

	STANDARD OPERATING PROCEDURES	S O P	
	SURVEY OF MINE SUSPECTED AREAS AND/OR BUILDINGS	01.	
	GENERAL SURVEY	01.01	
HUMANITARIAN DEMINING		TO 523	
<ul style="list-style-type: none"> ③ ORGANIZATIONAL FORMS ③ PLANNING ③ IMPLEMENTATION PROCEDURE ③ RECONSTRUCTION OF MSA ③ RECORDING DATA INTO THE MIS ③ INCLUSION OF AREAS INTO THE MSA ③ EXCLUSION OF AREAS FROM THE MSA ③ REPORTING ③ VERIFICATION ③ CRITERIA FOR DEFINING STATUS OF AREAS 			
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INTRODUCTION

General survey of the entire territory of towns and municipalities resulted in defining mine suspected areas through the following indicators:

1. Borders of MSA are defined inside of administrative borders of municipalities and cities with a cumulative presentation of MSA in the Republic of Croatia.
2. Categories of areas within MSA are defined according to methods of demining.
3. MSA structure assessment done according to type and usage of areas.
4. Completed reconstruction of minefields in the MSA and assessment of types and numbers of mines.
5. Completed marking of MSA with mine warning signs.

The defined MSA in the Republic of Croatia and experience during past mine action activities have facilitated the inclusion and adaptation of activities concerning procedures in data collection during general survey for monitoring and updating the MSA situation.

The standard operating procedures (hereafter SOP) "General Survey" prescribes it is necessary to increase the effectiveness of applying general survey in new data collection, verification of the dependability of data, linking to existing data, as well as monitoring and updating the situation in MSA and marking this accordingly.

As per standard operating procedures the "General Survey" prescribes procedures for definition of areas inside the MSA according to demining methods:

- areas for demining,
- areas for technical survey using mine search method and
- areas to be used at one's own risk.

Additional data collection by technical survey for a precise draft of projects has to be done according to SOP 01.03.

Upgrade and adaptations of procedures of data collection through general survey is geared towards further collection of, for now, still inaccessible original information concerning mine planting and other information that can prove the existence or nonexistence of mine threat.

Due to the lack of original information on mine planting, in the process of data collection through general survey there is an emphasis on personal contact and interviews with those who know about wartime events linked to mined territories and the existence of other indicators of mine presence.

Furthermore, emphasis is put on cooperation with local authorities and other users of MSA during conducting general survey, as well as joint obligations of collecting data on MSA, maintenance of marking system of MSA and education of local residents about mine threat.

The consistent application of the SOP and operative planning will ensure uniform steps are taken during planned execution of tasks during general survey, with aim of monitoring and updating the state of MSA, as a rudimentary foundation for making sound decisions for mine action.

Users of the prescribed SOP are obliged to monitor its practical use and suggest possible improvements therein. The Operations Division will carry out analysis of SOP applicability, its further enhancement, harmonization with legislation and reporting to CROMAC Management Board immediately after changes have been made.

SUBJECT

Standard Operating Procedures "General Survey" prescribe the overall activities in the process of collecting data about threat from mine contamination of areas and facilities with the aim of defining, monitoring and updating MSA in the Republic of Croatia.

Standard Operating Procedures define organizational types of general survey, planning, gradual implementation method, reporting, responsibility, and verification of results of general survey.

Standard Operating Procedures prescribe criteria for identifying the existence or non-existence of mine threat, based on which areas are included in or excluded from MSA.

Standard Operating Procedures prescribe the criteria for defining areas and buildings in MSA according to demining methods used.

Standard Operating Procedures together with the annexes prescribe documents for general survey, their contents (forms) and instructions on how to fill them in.

NORMATIVE REFERENCES

The SOP is based on the International Mine Action Standards (IMAS – 08.10. “General Assessment of Mine Action”), Law on Amendments to the Law on Humanitarian Demining (National Gazette) no. 63/2007), the Law on Humanitarian Demining (National Gazette no. 153/2005) and the Rules and Regulations on Methods of Demining (National Gazette no. 53/2007) and other regulations pertaining to mine action in the Republic of Croatia, and has been harmonized with all other SOP of CROMAC. A list of normative references is provided in Annex A.

TERMS AND DEFINITIONS

Terms and definitions in SOP are harmonized with the Law on Humanitarian Demining in the Republic of Croatia, Rules and Regulations on the Method of Conducting Humanitarian Demining and other regulations defining the sphere of demining in the Republic of Croatia (see Appendix A) and other international norms, which define terms and abbreviations in mine action (rpHRN 1129 and IMAS 04.10). Additional explanation of terms and definitions may be found in Annex B.

GENERAL SURVEY

General survey is the sum of overall activities of collecting information on MSA, data processing, analysis, connecting data and taking the necessary steps to establish the exact situation in MSA.

Planned implementation of general survey is intended to facilitate timely and reliable data for deciding on and planning mine action activities.

Collecting data during general survey is envisaged as continuous monitoring of changes in MSA, putting up mine threat warning signs and informing local communities on the current situation in the MSA.

Continued data collection about MSA is necessary for the effective planning of areas and buildings for mine search and demining.

1. ORGANIZATIONAL FORMS OF GENERAL SURVEY

General surveys are continuous cycles of activities through two interconnected survey methods:

- General survey of suspected areas inside the municipality and city administrative borders.
- Additional general survey of narrower mine suspected areas in municipalities and cities as part of the overall mine suspected area of municipality/city.

The difference between types of general survey refers to the size of areas to be examined and set goals.

1.1. General Survey of Mine Suspected Areas in Municipalities and Cities

General survey of MSA in municipalities and cities include survey of the entire MSA and, if necessary, even outside the administrative borders of municipalities and cities.

The aim of general survey in municipalities and cities is to collect new information and provide update to the overall MSA situation.

The collected data through general survey and the updated MSA is presented in a General Survey Report on MSA to the municipality or city as per Annex D. The report must include data on the MSA in a municipality or city according to the following:

- new size of the area of the MSA in the municipality or city and defined changes to the size of the MSA area based on data on completed demining, mine search, exclusion from and inclusion into MSA,
- new situation of MSA as per adopted categories according to demining methods,
- structure of MSA according to type and usage,
- assessment of remaining number of mines, types of mines and positions of minefields on land as mine polygon,
- situation concerning marking with mine threat signs and information on the continuity of MSA marking maintenance over the past period,
- information on mine victims among the local population during the postwar period and other forms of mine incidents,
- settlements, residences and business areas in municipalities and cities where mine threat has substantially influenced socio-economic situation and development plans of wider community,
- conclusions on the overall situation of the MSA in a municipality and city and strategic decision making about informing the community of the size of the mine threat.

1.2. Additional General Survey of Mine Suspected Areas

Additional general survey of MSA is a survey directed into a specific area as a part of MSA of a municipality or city.

Additional general survey is planned within operative plans and is harmonized with demining plans.

The aim of additional general survey is to collect new information and update the situation in MSA including installing mine threat warning signs on the territory of municipalities and cities.

Additional general survey is planned and performed for:

- additional collection of data on the MSA based on new information on planted and/or cleared mines from the MSA,
- additional collection of data on MSA for which previously conducted surveys did not collect sufficient data.

Additional general survey may be performed outside of a planned activity if the:

- data collection is urgently required upon report of a discovered mine,
- data collection is urgently required because of an occurred mine incident,
- data collection is urgently required because of update of MSA for which a project is being drafted.

Collected data though additional general surveys of MSA are presented in the Report on Additional General Survey of mentioned MSA in a municipality or city as per Annex F.

The Report on Additional General Survey presents detailed information on the situation in MSA as follows:

- newly defined area size of MSA based on data on completed demining, mine search, exclusion from and inclusion in MSA,
- changes in area size of "P" surveyed areas,
- new situation in MSA according to adopted categories based on demining methods,
- structure of MSA according to type and usage,
- assessment of remaining number of mines, types of mines and positions of minefields on the area of survey,
- changes in marking the area with mine threat warning signs and information on the continuity of MSA marking over past period,
- new information on mine victims among the local population and other mine relation incidents in the area,
- settlements, residents and business areas in municipalities and cities where mine contamination has substantially influenced socio-economic situation and development plans of wider community,
- conclusions on the overall situation of the MSA in a municipality and city and strategic decision making about informing the community of the size of a mine problem.

2. GENERAL SURVEY PLANNING

General survey is permanent and specific, rudimentary for the effective implementation of any other mine action activity. General survey planning assures timely acquisition of current information required for to be included in an Annual Demining Plan.

2.1. Planning Levels of General Survey

The planning of general survey on the level of CROMAC is harmonized with the Annual Demining Plan passed by the Government of the Republic of Croatia.

Based on the Annual Demining Plan, CROMAC drafts operative work plans on the basis of three-month and monthly periods.

Operative planning of general survey is under the authority of CROMAC Operations Division and CROMAC's regional offices.

2.1.1. Operations Division

is the carrier of operative planning of general survey. The sector gives guidelines, coordinates, harmonizes and passes general survey operative plans based on recommendations of CROMAC regional offices.

The Operations Division controls, directs, verifies and monitors execution of the plans. Monitoring plans execution is carried out weekly, monthly and periodically through reports.

2.1.2. CROMAC Regional Offices

propose general survey of areas in municipalities and cities under their authority. Regional offices harmonize plans of general survey with demining plans, Operations Division guidelines, available capacities and own assessment of the MSA and priorities for general survey.

CROMAC regional offices carry out general survey based on passed operative plans. Regional offices also monitor whether general surveys are carried out according to plans and reports to the Operations Division on a weekly, monthly and periodic basis

3. GENERAL SURVEY IMPLEMENTATION PROCEDURE

Implementation of general survey is based on monthly operative plans and work order of the head of CROMAC regional office stipulated in Annex C of this SOP.

General survey is carried out by CROMAC surveyor.

General survey may be carried out by project drafters as additional procedure, if urgent data collection is required on the area for which a project is being drafted.

Surveyor, during general survey in the field, collects data on mine contamination of areas and/or

buildings, solely from safe areas and without using demining methods.

The surveyor reports directly to the head of the Survey Section of CROMAC regional office.

The head of Survey Section is responsible for the immediate preparation of surveyors for general survey, constant monitoring and supervision of their work. In cooperation with surveyors he analyzes the results of completed general survey, and after examining paperwork, verifies general survey report with his/her signature.

The head of the CROMAC regional office holds the most responsibility for implementing general survey according to plans. He/she supervises and coordinates general survey activities and his/her signature verifies a completed general survey.

The implementation of general survey includes: preparations for general survey, field work, final analysis of MSA, final report draft and entering the report into CROMAC MIS.

Besides individually, in the following cases general survey is conducted in groups of two employees at least:

- a) due to the safety of employees on mountainous and inaccessible areas distant from the communities where there are no safe traffic and telephone (mobile) communications.
- b) due to performance of marking operations during the tasks of MSA marking requiring the transport of marking instruments (tables, tools etc.) to bigger distances and terrains difficult to access by vehicle.

3.1. General Survey Preparation

Preparations for general survey include analytical preparation of MSA and logistical preparation for general survey of the MSA in the field.

Surveyors are sent to do general survey of MSA after all preparatory activities have been completed and the head of the Survey Section assessed all preconditions for an effective general survey have been met.

The head of the Survey Section will not allow any surveyor into the field if he/she is not assured that is properly prepared

3.1.1. Analytical preparation

is a detailed analysis of previously collected data and drafting of initial analysis about the MSA for the general survey in the field.

Previously collected data is found in the following documents:

- prior general survey report on the entire area of municipality or city,
- additional general survey of the entire area of municipality or city,
- survey for project preparation and data acquired through demining, mine search or technical surveys,
- original information on minefields collected after surveying entire area of municipality or city or was omitted in past surveys.

The drafting of the initial analysis includes a group of interrelated research activities and data analysis,

comparison, systematization, linkage, data interpretation and reconstruction of the battle formations of units protected by mine-explosive obstacles.

Research and analysis of data includes in-depth investigation of details included in existing documents, their grouping and linking together into logical information wholes, with the aim of clearly locating minefields and other data pertinent to the situation in MSA.

Comparison, systematization and data linkage includes detailed research of two or more documents in order to establish possible causes and effects and make conclusions.

Data interpretation is a systematic process leading to conclusions. It relies on acquired knowledge experience, professional judgment, as well as understanding sources and areas the data was collected from. New pieces of information are compared with old and/or questionable issues. This procedure may increase the trust in the legitimacy of sources or open up new questions concerning the actual state of MSA.

The aforementioned activities of data research and analysis, comparison, systematization, linkage and interpretation of the situation in MSA, as part of general survey preparation, should lead to conclusions about the currently known data and unknown information about the MSA.

Analytical preparation defines which unknown pieces of information about MSA will be considered during general survey in the field.

Unknown pieces of information about MSA may be grouped as follows:

- unknown positions of orientation marks, inter-symbols and other markings in the location,
- unknown pieces of information about the topographic characteristics of areas and/or buildings as natural obstacles for which there is no information about mine threat,
- unknown pieces of information on positions of mines due to lacking information in records,
- unknown pieces of information on positions of fortified facilities and other facilities used for military purposes as indicators of mine threat.

Analytical preparation is done by drafting the following documents:

- working copies of topographical maps scaled 1:25000, 1:5000 and DOP2 with marked "P" areas according to demining methods, information on minefields and other known (or presumed) data about fortified facilities and barriers. Data on the working copy of maps are updated with information acquired during general survey in the field,

- list of missing data that needs to be collected, amended, or verified through general survey in the field. The pieces of information that need to be collected during general survey in the field are derived from detailed analysis, interrelating all documents and data on MSA of a municipality or city or survey area,

- list of persons that are considered sources of original information on minefield placing and other missing data on the MSA. Information about such persons is derived through analysis of original documents and through cooperation with the local administration and self-administration, Croatian Army (CA), Ministry of Interior Affairs (MIA), Defense Offices and other users of MSA (public companies, etc.),

- status of marking the mine suspected area,

- implementation plan for the general survey in the field, including defined activities and tasks in data collection on specific mine suspected area and a general time line with scheduled deadlines,
- logistical support for general survey in the field according to the implementation plan.

Analytical preparations are done by surveyor with the guidance and control of the head of the Survey Section.

During the preparations for general survey in the field, agreement is reached about the type of cooperation and necessary assistance from local authorities, public companies, and individuals, as stipulated by Annex O of this SOP.

Completed analytical preparations for general survey in the field are verified by the head of the Survey Section based on his/her prior confirmation of the analytical preparations and preparedness of surveyors.

3.1.2. Logistical Preparation

Logistical preparation for general survey includes making sure technical and other equipment is complete and in working order, accommodation organized and compensation of travel expenses during the general survey in the field reimbursed.

Equipment meant to be used by surveyors needs to facilitate optimal conditions for a good quality general survey. Basic equipment used by surveyors includes:

a) Field measurement equipment

- Hand compass
- Laser distance meter or measuring tape
- Map scaler
- GPS

b) Observation equipment

- Binoculars

c) Equipment and accessories for documentation

- Notebook computer
- Digital camera
- Accessories for drawing and writing

d) Field vehicle

e) Communications

- mobile GSM devices

f) Working clothes and shoes

According to CROMAC's standards.

3.2. Collection and Confirmation of Data in the Field

Methods of general survey in the field are planned courses of action for surveyors to follow during collection of data on mine suspected areas without the use of pyrotechnical methods.

a) Data collection through interviews

Data collection by using the interview method with persons who have information on minefield placing, and the overall situation of mine suspected areas, is meant to acquire information on: systematic minefield placing, existence of mines outside the assessed combat area and defined MSA, use of areas in MSA at own risk, unrecorded mine incidents involving people or animals, removal of mines in postwar period by local residents, explosions of mines and UXO during agricultural earth scorching, as well as checking the dependability of data that was collected in previous surveys.

b) Data collection in the field – measurements on topographic map
S 1: 25000, CBM M 1: 5000, DOP2-3D and land

Measurement methods determine the dependability and reliability of data previously collected and positioned on topographic map, while also update the maps with new pieces of information acquired during surveys.

c) Data collection in the field – observation

Observation is a method that directly records the situation in the area being surveyed. The aim of observation is to exactly record and note facilities, terrain conditions and data in the survey area. Observation of the terrain is done visually (binoculars or without any accessories) or with technical equipment that leaves records (photography, audio recording, video recording, sketches, etc.). General surveys of MSA are carried out in cooperation with local authorities, Ministry of the Interior, Croatian Army, public companies and local residents.

3.2.1. Work Procedures in the Field

Field work is carried out in accordance with the set goal, tasks defined in general survey plan and set organizational flow of preparations.

Order of procedures of general survey in the field:

a) Establish contact with the foreseen person (or persons) at a set time and location (work spot), inform the person about the aim of carrying out survey in the foreseen area and use the expected information to fill in the missing data on the MSA,

b) While talking to contacts, surveyors should acquire additional information on wartime activities in the area, knowledge of mine planting during the war, demining during the war and postwar period, which should all contribute to the effectiveness of the general survey in the field and defining MSA,

c) Make a comparison between geographic and topographic maps and the actual situation in the field. Any changes are drawn into a work map; necessary sketches are made and explained with descriptions. The changes may involve new infrastructure facilities and other buildings important for precise positioning data on mine contamination, such as: electric and telecommunications routes and poles, roads and paths through fields, amelioration systems, bridges, residential homes and commercial premises, hamlets, streets, paths, other buildings, etc.,

d) Collection of data on the basic topographic characteristics of the area and characteristics of the ground, inasmuch as there are dependable sources for this kind of information (type of ground, density, type and height of vegetation, existence of physical obstacles, metal and other pollution in the area, mineralization of soil, etc.),

e) Precisely establish the existence of safe paths and previously demined, i.e. surveyed, areas and other spaces outside of the MSA that may serve for examination in the field,

f) Check for and make corrections of data on work maps according to the situation with the nature there: orientation marks, spread of minefields and position of mine incidents, fortified facilities and other mine contamination indicators (trenches, artillery bunkers, command posts, storage facilities, camouflaged approaches to facilities),

g) Determine or assess positions of minefields according to partial information from original documents and collected data through interviews with contact persons and draw it into work maps,

h) Determine areas and buildings that should be included into the MSA, as per Point 6.1 of the SOP, and precisely draw them into the work map scaled to 1:5000 and DOP2,

i) Determine the areas and buildings that can be excluded from the MSA, as per Point 6.2 of the SOP, and precisely draw them into the work map scaled to 1:5000 and DOP2,

j) Determine MSA boundaries and categories of areas and buildings according to demining methods in the MSA, as per Point 6.3. of the SOP-a, and precisely draw them into the work map scaled 1:5000 and DOP2,

k) Collect information about the structure of the MSA according to type and use,

l) Collect information on priorities for demining areas and buildings due to direct mine threat to the population, needs and forms of education of local residents on mine threat, settlements (or their hamlets) where mine suspected areas have influenced social and economic development of an area. Pieces of information are obtained from local authorities through a written request from the CROMAC regional office.

m) Carry out the necessary marking of the MSA with mine threat signs as per the SOP 01.02,

n) Newly collected data is recorded, confirmed, analyzed and linked to other – dependable data, in order to exclude any possibility of mistaken portrayal of the situation in the MSA.

