some of the emerging themes or ideas that are developing through the field work.

Beginning the analysis during the fieldwork allows the survey team to also follow up on some of the new ideas and concepts during subsequent interviews and it also provides a way to quality assure the information that is being collected. If all the data analysis was left until the end of the research this opportunity would be missed. The simultaneous collection of data and conduct of the analysis improves both the quality of the data collected and the quality of the analysis.[3]

DISSEMINATING AND ACTING UPON THE INFORMATION

Once valuable data is produced and analysed, the next challenge is to disseminate the information in a suitable format and act on it. The utility of a survey or piece of research often depends on how it is communicated to others. The communication of the results influences the extent to which findings are seen as credible and the uptake of findings and recommendations. As surveys and research activities often intrude into people's lives and take up the time of the poor and vulnerable, it is important to ensure that research has utility, is credible and appropriately communicated so that recommendations are acted upon.

Consider the intended audience when presenting survey findings. For example, providing feedback to a community who participated in a survey will require a different methodology than presenting the findings to mine action operators and government ministries. In the design phase, it can help to develop a plan that indicates who the findings will be disseminated to and the methods that will be used.

Reporting back to communities who participated in a survey could be achieved by holding village meetings and presenting the main findings orally using flipcharts or slides and projectors (if electricity is available). The meeting could be organised like a workshop where participants provide feedback on the findings and whether they consider the findings representative of their own knowledge and experience. In areas where people are literate, simple brochures or pamphlets outlining key findings could be distributed to communities.

At provincial or national level, it is often important to hold meetings and to present the survey findings through a formal presentation followed by questions and answers. The presentations should be clear, outlining the main aims of the survey, the methodology used, the key findings and any proposed recommendations. Pictures and graphs can be used to help to summarise the information and to ensure it is easily understandable. Questions can also be used to help the audiences discuss the main findings and to discuss the possible options for taking action. These sorts of local and national workshops and presentations can also provide an opportunity to check the main findings and conclusions of the survey and adds to the credibility of the research findings. Follow-up planning meetings may also be required to discuss implementation options.

Generally most survey findings will also be written up in a report. Box 11 summarises some of the key areas to cover in a report.

Box 11 | Key issues to cover in a report summarising survey findings[4]

Some of the key areas to cover in a survey report include:

- clear statement of survey aims and purpose
- clear overview of survey design and rationale for the design
- explanation of how participants were selected and number of participants
- description of survey setting
- clear description of methods and any changes made to the survey design during implementation
- role of the project manager and survey team and relationship with programme and/or participants
- how ethical issues were addressed
- clear description of data analysis method
- clear statement of findings
- contribution survey makes to the overall body of knowledge

The report should also contain an appendix, which can be in a separate volume if it is likely to make the size of the report difficult to manage. Typical things to put in the appendices include the research instruments, statistical analysis, lists of people interviewed (if relevant and not a breach of confidentiality agreements), a bibliography and perhaps maps of the survey areas. A glossary of terms and acronyms should be included at the front of the report to assist the audience when reading the executive summary or main body of the report.

When presenting the findings of qualitative or mixed methods survey, either through presentations or a report, it is helpful to include quotations or descriptive examples or case studies to illustrate the main points and bring the data to life. Quotations should be carefully chosen to support the data interpretation and to ensure that people's words are no taken out of context or edited to exemplify a point. It is also important when using quotations to ensure that their use does not breach any agreement of confidentiality and anonymity made with the research participant.

Photographs may also help to communicate findings, or diagrams with boxes and arrows can help to show how the pieces fit together. Laying out data in a table or a matrix form or using flow charts or maps can also help improve understanding of the data and help communicate the ideas to others. In presenting findings it is important to avoid generalising, but rather to highlight where there are differences and to provide explanations for those differences. The survey methodology should also be presented so that people understand how the data was collected. Presenting problems and limitations also helps others to better understand how you arrived at your conclusions.

