Evaluation of the
Global Landmine Survey Process

Final Report

Oslo, November 2003

DEMEX

Scanteam

Contents

Abbreviations

ASM	Advance Survey Mission
CIDA	Canadian International Development Agency
CMA	Cranfield Mine Action
Danida	Danish Agency for Development Cooperation/MFA
DCA	Danish Church Aid
DDG	Danish Demining Group
EOC	Expert Opinion Collection
GICHD	Geneva International Centre for Humanitarian Demining
GLS	Global Landmine Survey
HI	Handicap International (Belgium / France)
ICB	International Competitive Bidding
ICBL	International Campaign to Ban Landmines
iMMAP	Information Management and Mine Action Programs (VVAF)
IMSMA	Information Management System for Mine Action
ISMA	International Standards for Mine Action
LFA	Logical Framework Approach
LIS	Landmine Impact Survey
LSN	Landmine Survivors Network
LUPU	Land Use Planning Units (Cambodia)
MA	Mine action
MAC	Mine Action Center
MAG	Mines Advisory Group (UK)
NPA	Norwegian People's Aid
PRSP	Poverty Reduction Strategy Process/Paper
QA	Quality Assurance
QAM	Quality Assurance Monitor / Manager
QMS	Quality Management System
SAC	Survey Action Center
SHA	Suspected Hazardous Area
SWG	Survey Working Group
TAP	Task Assessment and Planning
UNDP	United Nations Development Programme
UNMAS	United Nations Mine Action Services
UNOPS	United Nations Office for Project Services
UXO	Unexploded Ordnance
VVAF	Vietnam Veterans of America Foundation

1 Executive Summary

Scanteam of Norway with Demex of Denmark were contracted by the Survey Action Center (SAC) to carry out an evaluation of the Global Landmine Survey (GLS) process. The work was done during the period May-October 2003. The main findings and recommendations are the following:

Main Achievements

The GLS process can, after only a few years, point to some very impressive achievements:

- The mine action community has been able to come together to establish the Survey Working Group (SWG) and GLS through a collaborative and deliberative process unheard of in any other sector of development and emergency action.
- Landmine Impact Surveys (LISs) have been finalized in over half a dozen countries, and are underway in almost another half a dozen.
- The LIS produces reports, databases, and other outputs that provide a qualitatively better and more accurate description and analysis of the mines/UXO problems, and thus provide a better basis for mine action (MA) decisions.
- The LIS has developed a methodology and standards which are recognized and followed by key actors involved in landmine surveying. These are set out in Protocols and Advisory Notes that are easily available and which are subject to a process of continuous discussion and updating.
- The surveys that are carried out become known by the full GLS community and are thus subject to considerable discussion and debate.
- The GLS has often introduced new and better tools to the partnering countries (such as GIS-based information, powerfully searchable IMSMA databases, examples in how to carry out and run large-scale surveys).
- The GLS process has undoubtedly contributed to maintaining mine action higher on donors' agendas than would otherwise have been the case. This is reflected in the successful mobilization of funds for the LISs (with the Angola LIS over USD 25 million), reminding donors of the commitments made under the Ottawa Treaty.
- The GLS process has undoubtedly also contributed to increasing the profile of MA in the partner countries. This has partly been done by providing national authorities and mine action stakeholders with a series of information-rich products that are useful for decision making but also useful from a purely informational and awareness-raising perspective vis-à-vis the population at large. The LIS strengthens the argument for allocating national resources to MA as the factual basis regarding the mine/UXO problem and what to do about it is both qualitatively and quantitatively better. Finally, the LIS is a major support to national authorities and local mine actors in their own fund raising dialogue with the donor community.
- The GLS is evolving, with more efforts and attention now being paid to areas such as training/capacity building, including the use and updating of the Information Management System for Mine Action (IMSMA) database, follow-up use of the LIS results through Strategic Planning, etc.

Planning Landmine Impact Surveys

- The LIS is a costly undertaking, and should therefore, as far as possible, follow international "best practice" standards and procedures:
    - The request for a LIS should be handled according to UNMAS 2001 TOR and subject to a critical assessment of the need and utility of a LIS.
    - The Advance Survey Mission should become a standard project planning exercise, using Logical Framework Approach (LFA) participatory processes. Sufficient time should be used to ensure that the identification of the main project elements are done satisfactorily, local skills should be fully utilized in the planning, local stakeholders fully involved regarding problem definition and choice of implementation modalities.
    - Project planning should be contracted out based on clear TORs, where having an SAC staff member as part of the mission is helpful.
    - The implementation of the LIS should be set out to tender based on International Competitive Bidding principles.
    - Whether the same entity can both plan and implement a LIS should be considered by the SWG. If this is accepted, the potential role conflict needs to be solved through satisfactory procedures.

The LIS is currently structured as a "stand alone" event and is an externally driven and defined process that is poorly integrated into national tools and tasks:

- Links and "hooks" (such as data transferability) to other processes and instruments should be developed to enhance relevance and usability of LIS results (broaden user groups and beneficiaries). A strong participatory planning process can ensure that these dimensions are properly addressed.
- MA in general and LIS in particular should move towards more general sector-planning approaches developed in host countries, and adopt to the processes and criteria that are applied to other sector interventions in the country.
- The planning should include a standard LFA risk assessment, looking at all the elements of the goal hierarchy. Particular attention should be paid to a realistic assessment of the key national institutions regarding their commitment and capacity to participate in and use the results of the LIS:
    - If there is Low Capacity, the LIS should have a Capacity Development component as an integral, early and important part of the LIS.
    - If there is Low Commitment, it is doubtful if it is meaningful to carry out a national LIS. Alternative models should be explored instead.
- The overall plan from planning through implementation needs to be sorted out with the national government. If the LIS requires a separate MoU or other formal government agreement, this should be in place *before* the project planning begins.
- Project planning should include the Expert Opinion Collection (EOC) process to give the project document a solid informational basis so that budgeting and timeline preparation is realistic.
- The project document should be subjected to the normal scrutiny by national authorities and local stakeholders before final approval.

- SAC/SWG should organize one or two regional workshops with local partners to discuss current LIS standards, including more flexibility for local adaptation.
- SAC is encouraged to use ISO 9000-2000 Quality Management System for GLS.

Implementing Landmine Impact Surveys

- LIS reporting should be streamlined. Only information required for decisions is forwarded (apart from the contents data). This should be done throughout the LIS structure, so that there is performance- but not activity-tracking at higher levels.
- The standard questionnaire should be reviewed for a focus on collecting only "first order" data. Other variables should only be included if it is clear that they will be used by actors for important decisions
- Internal Quality Assurance systems should be a key criterion when selecting bidders for implementing a LIS. "Best practice" internal QA systems should be posted on the SAC web-site (helpful if for example NGOs in Angola were to do regional LISs).
- QA resources should be spent more evenly across the three dimensions of data quality: (i) is the survey asking the right questions (relevance)? (ii) does the survey generate answers to the questions being asked (validity, reliability)?, (iii) is data integrity along the information chain maintained?
- Local partner institutions for the implementation of the field survey should be identified, to ensure that learning from the LIS survey process is internalized by national institutions and not just simply by the individuals engaged.
- Active involvement of local social science skills should be encouraged: (i) as trainers/teachers, (ii) as analysts and disseminators of results, (iii) as resource persons to the LIS itself (discussions of local adaptation of questionnaires, weighting schemes, as external QA for testing survey instruments and techniques).

Results and Impact from Landmine Surveys

Donors do not use the LIS results directly, but are interested in seeing that partner authorities do – it provides an assurance that MA resources are being planned better.

National authorities by and large are using the LIS, and in most cases trying to shape national MA plans based on it.

Local operators generally do not use the LIS for their planning, in part because funding often determines where they work – donor behavior becomes a blockage to more rational MA resource use through the project approach.

- There is a need for MA actors to come together to see how the LIS can be used for more rational sector resource allocations. National concerns and priorities should be a major benchmark for individual organizations' priorities.

The weights attached to the various factors in the impact survey clearly can alter the ranking of communities, but weightings will always remain subjective preferences – there are no obvious "objective" weights.

The general triage of "high", "medium" and "low" impact makes sense, and the cut-off points between them are and will necessarily remain arbitrary, no matter where the border values are set. The key is to ensure that the weights are in accordance with the kinds of concerns national authorities have regarding the negative impact of mines

and UXO. In order for decision makers to see the consequences of alternative weighting schemes, simulations could be done on a constructed case.

- What is more important is to increase the relevance of the LIS within the national planning system by linking up to general planning priorities (such as in PRSPs), so that the LIS ratings enter the final resource allocation decisions.

All the reports need to be available in the language/s used by mine action actors and local authorities.

The LIS database is a key output of the process and its value needs to be ensured through (i) easy and open access to both data and results, (ii) a program of continued and structured updating of key variables, (iii) accessibility in terms of low-cost and easy-to-use software platform (relative to situations in differing countries).

Having IMSMA as the standard database for mine action makes sense from a pragmatic efficiency point of view. The challenge is to develop it in two areas: (i) making transfer of LIS data to other databases easier (continuing the development of the data transfer protocol "maXML"), and (ii) make its access to MA operators easier, so that data are more directly user-friendly. GICHD might consider a workshop with key users to identify key steps to take in this connection.

General Issues in Landmine Impact Surveys

- The SAC should continue its role as fund-raiser; coordinating and management role for those LISs that are under its purview; prepare in collaboration with partner authorities the agreements necessary for a LIS, including the TOR for the project preparation work; participate on the project planning process; tender the LIS implementation and ensure fair and transparent decision making in awarding the contract; and provide the training and other support services that are agreed to.
- SAC should avoid direct management of LISs and focus strategic management of the GLS process and its accomplishments. A key role is collecting, analyzing, disseminating and discussing "lessons learned". A key target group for this, apart from the SWG itself, is interested stakeholders in partner countries.
- The SWG should remain an open deliberative body but where partner country stakeholders should be invited in. Regional workshops as part of a more pro-active capacity development effort could be highly constructive.
- The SWG Protocols/Advisory Notes provide helpful standards, though there is a need to accept flexible adaptations to country specific situations.
- The SAC management/board selection processes are opaque – formal accountability seems difficult to pin down [no real conclusions or recommendations – simply an observation for consideration].
- The need for external QA and a formal Certification process is questioned. If instead LIS implementers are asked to implement a QMS according to ISO 9000-2000, further external verification would seem superfluous, especially if national authorities accept this as they do for other national survey processes.
- UNDP has supported various forms of capacity development. This focus should be maintained but built on better principles of sustainability.

2 Introduction and Background

The Global Landmine Survey (GLS) program was conceived in March 1998 when the Ottawa Workshop on Mine Action Coordination agreed on the need for an international effort to survey landmine-affected countries. Subsequently, the Vietnam Veterans of America Foundation (VVAF) and Handicap International (HI) organized meetings of interested parties to develop a collaborative GLS program. The program was to identify the geographic distribution of landmines and to understand better the social and economic impact of these landmines on mine-affected communities.

A Survey Working Group (SWG) agreed to lead the program and appointed VVAF to create and manage a Survey Action Center (SAC). The SAC was tasked with coordinating landmine impact surveys (LIS) worldwide, providing technical support and mobilizing resources. In 2001 SAC was established as an independent Center.

The first LISs were carried out in Mozambique and Yemen. Since then surveys have been completed in Afghanistan, Cambodia, Chad, Lebanon, Somaliland and Thailand, and a modified survey and socio economic analysis conducted in Kosovo. Surveys are underway or about to be finalized in Angola, Azerbaijan, Bosnia-Herzegovina, Eritrea, and Ethiopia, and are planned for Vietnam and Sudan, among other countries.

When the GLS program was launched it was envisaged that it would end once surveys had been carried out in all the major mine-affected countries. The program is now considered to be more than 50% complete, and it was therefore considered timely to undertake a formal and independent evaluation of the LIS process. The evaluation is to form part of a broader strategic review of the GLS program.

Based on an open tender process, Scanteam of Norway in collaboration with Demex of Denmark was awarded the contract to carry out the evaluation (see Annex A for the TOR). The evaluation took place May-September 2003 with field visits to seven GLS countries: Bosnia-Herzegovina, Cambodia, Chad, Ethiopia, Mozambique, Thailand and Yemen. Interviews were carried out in five donor countries (Canada, Denmark, Norway, Switzerland and the US) as well as with UN agencies in New York and Geneva. Telephone interviews and E-mail exchanges were used with a number of key informants (see Annex C for persons interviewed). In addition a document review was carried out (see Annex B for complete list).

2.1 Objectives of the Evaluation

The *objectives* of the evaluation were two-fold:

- Examine the current GLS organizational structure and LIS methodologies: procedures, tools and assumptions.
- Evaluate the utility, efficacy and use of the survey results.

Based on the evaluation of the above two areas, the team was to make *recommendations for improvements* to the overall effectiveness and efficiency of impact surveys.

This evaluation therefore looked at what has been attained by the LIS itself, but also what has been attained through the use of LIS outputs. Another issue was the role of national stakeholders in the stages of LIS implementation and use of LIS products. The purpose has been to identify possible improvements to on-going and future surveys, to enhance their value to both national and international officials and other potential users of the survey results.

2.2 Structure of the Report

The third chapter discusses the approach and methodology used. Chapter four looks at planning the LIS, chapter five discusses implementation experiences, while chapter six looks at the results achieved and their impact. Chapter seven then summarizes by looking at the overall process, including the roles of the key international actors.

A series of annexes are attached. Annex A provides the Terms of Reference, Annex B the list of documents reviewed and Annex C persons interviewed. Annexes D through J are country studies for each of the seven countries visited.

2.3 The Evaluation Team

The Evaluation was carried out by four international and five local consultants. The international consultants came from Scanteam, which has broad international evaluation experience (Mr. Arne Disch, team leader, and Mr. Atle Karlsen). Demex added the mine action background (Mr. Erik Lauritzen and Mr. Niels Strufe). The international team is responsible for the report including all annexes.

Local consultants were used in five countries: Ms. Anne Thomas/Cambodia, Ms. Tihut Yirgu Asfaw/Ethiopia, Ms. Pamela Rebelo/Mozambique, Mr. Taweekiat Prasertcharoensuk/ Thailand, and Dr. Faiz Mohammad. In most cases, the local consultants carried out a series of preliminary interviews before the international team arrived, participated with the international team during the fieldwork, and followed up on issues that required clarification. They were also largely responsible for the planning of the field work visits and meetings.

2.4 Acknowledgements and Disclaimer

As with most Evaluations, the great challenge was accomplishing the tasks within the limited time available. Our first thanks go to all our informants who set aside time to answer questions they often had already answered many times before! Government officials, NGO staff and donor representatives in the seven countries visited were without exception extremely generous with their time, for which we are very grateful.

UN staff in New York, SAC and VVAF staff in Washington, GICHD staff in Geneva, donor and NGO representatives in their capitals, members of the Survey Working Group, and former survey team members and quality assurance managers were all extremely helpful – the UN, SAC and VVAF also in tracking down documents, from processes that have generated more than their fair share of paper!

Throughout the process, we have been struck with the seriousness and professionalism of persons met. While there are a number of observations made throughout this report that point to ways in which the Evaluation team believes the LIS and other aspects of mine action can be improved, the current shortcomings are clearly not due to lack of dedication and concern.

The Evaluation team alone is responsible for the analyses and conclusions of the report, as well as for any remaining errors contained herein. The opinions expressed should not be attributed to the SAC, any of the organizations under review, or any of the other participating organizations or institutions mentioned in this report.

3 Approach and Methodology

The TOR for the evaluation asks a formidable range of questions (see Annex A). The Evaluation therefore had to define those that were considered the more important. Appropriate tools had to be developed to generate the information required and to record it, before the analysis could be done.

As with most evaluations, this one was based on a mix of document review and interviews and discussions with key informants. Identification of documents and persons to speak with was thus part of the process. Finally, the findings had to be checked to ensure that information collected was indeed correct, and that interpretations of the information was reasonable.

3.1 Key Issues

In order to structure the study, the issues contained in the TOR were structured into four sets of key issues, which are then subsequently treated in separate chapters in this report: the planning phase of the LIS; the implementation; the outputs and their impact; and finally overall issues that affect a LIS process and its results.

Planning the LIS

In the sphere of the planning of the LIS, some of the key questions the Evaluation asked were:

LIS Planning: Were the different stakeholders aware of a LIS being planned in their country? Were they involved in planning it? If so, what role did they play? Did national authorities provide any guidance or clear decisions regarding the role and involvement of the public sector and other stakeholders? Did stakeholders feel their experience and views were used? Did they feel that the LIS staff were interested in involving national stakeholders?

LIS Methodology: Were stakeholders familiar with the LIS methodology? If so, what did they think were the strong and weak points about it? Was it seen as appropriate in the particular country context?

Links: Was the LIS linked to national or local planning and surveying processes (national development plans, etc)? Did the LIS fit in well with other planning processes and instruments that they were familiar with? Where was there room for improvements?

LIS Implementation

Regarding the implementation of the surveys, some of the issues raised were:

LIS Teams: What was the impression of the management of the LIS process? What were the views of the survey teams – were they knowledgeable about the task, committed, qualified, well trained? What were possible positive and negative aspects of the international and local teams?

Use of tools: The surveys followed some internationally developed standards, quality assessment approaches, software (IMSMA). What was the impression of these (quality, relevance, ease-of-use)? When these are compared to tools used in other surveys (health, food security, poverty reduction strategies, etc.), what were seen as advantages or disadvantages? Could the LIS benefit from the survey experience in other sectors?

Consultation: Who was consulted by the survey at national, regional, local levels? Did stakeholders experience the consultations as open, listening? Compared to other surveys and planning processes, how was the LIS viewed? What have been the reactions to the LIS by those who were consulted/surveyed?

LIS Implementation: What were the views on the process itself – timetable, resource use, the way the survey was conducted locally? If informants were to provide advice regarding the LIS process itself, what would that be?

LIS Outputs and Impact

Regarding the results of the LIS (in those countries that had finalized one) and how they were used and were of value, questions that were asked included the following:

Survey results: What was the quality, relevance of the survey report? Who has access to the report? Who has access to the data? How easy is it to use the data? Were they familiar with the impact ratings in the report ("high", "medium", "low")? Do they agree with the ratings? Should the ratings be done differently – if so, how?

Strategic Planning/Task Assessment and Planning (only in countries where appropriate and with the central actors for whom these issues are relevant): What was the impression of the strategic planning work? What is the value-added? Is the training helpful? Does the software address the right issues? Does Strategic Planning make it easier or more difficult to link up with other national planning processes? In what ways do Strategic Planning and TAP improve the utility of the LIS? How can possible shortcomings be addressed?

Practical results of LIS outputs: What are the national authorities using the LIS survey for? What is being done with the database? Is the database updated – if so, how often, and for what purpose? Apart from national authorities, who else is using the LIS survey in their work (NGOs, regional authorities, local communities)? What do they use the survey for?

It also became apparent that there was a need to situate the LIS within the larger development planning debate and experience, since what is new and important with the LIS as compared with standard "Level 1"-surveys is the concern about the socio-economic impact of landmines and unexploded ordnance (UXO), and how this should affect mine action planning and resource use, so this has been included as well.

3.2 Evaluation Process

The evaluation was carried out in a series of steps. The first phase was a general orientation phase. The team leader participated in the Survey Working Group (SWG) meeting in Geneva on May 12, where the general approach was presented and ideas and information provided. A general overview of key informants and important documentation was collected, and a Scoping Study presented on May 20 to the Evaluation Steering Committee.

A visit to Canada and the US to talk with key informants in the UN system, the SAC and VVAF, and other stakeholders took place in June, while other members of the team visited Geneva for meetings with the GICHD. A series of telephone interviews were carried out, and a desk study of the key documentation done. Based on this, an Inception Report was presented to the Evaluation Steering Committee on June 20.

The international team had divided tasks among themselves, among other things the countries that were to be visited. The TOR for the job specified that seven countries

were to be included, and that each visit take one week. This was a limited period, so in five of the seven countries experienced local consultants were hired to do both preliminary work, plan the full field work, and follow up once the international team left. Two of the international consultants visited each country, with one being "primary responsible". Each international consultants thus had two countries each except the team leader, who had one, but then in charge of the overall report.

A first set of three countries were visited end June-early July by both teams, and based on this, some adjustments were made to the planning of the second set of four countries, which were visited in August. Because of the very short time in-country, the international consultants often split in two: one would take a slightly longer field-visit with the local consultant, while the other would have a shorter field trip and interview more of the stakeholders in the capital (government, NGO head offices, donors etc).

3.3 Document Study

The document review was largely a desk study done before the field work began. It was complemented with follow-up work as a series of key documents were not received till after the field work had been carried out.

An inventory of known documents was prepared, and focus was on (i) general background information, (ii) GLS instruments (protocols etc), and (iii) country relevant information for the seven countries to be visited. The latter group of documents – the largest set – was distributed according to who had main responsibility for that country. The other documents were distributed across the team such that it was ensured that all relevant information had been read by at least one person on the team, and thus was "available" as input to the reports and the annexes.

3.4 Interviews

Three sets of interviews were carried out. The first one was with central informants from the main partners in the GLS on the donor and implementation side: the SAC and VVAF in Washington, the various UN agencies in New York and Geneva, representatives of international NGOs, and donors.

The second set of interviews was done during the field work. Information was collected from stakeholder representatives through one-on-one interviews, discussion groups, and group interviews in villages.

The third and final set of interviews were done after the field work was over, going back to some informants or reaching some others that were seen as important to provide complementary information to that already gathered.

In planning for the interviews, a Conversation Guide was prepared – one used for the first set of donor-country interviews and the second one for the field work. These Conversation Guides were distributed before the meetings so that informants knew what the team was looking for. It also helped the consultants focus on getting the key information during the limited time available for each interview.

Interview notes were typed out and distributed among the consultants, not least because the key consultant for a country was not present at all the interviews and these hence had to be shared.

3.5 Quality Assurance

The Evaluation has turned out to be fairly complex, so a number of steps were taken to assure the quality of data collection and analysis.

Two preparatory reports were produced for the Evaluation Steering Committee and the SAC, noted earlier: the Scoping Study and the Inception Report. Both studies were commented on by the Steering Committee and SAC, providing feed-back to the team's ideas on work plan, focus, and preliminary findings.

Once the field work had been done, the team wrote up Country Study Annexes. These were first discussed within the team, re-drafted, and then sent to stakeholders in the country visited. The stakeholders were asked to comment on the factual content, identify possible misunderstandings, but also point out disagreements with the analysis, conclusions and recommendations. The revised annexes have been included here in this report, and these form a key set of building blocks for the main report.

The international team has met twice during the process – once in Oslo in July, and once in Copenhagen in September. During these meetings the various aspects of the report were discussed, and Scanteam has organized an internal meeting in Oslo to go over the methodology with other staff of the firm. During the Copenhagen meeting, a representative from Cranfield Mine Action Center came over and gave a presentation on the Strategic Planning process that they are managing.

The final quality assurance step has been the chance to present the main parts of the report to the Survey Working Group at its meeting on October 15-16 in Copenhagen. An outline report, highlighting what the team felt might be the more controversial issues, was distributed a few days before the meeting. A presentation of the report was made followed by several sessions of discussion that brought out a number of issue for the team to consider.

A complete draft report was then prepared to the SAC for circulation to the SWG (the current document). Actors were thus given the opportunity to comment on both the main report and the country annexes, before the consultants finalized the report

4 Planning the LIS

The objective of a LIS is "to facilitate the prioritizing of human, material and financial resources supporting humanitarian mine action at the national, regional and global level through the completion of Level One Mine/UXO Impact Survey" (SWG, June 1998, quoted in LIS Advisory 03, *Survey Overview*). In line with this, a LIS is to provide (op. cit., p. 2):

- "Accurate information for strategic planning and resource mobilization:
  - Clearly defined needs and program requirements;
  - Informational tool for planning support and reporting;
- Baseline data to measure progress and support country Mine Action Centers:
  - Clear measures of performance;
  - Well supported comprehensive quality assurance;
- A platform to support multi-sector programming and research efforts."

There are therefore three constituencies that are foreseen for a LIS:

- *Funding agencies* that want better information for decision making regarding their support to mine action around the world;
- *National authorities* including Mine Action Centers (MAC) that need the information for planning, monitoring and assessing mine action activities;
- *Operators* working in mine affected countries engaged in mine action – demining, victims assistance, mine risk education, mine information/data collection activities.

The SAC and SWG formalized the procedures to be followed when carrying out a LIS in the form of nine Protocols and six Advisory Notes (see Appendix B, SAC 2003a-o). This covers the full process from the Advance Survey Mission, Expert Opinion Collection, a thorough discussion on data requirements and questionnaire, to the data analysis, discussions on the socio-economic indicators, etc.

The protocols were based in part on the experiences from some of the first landmine surveys that had been carried out in Afghanistan, Angola, Cambodia and Laos, as well as the United Nations' *International Standards for Humanitarian Mine Clearance Operations*. During the so-called "Brussels workshop" held in May 1998, UN agencies, NGOs and donors came together to agree on principles for landmine surveys, and the first protocols were agreed to. They have been revised, with the current protocols/advisory notes largely dating from January 2003. Some of these are still not considered final, however, as discussions are still on-going on some of the issues, such as Protocol 06, "Visual Inspection".

4.1 Background

It is important to realize that the LIS process has been in existence for only about four years. The development cycle has therefore been extremely intense, and has followed an unusually structured path. The Survey Working Group, but in particular the SAC/VVAF put in a very dedicated effort to put together the procedures and structures for the first LISs. There was a need for new tools concerning the socio-economic measurement, where largely *qualitative* data collected from communities through rapid surveys (structured interviews and map-based information) were to form the basis for ranking the impact of mines/UXO. The procedures for transforming

such verbal/"soft" data into *quantitative* ratings is a major methodological achievement.

While one might disagree with some of the *contents* of some of the Protocols and Advisory Notes, their production and the systematic and thorough analysis that lie behind them reflects a dedication and an accomplishment that is exemplary. The methodology and these standards are now internationally recognized and followed by the key actors involved in landmine surveying. The Protocols and Advisory Notes are furthermore publicly available and subject to continuous discussion and updating through the SWG.

Perhaps more important is that the mine action community – the NGOs and UN agencies involved – has been able to come together to establish the GLS through a collaborative and deliberative process unheard of in any other sector of development and emergency action. The donor community was involved in the formation of the SWG (during the Brussels workshop), but have since pulled out since the SWG primarily focuses on the operational issues of mine action (MA).

On the other hand, partner country actors – mine action centers, local operators, etc – are not part of the SWG. This is a major weakness in terms of credibility and legitimacy when it comes to discussing and deciding issues, such as new versions of Protocols. While the UN agencies presumably can speak on behalf of the international community, the NGOs cannot claim that they represent any other constituency except themselves. The SWG is thus a self-constituted body with no formal status within formal mine action. Whether this is a problem or not depends on what the future of the SWG becomes – whether it will continue to limit itself to addressing only LISs, or take on other issues within mine action.

4.2 Preparations for a LIS

The Protocols are in a number of areas quite demanding. The costs of the LISs are thus substantial, where the typical LIS has cost around USD 2 million, but where the Angola LIS is budgeted at over USD 6 million. The planning that goes into a LIS is therefore important to enhance both efficiency and effectiveness.

An LIS is to be based on a request by national authorities to the UN system. A UN Assessment Mission visits the country in question, and based on the visit and the dialogue with the authorities a decision is taken regarding the need and utility of an LIS[1].

Once the request has been accepted, the SAC is contacted to begin planning the survey process. This involves several tasks: mobilize the resources, organize an Advance Survey Mission (ASM) to plan the LIS, and contact potential implementing agencies that might want to carry out the LIS.

The ASM has a detailed list of tasks to carry out in a short period of time (Protocol 01). The mains tasks are (i) to get agreements with national authorities on all the formal requirements to carry out an LIS, (ii) visit the mine action community for discussion and joint planning, as well as information collection, (iii) identify sources of information and national skills that can be used for the LIS, and (iv) put together a

[1] The process that is to be followed is spelled out in UNMAS (2001): "Impact Survey Certification Committee: Terms of Reference". In principle it is quite rigorous and in line with standard UN (UNDP) procedures for screening requests for assistance from member governments.

draft project proposal with a timeline and budget, as the basis for planning the LIS. The practical information that is expected to be collected is comprehensive, whereas the picture of the mine/UXO problem may be more uncertain as there is limited time for identifying the probable scope of the issues.

The ASM is to consist of (a minimum of) two people, one of whom is a SAC staff member. The other has usually been a representative of the organization that has been selected to carry out the LIS.

Selecting LIS Countries

The process by which countries are accepted for an LIS varies. The standard procedure is through the UN system (see footnote 1). The first countries included Mozambique, Chad and Thailand. In the case of Thailand, which is not a heavily mine-affected country, the Thai Government's own strong request, combined with the fact that Thailand was the first country in the region to sign the Ottawa Treaty, led the UN system to conclude that a LIS was indeed useful. In the case of Mozambique, and later on Cambodia, a particular donor – Canada – took the initiative. The reason was that Canada and other donors were providing considerable funding for mine action, in Mozambique including for capacity development, but did not feel comfortable that the overall resource allocation and use was well planned.

The process for accepting countries, and prioritizing among them, should ideally have followed more planned procedures with the more heavily mine-affected countries coming first. In the real world, a number of factors have intervened to make the prioritization more *ad hoc*. Some governments have been reluctant to invite in external bodies to carry out information intensive surveys in sensitive areas (many of the mined areas may still be politically contested or a security zone). In other countries, governments may have been opportunistic, sensing both that a LIS could provide a high-profile event that would "market" their commitment to mine action – politically a positive signal – while there undoubtedly also were expectations that the survey would make donors more aware of the mine/UXO problem and thus help generate more external funding for mine action. The fact that the LIS itself is a grant-funded activity also means that governments may be more interested than the issue itself warrants from a national planning perspective.

Because of the possible distortions that exist in terms of the incentives to governments for wanting or discarding the possibilities of a LIS, the UN Mine Action Service needs to make a careful analysis of the arguments for a LIS. The first issue is if there is a genuine need for a LIS – the suspected mine/UXO problem requires a serious planning exercise – and the second is if the LIS is likely to be used such that resource use in fact will improve – the utility issue. The process regarding a request for a LIS should therefore follow the procedures established so as to avoid major resource mis-allocations: undertaking an expensive LIS in a country that really does not warrant one.

The Advance Survey Mission and Project Planning

The ASM as a planning process presents serious challenges. The time line for the mission has generally been very short, and the limited staffing – in principle only two persons – means that the mission may not have sufficient skills for doing a satisfactory job.

The outline of the project document that has been elaborated in Protocol 01 is largely in line with standard Logical Framework Approach (LFA) project preparation. There is an overarching Goal followed by the Objectives and then the Outputs that are to be produced by the LIS[2]. But the project documents that have been seen by this Evaluation have been quite variable in quality, largely because the actual planning process falls short of what are recommended as "best practice" planning approaches by the Development Assistance Committee (DAC – see footnote 2).

First of all is the process itself. While the LFA approach is best known (or disliked!) for the (in)famous logframe matrix, the core of the approach is the participatory planning process that should be followed: the stakeholder-, problem- and solution analyses, followed by the risk and alternative analyses[3]. The main purpose of this is to build a consensus with the key local actors ("stakeholders") around the understanding of the problem to be addressed, the solution set that is chosen, and finding collaborative mechanisms for implementation. This entire process seems to be missing from LIS planning, and this may lie at the heart of the short-comings that the LIS process is experiencing (a theme that will be returned to below).

While a rapid ASM may produce a formal LFA outline or matrix, the *contents* of the elements is often weak. In the Objectives hierarchy, the Goal and Purpose ("Objectives") need to make sense in the national context (see section 4.3). Another concern is the discussion of external factors and risk analysis (see section 4.4).

While the limited time has been a serious constraint, the Protocol itself needs upgrading. It puts a lot of emphasis on getting background information that is relevant for planning the *logistics* of the LIS. But there is relatively little concern about what this Evaluation would consider to be higher-order concerns. While it is important that the LIS "does the things right" (efficiency), it is more important that it "does the right things" (effectiveness). This is where the criticisms of the key aspects of the LFA come in (the next two sections), but also issues surrounding the ASM itself.

The first one is the question of whether the limited ASM mission contains good programming skills, not from a technical survey point of view, but from a mine action planning perspective (section 4.3). The second is if the ASM itself is structured well in terms of what are considered "best practice" principles for general project programming. The time constraint, a Protocol focused on the logistics planning and narrow planning skills have led to project documents that have been unrealistic both with respect to defining the problem, and the necessary budget required to do the job properly. The basis for mobilizing funding and for the implementing entity to plan for the task is thus unsatisfactory.

The ASM tends to include staff from the agency that later on implements the LIS. The ASM is thus almost a preparatory phase of the LIS itself. In some cases, the LIS has been initiated immediately after the ASM, so that there has been no time for local

[2] The DAC of the OECD – the secretariat in Paris that serves as a coordinating body of the bilateral donors – has put together a series of standards and "best practice" approaches for development cooperation. The DAC standards for project preparation, using the LFA, has a somewhat different language. Instead of Objectives being sub-ordinate to Goal (or Development Objective in UN system language), the entire goal hierarchy is collectively referred to as the Objectives of the project, and the second-order Objective is the project Purpose (or Immediate Objective in the UN system).

[3] A standard manual is NORAD's "The Logical Framework Approach", which has been translated into more than a dozen languages and is used by bilateral agencies as well as international and local NGOs around the world. See NORAD (1999).

actors to respond to and digest the project proposal. There is thus also a serious potential for role conflicts, as the ASM team can easily be accused of preparing a document that is suited to the known implementing agency (itself). The potential for such impropriety is normally something international actors are very conscious of and do a lot to avoid.

Local consultants are normally an important part of any planning process. These could be recruited from the local mine action community, but normally would be professional consultants who are familiar with the local framework conditions and are able to guide the international programming team. There seems to be very little involvement of local skills in the ASM except as informants.