Upon completion of daily planned activities, the surveyor keeps a diary of completed general survey tasks by recording the acquired data, using further general survey procedures to draft a general survey report.

During the general survey in the field there is planned supervision, work direction and assistance to

surveyors rendered by the head of the Survey Section and, as needed, from the head of the CROMAC regional office.

The head of the Survey Section controls and supervises the work of surveyors in the field and regularly reports to the head of the CROMAC regional office after survey tasks are completed.

The head of the Survey Section is in daily contact with surveyor in the field through communication lines in order to monitor the implementation of general survey in the field. Contact at the beginning and end of each day is mandatory.

3.3. Reconstruction of MSA

Prior to report writing, a detailed analysis of collected data by general survey in the field, linkage with the initial analysis for survey and coming to conclusions through a process of data interpretation of MSA has to be completed.

A reconstruction of the mine situation and a definition of the MSA in a municipality or city are done based on all available information.

In the process of final reconstruction – MSA definition, department head is obliged to inform the head of regional office about it and include all experts and competent staff into the analysis that can contribute to the efficiency of the analysis itself as well as decision making.

Reconstructions of mine situations are done, as per Point 3.1.1 (Analytical Preparation), through repetition of procedures.

Based on an analysis of mine suspected areas where general survey failed to collect all data, it is paramount to assess the organization of mine planting in order to create conditions for a rational definition of MSA boundaries and areas within MSA.

3.3.1 Definition of Areas Inside of MSA

Areas "P" inside MSA are defined based on a completed reconstruction of the mine situation and the criteria for determining the status of areas as per Point 6.3. of the SOP.

Criteria for determining the categories of areas through general survey determine areas inside of MSA according to demining activities:

- areas for demining,
- areas for detection,
- areas used at one's own risk.

Areas for demining are defined based on the existence of dependable information on systematic mine planting.

Areas for detection are defined for collection of additional information through technical survey aimed at determining the existence (or non-existence) of mines and other UXO.

Areas, used at one's own risk, are defined based on collected information in a defined MSA, and used, despite warnings of mine threat therein.

3.4. Reporting Survey Results

The report on results of survey of mine suspected areas is a final document that synthesizes all data about the MSA.

The report is drafted by a surveyor of general survey, i.e. an employee that carried out general survey per orders issued by the head of the CROMAC regional office. The surveyor that carried out general survey is responsible for the correctness of collected information.

The report on the situation in MSA includes the following information:

- a) Cumulative data on the MSA as per Annex D or F,
- b) Particular information about the established "P" areas categorized according to mine action as per Annex H and H/1,
- c) Situation of the MSA on DOP2 S 1:2000 and CBM S 1:5000 with the following information (in detail):
 - categorized MSA according to demining methods (demining, detection, used at own risk) and areas excluded from the MSA with signs for areas "P",
 - areas that were cleared of mines or examined during the course of general survey,
 - drawn in data on mines in MSA (vectors of mine obstacles, MI, fortified facilities and other indicators of mine contamination),
 - positions of mine threat signs and positions of completed fencing (vector display of fences) with numerical marks for sign and fence positions,
 - administrative borders of municipalities or cities,

- d) Situation on a map of MSA scaled to 1:25000 with the following data (overview):
- MSA (without showing categories according to demining methods) with marked areas used at own risk,
 - positions of mine threat signs and positions of completed fencing (vector display of fences) with numeric symbols for positions of signs and fences,
 - administrative borders of municipality or city,
- e) Records from the meetings with local authorities pertaining to have agreed upon cooperation to implement general survey of the MSA, as per Annex O,
- f) Records of collected data from contacts – interview method about MSA situation, as per Annex K,
- g) Records on the existence of mines and other UXO that were taken based on data collected during survey, as per Annex L,
- h) Records on MI created on the basis of information collected during general survey, as per Annex M,
- i) Sources and types of newly collected information (contact persons, documents, etc.) that confirm the nonexistence of mine threat on areas and buildings, which are proposed for exclusion from MSA,
- j) Overview of the status of records on existence of mines within the boundaries of municipalities – cities or surveyed areas as per Annex I or I/1,
- k) Overview of the status of records on MI within the boundaries of municipalities – cities or surveyed areas as per Annex I or I/1,
- l) Overview of the existing mine threat signs of MSA, as per Annex N,
- m) Overview of the existing mine threat fences, as per Annex N/1,

3.5. Recording General Survey in MIS

Recording collected data and analysis results to the MIS includes:

- drawing the MSA boundaries as a closed area (polygon),
- drawing "P" areas inside of MSA as a closed whole with clearly determined geographic and topographic borders, thus facilitating continued monitoring of changes in the area size of MSA,
- reconstruction of mine levels with vectors displaying mine obstacles (real and presumed), fortified and other facilities as indicators of mine presence,
- positions of mine incidents and located or activated mines and other UXO,
- positions of mine threat warning signs.

Surveyor records general survey in MIS, by inputting data.

The head of the Survey Section controls the entered data into the MIS, and hands it over for verification to the head of the CROMAC as the final version of MSA.

During the data verification process concerning reconstruction of mine and other MSA indicators that demands an all encompassing analysis, the head of the Survey Section is obligated to keep the head of the CROMAC regional office informed, as well as including all competent persons that could make a contribute to the effectiveness and decision making in the analysis process.

Data entered into MIS needs to be tailored to practical use for drafting demining projects and be good for verifying changes to MSA after further additional survey.

3.6. Verification of Report on General Survey of MSA

Control, analysis and verification of Report on general survey are conducted on two levels:

- on the level of Regional Office
- on the level of Operations Division

3.6.1. Implementation of Control, Analysis and Verification of Report on General Survey on the Level of Regional Office

Regional Office conducts detailed analysis, control and verification of Report on general survey to establish changes to the state of MSA on the surveyed area and MSA of municipality/city and county.

According to the prescribed authority, duties and responsibilities of the Regional Office the following roles participate in procedures of analysis, control and verification of Report on general survey: surveyor, database advisor, head of Survey Section and head of Regional Office.

a) Surveyor

Before signing the Report, surveyor conducts final verification of the document that he created and input into the MIS and GIS as described in point 3.4 and 3.5 of SOP "General Survey". He conducts control by detailed research and comparison of textual, attributive and graphic data. During final verification he corrects discovered mistakes immediately, or if not authorized reports them to the head of Survey Section and finally requires official assistance to define the state of MSA.

The surveyor confirms by his signature correctness and authenticity of data and final control of the Report as well as its harmonization with SOP "General Survey" and informs the head of Survey Section.

b) Database advisor

Database advisor verifies the completeness of graphic and attributive data of the Report in MIS, based on the report verified by the surveyor. He thus, creates the draft of the document of the Changed State of MSA on the surveyed area based on positive results of the graphical analysis of the state of MSA after conducted survey.

During verification, if database advisor discovers mistakes during input in MIS, or requires additional information on changed borders to the MSA, or input data on marking the MSA he should immediately inform the surveyor and head of Survey Section about it.

The database advisor confirms by signing document "Changes to the MSA" that he conducted check of attributive and graphical data in the Report, correctness and authenticity of data input in MIS and final control of the Report as well as its harmonization with SOP "General Survey". He forwards it to the head of Survey Section and informs the head of Regional Office.

c) Head of Survey Section

Based on the control procedure of the surveyor and check up of the database specialist, head of Survey Section conducts detail control and analysis of all collected data and results of the survey contained in the Report on general survey. He/she checks and analyses the following data on the state of MSA:

- data on mine/UXO obstacles in records on mine-explosive obstacles, comparison with military maps and other documents on accuracy on positioning mine-explosive obstacles,
- data on mine incidents,
- data on military demining,
- data on results of demining and survey after conducted demining and mine search or detection,
- data that confirm of criteria for inclusion of areas and buildings into MSA,
- data that confirm of criteria for exclusion of areas and buildings from MSA,
- categorization of MSA according to demining methods,
- quality of defined border of MSA, precision of mapping and harmonization with DOP2 and DOP3D,
- state of marking of MSA, with the plan for re-marking the area to be excluded from MSA,
- accuracy of input of the Report into MIS

During control and analysis of the Report, head of Survey Section can consult the surveyor for all additional explanations and/or necessary corrections.

If the head of the Survey Section detects the need for corrections of the graphical outlay of the MSA in the Report, procedures from point a) and b) need to be repeated after the corrections have been made.

He regularly informs the head of Regional Office on execution of assignments of control and analysis of the Report, and if necessary they analyze the indicators of state of MSA.

Head of Survey Section reports to the head of Regional Office on the conducted control and analysis of the Report on general survey and that the general survey has been conducted according to SOP "General Survey". He/she verifies it by signing "Report on general survey" and "Changes to the MSA".

Head of Survey Section regularly reports to the head of Regional Office on the following indicators of MSA:

- data on areas and buildings to be included in MSA,
- data on areas and buildings to be excluded from MSA,
- defining boundaries of MSA,
- state of marking the MSA,
- conducted input of Report into MIS and GIS,
- other indicators of state of MSA on demand of head of Regional Office.

d) Head of Regional Office

Head of Regional Office continually supervises the procedures of verification and offers professional assistance in resolving the issues relating to quality defining and marking of MSA. He/she conducts final verification of Report on general survey.

By signing the "Report on general survey" and "Changes to the MSA" the head of Regional Office confirms the newly established state of MSA.

e) Procedures after the verification has been completed

Upon the analysis, control and verification, the Regional Office prepares the necessary documentation (in line with the number of copies as per table) and submits the documentation as one hard copy and in digital form to the relevant department for further procedure (according to point 3.6.2.)

For the purpose of practicality and cost-effectiveness, it is not necessary to print identical documents two times (this primarily refers to the data on MSA given in the enclosures).

TABLE TO BE SUBMITTED AS HARD COPY

NAME OF SUBJECT:	NO. OF COPIES	ENCLOSURE (NUMBER OF COPIES)							
		DATA ON AREAS (ENCLOSURES H,H/2, H/3)	MAPS			OTHER DOCUMENTS			
			DOP2	CBM	TM	RECORDS ON CONVERSATION HELD	MINEFIELD RECORD	MINE INCIDENT RECORD	DOP 2-3D DISPLAY (as per specificity of the situation)
Report on additional GS in the MSA (ENCLOSURE F)	1	1	1	1	1	1	1	1	1
Proposal for inclusion of the area and/or building into the MSA	1	1	0	1	1	0	0	0	0
Proposal for cancellation of area and/or building from the MSA	1	1	0	1	1	0	0	0	0
Change of MSA status on the area of Town/Municipality	1	0	0	0	0	0	0	0	0
Correction of data on the area in the MSA A_ ENCLOSURE (H/2)	0	1	1	0	0	0	0	0	0
Correction of QA and QC Dept.' s data on the area in the MSA A_ ENCLOSURE (H/3)	0	1	1	0	0	0	0	0	0

REMARK:

Submission of documentation in DOP2-3D and photographs is conditioned by the specificity of the situation on certain terrain parts. It serves as an additional interpretation of textual description of the area.

3.6.2 Implementation of control, analysis and verification of the Report on general survey at the level of Operations Division

AT the level of Operations Division, Department for Organization and Analysis of General and Technical Survey conducts further analysis, control and verification of Report on general survey.

Department for Organization and Analysis of General and Technical Survey, through analysis and control of report on general survey, additionally examines the situation of MSA according to report, prescribed procedures, criteria and given facts.

Detailed analysis, control and verification of the Report is conducted by advisor for survey and operative planning and advisor for survey and UXO, and they create a Report on conducted analysis, control and verification of the Report.

Final verification of Report on conducted analysis, control and verification of the Report is made by deputy director for operative planning after final control and verification conducted by the head of Department for Organization and Analysis of Genral and Technical Survey.

Analysis, control and verification of Report on Revision of general survey of Municipality/City are conducted by:

1. by checking required documentation is completed;
2. detailed analysis and control of the proposal for inclusion of areas and buildings in MSA, according to point 4.1 of this SOP;
3. detailed analysis and control of the proposal for exclusion of areas and buildings from MSA, according to point 4.2 of this SOP;
4. detailed control and analysis of defined and categorized mine suspected areas "P"
5. comparison and analysis of data from general survey with data on military activities conducted during Homeland war and marked on military maps received from the Ministry of Defense
6. insight into marking data

Detailed analysis and control has to encompass those polygons of MSA that form the borders of MSA and those that:

- spread on the areas of settlements, roadways, tourist areas and other security sensitive areas being intensively used in immediate vicinity of MSA (houses, house yards, schools, kindergardens, health institutions, infrastructure etc.);
- spread over areas of administrative borders of municipalities/cities and regional offices of CROMAC on which MSA are not visibly connected;
- spread over other areas on which MSA drastically changed in comparison to former state.

Department for organization and analysis of general and technical survey prepares the verification document in two copies referring to the performed analysis, control and verification of General Survey Report.

The copy of the verification document is submitted to the Regional Office for further procedure.

3.6.3. Change of MSA Status in CROMAC MIS

Based on verification of general survey report as per Point 3.6.2. SOP General Survey, Operations Department performs the change of MSA status in CROMAC MIS database.

The change of MSA status is conducted based on documents on verification of GENERAL SURVEY REPORT at the level of Operations Division and documentation on change of MSA status of the survey in question.

Change of MSA status in the database is performed by Senior IT Officer from the Operations Division or other person from the same division – by order of assistant director.

In the process of MSA status change, the senior IT officer is obliged to immediately inform the ASSISTANT DIRECTOR FOR OPERATIONS about any mistakes or ambiguities observed.

3.6.4. Verification of MSA-related Data Based on CROMAC Operative Plan for the Production of Mine Search and/or Demining Projects

For the purpose of precise project designing, CROMAC Regional Office performs the detailed analysis of all data available relating to project area.

If necessary, based on a decision made by the Head of Regional Office, additional general survey should be conducted as well.

Head of Regional Office is carrier of all the activities of project preparation. He/she participates in analysis of the state of MSA on the area of projection and coordinates execution of tasks of general survey and project preparation.

The Regional Office performs the control of analysis and verification of MSA-related data based on which the project is made as per Point 3.6.1. of the SOP.

THE HEAD OF REGIONAL OFFICE CONFIRMS BY SIGNING THE PROJECT THAT THE PROCEDURE OF CONTROL, ANALYSIS AND VERIFICATION OF MSA-RELATED DATA BASED ON WHICH THE PROJECT IS MADE HAS BEEN CARRIED OUT. (AS PER POINT 3.6.1. OF THE SOP)

Department for organization and analysis of general and technical survey performs the control, analysis and verification of defined MSA status for project production purposes through insight into the relevant data.

Changes in MSA status on the project area in relation to the previously defined situation is performed according to Point 3.6.2. of the SOP in the Operations Division-Department for organization and analysis of general and technical survey.

3.6.5. Verification of correction of the area in the MSA

Verification of correction of the area inside the MSA (Appendix H/2) is only performed in CROMAC Regional Office and as such is considered final. Correction of area inside the MSA is not an additional general survey.

Correction of areas for the purpose of easier and simpler registration of the document "Change of MSA status in CROMAC MIS database" is defined by the mark GS.

4. PROCEDURE OF INCLUDING THE AREAS IN MSA

Areas and buildings are included in MSA based on verified report on general survey of MSA and prescribed Criteria, according to point 6.1. of this SOP.

Control, analysis and verification of the Proposal of the head of Regional Office for inclusion of areas and buildings in MSA are made by Operations Division, Department for Organization and Analysis of General and Technical Survey.

Areas and buildings that fulfill the criteria for inclusion into mine suspected area have to have their borders and areas precisely defined, with details on mine contamination and/or other explosive ordnances and/or other indicators that point to the existence of mine danger.

Implementation of the procedure of inclusion of areas and buildings into the MSA and reporting about inclusion is CROMAC's priority task.

Having collected data from the field relevant for the realization of criteria for inclusion and/or exclusion of areas and/or buildings into the MSA, CROMAC Regional Office has to immediately (during the terrain survey) perform marking of said areas and/or buildings with mine warning signs.

Marking positions of polygons proposed for inclusion into the MSA are not entered into marking situation records prior to verification of inclusion proposal in the Regional Office!

Upon the completion of verification of inclusion proposal in the Regional Office, it is required to send the first page of the verified document by e-mail to CROMAC Operations Division and the entire documentation by regular mail in analogous (hardcopy) form.

Upon verification of the inclusion proposal in the Regional Office, marking situation is being updated.

In the process of verification of the inclusion proposal in the Regional Office, polygons from MAPInfo layer (TAB) of the relevant survey should be copied into the layers (TABs): PUK5KA, PUK6KA Karlovac Regional Office, PUK5OS, PUK6OS Osijek Regional Office and PUK5ZD I PUK6ZD Zadar Regional Office.

The above-mentioned layers are parts of replication with structure of a survey layer so that subject polygons are simply copied to the above-mentioned layers that have been created for each Regional Office and GK zone separately.

IMPORTANT – polygons from survey in the 5th GK zone have to be copied into the above-mentioned polygon that has the figure 5 in its name. For the 6th GK zone, the name consists of figure 6 with the relevant Regional Office mark at the end consisting of two letters – KA, OS or ZD.

4.1 Content of the Proposal for Inclusion of Areas and Buildings in MSA

Proposal of the head of Regional Office for including the areas and building in MSA contains data relevant to:

- a) Administrative and geographical locality of the areas and surfaces proposed to be included in MSA (county, municipality/city, settlement, village),
- b) Mark, order, date and other relevant information by which the MSA has been established and entered

into the MIS

- c) Structure of buildings and areas proposed to be included in MSA according to type and use,
- d) Categories of areas, buildings proposed for inclusion into MSA according to demining methods,
- e) Data on mines and/or other explosive ordnance and/or other indicators that point to the existence of mine threat on areas and buildings proposed to be included in MSA,
- f) Marking of areas and buildings proposed to be included in MSA and their area expressed in square meters and total area size,
- g) Explanations of the applied Criteria based on which areas and buildings are proposed to be included in MSA,
- h) Sources of new types of information (contact persons, documents etc.) that confirm the existence of mine threat on areas and buildings proposed to be included in MSA,
- i) Conducted marking with mine threat warning signs (number of signs with numerical marks) of the areas proposed to be included in MSA.