Survey and research findings can reach a wider audience through press releases, presentations at sector workshops and conferences or publications such as journal articles. All of these methods can help to disseminate the main findings to a broader audience and generate further discussion and debate. Mine action research and survey may be of use not only to mine action operators but also to other sectors of the humanitarian and development community. Similarly, surveys in MRE may require a wider audience than just the MRE operators. In Afghanistan, the involvement of other sectors improved survey value and added needed information that MRE implementers may not have considered. This resulted in information that benefitted a wider audience and range of activities.

Once survey findings have been effectively disseminated to key stakeholders, the next and perhaps most critical step is translating those findings into action. Once analysed, survey data can be used in a variety of ways, which typically relate to the overall motivation and purpose for conducting the survey, eg advocacy, risk education, disability policy, development programming.

The Lao National UXO Victim and Accident Survey has produced demonstrable changes in practice. For example:

1. clearance operators carry out activities in neglected areas, such as Bolikhamxay (SODI) and the northernmost province of Phongsaly (PCL); this is largely due to the availability of information from the Phase 1 Survey
2. Xieng Khouang province has a new plan to develop emergency trauma care that is based largely on the availability of survey information on the location of accident hot spots
3. child UXO survivors in Sepone, Nong and Vilayboury districts of Savannakhet province have been identified for assistance programmes
4. the Lao physical rehabilitation services (COPE) is undertaking major outreach activities in order to draw in patients requiring prostheses and other devices, and are able to pinpoint individuals

5. the NRA is able to investigate the characteristics of casualties (eg occupation, activity, age, sex) and discover patterns that could allow risk education to be better targeted
6. Catholic Relief Services has started a project to give support to trauma victims in Bolikhamxay province
7. the NRA is undertaking a District-based evaluation of UXO contamination (mentioned in the NRA's Strategic Plan, Safe Path Forward 2 as an output most particularly 'Output 2: District focused approach to management of UXO threat') which will draw on the Phase 1 and Phase 2 surveys as an input

The survey findings may also reveal where development assistance is required. For example, in Sri Lanka, TIA data from the Vavuniya Clearance Plan was used as a planning tool by the SOLIDAR Consortium for Quick Impact Projects (QiPs).

In Yemen, focus group discussions with village leaders, men, women and children explored development outcomes and needs, and assessed where benefits had already occurred and where additional inputs (for example from government, NGOs or donor programmes) could enhance livelihoods. A range of government, development and donor agencies attended a feedback meeting at which the findings of the Yemen post-clearance livelihoods survey were presented and discussed. As a result, they expressed interest in supporting some of the developmental opportunities. However, it is unclear to what extent these have materialised into practical assistance for communities and survivors.

Box 12 | Acting on survey findings in Vietnam[5]

CHF's work in Vietnam is an example of how findings from a survey can be used for community planning.

Making plans

MAG completed UXO clearance in Da Krong commune in Da Krong district in Quang Tri province, and prepared a detailed community development survey of the ten villages in the commune

CHF, working in conjunction with the District Agricultural Extension Centre (DAEC), established a project team and conducted Sustainable Livelihoods Approach (SLA) activities in all ten villages. The project staff, assisted by the commune extension workers, managed to prepare family development plans for every poor family in each village. In some villages, all families included themselves in the poorest categories, and unfortunately many farmers showed the results of their contact with explosives. In most villages, the resultant Village Development Plan (VDP) was a compilation of nearly all the family plans.

CHF had found that many previous consultations by other organisations had taken place at village level but with no tangible results. So after two days of village meetings and family interviews, the CHF project teams tried to return to each village within one week with plans for the poorest families.

At the CHF head office level, results were then used to raise funds, and at national level for transmission to government. Budget and time restrictions would ultimately hinder the project, but participating families managed to derive some good income opportunities, and developed some excellent forest enrichment.

The project staff and the extension workers were able to conduct training for all families, and provide inputs for cash crops, improved varieties of livestock and seeds for forest trees. Many families considered and used new methods to raise livestock. Some families decided to start home gardens, and learned to use animal manure to fertilise their crops. Many villages established forest nurseries as farmers could not get access to forest tree seedlings.