There would normally be a time lag between the preparation of the project and the beginning of the implementation, to allow local actors to consider and comment on the proposal. This among other things is important for the ownership dimension to take hold.

Another issue is the extent to which such ASM missions in fact take place. This Evaluation was not able to find formal ASM reporting from several LIS processes. The attention to the planning dimension in general is therefore a weak point in the LIS.

Contracting for the LIS

The normal procedure till recently for contracting the organization to implement the LIS was simply that the SAC Board made the selection. This procedure contains two problems. The first one is the one noted above, that the agency was often selected before the planning had begun, so that it would take part in the ASM as well as do the LIS. This was justified on the grounds that it made the overall process faster and more efficient since the SAC then had only one party to work with throughout the process.

The other problem was the selection process itself. In some sense it was "open" since any organization that wanted to take on the task could put itself forward. But the decision and the criteria for the selection were not transparent, and there were complaints that Board members allocated LIS tasks to themselves. To what extent this is actually the case can be debated – but the appearance of possible role conflicts was quite clear.

Due to complaints about lack of transparency, the SAC Board in May 2002 changed the procedures, establishing a three-person committee to nominate the implementing partner (SAC 2002). One person was to be from the SAC Board while the other two would be appointed by the Board but could not be Board members. These latter two would change for each LIS.

While in principle this makes the process somewhat more transparent, major flaws remain. In the first place, the new Board Policy underlines that "this is not a tendering process but a partner selection process. This document in no way alters the fundamental role of the SAC Board to appoint the implementing partners,.." (SAC 2002, Introduction). So while the Nominating Committee shall make its proposal, "the final decision … remains with the SAC Board of Directors. If the Board chooses to appoint other than the recommendation of the Nominating Committee this decision is final. To serve the purpose of transparency, however, the SAC Board shall be required to state its reasons in writing to the SWG" (SAC 2002, pt. 3). It then ends with a point 4 on Sole Source: "SAC, in special circumstances, may recommend to the Nominating Committee that the normal practice be abridged and a sole source

contract be awarded. In these cases, SAC shall spell out the circumstances it feels warrants this recommendation".

This policy is clearly unacceptable. It is not in line with standard procurement rules of the UN system, the World Bank, or what the donor community is working hard to establish as "best practice" in normal development cooperation based on Good Governance principles.

Normally procurement of services above USD 1 million – which every LIS has been – would have to follow International Competitive Bidding (ICB) principles[4]. This becomes even more important here since the procurement is done by the SAC, which is a purely self-constituted body with unclear governance rules (how the Board is elected, its period of membership, its representativity, etc.). It is difficult to understand how the UN system could accept this situation (UN system representatives have sat on Nominating Committees, but are also fully in the picture regarding SAC procedures and actions). It is also hard to believe that the donors, whose funds are financing the LISs, would find this procurement policy in order.

At the same time, it is clear from discussions with some NGOs that they see no problems with the idea that a million-dollar plus task like a survey can be negotiated directly between an NGO and a donor, or through a host government. The idea that tasks that are considered to be primarily targeted to the NGO community should be put out to tender seems alien to several. The thinking is rather that if an NGO comes up with a good idea, like some form of a survey, and can get somebody to fund it, this is acceptable – "this is the way the NGO community often generates its business". Compared with this approach, the SAC Nominating Committee may be considered one step forward – but there is still a long way to go!

However, the partner selection might be decided by the partner country. In Ethiopia, the government wanted Norwegian People's Aid (NPA) to carry out the LIS because it trusted NPA given NPA´s earlier presence and services in the country.

As noted earlier, the agency that is given the contract to plan would in normal bilateral cooperation not be allowed to bid for the implementation. In some agencies, this is addressed by having an independent appraisal before the implementation task is set out to tender[5]. But project planning remains an identifiably separate task from project implementation.

The objection to tendering that comes up is that this makes for a more bureaucratic and thus slower and hence more expensive approach. The lessons from development cooperation, however, is that this procedure provides better value for money, and thus is worth it.

In the case of the LISs, there are several problems identified that may in fact be better addressed through such a tender process. The first one is that there is disappointingly little continuity of survey management from one country to another: few staff that worked on a survey done by an organization participated in any subsequent surveys

[4] A number of bilateral donors have an even lower threshold value, such as USD 500.000.

[5] In the Danish system, for example, a firm can be contracted to do the planning, and Danida's Technical Department will then lead an independent appraisal. Once the appraisal has been completed and the project document revised according to the appraisal report, all firms are permitted to tender, as Danida feels that the Technical Department will have verified that there are no "hidden agendas" and biases in the final project document that would favor the planning firm over its competitors.

done by the same organization[6]. That means that much of the learning that takes place in the course of running a survey is lost, hence the argument for continuing allocating surveys to the same NGOs loses much of its validity. If an invitation to tender made it clear that a key criterion for weighting proposals would be experience of team members and in particular of the project manager, the probability of bidders ensuring that they have recruited experienced staff would increase considerably.

Other considerations can also be better specified in an invitation to tender, such as how Quality Assurance is to be addressed, the pre-testing and social science skills that will be employed for the questionnaire, etc (these issues will be raised later in this report). In each case, as particular considerations come up and as lessons are being learned, SAC would be able to define what it is that is required and expected, apart from what can be read from the protocols, ensuring value for money.

Conclusions/Recommendations:

- The LIS process has only been in existence for four years, yet has made strides through a consistent and persistent development of the methodology to be used. A set of publicly available Protocols and Advisory Notes have been produced that are under constant revision, and are now widely accepted internationally as standards for such survey work. This is the result of a unique coming-together of the key actors in the UN and NGO mine action community – though the lack of partner country representatives weakens the SWG's credibility and legitimacy when formal decisions are taken.

- The LIS is a costly undertaking, and should therefore, as far as possible, follow international "best practice" standards and procedures:
    - The request for a LIS should be handled according to UNMAS 2001 TOR. It should be subject to a critical assessment of the need and utility of a full-scale LIS.
    - What is currently an ASM should become a standard project planning exercise, using LFA participatory processes. Sufficient time should be used to ensure that the identification of the main project elements are done satisfactorily, local skills should be fully utilized in the planning, and the involvement of local stakeholders needs to be ensured regarding problem definition and choice of implementation modalities.
    - The project planning task should be contracted out based on clear TORs, where the practice of having an SAC staff member as part of the mission is helpful.
    - The implementation of the LIS should be set out to tender based on ICB principles.
    - Whether the same entity can both plan and implement a LIS should be considered by the SWG. If this is accepted, the potential role conflict needs to be solved through satisfactory procedures.

[6] One interesting exception is in the NPA part of the Angola survey, where NPA has hired the former manager of the GSI survey conducted in Cambodia. But NPA, which is the agency that has carried out the most LISs – in Thailand, Ethiopia and now Angola – has not been able to find somebody within its own staff to become project manager.

4.3 LIS and Development Planning

For national authorities, mine action (MA) is one of many interventions required for sustainable development in mine-affected communities. MA ought therefore to be part of the larger planning and monitoring concerns of government. The LIS, which is concerned with blockage of access to key resources and the negative impact of mines/UXO (victims in particular) should therefore be seen as one of the many planning and management tools the government has for better resource allocation, monitoring and implementation.

From a general development perspective, MA enters as another concern on the development agenda, just as gender did some 20-25 years ago, environment 15-20 years ago, "good governance" and human rights ten years ago, etc. The pattern is also similar: these concerns were first driven by concerned groups who brought to the issue particular tools and skills, started out with demanding separate funds and treatment, but over time became integrated into larger processes due to lack of sustainability and impact through the marginalization and "separateness" of the work.

The LIS itself is conceived as a stand-alone exercise, however – there is nothing in the protocols that ensures its integration into other planning processes. Yet any donor-funded activity should be assessed in light of what other potentially complementary activities are in place or are being considered. The LIS planning should therefore carefully analyze what kinds of links can be established to other national information and planning tools, since the LIS generates high quality data on a number of variables. Key processes in poorer countries would be Poverty Reduction Strategy Processes (PRSPs), but in general the links to national statistical offices, regional and national spatial planning bodies, and to planning ministries or similar national coordination institutions should be sought[7]. It is not always feasible to establish such linkages, but if the planning process concludes that the LIS indeed should be a stand-alone event (for example in a country recently emerging from conflict with no or little structured planning and information collection), then the LIS itself should be down-scaled.

A key aspect of this “linking” analysis is the study of relevant information already in place within the mine action community. In a number of countries where mine action has been taking place for years, actors have already generated various kinds of data: victims’ databases, various mine contamination surveys, etc. Being able to access and use this data has been problematic, for a number of reasons. In some cases, operators have collected data based on their own direct needs, so specifications and variables used do not match what the LIS is to collect, the quality of the data is unknown, the data are not in the public domain so other actors have not had a chance to comment, etc. In Cambodia, an earlier survey in southern provinces did not include the kind of quality assurance the LIS demands, so while “lessons learned” were valuable, the data were not. Similarly for the victims’ database, which had been in existence for a number of years, but where in particular the linking of accidents with the accident site/community was found to be so different that it could not be merged with the database the LIS was to generate (see Annex E). Being able to piggy-back and link is thus not easy, but needs to be carefully studied during the project planning phase.

[7] This is not saying that a LIS would easily "fit" with other information gathering activities, or could piggy-back on other activities. There are often high costs to such coordination – see for example Aldo Benini et. al. (2003) which analyses the experience from the Lebanon LIS of taking advantage of agricultural survey data to get a better socio-economic impact analysis.

LIS planning should also consider what kinds of aid management/aid coordination bodies exist, so that the LIS as process and the LIS products are as well coordinated with other bodies as possible. It will ensure a higher profile and better acceptance among actors who may be "gateways" to other decision makers.

The experiences from gender, environment, and human rights action point to the need to move from project to sector or program planning (such as SWAPs, Sector Wide Approaches to Programming); more holistic planning such as PRSPs; longer time horizons to ensure that interventions such as capacity development are addressed properly; clearer prioritization so that activities are in line with resources and priority tasks are addressed based on national criteria (transparency in resource allocation); national authorities must clearly be the decision-makers ("in the driver's seat"); local ownership must be in place so that relevance and sustainability are assured. One sub-conclusion of this is that the LIS itself ought to be analyzed and inserted into the MA "sector" debate. The LIS should be seen as useful by key MA actors before many resources are allocated to the survey itself.

Conclusions/Recommendations:

The LIS is currently structured as a "stand alone" event and is an externally driven and defined process that is poorly integrated into national tools and tasks.

- Links and "hooks" (such as data transferability) to other processes and instruments should be considered or developed to enhance relevance and usability of LIS results (broaden user groups and beneficiaries). A strong participatory planning process can ensure that these dimensions are properly addressed.
- MA in general and LIS in particular should move towards the more general sector-planning approaches developed in host countries, and adopt to the processes and criteria that are applied to other sector interventions in the country.

4.4 Project Document and Risk Assessment

The risk analysis in the ASM Protocol looks at factors such as weather and the security situation – factors that impact on the delivery of the project's Outputs. But a greater concern are the factors that will affect the higher-level objectives since the Outputs are only means to an end: the LIS is to support decision making, with the Goal being a mine-risk free society or similar. That is, the fundamental assumption is that LIS outputs will be used by key actors, where the main ones are (or ought to be!) national MA bodies/authorities. An important task of the project planning should hence be to carry out an analysis of the national capacity to manage, participate in and use the LIS. The two sets of questions that are important for this risk analysis, are:

- Is/are the national MA institution/s likely to be active participant/s in the LIS?
- Is/are the national MA institution/s likely to use the LIS results actively?

The key dimensions are **capacity**/ability to participate/use the results (they have staff, operating budget, etc), and **commitment**/willingness (authorities and institution really want to participate and use the LIS). Such a risk-matrix is thus the following:

Capacity ⇩/ Commitment ⇨	Low	High
Low	Unwilling & incapable	Incapable, but willing
High	Unwilling but capable	Willing and capable

Defining in which quadrant an institution falls is important, because the top-left quadrant (low capacity and low willingness) is, in LFA terminology, a "killer assumption": if a key institution belongs here, the LIS itself is probably not viable.

Thailand clearly falls into the Willing and Capable category, and Yemen is close: it has allocated as much of own resources as could reasonably be expected. Ethiopia is similar to Yemen, with strong political will to manage and own the process and its results, though with insufficient own means to address it fully.

Angola would be in the opposite corner – a regime that so far has shown neither commitment nor built any serious own capacity in the MA sector.

Cases like Mozambique and Chad are less easy to decipher. There is clearly very little capacity, but the big problem is to understand whether there is or is not political will to address MA seriously.

Commitment is an internal decision variable, under the control of national authorities. If they do not show commitment, there is little external agencies can do, especially in the short run.

Capacity is something that donors can contribute to – in fact that is what donors largely do! – so this can become a joint responsibility. But Commitment is more important than Capacity. Without the Commitment no amount of Capacity is of much use.

In general the project document should be more elaborate on what the situation at the end of the process is expected (or desired) to be. This will make it clearer which assumptions are either explicitly or implicitly required for this result to be realistic. This would most likely point to a need to discuss the role of the various stakeholders, both during preparation, implementation and then use of LIS results afterwards. This stakeholder analysis would also make it clearer how good the planning process has been in terms of the involvement of the various stakeholders during the planning, so that something can be said about revealed commitment and thus the likelihood of expected end-of-LIS situation.

Conclusions/Recommendations:

Generally, the project documents do not reflect the serious risks related to the political capacity and commitment of the beneficiary. An assessment of the risk of delays, lack of funding owing to political reasons etc. is missing.

- The planning should include a standard LFA risk assessment, looking at all the elements of the goal hierarchy.
- Particular attention should be paid to a realistic assessment of the key national institutions regarding their commitment and capacity to participate in and use the results of the LIS:
    - If there is Low Capacity, the LIS should have a Capacity Development component as an integral, early and important part of the LIS.
    - If there is Low Commitment, then it is doubtful if it is meaningful to carry out a national LIS. Alternative models should be explored instead[8].

[8] In Angola, active operators could carry out LIS-like surveys in the areas they work in, to ensure that second-order (regional) resource efficiency is attained. This would also lay the foundations for either a

4.5 Structuring LIS Planning

LIS planning is today too truncated with insufficient participation by key stakeholders in the identification and formulation of the project document. The information base is too narrow. The result has been that knowledge about and interest in the LIS has been limited, while some of the proposed timelines and budgets were unrealistic, leading to extensions and changes to these critical LIS parameters. The ASM should be transformed into standard project planning, with more time spent on collecting data on the core issue, namely the mine/UXO problem. The Expert Opinion Collection (EOC) should therefore be an important part of the planning exercise (further EOC can be carried out by the LIS itself, if this is found to be helpful).

The necessary *political* framework conditions – agreements such as Memoranda of Understanding (MoUs) – should be in place before the formal planning begins. While this may delay start-up, it is important that the government has assumed the political commitment up-front. The MoU in Ethiopia was signed after the mobilization for the LIS began, delaying start-up by several months, increasing costs considerably.

Separating the planning from the implementation, with these two activities are carried out by different organizations, may entail information loss. But even the EOC is little more than a planning tool for the actual LIS. Providing a better picture of the task at hand through a more thorough and rigorous planning will likely offset this possible downside. The implementing organization should consider ways in which it can tap into the information mobilized by the planning mission, such as the local consultants.

There is concern within the MA community that this more formal planning may make the undertaking more bureaucratic and costly, reducing *efficiency*. But the lesson from development cooperation is clear: getting the planning right first time around enhances *effectiveness* (achievement of project purpose), and this is a much greater concern. Short-term efficiency concerns should therefore not upstage the longer-term effectiveness considerations.

Conclusions/Recommendations:

- The overall plan from planning through implementation needs to be sorted out with the national government. Formal clearance, such as a separate MoU or other government agreement, should be in place *before* project planning begins.
- Project planning should include the Expert Opinion Collection (EOC) process to give the project document a solid informational basis so that budgeting and timeline preparation is realistic[9].
- The project document should be subjected to the normal scrutiny by national authorities and local stakeholders before final approval. Without this, national ownership becomes problematic.
- SAC/SWG might want to organize one or two regional workshops with local partners to discuss current LIS standards and the need for flexibility to adjust to partner country conditions and needs.

"retrofit" national survey later on, or at least create solid partial bases for a later national effort. Following the LIS standards would ensure that these options are realistic

[9] This form of information collection is in principle what project planners do, but the EOC standards are better and more specific, so the LIS would be "best practice" in this field.

5 Implementing Landmine Impact Surveys

Most of the Protocols and Advisory Notes, logically enough, address issues concerning the actual implementation of the LISs. This goes from organizational issues, to problems how to carry out the interviews, the visual inspections of Suspected Hazardous Areas (SHAs), and surveys based on sampling, retrofit surveys, and false negative sampling. These documents are generally very operational and provide clear advice as to how the survey should be done. Protocol 05, which is the guideline for the interviewers, is particularly important – and good – as it discusses how interviews are to be conducted, the structure and phasing of the process (doing the visual inspection of the SHAs after the interviews are done), the biases that are inherent in such an interview-based survey, etc. The Protocol notes the need for addressing the gender dimension properly, the variation in backgrounds required of the community group being interviewed, and the problem of having the interview certified by the community leader. Since the background of the surveyors has varied considerably between and within country teams, these kinds of clear guidelines are obviously helpful, both for the surveyors themselves, management, and the ones responsible for training the surveyors.

In terms of the actual implementation of the LIS, in virtually all cases the processes have been exemplary: operational plans have been made, external and national staff have been recruited according to job descriptions, various forms of training/skills upgrading have taken place, testing of the survey instruments have been carried out and modifications done, and the field work then done according to (sometimes revised!) time plans and largely within (revised !) budgets. Yet a number of LISs have faced criticism.

5.1 Dialogue with Stakeholders

As discussed regarding the planning of the LIS, a key issue is the dialogue with local stakeholders. This includes national and regional authorities, development actors in mine-affected areas, and local mine action agencies, including the international NGOs. In line with the Protocols, in all the countries visited by this Evaluation there has been a serious effort at ensuring this kind of dialogue, and clearly much time has been spent in the early phases of the LIS to verify available databases, contact stakeholders, etc. But because the planning phase has been rushed, stakeholders were not brought into it, do not feel much ownership to the LIS, and thus do not always pro-actively engage.

Perceptions about the dialogue are in some cases very contradictory. While some are adamant they were not really consulted, the LIS implementers are equally clear on the lengths they went to ensure involvement by all relevant actors[10]. The bottom line seems to be that for whatever reason, in some countries key actors did not feel they were taken seriously and thus (i) believe they were not able to contribute the information they already had, (ii) therefore disengaged somewhat from the LIS process, and (iii) tend to discount the LIS results afterwards. This Evaluation would attribute a lot of this problem/short-coming to the rushed and thus truncated planning process, which in particular did not engage the stakeholders in the kind of participatory planning process that long experience in development cooperation points to as necessary for participation, engagement and ownership.

[10] The most controversial cases were Cambodia and Mozambique – see Annexes E and H.

5.2 Project Set-up and Capacity Building

The protocols assume that the LIS is largely to be handled as a "turn-key" project: an external agency is given the contract to deliver some outputs, and thus should focus on doing this on time and within budget. The attention to issues like the follow-up use of the LIS results and capacity building is thus second-order, though these are critical for attaining the higher-order objectives – more efficient MA resource use.

All LISs had established links with the national mine action center (MAC) or authorities. The longer-term effect varied considerably, however. In some cases LIS project management was established within the premises of the national counterpart agency, which assisted skills transfer and other forms of learning. Even in cases where this took place, such as in Thailand, however, longer term capacity development has been elusive, largely because the Thai MAC is within a military structure. Due to the rapid turn-over in military staff, two years after the termination of the survey virtually none of the officers who had participated on the LIS remained within the TMAC. UNDP had hoped to have their capacity building project in place by the time the LIS began, so that training of also civilian authorities could be done in connection with the field work. The agreement with the government was delayed by 18 months, however, so that by the time the project was agreed to, the possibilities for involving also civilian (more permanent) structures had been lost (Annex I). This case shows, in the view of this Evaluation, another example that argues for doing the LIS planning carefully: get the various components of a more consistent mine action program in place.

In Yemen, and currently in Ethiopia, the ownership by the national authorities is such that the links to LIS management will have a more enduring impact (Annexes G and J). In Mozambique, little was attained in the area of capacity building, in part because the LIS project in its early phases was not located with the national MAC. But in Mozambique an analysis of the national MAC would also have shown that the political commitment to ensure capacity development was extremely weak, so the attempts to ensure sustainability of the use of LIS outputs would have to be structured around this.

Conclusions/Recommendations:

- The problem of Capacity Development should be given attention during project planning. If local capacity is seen as a problem, sufficient attention to how this should be addressed during the LIS should be included as part of the LIS project.

5.3 Activity Management

One of the most striking features of the LIS process is the very careful and detailed planning of the field work, and then the near-obsession with sticking to the time schedules. On the one hand, the LIS exhibits some "best practice" characteristics in terms of planning the logistics, the administration, the communication and management of a large field-based survey. National census authorities and others who carry out large-scale surveys can undoubtedly learn a lot from this.

Time Management

On the other hand, the tight timeline set for the entire exercise becomes a straight jacket in that more time for quality-assurance steps (see below) may be excluded. The need for deadlines due to cost considerations is appreciated. The overall need to set very tight deadlines is not understood, however, since no LIS – as far as the

Evaluation was able to establish – ever had to deliver key information into a time-critical decision-making process (annual budgeting/planning cycles, Parliamentary decisions, etc.).

Instead a combination of factors seems to be contributing to this exaggerated time concern. The first is seeing the LIS as stand-alone, so it does need to be concerned with any other efficiency criteria but its own, so "getting the job done" becomes task number one. The second is undoubtedly the military influence on the thinking about how best to achieve one's objectives, with detailed planning followed by disciplined implementation. Finally is the continued tendency to see all mine action as an emergency activity, so that time remains of the essence.

Information Management

The reporting back from the field has been very intensive. Data transfer from the survey itself is of course critical. But in most cases management seems also to have been engaged in constant surveillance of the activities as such, with an intensive activity-based reporting taking place. This has been a very time/administration intensive activity which in the opinion of this Evaluation does not generate much value-added for managing such a survey. Normally one would use simple "variance reporting", so that deviations from the foreseen program are conveyed to management for discussion and decision. Otherwise decisions are pushed as far down the hierarchy as possible, so that area managers or the equivalent take the daily decisions on how to cope with unforeseen events and delays.

This tendency for over-reporting goes all the way through the system, with SAC sending out weekly reports from every LIS process underway. One thing is that it is unclear why this is done – hopefully nobody outside the LIS management interferes in how the local contractor does the job. But the other thing is that management clearly must spend considerable time on these reports, which are of the kind that most managers today would like to avoid: lots of detail on activities, but little of substance on achievements.

Conclusions/Recommendations:

- LIS reporting should be streamlined so only information required for decisions is forwarded (such as variance-reporting), apart from the contents-reporting on the data. This should be followed throughout the LIS structure, so that there is performance- but not activity-tracking at higher levels.

5.4 Questionnaire

Two of the longest LIS documents address the questionnaire issue. The 140-page Protocol 3 is called "Minimum (!) Data Requirements and Questionnaire" while Advisory Note 4 is a "Background Paper on Socio-economic Indicators". These are thorough discussions regarding the data to be collected, and why. The data needs have evolved as a function of the felt needs by key actors in the LIS processes. When the questionnaire is discussed with actors in the countries to be surveyed, the typical change request is to add more data because each actor has some additional variables that it would be helpful to get information on. The net result has been that the questionnaire is being felt as too large and unwieldy. More important, however, is that most of the information is in fact never used by anybody.

The starting point should once again be in the planning exercise. Which actors are likely to use the database, and for what purpose? This is where the "hooks" to other

surveys and planning processes is important. If it is likely or certain that the LIS database will be used also by other actors for decision making, it may make sense to add some additional variables in order to provide the value-added for other central processes, since the LIS already is such an expensive undertaking (other actors who wish to engage in mine affected areas may want such information for taking own decisions, such as health authorities for more effective victims' assistance interventions or education authorities for rebuilding education infrastructure, for instance).

As long as the LIS is structured as "stand alone" and thus is not specifically going to feed into any planning process outside the MA community – and this was the case in all the countries visited by this Evaluation – then the basic approach should be according to what the protocol itself suggests: a "minimum data needs" survey. All the information on social infrastructure (schools etc) is of little use unless these particular buildings are blocked by mines and thus enter the "blockage" analysis.

An argument was made both in some countries visited and by some of the MA agencies that the LIS high-quality data can be used by other ministries. This argument might be valid in a country where the LIS is a truly national survey, like in Cambodia, since it then gives a picture of the entire country. In almost all countries, however, the LIS only gives data on the mine affected communities, which is a very biased sample. The LIS data can therefore not be used to extrapolate to the national level, so for a ministry to have very good data on 14% or even 36% of the communities is not helpful from a planning perspective. The one exception is that in several countries, the GPS data were used to update the national gazetteer.

LIS data may be of more interest at local level in mine intensive regions, but in no country this Evaluation visited did we find any agency outside the MAC that was using the LIS data for planning purposes. In Cambodia the Land Use Planning Units (LUPU) in the most mine-affected provinces were just being trained in the use of the LIS data as this mission visited during the summer of 2003, more than a year after the LIS had been completed. The Evaluation noted that the data being collected by LUPUs contained many of the same variables, so there was a possibility of some synergy. But by and large the LUPUs collected the data in the field for those specific communities where they were considering land allocation activities – and these decisions were not driven by the kind of top-down strategic data pictures that the LIS generates but from a bottom-up political process. So even in Cambodia, the use of the LIS data was virtually nil outside the MA community.

A similar picture emerges regarding the socio-economic information. Data on distribution of labor across sectors etc is potentially interesting if it is used for something. For the LIS ratings themselves they do not enter, so they are not a "first order" piece of information such as the blockage and victims data. If there is more refined analysis being carried out in terms of understanding larger implications (blockage of pasture land in a village where only 5% engage in livestock raising is very different from one where 80% have livestock), this may be helpful, but this kind of more detailed analysis seems to be done only when actual development activities are being considered for the village, not in the LIS study itself.

Conclusions/Recommendations:

- The standard questionnaire should be reviewed for a focus on only collecting "first order" data. Other variables should only be included if it is clear that they will be used by actors for important decisions

5.5 Quality Assurance

Another strength of the LIS is the quality assurance (QA) that is applied to the process. The QA has two dimensions – internal and external.

The internal QA is the most important. This has varied from informal supervision systems to a very structured program such as the one in Cambodia that itself took about 10% of total resources. This included the programming of data consistency checks for data entry, the UN mandated re-survey of 3% of communities, etc.

External Quality Assurance

The external QA Monitor (QAM) supplied by the UN has often come in too late in the process. Exactly where the problem lies is not totally clear, but late QA is poor QA, since "quality at entry" is key to overall quality. If the intention is to ensure quality through external QA supervision, then the QA manager must be in place by the time the key decisions are being taken at the beginning of the process.

The QAMs have in fact functioned as senior advisers to LIS management as well. This service has been very much appreciated – but exactly because there has been so little learning across LIS processes that the QA managers represent "institutional memory".

The need for the external QA hinges to a large extent on whether or not the UN Certification Process is still seen as necessary. If that disappears (see more on this later), what largely remains would be the senior advisor services. This is turn is only required to the extent that the LIS process itself is not able to ensure more continuity and consistency.

External Quality Assurance and ISO Standards

According to Terms of Reference for the UNMAS Certification Committee (UNMAS 2001), the key element of the certification process is QA monitoring based on the external QAM. The task of the QAM is very comprehensive and requires a high degree of presence in the field controlling the LIS activities. The budget of the QAM for the LISs have been USD 40-50.000, reaching USD 90–100.000.

The International Standardisation Organisation (ISO) has issued a set of guidelines for Quality Management Systems (QMS) called the ISO 9000-2000 series. ISO 9000-2000 is widely implemented in the development sector among major donors, consultants and contractors. It is described in International Mine Action Standard (IMAS) 07.10 "Guide for the management of demining processes". It encourages managers of demining organizations to examine how to apply the principle of quality assurance to mine action.

The principle of ISO 9000 compared with the LIS certification processes and QAM is that the ISO 9000 is based on *management procedures* whereas QAM is based on *control by checking and repetition of processes/activities*. Application of ISO 9000 to mine-*clearance* is controversial because of the risk of accidents. Applying ISO 9000 to the LIS process does not contain this problem so the Evaluation believes that the ISO 9000 would be appropriate to the LIS (and the certification procedure, if this is kept).

Use of ISO 9000 Standards

The big issue is how many more LISs the SWG expects are still to be carried out. If there are only a few major mine-affected countries yet to be surveyed, it may not be necessary to implement major changes. The basic question then becomes whether Certification is necessary or not. If not, the second issue is then whether the kind of external QAM is required, or whether it is largely the "senior advisor" services that are most sought. And this need, as noted earlier, can be better addressed by ensuring that the incentives for the implementing partner are such that they are not likely to get the contract unless they have such skills in place (they can in fact include such senior skills directly as part of their tender proposal).

On the other hand, if there is a felt need for continued external QA, the Evaluation would suggest moving to using the ISO 9000-2000. In the context of the GLS, this would requires the following steps:

- The LIS process should be subject to a QMS covering external and internal QA.
- An external audit of the external QA system should take place as a basis for the certification process.
- SAC or UNMAS should contract a professional (certified) QA auditor to perform an audit of all future LIS.
- A LIS Advisory on the Quality Policy and Certification Process based on external Quality Audit should be prepared.
- A LIS Protocol on a standard Quality Management System for all LISs should be prepared.

It is anticipated that the consequences will be that:

- The LIS process, certified against an understood and known standard, will gain more credibility in the national and international development sectors.
- The certification process will be easier and more transparent.
- The cost of QA can be reduced.

Content of Quality Assurance

Regarding the *content* of the QA, the Evaluation finds that there is too much attention paid to the third-order issue of data veracity ("are the data entered in the database the information that was provided by the informants?").

The first-order issue of whether the survey is asking the right questions has been addressed above (should the survey contain all the current questions – is this necessary to answer the key concerns?). The second order issue, which is often the most difficult in such surveys, is if the questions being asked in fact generate the information desired (are data collected valid and reliable?). This needs to be tested for, and this is in part what the pre-test is meant to do.

The one study of the validity/reliability of the LIS survey data that this Evaluation is aware of was quite critical to the LIS information. Three villages in Mozambique were visited, where the researchers spent a couple of weeks in each place to be able to collect more careful and in-depth data. The basic finding was that the rapid survey could not capture the impact picture very well (Millard and Harpviken 2000). They furthermore point to methodological biases in question formulations ("how many

have been hurt…" rather than the more neutral "has anybody been hurt…"). They also note that the selection of informants in several cases was not good – the best informants were not included. This included the rather obvious one of including local mine operators, an observation that is in line with the comments received by this Evaluation in a number of countries. Another issue that was raised by several field-based organizations during this Evaluation was that the rapid survey techniques being used may not succeed in collecting the information desired (information is missed, partial/distorted information is received – for a number of reasons).

One reply to the Millard/Harpviken critique is that the kind of in-depth study that they carried out is not realistic to replicate by a national survey – the purpose of the LIS is exactly to try to scale down to a few common denominators the concerns of local communities. But the study does point to problems with the validity/reliability of the picture that emerges that a QA system should try to address. The best means for doing this is probably to carry out some in-depth re-visits of communities visited early on in the process, to check if information collected can be verified by more in-depth studies. If not, the LIS needs to consider what is causing the biases and adjust the information collection instrument or procedure.

The current QA systems thus seem to focus on whether the data transmission chain from informant to database was able to maintain data integrity. The answer was largely Yes, but with very high QA verification costs. This focus on data integrity when data reliability/ validity is a bigger issue seems to be a misplacement of effort.

Conclusions/Recommendations:

The certification process is rather complicated and expensive, and not in line with international "best practice".

- Internal QA systems should be a key criterion when selecting bidders for implementing a LIS.
- "Best practice" internal QA systems developed in connection with LIS implementation should be posted on the SAC web-site as help for other LIS implementers (helpful if for example NGOs in Angola were to do regional LISs).
- The role of external QAM may not be necessary (see later).
- QA resources should be spent more evenly across the three dimensions of data quality: (i) is the survey asking the right questions (relevance)? (ii) does the survey generate answers to the questions being asked (validity, reliability)?, (iii) is data integrity along the information chain maintained?
- Application of ISO 9000-2000 should be considered.

5.6 Local Survey Skills

The LIS uses local surveyors to carry out the actual field work. The recruitment base for the surveys have varied considerably, from Cambodia where the implementer was locked into hiring only former deminers, to Mozambique where most of the surveyors were recent university graduates with no demining and little field experience. The implementers have had to balance the need for getting as accurate readings on spatial parameters as possible – location of village, of accident sites, size of SHAs, etc – as well as distinguish poor data from valid, and to ensure that all the voices and interests have been duly heard. This requires a range of skills that few individuals have, particularly in skills-scarce societies like Mozambique. The training that has been

provided seems in most cases to have been quite good and relevant given the background of the team members, though experts in both mine area surveillance and group interview techniques would consider the training to be rather superficial, with consequent results for the quality of the information collected[11].

The Evaluation would not be so harsh in its conclusions, however. By and large the teams seem to have been very dedicated, have worked hard, have taken the task seriously, and delivered often outstanding performance in terms of data collection. Staff have been tested before the real field work and often been re-trained/had their skills upgraded during breaks in the actual field work. This approach is probably "best practice" in terms of survey staff hired for large-scale field surveys. The survey staff have therefore been through a very good school in terms of the organization, running and implementation of such surveys. The issue is if the country benefits as much from this valuable capacity development as is possible.