Together with the proposal to include areas and buildings in MSA the following documents must be included:

- Information on areas "P" as per Annex H/1, proposed for inclusion in MSA with enclosures (see the documentation submission table in Point 3.6.1.),
- Map with marked boundaries of the mentioned areas "P", mined areas, status of areas surrounding them and positions of existing mine warning signs. Data are presented on DOP2, maps TM 1:25000, and CBM 1:5000.
 - Record/s on collected data through interview method as per Annex K,
 - Records on minefields and mine incidents (if records were based on Records on collected data through interview, the same were created according to annex L and M)
 - Other collected documents that confirm the existence of mine threat.

Proposal for the inclusion of areas and buildings from the MSA is delivered for verification to the Operations Division in one copy.

4.2. Procedure of Verification of the Proposal to Include Areas and Buildings in MSA

The proposal of the head of the CROMAC Regional Office for the inclusion of areas and buildings in MSA is controlled and verified by the Department for Organization and Analysis of General and Technical Survey and is presented to the deputy director of CROMAC for operations for inspection and further procedure.

The verification procedure for the proposal of the inclusion of areas and/or buildings in MSA is done as per Point 3.6.2 of the SOP.

Operations Division delivers the prescribed and verified documentation on inclusion of areas and buildings in MSA to the Information Technology Department as information on the new situation of MSA and the Request for creating map on conducted inclusion of areas in MSA.

Information Technology Department creates the maps showing the new situation of MSA in format DOF2 or TK 1:25000 and/or HOK 1:5000 with the following information:

- areas included in MSA with precise boundaries and hatching according to accepted standards for display of MSA without categorization according to methods of demining
- marking of included areas in MSA according to survey report
- numerical marks of the signs and fencing locations that mark the areas to be included in MSA
- marking based on which data on areas for inclusion in MSA were collected
- state of MSA surrounded by areas included in MSA (existence or nonexistence of MSA)
- legend of information displayed on the map

4.3. Reporting on Included Areas and Building in MSA

According to the Law on Humanitarian Demining and Article 4 of the Rules and Regulations on Methods of Conducting Humanitarian Demining CROMAC will inform Inspectorate of the Ministry of Interior of the Republic of Croatia on the Decision to include areas and/or buildings into MSA.

Maps showing the included areas and surfaces in MSA are to be further reported to the following subjects:

- Municipality or city where areas were included in MSA,
- County to which the municipality or city administratively belong,
- County police administration,
- National Protection and Rescue Directorate, branch office
- CROMAC Regional Office that submitted the Proposal for Inclusion,
- users of MSA if they submit a request or have interests in the mentioned area (public companies, etc.),
- CROMAC archive

4.4. Procedure of Intervention Inclusion of Areas and Buildings in MSA during General Survey

During general survey that takes a longer period of time, areas and buildings, upon meeting inclusion criteria, may be excluded in MSA prior to the completion of general survey.

Collection of data and defining areas and buildings to be included in MSA is done as an intervention by the surveyor that is carrying out general survey of the mentioned municipality/city or additional general survey of the wider territory of the municipality/city.

Data on areas and buildings that are included in MSA through intervention are presented according to Annex H/1, which is certified by the surveyor or project designer, head of Survey Section and CROMAC head of Regional Office.

Data on areas that are included in MSA through intervention on the H/1 form for intervention verification are submitted in the annex to the Proposal for inclusion of areas and/or buildings to the MSA made by the Head of Regional Office.

Data on the area that was included in MSA through intervention during GS are, as per above-mentioned paragraph, presented as integral part of concerned Report on general survey of MSA.

5. PROCEDURE OF EXCLUDING AREAS FROM MSA

Areas and buildings are excluded from MSA based on verified Report on general survey of MSA and prescribed Criteria, as per point 6.2. of the SOP.

Based on the Law on Humanitarian Demining, Decision on exclusion of areas and buildings from MSA is made by CROMAC Director. This Decision has to be in accordance with documented proposal made by Assistant Director for Operations.

CROMAC issues the Certificates on exclusion of areas and buildings from MSA to MSA beneficiaries.

Areas and buildings that fulfill the Criteria for exclusion from mine suspected area have to have their borders and areas precisely defined, with detailed explanation on non-existence of mines and other explosive ordnances therein.

5.1 Content of the Proposal for Exclusion of Areas and Buildings from MSA

Proposal of the head of Regional Office for excluding the areas and building from MSA contains data relevant to:

- a) Administrative and geographical locality of the areas and surfaces proposed to be excluded from MSA (county, municipality/city, settlement, village),
- b) General survey that determined MSA and completed input into database,
- c) Structure of buildings and areas proposed to be excluded from MSA according to type and use,
- d) Categories of areas, buildings proposed for exclusion from MSA according to demining methods before status for exclusion from MSA,
- e) Reasons for difference between prior estimate of MSA and new sate of areas and buildings to be excluded from MSA,
- f) Marking of areas and buildings proposed for exclusion from MSA , their area size in square meters and total area size,
- g) Explanation of applied Criteria for exclusion of areas and buildings from MSA,
- h) Sources of new types of information (contact persons, documents etc.) that confirm the non-existence of mine threat on areas and buildings proposed to be excluded from MSA,
- i) Conducted marking with mine threat warning signs (number of signs with numerical marks) of the areas proposed to be exclude from MSA,
- j) Purpose of areas and buildings after exclusion from MSA.

Together with the proposal to exclude areas and buildings from MSA the following documents must be

included:

- Information on areas “P” as per Annex H/1, which are being proposed for exclusion from MSA displayed on a map with boundaries of the mentioned areas “P”, status of areas surrounding the mentioned areas (categorized MSA according to demining methods) and positions of existing mine threat warning signs and mine fences. Data is presented on DOF2, maps TK 1:25000, and/or HOK 1:5000.

- Records on collected data through interview method as per Annex K,

- Other collected documents that confirm the non-existence of mine threat.

Proposals for the exclusion of areas and buildings from the MSA are delivered for verification to the Operations Sector in two copies.

5.2. Procedure of Verification of the Proposal to Exclude Areas and Buildings from MSA

The proposal of the head of the CROMAC regional office for the exclusion of areas and buildings from MSA is controlled and verified by the Operations Division - Department for Organization and Analysis of General and Technical Survey.

The verification procedure for the proposal of the exclusion of areas and/or buildings from the MSA is done as per Point 3.6.2 of the SOP.

Operations Division performs the change of MSA status in the database resulting from exclusion of areas and buildings.

Based on verification document on exclusion of areas and buildings from MSA, the Change of MSA status in the database is performed by Senior IT Officer from Operations Division or other employee of the same division – as per order of assistant director, point 3.6.3. of this SOP.

5.3. Reporting about Performed Exclusion of Areas and/or Buildings from MSA

According to Article 4 of the Rules and Regulations on the Method of Conducting Humanitarian Demining, CROMAC submits the Certificate on exclusion of areas and/or buildings from MSA to the Inspectorate of the Ministry of Interior. The Certificate on executed exclusion of areas and/or buildings from MSA is submitted to:

- Municipality – Town in which the exclusion of areas from the MSA has been performed;
- County that the Municipality-Town belongs to, in administrative sense;
- County Police Administration;
- National Protection and Rescue Directorate, branch office;
- CROMAC Regional Office that submitted the Proposal for exclusion;
- MSA beneficiaries upon their request or if they realize their interests on subject area (public companies etc.);
- CROMAC archive.

Map showing the new MSA status containing the following information is submitted in the annex to the Certificate on performed exclusion of areas and buildings from MSA:

- areas excluded from MSA with precise boundaries and hatching according to accepted standards,
- marks of excluded areas from MSA,
- Survey Report's reference code based on which the data relevant for exclusion of areas from the MSA were collected,
- state of MSA surrounded by areas excluded from MSA (existence or nonexistence of MSA),
- numerical marks of positions of mine warning signs or fencing of new MSA status upon exclusion of areas and/or buildings ,
- legend of information displayed on the map

Document on executed control, analysis and verification of a Proposal of the Head of Regional Office to the director concerning the exclusion of areas and/or buildings from the MSA marked on the maps are forwarded to the Support Division for further procedure of issuing the Certificate on Exclusion.

Upon receipt of the CROMAC Certificate on the exclusion of areas and/or buildings from MSA, the CROMAC Regional Office shall perform re-marking of MSA as per SOP 01.02 and plan of re-marking from the Point 5.1, subparagraph "i" of this SOP.

Upon receipt of a notification by the Operations Division sent by e-mail and fax concerning the executed verification of Proposal for exclusion of areas from the MSA, CROMAC Regional Office immediately has to start with MSA status update in CROMAC MIS in line with re-marking plan and newly-defined MSA boundaries. Terrain activities should be initiated promptly, as soon as possible.

The notification is submitted to e-mail addresses of the head of regional office, department head and database advisor.

The code of the positions of mine warning signs to be placed upon verification of exclusion as well as the code of positions of mine warning signs to be removed from the MSA with corresponding coordinates (GPS and maps) should be stated in the report (Point 7 – Conclusions about the area) on areas to be excluded, available in the appendix H/1.

Upon re-marking of MSA in the field, CROMAC Regional Office is obliged to inform the Operations Division about it right away.

5.4. Procedure of Intervention Exclusion of Areas and Buildings from MSA during General Survey

During general survey that takes a longer period of time, areas and buildings, upon meeting exclusion criteria, may be excluded from MSA prior to the completion of general survey if:

- MSA user requests query about the mine situation on areas and/or buildings that meet the criteria for exclusion from MSA and/or
- survey for drafting projects includes areas or buildings that meet the criteria for exclusion from MSA.

Data on areas and/or buildings that are excluded from MSA through intervention are presented as per Annex H/1, which is certified by the surveyor or project designer, head of Survey Department and head of CROMAC regional office.

Data on area that is excluded from MSA through intervention on H/1 form is submitted in the enclosure of the Proposal for exclusion of areas and/or buildings from MSA made by the head of regional office.

Data on area that is excluded from MSA through intervention, during the general survey as per previous paragraph are shown as an integral part of the report on general survey of the MSA.

6. CRITERIA FOR ESTABLISHING THE STATUS OF AREAS THROUGH GENERAL SURVEY

The criterion defines the contamination or non-contamination of areas in the Republic of Croatia with mines and UXO, mine suspected areas and categorization of areas inside of MSA. The criteria for establishing the status of areas include:

- Criteria for inclusion of areas and buildings into MSA
- Criteria for exclusion of areas and buildings from MSA
- Criteria for determining categories of MSA according to demining methods

The criteria for establishing the status of areas and buildings are confirmed through the procedures of collection, processing, analysis, data linkage and conclusion making.

6.1. *Criteria for Including Areas and Buildings into MSA*

The criteria for the inclusion of areas and buildings into MSA confirm areas and buildings are contaminated with mines and UXO.

Areas and buildings that need to be declared as mine suspected and included into MSA after information have been collected through general survey and/or when analysis procedures confirm one or more of the following criteria:

- a) original information on mine contamination exists,
- b) original information on conducted demining exists, but not verified that all mines were removed from mentioned area,
- c) mine incidents occurred (victims, people or animals),
- d) existence of mine contamination indicators,
- e) that through the reconstruction of minefields and combat positioning of a troop, mine contamination of subject area is analytically assessed,
- f) that areas and buildings had a military significance during combat and have due cause of being suspected of being mine contaminated,
- g) if mines are found on previously surveyed areas for which:
 - a demining company gave CROMAC a statement of established non-contamination of an area and/or building, based on which CROMAC issued a *certificate* on established non-contamination of an area and/or building,
 - a demining company gave CROMAC a statement of established non-contamination of an area and/or building, based on which CROMAC carried out final supervision and took over the worksite

- h) if mines and/or UXO are found on previously demined areas for which:
- a demining company gave CROMAC a quality guarantee on demining of an area and/or building, based on which CROMAC carried out professional supervision over completed work and issued a *confirmation* that a certain area of a demining implementation plan has been cleared of mines as according to Law on Humanitarian Demining and Rules and Regulations on Methods of Demining,
 - a demining company gave CROMAC a statement guaranteeing an area and/or building has been cleared of mines and UXO up to the depth determined in a project plan, based on which CROMAC performs a final supervision and takes over worksite,
- i) if mines are found in previously demined/surveyed (detected) area for which the Ministry of Defense or the Ministry of Interior issued a statement guaranteeing non-contamination of military facilities or a statement guaranteeing a military facility has been cleared of mines and UXO to the depth determined by a project, and the mentioned facilities are now in the ownership of local authorities, or
- j) that persons well acquainted with war events and/or area beneficiaries provide reliable information about their mine contamination based on:
- detection of mines,
 - independent removal of mines,
 - mine incidents,
 - activation of mines during fires and
 - other indicators of mine contamination.

6.2. Criteria for Excluding Areas and Buildings from MSA

Areas and buildings are excluded from MSA when general survey methods of collecting data and analysis conclude all exclusion criteria have been met.

The criteria for exclusion of area from MSA are strict. They require all necessary information and their detailed analysis (without error or omission) to reach conclusions and decisions about exclusion from MSA.

The exclusion of areas and buildings from MSA is based on meeting two sets of *interrelated* criteria:

- General criteria for excluding areas and buildings from MSA and
- Particular criteria for excluding areas and buildings from MSA

6.2.1. General criteria for Excluding Areas and Buildings from MSA

The general criteria is applied for the exclusion of areas and buildings from MSA that were declared mine suspected in previous general survey due to the impossibility of confirming all data on the nonexistence of mines and UXO and the removal of all suspicions of mine threat.

An area or building are excluded from MSA when general survey methods of data collection and analysis procedures confirm the following criteria:

- a) no original data on mining and demining,
- b) no mine related incidents,
- c) no fortified facilities and fortified obstacles that could point to the existence of mines and UXO.
- d) analysis and assessment establishes that areas and buildings were not used for combat military purposes nor had other military significance with possible left over mines and UXO (command points, separate positions, movement of scouts or diversion groups, unit training polygons, etc.)
- e) on scorched areas there were no explosions of mines,
- f) no mine indicators were found,
- g) collection of data in the field through interviews with persons and/or other methods of general survey confirming the above conclusions pointing every suspicion of mine and other UXO has been removed.
- h) impossibility of placing minefields with regard to topographic features.

6.2.2. Particular Criteria Excluding Areas and Buildings from MSA

Particular criteria are applied for excluding areas and buildings from MSA with mine and UXO contamination as per Point 6.1 (from “a” to “f”) if general survey methods conclude they are being used.

For the exclusion of areas and buildings from MSA which are being used, it is necessary to collect information that removes suspicion of mine and UXO contamination.

Data collection should establish a *rationaly acceptable* time period of an *effective* (continuous) usage of the mentioned area or building in a defined MSA over the past period (total number of years from the end of combat activities), in which there were no human or animal victims, cases of finding mines and other UXO, explosions, mine or UXO explosions during fires and other indicators that point to the existence of mine contamination.

The decision to exclude areas and buildings from MSA that are used at own risk are based on the duration of use, type and use of area and building, as well as other specifics established during general survey.

Areas and buildings in MSA that have been in use over a period at own risk may be excluded from MSA if the following criteria are met:

1. Agricultural Areas

a) Arable land and gardens that were tilled or dug to a depth of 20 cm or more for over three years.

b) Orchards with grassy areas and regularly mowed and/or grazed, picked, sprayed and clipped for over 4 years.

c) Vineyards (and plantation vineyards) that were tilled and/or dug 20 cm or more for over two years.

d) Vineyards that is grassy and kempt with regular mowing for over four years.

2. Fields and Grazing land

a) Fields that is regularly mowed down to the ground and hay moved from area (transport or scorching) for over four years.

b) Fields (also grazing land) that are partially mowed, mowed grass or hay collected and removed from area (transport or scorching) on which there has been cattle grazing on the entire area, shepherds and other residents moved about, for more than five years.

c) Grazing and other areas used exclusively for cattle grazing (grazing fields, shrubbery and stone, abandoned arable land), where cattle grazing was continuous on the entire area, shepherds and other residents moved about the mentioned area, for over seven years.

3. Forests

a) Forests, forest paths with turning points and clearings that were regularly used for hewing and timber removal, heating wood, maintained clearings and fire prevention paths, where foresters, hunters, hikers, forest fruit pickers, excursionists and other users walked, for more than seven years.

b) Forest paths with hard areas (gravel roads) that were used regularly (not only vehicle lanes) for transporting timber, and maintained (filling and similar) over the whole area for no less than 3 m in width, for more than four years.

4. Rivers, other waterways and water areas with coasts and embankments that were regularly used and maintained (cattle watering, gravel exploitation, movement of fishermen, hunters, excursionists and local residents) for over five years.

5. Houses and farm buildings with yards

a) Houses, other living premises and farm buildings with yards that have been used for living or premises maintained for more than three years.

b) Newly built houses, other living premises and farm buildings with surrounding space that were used for construction preparation, during construction and were maintained after construction for more than one year.

6. Roads and uncategorized local roads at least three meters wide, used over the entire surface (not only driving lanes) as access roads to agricultural land parcels, grazing land, forests, rivers and other water areas, as well as other areas and buildings for which criteria has been met for exclusion from MSA according to Point 6.2.2.

Specific cases should be analyzed because earlier exclusion of areas and buildings from MSA in relation to the prescribed usage criteria as per Point 6.2.2 is connected to the frequency and ways of their

usage. Some examples are : arable land and gardens tilled or cultivated in other ways a number of times per year (areas with Mediterranean climate), work on renewing forest areas (hewing and/or tree root removal, hole digging for bedders, sapling planting, marking trees for hewing, creation of forest clearings and paths, etc.), renewal and use of family houses.

6.2.3. Links Between General and Particular Criteria for Excluding Areas and Buildings from MSA

Areas and buildings that fit into particular time period criteria and use method as per Point 6.2.2 may be excluded from MSA if the following general criteria for exclusion of areas from MSA have been met:

- a) if during the use of areas and buildings at own risk there were no human or animal mine or UXO victims, no mines or UXO were found, no explosions of mines or UXO occurred, no signs of mine planting exists (remnants of packaging and mine related materials, minefield markers, etc.) nor other indicators pointing to mine threat.
- b) if users of areas and buildings at own risk assess they feel completely safe and no mine threat exists.
- c) data collection in the field through interviews with contacts and/or other general survey methods the above conclusions is confirmed and all suspicions on the existence of mines and other UXO have been removed.

