



Advisory 01 – Brussels Principles and Standards

Purpose

This advisory documents the principles established by the mine action community on landmine impact surveys, during a meeting held at Brussels in 1998. The Brussels Principles are, in a way, the founding charter of the Survey Action Center and the landmine impact survey process, and thus are key documents for SAC and SWG institutional memory.

Terminology

- The Level One General Mine / UXO Survey is now referred to as the Landmine Impact Survey (LIS).
- The International Standards for Humanitarian Mine Clearance Operations are now superseded by the International Mine Action Standards (IMAS).

Attachments

A01b Brussels meeting list of participants

Editing

Original documents were written 98 05 10

Editing by Dann Naseemullah 03 01 13

Introduction

On the 7 May 1998, representatives from non-governmental organisations, donor nations, the European Commission, and the United Nations met in Brussels and convened a meeting of the Survey Contact Group. The Survey Contact Group was formed as a result of the Ottawa Conference held on March 21-24, 1998¹. This meeting was hosted by the Vietnam Veterans of America Foundation and Handicap International.

Global experience in mine afflicted theatres has clearly indicated that Level One General Mine/UXO Surveys provide the framework for obtaining essential data/information. This data/information is required to focus mine action efforts in the most efficient ways possible, mobilize the necessary resources, and obtain better base line data for gauging progress in ridding the world of mines/ unexploded ordnance (UXO).

The meeting, consisting of five days of working group sessions, was unique in that it brought together donors, United Nations and non-governmental organizations at a working level conference to collaborate in the development of methods and procedures at the planning stage of a new mine action initiative. Field personnel from four field tested national surveys -- in Laos, Angola, Afghanistan and Cambodia – shared their experiences and discussed lessons learned with policy makers in order to develop an enhanced model for Level One General Mine/UXO Survey. The working group meetings drafted a set of principles for the conduct and content of Level One General Surveys, and produced working papers that develop the guidelines for quality management, methodology and survey instrument format.

The working groups agreed to accept, as a starting point, the guidelines on Level One General Survey, as it appears in the UN's *International Standards for Humanitarian Mine Clearance Operations*. However the term "humanitarian mine action" is now largely accepted to include victim assistance, mine awareness and mine risk education activities. It was also agreed that an understanding of the social and economic impact of landmines / UXO on affected communities is crucial to effective use of humanitarian mine action resources. The working group therefore agreed that the Level One General Survey concept should include additional language recognising the need for information/data regarding these additional elements. The working group regards the enhancement of guidelines as an important step towards the development of operational standards.

The meeting participants were looking forward to establishing better cooperation between non-governmental organizations, the United Nations, the European Commission, and donor nations. A serious discussion has begun regarding a mechanism to facilitate and accelerate the implementation of Level One General Mine/UXO Surveys in support of global humanitarian mine action. Discussions on all issues are continuing and a final report and proposals will be made available at a later date.

¹ A list of participants to the Brussels meeting is attached.

Basic Principles

All the members of the Survey Contact Group have agreed that effective mine surveys include the following basic principles:

- Endorsement of the standards and definitions of Level One General Survey as detailed in the UN document *International Standards for Humanitarian Mine Clearance Operations*;
- Assistance in the collection of elements for social and economic impact evaluation.

The Level One General Survey is an information / data gathering process designed to collect information on contaminated areas, areas suspected of contamination or areas uncontaminated by mines or UXO. This process is intended to provide a basis for the analysis of the impact of the mine / UXO problem and to identify critical planning criteria.

1. Surveys must indicate future, appropriate priority responses to mine and UXO contamination, and its human and economic impact.
2. Country assessments conducted by the UN or appropriate competent agency must be the precursor to all humanitarian mine action.
3. Surveys must be conducted in agreement with the government or appropriate authorities of the country or region.
4. Survey implementers must work to ensure that activities do not lead to the creation of false expectations on the part of mine-affected communities.
5. Survey activities are an integral part of humanitarian mine action that demand sustained political and financial commitment, with survey outputs to include details of appropriate and timely follow-up.
6. The information collected must be accurate, relevant and immediately applicable to humanitarian mine action.
7. Each proposed survey must include a country-specific plan, involving data gathering from at least a representative sample of communities.
8. Data collection and its outputs must be transparent, accessible and, as much as possible, compatible with relevant national, regional and international databases.
9. Survey activities must be culturally sensitive and take into consideration the well-being and security of staff.