The first question is if LIS management has searched for possible institutional partners in recruiting surveyors. National statistical offices, social science departments at universities, independent research institutes and other bodies may be interested in finding collaborative arrangements to either have own staff or people they otherwise use for their own survey activities involved in the LIS, in large part for the learning effect (but the LIS is also often interesting to the individuals as employment opportunities). The "capture" of the lessons from the LIS is then much greater as the surveyors and their new skills are known to logical future users of these same skills.

Local social science/university skills should also be used as much as possible. Several possibilities exist: (i) act as trainers to surveyors, (ii) become involved in the discussions on weights, and in the analysis of the final data (having graduate students do their theses on LIS data could be very valuable), (iii) do research-based village re-surveys, to provide an independent QA on the survey instruments being used. The idea would be that local science skills are used to re-visit some of the first communities surveyed by the LIS, to verify that instruments and approach generates valid and reliable information, and if not to provide ideas on how this can be corrected for. By involving researchers in the effort early on, the LIS will also generate an important set of stakeholders as well as key persons for maintaining "institutional memory" about the LIS and its results.

Conclusions/Recommendations:

- The project planning process should include the identification of possible partner institutions for the implementation of the field survey, to ensure that as much of the learning from the LIS survey process as possible is internalized by national institutions and not just simply by the individuals engaged.
- The active involvement of local social science skills in the LIS process could be encouraged along several lines: (i) as trainers/teachers, (ii) as analysts and disseminators of results, (iii) as resource persons to the LIS itself, including on discussions of local adaptation of questionnaires, weighting schemes, and as external QA for testing the survey instruments and techniques.

[11] Several social scientists spoken with were quite critical of the kinds of skills that the surveyors were given. The Evaluation believes on balance, however, that the kind of training that would be necessary to attain the quality that these informants find desirable, is not realistic. It is more important to verify that the instruments are as good as possible, and then train the surveyors in using the instruments.

6 Results and Impact of Landmine Surveys

The last two Protocols address the questions of Impact Scoring and the Data Analysis – how to process the data generated from the survey to produce the main outputs of the LIS: one or more reports detailing the process and presenting the findings, often broken down by region; the database, including with possibilities for map-based presentation; and some analysis of the data, in particular providing a rating of communities ("impact scoring") in terms of severity of the impact of the mine problem for the communities based on the variables and weightings of these that have been discussed before the LIS begins. These outputs are to contribute to the Purpose of ensuring better decision making and deployment of scarce MA resources, with the Goal of eliminating or reducing the negative consequences of mines and UXO in-country.

6.1 Use of LIS Outputs

As noted, the intention of the LIS process was to make the information available to three sets of actors, for better decision making and action by them: international funding agencies; national mine action authorities, and MA operators on the ground, whether engaged in demining, MRE, victims assistance, etc.

Donors

The response from the donors is that they themselves do not use the LIS reports for own decision making, but it is important to them to know that the host country does! That is, they want to feel reasonably certain that local MA resources are used well, and having a LIS in place as the basis for planning is seen as a strength.

While the LIS is therefore not contributing much to donor decisions directly, as had been the intention, the LIS is indirectly important as it provides the donors with a possibility for verifying if a partner country is in fact using the LIS information or not.

While at first glance this may seem a somewhat disappointing conclusion, it is in fact in line with the way donors currently prefer to work. Donors want the partners to take responsibility for their planning and implementation, and the donors will then verify the quality and veracity of information provided, and on that basis accept to continue supporting. The main decisions on how much to allocate across which partners is driven by political agendas back in the donor HQs – but where the reporting from the field on the quality and commitment by the partner is important for shifting resources over time.

National Mine Authorities

The use of the LIS by national authorities varies considerably in line with the Commitment/ Capacity dimensions discussed above. But Commitment is also a function of how important the mine/UXO problem is in the national context. In Mozambique, the mine problem is not included in the country's main planning and coordination instrument, the Poverty Reduction Strategy Paper (PRSP), because there are other issues that are of much greater concern to the authorities: rural poverty, HIV/Aids, lack of educational facilities, etc. Expectations regarding the use of the LIS results must therefore be realistic: they will be both a function of the relative importance of the mine/UXO issue, but also of the absorptive capacity – many of these societies can only address so many problems at a time.

By and large, however, it is clear that national authorities are taking the LIS seriously. In the cases of Thailand, Yemen and Chad the reports clearly led to shifts in resource use – Thailand focusing a lot more on the border to Cambodia, Chad realizing they had more of an UXO problem rather than a mine one, and Yemen identifying more mine affected areas but also shifting resources towards MRE and victims assistance.

In Cambodia, the national MAC is using the LIS to critically assess whether demining operators are in fact focusing on the high-impact areas (the first analysis claimed that this was not really the case), and using the LIS as the basis for structuring the dialogue with the MA community. In Ethiopia, it is also clear that the authorities intend to use the LIS for their MA planning and action in accordance with the national development program supported by the World Bank. In Mozambique, the national MAC has developed a national five-year mine action plan – but one that is not respected and used by other actors, including the all-important provincial governors.

Yemen seems to be the only country that so far has used the results to look at the larger resource picture and re-direct resources away from simply demining. This is in part a function of the fact that the restructured YEMAC both has policy planning, budgeting and implementation responsibilities and covers all mine action areas, and thus has a "built-in" possibility for seeing the larger picture. In the other countries, it is difficult to see that the LIS has contributed very much to these kinds of shifts in resource use. One reason may be that the victims data weigh so heavily in the overall scoring system, and the logical response to high victims scoring is to remove the mines.

Overall, however, the use of the LIS as far as national authorities are concerned must be considered to range from satisfactory to quite good.

Local MA Actors

The third target group for the LIS outputs is the local Mine Action community. Here the findings are more disturbing, as most of the local MA actors seem by and large to ignore the LIS outputs.

In some countries, notably Mozambique and Cambodia, local mine action organizations have shown disdain or even hostility to the LIS – both during its implementation and afterwards in terms of its use. One issue that arose in both cases was that the surveys had come about outside the SWG system, and the actors who were awarded the contracts did not have previous mine action experience. In Cambodia, this problem was compounded by the fact that the implementer was a commercial company. This broke with the bond that exists within the NGO community due to what is perceived to be the common the reason for them being engaged in mine action.

In Chad, Ethiopia, Thailand and Yemen there are few actors outside the national public sector engaged in mine action, so these actors are rather marginal in the context of the overall national effort. But even here there were not strong links to the LIS as a planning tool.

Lack of Commitment by other key actors is thus an issue. The problem of the dialogue and ownership to the LIS from the outset has been touched upon. Another issue is who controls resources. In a number of countries donor resources largely flow on the outside of government channels directly to operators. The operators are thus largely free to continue setting their own priorities, whether based on the LIS or not.

What is difficult to fathom is that the operators are largely those NGOs that make up the SWG where the LIS originated and is still discussed. When this issue was raised during the SWG workshop in Copenhagen mid-October 2003, there was no real reply to what can be done to improve this situation. This therefore remains a challenge to the SWG and the NGOs that participate in it: what is the purpose of continuing supporting and discussing the LIS process if it is not going to have an operational impact? The question is on what grounds an NGO can ignore the priorities of an LIS if those are accepted and used by the national authorities?

Conclusions/Recommendations:

Donors do not use the LIS results directly, but are interested in seeing that partner authorities do – it provides an assurance that MA resources are being planned better.

National authorities by and large are using the LIS, and in most cases trying to shape national MA plans based on it.

Local operators have by and large not used the LIS for their planning, which is surprising given that they generally make up the SWG, which is the "home" of the LIS.

- There is a need for MA actors to come together to see how the LIS can be used for more rational sector resource allocations. National concerns and priorities should be a major benchmark for individual organizations' priorities.

6.2 Rating System

The key to the impact analysis is the rating scheme that has been developed. It is discussed a lot within the MA community. The TOR asked the Evaluation to test and see if ratings would vary significantly if plausible alternative weights were used.

The largest debate is on the victims' data, where each victim during the last 24 months is given a score of two – any victims before that is given a score of zero. Five victims in one accident score the same as five victims in five different incidents. Two victims in a village of 1000 people score as much as two victims in a village of 100. So there are many ways in which the victims score can be made more "realistic": (i) Victim within last 12 months scores two, within 12-24 months scores one, and more than 24 months zero; (ii) multiple-victim accidents get reducing weights: first victim full score, second victim 50% score, all subsequent victims 33% score, (iii) scores could also be reduced as a function of size of population – one victim in a large village provides a lower probability index than one victim in a small village, and in each country villages could be stratified as "small", "medium" or "large", for example.

An attempt was done to do some runs in Thailand, but there was not enough time because the victims data on the electronic file did not contain enough information to actually provide these kinds of classifications. One would have to go back to the original files and cross-check with other data (for example on village size). But there clearly are variations that can be tested – the question is if the added "sophistication" in the weightings will generate a more "correct" impact picture. This is largely a subjective consideration, but one that local stakeholders (such as the local research community and development decisions makers) should participate in. The marginal costs of changing the weights are small, so these kinds of changes would be easy to build into new surveys once they have been agreed to (though trying to remember whether an accident took place eleven or thirteen months ago becomes a complicating factor).

The local blockage factors have been modified in a number of countries, to be as relevant as possible to the country-specific situations. What is not captured, however, is the relative importance to the community of each blockage: if one of ten or the only water point is blocked they both get a blockage point. When comparing across communities, the blockage of a well in a village of 100 and the only well in a village of 1000 receive the same weight when ranking the two communities in terms of priorities.

While the LIS rating is meant as an input into larger decision making processes, this does not always happen. In Mozambique, the national strategy built on the LIS is ignored by governors because they have a very different political agenda, and also overlooked by central planning authorities because they have certain national areas that are priority. In Yemen, the LIS is clearly driving key MA decisions, though priority tasks such as clearance of land for key investments (the Aden development zone, new gas and oil fields, etc) take precedence over community-based ratings.

This, however, is an appropriate use of the LIS results. It has always been recognized that the LIS Impact Scores are not the same as operational priorities for national authorities. They simple provide decision makers with information regarding how communities view the impact of mines/UXOs, and how a set of explicit criteria have led to a relative ranking of these communities in terms of severity of impact. This information is then to be analyzed in the context of other decision criteria for some final choices regarding resource use.

In reality, however, MA is often treated like a quasi-sector: there are some resources allocated to MA which that "sector" then prioritizes internally. So the "within-sector" allocations ought to be in line with the LIS results – but as noted, this is not always the case.

But LIS data could probably be used more also in other planning processes. In a number of countries it was clear that other planning institutions were not aware of the LIS data, and the possible implications for their own planning activities. The question is if more work can be done to make LIS data useful to others. This means supporting national MACs to feed the LIS into national planning processes or – through dialogue with regional authorities – see if this may help integrate the LIS outputs more closely into these decision making processes. Ideally this should have been discussed and made clear doing the planning, but this is often not possible – other authorities would not be in a position to make any commitments before the information is actually available.

Whether this is realistic or not is not clear – it probably would vary from one country to another, but may be a question worth exploring with national authorities.

Conclusions/Recommendations:

The weights attached to the various factors in the impact survey clearly can alter the ranking of communities, but weightings will always remain subjective preferences – there are no obvious "objective" weights.

The general triage of "high", "medium" and "low" impact makes sense, and the cut-off points between them are and will necessarily remain arbitrary, no matter where the border values are set.

The key is to ensure that the weights are in accordance with the kinds of concerns national authorities have regarding the negative impact of mines and UXO. In order

for decision makers to see the consequences of alternative weighting schemes, simulations could be done on a constructed case.

- What is more important is to increase the relevance of the LIS within the national planning system by linking up to general planning priorities (such as in PRSPs), so that the LIS ratings enter the final resource allocation decisions.

6.3 Database Usage

The main product of the LIS is the database that is generated. There are several issues that are raised by informants concerning the database: (i) access to the data, (ii) the user friendliness of the software, (iii) maintaining the database, (iv) the need for a general standard.

Access to Data

Access to the LIS data is a problem in several countries because of government policies. The SWG policy on the issue is quite clear: those governments that are not already aware of it should be informed that the LIS data are to be put into the public domain. What has not been specified, however, is how soon this should happen, and in what format the data should be accessible.

In Yemen, data were released as the survey progressed, so that local authorities and others could see the results shortly after the survey had passed through. In Cambodia, the survey strategy was intended to be similar, so the implementer began work in the most mine-affected areas in order to make this vital information available as quickly as possible. In the end, however, the national MAC refused to release the data until the entire survey was finalized and the MAC itself had had time to structure the data release in the way it wanted – which was quite controversial, as the database was released, slowly and reluctantly, with a three-month validity period, after which the database was locked (Annex E). One reason given by some mine operators for not using the LIS more actively is exactly that in such cases the release of the data is so late that the information loses a lot of its value.

User Friendliness of Software

Another unique feature of the GLS is that the actors have come together around the use of a common database, the Information Management System for Mine Action (IMSMA). Funded by the Geneva International Centre for Humanitarian Demining (GICHD), IMSMA is an integral part of the LIS, as data collection is structured such that the information can easily be entered into the database for analysis. In the first surveys, this in fact constrained somewhat the ability of the survey to adapt to local circumstances as the early versions of IMSMA only permitted five user-defined variables when describing blockages – most of the blockage variables were pre-defined (in function of the Protocol's definition of blockages). While this problem has been solved with later versions of IMSMA, it points to the importance of the relationship between the survey itself and the database that it generates.

IMSMA is today used in 36 programs, most of them written in Access, though the most recent version of IMSMA is now using SQL Server or Microsoft Desk Top Engine (MSDE). The views concerning the software program platform varies. For some, Access is more user- friendly since it is the most common database in use (as part of Microsoft Office). Finding persons who are familiar with Access and can

manipulate tables and generate reports is thus relatively easy (though Access as a program clearly requires experience and skills).

In the view of GICHD, moving to SQL Server is an improvement as it facilitates back-up and restoration of data, is more stable and easier to maintain than an Access database, and thus provides more safety and ease for the operators. In GICHD's view, installation and maintenance is easier, and the manipulation of the database in fact easier. While the Evaluation team heard comments to the contrary, it should be noted that this were reactions from a few staff right after they had moved to the SQL version. Over time, it may be that GICHD is right.

In Cambodia, a FoxPro database was used instead of IMSMA. The main reason for this was that the national demining agency already had a FoxPro database installed, and wanted to build on this rather than move to a different software package. A further argument was that FoxPro was easier to handle than Access[12]. The IT expert on the LIS was able to do considerable programming on the database, thus adapting it to the needs of the survey, such as putting in a number of data-checking "traps" that facilitated the quality verification of data.

Whether this in the end was an advantage or not is contested. From the implementers point of view, the FoxPro meant that the distribution of data tables was easy since FoxPro is easy for even NGOs to learn and use, so the database was immediately accessible. Getting the IMSMA written in Access is much more difficult, and the claim is that LIS data on SQL Server will be even less accessible for other actors than the national database operator.

In the end, the Cambodia LIS had to be ported to IMSMA, and that transfer turned out to be quite problematic. This points to the problem of having different databases for the LIS data, as the transferability of data is not guaranteed. The further problem that emerged was that the sustainability of the original FoxPro database – one of the arguments for "keeping it simple" – was in fact poor: once the FoxPro data manager of the implementer was not available, neither the national MAC nor other actors in the MA community was able to maintain and update the database. Moving to IMSMA therefore became a necessity in order to assure continued back-stopping and training of local staff, since this is guaranteed by GICHD.

The developers of IMSMA have over the last couple of years also worked on a data transfer protocol (called "maXML") that will allow the transfer of LIS data to other disciplines easier. IMSMA now supports this protocol, so that an important step in making LIS data available to other actors has been taken.

GICHD makes the point that because IMSMA is now an international standard, individual countries and LIS teams do not (as the Cambodian team had to), spend resources on developing and maintaining software. It simplifies training, database updating etc since this is all centralized and the costs are fully borne by the GICHD.

While the criticisms of IMSMA were considerable, the issue is probably that there is no easy solution to both collecting comprehensive data in an area, and being able to easily do sophisticated data analysis without the underlying software being of some complexity. The current solution of having one actor take responsibility for training,

[12] FoxPro is two-dimensional spreadsheet-like while Access is a more complex fully relational database.

software updating, and responding to new needs from the field is, in an imperfect world, probably the best solution.

What could be interesting is for GICHD to see if there are ways of making the IMSMA more user friendly. The Evaluation realizes that there are technical limits to simplifying the data manipulation aspects of the database – but as long as the software is seen as a barrier to access, this is a problem that needs to be addressed.

The other issue is the concern of allowing other users more easy access to the data. Several public agencies and NGOs claimed that for them to be able to use the data relevant to the areas or issues they are working on, would make a big difference. If maXML would allow for data transfer into more common formats, this issue could perhaps be addressed.

Maintaining the Database

But the costs of maintaining and developing the database was a concern in several countries. There are two issues – having the skills to be able to use the database, and secondly having a policy of updating the database so that it does not become a static one-off snapshot.

Even at the level of having the skills to simply run the database, in several countries the only solution so far found is having UNDP-funded projects that pay the technicians to stay on after the LIS project has formally terminated. This salary-supplement approach is clearly not sustainable, and other approaches need to be found.

In no country had the database been transferred to a national agency that would have better skills at handling it, such as a national statistical office, a planning department, as university, or similar. This may or may not be a good solution, but more imagination could have gone into looking for a solution different than maintaining a database in an organization that historically has never had this kind of responsibility and perhaps should not have it today. Various forms of out-sourcing or responsibility-sharing arrangements could be looked into, depending on the specific circumstances in the various countries.

The other issue is the updating of critical variables, since the time value of information is important. Continuing demining and population movements mean that every day the database remains static, its value as a source of information depreciates. If there is no longer-term plan for ensuring the database's constant updating, the returns to the LIS investment drops dramatically over time. This shows again the need for seeing the LIS both in a larger perspective, and a longer time horizon.

International Standards

Whether there is a need for an international standard such as IMSMA is also debated. The argument that donors wish internationally comparable data in order for them seems not to be valid, at least based on the information this Evaluation received from the donors regarding how they take decisions.

The more important argument would seem to be the one put forward by GICHD: that with a common platform software updating, staff training, ability to ensure sustainability of databases etc. is much better.

To the Evaluation, this pragmatic cost-efficiency approach makes sense. While there is no particular need for an international standard in order to ensure cross-country

comparisons, the economies of scale from using the same software in many different settings would seem to outweigh the costs – though again the idea of workshop with users to determine costs and benefits might make sense.

Conclusions/Recommendations:

- The LIS database is a key output of the process and its value needs to be ensured through (i) easy and open access to both data and results, (ii) a program of continued and structured updating of key variables, (iii) accessibility in terms of low-cost and easy-to-use software platform (relative to situations in differing countries).
- Having IMSMA as the standard database for mine action makes sense from a pragmatic efficiency point of view. The challenge is to develop it in two areas: (i) making transfer of LIS data to other databases easier (continue the maXML development), and (ii) make access to MA operators easier, so that data are more directly user-friendly. GICHD might consider a workshop with key users to identify key steps to take in this connection.

6.4 Resource Efficiency

Whether the costs of the LISs can be justified should be analyzed from three angles: (i) the costs of the LIS in relation to annual MA expenditures, (ii) whether the LIS has served as a good resource mobilizer for the government and MA actors in securing more/further donor support, and (iii) if the LIS has led to decisions that have improved efficiency of resource use.

LIS Costs as share of MA Expenditures

While the Cambodia LIS ended up costing over USD 3.5 million, the annual MA expenditures are estimated at USD 30 million. The nearly USD 2 million spent in Chad in a country that has an annual MA expenditures of around USD 900.000 is clearly a lot more questionable. The need for a realistic budget based on a serious project planning process is thus required, so that national authorities can consider what level of resource expenditure they find reasonable.

LIS as Resource Mobilizer

While many in Cambodia criticize the LIS, is it being used aggressively to market the need for more funds, and evidently with success. What the marginal value-added of the LIS is, is impossible to guess at, but that a LIS has been carried out is known by the donors, and is perceived positively by them. The fact that the Cambodian government is using the LIS now for its own planning can only strengthen its status and hence "marketing value". In Chad, however, the LIS – which was considered quite good – did not lead to any serious increase in MA support. Why this is, is difficult to gauge, but donors have made it clear that the LIS *per se* is not important for resource allocation decisions. It is rather more strategic considerations that lie behind. But the lack of a LIS may hurt a country negatively in the competition for resource, since the LIS has achieved a certain credibility among the donors (though not many actually read them and thus know what they say!).

LIS leading to greater Resource Efficiency

In terms of enhanced resource efficiency, Yemen is a clear-cut case of this happening, including shifting between demining, MRE and VA. Mozambique is a country where

nothing has happened, while Cambodia is trying to make it happen! Net gains will thus only becoming clearer over time. The Cambodia LIS data analysis indicates that there may be some considerable efficiency gains to be had through re-allocating resources – but whether this analysis is accepted by all remains to be seen.

Conclusions/Recommendations:

- The relative efficiency of investing in a LIS should be related to three factors, two of them which are speculative regarding the future. The LIS budget ceiling should therefore be a government decision, in light of its own priorities and assessments of expected returns to the LIS investment.

6.5 Strategic Planning

The LIS is to inform future mine action. But the LIS reports and databases are themselves simply an informational basis for decision making. In order to carry out the kind of strategic planning that the LIS is intended to support, many of the countries where LISs are carried out, require additional help, in particular by the national MACs that are responsible for national MA planning and implementation. Two kinds of follow-on activities have so far taken place – general Strategic Planning support by Cranfield Mine Action center (CMA), and in Bosnia a pilot project on Task Assessment & Planning (TAP) was conducted in December 2002.

CMA support is of a more generic kind that is introduced at key stages during the LIS (see Morete 2003b, where CMA intervenes typically at three points during an 18-month LIS). It is meant to assist national authorities both understand how the LIS results can be used, and then support in this process. As part of the support, a software package called "Freeway" has been developed, though not a necessary component. The approach is a fairly standard management decision approach, in line with principles of objectives-oriented planning/results-based management.

Both the Strategic Planning and the TAP seem to be helpful extensions/complements to the LIS. However, this Evaluation did not receive sufficient feed-back to form any particular views on the specific value of them as practical tools.

The one issue the Evaluation would raise, however, is the use of specific tools like "Freeway". An important precondition for the use of such tools is the local capacity and commitment, as discussed in section 4.4. The lesson from many years of development cooperation is that whatever tools donors introduce into partner countries, they need to be appropriate to the needs and capacities of the partner. Countries like Bosnia and Thailand have very different organizational and human resource conditions than Mozambique and Angola, and that should inform the survey structure and planning instruments used. Of greater importance, in line with what has been stated above, is to verify what kinds of instruments and processes are already in place, and try to use or adapt to these. This will also make the acceptance of the LIS results much greater, as the adaptation costs to local actors are reduced. A key task for support actors like CMA ought therefore be to facilitate this kind of linking, based on their knowledge of strategic planning principles.

7 General Issues

A number of more general issues regarding mine action surveys merit consideration.

7.1 Roles of SAC and SWG

The SAC has been careful to stick to the mandate that it was given when created – to manage the GLS. Suggestions that can be considered "mission creep" – expanding the range of activities that it engages in – have been avoided. In principle this is a commendable policy, as there is a rational expectation that the "sunset clause" regarding SAC's establishment will be adhered to: once the GLS is over, SAC will be disbanded. At the same time, the SAC has performed some important roles, in particular resource mobilization as well as the coordinating management function for most of the LISs.

SAC's Future

This Evaluation does not want to enter into a discussion on the merits and drawbacks of the SAC's range of activities, since it is neither in our mandate nor does the Evaluation have any basis for any particular point of view. What should be noted, however, is that the SAC currently lives off the overhead and the contracted tasks that it performs in the various LISs. This provides a potentially distortionary incentive for ensuring the continuity of LIS process, since it is neither rational nor possible to close the SAC down if there currently are no more LISs only to revive it if there are a number of LISs that should be carried out some years from now. What needs to be decided fairly soon is if the SAC should be disbanded, and if so, when and how, or if the services the SAC provides to the mine action community are seen interesting enough to consider other options for the future.

Given the number of countries that really need a LIS, it is clear that the SAC, if it sticks to its GLS role, needs to begin planning its termination soon. This is both to ensure an orderly managerial and financial closure, but primarily to have a realistic picture of what the income stream and thus what the maximum activity level can be during the winding down period.

The issue of the activity level has to do with one area where the SAC could have done more. This is concerning the development and maintenance of institutional memory – collecting, structuring, storing, discussing and disseminating "lessons learned" and "best practices" from the survey work. One of the unfortunate results of SAC leaving the VVAF was that much of the social science and analysis skills were left behind, weakening SAC's capacity in this area. But as the GLS winds down, this function remains important, not only for the mine action community, but also because there are so many "best practice" aspects of the LIS that other surveys could benefit from. Clearly the UN system – and in particular the UNDP – could also play a much more important role in this field. But the major onus is on SAC and the legacy it intends to leave behind.

The alternative is for the SAC to expand its range of activities, much like VVAF has, into related fields of management of information intensive activities. Whether this is a smart move or not depends in large part how the SWG and the mine action community in general feels about the importance of a body like the SAC for future MA related activities. But clearly the GLS process as currently conceived has pretty much run its course, and this needs to be addressed.

Regarding the remaining LIS processes, the contractual, managerial and other formal responsibilities between actors have been difficult to discern in some of the surveys. SAC in particular has had different tasks and hats, making it important that the structure be simplified and more transparent, where possible.

The Future of the SWG

Linked to this is the fate of the SWG itself. This deliberative body has also been constituted around the Global Landmine Survey process. The question is if the MA community has found the SWG as such a relevant and important body for policy and implementation issues.

If the SWG intends to continue functioning after the formal GLS process has terminated, one key issue it should address is how to include partner organizations in the process. Having workshops/seminars in the regions where mine action is most important and thus using SWG meetings as part of a larger capacity development effort could be very constructive.

Conclusions/Recommendations:

- The SAC should continue its role as fund-raiser (at least unless and until there is a MA sector program that will also fund LISs); have the coordinating and management role for those LISs that are under its purview; prepare in collaboration with partner authorities, the agreements necessary for a LIS, including the TOR for the project preparation work; participate on the project planning process; tender the LIS implementation and ensure fair and transparent decision making in awarding the contract; and provide the training and other support services that are agreed to.
- SAC should avoid direct management or oversight of LISs and instead focus on more strategic management of the GLS process and its accomplishments. A key role in this connection is collecting, analyzing, disseminating and discussing "lessons learned" from the LISs. A key target group for this, apart from the SWG itself, are interested stakeholders in partner countries.
- The SWG should remain an open deliberative body but where partner country stakeholders should be invited in. Regional workshops as part of a more pro-active capacity development effort could be highly constructive.
- The SAC management/board selection processes are opaque – formal accountability seems difficult to pin down [no real conclusions or recommendations here – just an observation for further consideration].

7.2 Survey Tools and Protocols

The SWG Protocols and Advisory Notes are by and large seen as very helpful by the implementers. In some of the poorer countries and less mine-affected countries, they were seen by some as excessive in their detail, and in almost all countries there have been some adaptations, especially regarding the questionnaire (the blockage factors have been changed, and the IMSMA database made more flexible to handle such country-specific changes).

What is seen as a major strength is exactly the access to standards that have been discussed, tested and agreed upon. This provides a major help to all the parties involved in the LISs. The fact that the SWG exists as a forum for discussing new experiences is another advantage.

It is also clear that all LIS implementers have used the tools and tried to follow the Protocols as far as possible. Some of the uncertainties/ambiguities of early versions of these documents have been sorted out, making them clearer and easier to follow. The Certification Committee discussions show that implementers have made strenuous efforts to comply with these standards, by and large with success.

Conclusions/Recommendations:

- The SWG Protocols/Advisory Notes provide helpful standards, though there is a need to accept flexible adaptations to country specific situations.

7.3 UN Quality Assurance and Certification

The UN agencies play a number of roles which are fairly straight forward. The one major question the Evaluation has concerns the UN Quality Assurance Management and the Certification process, managed by UNMAS.

Actors in the field complained that they often did not get access to the QA reports that were sent to New York. Furthermore, if there were comments made to the report, they were often not transmitted back to the field. The entire QA process was therefore seen as not being very transparent. Generally the project managers were given verbal briefings by the QAMs in the field, so they generally knew what the observations were and could take them into consideration. But the UN QA process could be much tighter and more transparent: reports distributed and comments/observations communicated to all relevant stakeholders within known time limits.

The other issue is the Certification process. It is only related to the LIS process itself (did it follow the Protocols?) and not the contents and results of the survey. But the discussion on the Certification only takes place once the survey is finished and a request for certification is received. This, frankly, makes no sense if the intention is to help a process that might be going off track get back again. While this is what the QA manager in the field is supposed to help with – and what has in fact happened on a number of occasions – the Certification itself becomes somewhat incongruous

The management of the Certification process also needs some strengthening. The Cambodia LIS was discussed by the Certification Committee one year after the survey had been finalized. This was largely due to bureaucratic misunderstandings and delays caused by the Cambodian authorities being very late finalizing their request for Certification. But there is a strange disjuncture between a process that is run along extremely tight timelines and then suddenly nobody has a management responsibility for ensuring a speedy finalization.

The discussion on the Cambodia LIS also revealed how disjointed the Certification process is. One issue that was critically assailed at the meeting was the fact that all the Cambodian surveyors were male, which runs contrary to the Protocol, but where the implementer was bound by an MoU negotiated between two governments. This problem had, however, been known all along, and clearly must have been picked up by the QAM. This Evaluation cannot see the purpose of discussing this issue, though important, one year after the process has ended. Either the QAM is linked into an on-going monitoring and certification process so that problems identified can be corrected while on-going, or the entire QA/Certification loses its value in terms of contributing to the actual quality and content of the LIS.

Lately the Certification Committee has become more critical of what is happening in the field, requesting LIS teams to correct problems identified. If this is done in a

timely manner and the proposals in fact lead to better LISs, the Certification may be justified. If not, there are several arguments for discontinuing it:

- By and large national authorities do not ask external quality assurance and certification of national surveys. There is nothing inherently difficult about the LIS that should necessitate this (agricultural and population census surveys, for example, are much larger and more complex). If the planning of the survey has been done properly and national authorities are happy with it (the Cambodian authorities accepted all-male surveyors, no matter what the misgivings of others might be), then it is their views and concerns that should matter.
- The fact that national authorities now are asking for Certification probably in large part is because expectations are that this will provide some value-added, for example in the form of greater donor acceptance and hence more donor funding. Whether this is a correct perception or not is unclear, but given what donors have said, they probably are much more concerned that the survey is done than that it receives some formal Certification later on.
- If the LIS processes themselves institute Quality Management Systems along the ISO 9000-2000 requirements (see section 5.5 above), there would seem to be no need for any further QA system.
- The invitations to tender should ask that bidders specify the QA system they intend to put in place, and make it clear that this aspect will be given an appropriate weight when considering the competing bids.

Conclusions/Recommendations:

- The need for external QA and a formal Certification process is questioned. If instead LIS implementers are asked to implement a QMS according to ISO 9000-2000, further external verification would seem superfluous, especially if national authorities accept this as they do for other national survey processes.

7.4 Capacity Development

Most of the mine affected countries have experienced serious armed conflict. This has naturally affected national institutions, including the capacity of the national mine action authorities. A key aspect of the planning for a LIS should therefore be the capacity analysis of what are expected to be the major users of the LIS outputs. A realistic program of capacity building should be part of what is after all a process that stretches over at least one year, often times considerably more. The UNDP would be a logical partner in such endeavors.

Conclusions/Recommendations:

- UNDP has supported various forms of capacity development. This focus should be maintained but built on better principles of sustainability.

7.5 Roles of Partners/National Authorities

The role of partners has varied considerably, largely as a function of national decisions, not because the LIS has desired any less or more involvement. In line with what has been said earlier, more emphasis on good participatory processes during the planning may help strengthen genuine ownership and thus involvement both during and after the LIS. The *trend* is in the right direction – all means should be used to

ensure that this continues to ensure sustainability of results and maximum impact on local mine action.

One key issue, however, is that as much of the documentation as possible should be available in the local languages. This is particularly important for all final reports (including explanations about the database), but also as much of the preparatory material as possible. Language barriers have clearly been a major blockage factor in a number of the countries (UNDP is using the remaining funds from its project to translate the survey report into Thai, a couple of years after the survey was done. This has clearly made the report inaccessible to local authorities in mine-affected areas).

The LIS also needs to have a more aggressive/pro-active dissemination and *training* component, to help national authorities and other potential users understand what the database and reports actually contain, and how they can use the information for their own purposes. While this is by and large the responsibility of national authorities, it is clear that the follow-up and use of the LISs in most cases is rather poor, thereby reducing significantly the value and relevance of the LIS. Including this as part of a Capacity Development component could provide significant value-added.

Conclusions/Recommendations:

- A strong and conscious effort must be made to involve national stakeholders. Barriers to participation, in particular due to language, needs to be planned for and resources set aside to ensure that this is addressed.

7.6 Summing Up and Conclusions

The observations made above boil down to something rather simple and do-able:

Simplify – Streamline – Standardize (join the mainstream!)

The suggestions are largely straight-forward and in line with what is happening in the other fields of development cooperation: mine action should join the larger development cooperation community, taking its rightful place alongside the other actors, bringing in a series of "best practice" models regarding large-scale surveys, and learning from "best practice" programming of large-scale activities!

Annex A: Terms of Reference

The GLS Evaluation should examine the many facets of the GLS process, at the same time collecting and generating lessons learned, suggesting possible improvements to make the process more effective, more efficient, and more useful, and identifying for further review significant issues not fully covered in the Evaluation. The evaluation is intended to contribute in three main ways: (a) to make the learn lessons from past LIS to make implementation of the future ones more effective; (b) to make the results of the LIS more useful; and (c) to consider whether and in what circumstances the results produced by the LIS could be obtained through alternative means requiring fewer resources and less time. It is not an evaluation of any single LIS, nor will it involve new field survey work. It may, nonetheless, involve reanalysis of some information collected by the LIS.