Another sustainable benefit was the creation of Farmers Field Schools (FFSs) in every village. CHF created about five or six interest groups in each village after the family interviews. In areas with large command areas for irrigated paddy, all the poor farmers in one area were encouraged to join a Farmers Field School for irrigated paddy. The FFSs gave farmers the chance to talk about their activities together and in the field. Each FFS was provided with training, and inputs like seeds and fertilizers.

A particular challenge faced by all socio-economic surveys is the validity of the data over time. For example, the Local Perceptions and Responses to Risk surveys in Cambodia and Lao PDR provided a clear picture of the village's risk exposure at a particular point in time. The research team found it important to stress that the risk rankings produced by the survey could not give a permanent answer. In fact, sources of risk can fluctuate and change value or weight as soon as new decisive factors come into play.

To avoid the data becoming obsolete, a survey can incorporate a plan for capacity building and systems for regular updating of the data like the Lao National UXO Victim and Accident Survey. Updates can also take place at regular intervals like the KAPB surveys in Afghanistan that were undertaken in 2004, 2005 and 2009. This will depend on the purpose of the survey in the first place, and whether an ongoing system is needed, or whether a one-off snapshot at a particular time is sufficient.

CHANGING PRACTICE

There are a variety ways that mine action programme managers can use survey data once the data has been analysed. The ways the data is used will depend on the purpose of the survey. The measure of success for a socio-economic survey should be whether it achieved intended changes in policy and/or practice.

The majority of discussion surrounding the village demining issue in Cambodia prior to the study by Handicap International Belgium had focused on whether village deminers should be trained in demining techniques, or at least be provided with some safety equipment. The study, which provided a rigorous analysis of the circumstances of village deminers, revealed that the debate on training was only one small part of the equation and had an overly narrow focus on technical expertise and safety. The qualitative research clearly showed that village demining was largely a consequence of the vulnerability of rural people living in contaminated areas to other risk factors such as hunger, sickness, land insecurity and a lack of alternative livelihood options. As many men had former military experience, they felt they could use these existing skills to conduct basic demining and reduce vulnerability to some of these other risk factors. The majority of village deminers did not want training in demining. What they wanted was access to uncontaminated land and livelihoods security. The study has since informed the development of some innovative mine action initiatives in Cambodia that have aimed to better address the needs of affected communities.

For example, the locality demining approach developed by MAG in Cambodia recruits vulnerable people living in mine-affected areas and trains them to demine to the same standards and regulations as MAG's regular teams. The teams of locality deminers work to clear the minefields in their village vicinity for a period of two to three years. During that time they not only contribute to making their villages safer, but they also earn a regular income which helps to improve their livelihoods.

In addition, the Community-Based Mine Risk Reduction (CBMRR) project of the Cambodian Mine Action Centre (CMAC) was established with the support of HIB and UNICEF in response to findings that high risk behaviour such as village demining was not being addressed by traditional MRE approaches. CBMRR now actively involves local people in the mine action prioritisation process and helps to link them with mine action, victim assistance and development services so that their broader livelihood needs are better addressed.

The village demining study also led to the area reduction policy implemented in 2005 by the Cambodian Mine Action Authority. A footnote in the Cambodian National Mine Action Strategy 2010-2019 notes that "village deminers have reduced the level of threat over large areas of land and returned that land to productive use. Such practices have led the Cambodian Government to develop national policies, such as the area reduction policy allowing operators to reclaim from suspicion previously suspected land that has been returned into productive use." This has enabled the better deployment of demining resources to areas that are known to still be contaminated.