Prerequisites for Level One General Survey

The basis for strategic decision-making that leads to the initiation of a Level One General Survey will follow the listed prerequisites as a matter of fundamental principle by the NGO consortium.

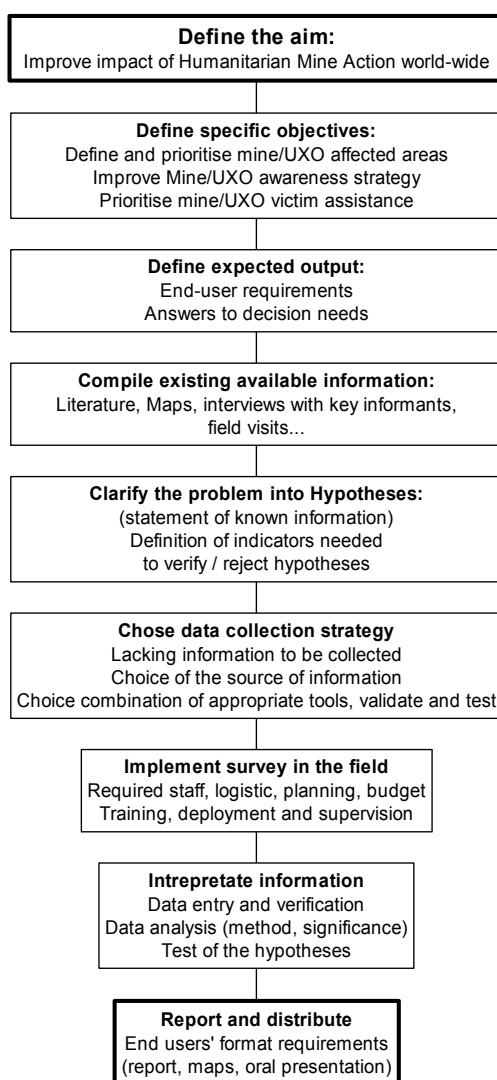
1. UN Humanitarian Mine Action Standards relating to Level One General Survey are accepted as the baseline minimum standard.
2. Country assessments conducted by the UN or appropriate competent agency must be conducted before the survey is initiated.
3. The host government or recognised authority must endorse the conduct of Level 1 General Survey and acknowledge the survey as part of the process of subsequent humanitarian mine action.
4. The end user and stakeholder requirements for the output of a Level One General Survey must be considered in the planning and execution of the survey.

Methodology

1. The central goal of the survey process must be clearly defined. Specific objectives, with clearly defined expected outputs, must be identified.
2. Existing information must be collected and reviewed to clarify the problem, and to develop hypotheses and a survey plan.
3. The information and data collection strategy must be defined in terms of standards, tools, and quality assurance prior to full survey operations in the field.
4. An integrated survey operation with all the relevant components must be conducted. The information/ data must be collected, collated, analysed and distributed.
5. Quality assurance and quality control checks must be established at all levels of project design, execution and review.

A01 – Brussels Principles

Suggested survey process



Survey Standards

The listed standards are basic requirements for the conduct of a Level One General Survey.

Threat assessment Standard (Mine /UXO, Security)

1. An assessment of the threat to survey personnel and their field collaborators should be determined. The assessment should include but is not limited to Mine/UXO, conflict, physical security and health issues.

2. Appropriate measures must be taken to ensure the safety and welfare of personnel involved in the survey as a matter of basic humanitarian principle.

Information/Data standard (Written, Graphic, Digital)

3) Metadata (description of data fields) must be maintained for all data tables to facilitate exchange to ensure compatibility.

4) All sources of information should be checked in terms of basic reliability.

5) The classification of communities as ‘high risk’, ‘low risk’, ‘suspected’, ‘reported’, and ‘unknown’ must be qualified with the relevant information.

6) Qualitative and quantitative data and information should be recorded in formats which allow for cross-referencing.

7) Measurement criteria must be standardised. Metric measurement should be used to ensure that all measurements are compatible. A variety of measurement equipment is required to record accurately data. This includes compasses, protractors, GPS, rangefinders, binoculars, camera etc.