The Terms of Reference (TORs) define the aim and scope of the GLS Evaluation, and describe the Project organization, phases, deliverables, timings, and funding. This supporting document complements the TORs. It provides a list of issues and questions which, together, describe the extent and range of the subjects to be addressed by the Evaluation Team. The list is neither exhaustive nor prescriptive.

STRATEGIC DIRECTION

Was the GLS organizational structure and overall management system (i.e. roles and relations among UN - donor - SWG - SAC - implementer - QAM - national authorities) appropriate, effective and transparent? Were lessons learned during and after each survey, and what was the mechanism for applying the lessons to the organizational structure, LIS procedures and protocols? Was the selection of countries to be surveyed logical, fair and transparent?

LIS PLANNING AND PREPARATION

Administrative set-up

Were the timeline and human resources required to undertake all tasks during the administrative set-up phase realistically defined? Were they underestimated? Did administrative set-up occur simultaneously to the completion of other tasks, such as questionnaire adaptation, expert opinion collection, and coordination? Was sufficient time allocated from the time of arrival of the international survey staff until the first team was deployed to the field to conduct interviews? Was this planning criterion carefully assessed during the Advance Survey Mission? Was an international Administration/Finance Officer employed fulltime on the survey? Was equipment procured on the international market? Were there delays associated with this? Were there viable and economical options for procurement of that equipment from the national market?

Stakeholder priorities

Given the reality that each stakeholder has its own unique perspectives and priorities, were detailed common goals shared by all concerned established at the earliest stages of planning? Were all stakeholders consulted regarding survey operational planning? Were country specific indicators established with stakeholders and progress of the survey regularly communicated to them? Was an effective mechanism set up to

coordinate the participation of key stakeholders throughout the process, and especially in its early stages? Was this coordination process facilitated by the donor, the contractor, UNMAS/SAC representatives, the QAM?

National mine action authorities

The ability of the Survey to have the full benefit depends to a large extent on the availability of appropriate Government resources and commitment, particularly human resources and policy attention. Was a well-defined relationship with the national counterpart, providing clear definition of responsibilities (including a Memorandum of Understanding [MOU]) in place? Was the National Authority fully and actively involved in the survey? How were the results and their use affected by this? Was the survey team co-located with the national mine action centre and/or a UN technical assistance project? Were local staff, particularly data entry operators and key management staff of national mine action centers included in training and implementation of the survey?

Geodata

Were the existence of a comprehensive national gazetteer and national maps confirmed before decisions-in-principle were made about the feasibility of conducting the survey? If yes, were they factored into budget estimates and timetables? Were the identification of datasets and their availability negotiated at early as possible? Was it done during the Advance Survey Mission? Did the Survey team obtain basic electronic map information, such as an official gazetteer, detailed up-to-date census information and secondary data from the national authorities and other interested partners? Was it difficult? Were the results incomplete? Was a timeline for acquisition of map information and datasets established with specific terms and conditions defined with partners? Did the survey team make full use of existing data and knowledge in the preparation phase? Did the survey team seek assistance in obtaining GIS and other data from their national government and other national institutions with programs in the area of interest? If yes, were they available and readily accessible? Did SAC support efforts to access existing maps and GIS information from other sources?

Local staff - selection and training

Were candidates carefully screened and was training extensive enough? Assuming that local survey and data management skills are limited in most mine-affected countries, did the project obtain the best-qualified candidates, either from the local market or staff of the national mine action authority? Was the relation of survey local staff to communities important in the selection process? Were data management staff selected with a clear understanding that they were committed and able to continue work with the national mine action authorities when the survey was complete? Were sufficient time and financial resources allocated to address training needs and specific conditions of the survey? For example, in cases where staggered start times were used, was more than one enumerator-training course conducted and was overall training time for enumerators longer than normal? Should SAC develop a common training curriculum, specifying desired outputs, but allowing flexibility to preserve local cultural sensitivity needs?

IMPLEMENTATION

Review the various protocols and the Certification Guidelines, and the various steps in the model timeline. Were they carried through as intended, with the expected results, or were there deviations?

How was the Advanced Survey Mission requested and conducted? What expectations were raised and agreements achieved? How was the LIS implementer chosen and was this a contentious process? Was it an appropriate organization? Was it appropriately staffed? How did the training of the implementing agency take place (training on how to conduct the survey and how to use the tools used in the survey) and how could it have been improved, how were surveys carried out (schedules, steps, etc.), in particular how did the actual experience differ from the originally planned approach? Were the LIS Protocols easy to understand and to apply; were they universally applied; were they amended and refined as a result of experience? What changes were made to the planning process? What changes were made to the process of negotiation with Government and other parties? How (if at all) was existing data taken into account in the preparation phase of the survey, what existing data was used and was existing data imported into the information management system as a working base for the survey. If data existed and was not incorporated – why was this the case? How did the field trial and pre-test process change, if at all? How useful was the collection of expert opinion; did it provide a nearly complete reference, or simply a starting point and political contact? Was a standard questionnaire used for data collection? Were coding sheets used? Was data entered in the field or at HQ? How did the sampling for false negatives (positives) vary from the original plan? How was the result of the sampling analyzed? How many error cases were found? Was it a cost effective means of improving the results of the Survey? Did any of the protocols require effort beyond a reasonable point of diminishing returns, in the judgment of those involved in the survey? What internal quality management procedures were used, in the survey as a whole, and in the data collection and entry processes specifically?

SURVEY METHODOLOGY

SWG protocols

Were SWG protocols generally used and approved of by the survey teams? Should SAC develop additional protocols? (e.g. – for nomadic communities). Were the protocols appropriate in all countries and if not, how were adaptations carried out and were they successful.

Questionnaire

Did the survey team make all possible effort to fully understand the SAC survey questionnaire? Did the survey team attempt to review and adapt the SAC survey questionnaire to local conditions? If yes, what changes were made and were key information dropped from the survey questionnaire for the specific country?

Language and translation

Were the survey documents and questionnaire developed in the most accepted language of the country (for example Portuguese in Mozambique)? Did the translation of protocol documents and the questionnaire begin early in the survey, using professional translators? Was re-translation of the questionnaire into English (as a quality control measure required by SAC protocols) completed by an independent

translator? If not practicable, was a small committee of bilingual personnel employed to review the survey questionnaire translation? Were other alternatives found to provide useful information and feedback for translation of the survey questionnaire, training, and operational planning? Was the local language used in interviews different from the language adopted for the survey questionnaire? If yes, was the translation of terms used in the survey questionnaire standardized?

Expert opinion

Did expert opinion collection begin early in the survey, before the recruitment and training of field staff? What was the quality/accuracy of the information collected through expert opinion? Did the number and location of communities impacted adequately determine the composition and selection of survey teams? Were enumerators recruited from areas suspected of being mine impacted and did the recruitment ensure appropriate language skills and familiarity with the areas? Were the extent and location of mine-affected communities well known at the national capital level? Did the survey indicate that better expert opinion was collected at the local level? Did the survey adequately assess where quality expert opinion was available? Did expert opinion collection result in extended timelines (i.e. for false negative sampling)?

IMSMA availability

Was the IMSMA database fully functional for the pre-test and pilot survey? In situations where mine action programs already existed, were efforts to use data from existing databases made in order to minimize duplication of data collection? Was a field check of accuracy of existing databases conducted?

Time constraints

Did the survey determine timing of the community interview and proximity verification early during pre-test and pilot survey? Was operational planning driven by the time required to complete surveys? Specifically, to what extent did travel to and from affected communities affect the surveys? Were productivity assumptions carefully assessed at the early stage?

Significance of zero impact

Did the survey find landmine/UXO contaminated areas that presented no impact upon communities? If yes, did the survey track non-impacting landmine/UXO contaminated areas through the IMSMA database?

Did surveys encounter single items of unexploded ordnance without direct impact upon communities? If yes, were locations of such items registered and reported so that existing mine action teams can respond?

False-negative sampling

Did false negative sampling raise questions regarding cost, time and applicability in survey countries? Was a local adaptation considered while abiding by the general requirements of the protocol to obtain a valid coverage estimate? Did surveys generally adapt the protocol to what was practical and practicable in terms of time, budgets and logistics? Did the survey complete false negative sampling before village level interviews? Did the survey implement community interviews and false negative

sampling concurrently through the enumerator teams? Was the SAC protocol understood and applicable? If not, did the surveys find acceptable alternatives to cope with this issue?

Re-survey

Did re-survey cover one percent of the affected communities as per the SWG protocol? If not, why?

Delineation of contaminated areas

In those countries where the shape (polygon) of contaminated areas could be determined with no danger to field staff, no significant impact upon the operational timeline and the level of detail collected for the mined area was thought important for national authorities, were additional efforts made toward defining the polygon area? Were boundaries and areas precisely measured by means of GPS, compasses, etc.? How did the estimated areas produced by the LIS compare to previous estimates?

District mapping

Was district mapping developed by enumerator teams under the supervision of a Field Supervisor? Was the district level picture of the degree of mine contamination found useful (during data collection) through provision of better-defined problems and survey coverage?

Weighting

The LIS impact methodology relies to a significant extent on the collection and analysis of victim data. Did the survey produce data on a significant number of victims not otherwise known? Are there other less expensive ways to obtain that information? Is the victim data a good proxy for High or High/Medium impact communities? Is the detail of victim data too much / too little / about right to make the data useful to victim assistance organizations? (Suggest to re-analyze data pools for this purpose.)

Is the GLS weighting system valid? Many other criteria may also be important. Is there enough subtlety in adjustment of this weighting system? Is this explained adequately to the end users? Were alternative weighting systems considered, and if so did they lead to distinct understandings of the landmine problem in the country? Did they produce significantly different results, and, if so, in what way? What alternate weighting systems should be considered, and what implications might they have? Did the survey use country-specific impact factors while abiding by a common weighting protocol to keep surveys internationally comparable? By its emphasis on recent victims, the survey assigns a very high percentage of landmine affected communities to the low-impact category other than in exceptional circumstances. Did planners express the need for indices that would allow them to establish priorities among communities within the low-impact category? Was there concern about the weighting systems "blindness" to the size of contaminated areas and the size of the associated population? (Reanalyze existing data with alternative weights.)

SURVEY OUTPUTS

Survey products

Did the survey reveal and convey technically correct information concerning the Mine/UXO problem and associated factors? Was the survey database considered useful? Were the layout, tables and graphs in the LIS report user friendly and cost appropriate? Should other tables or analyses have been provided? Were arrangements made to translate the document into the appropriate national language? Were the results of the LIS made publicly available? How was this done? Are they known? Have the results of the LIS changed the ways in which the landmine problem is defined and addressed, by national authorities and donors?

Effective use of results

Was the entire process aimed at giving the government a clear means of prioritization, to develop a logical, politically acceptable, affordable, achievable mine action plan? Did the Survey results modify/clarify the understanding of the landmine/UXO problem in the country? Was an overall mine action strategy developed on the basis of the survey results? Was a yearly work plan produced on the basis of the strategic plan? Is works planning and prioritization based upon the survey results? If so, how are they linked? Are the results of the ongoing activities compared with the yearly work plan and the strategic plan? Are the plans adapted according to the results of the ongoing operations? Have the results of the survey been useful in resource mobilization for the national program? If so, how have they been useful? Are the electronic add on products being generated necessary or could more extensive training in use of the survey (IMSMA) preclude the need for these? What doubts remain about the survey products and the landmine situation? Does the general survey process carried out in the country now incorporate the concept of socio-economic impact and related questions?

The Survey has several possible products (and some indirect benefits), as suggested below. What is their relative importance? To what extent have they been achieved in each case? Could they be achieved with a lower investment of resources and time? They include:

- Comprehensive snapshot of the impact of landmines in the country
- Comprehensive database that can be updated
- Strengthening national MA institutions
- IMSMA database
- Trained IMSMA operators
- Increased information management awareness by country MAP personnel
- Trained community surveyors
- Focus on "socio-economic impact" as basis for priority setting
- National mine action strategy, including time frame and costs
- Annual works planning
- Government commitment
- Donor commitment
- Basic understanding of location and characteristics of hazardous areas
- Sufficient information on hazards to priorities sites for technical surveys

Survey utility

Did the survey serve the practical information needs of the National Authorities and international community? To which extent did the survey serve a plurality of stakeholders? Was the utility of Survey well understood and not questioned by the

stakeholders involved in the project? Did the survey team coordinate and plan toward conducting a survey that provided data suited to guide resource and effort prioritization to all Mine Action actors? Was the national authority offered the opportunity to draw upon the knowledge gained by the contractor when preparing the national mine-action work plan? Was training provided to the end user on exactly how the survey might be utilized in a planning/prioritization process? If not should there be? Did the national mine action authorities move quickly to develop a comprehensive national mine-action work plan? Is there any possible utility in using the results (with perhaps extended TOR) to other sectors? Can data gathered be of use to other sectors?

Survey information transfer and reporting

Was information conveyed and transferred in an accurate, complete and usable manner to the National Authorities and international community? Was the transfer of data between mine-action centre data pools rapid (if applicable)? Did the national mine action authorities evaluate the benefits of extending the survey to the areas and communities that were inaccessible to the implementation partner? If so, did they use the same methodology as that employed by the implementation partner? Was the data collected entered into the IMSMA database? Did the IMSMA database achieve its full potential? Did the survey incorporate any mechanisms to improve information transfer and reporting process? Did the survey team consider that the data collected and stored through the survey also had numerous potential applications in sectors outside mine-action? Did the national mine action authorities take steps to inform the wider government, NGO, commercial, and academic communities of the existence and relevance of those data and did they encourage and facilitate broad access to them? Were the national mine action authorities given competence to establish the systems, means and resources to exchange data on a regular basis with all mine-action operators active throughout the country? Were appropriate quality assurance measures and channels of communication implemented to control the entry and accuracy of data processed, and to ensure their transmission on a timely basis to planners and decision-makers? Was there a continued emphasis on national capacity-building in the areas of data-manipulation and analysis plus the effective utilization of complementary planning tools? Did a technical Assistance Program assist in the development of indigenous capacity and the preparation of the mine action plan?

Data release

Was survey data immediately available to national authorities and organizations for operational planning, instead of waiting for certification by the United Nations Certification Committee at the end of the project? Was the release frequency determined by negotiations between the survey team and national authorities? Were clearance assets redeployed as a result of information released during the LIS? Was the national authority a key part of this data release if appropriate?

CERTIFICATION PROCEDURE

How was the QAM selected? Was the QAM appointed on or before the date of selection of the contractor? Was the QAM an appropriate person? Was the QAM available at the appropriate times? Did the QAM provide useful feedback during the survey process that improved the quality of the survey? What contribution did the QAM provide to the certification process? Did the interventions of the QAM increase

confidence in the product produced? Did the QAM ensure the satisfactory frequency and quality of communications among all parties, including the donor, the contractor, the national authority, the UNMAS, and the SAC? Is the utility of a part-time (versus full-time) quality assurance monitoring questioned? Were issues raised early by the Quality Assurance Monitor for discussion with the Survey Team Leader, SAC, the national mine action authority and other interested partners to allow quick resolution? Did advance or pre-planning missions involve, in some way, the participation of the QAM, the contractor, and the national mine-action authority? Is there any merit in having the QAM involved in certain facets of the survey from its earliest stages? What was the methodology of the certification process? Would it be helpful to have tools to assess the completeness and consistency of the data in the IMSMA database to support the quality assurance and the certification? What questions would the above mentioned tool have to answer? Did the QAM work directly with the IMSMA system as part of the QA process and did he use the already existing tools to assess the completeness of the collected data? Did the QAM possess sufficient knowledge of the IMSMA system to perform his role? What was the usefulness and validity of the Final Certification? How could these be more useful? Should the TORs of the QAM and/or the Certification Committee be modified?

GENERAL ISSUES

What factors limited the effectiveness, efficiency and usefulness of the survey? How can the survey process be made more efficient? What qualifications should be required of an implementing partner? How can the effectiveness/usefulness of the results be increased? Were sufficient resources made available for the LIS? Could the process have been conducted less expensively, or benefited from more resources? The LIS does not provide a 100% complete and accurate list of communities and impact. Is the degree of accuracy obtained sufficient? Is it worthwhile to spend more to improve the remaining coverage? Or, would it be appropriate to spend less to get a reduced coverage?

What is the importance of SAC (or other) training and backstopping in conduct of the LIS? Is the "survey package" now sufficiently clear that a good LIS can be conducted by any qualified institution, with only limited further support? What training materials should be developed to complete the survey package? Has the LIS proven to be a one-shot process, or has it been institutionalized? What support would a motivated national mine action authority require to carry out a LIS? Should such support be provided by a single specialized entity? Can it be supplied by any experienced social research entity?

The evaluation is not intended to include direct technical assistance to Districts in order to establish or to increase their financial and technical management capability. That type of assistance has already been provided or made available by the Asia Development Bank and other donors working on devolution. For the purpose of this program, while a grant to a District may include costs related to its financial and technical management of the project, the District must already meet the second precept in order to be eligible for award of the grant.

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- Protocol 8 – Field Organization and Flow Chart
- Protocol 9 – Survey Interviewers
- Protocol 10 – Questionnaire/ Coding Sheets
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Annex C: Persons Interviewed

1. INFORMANTS IN LIS COUNTRIES VISITED

Bosnia-Herzegovina

Mr. Emmanuel Sauvage, Project Manager HI LIS

Ms. Almedina Komic, National Operation Co-ordinater, HI LIS

Mr. Dusam Gavran, Director of BHMAC

Mr. Tarik Serak, BHMAC

Mr. Jusuf Jasarevic, BH MAC Regional Manager

Ms. Kimeta Diberovic, HI LIS Regional Co-ordinator, Regional Office Mostar

Mr. Marinko Bosnjak, Civil Defence Gorni Vakuf

Mr. Asmir Begovic, Civil Defence, Gorni Vakuf

Mr. Mirza Agic, HI LIS, QMS Manager

Mr. Neven Rediz, HI LIS GIS Assistant

Mr. Abdulah, HI LIS, Regional Manager, Regional Office Sarajevo

Mr. Knezevic Goran, HI LIS, Regional Manager, Regional Office Pale

Cambodia

H.E. Sam Sotha, Secretary General, Cambodian Mine Action and Victim Assistance Authority (CMAA), Phnom Penh

Mr. Chea Eang, Director of Database, Assistant to the Secretary General, CMAA

Lt.Gen. Khem Sophoan, Director-General, Cambodian Mine Action Center (CMAC)

Mr. Tong Try, Director of Operation and Planning, CMAC

Mr. Ith Loeur, Director, Provincial Department of Rural Development, Banteay Meanchey province, Sisophon

Mr. Hoeung Kim Soeung, Director, Khmer Farmer Development, Banteay Meanchey province, Sisophon

Mr. Sam Sereywathana, Director, Rural Community and Environment Development Organization (RCEDO), Banteay Meanchey province

Mr. Kham Sereyrith, Chief of Operation, CMAC/Siem Reap province

Mr. Michael Simmons, Vice President, GeoSpatial, Vancouver

Ms. Valerie Warmington, Team leader, GeoSpatial Survey Team, Vancouver

Mr. Ade Riddout, QAsia (former Project Manager, GeoSpatial Survey Team), Phnom Penh

Mr. Mao Vanna, General Manager, GeoSpatial International, Phnom Penh

Mr. Michael Sheinkman, Geographer, Evaluator on Level 1 Survey training program, CIDA, (former UN Mine Clearing Advisor), M&M Technology Co., Ltd.

Ms. Beate Tränkmann, Team leader, Governance Cluster, UNDP, Phnom Penh

Mr. Brian Lund, Assistant Country Director, CARE, Phnom Penh

Mr. Michael McDonnell, Project Manager, Mine/UXO Risk Reduction, HI Belgium, Phnom Penh – former Quality Assurance manager, GeoSpatial survey team.

Mr. Christian Provoost, Coordinator, Mines and Disability Prevention Department, HI Belgium, Phnom Penh

Mr. Chhiv Lim, Project Manager, Cambodia Mine/UXO Victim Information System, HI Belgium, Phnom Penh

Mr. Ray Worner, Project Advisor, Cambodia Mine/UXO Victim Information System, HI Belgium, Phnom Penh

Mr. David Gauthier, Project Manager, LUPU Support project, HI, Siem Reap province (telephone)

Mr. Felipe Atkins, Programme Manager, Norwegian People's Aid (NPA), Banteay Meanchey province

Ms. Ruth Bottomley, Researcher, NPA, Battambong province (telephone)

Mr. Vinh Loeub, Field Liason and Monitoring Officer, NPA, Banteay Meanchey province

Mr. Khiev Sakhet, Field Liason and Monitoring Officer, NPA, Banteay Meanchey province

Ms. Kim Leang, Lutheran World Federation, Banteay Meanchey province

Mr. Chab Vibol, World Vision, Battambang province

Mr. Chhan Sokha, World Vision, Battambang province

Mr. Phiep Mono, MAG, Battambang province

Ms.Thong Monyly, MAG, Battambang province

Ms. Eoun Saroy, MAG, Battambang province

Mr. Keo Chhunly, LUP-Mapping & Demining Liason Officer, CARE, Battambang province

Ms. Krisna Uk, Assistant Project Development and Support, NPA, Phnom Penh

Mr. Andy Leigh, Senior Operations Manager, World Vision Cambodia, Phnom Penh

Mr. David Hayter, Country Programme Manager, Mine Action Group (MAG), Phnom Penh

Mr. Stephen Bradley, Senior Technical Adviser, MAG, Phnom Penh

Mr. Ricard Boulter, Programme Manager, Halo Trust, Siem Reap province

Colonel (ret) Jean Pierre Billault, Adviser, CMAC, Siem Reap province

Mr. Soun Chear, Director, Land Use Planning Unit, LUPO, Battambang.

Ms. Clare Brazend, Advisor (Australian Vollunteer Programme), Land Use Planning Unit, LUPO, Battambang.

Ms. So Carita, Project Manager, Integrated Demining Development Project, IDDP, CARE Cambodia, Battambang.

Mr. Keo Chhunly, Land Use Planning – Mapping and Demining Liason Officer, IDDP, CARE Cambodia, Battambang.

Mr. Pheap Mono, Regional Manager, Mines Advisory Group, MAG, Batambang Province.

Ms. Sarah Bearup, Mines & Disabilities Program Manager, World Vision Cambodia, Battambang.

Mr. Chap Vibol, Intergrated Mine Action Planning, IMAP Manager, World Vision Cambodia, Battambang.

Mr. Chham Sokha, Mine Awareness/Land Tenure facilitator, World Vision Cambodia, Battambang.

Ms. Kim Kim Leang, Project Coordinator, Integrated Rural Development through Empowerment Project Battambang, Lutheran World Federation Cambodia Program, Battambang.

Ms. Denise Coghlan r.sm., Consultant to ICBL, Landmine Monitor Report, Jesuit Service – Cambodia, Phnom Penh.

Chad

Mr. Beat Schock, Technical Advisor, UNDP

Mr. Jürgen Bauer, Programme Coordinator, HELP Germany

Mr. Mahamoud Adam Béchir, Coordinator, Haut Commissariat National deminage (HCND)

Mr. Michael Balima, Representative, Resident, Joint Programme, UNDP

Mr. Michael Verreault, Principal Technical Advisor, UNDP

Mr. Moussa Ali Sountali, Administrator of Programe, HCND

Mr. Tadjadin Douda Askanit, Head of Operations, HCND

Mr. Tony Allen, Operations Officer, HCND

Mr. Marc Lucet, Team Leader, Chad Landmine Impact Survey (now UNICEF/Yemen)

Ethiopia

Mr. Adam Combs, Head of Administration, Norwegian People´s Aid

Mr. Ato Abebaw Alemayehu, Operations Officer, Emergency Recovery Project, World Bank

Mr. Ato Ambachewa Negus, National mine coordintor, Rehabilitation and Development Organisation (RADO)

Mr. Ato Assefa Ashengo, Head, Rehabilitation Appairs Department, Ministry of Labour % Social Affairs (MoLSA)

Mr. Ato Teklewold, Director of EMAO

Mr. Ato Yiberta Tadess, Executive Director, Rehabilitation and Development Organisation (RADO)

Mr. Ato Wendwosen Feleke, Head, Emergency Recovery Program Management Unit (ERPMU), Ministry of Fiance and Economis Development (MoFeed)

Mr. Damien Valette d´Osia, Quality Control Manager, UNMAS

Mr. Gerhard Westerveen, Assistant Representative for Protection, UNHCR

Mr. Jonas Zackrisson, Team Leader, Ethiopia Landmine Impact Survey, Norwegian People's Aid, Addis Ababa

Mr. Marc Rubin, Head Emergency Section, UNICEF, Addis Abeba

Ms. Maria Strintzos, Head, Fund Raising department, Relief Society of Tigray (REST)

Mr. Vic Thackwray, Mine Action Advisory Team, Operations Advisor, UNDP, Ethiopia

Mr. Zelatem, District Leader, HI, Aksum

Mozambique

Mr. David Horton, Executive Director, Canadian International Demining Corps, Sydney, Nova Scotia

Mr. Alberto N Mourato da Silva, Programme Manager, CIDA, Maputo

Ms. Clarisse Barbosa, Programme Officer, Norwegian Embassy, Maputo

Mr. Felipe Muzima, Programme Manager Mine Action Programme, NPA, Tete

Mr. Jacky D`Almeida, National Programme Director, Accelerated Demining Programme, Maputo

General Fundoe, Mozambique Mine Group, Maputo

Mr. Florencio Chongo, Deputy Director, Accelerated Demining Programme, Maputo

Mr. Augusto Chiridza, Oficial do Plano, Acceleated Demining Program, Maputo

Mr. Felisberto Joao Nuvunga, Deputy Director, IND

Mr. Tomàs, Head of Planning, IND

Mr. Hugh Lawrence, Technical Advisor Operations, UNDP/IND

Mr. Olaf Juergensen, Chief Technical Advisor, UNDP/IND

Mr. Jim Nightingale, Technical Advisor GIS, UNDP/IND

Mr. Augusto Nogueira, Technical Advisor GIS, IND

Mr. Jose Maria David, Head of IMSMA database, IND

Mr. Carlos Mucapera, UNDP Mine Action Programme Manager

Mrs. Margarida A. Matsinhe, Administradora, Namaacha district, Maputo province

Thailand Survey

General Vasu Chanarat, Adviser, Prime Minister’s office (former TMAC Director General)

General Ronnachai-Pannipa Srisuworanan, Office of Chief of Joint Staff, Supreme Command Headquarters (former TMAC Deputy Director General)

Major General Gitti Suksomstarn, Director General, TMAC

Major General Somsak Skultong, Deputy Director General, TMAC

Major Saranyu Viriyavejakul , Head, Humanitarian Mine Action Unit number One

Group Captain (Ms.) Sopa Boonprasop, TMAC

Mr Ruangdech Poungprom, Database manager, IMSMA Database, TMAC

Ms Narudee Leardphonsuttirat, GIS Database service officer, IMSMA Database, TMAC

Mr Tat Glinsorn, Network administrator, IMSMA Database, TMAC

Dr. Amara Pongsapich, Dean, Faculty of Political Science, Chulalongkorn University

Ms. Sirisupa Kulthanen, Assistant Resident Representative, UNDP

Ms. Emilie Ketudat, Thailand Campaign to Ban Landmines

Mr. Suthikiet Sopanik, Director, General Chatichai Choonhavan Foundation

Ms. Duangkamol Ponchamni, Country Director, Handicap International

Fr. Vichai Phokthavi, Catholic Commission for Justice and Peace

Mr. Michael Sheinkman, Geographer, (former UN Mine Clearing Advisor and advisor to TMAC on LIS), M&M Technology Co., Ltd.

Dr. Rune Engeseth, Norway's Energy and Water Regulatory Authority, Oslo

Mr. Apichat Taweerpora, Deputy District Govenor, King A. Khok Sung district, Sa Kaeo province.

Mr. Boonkurt Gunmann, Deputy Village Headmann, Ban Nhong Ya Kaew village, King A. Khok Sung district, Sa Kaeo province.

Mr. Peng Sawaengsuk, Villager, Ban Nhong Ya Kaew village, King A. Khok Sung district, Sa Kaeo province.

Yemen

H.E., Mr. Hisham Sharaf Abdalla, Deputy Minister for International Cooperation, Ministry for Planning and International Cooperation

H.E., Eng. Abdulmaklik M. Alama, Deputy Minister, Ministry of Oil and Minerals

Mr. Saleh M. N. Al-Beshi, Assistant Deputy Minister, Agricultural Affairs, Ministry of Agriculture and Irrigation

Mr. Amin M. Al-Maktari, Deputy Assistant Minister, Financial and Local Control, Ministry of Local Administration

Mr. Gamal M. Al-Haimy, Director-General, Control and Inspection Director General, Ministry of Education

Dr. Naseeb Maljam, Director-General, Medical and Health Services, Ministry for Public Health

Mr. (Col) Mansour M. Al-Ali, Director, Executive Mine Action Center/EMAC

Mr. Yahya Y. Al-Mutawakel, Adviser to Head, Poverty Reduction Strategy and Follow-up Monitoring Unit, Ministry of Planning and International Cooperation

Ms. Rashida Ali Al-Hamdani, Director, Department for Administration and Labor, Prime Minister's office/Chair, Yemen Women National Committee/Rapporteur, National Mine Action Committee, Prime Minister's office

Ms. Huda Ali Ahmed, Director of Rehabilitation, Ministry of Insurance and Social Affairs

Mr. James W. Rawley, Resident Representative, UNDP

Mr. Moin Karim, Deputy Resident Representative, UNDP

Mr. Ghulam M. Isaczai, Assistant Resident Representative, UNDP

Mr. Jamal Jarallah, Programme Officer, UNDP

Mr. Marc Lucet, Project Officer, Area Based Programme, UNICEF

Ms. Jacqueline Isakov, Program Director, Handicap International

Mr. Tawfiq Radman, Acting Country Director, Adventist Development and Relief Agency

Mr. Dieter Windeler, Project Manager, GTZ Demining Project

Mr. Ahmed Alawi, Manager, Information Systems Department, EMAC

Mr. Mohammed Ahmed, Deputy Manager, Information Systems Department, EMAC

Mr. Amin Al-Haraxi, Data Analyst, Information Systems Department, EMAC

Mr. Hartmut Thoms, Operations Adviser, EMAC

Mr. Faiz Mohammed, Adviser, EMAC

Ms. Cveta Dermendjeva, Adviser, Victims Assistance Department, EMAC

2. INFORMANTS OUTSIDE LIS COUNTRIES

Non-Governmental Organizations, Universities

Mr. Alastair McAslan, Director, Cranfield Mine Action, *Cranfield University*

Mr. Hemi Morete, Programme Officer, Cranfield Mine Action, *Cranfield University*

Mr. S.A.M. Christensen, Mine Action Coordinator, *Danish Church Aid*

Mr. Steven Olejas, Program Coordinator, Operative Emergency Unit, Mine Action Team, Danish Church Aid, Copenhagen

Mr. Bo Bischoff, Programme Manager, Danish Demining Group

Mr. Paul Mackintosh, Program Manager, Somaliland Impact Survey, Danish Demining Group, Somaliland

Mr. Guy Willoughby, Director, HALO Trust, Dunfries

Mr. Nick Bateman, Desk Officer, Small Arms and Light Weapons Disposal Program, HALO Trust, Dunfries

Mr. Simon Conway, HALO Trust, Dunfries

Mr. Andrew Finister, HALO *Trust*, Dunfries

Mr. Jean-Baptiste Richardier, Director, *Handicap International France*, Lyon

Ms. Taz Khaliq, Head, Mine Action Unit, *Handicap International Belgium*, Brussels

Mr. Mark Russell, Mine Action Unit, *Handicap International Belgium*, Brussels

Ms. Mary Wareham, Coordinator, Landmine Monitor, Human Rights Watch, Washington DC

Ms. Elizabeth Bernstein, Coordinator, International Campaign to Ban Landmines (ICBL), Washington DC

Mr. Stefano Calabretta, Mine Action Unit Director, InterSOS, Rome

Mr. Tim Carstairs, Director for Policy, Mine Advisory Group, Manchester

Ms. Lydia Good, International Partnerships Coordinator, Mine Advisory Group, Manchester

Mr. Per Nergaard, Head, Demining Program, Norwegian People's Aid

Mr. Robert Eaton, Director, Survey Action Center, Washington DC

Mr. Mike Kendellen, Director for Survey, Survey Action Center, Washington DC

Ms. Nelly Schneider, Chief Administration Officer, Survey Action Center, Washington DC

Mr. Justin T. Brady, Senior Technical Adviser, Eritrea Landmine Impact Survey, UN Joint Mine Action Center, Asmara

Mr. William E. Barron, Operations Manager, Information Management and Mine Action Program, Vietnam Veterans of America Foundation, Washington DC

Mr. Aldo Benini, Socioeconomic Analyst, Mine Action Program, Vietnam Veterans of America Foundation, Washington DC

Mr. Joseph Donohue, Mine Action Program, *Vietnam Veterans of America Foundation*, Washington DC

Mr. Matthew Wood, Information Management Officer, Information Management and Mine Action Programs, Vietnam Veterans of America Foundation, Washington DC

United Nations Agencies

Mr. Martin Barber, Director, United Nations Mine Action Services, New York

Mr. Noel Mulliner, Deputy Chief, Operations, United Nations Mine Action Services, New York

Mr. Martin Donoghue, United Nations Mine Action Services, New York

Mr. Sebastian Kasack, Mine Risk Education Officer, United Nations Mine Action Services, New York

Mr. Patrick Tillet, Program Officer, United Nations Mine Action Services, New York

Mr. Richard Kollodge, Information Officer, United Nations Mine Action Services, New York

Ms. Ameerah Haq, Deputy Assistant Administrator and Deputy Director, Bureau for Crisis Prevention and Recovery, UN Development Programme, New York

Mr. Sayed Aqa, Head, Mine Action Unit, Bureau for Crisis Prevention and Recovery, UNDP, New York

Mr. Oren Schlein, Mine Action Specialist, Min Action Unit, Bureau for Crisis Prevention and Recovery, UNDP, New York

Mr. Charles Downs, Division Chief, Mine Action Unit, UN Office for Project Services, New York

Ms. Polly Brennan, Coordinator, Landmines and Small Arms, Humanitarian Policy and Advocacy Unit, Office of Emergency Programs, UNICEF, New York

Mr. Reuben McCarthy, Project Officer, Landmines and Small Arms, Humanitarian Policy and Advocacy Unit, Office of Emergency Programs, UNICEF, New York

Ambassador Martin Dahinden, Director, Geneva International Centre for Humanitarian Demining (GICHD), Geneva

Mr. Ian Mansfield, Operations Director, GICHD, Geneva

Mr. Alan Arnold, Head, IMSMA Team, GICHD, Geneva

Mr. Eric Filippino, Head, Socio-economic Section, GICHD, Geneva

Mr. Håvard Bach, Head of Operational Methods, GICHD, Geneva

Ms. Ananda Millard, IMSMA Training Coordinator, GICHD, Geneva

Donor Representatives

Canada

Mr. Earl Turcotte, Chief, Mine Action Unit, UN and Commonwealth Division, Multilateral Programs Branch, Canadian International Development Agency

Mr. Andrew Shore, Coordinator, Mine Action Team (ILX), Department of Foreign Affairs and International Trade

Denmark

Ms. Hanne Elmelund Gam, Adviser, Third section, Office for Humanitarian Assistance, Ministry of Foreign Affairs

Norway

Ms. May Eli Stener, Adviser, Department for Human Rights, Humanitarian Assistance and Democracy, Ministry of Foreign Affairs

United States

Mr. Richard G. Kidd, IV, Foreign Affairs Officer, Office of Plans, Policy and Analysis, Bureau of Political-Military Affairs, Department of State

Annex D: Bosnia Country Annex

A. Introduction and Background

The Bosnia and Herzegovina Mine Action Center (BHMAC) has described Bosnia and Herzegovina (BiH) as probably the most heavily mined country in Europe following the extensive use of landmines, especially anti-personnel mines during the 1991-95 conflict. A considerable quantity of unexploded ordnance (UXO) also affects the country. The total mine contaminated area is estimated to be 2,145 km^2 (+/- 50 %), which is approximately 4.2 % of the total area of BiH. According to BHMAC it is estimated that there are about 10,000 locations with some 670,000 mines and 650,000 units of UXO.