The *records* of collected data through interviews conclude the situation in MSA being used.

If only partial evidence exists as per Point 6.2, areas and buildings cannot be excluded from MSA.

6.3. Criteria for Establishing Areas According to Demining Methods

The criteria for determining the category of mine suspected areas according to demining methods are differentiated by dependency of collected information on the existence of mine obstacles and other indicators of mine threat.

Categories of mine suspected areas according to demining methods are established according to the following criteria:

- Criteria to define areas in MSA for demining,
- Criteria to define areas in MSA for detection,
- Criteria to define areas in MSA being used at own risk.

6.3.1. Criteria to Define Areas for Demining

Criteria to define areas in MSA for demining confirm their contamination with mines.

Areas and buildings need to be categorized for demining when collected data through general survey method and analysis procedures confirm one or more of the following:

- a) There are records of mines with information on their positions, types of mines and their

distribution inside the boundaries of mine contaminated area. Position of mines and areas covered are precisely reconstructed and/or confirmed with precise information on mine incidents and/or confirmed explosion and/or visually noticeable mines from a safe area. The areas are not in use. Interview method confirms the existence of mines,

b) Precise information on mine incidents and/or precisely registered positions of mine explosions and/or visually noticeable mines from a safe area. The reconstruction of mine obstacles leads to the conclusion that there are unknown mine obstacles present. Interviews confirm mine obstacles exist. The mentioned area is not in use,

c) The reconstruction process of mine contaminated area leads to the conclusion that there are unknown mine obstacles in the mentioned area. Interviews confirm the existence of unknown mine obstacles on the mentioned area. The mentioned area is not in use,

d) The data collection procedure leads to the conclusion that UXO is left over from shelling of the area and there are left over unexploded cluster bombs. The area is not in use or is used at own risk.

e) There are recorded records or other original information on military demining of mine obstacles or mined areas or buildings, but an analysis of the mentioned information shows that demining was only partial, or that original information is not correct or undependable. The area is not in use.

Areas and buildings that were cleared of mines by military units are categorized for demining when the analysis of the records and other original information on performed military demining establishes the following indicators:

- information on the number and/or types of mines that were cleared *do not correspond* with the overall number of mines according to types found and/or activated (destroyed) mines. The area is not in use.

- information from recorded records on numbers and/or types of mines *correspond* with data on the overall number of mines according to types found and/or activated (destroyed), but while demining other types of mines were discovered. Areas are not in use.

- information on the number and type of mines as per recorded records on performed demining *do correspond with* information on the overall number of mines according to type and/or activated (destroyed) mines, but other collected information on the mentioned area and/or building indicate the existence of left over mines or other UXO and original information is considered undependable due to:

 - Special military significance of the area and/or buildings (barracks, warehouses, command post, communications center, etc.),

 - if there was intense combat activity in the area, with changing positions of defensive lines and mine boundaries,

 - reconnaissance and/or special operations units with suspicion of planting mines,

 - swamp and flooded properties of the area and/or building and other characteristics that encumber demining activities as per military criteria.

 - when the person participating in the actual demining negates the correctness of information in the records on total demining of area, i.e. he/she states that not all mines were found and there are left over ordinances.

 - Aside from what was concluded, the area and/or building is not in use.

- the area previously demined by military has collected information on visually noticeable mines and/or registered positions of mine explosions.

In defining the boundaries of

areas for demining, it is necessary to consider the dependability of collected information and the MSA characteristics in relation to:

- *safety zone surrounding mine positions* aimed at failing to precisely determine mine positions in order not to “cut across” mines,
- *boundaries of mine suspected areas that need to be “connected” with areas for demining*, since the areas are small, geometrically irregularly shaped, etc., and require additional project activities and work would not be rational
- *area size, ground and vegetation conditions*, as determining factors in assessing the effectiveness of demining in relation to detection.

6.3.2. Criteria to Define Areas in MSA for Mine Detection

Areas and buildings inside MSA are placed in categories for detection when general survey methods fail to collect information in mines and UXO as per Point 6.3.1., while the analysis procedure confirms *one* of the following criteria:

a) Non existing original information on mine contamination. Areas cannot be excluded from MSA due to existing mine danger indicated by collected information on combat activities, remnants of fortified and other facilities used for military purposes and/or unconfirmed information on mine detonations or other ordinances during scorching. Areas are not used by local residents due to their suspicions they may be mined.

b) Non existing original information on mines. Areas cannot be excluded from MSA due to existing mine danger as indicated by collected data on existing remnants of fortified facilities and fortified obstacles and/or unconfirmed information in find of individual mines and/or their parts during working on arable land and gardens and/or cattle grazing, and/or mowing fields and/or recreational hunting, fishing, excursions. Areas are not used by local residents due to suspicion of mine contamination.

c) Non existing original information on mines. Areas cannot be excluded from MSA due to existing mine threat indicated by unconfirmed data on human and/or animal victims and/or other indicators of mine threat on imprecisely defined (approximated) wider areas. Area is not used by local residents due to suspicion of mine contamination.

d) No original information on mines. Areas cannot be excluded from MSA due to mine threat indicated by collected unconfirmed data through interviews about the activities of local residents during the war that could be linked to mine contamination. Areas are not used due to the suspicions of local residents and other users of MSA on the existence of left over mines and/or discarded other ordinances.

f) There is original data on performed military demining. The information on the number and types of mines *corresponds* to information on the overall number and types of mines found and/or activated (destroyed). The area is not in use due to suspicion of left over mines and/or other ordinances expressed by local residents.

g) There is original data on military demining of mine obstacles with mines that were planted on top of the ground area. Original information is general in nature, lacking precise data on the number and types of detected and/or activated (destroyed) mines. The area is not in use. The criteria relates to the following mines which are, according to dependable original information, planted on top of the ground: PMR-2A, PMR-3 and MRUD.

h) There is original information on military demining of mine obstacles that were planted on asphalt, concrete, gravel and other hard areas (mines were not planted by deep insertion and/or camouflaging on areas or visible mine beds of removed mines and/or holes caused by mine activation).

Original information is general, without precise data on types and numbers of mines found and/or activated. Area is not in use.

i) There is original information on mine contaminated areas. General survey has established that areas are used at own risk less than the optimal time period and usage methods used as practical confirmation that mine threat does not exist. Interviews with users provide them with information on mine contamination and based on that information users stopped using the mentioned areas.

The justification of defining areas for detection *rather than demining* as not rational is derived from the nonexistence of original information on mining, large area and the lack of other dependable analytical indicators on the existence of mines and UXO.

6.3.3. Criteria to Define Areas in MSA that are Used at Own Risk

Suspicion to the existence of mine threat on areas used at own risk are based on original information on mine planting during the war and data collected during the postwar period on the existence of mine threat without evidence on completed demining or removal of mines by other non-professional methods (self-initiated mine removal, unarming, area scorching, etc.).

Evidence of completed demining of used areas are defined unacceptable if instances of human or animal victims occurred, the finding of mines and UXO, explosions during scorching or finding indicators that point to the further existence of mine threat.

The justification of defined areas in MSA as used at own risk is based on analysis and *assessment of the existence of left over mines and UXO*, but that were not found in a short (unacceptable) period through the method of using the land.

An acceptable time period for the method of using the land, as practical evidence of the nonexistence of mine threat is found in Point 6.2.2., (Particular Criteria for the Exclusion of Areas and Buildings from MSA).

Areas are considered part of the used at own risk category after users continue to use them based on personal opinion that area is not mine contaminated and/or they intend to continue using the mentioned area regardless of further assessments of existing mine threat.

When general survey establishes that in the defined MSA, an area and/or building is used, but does not meet the criteria for exclusion from MSA as per Point 6.2 of the SOP, it is marked as per Point 01.02. of the SOP.

When the user of the area and/or building used at own risk is available, it is surveyor's duty to inform him/her about the mine threat in the mentioned area.

When the user of the area and/or building is not available, information of mine threat on the mentioned area and/or building is considered complete after marking the MSA.

Areas and/or buildings in MSA used at own risk, but do not meet the criteria for exclusion from MSA need to be assessed for existing mines and categorized for demining activities on the area (detection or mine clearing).

The CROMAC regional office is obligated to inform the authorized police administration and local authorities which areas and buildings in MSA are used at own risk.

Areas and buildings need to be categorized as used at own risk when, though general survey methods, collected data and its analysis meet *one or more* of the following criteria:

a) Original data on mine area exists. General survey establishes the areas are in use. The interview method failed to confirm original information on the number and types of removed mines and/or other characteristics of mine obstacles and/or acceptable time period in the method of area use without finding any mines and other ordinances. During the use of the areas there were no mine related accidents. Users of the areas are aware of the *assessment* of existing mine threat from left over mines and the necessity of performing demining activities. The area user continues to believe there is no mine threat and continues to use the mentioned areas regardless of the assessment of existing mine threat.

b) Original information exists on military demining of areas during wartime and/or military and civilian demining in the postwar period. General survey established areas are being used. Through interviews data was collected on findings of mines and/or other indicators on mine threat and/or mine incidents. After finding mines and/or other indicators of mine threat and/or mine incidents, the acceptable time period did not pass for the method of using the areas (as per Point 6.2.2.) like practical confirmation that there is no mine contamination.

The users of the areas are informed on the existing left over mine contamination and the need to undertake mine clearing activities. The users of mentioned areas continue to ignore mine threat and continue to use them regardless of mine threat warnings.

c) There is original information on mined roads and/or local paths. General survey established the road areas are in use by visible tire tracks, but not outside of the area and in the middle of the road. The interview method failed to confirm original information on the number of removed mines and/or other characteristics of mine obstacles. Users of roads and/or local paths are informed (directly or through local authorities) on the assessment of mine threat and the need to carry out demining activities. The mine threat warning, in practice, is not respected by users and the roads and/or local paths are continued to be used.

SOP ADDITIONS CROMAC 01.01 "GENERAL SURVEY"

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Normative References

1. Law on Amendments to the Law on Humanitarian Demining (National Gazette no. 63/2007), the Law on Humanitarian Demining (National Gazette no. 153/2005)
2. Rules and Regulations on Methods of Demining (National Gazette no. 53/2007),
3. IMAS 08.10 (General Assessment of Mine action)
4. Guidelines for filling out IMST forms and recording survey in MIS
5. IMAS 04.10 (Glossary of Terms and Short Forms of Mine action)
6. IMAS 02.10 (Managing Mine action)
7. IMAS 08.10 (Technical Survey)
8. IMAS 08.040 (Marking Danger of Mines and UXO)
9. IMAS 10.(Reporting and Investigation of Incidents during Demining)
10. ISO 9001:2000 (E)

List of Terms and Short Forms used in SOP

Information sources (IP) are military and other state and international institutions and organizations, as well as persons with information on the mine situation in a certain area.

Original documents (ID) are written records from wartime that convincingly portray or point to the existence of mines and other ordinances.

Mine indicators (IM) are locations of mine explosions, elements of mines, fortified facilities or fortresses built and/or adapted for armed combat and other revealing signs pointing to the existence of mine threat.

Data collection (PP) is a group of organized and planned activities for establishing sources (subjects) with information on mines or other factors of the mine situation, establishing contacts and accepting data.

Records are entering, storing and accessibility of data for operative use.

Assessment of mine suspected area (AMSA) includes natural, infrastructural and social categories caught in mine contaminated areas or mine suspected areas, taken in the context of their social and economic influence on the situation and development plans of the community.

Polygon (P) is a closed territorial whole with clearly determined geographic and topographic boundaries.

Mine polygon (MP) is the basic territorial whole for treating a mine problem with characteristics of dependable contamination with mines and other ordinances, with clearly determined geographic and topographic boundaries.

Reconstruction of mine situation (RMS) is a finalization of overall activities in which comparison, linkage, interpretation, harmonization and other forms of analysis of all available information, providing the situation with mine contamination of an area with mines and/or UXO.

Survey of mine suspected areas and/or buildings (S) is a group measures and procedures to establish the existence of mine contamination of an area and/or building with mines or UXO.

Survey activities (SA) are activities of general survey of mine suspected areas and/or buildings (GS) and technical survey of mine suspected areas and/or buildings (TS).

General survey (GS) is the procedure of collecting data from the safe distance, processing data on contamination of an area and/or building with mines and UXO, establish the rudimentary technical socio and economic indicators of an area and/or building and marking of mine suspected areas.

If the contamination of area and/or building with mines and UXO is not proven by general survey, CROMAC director issues a certificate by which the subject area and/or building is excluded from mine suspected area.

If an area cannot be excluded from mine suspected area by general survey, there should be the technical survey carried out or mine search i.e. demining project proposal made.

Technical survey (TS) is the procedure used to confirm the accuracy of data collected by general survey, collect data on area features and check the existence of contamination of a part of mine suspected area and/or building from mines and UXO.

Mine search (MS) is the procedure that establishes the accuracy of data collected by general and technical survey and existence of mine contamination of the entire mine suspected area and/or building and removes the entire UXO found.

Mine suspected area (MSA) is every area contaminated with mines and UXO, or where there is a suspicion of contamination, and is defined as a polygon due to the existing doubts about the safety of life and work.

Demining activities (DA) are activities related to detection on worksite, marking, as well as disabling (deactivating) and destroying mines and unexploded UXO.

Worksite (W) is an area (zone) where demining is taking place with boundaries determined in the demining implementation plan.

Leader of demining team (LDT) is the person leading the work of the pyrotechnical group and has to have the authorization of the Ministry for demining.

Surveying lane (SL) is a ground belt – lane with a width of 1-6 meters within the MSA that was made by machine or manually for mine or UXO detection. Its location is recorded in the TI records. If the length of the surveying lane is more than 500 meters passes through mined territory, its width must be no less than 5 meters. In principle surveying lanes are made touching field paths and other hard orientation points (cliffs), which can precisely be identified in the survey area.

Surveying network (SN) includes all surveying lanes (surveying lanes in that case are directions 1-6 meters wide) that intersect at a certain angle. Space between surveying lanes is 5-25 meters intersecting at 60-90° angles.

Orientation mark (o) is a solid and easily recognizable point on the land not far from the MP to which the minefield is connected and is expressed in the records of MEP with coordinates (x, y) and a description of the orientation point – object, direction/azimuth and distance in meters or steps to the boundary point of the minefield:

- a) between orientation marks and MEP there is optical visibility and in principle is set outside of MSA
- b) has a standardized mark.

Auxiliary orientation point (a_o) is a solid and easily visible point on the ground between an orientation point and minefield location. It is used when there is no direct optical visibility between orientation point and minefield. In principle it is outside of the MSA and has a standardized mark.

Boundary of minefield (B m/a) is an invisible line on the ground that is, in principle, set 3-5 meters outside of the furthest most line of mines in MP and outside of the furthest mines in a line I the MP. In the records the m/p is expressed as a line, i.e. right angle around the mines where distance is expressed in meters from the boundary up to the first mine.

Breaking point (Bp) is a firm point on the ground with coordinates (x and y), marking changes in the direction of the polygon boundaries and has a standard appropriate mark.

Inter-point (iP) is determined between two neighboring points on the boundaries of a polygon insofar as the distance between them is more than 100 m. Inter-points may have coordinates x and y and may, if necessary, have an appropriate sign, a wooden or plastic wheel, visible from a certain distance.

Marcation point (MP) is a standard mark as a firm and visible point from no less than 30 m away, while its base serves as a sign directly before dangerous territory or minefield in the direction of approaches outside of MSA. Written on a rectangular sign is the number of the MP, an arrow point toward the MP, direction angle and distance in meters. All of this is attached to a base no less than 1.25 m from the ground.

Introduction point (IP) in a demining project or TI is a firm and easily visible object or standard sign, on a safe access path, located on a safe boundary of the projected area, from which deminers can or TI can get acquainted with project tasks.

Starting point (SP) is a standard mark on a safe boundary of the projected areas, most frequently on an approach path or safe area from where machines or pyrotechnicians begin their work.

Starting lane (SLL)(also presumes a starting point) is a marked lane between two PT, outside of the project area MSA in a safe area from where demining activities begin.

Areas without visible risks are areas that technical survey has established no mine or UXO contamination. They are declared such after technical survey has been completed.

Exclusion from MSA is a process through which an area that was first considered contaminated with mines, after technical survey and analysis of other data, is rendered smaller than originally determined.

Mine action (MA) is a group of activities that neutralize mine contamination, as well as actions geared toward to the prohibition of mine production, sale and use, acquainting residents with mine threat, offering assistance to mine victims, activities of general and technical survey, mine clearing, marking and fencing, and reducing MSA.

Head of worksite (HW) is a person heading all demining activities at the worksite and must be authorized by the Ministry for demining.

Standard Operative Procedures (SOP) are procedures through which an authorized legal entity, in detail, establishes the method of demining activities, drafted in accordance to international standard operative procedures prescribed by the United Nations.

Worksite marcation (WM) is the procedure of creating boundaries of an area in which a legal entity is undertaking demining activities from areas not being demined.

Detection on worksite (DW) is a series of procedures to search the worksite for mines and UXO.

Totally cleared (TC) is the state in which the entire worksite is clear of all mines and UXO up to the depth of 20 cm confirmed through quality control.