8) Enduring reference points that can be easily identified by Level Two technical survey or mine clearance teams should be identified and recorded. GPS can be used as a navigational aid or to supplement map coordinates.

9) All measurement equipment must meet approved survey requirements or accuracy and uniformity prior to the commencement of survey execution.

Training standards

10) A training package must be created and tested that includes all relevant skills to enable survey and support personnel to perform their assigned tasks competently, consistently, and safely.

Geographic data standards

11) Geographic coordinate data must be recorded in a manner that is sufficient to allow for integration with Level Two Technical survey information when it becomes available. If latitude and longitude are used, the data format should be degree decimal and coordinates recorded to a precision of five (5) significant figures following the decimal point, with north and east recorded as positive numbers. If UTM or another local coordinate system is used, coordinates should be recorded to a precision of one meter easting and one meter northing.

Archive standards

12) Safe and secure conditions must be established to store all collected data and information, in more than one location with master and backup formats.

Information distribution standards

13) Clear guidelines for information distribution and access must be determined prior to survey commencement.

Quality Assurance and Quality Control standards

14) Quality assurance and quality control, as defined in the UN document *International Standards for Humanitarian Mine Clearance Operations*, will be applied throughout all levels and all stages of the survey.

Human Resource standard

15) Job profiles and terms of reference should be determined prior to the recruitment of survey personnel.

Core Information Groups

The information groups and sub-groups listed below form the minimum information requirements of a Level One General Survey, with qualitative observations by surveyors providing clarity to quantitative data collected in the field. The list does not exclude consideration of additional requests for information by end users or stakeholders.

- Survey team data
- General location data
- Terrain/geographic data
- Accessibility data
- Infrastructure data, including victim rehabilitation service data
- Historical conflict data
- Minefield/UXO location data
- Mine/UXO recognition and technical data
- Informant source data
- Socio-economic data.
- Mine victim/ accident data
- Behavioural data

Quality Management

Quality management applies during all phases of the survey from the planning to production of the final product.

For the purpose of this document quality management is divided into categories of quality assurance and quality control as defined in the United Nations document: *International Standards for Mine Clearance Operations*. The Consortium will ensure that quality Level One General Surveys are conducted to meet, at a minimum, the above standards.

Quality Assurance Measures

Quality assurance measures must be established to ensure that country programs are established in a manner that meets the overall requirements for survey operations. These include:

- 1) The development of country specific training packages and survey formats. The training program and survey format as outlined in the Consortium's SOPs must be adapted to accommodate in-country realities.
- 2) the selection of staff. All project staff must have the appropriate level of education, experience and familiarity with the area of operation, confidence of the communities in which they will work, and the capacity to effectively transfer skills.

Quality Control: data collection, data processing and data analysis

All field operations must be regularly monitored and appropriate corrective measures adopted where necessary including:

- 3) Data will be gathered from relevant sources, and potential cultural bias will be minimized to the extent possible during interviewing and data gathering;
- 4) Mechanisms for cross-checking will be incorporated to facilitate verification of the data collected. For example, questionnaires will be structured and a variety of sources contacted so that information can be cross referenced for consistency;
- 5) The agency implementing the survey will conduct surprise monitoring to ensure the survey teams are operating in accordance with the operations plan and SOPs;
- 6) Survey supervisors or other relevant staff will resurvey a number of areas which the survey teams have already visited. The findings of the exercise will be compared for accuracy.
- 7) All data gathered will be checked at regional office level to rectify any inaccuracies or discrepancies;
- 8) Additional checks will be applied at country office level to the data received from all regional offices;

9) Data must be analyzed and presented in a manner consistent with the consortium's standard reporting requirements.

Survey Contact Group and Certification:

The Survey Contact Group will be the primary mechanism through which the consortium will engage the donor community and the UN system on issues related to quality assurance and quality control in the conduct of Level One General Surveys. In the short term, the goal will be to inform the donor community about the means through which the consortium will ensure that, at a minimum, it will meet the UN standards for Level One General Surveys. The longer term goals of the Survey Contact Group with respect to quality management will include the development of mechanisms to:

- 1) encourage the broadest possible adoption and implementation of the survey standards with a view to the development of a system to certify that all surveys are conducted in accordance with these standards; and
- 2) ensure that experience gained in implementing these standards is incorporated into ongoing efforts to improve the current standards.