According to BHMAC, there has been no complete national survey, and these records refer only to known minefields. However, there has been a systematic survey conducted in the Federation in 2002 and recently a smaller-scale survey in the Serbska Republic. More minefields are being discovered from better reporting and from clearance activity. In the middle and southern part of BiH, most mines were randomly laid by soldiers not trained in the orderly laying of mines and accurate record-keeping; many of the minefield records are therefore non-existent or useless. BHMAC has received no minefield reports from the Serbian army for the areas around Sarajevo and Gorazde. The upshot is that the mine threat in BiH is widespread, in a low-density random pattern.

Until 1998 the UN was in charge of the MAC, and many problems relate to this period, because mines and UXO continue to be found in areas that had been released as cleared areas (i.e. areas that were claimed to be free of mines and UXO).

Mine action began in 1995, with the UN Mine Action Centre (UNMAC) started in 1996. In 1998, the national authorities of BiH took over the responsibilities for mine action, with financial support from the international community. The Demining Law in Bosnia[1] was adopted in early 2002, thus creating a legal frame for mine action. The BiH Demining Commission, located within and responsible to the Ministry of Civil Affairs and Communication, is the central body for demining activities. The former three MACs have been merged into one - BHMAC - which operates in accordance with international standards (IMAS). BHMAC is the technical service of the Demining Commission

At the international level, the board of Donors has the function of supporting the work of the Demining Commission. The Demining Law allows the Board of Donors to consist of UNDP, the Office of the High Representative (OHR), and other donor representatives and to exist as long as the donors deem necessary. BHMAC is managing the Mine Action issues, and UNICEF supports MRE. It is unclear whether the LIS will result in changed priorities when it comes to the disbursement of funds for mine clearance, MRE and VA respectively**.** The first priority of the government is the resettlement of displaced persons, and the LIS is expected to make a substantial contribution to this. A draft Demining Strategy Plan for BiH to the year 2010 was presented to the Board of Donors on 20th March 2002 and approved by the Committee of Development in mid-2003.

[1] Demining should be understood as Mine Action. The Demining Law also covers Mine Risk Education (MRE) and Victims Assistance (VA).

The Strategy Plan comprises a concept for operations of mine action in BiH including a mine action operational plan and a number of strategic projects. The aim of the Strategy is to set BiH free of the negative impact of mines and other contaminants resulting from war by 2010, as well as to protect the population and to develop the economy and natural resources. The grand total of financial means required for mine action is about EUR 335 million[2].

In addition to the Strategy Plan, BHMAC has prepared a Mine Action Plan for BiH for the year 2003, comprising an operational plan for demining and other mine-related activities to be carried out through 2003. The scale of the work and resources applied are impressive: 14 Non-governmental and 20 commercial demining organizations plus five BiH governmental demining organizations with altogether approximately 1200 demining personnel.

B. Planning the LIS

The Survey Action Center (SAC) made a trip to BiH in June 2000 and recommended major revisions to information management systems, a Landmine Impact Survey (LIS), and conversion to the Information Management System for Mine Action (IMSMA)[3]. However, BHMAC did not recognize the proposal as a top priority at that point because the Demining Act was not completed yet. After some discussion, it was agreed at the donor meeting on 20 March 2002 to fund a LIS, using the SAC as implementing partner.

SAC carried out an Advance Survey Mission (ASM) early in 2002[4]. It was intended that the survey should be started in November 2002 and be completed within eight to ten months.

In a Statement of Interest, June 2002, Handicap International (HI) presented an outline plan of action based on the experience of HI LIS in Chad. HI proposed alternative options for the performance of the survey, and expressed concerns with respect to the quantity and quality of data gathered because of difficulties of communication with the local authorities, risk of delays and other problems.

In its Project Proposal, HI states that it was named by SAC in July 2002 as implementer of the LIS for BiH[5]. The Project Proposal does not refer to any ASM report or project document issued by SAC. According to SAC´s new policy for partner selection[6], procedures for the transparent methods of selecting the implementing partners for SAC-executed surveys were introduced in May 2002. Another bidder, CIDC, did not find the selection transparent, however.

In the Project Proposal the partners are presented as being BHMAC, SAC and the UN Mine Action Centre (UNMAS). BHMAC as the official mine action state body had to facilitate the HI intervention in the country based on a Memorandum of

[2] Demining Strategy for BiH by the year of 2010, p. 15

[3] Trip Report: SAC Visit to Bosnia, June 2000. The SAC Team consisted of Richard Kidd and Mathew Wood

[4] Statement according to Landmine Monitor 2002. However, no report of the ASM or confirmation of the performance of the ASM has been identified.

[5] Handicap International, Bosnia and Herzegovina, Landmine Impact Survey, Project Proposal, October 1st, 2002 – October 31st, 2003, p. 3.

[6] SAC-BD-02-003 Poll of the Board of Directors, 14 May 2002

Understanding (MoU) between BHMAC and HI on co-operation during the implementation of the LIS. The MoU was signed on 9th December 2002.

SAC, as the primary contractor, provides HI with the technical expertise required for the survey methodology, operational implementation etc. SAC will organize a training session for HI senior staff involved in the survey operation Plan. The Evaluation finds this somewhat strange if the main argument for asking HI to implement the Bosnia LIS was its Chad experience. There seems to be no carry-over of this experience into the Bosnia LIS. UNMAS provided a Quality Assurance Monitor (QAM) through UNOPS in connection with the Certification, as a UN Certification Committee would be called by UNMAS to review the survey process and provide the UN certification if acceptable standards were maintained throughout the process.

The Project Proposal was based on a time schedule of 13 months from October 1st 2002 to October 31st 2003, with a total budget of USD 676,906 funded by the European Commission and the United States Department of State through the International Trust Fund. The budget has been extended to USD 993,602 because of the increase in the number of communities to survey as a result of the EOC.

The contract between SAC and HI was signed on 24th September 2002, and the LIS Project was started as planned by 1st October 2002.

Objectives of the LIS

With reference to the HI Project Proposal the immediate objective is to conduct a LIS to internationally recognized standards, and assist in planning a strategy for minimizing the impact of mines on communities in BiH. The preamble of the MoU states that the LIS aims to:

- Define the problem in terms of scale, type, location, hazards and social and economic impact experiences by affected communities.
- Improve national planning efforts that support clear prioritization of resources.
- Foster development of national plans with well-defined immediate, intermediate, and end objectives.
- Establish baseline data for measuring the performance of mine action programs.

The MoU preamble and provisions contain a much more differentiated vision of the objectives than the objectives of the HI Project proposals. It is the opinion of the Evaluation that the objectives of the LIS should have been analyzed and discussed in more detail and in light of the actual situation and needs of BiH. Mine action has taken place in BiH since the Dayton agreement in November 1995. Many surveys and mine clearing projects have been carried out. BHMAC has started a systematic technical survey and impact analysis, which is to go on as a continual process. HI's Chad LIS experience is thus in many ways not relevant to Bosnia. Chad needed the LIS to identify the mine problem. In Bosnia, BHMAC has the information and training for the prioritization. The major difficulty is the scale of the problem and the 50-60% of unknown minefields.

The two mine action scenarios are quite different. Therefore, the objective of the LIS BiH as described in the HI Proposal is not entirely satisfactory to BiH. This was also a major reason that BHMAC was not convinced that a complete LIS according to the SAC Protocols was the most important input to mine action in BiH.

LIS Methodology

During the early initiative on a general landmine survey of BiH in 2000, the need for a LIS and transfer of the existing BiH data base to IMSMA was discussed with BHMAC[7]. There are no records or other evidence to be found of any discussion of the LIS methodology between SAC or HI and BHMAC during the actual planning of the HI LIS to be started by the end of 2002. However, the MoU expresses explicit mutual understanding of the use and implementation of the LIS methodology and the IMSMA to be used by BHMAC. Therefore, it is assumed that the LIS methodology and the IMSMA must have been discussed in detail during the planning of the LIS, but BHMAC has not made any commitment with respect to the implementation of the LIS and IMSMA procedures. Currently BiH expects to be used for the trial of an updated IMSMA so it can be presumed that BiH is not adverse to such a move[8].

Links

The Demining Strategy for BiH 2010 and the Mine Action Plan of BiH 2003 focus on mine action issues and objectives. Referring to the Demining Strategy, BHMAC along with the Ministry for Human Rights and Refugees shall create a project for demining agricultural areas, which will be co-coordinated with other activities of State Bodies. However, the Demining Strategy does not reflect the issue of mine action as an integrated part of the economic development of BiH, because there was no Development Plan at the time the mine action element was written. There is no evidence of links between LIS, regional planning of mine action and national planning of development. However, the BHMAC Deputy Director (Operations) is now a standing member of the group which forms the National Development Plan

The general structure of mine action and relations between the various ministries and other public stakeholders with respect to co-ordination of the development and rehabilitation of Bosnian society was discussed with BHMAC, which explained that there is a gap between BHMAC and other ministries/agencies. However, there were no principal parallel mine action structures. It is the hope of BHMAC that the LIS will bridge the gaps.

C. LIS Implementation

Survey Management and Process

The HI LIS started with Expert Opinion Collection among seven experts/organizations, including three national and four international major stakeholders of mine action in BiH:

- BHMAC – Official Mine Action State Body that dispenses the main and global information regarding landmines and UXO.
- Civil Defense – Centralized governmental organizations active in mine action.
- Municipal Mine Action Co-coordinators - Individuals that play the main role in the prioritization of minefield processes.
- Office of the High Representative – International administrator.
- International Committee of the Red Cross – International NGO
- Landmine Survivor Network – International NGO.

[7] Trip Report: SAC visit to Bosnia, June 2000

[8] According to comment of Mr. David Rowe

- Norwegian People's Aid – International NGO.

The military units of SFOR and its predecessors have conducted mine clearance in the initial post war period and collected mine information, which has been handed over to BHMAC. HI LIS has access to the military mine information via BHMAC.

UNICEF and UNDP were not been mentioned in connection with EOC, but it is understood that information from UN organizations is collected via BHMAC.

During the Advance Survey Mission an estimate of 830 mine-affected communities was made, but the EOC process identified 2641 populated places possibly affected. The EOC was completed by the end of January 2003.

The unexpectedly high number of affected places resulted in a proposed extension of the budget by USD 316,696, approximately 50 % of the original approved budget, based on a discussion of the time needed for interviews and data collection per Suspected Hazardous Area (SHA)[9].

The BiH LIS senior staff training process was conducted in January 2003 by SAC representatives. The formal training was held from January 27th to January 31st.

A pre-test of interviews and data collection started on February 2nd 2003. Following the survey training stage, a Pilot Test of the entire survey process itself was conducted from March 17th until April 13th with positive results.

HI did not receive the IMSMA software until March 16th 2003, at which time the GIS Assistant returned from IMSMA training in Albania. This significantly delayed the IMSMA implementation and the subsequent entry of the Pilot Test data. By the end of June 2003 the HI LIS had a total of 55 staff, organized as follows:

- Central office in Sarajevo, 10 staff, including three expatriates.
- Regional Office Mostar: 8 staff, including three teams
- Regional Office Bihac: 6 staff, including three teams
- Regional Office Banja Luka: 6 staff, including three teams,
- Regional Office Sarajevo: 10 staff, including four teams
- Regional Office Pale: 12 staff, including three teams
- Data Entry Unit, collocated with BHMA; three staff

By the end of June 2003, the survey had covered 59% of the total number of Populated Places with SHAs, which is satisfactory. HI had by then increased the number of surveys of Populated Places from 5 to 8 surveys per week per team.

With respect to the increased number of Populated Places, HI has made a proposal for the extension of the contract in order to complete the LIS before the end of 2003. The Evaluation Team asked for alternative, flexible, quicker survey processes in case a budget extension could not be obtained. The HI Team Leader explained that the work would stop if the budget was not extended. There was no room for alternative solutions if the protocols were followed.

[9] E-mail correspondence Mike Kendellen, Tom Haythornthwaite – Emmanuel Sauvage, January – February 2003.

The Evaluation Team has interviewed HI staff from the Mostar Regional Office and attended interviews in the Mostar region. It was very clear to the Team that the HI staff worked very effectively and that the individual staff members were highly motivated and dedicated to their jobs.

Quality Assurance

With reference to the Quality Assurance Monitoring Plan 2002 – 2003, the first QAM intervention was planned for November/December 2002. However, the funding of the QAM budget, USD 96,000, had not been decided at that point, which delayed the QAM process. Therefore, the QAM missed the planning and the training part of the project. The Quality Assurance Monitor (QAM) conducted the first mission from 15th February 2003 to 13th March 2003, resulting in the first report, March 2003. The QAM found that there was a lack of interaction and co-ordination between BHMAC and HI. The QAM recommended strongly co-locating the survey staff with the BHMAC staff, and to coordinate certain activities of BHMAC and HI, especially in the different regions.

The second QAM mission was conducted from 23rd April to 31st May 2003. The QAM noted

- that the interaction with BHMAC had improved,
- that the survey field activities were executed to a very high standard, in an enthusiastic manner and were following the protocols,
- that the methodology of false negative sampling developed and implemented is based upon the SAC protocols,
- that the major threat in the opinion of the QAM was that no formal data entry on field documents had started, and
- that an initiative had been taken to introduce an internal quality assurance system based on the ISO approach.

Generally, the QAM found the survey progress satisfactory.

When the Evaluation Team visited HI in July the internal Quality Management System (QMS) was discussed. The contract was signed on May 6, 2003. QMS was effective at that time and approved by QAM, according to HI. However, no Quality Management Plan was presented to the Evaluating Team.

Concerning the former draft SAC protocol on certification, the Evaluation finds that the certification process is rather complicated and does not comply with certification processes as they are understood internationally (ISO 9000-2000). The task of the QAM is a mix of coaching, advising and quality control, which is not in line with basic principles of Quality Management, as there is a mixing of roles, taking on both "internal" (coaching, advisory) and "external" (quality assurance, monitoring) tasks. The overall Quality Management of the LIS processes should to be discussed and streamlined. For instance the flow of documents is not controlled. Many documents do not contain the most basic identification information on author, date, revision number etc. The application of the LIS process to the ISO 9000-2000 systems should be considered.

Use of tools

Generally the HI LIS conducts the procedures according to the protocols. The Evaluation Team did not find that there was any co-ordination between the HI LIS and the BHMAC technical survey with respect to the methodology and performance of the survey processes, however. It is the Evaluation Team's perception that BHMAC does not intend to make any changes in the planning and prioritization of surveys until the HI LIS was completed, evaluated and accepted by BHMAC. However, referring to the Third QAM´s report, June 2003, the co-operation between HI and BHMAC has improved, and BHMAC has shown interest in the LIS. There are still problems concerning the different information systems, because BHMAC uses FoxPro. After installing the IMSMA at the BHMAC site, the Team finds that it should be possible for BHMAC to exploit the data collected by HI LIS. The major problem might be the understanding that the HI LIS is not a Level 1 survey, and therefore the results of the HI LIS are not for the immediate operational use of the demining teams. The LIS process must be followed up by technical surveys and prioritization processes according to the principles of the proposed Task Assessment Planning (TAP).

HI explained that the functionality of the generic scoring systems was good, and that HI was satisfied with this scoring system in general. However, the Evaluation Team does not see any evidence of links to Bosnia's development plans and discussion of the outcome of the scoring system with the authorities.

Cooperation and Consultation

Both parties have expressed their willingness to co-operate in the MoU. However, it is the opinion of the Evaluation Team that no serious cooperation had taken take place until recently, when HI and BHMAC entered into an agreement on improvement of cooperation. Regular meetings have recently been established between the two parties, to be held every 14 days, where all problems are discussed and solved. According to the general Director of BHMAC there are no outstanding problems. On the other hand, the Team did not find any concrete evidence on mutual exploitation of the generated survey results among the two parties. During the interviews of the regional LIS, representatives and BHMAC representatives could not answer the questions on what the other party was doing in their region at the moment.

With reference to interviews of several persons during the trip to Sarajevo and Mostar, the Evaluation Team finds that co-operation between BHMAC and HI LIS was poor.

During the field data collection work and interviews, the HI teams work together with the Municipal Mine Action Co-coordinator and the Civil Defense. The Evaluation Team had the opportunity to observe the co-operation at the municipal level, which was very convincing.

It was advised that HI LIS has contact with UNICEF concerning Mine Risk Education (MRE). HI LIS also has contact with UNDP, which supports BHMAC as the Mine Action technical adviser.

D. LIS Outputs and Impact

Survey report

The survey will be completed by the end of 2003. Based on observations during the mission, the Evaluation Team is strongly convinced that the final survey report will be of satisfactory quality for most stakeholders of mine action in BiH.

However, the major question is whether BHMAC will accept the report and implement the LIS methodology in its future survey work, for instance as basis for the proposed TAP and Strategic Planning processes. It is anticipated that the results of the LIS and the collected socio-economic information will be of great value to other authorities of BiH.

IMSMA Database

The data unit has been installed within BHMAC compounds in Tito Barracks, which opens the possibilities for closer communication between HI LIS and BHMAC. Unfortunately, the IMSMA software and training of the IMSMA operator has been delayed by three months. The HI LIS GIS Assistant explained that there were difficulties in providing the programs and lack of training. Therefore, it has not been possible for the Evaluation Team to assess the opportunities of BHMAC using the IMSMA system.

Practical Results of LIS Outputs

During the visit concrete survey results were presented to the Evaluation Team. However, it is too early to discuss the possible value of the practical results to the community of BiH and BHMAC.

With reference to the Demining Strategy for BiH by the year of 2010, BHMAC has planned a systematic survey of BiH (Objective 1.6). The revision of the Demining Strategy for BiH is planned to take place in 2004 after the completion of the impact survey research. The Evaluation was informed that the results of LIS will be a fundamental input to the revised strategy. But the risk is that the results of the LIS will not be used unless much effort is put into convincing the BHMAC of the value of the LIS results, both technical and socio-economic. Even if BHMAC does not fully exploit the results of LIS, it is expected that the IMSMA database will be valuable to BHMAC, and that BHMAC will be able to exploit the IMSMA database[10].

E. Conclusions, Findings, Recommendations

Conclusions

The HI LIS is very well managed and conducted. The quality of the work is very good and convincing. When completed, it is expected that the results of the LIS will be of high quality and value. The major problem is that BHMAC is far ahead in its own planning and structures of mine surveys. The interest and the ownership of BHMAC were not clear from the start of the project.

Findings

Key findings, LIS planning:

- There is no evidence of an Advanced Survey Mission as no mission report has been presented. However, an ASM is mentioned in connection with an estimation of 830 places possibly affected by mines as a basis for the EOC. The QAM report also mentions the ASM, but no reference is specified.

[10] In comments to this Annex draft, the UNDP advisor to BHMAC stated that there is no reason to suggest that BiH will *not* use the findings of LIS. However, the Evaluation did not find a unanimous appreciation of the LIS among the interviewed BHMAC staff.

- The objectives of the LIS are not clear. The objective of the Project Proposal prepared by HI does not correspond with the preambles of the MoU. The Evaluation Team does not find evidence of any serious discussion of the LIS objectives.
- HI has been selected for implementation of the LIS in BiH. No statement on the selection process or reference to the SAC Partner Selection Policy has been found.
- A MoU was signed by HI and BHMAC on 9th December 2002, two months later than the start of the LIS. The Evaluation Team finds that an MoU should be signed before signing and starting the LIS, as a basic precondition of the LIS engagement. Furthermore, the Team finds that the MoU should have been signed by SAC as the primary contractor.
- There is no evidence of involvement of BHMAC in the planning process. The ASM has a key role to play in planning the different LIS projects. The Evaluation Team has not found any evidence of national participation in the planning of LIS. If stakeholders are not involved at this stage the national role and ownership may be weakened or lost.
- No relations between BHMAC and SAC are described in the contract documents and the MoU. SAC´s role in the LIS process as prime contractor is not clear, both in the planning and the implementation of the LIS.
- No evidence of discussion of the LIS methodology between SAC, HI and BHMAC has been identified. The Team finds that a discussion of the application of the LIS methodology and results to BiH mine action and development would have been useful.
- No links between LIS, regional planning of mine action and national planning of development are identified.

Key findings, LIS Implementation:

- The results of the EOC vary very much from the estimated number of polluted communities, which leads to serious impact on the project with respect to time and funds.
- The Evaluation Team finds that SAC has not been very visible in the discussion of co-operation between HI LIS and BHMAC.
- BHMAC and HI LIS conduct technical surveys and LIS at the same time in the same region without any co-ordination. Neither of the two parties knows on what or where the other party is working.
- It is very positive that the IMSMA Data Unit is placed inside BHMAC compound, which opens possibilities for closer contact.
- The QAM has been delayed, possibly because of a lack of funding, and missed the planning process.
- Generally the Evaluation Team finds that the Quality Management of the LIS does not comply with international principles of Quality Management.
- The strong point of the LIS is the uniform methodology of the survey in accordance with the protocols.

- The weak point is lack of flexibility and capability to meet project changes and risk from lack of funds, shortage of resources etc. The scoring system of LIS might contain weak points with respect to the application to BiH development. Another weak point is that the supposed number of communities (SHA) has not been estimated properly. The initial number of communities to survey has been estimated at 830. According to EOC the number of Populated Places has been estimated at 2641, which means that the work of HI LIS is much greater than expected.
- The HI LIS regional offices have established good contacts with the local authorities and civil defense at a municipal level. The collection of information on municipal level was very positive.

Key Findings, LIS Outputs and Impact:

- The value of the LIS depends on the BHMAC evaluation of the results and the need for the results.
- The Evaluation Team finds that there is a serious risk of losing the efforts of the LIS work if HI does not provide successful and convincing results, which can be accepted by BHMAC. The start of IMSMA and co-location of IMSMA with the headquarters of BHMAC is very promising, and the Evaluation team finds that the IMSMA might be an important vehicle to reach the participation and ownership of BHMAC.

The main lesson learned from the HI LIS is that it is very problematic to start and implement the LIS procedure in a country where co-coordinated and well managed mine actions have been conducted for many years. The LIS is not ultimately necessary for the demining strategies of BiH.

It is the opinion of the Evaluation Team that the planning of the LIS process has taken place without the full participation of BHMAC. The LIS has been implemented too late in relation to the ongoing Mine Action in BiH and there is a high risk of losing the results if they are not implemented by BHMAC.

Recommendations

With respect to the completion of the ongoing HI LIS in BiH it is recommended:

- That all stakeholders take proactive measures in order to improve the co-operation between HI LIS and BHMAC and secure the mutual understanding and success of the LIS.
- That such measures could be workshops, informal meetings, establishment of working groups to solve technical problems, sports competitions (e.g. football matches, bicycle races), social events etc.
- That SAC presents ownership as the prime contractor, and shows more visibility in the project and support to HI.

With respect to future LIS projects the findings of the HI LIS lead to the following recommendations:

- Before the start of the LIS the ownership of the national MAC must be ensured through a carefully conducted ASM with explicit criteria for success.
- The objectives of the LIS must be discussed and clarified.

- The role and responsibility of all key stakeholders, especially SAC and the implementing partner, must be clarified.
- The scoring system should be adjusted in accordance with the specific context.
- All necessary funds for the LIS and the QAM must be identified and approved before signing any contracts and the start of project.
- SAC must take ownership and responsibility for the project and must also proactively attempt to counteract the risk of a lack of co-operation and interest from the local counterpart.

Finally, it is recommended that the entire integrated process from project identification to the implementation of results should be considered and discussed in detail. It is very much recommended that the project management should be conducted in a very professional way in accordance with the principle of project management among the donor communities.

Postscript

The Evaluation Team thanks Mr. David Rowe, UNDP, and Mr. Emmanuel Sauvage, HI LIS, for their valuable comments. The comments indicate some disagreement with our evaluation of the co-operation between HI LIS and BHMAC and the implementation of the LIS results in the BiH MAC Mine Action strategy.

The Evaluation Team would like to underline that the above assessment was based on the background document review and the field visit to Bosnia that took place June-July 2003. The documents and the interviews conducted clearly noted that until spring 2003 there was a lack of interaction and co-operation between BHMAC and the HI management of the LIS.

The comments on this Country Annex reflect a positive development and the actual stage reached by the LIS in October 2003. The joint BHMAC and HI LIS presentation in Copenhagen on 16th October 2003 and the dialogue between the Evaluation Team and the Bosnian parties regarding this Annex show that the progress on the LIS is very promising, and that solid co-operation has been established between the parties. Furthermore, the statement by Mr. David Rowe that the BiH Demining Strategy will be revised based significantly on LIS indicates that BHMAC is prepared to take full ownership of the LIS.

Annex E: Cambodia Country Study

A. Introduction and Background

Humanitarian demining in Cambodia began already in 1991, and the Cambodia Mine Action Centre (CMAC) was established in 1992. A first rough landmine survey was done by the UN military administration in 1993, to identify areas of danger to UN personnel. This, however, was of little use for planning more systematic and nation-wide mine action activities. In 1998, therefore, the EU began funding a more comprehensive survey carried out by CMAC. It was completed in three of the southern provinces and was to continue in two northern ones when an agreement was reached between Cambodia and Canada to fund a national survey.

A Memorandum of Understanding (MoU) was signed between the two countries in April 2000 for the funding of a national Landmine Impact Survey[1]. The MoU states that the *purpose* of the project "is to provide to Cambodian authorities a National Level 1 Survey of mine-affected areas" (Article III). The original Cambodian party to the MoU was CMAC, but with the establishment of the Cambodian Mine Action and Victim Assistance Authority (CMAA), the CMAA became the responsible Cambodian partner.

CIDA had requested UNMAS assistance for selecting the agency to carry out the work. The contract was awarded to GeoSpatial International (GSI), a firm with considerable experience in large-scale natural resource-use surveying, and with expertise in using GIS technology to record vast amounts of map-based data, but with no previous mine action history. The contracting of GSI took place at the same time as the negotiations on the MoU were concluded, so that GSI's Inception Mission (similar to Advance Survey Mission in SAC terminology) took place already in April-May 2000. During this Inception Mission, fairly extensive discussions were held with the mine action community in the country. A management plan, some of the Standard Operating Procedures etc were prepared, and the work on selecting the surveyors was initiated.

The preparatory work was begun in June 2000, the survey initiated in August 2000 and terminated in April 2002. The final survey database was handed over to the CMAA at the conclusion of the database work in May 2002, and the final report a couple of months later. The UN certification of the process was approved in June 2003, with some comments.

The original budget had been set at CND 2 million, but the complete survey ended up costing CND 3.9 million. This does not include the Canadian funding of the UN Quality Assurance Manager (QAM), nor the follow-up technical assistance that CIDA has been providing to the CMAA and other Cambodian authorities to enable them to use the survey database.

B. Planning the LIS

[1] The MoU uses the term "National Level 1 Survey", which is not the same thing as a Landmine Impact Survey. A Level 1 survey focuses on the landmine identification, whereas the purpose of the LIS is exactly to move towards identifying the *impact* of landmines and thus generate priorities based on this. The survey carried out was in fact an LIS, so it is simply the term in the MoU that does not reflect this reality.

The Cambodia survey was managed in a somewhat different manner than the majority of the surveys since Canada took a direct role in setting parameters and tracking performance. This meant that the MoU was signed directly between the two governments. The one concrete problem that emanated from this was that CIDA had agreed that all the surveyors were to be hired from CMAC staff.

A more general problem was the line of communications between GSI and the international mine action community. CIDA wanted to manage parts of this, which at times was perceived as blocking a more open and direct link to the UN and SAC. GSI staff participated in the introductory training provided by SAC in Washington, and SAC's social scientist Aldo Benini visited Cambodia once, and GSI found these interactions helpful and constructive. While informal contacts were maintained, the formal communication was at times strained both with SAC and UN bodies due to CIDA "sitting on" the contact flow.

Protocols

In planning the survey, GSI relied to a great extent on the SAC Protocols. This was in part because this was mandated by their contract. The MoU notes that "The survey will adhere to international standards for such work" (Art III, Section 3.01), and Annex B gives several references to UNMAS protocols. CIDA and GSI were concerned that the survey be certified by the UN, and this of course required adherence to these. But GSI also felt that the Protocols were of considerable help to them. They provided a good synthesis of what the mine action community considered to be "best practice" approaches in a number of key areas, and for a firm that was new to the field, this was of great assistance. It was also felt that the Protocols by and large were appropriate in their level of detail: they provided guidelines in terms of what needed to be done, but not necessarily how – that could be defined in each case through the specific Standard Operating Procedures produced by the implementing agency, for example.

Questionnaire

Regarding the survey itself, the key instrument was the questionnaire. GSI reviewed the SAC questionnaire as well as the one CMAC had used for the EU-funded surveys. They ended up largely using the CMAC one, both because it was more reasonable in length, but also seen as more appropriate in the Cambodian context. It had been field tested and thus already through a series of modifications based on the Cambodian reality.

GSI refined it through requesting comments from the local mine action community, and while most of the suggestions were for including more questions, they led to improvements in the final survey instrument. The modified questionnaire was pre-tested as part of the training of the surveyors, and a revised version was then submitted to a more formal pre-test. Using the CMAC rather than the SAC questionnaire as the model provoked a temporary halt in operations as UNMAS was concerned standards were not being followed, though the issue was solved within a couple of weeks.

While the questionnaire used was similar to the one used during the survey of the three southern provinces, the actual information generated was not used. The main concern was that the quality assurance on the data collection and data entry had not been good enough to ensure that they would fulfill the UN certification standards.

Victims Information Database

A key existing information source was the Cambodia Mine Victims Information System (CMVIS). It had been developed over a number of years by Handicap International in collaboration with the local Red Cross society. While GSI spent considerable time reviewing the data with the intention of basing their own victims' data on that, they ended up deciding that this was not possible, primarily because the site identification of the accident was too poor[2]. Since the impact scoring is primarily driven by the accident data, this was a serious draw-back. The conclusion the parties came to was that the LIS ended up with better site data while the CMVIS had better victims information, thus reflecting the somewhat different uses that the data were to be put to. An attempt has been made to merge the two data sets, but so far this has not been successful. Instead, the CMVIS has continued to develop, learning some lessons from the LIS in terms of site location, but by and large being driven by the needs as expressed by the users of the CMVIS (see last section, "Survey Follow-up").

Another important source of information was of course the national gazetteer, housed in the Ministry of Land Management, Urban Planning and Construction (MLMUPC)

National Census Survey

Another critical decision was that the survey had to be a national census exercise, visiting all the known villages, rather than just the 50% or so that had originally been expected. The original assumption was that the eastern part of the country was relatively mine-free, and that using standard sampling techniques, including the False Negative Sampling (FNS) approach, would permit the more focused survey. The US bombing of the "Ho Chi Minh trail" had created a fairly wide-spread UXO (cluster-bombs) problem in the eastern parts of the country, however. A team went to three southeastern provinces and tested using the FNS there. The conclusion was that there was no savings to be obtained by using sampling rather than census. The LIS therefore ended up visiting every one but two of the nearly 14.000 villages in the country. This made both the budget and timeline situation quite different from what had been planned for during the Inception Mission.

Social Science Skills

GSI hired a senior social scientist from a local university as a social science adviser. But the total time allocated for her work was 20 hours during the preparatory phase, and about three days for observing the training that was being carried out of the surveyors. No further local social science skills were hired to monitor or follow-up the actual fieldwork.