General Survey Order

Class:		Registry number:	
Mark:		Date:	
Name of survey area:			
Form of general survey:	<input type="checkbox"/> General survey of MSA in municipality/city <input type="checkbox"/> Additional survey of MSA	Task type:	<input type="checkbox"/> planned <input type="checkbox"/> Extraordinary task
Aim of general survey:			
Area for survey (m ²):			
Areas in MSA:		Prior survey:	
County:		City / municipality:	
Settlement:			
Leader – surveyor			
Members of survey group:			
Beginning of analysis preparation:		Planned end of analytical preparation:	Planned # of working days:
Planned beginning of field survey:		Planned end of field survey:	Planned # of working days:
Planned beginning of report draft:		Planned end of Report draft:	Planned # of working days:

Attachments:

Order issued by:

(Head of regional office)

Received by:

(Head of survey group)



Class:
Reg. #:
Date:

GENERAL SURVEY REPORT OF MSA IN MUNICIPALITY OR CITY

1. GENERAL INFORMATION

MUNICIPALITY/CITY	COUNTY		
Cartographic data	TK 1:25000	HOK 1:5000	DOF2
Survey order:	Survey mark:	Prior survey mark of whole area:	
SURVEY IMPLEMENTATION	Start date	End date	Used work days
Survey preparation	Start date	End date	Used work days
MSA field survey	Start date	End date	Used work days
MSA survey struction, report draft and data entry	Start date	End date	Used work days
	Surveyor:		
(regional office)			

2. CHANGES TO MSA AREA SIZE IN MUNICIPALITY/CITY

MSA area size (new situation):	m ²	Initial state of MSA for field gen. survey:	Difference in relation to initial state (+/-):	m ²
Data on MSA area size difference compared to initial state	Demined during gen. survey:	m ²	Detected during gen. survey:	m ²
	Excluded gen. survey:	m ²	Included gen. survey:	m ²

3. MINE SUSPECTED AREA CATEGORIES ACCORDING TO DEMINING METHODS IN MUNICIPALITY/CITY (new state)

MSA categories according to demining methods (new state)	Area size (m ²)	Proportion in MSA %	# of areas
Areas for demining			
Areas for detection			
Areas used at own risk			
Total MSA in municipality/city			

3.1. Mine suspected areas for which inclusion and exclusion procedures were applied during general survey:

Areas excluded from MSA			
Areas included in MSA			

3.2. Mine suspected areas in status for exclusion and inclusion:

Areas excluded from MSA			
Areas included in MSA			

4. MARKING MSA IN MUNICIPALITY/CITY (new state)

# of positions of mine threat warning signs		Initial state during gen. survey of # of placed mine threat signs		Difference in relation to initial state
Information on changes to marking of MSA in relation to the initial state:				
Established number of missing and permanently damaged signs				
# of signs placed on positions of missing and permanently damaged signs (replaced signs)				
# of missing and damaged signs by unknown perpetrators reported to police				
# of previous positions of signs no longer in marcation function (positions without signs)				
# of new sign positions determined during gen. Survey				
# of erected signs at the request of local community				
# of positions where signs are needed (incomplete marcation)				
# of used signs during gen. Survey				

5. DATA ON WARTIME ACTIVITIES

Chronology of wartime activities in municipality/city
Line position of defenses and combat activity facilities
Forms of mine obstacles in combat zone
Topographic characteristics in combat zone (relief, vegetation, waterways and water areas, settlements and infrastructural facilities)
Used information sources

6. MINE INFORMATION

6.1. Status of records on mine obstacles

#	STATUS OF RECORDS ON MINE OBSTACLES	# of records	TYPE OF MINE OBSTACLE			Assessment of # of mines in MSA in municipality/city		
			Mix	PO	PP	PO	PP	Total
1.	Mine obstacles completely inside MSA in municipality/city							
2.	"Intersected mine obstacles" demined up to boundary of MSA in municipality/city							
3.	"Intersected mine obstacles" that run over boundary of MSA in municipality/city							
Total mined in MSA in municipality/city								
Information on records on mine obstacles outside of MSA								
1.	Mine obstacles demined (or removed) by military units							
2.	Mine obstacles demined (or removed) by UN peace forces							
3.	Mine obstacles demined by special police units MIA							
4.	Mine obstacles demined by "AKD Mungos" and other companies before CROMAC							
5.	Mine obstacles demined (or removed) by unknown persons							
6.	Mine obstacles demined under CROMAC supervision							
Total demined or removed outside of MSA in municipality/city								
7.	Records on mine obstacles not related to municipality/city							
8.	Records on mine obstacles with undefined status							

6.2. Status of records on mine incidents

#	STATUS OF MI RECORDS	# of records	Types of activated mines and ordinances			Marking on areas of mine incidents
			PO mines	PP mines	Other ord.	
1.	MI inside defined MSA boundaries					
2.	MI outside defined MSA boundaries (on safe areas)					
3.	MI records not related to municipality/city					
4.	MI records of undefined status					

6.3. Assessment of number of mines in defined MSA in municipality/city

ANTITANK MINES				ANTIPERSONNEL MINES			
#	Name of mine	# of mines	Proportion %	#	Name of mine	# of mines	Proportion %
1.	TMA-1				PMA-1		
2.	TMA-2				PMA-2		
3.	TMA-3				PMA-3		
4.	TMA-4				PMR-2A		
5.	TMA-5				PMR-3		
6.	TMM-1				PROM-1		
7.	TMRP-6				MRUD		
8.	unknown				unknown		
Total AT mines			100	Total AP mines			100
Assessment of total number of mines inside defined MSA in municipality/city: ____ mines/e							
Proportion of antipersonnel mines in relation to antitank mines: _:_ in favor of __ mines							
To find one mine in the defined areas it is necessary to demine an average of ____ m ²							
To find one mine in the overall defined MSA (detection and clearing) it is necessary to detect and demine an average of ____ m ²							

7. AREAS IN MINE SUSPECTED AREA

7.1. Area for demining

#	Area mark	Area size m ²	MINE INFORMATION		Assessment of # of mines and other ord. on area			
			Marks of mine obstacles	MI mark	PO	PP	Uk.	UbS
1.								
2.								
3.								
4.								
...								
Total								

7.2. Areas for detection

#	Area mark	Area size m ²	MINE INFORMATION		Assessment of # of mines and other ord. on area			
			Marks of mine obstacles	MI mark	PO	PP	Uk.	UbS
1.								
2.								
3.								
4.								
...								
Total								

7.3. Areas used at own risk

#	Area mark	Area size m ²	INFORMATION ON SOURCES OF MINE THREAT							Period of use	User
			Mine obstacle	MI mark	Demined without CROMAC supervision						
					Military	UN	Companies	MIA	Unknown		
1.											
2.											
3.											
4.											
...											
Total											

7.4. Areas with met criteria for exclusion from MSA

#	Area mark	Area size m ²	Type and/or use of area	Period of use	Data sources	
					Contact person	records mark
1.						
2.						
3.						
4.						
...						
Total						

7.5. Areas that meet the criteria for inclusion in MSA (information)

#	Area mark	Area size m ²	Type and/or use of area	CRITERIA FOR INCLUSION OF AREA IN MSA				
				Mine obstacle mark	MI mark	Found/activated mines and UXO	Other mine indicators	Defined area category
1.								
2.								
3.								
4.								
5.								
...								
Total								

8. STRUCTURE OF MINE SUSPECTED AREAS ACCORDING TO TYPE AND USE
(new state in MSA)

TYPE AND/OR USE OF AREA	Area size (m ²)	%	USE OF AREA (line objects)	Area size (m ²)	%	Length m
Houses and yards			Roads and gravel roads			
Agricultural areas			Local field paths			
Fields and pastures			Firefighting paths and clearings			
Forests			Railway tracks			
Shrubbery and rock			Overhead and other electric wires			
Cliffs and other rocky spaces			Pipelines			
Rivers and streams			Natural gas lines			
Lakes, swamps and other water areas			Waterways			
Social facilities			Telecommunication s lines and facilities			
Churches, cemeteries and sacral sites			Dykes and dams			
Military facilities			Canals			
Bridges			State border			
_____			_____			
Information on types and use of areas that overlap with structured MSA						
National parks			State hunting grounds			
Nature parks			Military polygons			
Tourism zones			Construction zones settlements			
Industrial zones			_____			

9. INFORMATION ON CONTACT PERSONS IN GENERAL SURVEY IMPLEMENTATION

#	Name and surname	War function	Employment information	Permanent address	Contact telephone	Collected information	
						Minute mark	For area "P"
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
...							

10. INFLUENCE OF MSA ON SOCIAL AND ECONOMIC SITUATION (information from local authorities)

Relation of size between municipality/city and MSA			Relation of municipality/city population and residents socially and economically dependent on MSA			Area proportion of MSA per resident of municipality/city
Area of municipality/city	Area of MSA	%	Population of municipality/city	# of residents socially and economically dependent on MSA	%	
m ²	m ²					m ²
Settlements (or their hamlets) with areas and buildings in MSA						
Priority development plans of municipality in areas defined as MSA						
Influence of MSA on development plans of public companies and the wider community in areas defined as MSA						

11. CONCLUSIONS ON SITUATION IN MSA IN MUNICIPALITY/CITY

1. Areas of municipality/city inside of MSA
2. Topographic characteristics of mine suspected areas
3. Characteristics of mine suspected areas according to type and use
4. Characteristic data that influenced size changes in MSA
5. Concentration of mines on territory of municipality/city
6. Mine incidents that occurred on the entire area of Municipality/City
7. Priority demining of areas and buildings due to possible direct mine threat
8. Mine suspected areas with inadequate amount of data collected on mine situation
9. State of marking of MSA and implementation of maintenance of marking
10. Established cooperation during general survey with competent parties from the local authorities, Ministry of Interior, Croatian Army, public companies and local residents
11. Other specifics

Certification of general survey report on total area of municipality/city: _____

Report on General survey of
total area of municipality/city drafted by:

Surveyor:

(Name and surname,
signature)

Report on General survey of total area of municipality/city
and entry of data into database,
controlled, analyzed and certified (date) _____

Head of
Survey Department:

(Name and surname,
signature)

Based on gathered opinions and controls, the
report on general survey of total area of
municipality/city controlled and finally certified
by (date) _____

Head of CROMAC regional
office

(Name and surname,
signature)

Attachments accompanying general survey report on MSA in municipality/city:

1. Data on areas in MSA:

- Areas for demining,
- Areas for detection,
- Areas used at own risk,
- Areas for exclusion from MSA,

2. State of MSA on DOF2 and map HOK 1:5000 with the following information:

- MSA categorization according to demining method (for mine clearing, detection or used at own risk) and areas excluded from MSA described with area symbol "P",
- areas that were demined and detected during general survey,
- marked data on mines in MSA (vectors of mine obstacles, MI, fortified facilities and other mine indicators),
- positions of placed mine threat warning signs and positions of installed fences (vector view of fences) with numeric marks of sign and fence positions,
- administrative borders of municipality/city.

3. State of MSA on map TK: 1:25000 with the following information:

- MSA (without displayed categorization according to demining method) with marked areas used at own risk,
- positions of mine threat warning signs and positions of installed fences (vector view of fences) with numeric marking of sign and fence,
- administrative borders of municipality/city

4. Records from held meetings with the representatives the local authorities on agreed cooperation on general survey implementation on the entire area.

5. Records on collected data through interviews

6. Records on the existence of mines and other ordinances as per information acquired through general survey

7. Records on MI based on collected data through general survey

8. Original records on mines and MI that were collected during general survey in municipality/city

9. Overview of data on the status of records regarding mines positioned inside of municipal – city borders

10. Overview of data on the status of records regarding MI positioned inside of municipal – city borders

11. Records on changes in MSA marking of mine threat warning signs in municipality/city

12. Records on changes in MSA mine fencing in municipality/city

INSTRUCTIONS FOR DRAFTING GENERAL SURVEY REPORT OF MSA IN MUNICIPALITY/CITY

INTRODUCTION

The General survey report on Mine Suspected Areas in Municipality/city is a final document in which all available data on the state of MSA in a municipality/city is synthesized.

The report content is prescribed as the data and its clarification in order to facilitate the effectiveness of the mine action system in reaching the following goal activities:

- uninterrupted monitoring of changes of and reporting on the state of MSA,
- decision making and planning of further activities of mine action,
- establishing extensive details on MSA as starting point for upcoming survey in the function of drafting a project for demining and detection,
- updating assessments of MSA and the National Program of Mine Action.

The general survey report on mine suspected areas in municipality/city is the result of collected, processed, analyzed and interlinked data, as well as the necessary conclusions on the situation in MSA.

The established state of MSA in municipality/city is the initial state for all ensuing activities of mine action.

An additional general survey of the MSA allows the establishment and update of any changes in MSA in relation to the previous survey of the entire area.

Changes to the MSA that occurred since the completion of the last general survey in a municipality/city are determined by:

- detailed analysis of the previous general survey report of the entire area of the municipality/city,
- detailed analysis of additional general survey after surveying the entire area of municipality/city,
- detailed analysis of general survey for project drafting after general survey of the entire area of the municipality/city and data acquired through technical survey, demining and detection,
- detailed analysis of original data on mine obstacles collected after general survey of the entire area of municipality/city or were omitted in the implementation of general survey of the entire area,
- field general survey of MSA in municipality/city in cooperation with local authorities, Ministry of Interior, Croatian Army, public companies and local residents,
- synthesizing of data from the survey report according to these instructions and data entry into a database,
- control and management of work tasks during general survey.

Verification of the report by the Operations Sector, the newly established state of MSA has the significance of an official document for further activities of mine action.

EXPLANATION OF CHARACTERISTIC REPORT CONTENT

The concept of reports on survey of the entire area of municipality/city includes:

- general depiction of state of MSA in municipality/city in the function of strategic decision making and informing of community on the extent of the mine threat,
- depiction of the state of MSA categorized according to accepted demining methods,
- depiction of the structure of MSA as per type and use of the area,
- detailed analysis of original information on mine situation with an assessment amounts, types and positions of mine obstacles in the natural surroundings,
- marking with mine threat warning signs and information on maintenance of marking of the MSA.

Sum of data on state of MSA

1. **General information** offers information on the area of general survey, legitimacy, timeframe and responsible subjects in its application.

2. **Changes in area of MSA in municipality/city** offer precise information on newly established area sizes in MSA with concrete data about the changes on MSA in municipality/city.

3. **Categories of mine suspected areas** are used to express current information on MSA categories according to demining methods. The sum of categories of area sizes for demining, detection and being use at own risk, logically comprise the newly established area size.

Data on MSA for which the inclusion and exclusion procedures were completed during general survey are given as information.

Data on MSA in the inclusion and exclusion status are given as information for further procedure in the exclusion and inclusion procedures.

Areas with status of inclusion in MSA need to be divided into appropriate categories according to demining method, as a final state, which is confirmed (most likely) through the prescribed inclusion into MSA procedure.

Areas with status of exclusion in MSA should be omitted from the newly established area size of MSA, as well as the final state, which is confirmed by (most likely) the prescribed procedure of exclusion from MSA.

4. **Marking mine suspected areas** are used to express current information on marking of MSA with mine threat warning signs and changes in relation to marking after completed general survey on the entire area of municipality/city.

Information on changes in the marking of MSA from the previous general survey of the entire area of municipality/city are indicators of the continuity of maintenance of marking and achieved cooperation with local authorities on the proclaimed joint obligations in protection from mine threat.

5. **Information on combat activities** needs to include proof of causes and effects of mine obstacles in the area of the municipality/city during wartime.

Missing Information from original wartime documentation is completed with survey findings, thus creating a well rounded image of the actual situation of mine obstacles through interlinking the various sources of information and in this way defining the boundaries and overall state of MSA in municipality/city.

6. Information on mines – it is necessary to thoroughly comb through original documents to determine their status and the state of MSA in municipality/city.

The true status of records on mine obstacles will be determined depending on individual analysis, vector positioning in natural surroundings and linkage to other data on mines and demining.

The number of mines is determined through calculation based on records on mine obstacles subtracted by the available data on mine removal or military demining in the postwar period.

The status of MI records is based on individual MI analysis, positioning in natural surroundings, linkage to mine obstacles and other mine indicators.

The prescribed records are composed based on the collected data on mines, existence of other ordinances and mine incidents. The data in written records are put in tables as per their status.

It is important to check the dependability of data, because they are indicators for defining MSA categories per demining methods.

7. Areas in mine suspected areas are grouped according to demining methods.

Data on areas that have met the criteria for exclusion and inclusion in MSA are given as information.

Areas with the status of being included in MSA *must be shown in table 7.6.* as information that will confirm (most likely) the prescribed procedure of inclusion in MSA.

Areas with the status of exclusion from MSA *must be omitted from the appropriate tables* depending on demining method and shown in table 7.5 as the final state, which will be confirmed (most likely) through the prescribed procedure of exclusion from MSA.

8. Structure of areas according to their type and use are established through general survey (or approximately assessed) as data on the natural and infrastructural content of MSA per a table, as important indicators for assessing the complexity of mine threats of municipality/city.

The importance of data on the structure of mine suspected areas is expressed for:

- determining demining priorities or other forms of demining action,
- defining indicators of the state and updating Programs and plans of demining on the local, higher and national level .

9. Information on contact persons during general survey of MSA in municipality/city confirm the legitimacy of collected data and other indicators on the state of MSA.

Collected information from *appointed individuals* are especially important if there is a lack of original information for assessing and making decisions on the exclusion of areas, inclusion of areas in MSA and defining areas as used at own risk .

10. The influence of MSA on the social and economic situation includes data from the local authorities. Data on the influence of MSA should be requested at the meeting with the representatives of the local authorities on the upcoming general survey. This information has significance in planning priorities in demining and other mine action activities.

11. Conclusions on the state of MSA in municipality/city show important indicators that are included in the Report Conclusions as per defined points.

The sum of collected data on the state of MSA in municipality/city is the result of all collected data on areas “P” as wholes in MSA in municipality/city.

Data on areas in MSA P __

Data on areas in MSA offer detailed information for each of the areas in a defined MSA. The basis for defining areas "P" in MSA are accepted categories according to demining method or their status in meeting the criteria for exclusion from MSA.

The starting point of general survey is individual treatment of areas defined through general survey of the entire area of a municipality/city, in order to establish recent changes and state of the mentioned areas.

General survey of the mentioned areas of MSA can establish changes that may require re-categorization of some areas according to demining method used, which will result in changes to the boundaries of the area, area (m²), new information on mines, number of mine threat warning signs related to marking the area, structure of MSA according to type and use, as well as other important indicators on the state of MSA.

Data on newly established areas inside the boundaries of the mentioned area are marked separately as for each preceding area. Each newly created area must be given its own particular sign in order to be easily recognized until mine threat is completely removed.

The form "Information on area in MSA P__" is adapted to the needs of data for the established categories of areas as per the demining method.

Data are entered into the form that is appropriate to the defined category of the area.

The "Information on area in MSA P__" form as per Annex H is filled in for areas that are categorized per demining method as areas for demining, detection and used at own risk.

The "Information on area in MSA P__" form as per Annex H/1 is filled in for areas that are excluded from MSA and for areas that are included in MSA.

In form H/1 there are no points "Changes to area size P__" and "Data on new areas inside the boundaries P__", due to the fact that there is no information for the mentioned two points.

1. **General information** gives basic data on the area through indicators on the size, location of mentioned area, boundaries, as well as a description of natural and infrastructural characteristics of the area with an access path.

The definition of the area boundaries needs to be appropriate to the circumstances in the field and take into account the following operative and safety conditions:

- the boundaries of the area must be clearly visible and composed of natural obstacles in order to make further mine action activities and marking of MSA as effective as possible (waterways, roads, infrastructural facilities, cadastre parcels),
- that area includes all mine obstacles with a dependable safety zone to allow the effective projecting,
- that the mentioned area in its boundaries is a homogenous whole in relation to the structure, use and/or users of MSA.