ANNEX A - TABLE OF CORE INFORMATION GROUPS/ SUB GROUPS

Survey Team Data	General Location Data	Terrain Geographic Data	Accessability Data	Infrastructure Data	Historical Conflict Data	Mine/UXO Location Data	Mine/UXO recognition & Tech. Data	Informant Source Data	Social-Economic Impact	Mine Victim/Accident Data	Behavioral Data
Name	Province	Vegetation	Road	Utilities	Who laid	Minefield/UXO Code (location code)	APM	Type	Land Use	Who	Patterns
Organisation	District	Ground Cond.	Bridge	Power	When laid	Estimated Size	ATM	Name(s)	Access	Current Location	Who
Position	Village	Water	Rail	Water	How laid	Casualties,Qty	UXO	Age	Population	Where injured	What
Dates	Location Code	Water Table	Air	Communications	Why laid	Casualties,When	Booby Trap	Occupation	Social	When	Where
Task N°/Ref N°	Map Name	Seasonal Considerations	Water	Health Service		-Human	Other	Address	Economic	How	Why
	Map Series		Route Restrictions	Victim Rehab Services		-Animal		Language		Why	How
	Map Edition/Yr		Class					Reliability		What	
	Map Sheet		Width								
	Map Scale		Length / Distance								
	Map Easting		Time From / To								
	Map Northing		Route Name								
	GPS Easting										
	GPS Northing										

ANNEX B
GEOGRAPHIC INFORMATION REQUIREMENTS FOR
HUMANITARIAN MINE ACTION
LEVEL ONE GENERAL SURVEY

The institution responsible for coordinating humanitarian landmine and UXO clearance in an affected country requires access to current, accurate, and detailed geographic data in both printed map and digital forms.

Geographic data requirements for Level One General Survey can be met through the following actions:

1. Identification of geographic information on existing printed maps and its conversion to digital form (digitizing);
2. Compilation of geographic information at the scale of existing printed maps and its conversion to digital form (digitizing).

DATA REQUIREMENTS

1. Printed maps: A national institution responsible for mine action needs copies of all map sheets of the large and medium scale topographic maps available for the country.

2. Gazetteer of all populated places: The gazetteer must be comprehensive, including all populated places, because of the need to record information about areas that are free of contamination as well as those which are contaminated.

Unique ID number: Each populated place must be assigned a unique identification number based upon a hierarchical system which reflects the administrative system of the country. Such information is usually found in the national organization responsible for maintaining statistics or the census. The ID number must be comprised of integers (no characters or decimals): 11 22 33 44

- 11 = 1 order administrative code
- 22 = 2 order administrative code
- 33 = 3 order administrative code (if available)
- 44 = Population Center code

Examples:

Cambodia 11223344 - 8 digits, including 3rd order
 Laos 1122444 - 7 digits, no 3rd order

Name(s): Name(s) of all populated place must be recorded in both the local language and in transliterated form. If official system for transliterating local language exists, it must be used. In the absence of an official system for transliterating local language, a system should be selected for use which has been developed by one of the host nation ministries, departments, or organizations.

The geographic location of each population center should be determined and combined with the transliterated names to produce a gazetteer in printed as well as digital form. Geographic location can be recorded as either longitude and latitude or as easting and northing coordinates of UTM or another local coordinate system with a desired precision of within 1 kilometer of actual location.

The geographic location should be verified by local authorities (province / district) during the course of the Level One Survey.

3. Administrative boundaries will need to be compiled and digitized
 - first order (province),
 - second order (district), and
 - third order (sub-district or commune), if available.

The desired precision for compilation of administrative boundaries (1st, 2nd, and 3rd order) should be simply to ensure that all population centers lie within the boundaries of the administrative unit to which they are assigned according to the ID coding system. The geographic position of the administrative boundaries should be verified by local authorities (province / district) during the course of the Level One Survey.

4. Surface transportation network should be digitized from existing geographic data.
Roads; railroads; cart tracks; and footpaths.

All roads and cart tracks appearing on the largest scale topographic maps should be manually digitized to an accuracy such that ninety (90) percent of all features should be within a distance equal to 1 mm at the scale of the printed map:

1: 50,000 scale map - 90 percent of all features should be within 50 meters (1 mm).