Dialogue with National Actors

The dialogue between parts of the mine action community and GSI was the most contested issue that came up during the Evaluation. The MA community consists of

[2] There were several error sources. The first is that the CMVIS focuses on victims information and thus registers incidents by victim home site rather than accident site, though the latter is also registered. But site registration was less accurate than in the LIS in terms of map location since the LIS used their GPS locators for this. On the other hand, defining where village boundaries go for allocation of accident sites to a particular village is often quite contentious, and where neither LIS nor CMVIS can claim to be more "right". The CMVIS, however, used the old official gazetteer, which first of all was inaccurate in some location definitions, but also did not have nearly 500 new villages that the LIS picked up. The LIS used the more accurate GPS-based locators, and thus could relate accidents more correctly to villages. On the other hand, CMVIS has full-time data collectors so their information is more accurate and timely – the LIS had to rely on memories of accidents up to two years back in time by informants under time pressure, so this could generate highly inaccurate information.

two sets of actors – the NGOs, and the national mine actors CMAC and later also CMAA. The NGO community and GSI have very different views on how the dialogue was carried out both during the planning and follow-up phases. Some of the controversy is undoubtedly tied to the somewhat different interests of the actors.

From the beginning, GSI felt that it was looked at with considerable skepticism by the NGOs. GSI, as a commercial firm, was seen as an intruder into what was a fairly closed milieu, and where the self-image of humanitarian mine action was not seen as compatible with for-profit actors. This created barriers to communication from the beginning. The approach of the two sets of actors was also quite different in that the NGOs are primarily community based and thus have more localized concerns and approaches whereas GSI necessarily had to take a top-down perspective on the upcoming LIS. The way communication took place was also perceived differently by the actors. GSI spent – in their view – considerable time going around and talking with NGOs and other key stakeholders, informing about and wanting feed-back to the LIS planning. Most NGOs felt that they were being talked *to* rather than invited into a dialogue – a perception that perhaps was in part shaped by their pre-conceived notions about GSI. But it is striking that the recollections from these conversations are so different: GSI strongly convinced it made a serious and strenuous effort to reach out to other mine action entities, and the NGOs just as clear in their views that GSI had a narrow and utilitarian intention behind the meetings that did not listen seriously to NGO views. But there were also misconceptions regarding the LIS on the side of some NGO representatives, who were mostly interested in a more technical (Level 2) survey. The more general impact survey was of less interest.

Concerning national actors, CMAC/CMAA were heavily involved and engaged, so the key national stakeholders were fully in the picture. National authorities provided the necessary support in terms of providing written authorizations for the exercise, ensuring that provincial governors were informed and supportive, and that the public administration in general provided the necessary information. This included access to all available maps, census data, etc (though some of it was some time in coming, in the Cambodian context GSI in fact received an unusually open access to government data).

Regarding links to other national authorities, these generally were poor. GSI only became aware of the Poverty Reduction Strategy Paper process (PRSP) towards the end of the survey. The failure to ensure horizontal linkages lie more with national authorities as the Cambodian Government had signed the MoU and thus had every opportunity to involve other parts of government in the LIS if it had wished. This is being addressed now through the board of the CMAA having a wider representation.

On the other hand, the relations to the MLMUPC and its the cadastral surveying department was good, GSI both getting access to the gazetteer and maps up front, and providing the Ministry with the improved maps and gazetteer information with their GPS readings later.

Surveyors

The hiring of surveyors became an issue, because of the MoU that limited GSI to hiring CMAC employees. This meant all the surveyors were men, since CMAC did not hire women as deminers. It meant that all were experienced field staff with a good mine action background, so the training in map drawing, using survey instruments such as compasses and handheld GPS instruments was fairly straight forward. They furthermore came from a para-military organization where structure, hierarchy and

discipline were familiar concepts, and the implementation of an extremely tight and disciplined field schedule was thus feasible.

On the other hand it meant that GSI was not able to get staff with much academic, social science or interviewing background, leading to a lack in critically assessing validity of information provided. GSI was aware of these issues, so training was given considerable attention. Issues like interview techniques, body language, how to interview women and in minority areas were topics in the course and at refresher courses that were offered throughout the survey period. Particular attention was paid to the gender dimension, as GSI was conscious of the biases their all-male survey teams represented. They claim that this was overcome, however, in part due to the training, in part due to the fact that there are few cultural barriers to communication between men and women in Cambodia. In the annex to their report on gender issues, however, they point to other organizations' experience that does not support this line of reasoning[3]. In general, it is clear that gender *is* an issue, and was raised as such during the UN Certification discussion as well.

C. Implementing the LIS

An operational plan was designed for the various two-men teams where overnight staging areas, travel schedules etc. were carefully laid out, where daily radio-based communication ensured a very close and tight management of each team, and where the various quality assurance tasks were strictly adhered to. The implementation of the survey, including the expansion that had to take place once it became clear that a national census effort was required, the data collection, entry and verification, etc., is nothing short of impressive. The dedication of the field surveyors, the logistics of the operation, the overall management of the total team effort, the willingness and ability to "walk the extra mile" to reach each and every village in the country was a momentous undertaking, yet executed almost without incident.

Time Use

The surveyors were to interview at least three informants in each village, where the primary informant was to be the village leader. Instructions were to try to include respondents of different gender, age and socio-economic class. The other informants were to be geographically distant from where the village leader lived, to ensure geographic spread. In some villages, cluster meetings were held, and some villages were visited four or five times.

On average it would take about 45-60 minutes to record information in non-contaminated villages, while in contaminated villages it would normally take a full

[3] The World Food Programme has about 40% female surveyors, including at supervision levels, without having encountered problems in this area. In terms of information collection, the experience of MAG, according to the report, is that "Women never hold positions of formal authority within the village (e.g. village leader, deputy village leader, religious leader…) and so their views will be overlooked if figures of authority are solely relied on for information. Male authorities seldom identify and direct surveyors to speak with (particularly mine vulnerable or mine knowledgeable) women within the village. Women will attend meetings but in general will not contribute to discussions if 'authorities' are present. Women will offer their views if they are specifically sought or if participatory processes (such as community mapping techniques) are used. Old women are particularly good sources of village information. There are indications that women are less likely than men to provide fabricated data when asked a question to which they do not know the answer. Women are particularly sensitive/cognizant of socio-economic impacts related to their children and families overall (e.g. safe play environments, access to amenities such as markets, health centers, schools…)."

day. In the easier cases (for example only one easily located mine field) half a day might be sufficient, whereas in other cases up to three days were used.

The original plan called for the survey work to be done in 15 months, but once it became clear that a full census survey had to be carried out, this timeline was extended to 20 months. The field work began in August 2000 and was to have been completed by October 2001, but in fact was ended in April 2002 (this takes into account the fact that survey work was stopped for a couple of weeks due to the disagreements between GSI/CIDA and UNMAS on some operational aspects of the survey early in the process).

Quality Assurance

The quality assurance (QA) system was a very strong aspect of the survey. GSI introduced internal quality assurance procedures that were closely adhered to. The position of Field Editors were added to help the Field Managers handle the work load, and in particular the verification of the data. A Quality Assurance unit was set up which re-visited about 3% of the villages – a total of 486 – as per the UN standards. It systematically visited all provinces and teams, different parts of the questionnaire were verified at each visit so that the entire questionnaire ended up being thoroughly checked. Finally a number of data entry check points were programmed into the database to ensure consistency and correctness of the data. Data identified as not being right were sent back down to the field for correction, though most of the errors detected were transcription errors, often of GPS readings (geographic locations). The first part of the QA unit's work addressed the quality and availability of equipment, training and procedures, and after the field work began, the data entry. What was verified was that the informants listed had in fact been spoken with, that what they had said was what had been recorded. On average each survey team was checked over 13 times, so this aspect of the survey was unusually rigorous.

The GSI team believes the reliability of the data is exceptional: anybody can go back and verify that the information registered is in fact that which was provided by the informants. This Evaluation, when taking the LIS information back to villages and checked, verified that this is, in the cases that were carried out, in fact correct. The question is thus more on the validity side – if the LIS collected the right information on the issues they were asked to.

The external UN QAM posed some problems. While CIDA paid the UN for this from a fund separate from the GSI contract, the QAM visited the project for the first time for three weeks in February 2001, when operations had been underway for almost seven months. The two subsequent visits were in April and June 2001, and the last one seven months later, in March-April 2002. GSI felt that it could have benefited considerably from an experienced QAM in place and available for consultation already during the preparatory and training phase.

Information Biases

Yet according to many of the informants spoken with during this Evaluation, the LIS information basis was biased, in a number of ways, which had an impact on the final quality of the survey – the database, the maps and the report.

Both villages visited and field-based NGOs felt that the time period in each village was too short, and that therefore too few informants were interviewed. GSI disputes this, saying that the interviews would typically produce a spontaneous grouping of village residents and often, when memories conflicted, other older or more

knowledgeable residents would be summoned to provide their opinion. At the same time, however, the decision by GSI not to use village meetings for information collection was also criticized by a number of NGOs. GSI made this choice based on field experience from Cambodia, which was that such larger meetings did not in fact lead to more open and participatory information collection and discussions around the quality of the data provided, but rather were dominated by the few persons in authority. The presence of others, including women, did not provide value added, according to GSI. GSI notes that this decision was in fact recommended by several (other) NGOs, and was in their opinion a correct one.

A larger village meeting during the day would also have been problematic since most adults would be busy with their economic activities away from the house. NGOs comment that if the survey was indeed only to take place during working hours of one day, this would be a problem. But if the survey had taken place over several days, the scenario would have been different, based on the trust that could be established between the surveyors and the villagers. GSI comments that in most contaminated villages the survey took more than one day, and that there therefore was trust between the villagers and the surveyors, and no distortion in information can be attributed to this.

Using the village leader as the primary information entry point is also seen as problematic. One thing is that many village leaders were quite recent and thus not good informants. Another problem was that they were often used to identify other informants, and the tendency – as noted in footnote 3 – is that this would create a bias against women. There was also the concern that village leaders are more likely to provide information based on rent-seeking strategies. That is, they would see advantages in claiming that the mine problem is greater than it actually was in the hope that the village would benefit from faster or greater mine clearance efforts by demining NGOs or CMAC. GSI was aware of this, and comments that this was tested for when developing the questionnaire. It believes that the QA captured this issue well, and as a result there very few, if any, such erroneous reports in the survey.

GSI further believes that there was no serious gender bias, as around 30% of respondents were women, and that sufficient effort and training had been invested to ensure information gathering from women by the LIS teams.

The Evaluation is not convinced. In the six communities in two heavily mined provinces visited by the Evaluation, less than a handful of registered respondents were females, despite one village having a female acting village chief[4]. The development NGOs talked with were concerned for the reasons mentioned by MAG (footnote 3): women tend to have a different impact analysis regarding the overall household situation, and less likely to make up information if they do not know, so more reliable informants. The overall impression that the Evaluation was left with is that the rapid survey techniques combined with homogeneous male (ex-deminer) teams created a structural bias into the information collection exercise. The teams usually returned at night to their base. The ex-deminers/ex-military teams also clearly dialogued differently with the villagers than NGO teams do. The fact that the teams did not find

[4] GSI very correctly points out that this is a very small and non-random sample, so that its validity as a reflection of the survey is faulty. None the less, the visits were done with staff who have many years experience in talking with rural populations, and thus had a very different set of "listening skills" than the LIS teams. Both the NGOs and the local communities claimed that the issues raised by the Evaluation are correct

any value-added of having women present indicates more about the lack of gender-skills in the overall survey, since also in industrialized societies it has been shown that women and men communicate differently and will relate to surveys differently. The experience from participatory rural planning – whether rapid appraisals or detailed project planning – is also that women prioritize differently than do men. Claiming, as GSI does both in the LIS report and in its comments to this Annex, that the gender dimension has been addressed satisfactorily, is not in line either with what most of the NGOs claimed, nor with the extensive evaluation experience that the evaluators have from development situations, including in Southeast Asia. The key concern, though, was that with such a rushed effort, there were few possibilities to verify validity and accuracy of information provided. The surveyors would spend considerable effort in recording carefully what was being said, but not on going back and challenging the information by systematic confrontation with other sources that might have a different starting point for their information.

GSI believes this to be an absolutely incorrect conclusion, yet the Evaluation is very concerned that no systematic social science skills were used to verify and test this out. The internal quality assurance was headed by ex-military, the project manager who was put forward as the one with the most social science skills background is a natural scientist. There *are* good reasons why most surveys are careful to test for gender and "halo" effects (respondents answering back what they think the surveyors want to hear), and other possible sources of biases that may affect validity and reliability. The Evaluation has no way of knowing in what ways such possible biases may have affected or distorted the final picture that the LIS produced – if at all – since it was in no position of carrying out such an analysis itself. But it is noteworthy that the NGO criticism on this account was rather unanimous.

Complementary Information Sources

There are also strong disagreements concerning the degree to which the LIS identified important informants in the villages, such as ex-soldiers and local deminers who often have particular knowledge of the local battlefields or more specifically the minefields. Demining NGOs said that they often come across informants in this category who have either old mine maps or have drawn their own, which can be quite accurate. Talking with the older inhabitants of a village is also important, because the historical memory of where mines were laid or where fighting took place disappears quickly in areas with high mobility – a characteristic of several of the more mine-affected areas in the north and west. Talking with people who have recently moved in, even if they were village leaders, would be of less help.

GSI believes that it was able to identify and talked with these kinds of informants, whereas once again development NGOs claim the opposite – that the teams came in and were more random in who was interviewed. The Evaluation met several informants who showed maps they had and who had not been talked with by the LIS teams – though once again the representativity of this set of informants is clearly not known.

Another claim that was made by several informants is that the survey registered a number of *cleared* areas as suspected hazardous areas (SHAs), even though the local community knew very well that it had been cleared – sometimes several years ago. The reason supposedly was that the survey did not specify that it wanted information about *current* SHAs – not an identification of all areas that at one point or another had been mined. – It is difficult to understand from the questionnaire how such a

misunderstanding could arise, but it is clear from the result of the survey that a number of cleared areas have been identified as SHAs.

GSI believes that some cleared areas were only partially cleared and some were later discovered to still contain mines, so that in fact these SHAs were not mistakes. Once again, the factual statements are clearly contradictory, but strongly held by those who put them forward.

A further complaint is that the survey did not use the other major sources of information in the mine action field, namely the NGOs and local authorities. Here again the points of view are very opposed. GSI feels it did inform when the survey moved into a new province and invited local actors to contribute, while NGOS are adamant that there was never any serious interaction at provincial, district or village level with their offices or their staff. Some NGOs recall being invited to an information meeting, but most recall the survey as a blur of motorcycles rushing by without time for any information exchange – the surveyors were so stretched for time that they had to adhere to their timetable and could not deviate from that. The surveyors also were not instructed to seek out other informants than the ones to be found in each village.

GSI again disagrees with this description, believing that survey staff went to considerable lengths to identify all available sources, and that in particular all local authorities were consulted, sometimes on more than one occasion. They were asked for information – some were obviously embarrassed as they did not have available information that it was their responsibility to collect and maintain. Yet local and provincial authorities visited by this Evaluation also claimed that they were not consulted, but simply informed – first about the survey coming and its purpose and what they expected from them in order to implement it, and later on there were some debriefings about what had been found. Key actors such as Land Use Planning Units (LUPUs) were not invited to become involved, even though GSI states that all five LUPUs in existence at the time of the survey were contacted.

Again perceptions differ. One argument GSI makes is that it had to ensure that the data collection exercise was uniform throughout the country. It could therefore not permit *ad hoc* information sources that might provide data that were in conflict with what was systematically gathered on the ground – it would have made the quality assurance and data verification process impossible. GSI also wonders why, if NGOs and others were so concerned that their information be included, they were not more pro-active when the survey took place in their area, since GSI claims they had a very outspoken and well-known "open door"-policy – which other actors never took advantage of.

The Cambodia survey has clearly generated very strong opinions regarding the data basis. GSI believes that it went the extra mile in being comprehensive and careful on the data collection exercise, yet other informed actors – NGOs, local authorities, regional advisers to public demining agencies – paint a different picture. While the information collection exercise itself was impressive in its range and comprehensiveness, the issue of the validity/reliability remains, because the quality assurance, as far as this Evaluation is able to ascertain, did not put sufficient resources into this area.

D. LIS Outputs and Impact

The LIS process produced a number of outputs. It generated a database with considerable information, including demographic, on land use, on economic activities, etc. by village with GPS-based geographical locators, in addition to the strictly mine-related data. It provided updated information on the geographic distribution of the population, including identifying a considerable number of new villages, correcting the locations and names of a number of others, and thus made a major contribution to the national gazetteer. It provided information in digital format and map based, so that much of the strategic information could be presented visually and spatially allocated. A key piece of information was the SHAs that were presented as polygons on maps from location/village up to higher levels And it presented a final report that reviewed the process and its key achievements.

The report was produced in English, and was made available on a CD. The report CD is very well designed, easy to read and to find information. A summary of the main findings were produced in Khmer.

The other major output was the database, made available in FoxPro. This was handed over to the national authorities, as per the MoU, and the accessibility has later on become a contentious issue (see below).

Key Findings

The basic findings were that of the 13,908 villages surveyed, 6,422 (46.2%) were registered as contaminated, where therefore 45.3% of the total population was estimated to be at risk.

The contaminated *area* was estimated at about 4,500 km2[5], however, which represents only about 2.5% of the land area. A total of about 1,800 victims had been registered during the previous two years, of which around 1,400 were due to mines and cluster bomb areas, while the remaining 400 were due to spot UXOs. This is equivalent to 7.9 accidents per 100,000 population over a two-year period.

The fact that Cambodia is considered a heavily mine-affected country is reflected in the high percentage of contaminated villages that were considered to be "high impact". About 29% of the villages fell into this category, 24% were "medium impact", and the remaining 47% were "low impact". The other country LIS studies report much lower percentages in the “high impact” category. As with other country surveys, it was the victims data that largely determined whether a village would be classified as "high" rather than "medium" or "low" impact, and here is one area where the uniformity of the methodology does permit some cross-country comparisons: the cut-off points between the three categories are similar in the different countries.

LIS Database

When setting up the database, GSI had to decide whether it wished to use the IMSMA system, or use the database that CMAC already had in place, and which was based on FoxPro (IMSMA till recently was an Access-based system). The key reason for this was that CMAC did not want to change its own system and database, since considerable resources has been spent building up the skills base and ability to work with FoxPro. Since FoxPro is a two-dimensional database while Access is a fully

[5] Given the standard cost of USD 10,000 to clear one hectare of land, this means that complete clearance would cost USD 4.5 billion. It is estimated that total annual expenditures on all humanitarian mine action in the country today – demining, victims' assistance etc – is currently about USD 30 million.

functional relational database, it is also much easier to use, though of course more limiting in the kinds of queries it can handle. Another reason was that at the time, IMSMA only permitted five data fields that were not pre-defined to be used. This limited the possibilities for adapting the questionnaire to the local conditions.

On the other hand, the UN demanded that IMSMA be used as a condition for certification of the LIS, which put considerable pressure on the Cambodians to agree to move to IMSMA. The short-term compromise was to continue using the FoxPro, and then later ensure that the data be ported to IMSMA so that it would be available in this database as well.

The views on the database is – once again! – quite different across actors. An additional reason that GSI decided to stick with FoxPro was that the NGOs felt comfortable with it and claimed that they would not consider changing to IMSMA.

The Geneva International Center on Humanitarian Demining (GICHD), which handles IMSMA and the training for it, sees the issue quite differently. One thing was that it turned out to be much more difficult (and costly) to port the LIS database from FoxPro to IMSMA than expected, so the compatibility issue was a serious one. The other thing is that they believe GSI had to spend considerable resources programming FoxPro for it to function as the LIS database. Once the GSI contract ended, the national authorities were not able to continue developing the FoxPro database and wanted to move to IMSMA, since the continued back-stopping that goes with IMSMA made them more confident that they could maintain it as a continuous database.

Access to Data

While the NGOs were happy with FoxPro as a database, they have been very dissatisfied with the dissemination of the LIS results. The dissemination, however, was a Cambodian policy decision, and one that frustrated both the donors, GSI and the mine action community.

GSI, on advice from CMAC and much of the mine action community, took the strategy of surveying the most mine-affected provinces first, in part to ensure that the most important parts of the country would be covered in case funding later on might turn out to be insufficient for the entire exercise[6]. But the other intention was to make the LIS information available as the survey progressed, so that the most valuable information – data on the most mine-affected areas – would be available as early as possible for action by the mine clearing community. In this way, the impact of the survey in terms of reducing future victims could be maximized.

This intention of providing data as the process evolved was not permitted by the national authorities, however. CMAA insisted that the entire survey had to be finalized and the results approved by them before information was let out. The official reason given was a concern with the integrity of the data, but also of course the political responsibility that it is national authorities that should release these kinds of sensitive information to the public, not a commercial firm operating under contract to them.

[6] There was a time gap between the realization that the LIS would have to be a national exercise rather than the more limited survey originally envisaged, and the funding for this expanded exercise being in place. During this "window of uncertainty", efforts were made to cover strategic areas in case of funding shortfalls.

But once the full database had been handed over, access to it remained extremely difficult. In Annex B to the MoU – which was considered an integral part of the MoU – it is made clear that "the RGOC commits to provide a copy of all records and data resulting from the Project to interested international agencies and to make results available to the general public". The MoU says nothing about how soon this should happen, though.

What happened was that the CMAA "sat on" the database for over six months before the first official copies were made available to outside actors. The main reason for this was that the CMAA was being established and did not have a real organization and offices from which to work and manage the distribution of the data. But clearly this issue could have been addressed if there had been a political will to do so.

What has created most controversy, though, is that database was released with a three-month access-period. After 90 days the database was locked and could not be used. CMAA management was unapologetic about this policy, stating flatly that this was a way of ensuring that the mine action community would always have to come to it for renewal of the data. It then added that since it was going to continuously update the database, this would ensure that users always had the most recent and thus most useful database.

In principle anybody who wanted to could simply request a copy from the CMAA. But most actors spoken with by this Evaluation claimed it was difficult to get a copy, and that the "suicide date" reduced the value of the database dramatically since it could not be counted on as a continuously available information platform. While GSI, with the support of the CMAA, in the end did distribute a fair number of the CDs, their utility was thus seen as diminished.

SHA Maps ("polygons")

In addition to the actual database, the map-based information on Suspected Hazardous Areas (SHAs) has generated a lot of reactions. The first is that the polygons in general are seen as exaggerating the areas that can be considered contaminated. The concern is that this has made the work of the deminers much more difficult, because stakeholders outside the demining community tend to interpret the maps as showing the actual perimeters of dangerous areas, and the certification for mine free areas thus has to cover the full polygon. The other is that a number of areas registered as SHAs include those that were certifiably cleared years ago. There is also the claim that a number of known mined areas were *not* included.

A strong conclusion drawn by some informants is that the survey was done so quickly and therefore superficially that it contains serious inaccuracies. This renders it, in their opinion, of little use for planning purposes, whether for national, local/regional authorities or the mine action community itself.

Several informants went further, believing that the SHA-maps did Cambodia positive harm. Two examples typify this argument. One was where a general polygon had been drawn as a square 10 by 10 km area – obviously a very general indication. Within that area, the roads and river banks had been cleared, and this – according to the local CMAC team – were the only areas that probably had been mined, but in any case were the only important areas because the rest was unused forest. The area was important locally, though, for tourism, since they had traditionally taken tourists along the rivers, and now were trying to rehabilitate the tourism industry. Two major donors, however, were not willing to invest till the total area could be guaranteed

mine-free, since they had seen the map and saw the entire 100 km^2 as mined. Another case was where an area of 3 km^2 had been indicated as SHA, and which an NGO had been asked to demine for resettlement purposes. The area ran 1 km along a road, with a known mined bridge at the center, and then 3 km inland. A demining agency was hired by the NGO to clear the area, and it quickly demined the bridge and the road shoulders. Once it began the technical surveys beyond the road shoulders they found nothing. When they tried to find out why the area had been declared SHA 3 km away from the road – which seemed highly unlikely since it had not been a battle zone – nobody could give an explanation. But because the entire area was shaded as an SHA on the LIS map, the international NGO demanded that the entire field be demined so that they could provide certification of it being totally mine-free. So the demining agency had no choice but to waste the time and money to go over the remaining 90% or so of the area they knew to be as mine free as anywhere else in Cambodia would be, at a very high opportunity cost: other critical areas could have been cleared during this period.

The problem here is not so much one of the Cambodia survey per se, but rather how to register and use the LIS information. The survey has recorded the information provided by the communities, and if there are uncertainties about the outer boundaries, the survey has no choice but to provide the full uncertain area, such as with the 100 km^2 area, or the full 3 km in from the road. Once this has been plotted on a map, however, the maps tend to take on a "life of their own – which is eternal", in the words of one informant. External (not well-informed) actors like donors or investors believe the maps depict actual known hazard areas. Since the maps are not updated, they continue to be used as a reference.

GSI also points out that the total area “over-reported” clearly cannot be that serious since total contaminated areas represent only about 2.5% of the land area. Furthermore, most of the polygons are quite small, though a few are of the large-general-area kind. These few larger polygons visually dominate the map but they are not the main finding of the survey.

The LIS, not being a technical (Level 2) survey, never attempted to provide accurate SHA border markings – it simply recorded what the communities believed to be hazardous areas. CMAC recently completed a technical survey in one village in Pailin that took over 40 deminers three months to complete, so the difference in effort between the two kinds of surveys is dramatic – and hence the accuracy of information necessarily as well.

The situation in Cambodia is very dynamic. A lot of demining is taking place. New roads are also constantly being opened, and people move rapidly into these new areas being opened up by the road construction – including into areas that are mined but were not populated before and therefore not caught by the LIS. The CMAA is now working to update the database, and therefore expects also to be producing new maps – one of the few countries where this kind of information updating seems to be taking place.

Scoring and Rating

A key function of the LIS is to use the information collected to identify those areas most affected by mines and UXOs. The standard classification scheme developed by SAC was used, with "high impact", "medium impact" and "low impact" communities. The scoring is done by allocating a weight to the various socio-economic factors that reflect the impact of mines and UXOs on the community, in particular blockages to

various common resources, and accident victims. The rating is then done based on grouping the resultant scores into the three categories based on pre-defined upper and lower boundaries for each category.

The scoring system is debated but while a number of actors believe the accident victims score is exaggerated in terms of its importance, there were few who had suggestions regarding how this could be improved. GSI did provide an alternative scoring system that is user controlled. They provided the SAC system and the alternative in which the "weights" are user specified. At least three users seem to have tested this – CMAC, CMAA and HALO. Along with an updated database, this more flexible scoring may contribute to better MA planning, in the view of GSI.

One area that is being addressed, is the victims' data. The CMVIS intends to collect better information on the accident site, but there are also discussions about collecting more information about *why* the accident happened. A key reason is that there is a lot of mobility in the border regions with Thailand, which are heavily mine infested. Many of the accidents are therefore by recent arrivals who do not have good enough information about the minefields, and thus walk unawares into them. From a mine action point of view it makes a big difference whether mine accidents are due to ignorance or calculated risk – new arrivals taking big risks because they do not know better, or farmers taking risks because they feel compelled to for livelihoods reasons. The response that is required in these two cases is different, yet the rating scheme may in both cases simply record "high impact" with a resultant focus on demining, whereas mine risk education may be more relevant and cost-effective. What this says, essentially, is that the LIS needs to be a fairly dynamic instrument if it is going to capture these kinds of issues and continuously provide guidance to national authorities.

The rating scheme in itself does not necessarily correspond to how national authorities will prioritize mine action. National decisions may be that particular regions are high priority for reasons unrelated to mine action. In the case of Cambodia, however, this kind of political process does not seem to have interfered, so mine action has been authorized to move ahead and prioritize actions based on the LIS results.

Survey Follow-up

A key concern raised by almost all actors is the follow-up to the survey. While most of those who had seen the survey recognized that it had generated a lot of new and potentially useful information, the concern was that it needs to be continuously updated, since otherwise it will quickly become outdated and hence of not much use. The example the NGOs point to is the CMVIS. In some areas the CMVIS does not have as good data as the LIS (in particular the geographic locator of the incident), but the CMVIS is both a live database that is constantly being updated, and is also easily and openly accessible by all. Somebody sitting out in a province can call in and ask about the victims situation in an area, and without she or he having to manipulate the database themselves (most NGO staff in the field cannot work with databases), the CMVIS will provide the actual data in a user-friendly format. And this is exactly what users want!

On the national side, the Department of Cadastre and Geography in the Ministry of Land Management, Urban Planning and Construction some time ago adopted the LIS list of villages and issued it to all who use the gazetteer – though a number of the NGOs were not aware of this and thus were still using the old (incorrect) gazetteer.

NGOs by and large said that to the extent they had access to the LIS information, it was used as second-order verification: they would cross-check their own data with the LIS to identify potential information gaps or conflicts – but by and large their planning was based on internally generated information.

As of the first part of 2003, the CMAA has begun updating the database. UXO information is being entered (it was not entered before since UXO *per se* has no socio-economic impact and thus does not contribute to the scoring system except if there has been an accident). The annual work plans of demining actors are being entered, as is information on demined areas so that SHAs that have been cleared are eliminated from the database, and revised databases will over time be distributed to the MA community.

UN Certification

While the survey was finalized in April 2002 and the final report handed over to the Cambodian authorities in July 2002, the UN Certification Committee only held its meeting on 28 May 2003. This long delay was evidently due to (i) the Cambodian authorities spending time finalizing their comments and forwarding their request for certification, (ii) delays in CIDA of forwarding this request to the United Nations, evidently based on the misconception that the UN had already received full documentation and the certification request.

The meeting discussed the issues that had been raised around the survey: the gender imbalance in the survey team; the fact that the FoxPro database was not easily compatible with IMSMA, so GICHD had to spend considerably more time on porting the data than had been expected; the complaints about the exaggerated polygons; the fact that such a high percentage of villages were considered "high impact" compared with other countries; and the issue that the CMVIS had not been used but that a separate victims database had been created.

In the end, most of the issues were considered to have been addressed well enough that the process could be certified, though GSI was expected to provide more information on why CMVIS had not been used.

Usefulness of Results

The main national actors – CMAA and CMAC – both strongly defend the LIS as very useful. For CMAA, the LIS provides a much more accurate national picture than anything else they had before then. In their discussions with national decision makers and donors engaged in mine action, this provides the justification for the resource requests and the concrete activities that are to be undertaken. It justifies the continued national attention to the problem, forcing the national authorities to become more involved, coordinate, quality assure through approval process and setting national standards, etc. It also provides a key instrument for the overall dialogue within the demining community in terms of prioritization, the various work plans that each organization puts forward, etc.

Based on the LIS, and with UNDP assistance, the CMAA is now analyzing the actual activities being carried out by deminers and others, and the preliminary findings are striking. The areas that are being demined by the NGOs have much fewer of the "high impact" areas than the areas being cleared by CMAC, for example. If the picture that is being drawn from comparing the organizations' work plans with the LIS picture is

correct, there is considerable potential for much greater impact by re-allocating demining efforts to the higher impact areas[7].

During the finalization process, GSI experienced a lot of interest in the results, from both the mine action community as well as more general development and commercial actors. More update and reliable data on the landmine situation was clearly considered valuable. GSI thus spent considerable time developing various kinds of reports and feed-back to such queries, and felt that a considerable share of its management time towards the end of the process was devoted to dissemination and orientation. This also includes dialogue with local representatives of NGOs, who have been in the forefront of the criticism of the LIS. GSI had a number of NGO representatives go through the database with them to check for inconsistencies with their own data, and as far as GSI could ascertain, they walked away happy with what they had seen and where their comments on what they felt were incorrect data were taken into account.

Several actors mentioned that they wanted a database that was not read-only, but where they could enter their own data and use the LIS as the basis for own planning – and then perhaps even provide easily transferable data for updating the LIS back to CMAA. The fact is, however, that the FoxPro can be exported to Excel or Access, so for those actors who want to, it is possible to use it as a base an then add on whatever new information they want.

Informants' Conclusions

A number of conclusions have been drawn by different local actors. Some believe that the entire LIS was unnecessary. Cambodia had nearly ten years of mine action, so the key mined areas were known. The authorities could therefore do the kind of overall planning necessary for rational use of limited mine clearance activities.

Others felt that if a national LIS were to be carried out, it should have been a differentiated survey by region. In regions that were heavily mined, the LIS could have been close to technical surveys, helping to map out more accurately the extent and shape of mine fields, working closely with local communities to ensure that more accurate polygons could be drawn. In lightly mined or UXO-affected areas, a "quick 'n dirty" survey could be done since what is required there is mine risk education and assistance to UXO-tampering victims. This sentiment seems to be shared by GSI itself, with some staff noting that the probability of something happening due to mines/UXOs in a number of provinces is much less than falling off a truck or being killed by accidental gunshots.

Some of the NGOs felt that such a survey should have been much more participatory, so that the communities themselves were assisted in drawing up more accurate maps, ensuring that the knowledge generated by the survey remained with the communities. But in terms of such feed-back to the communities there are again conflicting views. GSI maintains that the SHA maps were shared with and reviewed by the

[7] This work has just begun, and at the time the Evaluation visited Cambodia, it was not clear what the deminers response would be to the CMAA analysis. It is not clear if for example the NGOs would agree with the accuracy of the "high impact" areas, the link to their own work, etc. But at the same time it is clear that this kind of analysis is important as it is exactly to clarify resource efficiency that the LIS is undertaken.

communities. Exactly how this process was done and to what extent the villages use the maps is not known[8].

E. Findings, Conclusions and Recommendations

Main Findings and Conclusions

The Cambodia LIS is a national census survey and thus unusually comprehensive in its coverage. It was carried out within an extremely tight time schedule, and the overall management of the process as well as the implementation of the survey was exemplary in its execution. The QA was given prominence, taking as much as 10% of total resources, and ensured that data received was correctly recorded and entered in the database. Despite this, the LIS suffers from a series of problems, some due to the process, some due to the surrounding framework conditions.