2. **Area size** shows the new state of area "P" in MSA in relation to the previous state established through general survey of the entire area of municipality/city and information on the difference in demining activities, detection and exclusion through general survey. Finally, it is necessary to express the total area size of new areas inside the boundaries of the previously established areas that occurred due to changes in categorization as per the method of demining and exclusion status.

Point 2 is filled in for areas "P" that were established in previous general survey of the entire area of municipality/city or through additional general survey.

3. Information on established changes inside the boundaries depicts data on newly established areas categorized according to demining methods and exclusion status. Point 3 is filled on for areas "P" that were established in previous general survey of the entire area of municipality/city or through previous additional survey.

4. Information on marking mine suspected areas expresses the number of signs, numeric marks for positions of signs related to marking the area and information on fenced areas. Individual signs are related to marking boundaries of mine suspected areas "P". This renders the overall sum of signs posted in the administrative borders of municipality/city, lower than the expressed number of signs that "cover" the marking of all areas as individual wholes.

Inasmuch as area "P" is on the administrative border of municipality/city or if area "P" is an integral part of MSA whole together with MSA of the bordering municipality/city. The position of mine threat warning signs outside of the administrative borders of municipality/city is expressed as data on marking the mentioned area.

5. Data on the mining of areas need to be analyzed in detail from original documents in order to establish the true state of mine threat of areas in accordance to criteria for grouping areas into appropriate categories as per demining methods.

The analysis of records on mine obstacles should conclude (assess) the number of left over mines according to type of the area in relation to data on performed demining.

A smaller number of mines detected on the area (or no mines at all) then data on mine threat indicate may be the result of demining and mine removal by military units during and after the war, UN peace forces, civil protection units from the MI, demining companies without CROMAC supervision or other unknown entities. Furthermore, a smaller number of mines may be the result of partial demining of mine obstacles up to the boundaries of mine suspected areas during previous demining activities or incomplete mine obstacles that transgress over the borders of the mentioned area.

Trough analysis of records on mine incidents it is important to establish possible links to data on positions of known mine incidents with known positions of mine obstacles, i.e. if the MI was due to an unknown mine obstacle.

Information on other mine indicators are completed with dependable data on the existence of mine obstacles, occurrences of mine related incidents and the existence of other unexploded ordinances.

If there is a lack of dependable information on the mine situation, other indicators may serve as basis for defining MSA boundaries.

The final assessment of how many mines and other ordinances exist on the area, shows as objective data as possible, which in the end will influence on categorization of areas according to demining methods.

6. Data on areas used at own risk show the key indicators preventing the mentioned area from being excluded from MSA and the necessity to monitor changes on the area according to criteria for exclusion from MSA.

7. Structure of mine suspected areas according to type and use are established (or approximately assessed) data on the natural and infrastructural situation of MSA according to a table.

8. Data on persons contacted during general survey of an area are shown in a table on persons and documents for the mentioned area that was created through statements of contacted persons. The same persons may give information for more than one area, which must be shown for each area individually.

9. Conclusions on areas in MSA express important indicators included in report conclusions according to defined points for a certain area.

Conclusions for an area in MSA "P" need to be summarized, clear and understandable with emphasis on indicators defining categories of areas as per the applied demining methods.



Class:
Reg. #:
Date:

ADDITIONAL GENERAL SURVEY OF MSA REPORT

1. GENERAL INFORMATION

Municipality/city		County	
Area of additional survey		Marks of previously defined areas "P" that are survey subjects	
Affiliation to settlement and/or users of MSA			
Cartographic data	TK 1:25000	HOK 1:5000	DOF2
Survey order:	Survey mark:		
Prior survey of entire area:	Prior additional survey:		
ADDITIONAL SURVEY IMPLEMENTATION	Start date	End date	Work days spent
Survey preparations	Start date	End date	Work days spent
MSA field survey	Start date	End date	Work days spent
MSA reconstruction, report draft and database entry	Start date	End date	Work days spent
(regional office)	Surveyor:		

<p>AIM OF ADDITIONAL GENERAL SURVEY</p> <p>Aim of additional general survey:</p>

2. CHANGES TO MSA AREA SIZE ON THE AREA OF ADDITIONAL SURVEY
(new situation)

MSA area size (new state): m ²	Initial state of MSA for field gen. survey: m ²	Difference in relation to initial state (+/-): m ²
Data on MSA area size difference in relation to initial state	Demined: m ²	Detected: m ²
	Excluded: m ²	Included: m ²
	Correction (+/-): m ²	

3. CATEGORIES OF MINE SUSPECTED AREAS ACCORDING TO DEMINING METHODS ON THE AREA OF
ADDITIONAL SURVEY (new state)

MSA categories according to demining methods(new state)	Area size (m ²)	Proportion in MSA %	# of areas
Areas for demining			
Areas for detection			
Areas used at own risk			
Total MSA in additional gen. survey area			

3.1. Mine suspected areas that went through intervention inclusion and exclusion procedures during additional
general survey:

Areas included in MSA			
Areas excluded from MSA			

3.2. Mine suspected areas in area of additional general survey in status of inclusion and exclusion:

Areas for exclusion from MSA			
Areas for inclusion in MSA			

4. MARKING MSA IN AREA OF ADDITIONAL GENERAL SURVEY (new state)

# of positions of posted mine threat warning signs		Initial state in gen. survey of # of posted mine warning signs		Difference in relation to initial state
Information on changes to marking of MSA in relation to initial state:				
Established number of missing signs and permanently damaged signs				
Number of signs posted on positions of missing and permanently damaged signs				
Number of missing and permanently damaged signs by unknown perpetrators and reported to the police				
Number of previous positions of signs no longer in function (positions with no signs)				
Number of new sign positions determined during general survey				
Number of posted signs requested by local community				
Number of positions where signs are required (incomplete sign posting)				
Number of signs used during general survey				

5. MINING INFORMATION

5.1. Status of records on mine obstacles on the area of additional general survey

#	STATUS OF RECORDS MINE ON OBSTACLE	Records #	TYPE OF MINE OBST.			Mine number in MSA assessment during additional gen survey		
			Mix	PO	PP	PO	PP	Total
1.	Mine obst. completely inside MSA boundaries of additional gen. survey							
2.	"Intersected mine obst." demined up to MSA boundary of additional gen. survey							
3.	"Intersected mine obst." Extending beyond MSA boundaries of additional gen. survey							
Total mined in MSA of additional gen. survey								
4.	Records on mine obst. not related to area of additional gen. survey							
5.	Records on mine obst. of undefined status on the MSA of additional gen							

5.2. Status of records on mine incidents on the MSA of additional general survey

#	STATUS OF MI RECORDS	Records #	Types of activated mines and other ord.			Marks on areas with mine incidents
			PO mines	PP mines	Other ord.	
1.	MI in MSA of additional gen. survey					
2.	MI not related to MSA of additional gen.					
3.	MI of undefined status in MSA of additional gen.					

5.3. Assessment of mine number in defined MSA of additional general survey

ANTITANK MINES (PO)				ANTIPERSONNEL MINES (PP)			
#	Name of mine	# of mines	Proportion %	#	Name of mine	# of mines	Proportion %
1.	TMA-1				PMA-1		
2.	TMA-2				PMA-2		
3.	TMA-3				PMA-3		
4.	TMA-4				PMR-2A		
5.	TMA-5				PMR-3		
6.	TMM-1				PROM-1		
7.	TMRP-6				MRUD		
8.	unknown				Unknown		
Total PO mines			100	Total PP mines			100
Assessment of total number of mines in defined MSA in additional general survey: _ mine/s							

6. AREAS OF MSA IN ADDITIONAL GENERAL SURVEY

6.1. Areas for demining

#	Area mark	Area size m ²	Mining data		Assessment of number of mines and other ord. on area			
			Mine obst. marks	MI marks	AT	AP	Tot.	Ord.
1.								
2.								
3.								
4.								
5.								
...								
Total								

6.2. Areas for detection

#	Area mark	Area size m ²	Mining data		Assessment of number of mines and other ord. on area			
			Mine obst. marks	MI marks	AT	AP	Tot.	Ord.
1.								
2.								
3.								
4.								
5.								
...								
Total								

6.3. Areas in MSA used at own risk

#	Area mark	Area size m ²	MINE THREAT DATA SOURCES							Usage period	User
			Mine obst. mark	MI mark	Demined without CROMAC supervision						
					Military	UN	Companies	MIA	Unknown		
1.											
2.											
3.											
4.											
5.											
...											
Total											

6.4. Areas that meet criteria for exclusion from MSA

#	Area mark	Area size m ²	Type and/or use of area	Time of use	Data source	
					Contact person	Minute mark
1.						
2.						
3.						
4.						
...						
Total						

6.5. Areas that meet criteria for inclusion in MSA (information)

#	Area mark	Area size m ²	Type and/or use of area	CRITERIA FOR INCLUSION OF AREA IN MSA				
				Mine obst. mark	MI mark	Found/activated mines and UXO	Other mine indicators	Defined area category
1.								
2.								
3.								
4.								
5.								
...								
Total								

7. STRUCTURE OF MINE SUSPECTED AREA ACCORDING TO TYPE AND USE

AREA TYPE AND/OR USE	Area size (m ²)	%	AREA USE (linear objects)	Area size (m ²)	%	Length m
Houses and yards			Roads and gravel roads			
Agricultural areas			Local field paths			
Fields and pastures			Firefighting paths and clearings			
Forests			Railway tracks			
Shrubbery and rock			Overhead and other electric lines			
Cliffs and other rocky spaces			Pipelines			
Rivers and streams			Natural gas lines			
Lakes, swamps and other water areas			Waterworks			
Social facilities			Telecommunications lines and facilities			
Churches, cemeteries and other sacral facilities			Dykes and dams			
Military facilities			Canals			
Bridges			State border			
_____			_____			
Information on type and use of areas that overlap with structured MSA						
National parks			State hunting grounds			
Nature parks			Military polygons			
Tourism zones			Construction zone settlements			
Industrial zones			_____			

8. INFORMATION ON PERSONS CONTACTED DURING ADDITIONAL GENERAL SURVEY

#	Name and surname	Wartime function	Employment info	Address	Contact telephone	Collected data	
						Minute mark	For area "P"
1.							
2.							
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							
...							

9. CONCLUSIONS ON MSA STATE IN AREA OF ADDITIONAL GENERAL SURVEY

1. Characteristic topographic traits of the area
2. Characteristics of mine suspected areas according to type and use
3. Settlements or their segments in MSA with size of population according to data from local authorities
4. Commercial capacities on MSA that are priority for demining according to data collected from local authorities
5. Characteristic information that influenced changes on MSA size on the defined area for additional general survey
6. Concentration of mines in the area
7. Mine incidents that occurred on the area of general survey
8. Demining priorities of areas due to direct mine threat
9. Established cooperation during general survey with responsible subjects from municipality/city or users of MSA
10. Other specifics

Certification of additional general survey report of area _____ located in the administrative borders of municipality/city _____

Report on Additional General Survey of Mine Suspected Area drafted by:

Surveyor:

(name, surname, signature)

Report on Additional General Survey of Mine Suspected Area and data entry into database; controlled, analyzed and certified
date _____ by

Head of Survey
Department:

(name, surname, signature)

Based on received opinion and control, Additional General Survey Report has been controlled and finally certified on
date _____ by

Head of regional office:

(name, surname, signature)

Attachments accompanying report on additional general survey on MSA in municipality/city:

1. Data on areas in MSA:

- Areas for demining,
- Areas for detection,
- Areas used at own risk,
- Areas for exclusion from MSA,

2. State of MSA on DOFP2 and map CBM S 1:5000 with the following information:

- MSA categorization according to demining method (for mine clearing, detection or used at own risk) and areas excluded from MSA described with area symbol "P",
- areas that were demined and detected in the previous period,
- marked data on MSA contamination (vectors of mine obstacles, MI, fortified facilities and other mine indicators),
- positions of placed mine threat warning signs and positions of installed fences (vector view of fences) with numeric marks of sign and fence positions,
- administrative borders of municipality/city.

3. State of MSA on map TM: 1:25000 with the following information:

- MSA (without displayed categorization according to demining method) with marked areas used at own risk,
- positions of mine threat warning signs and positions of installed fences (vector view of fences) with numeric marking of sign and fence,
- administrative borders of municipality/city

4. Records from held meetings with the representatives the local authorities on agreed cooperation on additional general survey implementation on the entire area.

5. Records on collected data through interviews

6. Records on the existence of mines and other ordinances as per information acquired through additional general survey

7. Records on MI expressed based on collected data through additional general survey

8. Original records on mines and MI that were collected during additional general survey in municipality/city

9. Overview of data on the status of records regarding mines positioned inside of municipal – city borders

10. Overview of data on the status of records regarding MI positioned inside of municipal – city borders

11. Records on changes in MSA marking of mine threat warning signs in municipality/city

12. Records on changes in MSA mine fencing in municipality/city

INSTRUCTIONS FOR DRAFTING ADDITIONAL GENERAL SURVEY REPORT OF MSA

INTRODUCTION

The report on additional general survey of mine suspected areas is a final document which synthesizes all data on MSA in the area of additional general survey.

The area of additional general survey is *a specific area which is a part of the overall MSA* where data are collected on changes that have occurred since the primarily established state of MSA during survey of the entire area of municipality/city and other, in the meantime, collected information from additional and technical survey.

Additional general survey is planned and harmonized with annual, three month, and monthly demining plans with the aim of:

- additional data collection on the MSA, for which it has been assessed that previously collected data does not reflect the actual state of the mentioned MSA,
- additional information on the MSA for which area and building projections will be done for demining and detection,
- additional collection of data on MSA based on new original information on mine threat and conditions fulfilled for re-categorization and exclusion of areas from MSA.

The emphasis of additional general survey is directed to collection of information on mine threat and occurred changes in the MSA that directly influence the effectiveness of the upcoming projections of the defined area.

Additional general survey must produce clear indicators on MSA that relate to:

- categorization of MSA as per demining methods and changes in relation to the previous state of MSA,
- areas that meet the criteria for exclusion from MSA, occurred changes in relation to previous state of MSA with detailed descriptions of the criteria based on which an **Opinion on Exclusion** may be issued,
- areas that meet the criteria for inclusion into MSA with documentation of the reached criteria based on which an area may be declared mine suspected,
- data on precise boundaries of MSA,
- data on marking MSA and occurred changes in relation to previous state.

Additional general survey may be conducted outside the plan due to the urgency of collecting information upon reported findings of mines, mine incidents and other urgent cases of information collection on mine threat.

Report on additional general survey is the result of collection, processing, analysis, inter-linkage of data and reaching necessary conclusions on MSA in a defined area.

The state of MSA established through additional general survey of a defined area represents a new quality state of MSA and logically, a starting point for all further mine action activities in that area.

The results of additional general survey update the previously established state of MSA in municipality/city or the results of previous survey in the area.

Through the preparations for additional general survey it is necessary to set all available information on the current state of MSA as a starting point for additional general survey. The current state of MSA in the area of the upcoming additional general is established through:

- detailed analysis of general survey of MSA in municipality/city that relate to defined survey area,
- detailed analysis of additional general survey in the area after survey of MSA in municipality/city was conducted,
- detailed analysis of data collected through demining, detection and technical survey,
- detailed analysis of original information on mine obstacles collected from the area after survey of MSA in municipality/city, additional general survey, or were omitted in the implementation of previous surveys.

In accordance to the goals, tasks and extent of the additional general survey through work in the field, it is necessary to achieve appropriate cooperation with local authorities, Ministry of Interior Affairs, Croatian Army, public companies and local residents.

During additional general survey the work of surveyors' groups are controlled and directed by responsible supervising personnel according to the management scheme.

The verification of the additional general survey report is done by the Operations Sector and the new state of MSA becomes the official document for further mine action activities and updating the state of MSA in municipality/city as a whole pertaining to the area under survey.

CONTENT OF THE REPORT ON ADDITIONAL GENERAL SURVEY

The concept of the additional general survey report through a sum of data includes:

- depiction of the state of MSA according to established categories for demining activities,
- depiction of the structure of MSA according to type and use,
- detailed information on mining with an assessment of amounts, types, and positions of mine obstacles in natural surroundings,
- marking area with mine threat signs and mine fences noting changes that occurred in relation to the previous state of MSA,
- state of MSA of the defined area relevant for upcoming projection activities of areas and buildings,
- data relevant for updating the previous state of MSA of the defined area, and informing the local community of entire area of municipality/city about the mentioned changes.

Content of certain data in the report, method of presenting the data and their purpose for the overall activities of mine action is the same as in the implementation of general survey of MSA in municipality/city. If amounts of information in the additional general survey report vary, they are due to the target area and its specific traits.

The additional survey report is filled in the same way as general survey report of MSA in municipality/city, Annex E. The necessary attachments to the report (forms) and the way they are filled in are identical to the attachments of the general survey report of MSA in municipality/city.