The greater involvement of mine-affected people in the mine action processes through the use of participatory approaches has also helped to promote an improved understanding by local people about the mine action process. A gender study conducted by MAG Lao PDR in 2008[6] demonstrated that the participatory approach used by MAG CL teams did have a clear benefit in terms of ensuring equitable participation in the prioritisation process. Those who attend the prioritisation meetings have a good understanding of the selection criteria. In villages cleared by MAG, 80.2 percent of the study group (85.1 percent men and 75 percent women) reported attending prioritisation meetings. This is a significantly higher male and female attendance than in villages cleared by other operators. Similarly, the participatory community meetings held by MAG CL teams also meant that villagers were better informed of the prioritisation selection criteria, enabling them to contribute in an informed way to the prioritisation process. In MAG villages, a significant 91 percent of respondents reported understanding the selection criteria, which was a considerably higher percentage than with the other operators.

ENDNOTES

[1] Knowledge, Attitude, Practice and Belief (KAPB) Survey – Afghanistan, Samim Hashimi with Susan Helseth, July 2010.

[2] H. R. Bernard. Research Methods in Anthropology: Second Edition. London: Sage Publications, 1995, p.360.

[3] Mikkelsen, 995:115.

[4] Ruth Bottomley and Joanne Durham.

[5] Sustainable Livelihoods in UXO affected areas, Mike Lord, former CHF Country Director in Vietnam, July 2010.

[6] Assessment of Gender Perspectives in UXO Action in the Lao PDR, MAG, March 2008, http://www.nra.gov.la/resources/Other%20Publications,%20Reports%20and%20Resources/Assessment%20of%20Gender%20Perspectives.pdf.

Planning and carrying out a survey can be a complex process, and numerous factors need to be taken into account at key stages of the process. The first step for any survey is to understand, first, the purpose of the survey and, second, the best type of survey for achieving that purpose. Once the purpose is clear, and the specific type of survey is chosen, a practical tool (or protocol) can be developed to serve as a guide for thinking through and, eventually, implementing the survey. When developing such a tool, it is crucial to keep in mind that the participation of survey respondents, particularly in mine-affected communities, is critical, since contaminated communities are often among the most remote and marginalised. Survey tools and approaches should promote inclusion and wider empowerment, including by designing tools that are gender-sensitive.

Numerous issues must be kept in mind when planning and implementing a survey, including the necessary financial resources, the capacity of the staff involved and the use of project cycle management as a means of efficiently managing a survey. All of these factors can affect the accuracy and quality of survey findings, so they demand great attention. But perhaps the most critical aspect of the survey process is the effective analysis and use of the data, and the generation of findings which can be used to generate policy and/or practice change.

Impressive work has been accomplished in designing, implementing and taking action based on the data generated through socio-economic surveys. Mine action agencies have forged new partnerships, learnt from good practice in survey research and the application of participatory methods and pioneered the integration of developmental concerns and planning. Hopefully, this Sourcebook will encourage survey managers in mine action to ask the right questions, design the right tools, and include all stakeholders in the evolution of their surveys.

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LIST OF RELEVANT STUDIES AND AUTHORS (ON CD)

- The Lao National UXO Victim and Accident Survey | Mike Boddington
- Qualitative Research Methodology: A Case Study of the Handicap International Belgium study on Village Demining | Ruth Bottomley
- Landmine Impact Survey | Robert Eaton
- Knowledge, Attitude, Practice and Belief (KAPB) Survey | Samim Hashimi with Susan Helseth
- Sustainable Livelihoods in UXO affected areas | Mike Lord
- MAG Sudan's Impact Assessment Tool | Louise Skilling
- Community Integrated Mine Action Planning (CIMAP) | Suzana Srnic Vukovic
- PRA and PLA Approaches: A Case Study with examples of participatory approaches employed by MAG and CMAC in Cambodia | Ruth Bottomley
- Evaluation framework for assessing the impact of explosive remnant of war (ERW) clearance on household livelihoods | Joanne Durham
- Measuring the Psychosocial Impact of Mine Action: A mixed method approach | Graeme R. Goldsworthy, Erica M. Pasini and Hope Rosenbaum
- DDG's approach to Impact Monitoring | Bodil Jacobsen
- Post-clearance livelihoods analysis in Yemen | Barry Pound
- Survey of 'Local perceptions and responses to risk' | Krisna Uk


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