- The need for a national census LIS is debatable. Given Cambodia's mine action history, a more focused survey on key mine-affected areas would have been more cost effective.
- The time constraints imposed were unnecessary and forced the survey to spend far too little time in key areas. This undermined the quality of the data, and in particular the identification of SHAs, including the size, shape and severity of suspected areas[9].
- The questionnaire format of the survey ensured consistency and coherence across the country but at the expense of more participatory approaches that could have generated much better data though requiring more time though not necessarily much more money. This would also have ensured more relevance and usefulness to local communities[10].
- The survey did not take full advantage of available information, both coming from and leading to a LIS that many actors feel no ownership to. This situation is caused by a series of factors, however. Some of the NGOs clearly were not interested in working with GSI, which was seen as an "intruder" since it was a commercial company. A number of the NGOs never accepted that the LIS was an impact survey and not a quasi-technical survey (they wanted information to help them directly in defining their demining tasks). But the GSI and the NGOs also

[8] The feed-back from the NGOs and in the villages visited was that they did not have the maps, whereas GSI, in their comments to the annex, say that these maps were provided. At that point the Evaluation did not have an opportunity to go back and verify what in fact happened, because a number of alternatives are possible: (i) the maps were discussed but not left behind, (ii) maps were left behind but nobody uses them and has forgotten about them, (iii) maps were left behind but with village leaders so others do not have access to them. The reality is probably that all different versions – as well as others – happened in different locations, but since there has been no systematic process for using and developing the maps from the side of the authorities, there is no systematic answer to how the LIS information has been used at village level.

[9] GSI believes this is an incorrect conclusion, because the time available was seen as sufficient for what the LIS was supposed to do – collect the communities' information on the known mine/UXO problem, and how this impacted on them.

[10] Again GSI disagrees, believing that the questionnaire-based survey generated the information that was available and necessary for the rating to be valid. On this point, however, the opinion among virtually all other actors is pretty much uniform: the survey is not the best way to get a good picture of socio-economic impact in the more mine-affected areas, because this requires more time for views to be heard and concerns to be aired.

seem to have spoken quite different languages: what GSI felt was an open and inviting approach the NGOs felt was superficial, and thus the dialogue never developed as intended.

- The quality assurance on the third-order question of whether the information recorded was the information provided was outstanding. Quality assurance on the second-order question would have been whether the information provided was valid (were the correct blockage factors identified? Did everybody agree on the rating of severity?) and reliable (were the mine fields identified the only ones? Were the victims data correct?). The first-order questions would have been if the information being asked for was relevant (were the variables being collected the best ones for answering the impact question) and valid (did they in fact measure what the survey wanted to measure). While the first order questions were addressed during the pre-testing and the third-order tested for a series of times, the second-order questions required the kind of in-depth study in villages that the NGOs felt were never undertaken[11]. The overall impression of the Evaluation is that this level was not quality assured as it should have, and that too many resources went into the third-level issue.
- The FoxPro database has proven much more user-friendly than IMSMA, raising questions about the need to insist on a particular technological platform for the survey data. The key considerations should be utility to local users.
- The local adaptation of the questionnaire was one of the strong suits of the survey, as it was adjusted for local conditions as far as blockage factors were concerned.
- A number of actors, including GSI, question the weighting scheme used for the scoring and subsequent rating. One thing is that the victims' data are of varying quality (which village should an incident be attributed to given unclear boundaries? Were two-year old recall data reliable? Should all victims receive the same weighting – five separate incidents versus five victims in the same incidence; an accident from ignorance by new entrants to an area versus chosen risky behavior for livelihoods reasons; UXO handling versus stepping on unseen mines, etc). Another is that blockage data do not weight by impact – how many families, or what share of families, or how severe is the blockage (are all water sources blocked or just one out of five?).
- The data collection was done as a stand-alone exercise and not linked to other data collection/planning exercises. Cambodia was engaged in a PRSP exercise and had LUPUs in five of the most mine-affected provinces, so designing an LIS that could complement and enrich these larger development exercises might have proven useful.
- The use of the national survey has been much less than hoped for, among other things because national authorities did not have a clear plan for actively using the data as soon as they became available. The mine action community and donors should have and still ought to insist on much more user-friendly access to data.
- While CMAA now has a five-year strategic plan, the LIS data could have been used more pro-actively to design it. There seems to have been too little analysis of

[11] GSI once again disagrees, but since there were no social science skills employed, it is difficult to see on what grounds and with what methodology this was done. None of the documentation seen or information collected point to systematic work at this second-order level.

the LIS data, for example in terms of identifying more appropriate response packages to different kinds of mine and UXO threats. Only now are some of the NGOs looking at the experiences from mine risk education and discovering that many of the actions taken so far have little impact. The LIS could have provided a stronger platform for such analysis, and in general the dialogue between MA actors in-country regarding "lessons learned" is very weak.

- The UN Certification process was poor. Nobody really managed the process and ensured that a reasonable timetable was upheld. The more important question is what the value-added of the certification is. Raising issues about the gender quota of the survey teams one year after the survey is concluded is useless. The UN recognized that not having the QAM in place at the onset of the process was unfortunate, but it is exactly the issues raised at the certification committee meeting that a good QAM and good QAM process could address. This would also be in line with "best practice" assessments made by the World Bank on how to achieve better results, where "quality at entry"-dimensions are seen are more important than intensive monitoring *during* implementation, for example. So it may be more important that a good QAM process is defined and in place rather than an *ex post facto* certification which by definition cannot improve the process or its products.

Recommendations:

Based on the above, the Evaluation team would make the following Recommendations:

- The main criterion for carrying out an LIS should be that national authorities both need such a survey and have demonstrated that they will in fact use it actively to manage mine action resources better.
- Surveys need to be based on more local consultation and driven by the need for quality and relevance of data rather than time limits. Consultation needs to be more thorough, with increased representation of females and other key local stakeholders, both quantitative and qualitative.
- The survey "information loop" should be much tighter, with feed-back built into the process at all levels, where a main objective should be to ensure that information is provided both as quickly as possible, but also in a form that is user-friendly at the different levels of the user-hierarchy: local community, regional and national authorities. The contract for a LIS should ensure that national authorities are in agreement with this dissemination strategy so that this information is put into the public domain as quickly as possible.
- The external QAM should be in place as soon as an operator/implementing agency ahs been identified. The QAM should focus on key strategic issues, and be both a conveyor of "best practice" lessons from the international mine action community, but also an adviser to the national authorities on how to maximize the future benefits from an LIS. As long as national authorities feel that the LIS has addressed their concerns it is not obvious that a UN certification has any further value-added.
- A mechanism is needed for ensuring that the process is adequately addresses important issues, including gender and cultural issues, local consultation, and representation of stakeholders. An external resource or reference group should

perhaps become part of the LIS. Local social science skills, mine action stakeholders and national authorities would function as both a sounding board and provider of inputs to the LIS. The social scientists could for example be used to carry out some in-depth surveys to verify the survey results. Such a resource/reference group could perhaps by chaired by the QAM.

Annex F: Chad Country Annex

A. Introduction and Background

The Landmine Impact Survey (LIS) in the Republic of Chad began in 1999 when United Nation Mine Action Service (UNMAS) made a request to SAC to undertake this effort. UNMAS designated the *Haut Commissariat National au Déminage* (HCND) as the primary beneficiary of the findings of the LIS. An Advanced Survey Mission was conducted in July of 1999 and Handicap International of France (HI) was chosen by SAC to be the executing agent or survey operator.

The LIS, conducted in Chad from December 1999 until May 2001, conclusively identified 249 mine-impacted communities, containing 417 areas contaminated by landmines and/or unexploded ordnance (UXO). The affected areas cover 1,081 square kilometers of land. This contamination directly interferes with the livelihood and safety of at least 285,000 persons.

HI established an office in Chad in January 2000 and completed the fieldwork and data collection by May 2001. The survey was conducted in accordance with the principles and protocols established by the Survey Working Group (SWG), as well as the UNMAS Certification Guidelines.

The survey confirmed that there are communities affected by landmines both in the central and eastern regions, but that the problem is especially severe in the northern regions. Based on the findings the survey drew the following major conclusions:

- In Chad, a greater proportion of communities are severely impacted than initially projected, and their geographic distribution is unexpectedly wide. The North region contains 91 impacted communities, 37 of which are highly impacted. The East region has 51 impacted communities, 12 of which are rated as highly impacted.
- A small number of parameters exert a strong influence on the probability that a mine incident will occur. Thus, it is possible to predict which communities are most likely to have incidents.
- The deadly effects of UXO in Chad are much higher than expected.
- Based on these findings, users of the Landmine Impact Survey can reduce the current hazard most effectively if they concentrate mine action efforts on a small number of areas.

Mine Action in Chad is structured in the following way: The national authority, HCND, is managed by a national coordinator and includes both national staff and technical expertise seconded by UNOPS and the Swiss government.

The only international operator in the MA-field, HELP Germany, is running the actual mine clearance work conducted, while HCND is responsible for the planning, monitoring and certification of all MA-activities in Chad. Mine action is mainly conducted in the northern parts of the country, where the LIS showed that the impact is severe.

When the evaluation team visited Chad in August 2003, it was found that nine projects programs have been completed. However, none have been released by HCND because of lack of quality control and documentation. The cooperation

between the technical advisors of HCND and HELP is not very good, because HELP does not comply with the international standards of mine action and the documentation from HELP to HCND is often incomplete. This leads to problems when it comes to the certification process, which again leads to difficulties in planning and prioritizing resources.

The LIS in Chad was originally budgeted at approximately USD 1.5 million, but ended up costing almost USD 2 million. By comparison, Mine Action (MA) in Chad has an annual budget of only around USD 800.000, which is both insufficient to address the problems the country faces in this field but also reflects the fact that the country has not received much donor support, even after the LIS had been completed and the scope of the problem could be documented. results were ready. As for the timeline the LIS in Chad took approximately 17 months to complete.

B. Planning the LIS

An advance survey mission was conducted in July of 1999. The governments of the United States and the United Kingdom, as well as the United Nations Foundation, provided funding for the survey. HI and the Vietnam Veterans of America Foundation (VVAF) also contributed funding to the survey. A portion of these funds was made available through a contracting mechanism managed by the United Nations Office for Project Services (UNOPS).

Informants stated that they found the process to be satisfactory with regards to participation of national MA stakeholders. When it comes to inclusion of other stakeholders, notably from the different development sectors, this was less satisfactory. Despite this, MA is included in the national poverty reduction strategy (PRSP).

C. Implementing the LIS

The LIS visited all 28 departments and 98 sub-prefectures in Chad. The only area not addressed was Tibesti in the north where security concerns prevented the LIS operations. Although the security concerns were real ones, this fact means that the LIS unfortunately is not a complete national survey. This has implications for understanding the scope of Chad's landmine problem and, subsequently, possibly for international involvement and for national prioritization. The Evaluation was told that Chad expected more international support for the mine/UXO problem after the LIS was completed, but despite the LIS showing that the landmine-problem is a real and widespread one, the international donors have shown little interest in the country.

Chad is a very poor country which affects all activities. There is lack of funds, and very poor infrastructure and services such as electricity, water and in particular fuel. The country has weak communication lines, complicated logistical planning and implementation and an extreme climate, especially in the northern and eastern regions. The LIS in Chad therefore faced severe challenges when it came to the practical problems and logistics of implementation. Given these problems, the impression by the Evaluation is that HI and HCND did an excellent job.

Despite these problems, the project followed the standard LIS -process beginning with the Expert Opinion Collection (EOC) and then the visits to the Suspected Hazardous Areas (SHAs) with a verification of all suspected impacted communities.

HI executed the survey using four international staff members and more than 60 Chadian nationals recruited from all of Chad's regions and major ethnic groups. Four field survey teams worked throughout the country, often for weeks at a time, with their movements coordinated through high frequency radio. This Evaluation was not able to re-trace the interview processes that were used, but the information seems to show that the project followed the standard LIS-procedures, with village interviews conducted in all impacted communities. French was chosen as the main survey and questionnaire language, but eleven local languages were used in the interview-processes. The data collected was verified in the field by the field editors and then re-checked before being entered into the IMSMA database.

Data collected were entered into the Information Management System for Mine Action database (IMSMA). The data in turn are analyzed and used in strategic planning processes.

The questionnaire that was used followed the standards laid out by the SWG. These were not fully relevant to the situation in Chad, nor necessarily addressing issues that were of concern to the national plan of development.

Once the LIS results were available, the decision was taken to focus demining resources in the Northern region, not just because the LIS had identified a problem there that was more serious than previously thought, but also because from a national planning perspective it was seen that the people of the Northern regions have few options when it comes to utilizing other areas than the ones that are impacted.

D. LIS Outputs and Impact

The main outputs from the LIS was the IMSMA database with the survey results, and the report which was produced on a CD-ROM which lays out the survey background, methodology and results.

The LIS has been used as the basic document for the National Strategy Plan for Mine Action (*Bilan des Chantiers de Deminage et de Depollution*), which is part of the National Strategy Plan for Poverty Reduction (*Document Strategique National de Reduction de la Pauvreté*). The LIS has been and is being used by HCND as a planning tool and basis for prioritization.

The LIS has not, according to key informants, been useful to the implementing units and HELP Germany as a tool for detailed planning and conducting mine and UXO clearance. HELP does not find the information of Chad LIS reliable and complete. The informants complain about the lack of useful technical information in the LIS-data.

The Evaluation does not agree with this view, since the LIS never intended to be a technical survey. Clearly the communication with the actors beforehand about the nature and objectives of the LIS should have made this clear, but it also is quite clear that there was some frustration because of these distorted expectations.

The withdrawal of HI immediately after completion of the LIS, including the handing over of the IMSMA database to HCND, has created problems with respect to the use of the LIS-data. Pro-active follow up is a general problem with a number of LISs in countries where the local capacity is limited. When the Evaluation team visited Chad, the IMSMA database had been "dead" for almost two years: it had not been used nor

had it been updated. The reason for this was lack of competent personnel to use the database. At present the Swiss government has seconded a GIS/IT-specialist to HCND and he will attempt to restore the database so that it again can be useful for Chad. But clearly the same problem will arise as soon as the technical assistance expert leaves the country and his assignment.

The results of the LIS, as displayed in the GIS-part of IMSMA, shows some of the serious problems Chad faces when attempting to use the IMSMA. Lack of coordination between the survey groups and the enumerators, and the lack of competence in technical areas, led for instance to five villages being defined as "High Impact" because they all defined the same (major) mine-field as the main source of blockage. The mine-field can only be defined as a real and geographically close threat to one or two of the villages in question. There were other similar documented problems that came about because of the problems with the insufficient technical background of staff.

E. Findings, Conclusions and Recommendations

Main Findings:

The key findings are the following:

- The LIS is being used as a planning and prioritization tool at a national level in Chad. The HCND has used the LIS-results to develop a national mine action strategy.
- The capacity and resources of the MA-sector in Chad, both the HCND and the international operator, are below what one could have hoped for after the LIS-process. The annual mine action funding levels of USD 800.000 is way below what is needed given the gravity of the mine/UXO problem in the country.
- The capacity of the HCND is still very dependent on international technical advisers.
- The lack of technical training, especially when it comes to measuring and defining distances and geographical coordinates, has led to a number of factual mistakes in the IMSMA database. This will lead to problems when using IMSMA as a technical tool for prioritization.

Conclusions:

The major lessons learned from this LIS exercise are:

- LIS has been important to HCND, but it is unclear whether the LIS has improved the mine action in the country. This is due to lack of funding, and donor-driven projects that may not comply with the national strategy developed by HCND[1]. Better transfer of knowledge and training combined with pro-active follow up after the LIS was completed would have improved the value of LIS.
- There is a question of whether a full-scale LIS was required in Chad. Given that the demining budget had been miniscule till then, it is difficult to justify spending nearly USD 2 million for rationalizing annual expenditures of USD 800,000.

[1] This refers to the German NGO, HELP Germany, which is supported by a number of donors.

- The Advanced Survey Mission remains a question in Chad. The Evaluation team was not able to find a report from the ASM, and none of the current employees could shed much light on this particular process. This underlines the problem that arises due to lack of, or at least weak, planning processes in the LIS. The planning/appraisal is important to projects as large as a LIS, but the evidence indicates that this aspect is treated too lightly.
- The enumerators and the field editors should have had more technical training to fully utilize the potential of the LIS-methodology.

Recommendations:

The main recommendations based on the Chad LIS are the following:

- More training of people in the use of LIS results and IMSMA is needed. To utilize the potential that lies in the LIS-data, both the landmine-related and the socio-economic, it is of outmost importance that capacity building becomes a much larger and integral part of the LIS.
- In Chad it is clear that a smaller, quicker and more flexible survey would have been sufficient – it is difficult to justify a USD 2 million survey in a relatively lightly mine-impact country like Chad.
- The weak capacity identified in countries like Chad means that pro-active follow-up (capacity development) to the LIS should be part of the overall planning and perhaps part of the implementation of the LIS. Furthermore, the more medium-term follow-up needs to be defined, and perhaps become part of the final phase of the LIS: ensuring that there is funding and capacity to follow up and use the LIS results in-country.
- LIS results also need to be more fully disseminated, so that the rich information source that the LIS represents is known and can be used by as wide a range as actors as possible.

Annex G: Ethiopia Country Annex

Abbreviations

ASM	Advance Survey Mission
CMA	Cranfield University Mine Action Management Program
CSA	Central Statistical Authority
ELIS	Ethiopian Landmine Impact Survey
EMAO	Ethiopian Mine Action Office
EOC	Expert Opinion Collection
ERPMU	Emergency Recovery Program Management Unit
GHAMAN	Greater Horn of Africa Mine Action Network
IDP	Internally Displaced Person/s
IMSMA	Information Management System for Mine Action
MOFED	Ministry of Finance and Economic Development
MoU	Memorandum of Understanding
NPA	Norwegian People's Aid
QAM	Quality Assurance Monitor / Management
RaDO	(Ethiopian) Rehabilitation and Development Organization
REST	Relief Society of Tigray

A. Introduction and Background

Ethiopia has had a landmine problem for the last 60 years as a consequence of war activities, starting with the Italian invasion in 1936 followed by World War II. During civil wars in 1971, 1975-1991 and border conflicts with Somalia, Sudan and Eritrea mines were extensively used in Ethiopia, especially in the Northern Border region, Tigray and Afar. Since 1995 landmines have killed 172 civilians and injured 113. 182 mine fields have been recorded in the Northern regions of Ethiopia.

Just after the end of the war a preliminary mine survey was carried out by HALO in co-operation with the Ministry of Defense of Ethiopia along the border with Eritrea. The survey was not completed and the results of the survey remain undisclosed[1].

The Ethiopian Mine Action Office (EMAO) was established in February 2001 and took responsibility for all mine action activities in Ethiopia. EMAO reports to the Emergency Recovery Program Management Unit (ERPMU) under the Ministry of Finance and Economic Development (MoFED). The capacity building of EMAO and training of staff was supported by UNDP, the US State Department and RONCHO, a private US company. Capacity building of Mine Risk Education (MRE) is supported by UNICEF and implemented by the Ethiopian Rehabilitation and Development Organization (RaDO). RaDO has operated in the Tigray and Afar regions since 1999 mainly engaged in physical rehabilitation and mine risk education. RaDO collaborates with EMAO.

The Mine Action Program, with a budget of USD 30 million, is one of six programs being funded under the ERPMU, which has a total budget of USD 230 million. This is being financed through a soft loan from the World Bank[2]. The Mine Action Program supports the rehabilitation of families recovering from the effects of the war, where clearing mines buried around water points is one of the prioritized objectives. The budget has now been reduced to USD 15 million due to the low expenditures to date[3].

In 2001 the United Nations Mine Action Service (UNMAS) identified Ethiopia as a potential recipient of a LIS. A joint Survey Action Center (SAC) and Norwegian People's Aid (NPA) Advance Survey Mission (ASM) was launched from 24 November to 1 December 2001. UNDP and SAC prepared a project document as a basis for the request of funds for the LIS. It was expected to start January 2002 and to end 30 June 2003. The total budget was about USD 2,430,000, excluding Quality Assurance Management (QAM), which had a budget of around USD 90,000.

The project goal was to conduct a LIS to internationally recognized standards, facilitating the planning of a strategy for minimizing the impact of landmines upon affected communities in Ethiopia. In April 2002, the Ethiopian LIS (ELIS) was launched, and it is expected to be completed by the end of 2003. The original budget of the LIS carried out by NPA was approximately USD 1.7 million.

[1] Landmine Monitor 2002 and meeting with Mr. Teklewold on July 30, 2003.

[2] This is a standard 40-year interest free loan with a minimal annual handling fee of 0.75%, funded through the so-called International Development Association window of the World Bank. In reality, these loans have a grant component of 75-80%, depending on inflation rates.

[3] The World Bank's Operations officer for the ERPMU noted that no more than USD 3 million has been spent so far, which is of some concern to the World Bank.

B. Planning the LIS

Planning and Design of the Survey

The planning process of the ELIS before entering into a contract with NPA comprised the ASM and the preparation of the NPA-SAC Project Document. The operations described in the Project Document are based on the operational plan outline proposed in the ASM report. The proposed survey operations were split up into three elements: 1) Expert Opinion Collection (EOC), 2) Community Interview of Affected Communities, and 3) Analysis and Planning.

Because of the high number of affected communities anticipated it was suggested that a rapid assessment of about 14,000 Kabelas (the lowest administrative unit in Ethiopia) should be carried out instead of an Expert Opinion Collection in accordance with the LIS Operational Protocol No. 2 EOC. According to the ASM report and the Project Document the rapid assessment would identify with high precision all the assumed affected communities. It was intended to carry out the rapid assessment using 90 persons visiting the above-mentioned 14,000 Kebelas and communities in 60 working days. It was also intended to subcontract the rapid assessment to the Ethiopian Central Statistical Authority (CSA).

It was assumed that about 1,500 Kabelas were affected and that the second component would require interviews performed by 28 survey teams organized into seven groups in 100 working days.

The Project Document lists the following constraints and risks:

- Seasonal weather conditions will restrict access to certain areas of the country during the rainy season from June to September.
- The community interviews will take place in four of the major national languages.
- The administrative structure and unit boundaries have changed considerably over the last decade. No up-to-date records exist. Incomplete administrative information and geographical data must be expected.
- Because of the size of the country, which does not have a developed infrastructure or transport facilities, serious logistical problems must be faced.
- Security could be a problem, and an armed conflict between Ethiopia and Eritrea was a major risk to the LIS.
- The risk deriving from poor planning because of the complex nature of the project and the poor information base. To mitigate against the risk, the survey team will conduct very extensive research during the first few months in the country, as well as use the built-in mechanisms of the survey process to continually refine and update both operational plans and associated budgets.

The Project Document does not mention the time schedule as an uncertainty issue. In the light of the overall context of the mine action in Ethiopia, time is a crucial factor. Referring to the goal of the ELIS, the planning of the LIS process should also have considered the important issues of (i) the urgent need for an overview of the landmine problem in order to establish the governmental strategy for mine action, and (ii) the urgent need for planning mine action as USD 30 million was already allocated by the Government from the World Bank loan.

The ASM report and the Project Document refer to previous survey experiences and country-specific considerations. No documentation is mentioned. However, it is assumed that it is the previously mentioned survey made by HALO trust that has not been completed or disclosed. The number of communities programmed for interviews is assumed to be 1,500, but there is no documentation or explanation for this. NPA has explained that interviewing 2,950 communities was planned. Later on, the number was reduced to 2,000[4]. The calculation of required work power for rapid assessment and community survey is not supported by analyses or discussions.

At the time of the start of planning the LIS in 2001-2002 very little information on the landmine situation in Ethiopia was available. There were very few experts on mines in the country, so the proposal of the ASM to conduct a rapid assessment instead of an EOC to get an initial overview made sense. However, SAC and EMAO should have discussed the opportunities of performing the rapid assessment followed up by a statistical analysis as an individual pre-survey in order to create a more robust and precise basis for the LIS contract with the implementing organizations. In April – May 2002, NPA launched a field assessment mission to the North Wollo Zone, to provide information on the mine situation. This mission could have been performed as part of the detailed planning before contract signing.

In fact, the planning process should include a detailed analysis of the main objective: facilitating the planning of a strategy for minimizing the impact upon the affected communities of Ethiopia[5]. This analysis should comprise the assessment of the necessary and satisfactory information and how to provide the information in due time for the strategic planning. The analysis should have been performed in close co-operation with EMAO.

Methodology and Protocols

The Evaluation has noted that the *Advisory 01 "Brussels Principles and Standards"* contains a suggested survey process from the definition of the aim to the final report. Issues of planning, design and preparation of project documentation are missing in the LIS protocol and advisory complex.

The delay in signing the MoU had a severe impact on time and finances of the ELIS. According to the Project Document, UNDP was the implementing agency, SAC was the managing agency and NPA was the executing agency. The institutional arrangements and roles of stakeholders: EMAO, UNDP, UNMAS, NPA, SAC and Cranfield University Mine Action Management Program (CMA), were defined in the document. SAC subsequently contracted NPA to work with EMAO to carry out the national survey. The contract was signed and entered into force on April 15, 2002. NPA then began recruitment and mobilization. However the LIS work could not start before final agreement with EMAO. Three months later a Memorandum of Understanding (MoU) between EMAO, SAC and NPA was signed, and the LIS could start. The relatively late signing of the MoU caused serious delays to the project and affected the cost[6]. SAC and NPA underestimated the time for the administrative treatment of the agreement. Furthermore, there were political and financial problems

[4] Interview with Adam Combs on August 1, 2003

[5] SAC-NPD Project Document, page 4, section 2.2.

[6] According to the QAM´s first report, December 2002 *"The establishment of operational capacity was delayed by nearly seven months"*

concerning the funding of the project, and discussion of the prioritization of the LIS work[7], as discussed below. It is not understood why SAC has signed a contract with NPA and started the project before signing the MoU with EMAO. This cannot be in accordance with the context of the Brussels Principles and Standards.

The choice of NPA as the implementing partner is based on NPA's earlier presence in the country and contact with EMAO and other organizations in Ethiopia. For instance it should be mentioned that the planning of the LIS conducted by NPA was also facilitated by the Fund raising Department Relief Society of Tigray (REST). In 1999, while the war was still on-going, REST prepared and submitted a demining proposal to more than sixty different donors. The only organization that responded positively was NPA. NPA came up with the idea of LIS and it was accepted and supported by REST. When NPA started the establishment of its office in Ethiopia REST played a significant role in obtaining a permit for the NPA staff who had to come from the Ministry of Defense and facilitated field visits and meetings with officials for NPA staff.

It is not clear to the Evaluation if the SAC policy on a transparent method of selecting the implementing partner[8] for the ELIS has been followed. However, the choice of NPA as the implementing partner was reasonable and justified.

The institutional set-up and role of stakeholders of the ELIS as described on the first page of the Project Document is not clear with respect to the terminology in the *LIS Advisory 2 – Institutional Mechanism Advisory*.

It is the opinion of the Evaluation that the ASM was performed according to *the LIS Operational Protocol No. 1* with some minor deviations with respect to editorial issues. The Evaluation has noted the following:

- Referring to the Protocol section 2, the ASM is only undertaken when SAC is confident of general donor support. At the time of launching the ASM the donor support might have been identified, but the Evaluation has noted that the funding of the LIS was one of the problems which caused a delay in signing the Memorandum of Understanding (MoU) between SAC, NPA and EMAO.
- The ASM has focused on the local commitment and ownership of EMAO, and the commitment of all Ethiopian stakeholders. There is no doubt about the role of EMAO, and the Director of EMAO has clearly expressed that EMAO needs the LIS and is responsible for the project. It is understood that EMAO has participated actively in the planning process and that other local counterparts have been involved more or less in the planning work, including the Central Statistical Authority, Ethiopian Mapping Authority, Journal of Modern African Studies, Forum for Social Studies, Disaster Preparedness and Prevention Commission and the University of Addis Ababa.
- According to the ASM report NPA would establish its office on the same premises as EMAO in Addis Ababa. The co-location with EMAO would ensure that the Information Management System for Mine Action (IMSMA) database and NPA expatriate staff are located at EMAO from day one and it would contribute to a fruitful co-operation between the two organizations.

[7] Meeting Mr. Teklewold, Director of EMAO, July 30, 2003

[8] SAC-BD-02-003 Partner Selection of 14 May 2002

- Apparently, the ASM has not got the necessary understanding of the Ethiopian administrative culture, which has led to an all too optimistic time schedule with respect to the negotiation and signing of MoU.

The idea of replacing the Expert Opinion Collection model as prescribed *in the LIS Operational Protocol No. 2* EOC with a Rapid Assessment and Community Interviews as described in the ASM report and the Project Document was fostered because of the scale of the LIS works. The Evaluation agrees with the ASM Team that under the present condition and context of the mine action in Ethiopia, where initial survey results of a very large area are urgently needed, the EOC protocol is not useful. This points to the question of the applicability of the EOC protocol in general terms. The EOC Protocol describes a very simple process of collecting initial information, e.g. starting with interviewing high level staff. However, it presupposes the presence of some "Experts". Realizing that, the picture of the mine impact in Ethiopia in 2001-2002 was complicated, and it was very difficult to get reliable information for a country overview. Therefore, the ASM proposal for a rapid assessment was appropriate.

Hence, the Evaluation finds that the EOC Protocol, which is largely based on the LIS experiences in Thailand, Yemen, Chad and Cambodia, did not fit the landmine situation and the context of mine action in Ethiopia.

Budget

Also the financial arrangements of the LIS were discussed. According to the Project Document, the total cost of the project was estimated at approximately USD 2.4 million in December 2001 (NPA USD 1,929,500, SAC USD 435,400, and CMA USD 72,500). It was assumed that *"UNDP will receive the majority of the funds required and subcontract SAC with these funds"*[9]. In the SAC-NPA contract of April 2002, the original budget was set to USD 1,309,800, which was increased to USD 1,71,514 in March 2003.

The financial arrangements listed in the MoU show that funds falling outside the framework of UNDP will be managed by SAC/NPA, totaling a balance of USD 1,243,000. Thus, SAC and NPA had to provide funds for the project a long time after the project started.

The possible lack of funding represents one of the most critical risks to the project, including the serious risk to LIS, NPA and SAC of losing credibility.

Timing and Agreements

The LIS initiative was started very early after ending the war activities and the timing is very favorable in relation to the national requirement for a survey in order to make plans and strategies for mine actions. Furthermore, it is important to note that the World Bank has financed a USD 230 million development project including mine actions, which created an urgent need for the LIS.

The negotiation with EMAO and late signing of the MoU are a cause for concern. According to EMAO, there were many administrative and political barriers inside the Ethiopian organizations. Not all politicians were convinced of the need for the LIS, and considerable "leg-work" had to be finished before the signing of MoU. On the other hand, EMAO and ERPMU/MoFED urgently needed the LIS for the strategy

[9] UNDP-SAC Project Document, p. 5, section 3.1.2

planning in order to speed up the mine action that was foreseen, and for which considerable funding had been allocated. If it turned out that these funds could not be spent as foreseen, there would be problems in terms of the commitment made to the World Bank when signing for the loan.

Therefore the start of the LIS in April 2002 before all agreements and financial arrangements were settled must be considered as premature.

A serious consequence of the delay was that the interviews now had to take place in the rainy season, which led to many logistical problems and further delay because of poor accessibility to many of the communities. Both the ASM Report and Project Document mention the weather conditions as a critical issue, but the very important issues of funding and timing have not been mentioned.

Mine Risk Education and Mine Victim Data Collection

With reference to REST an initiative was taken by a multi-agency Land Mine Group established in 1998-1999 named *Greater Horn of Africa Mine Action Network* (GHAMAN), to create awareness among different groups. REST together with CARE, Save the Children, UNDP and other organizations met regularly to exchange information

Today MRE is conducted by RaDO and funded by UNICEF. MRE is performed using a community-based model to create awareness at different group levels and ages for children and adults. The MRE component has three focus areas, i.e. practical MRE, Mine Victim Data Collection, and physio-social counseling, including mine victim support. The MRE budget is approximately USD 2 million per year.

The co-operation with NPA during the LIS in the two Northern regions has been discussed with EMAO. However, no formal agreement has been entered between NPA and RaDO. All victim data is given to EMAO and fed into the IMSMA. RaDO communicates with EMAO via UNICEF. At the moment RaDO and NPA are operating independently. According to information from RaDO, RaDO agents are living in the community and operating in collaboration with district/sub-district level government bodies. RaDO's agents are selected from the community so they have more reliable information i.e. information that is not biased.

It is the impression of the Evaluation that RaDO is very interested in the LIS survey and expects to have access to the survey results. Currently RaDO is working on strategic planning with a focus on social and economic assistance. To this effect RaDO hopes that the LIS results will be beneficial to the organization in terms of planning and prioritization activities.

The Evaluation finds that insufficient advantage has been taken of the opportunities of co-operation between NPA and RaDO on the exploitation of the results of the MRE and the LIS work respectively.

C. LIS Implementation

Just after the start of the project a field mission was launched to the North Wollo Zone, Amhara Region from April 23 to May 9, 2002. The Mission had two objectives: 1) to acquire first-hand knowledge of the magnitude of the mine/UXO problems in an area that the ASM had identified as one of the most heavily suspect in Ethiopia; and 2) to evaluate the reliability and specificity of information concerning the mine/UXO situation at the regional levels of Ethiopian governmental

administration. The overall conclusion of the mission was that the true magnitude of the mine/UXO problem in Amhara region is almost certainly far lower than worst-case estimates have suggested.