DATA ON AREA P IN MSA

1. GENERAL INFORMATION

Gen. survey mark		Previous survey code:	
Area categories		Area size	m ²
Area (cartographic name)		Affiliation to settlement(s) and/or users of MSA	
Cartographic data	TK 1:25000	HOK 1:5000	DOF2
Data on individual polygons of area P ____			
Special polygon mark	Polygon area size m ²	Numeric marks of signs related to polygon marcation	
P__-1			
P__-2			
P__-3			
P__-...			
Total m ²			
Area boundaries (description)			
Natural and infrastructural characteristics of the area:			
Access path (description)			

2. CHANGES IN AREA P SIZE ____
(changes in area in relation to previous surveys)

Area size (new state): m ²	Initial area "P" state for field gen. survey: m ²	Difference in area in relation to initial state (+/-): m ²
Data on difference of area "P" size in relation to initial state (m ²)	Demined: m ²	Detected : m ²
	Correction (+/-): m ²	New areas: m ²

3. DATA ON NEW AREAS P INSIDE THE BOUNDARIES ____
(changes on areas in relation to previous survey)

MSA categories according to demining method (new state) as defined on area "P"	Area size m ²	Area mark	Area number
Areas for demining			
Areas for detection			
Areas used at own risk			
Areas in exclusion status			

4. DATA ON MARKING P ____

Number of positions of mine threat warning signs related to marking areas		Numeric marks for sign positions	
Numeric marks for positions inside borders of another municipality/city related to marking areas			
Data on fencing:			

5. DATA ON AREA MINE CONTAMINATION

5.1. Records on mine obstacles on P ____

5.1.1. Mine obstacles on entire affected area:

Mine obst. Mark	DATA ON TYPES OF MINE OBST. AND MINES						DATA MINE OBST. DEMINING				
	Mine obst. type	PO mines		PP mines		Total mine	PO mines		PP mines		Total mines
		Name	pieces	Name	pieces		Name	pieces	Name	Piece	
Total											

5.1.2. Mine obstacles "intersected" by area boundary:

Mine obst. Mark	DATA ON TYPES OF MINE OBST. AND MINES						DATA MINE OBST. OUTSIDE OF BOUNDARY OF "P"				
	Mine obst. type	PO mines		PP mines		Total mine	PO mines		PP mines		Total mines
		Name	Piece	Name	pieces		Name	pieces	Name	Piece	
Total											

5.2. Records on mine incidents in P ____

MI mark	ACTIVATED MINES AND OTHER ORD.			MI CONSEQUENCES		MI date	Link to marked mine obst.
	PO mines	PP mines	Other ord.	Human victims	Animal victims		

5.3. Data on other mine indicators on P ____

Description of indicators:

5.4. Concluding assessment of amount of mines and other ordinances on P ____

#	Antitank mines		#	Antipersonnel mines		#	Other ordinances	
	Mine Type	pieces		Mine type	pieces		Ord. type	pieces
1.			1.			1.		
2.			2.			3.		
3.			3.			4.		
...				
Total PO mines			Total PP mines			Total Ordinances		

6. DATA ON AREA USED AT OWN RISK

MINE THREAT DATA SOURCES							Usage Period	User
Mine obst. Mark	MI mark	Demined without CROMAC supervision						
		Military	UN	Companies	MIA	Unknown		

7. STRUCTURE OF AREA ACCORDING TO TYPE AND USE P ____

AREA TYPE AND/OR USE	Area size (m ²)	%	AREA USE (linear objects)	Area size (m ²)	%	Length m
Houses and yards			Roads and gravel roads			
Agricultural areas			Local field paths			
Fields and pastures			Firefighting paths and clearings			
Forests			Railway tracks			
Shrubbery and rock			Overhead and other electric lines			
Cliffs and other rocky spaces			Pipelines			
Rivers and streams			Natural gas lines			
Lakes, swamps and other water areas			Waterworks			
Social facilities			Telecommunications lines and facilities			
Churches, cemeteries and other sacral facilities			Dykes and dams			
Military facilities			Canals			
Bridges			State border			
_____			_____			
Information on type and use of areas that overlap with structured MSA						
National parks			State hunting grounds			
Nature parks			Military polygons			
Tourism zones			Construction zone settlements			
Industrial zones			_____			

8. INFORMATION ON CONTACT PERSONS FOR GENERAL SURVEY IMPLEMENTATION P ____

#	Name and surname	Wartime function	Employment data	Address	Contact telephone	Interview records mark
1.						
2.						
3.						
...						

9. CONCLUSIONS ON AREA P IN MSA __

1. Criteria based on which area category is determined according to demining method (describe the criteria for a particular case)
2. Characteristic mines on area
3. New data on mine situation in MSA in relation to previous conclusions
4. Characteristic topographic traits of mentioned area
5. Missing information for a well rounded assessment of state of MSA (mining, topographic traits)
6. Criteria based on which area boundaries are defined according to instructions on defining the boundaries of the area P (to explain in detail)
7. State of marcation on area and maintenance

State of Area P in MSA __ on (date) _____

Surveyor:

(name and surname, signature)

APPENDIX:
(PHOTOGRAPHS, DOP2-3D DISPLAYS IF NEEDED FOR THE PURPOSE OF EXPLANATION OF CONCLUSIONS ABOUT THE AREAS)

DATA ON AREA P IN MSA ____

1. GENERAL INFORMATION

Gen. survey mark		Previous survey code:	
------------------	--	-----------------------	--

Area category		Area size	m ²
Area (cartographic name)		Affiliation to settlement and/or user of MSA	
Cartographic data	TK 1:25000	HOK 1:5000	DOF2

Data on individual polygons of area P		
Individual polygon mark	Polygon area size m ²	Numeric marks of signs related to polygon marking
P__-1		
P__-2		
P__-3		
P__-...		
Total m ²		
Area boundaries (description)		
Natural and infrastructural characteristics of area:		
Access paths (description)		

2. DATA ON MAKING P ____

# of positions of signs related to making area		Numeric marks of signs	
Numeric marks of positions inside boundaries of other municipality/city related to area marking			
Data on fencing:			

3. DATA ON AREA MINING

3.1. Records on mine obstacles on P ____

3.1.1. Mine obstacles completely on area:

Mine obst. mark	DATA ON TYPE OF MINE OBST. AND MINES					DATA ON DEMINING MINE OBST.					
	Mine obst. type	PO mines		PP mines		Total mines	PO mines		PP mines		Total mines
		Name	pieces	Name	Piece		name	pieces	Name	Piece	
Total											

3.1.2. Mine obstacles "intersecting" with area boundary:

Mine obst. Mark	DATA ON TYPES OF MINE OBST. AND MINES					DATA ON MINE OBST. OUTSIDE OF "P"					
	Mine obst. type	PO mines		PP mines		Total mines	PO mines		PP mines		Total mines
		Name	Piece	Name	Pieces		Name	Pieces	Name	Pieces	
Total											

3.2. Records on mine incidents on P ____

MI mark	ACTIVATED MINES AND OTHER ORD.			MI CONSEQUENCES		MI date	Link to mine obst. mark
	PO mines	PP mines	Other ord.	Human victims	Animal victims		

3.3. Data on other mine indicators on P ____

Description of indicators:

3.4. Final assessment of mine and other ordinance amount on P ____

#	Antitank mines		#	Antipersonnel mines		#	Other ord.	
	Mine type	pieces		Mine type	pieces		Ordinance type	pieces
1.			1.			1.		
2.			2.			3.		
3.			3.			4.		
...				

Total PO mines		Total PP mines		Total ordinances	
----------------	--	----------------	--	------------------	--

4. DATA FOR AREA USED AT OWN RISK

MINE THREAT DATA SOURCES								Period of use	User
Mine obst.	MI mar	Demined without CROMAC					Other mine threat indicators		
		Military	UN	Companies	MIA	Unkno			

5. STRUCTURE OF AREA ACCORDING TO TYPE AND USE P ___

AREA TYPE AND/OR USE	Area size (m ²)	%	AREA USE (linear objects)	Area size (m ²)	%	Length m
Houses and yards			Roads and gravel roads			
Agricultural areas			Local field paths			
Fields and pastures			Firefighting paths and clearings			
Forests			Railway tracks			
Shrubbery and rock			Overhead and other electric lines			
Cliffs and other rocky spaces			Pipelines			
Rivers and streams			Natural gas lines			
Lakes, swamps and other water areas			Waterworks			
Social facilities			Telecommunications lines and facilities			
Churches, cemeteries and other sacral facilities			Dykes and dams			
Military facilities			Canals			
Bridges			State border			
_____			_____			
Information on type and use of areas that overlap with structured MSA						

National parks			State hunting grounds			
Nature parks			Military polygons			
Tourism zones			Construction zone settlements			
Industrial zones			_____			

6. INFORMATION IN CONTACT PERSONS IN GENERAL SURVEY IMPLEMENTATION ON P __

#	Name and surname	Wartime function	Employment information	Address	Contact telephone	Interview records mark
1.						
2.						
3.						
...						

7. CONCLUSIONS ON AREA P IN MSA __

1. Criteria based on which area category was determined according to demining methods (describe criteria in a particular case)

2. Characteristics of mine obstacles on area

3. New information on area mining collected since the last survey

4. Characteristic area topographic traits

5. Missing data for overall assessment of MSA state (mining, topographic traits)

6. Criteria based on which area boundaries are defined according to instructions on definition of boundaries of the area P (explain in detail)

7. State of marking of area and the application of maintenance

8. Other specifics

State of area P in MSA __ on date _____.

Surveyor:

(name, surname and signature)

Report on the state of the area and data entry into the database; controlled, analyzed and certified on (date) _____

Head of Survey
Department:

(name, surname and signature)

Based on received opinion and control, the report on the state of the area was controlled and finally certified (date)_____

Regional office head

(name, surname and signature)

APPENDIX:
(PHOTOGRAPHS, DOP2-3D DISPLAYS IF NEEDED FOR THE PURPOSE OF EXPLANATION OF CONCLUSIONS ABOUT THE AREAS)

Annex I

OVERVIEW OF DATA ON STATUS OF RECORDS ON MINE OBSTACLES POSITIONED INSIDE MUNICIPALITY/CITY BORDERS

1. MINE OBSTACLE RECORDS RELATE TO DEFINED MSA IN MUNICIPALITY/CITY

1.1. Records on mine obstacles that are completely in defined MSA boundaries

#	Records mark	Records relating to same mine obst.		Unavailable records	Area containing the mine obst.
		Records mark	pieces		
1.					
2.					
3.					
4.					
5.					
....					
Total					

1.2. Records on mine obstacles partially demined or removed up to boundary of defined MSA in municipality ("intersected mine obstacles" with MSA boundary in municipality/city)

#	RECORDS MARK	Records relating to the same mine obstacle		Unavailable records	Area containing the mine obst.
		Records mark	pieces		
1.					
2.					
3.					
4.					
5.					
....					
Total					

1.3. Records on mine obstacles in defined MSA that cross over administrative borders of municipality/city ("intersected mine obstacles" with neighboring municipality/city)

#	RECORDS MARK	Records relating to the same mine		Unavailable records	Municipality/city in which the MSA
		Records mark	Pieces		
1.					

2.					
3.					
4.					
5.					
....					
Total					

2. RECORDS ON MINE OBSTACLES THAT WERE DEMINED, REMOVED OR ARE NOT RELATED TO MSA IN MUNICIPALITY/CITY

2.1. Records on mine obstacles that were demined (or removed) by military units

#	RECORDS MARK	Records relating to same mine obst.		Unavailable records	Difference in data
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

2.2. Records on mine obstacles demined (or removed) by UN peace forces

#	RECORDS MARK	Records relating to same mine obst.		Unavailable records	Difference in data
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

2.3. Records on mine obstacles demined by Ministry of Interior Affairs (MIA) special police units

#	RECORDS MARK	Records relating to same mine obst.		Unavailable records	Difference in data
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

2.4. Records on mine obstacles demined by "AKD Mungos" and other demining companies without CROMAC supervision

#	RECORDS MARK	Records relating to same mine obst.		Unavailable records	Difference in data
		Records mark	Pieces		
1.					

2.					
3.					
4.					
....					
Total					

2.5. Records on mine obstacles demined (or removed) by unknown entities

#	RECORDS MARK	Records relating to same mine obst.		Unavailable records	Difference in data
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

2.6. Records on mine obstacles demined under CROMAC supervision

#	RECORDS MARK	Records relating to same mine obst.		Unavailable records	Difference in data
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

2.7. Records on mine obstacles not related to municipality/city

#	RECORDS MARK	Records relating to same mine obst.		Unavailable records	Municipality/city to which the mine obst. is related
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

2.8. Records on mine obstacles of undefined status

#	RECORDS MARK	Records relating to same mine obst.		Unavailable records	Reason for undefined status
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

**OVERVIEW OF DATA ON THE STATUS OF RECORDS ON MINE OBSTACLES POSITIONED
INSIDE MSA BOUNDARIES IN A DEFINED ADDITIONAL GENERAL SURVEY**

**1. RECORDS ON MINE OBSTACLES RELATED TO A
DEFINED MSA OF ADDITIONAL GENERAL SURVEY**

1.2. Records on mine obstacles completely inside defined boundaries of MSA of additional general survey

#	RECORDS MARK	Records relating to same mine obst.		Unavailable records	Area containing mine obst.
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

1.2. Records on mine obstacles partially demined up to boundary of defined MSA of additional general survey ("intersected mine obstacle " with boundary of defined MSA of additional general survey)

#	RECORDS MARK	Records relating to same mine obst.		Unavailable records	Area containing mine obst.
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

1.3. Records on mine obstacles that cross over municipality/city border in defined MSA of additional general survey ("intersected mine obstacles " by the administrative border with neighboring municipality/city)

#	RECORDS MARK	Records relating to same mine obst.		Unavailable records	Municipality/city into which mine obst. crosses over
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

OVERVIEW OF
STATUS OF DATA ON
RECORDS OF MI POSITIONED INSIDE BORDERS OF
MUNICIPALITY/CITY _____

1. RECORDS OF MI RELATED TO DEFINED MSA IN MUNICIPALITY/CITY

1.1. Records of MI that occurred inside the borders of a defined MSA in municipality/city:

#	RECORDS MARK	Records relating to same MI		Unavailable records	Area where MI happened
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

1.2. Records on MI that happened outside of MSA in municipality/city (in safe area):

#	RECORDS MARK	Records relating to same MI		Unavailable records	Difference in records data
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

2. Records on MI not related to municipality/city

#	RECORDS MARK	Records relating to same MI		Unavailable records	Municipality/city related to MI
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

3. RECORDS ON MI WITH UNDEFINED STATUS

#	RECORDS MARK	Records relating to same MI		Unavailable records	Reason for undefined status
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

**DATA OVERVIEW ON
STATUS OF RECORDS ON MI POSITIONED INSIDE MSA BOUNDARIES OF DEFINED ARE OF
ADDITIONAL GENERAL SURVEY**

1. RECORDS OF MI RELATED TO DEFINED MSA FOR ADDITIONAL GENERAL SURVEY

1.1. RECORDS ON MI THAT OCCURRED IN THE BOUNDARIES OF MSA defined by additional general survey:

#	RECORDS MARK	Records relating to same MI		Unavailable records	Area where MI occurred
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

1.2. Records on MI that occurred outside MSA defined by additional general survey:

#	RECORDS MARK	Records relating to same MI		Unavailable records	Area where MI occurred
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

2. RECORDS OF MI OD UNDEFINED STATUS

#	RECORDS MARK	Records relating to same MI		Unavailable records	Reason for undefined status
		Records mark	Pieces		
1.					
2.					
3.					
4.					
....					
Total					

**RECORDS
OF DATA COLLECTED THROUGH INTERVIEWS**

Annex K

Records mark		Survey mark	
--------------	--	-------------	--

1. Information on contact person

Name and surname of contact person		Age	
Address		Telephone	
Employment information		Telephone	
Wartime function			
Type of data collected			
Interview preparation method			

2. Information on location and time of interview

Location of interview			
Time of interview	Date:	Time (from - to):	

3. Interview (questions/answers)

4. Assessment of data dependability

5. Conclusion on collected data

Date: _____

INTERVIEWER

**RECORDS
ON EXISTENCE OF MINE OBSTACLES AND OTHER ORDINANCES BASED
ON DATA COLLECTED THROUGH ADDITIONAL GENERAL SURVEY**

Records mark		Survey mark	
--------------	--	-------------	--

1. Survey data

Municipality/city:	County:	Settlement:
Cartographic data	TK 1:25000	HOK 1:5000
CROMAC regional office:	Head of group:	Group members:
Basis for composing records on existence of mine obst. and ord.:		Date:

2. Information on Mine obstacle and ordinance locations

Cartographic name of location:	Prior location mark :	Prior area category:
New area mark:	Area size:	Area category:
MSA size decrease that formed new "P"	Previous state: m ²	New state : m ²

3. Geographic and topographic data on mine obstacle and ordinance positions

3.1. Reference point for determining mine obst. and ord. position	Reference point coordinates	
	X:	Y:

Description of reference point:

3.2. Orientation point positions of mine obstacles and ordinances

#	Name of orientation point	Azimuth rt - ot (s)	Distance rt - ot (m)	Coordinates of orientation point	
				X	Y
1.					
...					

3.3 Position of mine obst. and ord.

#	Description of mine obst. position	Azimuth ot-position mine obst. (s)	Distance ot-position mine obst.(m)	Coordinate position mine obst. and ord.	
				X	Y
1.					
...					

4. Data on number of mine and other ordinances by type and kind

#	Antitank (PO) mines		#	Antipersonnel (PP) mines		#	Other ordinances	
	Mine type	Pieces		Mine type	pieces		Type	pieces
1.			1.			1.		
2.			2.			3.		
3.			3.			4.		
...				
Total PO mines			Total PP mines			Total ord.		

5. Sketch of schedule and/or positions of mine and other ordinances in nature

Description of data on schedule and/or positions of mines and other ordinances:

6. Other information on the existence of mines and other ordinances and completed marcation

RECORDS TAKEN BY

(name, surname, signature)

RECORDS
ON MINE INCIDENT BASED ON COLLECTED DATA ON GENERAL SURVEY

Records mark		Survey mark	
--------------	--	-------------	--

1. General survey information

Municipality/city:		County:		Settlement:	
Cartographic data	TK 1:25000			HOK 1:5000	
CROMAC regional office:		Head of group:		Group members:	
Basis of records composing on mine incident:					Date:

2. Information on mine incident location

Cartographic name of location:		Area mark :	Area category:	
New area mark:		Area size:		Area category:
MSA size decrease forming new P		Previous state: m ²		New state : m ²

3. Geographic and topographic data on position of MI

3.1. Reference point for determining MI position

Description of reference point:	Coordinates of reference point	
	X:	Y:

3.2. Orientation point of MI

#	Name of orientation point	Azimuth rt – ot (s)	Distance rt – ot (m)	Coordinates of orientation point	
				X	Y
1.					
...					

3.3 Position of mine incident

#	Description of MI location	Azimuth ot-position MI (s)	Distance ot-position MI (m)	Coordinates MI position	
				X	Y
1.					
...					