1:100,000 scale map - 90 percent of all features should be within 100 meters (1mm).

5. Infrastructure features can be digitized from existing geographic data
Bridges; power lines; dams; irrigation systems;

6. Physical features: Digital Chart of the World data can be used for representing surface hydrographic and topographic features.

7. Datum Transformation Parameters (local to WGS84) for all national topographic maps in use.

Datum: dx, dy, dz

Source of Datum transformation parameter information: i.e. included with commercial software (ESRI, MapINFO); provided by NIMA (DMA); or locally determined from reoccupation of original survey benchmarks

Ellipsoid: Name, semi-major axis, semi-minor axis, flattening.

Coordinate System: name, meridians, parallels, etc.

As part of the Level One Survey report, national, province, and district maps of landmine and UXO impact should be created by selecting landmine and UXO contaminated areas and depicting these locations in relation to other geographic data such as: population centers, administrative boundaries; roads; cart tracks; footpaths; rivers, and elevation

PARTICIPANT	DESIGNATION	ORGANIZATION	DATES ATTENDED
Bob Eaton	Director for Humanitarian Affairs	Vietnam Veterans of America Foundation Department for Humanitarian Affairs	7 - 11 May
William Barron	Planning Consultant Mine Survey Unit	Vietnam Veterans of America Foundation Department for Humanitarian Affairs	7-11 May
Michael Sheinkman	Geographer Mine Survey Unit	Vietnam Veterans of America Foundation Department for Humanitarian Affairs	7-11 May
David McCracken	Regional Senior Technical Adviser	Handicap International - Belgium	7-11 May
George Dallamagne	Director	Handicap International - Belgium	8-May
Anne Cappelle	Mines Unit Director	Handicap International - Belgium	7-11 May
Laurant Mercat	Former Coordinator - Lao Survey	Handicap International - Belgium	7-11 May
David Hunsberger	Technical Advisor Cambodia Data Incident Project	Handicap International - Belgium	7-11 May
Sayed Aqa	Director	Mine Clearance Planning Agency	7-11 May
Lou McGrath	Director	Mines Advisory Group	7-11 May
Tim Carstairs	International Policy & Research Officer	Mines Advisory Group	7-11 May
Steve Wilson	Technical Operations Manager	Mines Advisory Group	7-11 May
Ulrich Tietze	Angloa Program Officer	Medico International	7-11 May
Jean-Baptiste Richardier	Director	Handicap International - France	7-8 May
Bill Howell	Mines Unit Director	Handicap International - France	7-11 May
Ben Lark	Field Project Coordinator, Mines	Handicap International - France	7-10 May
Valerie Warmington	Co-Chairperson	Mines Action Canada	7-11 May
Gerard White	Co-Founder	Landmine Survivors Network	7-8 May
Susan Eitel	Project Coordinator	Landmine Survivors Network	7-11 May
Per Nergaard	Program Coordinator Landmines	Norwegian People's Aid	7-8 May
Rune Verpre Engeset	Landmine Survey Coordinator	Norwegian People's Aid	7-9 May
John Flanagan	Policy Officer Mine Action Service	UN Dept of Peace-Keeping Operations	7-11 May
Bob Lawson	Senior Policy Advisor Mine Action Unit	Non-proliferation, Arms Control & Disarmament Div. Canadian Dept of Foreign Affairs & Int. Trade	7-11 May
Alexander Stemmer	Assistant to Special Advisor	German Federal Foreign Office	8-9 May
Murph McCloy	Demining Coordinator Humanitarian Deming (2010 Initiative)	US Department of State	7-11 May
Michele Cervone d'Urso	Unit G/4 Regional Cooperation Refugees and Demining	DGVIII European Commission	7 & 11 May
Stephanie Baud	Unit G/4 Regional Cooperation Refugees and Demining	DGVIII European Commission	7-May
Reto Haeni	Program Manager	Swiss Federal Institute of Technology	did not attend
Luc Timmermans	Administration for Development Cooperation	Government of Belgium	7-May
Machteld Fostier	Head of Disarmament and Non-proliferation Dept.	Belgium Ministry of Foreign Affairs	8 & 11 May
Svien Henriksen	Consultant	Norwegian Ministry of Foreign Affairs	8-May