On this basis the Rapid Assessment (RA) and surveys were planned and completed by the end of February 2003 by the Miz-Hasab Research Center instead of CSA, because NPA found the price of CSA was too high. With reference to the QAM first report the RA would require 32 researchers to complete the task within 4-5 months, starting November 1 2002.

The operational set-up of the survey was established early in 2003; interview and data collection started in March 2003. The overall delay of the LIS was about seven months.

According to the weekly status report, by the end of June NPA had fielded 28 teams in the three main areas of Ethiopia. A total of 508 communities had been surveyed out of a total planned number of 1,260 – that is, just over 40%. At the same time, however, by that time, around 75% of the budget had been spent.

The survey is moving ahead, but the data collection is proceeding more slowly than anticipated. The reasons mentioned are: lack of transport capacity, difficulty in accessing communities during the rainy season, and villagers being fully occupied with agricultural activities and having therefore little time for community interviews. Weekly reports from weeks 23, 24 and 25, for instance, tell of security incidents owing to fighting between different clans.

Based on the visit to Axum it is the overall impression of the Evaluation that the data collection and the work of the teams is very well planned and performed with good results and high quality. The Evaluation noted the following:

- Each team performed one community interview per day. At the time there were many holidays, saints' days and other days on which interviews were not possible.
- The interviews took 50 % of the time. The interviews were normally finished before noon, and the rest of the day was spent on preparation for the next interviews, transportation and editing of the information collected.
- In the area five different languages were used; the interviews took place in the local language, the written report was prepared in the "national" language Amharic, after which the report was translated into English.
- 30-40 % of the interviewers were female.
- Traveling often took 1-1.5 hours each way, often along very bad and muddy tracks.
- It was often complicated to come into contact with the local head of the community in order to collect people for interviews, typically 10 persons.
- In the region there were many nomadic pastoralists, who needed special interviews.
- All survey leaders underwent a month's training in Addis.
- 30 % of the interviewers were recruited from the Central Statistic Authority (CSA), and it was revealed that there was a good link between LIS and CSA.

- The speed of the fieldwork was discussed. NPA advised that the average rate of interviews was 1.09, and it was explained that the supervisor had changed procedures on communication with the authorities in order to save time.
- There was no specific co-operation with the authorities on district level, but the authorities were informed by the letter from EMAO giving the official legislation to perform the LIS work.

A Kabele approximately 20 km west of Axum and 50 km south of the Eritrean border was visited. The head of the community was familiar with the ongoing LIS and the aim of the LIS because the authorities had informed him. He said that three persons had been killed in recent years and that a woman had been wounded in 2002. The Kabele was inhabited by approximately 3,000 people, including 30-50 displaced families from Eritrea. Two out of three communities had landmines. MRE had been undertaken in 2002 by the NGO RaDO. Finally, he expressed the opinion that the LIS was a very good program, and that he was a part of the process.

The Evaluation has observed a very high commitment among the NPA information collection teams, and finds that the information collection work is performed very well and according to Protocol No. 3, Ethiopian version.

Protocol No. 3

The methodology of survey and the collection of information were discussed with NPA representatives. No serious concerns on the Protocol were expressed. However, NPA has revised the questionnaire, which has been adopted by SAC as an appendix to the protocol, including a questionnaire for Internally Displaced Persons (IDP) and nomadic pastoralists as mentioned below. The major problem was the time taken for transport, preparation and contact with the people.

EMAO and ERPMU are waiting for the results of the LIS to be used for the strategic planning. Therefore, the Evaluation finds that the community interviews and the number of visited communities should be considered in order to optimize the inserted resources in order to provide information and the actual need for information.

Recruitment and Training

The recruitment of local staff, including supervisors, interviewers and others, was subcontracted to a local private company. The recruitment process was conducted in close co-operation with NPA with great success. The Evaluation team has noted that 30 % of the interviewers were recruited from the Central Statistic Authority, which gives evidence of relevant background and relation to a potential user of the collected data. Subcontracting recruitment is a new issue in the LIS procedures and it might be considered as an interesting option in future LIS.

According to the NPA-SAC contract, SAC carried out the training course. The course was completed in November 2002, including a pre-test.

Internal Displaced Persons, Nomadic Pastoralists, and Refugees

It is difficult to implement LIS among the Internal Displaced Persons (IDP) and the nomadic pastoralists, because of the unknown numbers of people and their movements. Apparently, there is no specific agency in Ethiopia that takes care of the people. On meeting with UNHCR it was advised that UNHCR only takes care of externally displaced people (refugees). All refugees live in camps. Until now, no mine/UXO problem has been identified in relation to refugees in camps.

The LIS survey teams have developed a special methodology for interviewing the IDP and pastoralists, using interviewers specially selected for this purpose. The ELIS Questionnaire is inserted in the LIS Operational Protocol No. 3.

Quality Management

According to the Project Document and LIS Protocol 5 a Quality Assurance Monitor (QAM) was provided by UNMAS. The budget prepared in September 2002 was for USD 91,801. The QAM arrived on 15 November in Ethiopia and presented the first QAM report in December 2002. He has recently visited the ELIS for the third and final time. The second report has been finished and sent to UNMAS.

With reference to the first QAM report, the following was noted and discussed:

- The MoU should have been reflected by the Advance Survey Mission (ASM) and the MoU should address all preconditions of the ELIS with respect to the relations between EMAO and ELIS.
- The change of Expert Opinion Collection to Rapid Assessment was necessary because of the size of the country and the scale of the mine problem.
- It is difficult to enter some border areas and some parts of Somalia are not accessible.
- He recommended that more focus be given to communication, including a briefing of stakeholders on the LIS work methods and the protocols. A communication plan was recommended.
- The work involved in the LIS had been underestimated by the ASM, which could involve a high risk of stopping the LIS before completion because of lack of funding.
- Transfer of IMSMA competence from NPA to EMAO has not been planned. UNDP is recommended to take action on this issue.
- Post-monitoring and follow up were discussed with respect to the value of the LIS, future use and the impact of LIS.

Finally, the QAM expressed the opinion that the protocols were not easy to read. More user-friendly protocols were recommended. Lessons learnt from other LISs should be shared. He noted that his employment for the QAM job had begun very late in the actual LIS process, which was the cause for missing the training part and the pilot test. He was not informed about the finalization of the job with respect to the delay of the project, which included uncertainty on extension of his contract for a possible fourth mission.

D. LIS Outputs and Impact

Because of the present stage of the LIS work it is too early to describe the output and impact of the LIS. Generally, however, there is a very positive expectation for the results and their impact in the mine action situation in Ethiopia.

According to the Head of ERPMU, the whole LIS exercise is in line with the government's polices and priorities. EMAO is currently waiting for the results of the survey to be used in the ongoing strategic planning work, which was expected to be completed at the beginning of September 2003. The question is whether the survey will be completed by then. However, it is anticipated that even if the full and final

report will not be ready by then, at least preliminary findings will be available to EMAO in order to undertake the planning work.

The IMSMA database will be handed over to EMAO by the end of the survey. The transfer of the database is facilitated by the replacement of the GIS specialist with a local specialist. Analyses of data will be a part of the following planning work assisted by CMA.

E. Conclusions, Findings, Recommendations

Main Conclusions

The Evaluation concludes that the ongoing ELIS is characterized by a high degree of consensus and co-operation among the main stakeholders: EMAO, UNDP, NPA and SAC. There is a clear need for the LIS as a basis for the national strategy for mine action, which has considerable funding from a World Bank loan. The Ethiopian government, represented by the EMAO, has expressed strong ownership of the LIS project and commitment to the LIS process.

The ELIS fits into the integrated post-war development of Ethiopia, and the LIS is expected to be very useful and worthwhile with respect to the to the ongoing development project financed by the World Bank.

The LIS work performed by NPA is well managed and has been done thoroughly. It is expected that the results of the LIS by the end of 2003 will be of good quality and satisfactory for the EMAO strategic planning.

However, the ELIS project suffers from a poor and far too optimistic planning process. The LIS process has been exposed to serious risks, which should have been countered by a more detailed and proactive design and planning.

Findings

The key finding is that the planning process has been too quick and too optimistic. It is noted that the ASM took place from 24 November to 7 December 2001. The final ASM report is dated 10th December 2001 and the SAC–UNDP Project Document has the same date. According the Project Document the estimated date of start of the LIS is 1st January 2002. This is unrealistic planning for a project with a total budget of approximately USD 2.4 million.

SAC and NPA signed the implementing contract on April 15 2002. The contract is effective from the date of signing and NPA have started the project, but the start-up had not been approved by the Ethiopian counterparts. After further negotiations, the MoU was signed on 17th July and the project could start. The delayed signature of MoU has an effect of seven months' delay on the project, with led to additional costs of USD 300-500,000 to complete the survey, according to the QAM´s first report.

With reference to normal procedures in planning international development projects it is good practice that no contract should be signed and activities begun before the necessary implementing arrangements between the donors, the implementing partners and the beneficiary partners, e.g. an Implementing Agreement (IA) or Memorandum of Understanding (MoU) are signed. Therefore, the Evaluation finds that it was not appropriate to start the LIS project before the signing of MoU between SAC, NPA and EMAO.

According to the Project Document a number of constraints and risks are listed, including the risk of incorrect planning assumptions because of the nature of the project. To mitigate these risks, the survey team will conduct very extensive research during the first few months in the country, as well as use the built-in mechanisms of the survey process to continually refine and update both operational and associated plans. However, the Evaluation has not found evidence of such action having been taken. The Evaluation finds that there is a lack of analyses and proactive actions in order to minimize and encounter the risks. Furthermore, issues of the timing and funding should be added to the risk.

With reference to Protocol 5 – Draft, Certification, Survey Proposal & Outline Plan it is stated: "*The outline plan is a basis to begin the survey project. Further development of this plan will be an ongoing task conducted during the implementation of the survey and will include refinements based on the results of both pre- and pilot –tests"*. The Evaluation finds that this is a very weak guideline, which has opened a window for poor planning. However, there is no justification for underestimation of the Ethiopian administrative culture and needs for participation and influence on the planning process.

The Evaluation finds that Protocols 2 and 3 are too rigid with respect to the actual LIS process and special needs according to the Ethiopian context of mine action. The objective of the LIS is to facilitate the Ethiopian mine action strategy. EMAO has clearly expressed the urgent need for a basic survey and information necessary for the planning of the strategy. The Protocols do not allow much room for special surveys with selected data collecting focusing on the actual need. The Evaluation agrees with the ASM and NPA in the introduction of the Rapid Assessment instead of the prescribed EOC. However, the Team finds that the various options for a much quicker data collection survey, including a serious reduction in the number of interviews and the number of questions should have been analyzed and discussed.

It is noted that the Protocols and Advisory do not contain any requirements regarding the content of the Project Document. The Team finds that there is a need for a standardized structure of project documents like the structure used by international organizations and donors.

The Evaluation finds that it is not acceptable to any of the involved parties to start a project of this kind and size without ensuring that the necessary funds will be available from the beginning to the end of the project. The budget must include a reasonable budget line for contingency costs depending on the actual risk to the project, e.g. risk of delays, disruptive weather conditions, accidents etc.

Finally, the Team finds that Quality Assurance Monitoring is costly and that the value of the long-term monitoring period is doubtful. The Team does not see any serious justification for not applying the Quality Management principles according to ISO 9000-2000.

Recommendations

General recommendations for future action:

- In order to improve the planning process it is recommended that SAC should analyze and discuss the different steps of the planning process and prepare advisory/guidelines for planning and design. It is also recommended that there be laid down requirements and guidelines for preparation of the Project Documents.

- It is recommended that risk management be introduced in the LIS in order to reduce the risk of delays, financial losses, and loss of credibility and – naturally – risk of accidents.
- It is recommended that more time should be spent on education and planning of communication between the different types of stakeholder in order to improve the mutual understanding of the LIS process and the various cultural, political, and psychological issues.
- It is recommended that the most important protocols should be reviewed, e.g. Protocols nos. 2 and 3, in order to make more room for flexibility and saving of time and costs according to the nature and context of the mine action in the individual countries affected.
- The survey results should be accompanied by possible recommendations for future actions regarding the use of those survey results. Recommendations that will inform future action in Mine Action will be highly important for prioritizing activities and geographical areas for future action.

Annex H: Mozambique Country Annex

A. Introduction and Background

The Mozambique Landmine Impact Survey (MLIS) was conducted between January 1999 and August 2001 by the Canadian International Demining Corps and Paul F. Wilkinson & Associates Inc (collectively referred to as CIDC). The MLIS was implemented in accordance with the guidelines promulgated by the Survey Working Group (SWG). Independent quality assurance was provided primarily through a Quality Assurance Monitor (QAM) contracted initially by the Survey Action Center (SAC) and later by the United Nation's Mine Action Service (UNMAS), and secondarily by the National Demining Institute (IND) and CIDA.

The Landmine Impact Survey (LIS) in Mozambique is different from the other LIS-projects (except Cambodia) in that the donor, Canada, was running the initiation of the project and the disbursement of funds outside the SAC-system. The operator was chosen through an open tender inside Canada, and CIDA in the end decided upon CIDC. The survey was part of a larger capacity building program (the Canadian Mine Action Programme), where CIDA is supporting the mine action sector in Mozambique, a program based on a Memorandum of Understanding between the Governments of Mozambique and Canada. UNDP is the implementing partner in charge of the capacity building program in Mozambique, and this program is still supporting some of the people that work with the results of the MLIS.

The Objectives of the MLIS was "to collect, record and analyze information on the location of known or suspected mined areas throughout the country, and to provide an overview of their social and economic impacts as perceived by the residents of landmine-affected communities"[10].

The MLIS-organization set up office in Maputo and hired employees through a national recruitment process. The employees were people with a University degree, in particular social scientists, some people from Mozambican demining organizations and some had computer background or had worked in the government structures. The main office was set up outside the *Instituto Nacional de Desminagem* (IND), which hampered the communication between the organizations[11]. The LIS-process had determined contact-persons within IND, but as far as the Evaluation could determine the information flow was not based on a written plan to structure it.

The Survey followed the methodology approved for LISs by the SWG and UNMAS, but had to do some adaptations to address the conditions in Mozambique: the size of the country and its limitations in transportation infrastructure, the widespread distribution of landmine-affected communities, the absence of a national gazetteer and inadequate mapping, and the relatively limited availability of expert opinion. These adaptations did not change the methodological approach, but the process and the practical implementation of the MLIS might have been affected.

[10] As stated in the final MLIS report.

[11] It should be mentioned that CIDC also set up the data analyzing unit inside the IND, but this fact does not change the evaluation team's view on the matter of communication between CIDC and the IND.

The MLIS was originally planned by CIDA and had a budget of CND 1.5 million and a timeline of 12 months. CIDC's original bid for the MLIS had a budget of about CND 1.8 million, but the survey ended up costing approximately USD 2.2 million. Of this, almost USD 500,000 was spent on vehicles and equipment that were handed over to IND for its ongoing mine-action program. CIDC ended up spending 12 months planning the LIS[12] and an additional 16 months implementing it. During the planning period, a two-month training program plus a pilot and field testing of the research instruments were conducted.

B. Planning the LIS

Prior to the implementation of the MLIS and the tender process that CIDC ended up winning, a CIDA-hired representative went on a fact-finding mission (needs-assessment) to Mozambique in 1997. This is the only activity resembling the described Advance Survey Mission that the Evaluation found.

The consultant stayed at the IND for 4-5 weeks, to support the production of the *"Strategic Plan for Mine Action in Mozambique"***.** This document contained a section entitled "*Research about the location of mined areas"* which is the only attempt at identifying the mine/UXO problem that could serve as a basis for designing the LIS that the Evaluation came across. This document was used as the background for the Project Document that was prepared for a multi-donor capacity building project at the IND. This document (in fact not dated till April 13, 2001) was distributed among the potential donors at the time to support the capacity building project coordinated by UNDP. The MLIS was subsequently included as a major component of Canada's support for mine-action in Mozambique.

Demining had been taking place for a number of years in Mozambique prior to the LIS taking place. Three operators worked in three different regions of the country: Halo Trust in the north, Norwegian People's Aid (NPA) in the center and the UNDP-funded Accelerated Demining Program (ADP) in the south. These three organizations therefore had a lot of experience, and also felt that they had generated a lot of relevant and valuable information through the surveys they themselves had undertaken in the regions where they worked.

CIDC spent considerable efforts to dialogue with these three organizations, but they never succeeded in establishing good working relationships with them. There seem to have been several reasons for this.

The NGOs were not very happy with the fact that CIDC, which was seen as both a quasi-commercial outfit, and not one with demining or survey experience, was given the task of carrying out the LIS. More important, perhaps, was the feeling that the LIS was unnecessary and that the information that the NGOs had produced was seen as sufficient for general planning purposes.

There seem to have been other factors at work as well. One thing is that there were misconceptions throughout the process about what the LIS was and was not. The difference between a standard Level 1-survye (identifying mine affected areas) and the socio-impact impact survey, which is concerned with identifying how

[12] A number of practical issues delayed this "preparatory" phase.

communities assess the impact of various mine/UXO threats, was not fully understood by some[13].

Some of the NGO staff also seem to have believed that there was no need for a national survey. The idea was that a reasonable picture could be stitched together from the data that existed, and then perhaps supplement with some further work, but not to carry out a full-scale national survey from scratch.

The information the Evaluation got, however, is that the data that the demining operators produced were unsuitable for a LIS study. First of all, they were primarily concerned with identifying mined areas and UXO problems, so they did not collect much in the way of socio-economic indicators. There were no surveys of the population's own views on issues like severity of the mine problem, blockages, etc. While some victims data wee collected, they were not systematic with regards to a number of the variables that are key to the LIS, such as identifying the accident site. The variables and definitions and methodologies used were not uniform across the NGOs, and there was no attempt at ensuring consistency and completeness – largely because the NGOs themselves did not worry about this since the data were largely for their own planning purposes. There was no particular quality assurance on the data collection and analysis, so it was impossible for somebody outside the organization to know anything about the reliability and validity of the data. Finally, the surveys were not publicly available, so they quite simply were not accessible and thus of no use.

The Mozambique survey was among the first ones to be carried out. CIDC therefore had no practical models to build on regarding a number of the issues that came up. This included how to structure the communication with the other mine action (MA) actors. How the dialogue, particularly between the mine operators and CIDC, was handled is hotly disputed. CIDC feels they put in a lot of effort to establish communication lines and involve the other actors. But these actors, on their side, are insistent that there was little if any dialogue, and that CIDC simply went ahead and carried out the survey the way they wanted without consulting properly with others.

A number of informants have furthermore pointed to the inexperience of the first team that was responsible for the LIS. A number of changes to personnel took place, and management had to carry out a fair amount of trouble-shooting. The Quality Assurance Monitor played an important role at several points, ensuring that the process got back on track.

The bottom line, however, was that the national authorities had decided on a LIS – whether the NGOs liked that or not. There is therefore the question why it was not possible to ensure that all the mine actors got together as long as a national decision had been taken. But in the end this never really happened – the poor dialogue and distrust continued throughout the LIS process, and clearly lingers on: the Evaluation was struck by how the parties still seem far apart in their perceptions of what happened, and disagree strongly on why a better process and a better result was not produced.

Regarding national actors, the situation was a little more ambiguous. The national mine action authority, IND, was seen as a fairly weak actor with little political clout either nationally or at the level of operations, in the provinces. The demining

[13] The fact that all the mine operators in Mozambique also were members of the Survey Working Group, where the LISs were defined and discussed, does not seem to have led to much information sharing with the field offices.

operators therefore largely discussed and decided their operations with the provincial governors and the donors who were funding the various activities, rather than with IND in Maputo. The IND was also a fairly recent creation, and was trying to shake off the accusations of corruption and mismanagement that had hampered its predecessor organization, and which had made both the donors and the demining operators quite critical of it and how it was operating.

When it came to discussing the basic questionnaire and the weighting/impact scoring, there seems to have been little involvement of other actors. Information about what was intended, and requests for feed-back were made, but with little response. This, however, is not unusual in Mozambique, where a large number of consultancy-driven processes overwhelm a small central bureaucracy and weak local institutions such as the university. But the result was, however, that the planning for the LIS did not generate a lot of participation and ownership, either among the mine operators or national bodies that potentially should have had an interest in the LIS.

No links seem to have been established to national or regional planning processes. Mine Action is presently not included in Mozambique's Poverty Reduction Strategy Paper (PARPA). This issue seems to have been discussed in August 2003, and the government now claims that mine action will be included in the next version of the PARPA, which is to be revised in 2004.

C. Implementing the LIS

The MLIS began its work in February 1999 with the Expert Opinion Collection (EOC). This work continued until September 1999, but was partly re-visited between March and February 2001 since it became evident that the original EOC had not provided the results expected and needed.

The MLIS then moved on to carry out group interviews in the 791 communities that self-identified as landmine-affected[14]. Carrying out a national survey over such a vast and poorly linked territory was a logistical nightmare. Once the process got underway, from a management point of view it seems to have progressed as well as could be hoped for, with tight communications between the field and the head office permitting tracking of progress.

A total of 6,772 persons participated in these group interviews – an average of almost nine persons in each interview. The average duration of these interviews was just over 100 minutes, but where these interviews could range from 15 to 250 minutes. Women participated in only 17.6% of them, however, which was a lot less than would have been desirable.

The survey started its work in the northern areas of Mozambique and worked its way south until it ended up in the Maputo province. The reason for choosing this approach was mainly the severe flooding that hit most of Mozambique in early 2000. The flooding was especially severe in the central and southern provinces, and CIDC therefore decided to begin field data collection in the northern provinces.

The process itself is highly contentious. While CIDC believes that a very serious and committed effort was made to collect reliable and valid data, many of the informants on the ground disagree. While there is little reason to doubt the commitment and the

[14] 938 communities that were not defined as landmine-affected were sampled through individual interviews, 208 communities were inaccessible.

seriousness with which the work was carried out, there are questions regarding the quality and comprehensiveness of the information collected.

The first issue that is raised is that the typical visit in a community was very short. This was in large part undoubtedly due to the large number of areas that needed to be visited, and the long distances that had to be covered. But a number of informants believe that the process was too rushed, and that this had an impact on the quality and consistency of the socio-economic data that was collected. The CIDC was aware of the problem, but felt that there was little that could be done about this, given the constraints under which the survey had to work: "[there is a] sacrifice in accuracy as a part of the trade-off for acquiring nation-wide information over a relatively short period and at a moderate cost".[15]

There are strong disagreements about to what extent the LIS included regional and local authorities in the survey. In Mozambique, with a relatively high degree of decentralization and often long continuity of the local administrators, these authorities are vital sources of information. While CIDC believes these officials were systematically visited and canvassed throughout the LIS process, others claim that this was done superficially and that key information was therefore missed.

The flooding has also been given as a reason for apparent discrepancies between the number of suspected mine-affected areas (SMAs) in the LIS, and the number of SMAs in the more recent findings of the regional operators, where a number of new SMAs have been identified. The argument is that the survey teams were not able to reach all the areas due to the flooding, and therefore could not carry out the interviews on site. While this is undoubtedly true in some cases, some informants claim that both the short interviews, and the sampling that was done, was such that a number of known SMAs were missed[16].

The quality of the survey staff posed some challenges, where the MLIS faced the normal problem in Mozambique of trying to find personnel with the desired skills. The enumerators employed by the MLIS were mostly recent graduates and students, although some were from the mine action community.

CIDC was aware of this problem. It believes first of all that they in fact succeeded in getting the kinds of staff they were looking for, but secondly that the training provided gave the surveyors the skills necessary to do the job well.

The criticism from the mine action community was that they lacked skills in assessing distances and topography, and the general challenges of getting the coordinates right. Very few had prior mine action related (including military) experience, which meant they did not have much experience in assessing information given to them about SMAs – both the likelihood of the information being correct, but also being able to properly identify the areas and draw the boundaries well.

This criticism is in many cases undoubtedly correct, but at the same time reflects the biases and misunderstandings within the mine action community about the LIS. While mine operators wanted, as mentioned before, the LIS to help them identify the new SMAs and map them out well, this was not the priority concern of the LIS at all.

[15] Quote from paper by Paul F. Wilkinson and Brigitte Masella, " MLIS: Optimising Mine Action", PFWA, 2003

[16] The UN Certification Committee, in its certification letter to CIDC of 14 September 2001, noted with concern that the level of coverage of the survey left some questions as to its completeness.

Criticizing the LIS for not doing a job it never was intended to do is therefore mis-directed.

But key informants also feel that the filled-out questionnaires varied in quality, both in terms of how well and extensively they were produced, and how valuable and accurate the information gathered was. It is claimed by several informants spoken with that some of the interviews conducted were not done according to the protocols. Places that were described as surveyed had not been visited in person or by a team of enumerators. Furthermore it was claimed that some of the interviews had been done with persons who were more or less randomly gathered and therefore did not provide any kind of representative sample of the community. Combined with the short time available for the conversations led to the information collected being of poor quality.

CIDC hotly disputes these claims, believing that the management was on top of these kinds of issues and that this does not represent any kind of systematic problem with the survey. But the quality assurance system in place was not as solid as those that have been developed by later surveys, and the fact remains that to many of the informed observers in Mozambique, the quality and comprehensiveness of the LIS is seriously questioned.

D. LIS Outputs and Impact

The MLIS produced the following outputs and results:

- The largest product produced by the MLIS was the populated database (IMSMA), in English and Portuguese, linked with a Geographic Information System (GIS).
- It produced a national village-level overview of the social and economic impacts of SMAs.
- It yielded, in English and Portuguese, research protocols and instruments suitable for further use, either in Mozambique or for instance in Angola.
- It compiled the first national gazetteer of places, names and locations, in the form of a computerized toponomy database containing the official and alternate names of some 11,300 communities.
- It prepared computerized maps suitable for future use.
- It provided through the final report, certified by the UN, a potential guide for donors and other national and international actors.

A key finding was that landmines were found to be a threat all over Mozambique, both in the cities and in the rural districts. Overall mining is fairly light, except around particular infrastructure areas such as power pylons. But the country-wide yet very dispersed distribution of the mines therefore represents a major challenge in terms of planning and carrying out mine action.

The subsequent national five-year plan developed by IND is largely based on the results of MLIS. This in itself is a strong indication that the national authorities take the LIS seriously, and wish national programming to be based on it.

Actual mine action in Mozambique does *not* follow the five-year plan, however. Neither the provincial authorities nor the three major mine operators respect the LIS or use it much for their own decisions.

At the level of the provincial governors, evaluations of specific mine programs have shown that the governors often prioritize based on purely political criteria (Demex 2002, Scanteam 2003). Since they do not have to answer to national authorities on these matters, there is little IND can do about this.

The mine actors believe that the MLIS is not accurate, and in particular that it overestimates the SMAs, especially in the northern region (the maps show some SMA boundaries that the mine operators claim are vastly exaggerated, and that a more careful survey should have been able to capture). While there is undoubtedly cases of badly exaggerated SMA boundaries, this Evaluation also believes that this criticism misses the mark somewhat: the LIS was to record the information and views that the communities themselves have on the contamination areas and risks, but not to conduct technical assessments of this information.

Furthermore, the mine operators receive a lot of their funding directly from the donors and for projects that have largely been developed locally. Since the funding therefore flows on the outside of the government channels, there is once again little IND can do about influencing decisions of the different mine operators. The ability and incentives for the actors to come together and plan jointly are therefore weak. It also means that both provincial authorities and mine operators in fact have an interest in *not* giving credence to the LIS, since a LIS that is seen as relevant and of quality would provide IND with leverage in influencing priority setting. This has led to a situation where the IND is largely without influence when national mien action priorities are being set. This situation is exactly what the LIS was intended to address.

IND's five-year plan advocates a shift in funding and importance from just clearing of landmines to technical survey and Mine Risk Education (MRE) and Victims Assistance (VA). The findings of the MLIS shows that there are relatively few high impact places left in Mozambique, and this lack of high impact in the country are correctly reflected by the IND in the five-year plan. This is not mirrored in the operators' actions or the donor support and this again is an indicator of the problem that IND lack practical power and influence to steer and orchestrate MA in Mozambique. MRE and VA get only about one percent of the total funding for MA in Mozambique, and this shows that although the MLIS correctly pointed to these areas as being important the shift of funds has not taken place.

The claim by the operators is that since the LIS is of such poor quality, it is not possible for them to use it as a planning tool. The argument that the government uses the LIS as the platform for *their* decisions does not carry much weight, because it must be recognized that IND has no choice but to rely heavily on the LIS, since it has no other information base for its own planning and decisions. Disregarding the LIS would politically be impossible since it was the government that had agreed to have the LIS to be carried out in the first place.

But the MLIS was also to be part of an on-going capacity building program for the Mine Action sector that CIDA is funding. The program is based upon a MoU between the governments of Canada and Mozambique. In terms of longer-term impact on the capacity of IND, the MLIS as such seems to have contributed relatively little.

The information that was collected was checked and then entered into the Information Management System for Mine Action (IMSMA) database. The use and maintenance of IMSMA is key to the longer-term management of MA, and in this area IND has not seen much capacity development. While the IMSMA is now owned by and operated by IND, the actual operations are dependent on a single person's knowledge and

interest. This person is still part of and is paid by the capacity building program, funded by CIDA and other donors, organized by UNDP. There is a real and large chance that he will find other work once or if he is transferred to IND and their salary system.

The follow-up and present usage of the IMSMA-database leaves a lot to be desired. With weak links between the MA-operators and the IND, the gathering of information is slow and inefficient. The information gathering lacks a systematic structure and the MA-operators often use different formats than what is compatible with the IMSMA-database. Finally the lack of resources to follow-up and continuously update leaves the database in an operational vacuum.

But the IND is presently conducting a number of information spreading exercises to change this situation. It is also communicating with the different NGOs to iron out discrepancies regarding SMAs. These initiatives, together with the necessary commitment and structured reporting from the NGO-operators, will certainly help update the IMSMA-database and start building the confidence in the survey results.

The MLIS and the final report have been certified by UN, but with comments on the level of coverage of the survey. The Certification Committee has also noted that the Certification Guidelines were not specific as to what procedures should be followed in MLIS.

The above mentioned process contributed to the fact that while the impact scoring provided by the LIS was being used to develop the National Demining Strategy, it did not serve as a tool for actual priority setting for mine action activities. Statistics from June 2002, two years after the MLIS was completed, show that only four of the 19 high impact areas that were identified had been cleared, ten of the 165 medium impact ones, and 44 of the 607 low impact areas defined were cleared[17].

But the MLIS is clearly the best and most comprehensive list of suspected mine affected areas in the country[18]. While mine action operators find new SMAs, this is of course natural as mine action work spreads. The challenge is to structure the information flow so that new SMAs are entered into IMSMA and subsequently used in the analysis for setting priorities.

The lack of links to the Poverty Reduction Strategy process is another challenge for the IND and the use of the IMSMA. So far, there has been little contact and interest in using the IMSMA outside the MA community – in part a reflection of the weak political power of IND as a national institutions.

E. Findings, Conclusions and Recommendations

Main Findings:

The key findings are the following:

- The MLIS was among the first Landmine Impact Surveys conducted. It faced a series of challenges in terms of the logistics of carrying out a national survey across a vast territory during the most difficult land transportation period in

[17] These numbers are slightly different from the 20 high and 164 medium impact places described in the final MLIS report.

[18] According to a paper by Paul F. Wilkinson and Brigitte Masella, statistical analysis shows that 90.4% of all the affected and identified SMAs were visited by the MLIS.

Mozambique's recent history (the 2000 floodings). The links with other mine action operators was poor, with lack of collaboration and subsequent distrust of the LIS results.

- The IND has developed a five-year national mine action plan mainly based on the MLIS report, but the priority setting by the operators and the actual mine action work being conducted does not follow the five-year plan.
- The capacity at IND has not improved much as a function of the MLIS. The Institute is still in need of technical assistance through donor funded projects (notably the UNDP capacity building program).
- The priorities of mine action in Mozambique do not reflect the potential for different ways of working. There has been no visible increase in the support to a coordinated MRE program, nor has the work on assistance to victims increased notably. It should be noted that UNICEF has just launched a MRE project in Mozambique.
- The socio-economic information gathered by the MLIS is not being used by anyone. The web-site of IND has some information on it, but the Evaluation believes there is room for considerably more development in this area.

Conclusions:

The major "lessons learned" from this LIS exercise include the following:

1. Weighting/impact scores:

The mine action efforts in Mozambique after the MLIS shows that failure to include all the important stakeholders, or their refusal to participate, in the planning of the MLIS and the development of the weighting, the impact scores and the questionnaire will lead to a lack of ownership and reluctance to fully follow and use the priorities set based on the results of the LISs.

2. Capacity building:

The potential for using the LIS also for capacity building was not exploited.

3. Implementation:

There is a need for more flexibility in the approach when implementing a LIS in a country such as Mozambique, with a long history of mine action and a number of operators already working in the country. The considerable information already in place could both have been used as starting points for the survey rather than ignoring them, and also using these resources to quality assure the final LIS findings more aggressively.

Recommendations:

- The planning and implementation of the LIS, from the Advance Mission Survey through deciding the weighting and impact scores, should be more of a national exercise. The protocols developed by SAC should become less of a blueprint SOP and more of a reference tool, and the focus should be on national usage and ownership and not on the establishment of internationally comparable data-sets.
- In countries where humanitarian mine action has a history and solid international representation the LIS should be based much more on what has been done already,

and not become a "new" and independent exercise. Flexibility is key, both in terms of time-limits, implementation partners and instruments. .

- The LIS should be connected to a central, national office that can make sure the results, both within the MA itself and the development arena, are being utilized more effectively and efficiently. In the case of Mozambique the IND is connected to the Ministry of Foreign Affairs, but should also have worked much closer with other relevant institutions such as the Central Statistical Office, the Ministry of Planning and Finance (for the PRSP/PARPA links), and the Ministry of Local Administration.
- The capacity of the national mine action authorities must be assessed more critically before initiating the LIS, so that the LIS can also be used to build national capacity, especially within the national mine action authorities.