4. Information on activated mine or other ordinances

Antitank mines		Antipersonnel mines		Other ordinances		Link of activated mine with mine obst. mark
Mine name	pieces	Mine name	pieces	Ord. name	pieces	

2. Sketch of activated mine or other ordinance activation location

Description of marcation as per sketch location

3. Accident information

MI date	VICTIM INFORMATION							Information on animal victim (description)
	Name and surname	Address	Age	Injury type				
				mpi	gpi	d	unknow	
Description of accident circumstances:								

Note: mpi - minor personal injury
 gpi - grave personal injury
 d - death

RECORDS TAKEN BY

 (name and surname, signature)

RECORDS
ON CHANGES TO MSA MARCATION WITH MINE THREAT WARNING SIGNS IN MUNICIPALITY/CITY _____

	Mark of survey or report from marcation	Date first sign posted at position	Sign coordinates as per map		Control date / sign removal / sign position change	Data on missing or permanently damaged sign			Conclusion on marcation		Marcation or changes in marking executed by (Name and surname)
			Y	X		Date sign was noticed missing or permanently damaged	Date of sign replacement	Date sign was reported missing/permanently damaged to the police or reported as needed or not needed	Position marked with sign (YES / NO / NOT NEEDED)	Type of sign (Large /Small)	
1	2	3	4	5	6	7	8	9	10	11	12
1											
2											
3											
4											
5											

MSA Municipality - city _____ marked on _____ position(s) of mine threat warning signs on (date) _____

Information on marcation changes in relation to previous state:			Notes:
Number of posted signs by prior state (initial state as per database):			
Established missing and permanently damaged signs (survey or marking control):			
Number of signs posted on positions of missing and permanently damaged signs (replaced signs):			
Number of missing and damaged signs by unknown perpetrator reported to the police:			
Number of prior sign positions no longer in marcation function (positions without signs):			
Number of new sign positions determined during marcation activities:			
Number of signs used to mark MSA:			
Number of positions that still need signs to be posted (marking not completed):			

Records taken (date): _____
 Signs posted by _____

RECORDS

From a meeting held with the representatives of local and regional authorities about the forthcoming activities of general survey of mine suspected areas in the area of

Municipality/City of _____

Location of the meeting: _____

Date of the meeting: _____, Time: from _____ to _____ hours

Meeting contents:

- 1. Introductory information about forthcoming activities of general survey of mine suspected area municipality/city of (planning foundation, goals and tasks of the general survey).**
- 2. Realization of the Demining plan of mine suspected areas in relation to the current state of MSA established by the general survey of the entire area of the of (area and square kilometers that were cleared - searched and excluded OI, financial costs, etc.)**
- 3. Assessment of realization of the Annual Demining Plan until the end of the current year (active demining – surveying projects, etc.)**
- 4. General survey implementation plan and forms of necessary aid stemming from the analysis of the situation and preparations for the forthcoming general survey of mine suspected areas of the municipality/city of**
(contacted persons estimated to have information on mine contamination or areas used at own risk, maintenance of MSA markings, required persons – guides who are familiar with the area surveyed, cooperation with town committees, associations, required data on social and economical indicators in MSA, etc.)
- 5. Discussion of participants of the meeting after the General Survey Implementation Plan is elaborated by the representatives of the CROMAC regional office and defining solutions according to established demands for necessary aid and other forms of cooperation (records are being taken of the discussion including names of participants and useful information according to the General Survey Plan)**
- 6. Conclusions of the meeting about forthcoming activities of general survey (precisely defined method of cooperation, aid, tasks, contact person information, time and place of cooperation in the field,**

etc.).

Endorsement of records:

Director of CROMAC regional office

Head of municipality / Mayor of

Appendix to the records

List of participants in the meeting about forthcoming activities of
the general survey of mine suspected area of the municipality/city
of _____
on _____

Num ber	NAME AND SURNAME	FUNCTION	CONTACT TELEPHONE	NOTES
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
...				

List of persons with duties according to the conclusions of the meeting

Num ber	NAME AND SURNAME	DESCRIPTION OF THE TASK
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		

9.		
10.		
...		

Annex P

INSTRUCTIONS FOR COLLECTING DATA THROUGH INTERVIEW

Content:

- Introduction
- Contact persons
- Establishing contact
- Methodology of conducting interviews
- Cooperation with representatives of local community
- Creation of records on collected information
- Records on information collected through interview (form)

INSTRUCTIONS FOR COLLECTING DATA THROUGH INTERVIEW

INTRODUCTION

Interview method for collecting information on mine suspected areas is necessary and very reliable. Through interview method we collect new information about mine contamination and conduct verification, i.e. confirm the credibility of original documents on mine contamination and other information from the database on the mine suspected area. It is particularly advised to use the method of interview with persons disposing of necessary data on mine contamination in the following circumstances:

- When there are no original data about mine contamination in war affected areas,
- When original data are incomplete or unreliable so they need to be amended and verified,
- When we have incomplete data and information about the place of incidents with people and animals, mine clearing during post-war time by the local community, mine explosions during scorching and other,
- When areas and buildings in mine suspected areas are used at own risk.

CONTACT PERSONS

Contact persons for collection of information are all the persons that provide data and information about mine contamination and other indicators of the situation in mine suspected areas through interview in the course of implementation of the general survey (socio-economic indicators, information on MSA currently being used, etc).

Contact persons are identified during preparations for general survey when analyzing original documents on mining and war activities and other information gathered during previous general surveys and demining activities.

These are members of military units that participated in planning, command and implementation of mine obstacles (commanders of troops, commanders and soldiers of engineering and other units that planted mine-UXO obstacles). Before talking to these persons, it is necessary during preparation to define specific queries about mine-UXO obstacles in the area of survey.

During the general survey, contacts are established with local population that has information on mine-UXO obstacles and situation on MSA (those who planted and cleared mines, who are familiar with mine contaminated area, who cleared mines on their own initiative, who saw or suffered a mine incident, who noticed fortification facilities, blockages and remnants of destroyed battle gear, who use or have information on usage of mine suspected areas and buildings at own risk, etc.). Interview with these people *often cannot be planned* and requires good personal preparation of the Interviewer and extensive

knowledge about the war activities, specificity of local community, and methods of guiding interview for the purpose of obtaining reliable data.

Collection of information of residence of persons that plan to be interviewed, i.e. their availability, is a demanding task, especially when dealing with refugees and displaced members of troops. The addresses of their residence need to be identified in cooperation with relevant state authorities (police administration and stations, defense offices), through contact established in communities where persons resided (town boards, relatives and acquaintances of the person), and other accessible and reliable ways of communication.

ESTABLISHING CONTACT

To establish contact for interviews with persons *mainly residing* in the area of the general survey is necessary to be planned in advance and realized in a place acceptable for both parties, in accordance with the information that need to be collected.

Interview with persons *not living* in the area of general survey may be conducted by:

- inviting the person (or persons) to official facilities or to some other location appropriate for interviews and receiving information,
- going to contact's address under specific circumstances (further distance, health state of person, fear of consequences of revealing information in official premises, transportation problems and other constrained circumstances).

Planning interviews with persons *living in other countries* (time and place) will depend on the assessment of usefulness of information or data the mentioned person is presumed to possess.

Interviews with persons living in other countries need to be conducted in cooperation with reliable mediators such as:

- Reliable individuals in contact with person (direct contact, correspondence, telephone interviews, through third parties,...),
- NGOs, associations and ethical societies,
- political parties "trusted" by the mentioned person.

Mediation in data collection is also useful if there are obstacles for establishing direct contact. In accordance to the scope and complexity of information indirectly communicated, the mediator may need to be educated beforehand, in order for the collected data to be complete, precise and useable. The education of mediators needs to facilitate:

- that no modification of key mine information (positions and content of mine obstacles) is made,
- that marking mines from memory (sketches and descriptions) contain key information,
- that poorly legible documents on mines (illegible handwriting, photocopies, etc.), if possible, are reconstructed and complemented,
- that during transfer documentation or other written information are not lost, guaranteed safekeeping of information from uninvited persons or any type of abuse.

INTERVIEW METHODOLOGY

Consequences of war rendered collecting information on mine contamination in certain areas more difficult. Hence, data collection on mine obstacles from the "losing army" is more difficult due to a lack of willingness to divulge information from the wartime period on events and individuals, fear of possible consequences and other similar things. These and other reasons make free communication on mine issues much harder, thus certain methodological adjustments are needed to interview certain contact

persons.

The beginning of interview needs to be adapted to the person (age, characteristics, education, consequences of war, etc.), with the aim of creating psychological conditions as background for obtaining information. One must *incite* a feeling of moral compassion and convince the person that his/her assistance in solving the problem is very valuable and a human obligation.

As an incentive for fruitful interview on the problem, the person should be updated with current information on mine victims, social and economic situation and other issues influenced by mine contamination, as well as current situation on demining but also the efforts being made by the state, with the aid of the international community and various donators, in order to clear mines out of former combat zones of the country as soon as possible.

During the interview it is important to eliminate any topics that would cause the person to feel indifferent toward the problem (current political affairs, inter-ethnic relations, etc.).

Obtaining information by asking precise questions using a prepared form has shown to be inadequate way to achieve the desired results from the interviewee that lacks the required level of expertise and is not psychologically ready to "be tested". The amount of information obtained, its exactness and precision, is proportional to the level of freedom and spontaneity experienced by the interviewee.

The interview needs to be spurred and guided with the aim of collecting data for the general survey area, as well as other mine contaminated areas if the interviewee possesses useful information (locations of planted mines, executors of demining, knowledge of third persons with more useful information...).

Inasmuch as the interview is linked to positioning mine obstacles, mine incidents and other indicators of mine contamination, mine suspected areas used at own risk by local residents, third party contacts, it is necessary to request the interviewee to join in a tour of the location in question.

The interview must be concluded by the interviewer expressing appropriate gratitude for the willingness of the person to cooperate and offer important information needed for demining and removing mine threat for local residents.

COOPERATION WITH LOCAL AUTHORITIES

As part of general survey it is necessary to establish cooperation with the users of mine suspected areas, first and foremost with the local authorities, in order to facilitate optimal conditions for contacting certain persons.

An appropriate thematic meeting should be arranged to inform the responsible department heads in local government on the upcoming general survey, as well as establish necessary forms of cooperation for its effective execution.

At the meeting the following issues should be pointed out and accepted:

- achievements in mine action in the area of the forthcoming general survey (demining and other methods used to render areas and buildings excluded from MSA, state of marking of mine threat ,...),
- goals and tasks of the upcoming general survey (general goals and/or defined specific tasks),
- mine situation in the area of the upcoming general survey according to available information,
- missing data on MSA,
- contact persons assessed to have useful information on mine situation and assistance is required assistance to make contact,
- necessary forms of cooperation during survey with local committees and persons that know the survey area,
- plan of general survey implementation.

The requests and conclusion put forth will take time to be realized as far as meeting with members of associations, local committees, public and other companies using areas and/or buildings in mine suspected areas and others assessed important for providing information on mine situation (hunters, hikers, fishermen, shepherds, mine victims, etc.). Hence, according to the set conclusions, and in the interest of effectiveness in collecting data, it is necessary to adapt previously drafted general survey implementation plan accordingly.

Records from the meeting on cooperation with local authorities and other users of MSA are drafted as per Annex O, as a model for meeting content.

RECORDING RECORDS ON COLLECTED INFORMATION

The records on collected information through interviews is an original document composed by the interviewer based on his/her notes on the interview (and memory). The records are composed in official premises and not in presence of the contact persons, especially if the contact persons choose to remain anonymous.

The records are signed by the interviewer and are not given to the contact person or other authorized persons for further signing.

CONTENT OF RECORDS

1. **Information on contact person** - in order to confirm the legitimacy of collected data and possible future contact if needed.

Unknown information about the contact person with whom it is planned to meet, should be obtained from (or in cooperation with) authorized bodies of the public administration.

Basic information about a contact person with whom unplanned interview was made in the field should be acquired exclusively on voluntary basis.

2. **Information on the location and time of interview** is essential for creation of records as an original document and possible further monitoring the situation in MSA according to collected data.

3. **Information obtained during interview** is recorded in the form of question asked by interviewer and answer given by interviewee, as well as spontaneous giving of information, if it is pertinent to establish new information on mine contamination and situation in MSA.

4. **Assessment of reliability of obtained information** is the prerogative for the interviewer to give personal assessment of how reliable are the collected data, based on the responses to posed questions, cohesion of answers with previously obtained information, as well as assessing the reliability of the contact person, during the meeting.

5. **Conclusions on collected information** are directly linked to the assessment of data reliability. Collected information is a starting point for making specific and conclusive decisions on the state of MSA, such as:

- it is evident there are mines in the area, thus it is necessary to compose records on the existence of mines,
- mine incidents are evident, it is necessary to compose records on mine incident ,
- there are other mine indicators based on which the areas need to be declared mine suspected,

- criteria have been met to exclude areas from MSA,
- areas are being used at own risk,
- collected data are incomplete and unreliable, thus further confirmation is needed,
- collected data confirm previous conclusions on the state of mine suspected areas or area,
- statements made by contact person are contradictory to known facts, are not legitimate or useable, thus should be disregarded in further procedures, etc.

The contact person may provide one or more type of information. In accordance to the conclusions reached about the collected information, further procedures are initiated (composed records on mine situation, mine incidents, inclusion in MSA, exclusion from MSA, defining categories for areas per demining methods,...).

**RECORDS
ON COLLECTED INFORMATION THROUGH
INTERVIEW METHOD**

Appendix for
instructions

Records mark		Survey mark	
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1. Information on contact person

Name and surname of contact person		Age	
Address		Telephone	
Employment information		Telephone	
Wartime function			
Type of information			
Interview preparation method			

2. Information on location and time of interview

Interview location			
Time of interview	Date:		Time (from - to):

3. Interview (questions/answers)

4. Assessment of reliability of information

5. Conclusion about collected data

Date of records: _____

INTERVIEWER

(name and surname, signature)

INSTRUCTIONS
FOR PROCESSING AND ANALYSIS
OF MINE INFORMATION

Contents:

- Introduction
- Documents with data and information on mines
 - Wartime documents
 - Postwar documents
 - Other documents and/or information
- Data processing
 - Procedures for data processing
- Analysis of information
 - Analysis of mine planting information
 - Analysis of demining records
 - Analysis of mine reports
 - Analysis of mine incident information
 - Analysis of human demining results
 - Analysis of cartographic data on mine obstacles
 - Analysis of cartographic data on fortified facilities and obstacles
- Analysis of data by inter-linkage (reconstruction)

INSTRUCTIONS FOR PROCESSING AND ANALYSIS OF MINE INFORMATION

Introduction

Data collection on mine suspected areas is done continuously from sources of documents and information on mine planting and military demining, planning and executing mine obstacles, mine incidents, self-initiated mine removal by unknown persons, other indicators of contamination of areas and/or buildings with mines and/or UXO.

Data sources are military and civilian archives with documents stored from the war, military personal that participated in planning, commanding and executing mine planting and military demining, mine victims, local residents, publications on wartime activities and other sources. Data sources are also documents created through mine action activities.

Checking existing data and collecting new data is done through general and technical survey of mine suspected areas.

The effectiveness of general and technical survey is based on detailed analysis of previously collected information on MSA, as analytical foundation for planning further activities.

Previously collected data for making the analysis are all available data in the CROMAC database, which was collected from various mine action activities.

1. Documents with information on mine obstacles

1.1. Wartime documents

- documents from engineering activities and objects (work maps, plans for securing engineering activities, orders, fortification plans, lists and records on mine obstacles and fortified obstacles),
- general and other (specialist) combat documents of planning, leading and reporting,
- documents from international peacekeeping forces related to monitoring separation zones between two opposing armed forces.

Documents from engineering securing may contain information on the types of fortification tasks and obstacles were carried out in the defensive zone, ferry and bridge crossings for tanks – amphibious vehicles, as well as separate fortified facilities and obstacles (communications centers, artillery and rocket positions, airports, warehouses, etc.).

Fortification plans include information on probable positions of military units, types, kinds and numbers of facilities for armed combat, protection, surveillance, etc.

Plans for obstacles include information on probable positions and types of fortification and mine obstacles. Records on mine obstacles include information on probable positions of mine obstacles, types of mines, mine planting systems, number of mines, etc.

General military and other (specialist) documents may include data that will contribute to understanding the organization, deployment and combat activities of military units on the target survey area.

1.2. Documents from the postwar period

- documents on mine incidents,
- documents created based on witness statements on mining, mine removal, mine suspicion and wartime events linked to the existence of mines,
- documents from previous general survey,
- documents from previous technical survey,
- documents from completed humanitarian demining,
- documents from authorized demining companies.

1.3. Other documents and/or information

- documents drafted based on newly discovered mines,
- documents and information on mine indicators available to, or publicly announced, by police, media and residents (written, telephone or interview methods).

Prior to entering data into the database and archiving it, each bit of data is individually processed and analyzed to reach clear conclusions on its reliability, i.e. the need for additional confirmation through survey methods.

2. Data processing

Processing collected data (or officially accepting it) is the continued task of recording data, obtaining a general idea of their source, comparison, assessment of usefulness and its protection.

Newly entered documents are compared with existing data on the MIS, while noticed errors are corrected and verified. Recording incorrect or misleading data into the MIS will affect later phases of the process and could diminish the level of reliability of other (more correct) data collected during survey.

2.1. Data processing procedures

- a) Recording – entering, saving and access to information for operative use.
- b) General access to the origin of documents –its creator, information or conclusions, period it was drafted and administrative area it belongs to.
- c) Assessment of usefulness – establish if the document, information or conclusion is useful in its original form, if additional checking or correction needs to be made through survey and other comparative analysis, or if it is of no use (copy, no elements for its positioning, illegibly, falsified, etc.)..

d) Protection from disappearance – document, information or conclusion, after initial assessment of usefulness, is copied and stored in its original and electronic forms, thus facilitating its further use in mine action activities. Original documents are stored in the CROMAC archive and are accessible to CROMAC personnel upon request.

Processed data are stored in the CROMAC MIS on the link principle: county, municipality/city, specific area or area.

Data processing and entry into the database is the continuous operative task and obligation of CROMAC regional offices Survey Department.

3. Analyzing data

Analyzing data is inspection of every aspect of data and their applicability for reconstructing the mine situation, as well as gradual linkage to other logical information wholes.

Analyzing data from general to specific and creating logical (related) groups will make it easier to understand, link and place them, into a map environment and context.

Data need to be grouped according to association (e.g., data on mines, data on demining, data on mine incidents, data on fortification, data on combat unit deployment, etc.). date of activity execution (from older to newer), opposing armed forces and their military units, persons that planted mines and all other activities that could help determine mine locations.

Analytical examination of data includes the following procedures:

- detailed analysis of each document (or information) regardless of the initial level of its reliability,
- linking together and adding missing information aided by other related documents,
- linking together and adding missing information aided by information from other kinds of documents,
- selection of data (or information) in relation to compatibility with their origin and related area,
- selectively discovering (presuming) mine contaminated areas that are not included in mine documents,
- defining missing information, i.e. demands for further data collection (confirmation and addition of existing or unknown data).

Dependable data established through analysis need to be drawn into analytical maps in vector form with maximum precision. Reliable data are used as guidance for analysis of other – less reliable data.

3.1. Analysis of Records on mine planting

Mine planting records reveal information on where mine obstacles (MEO) have been planted. This information may be expressed in various forms concerning content and appearance of document, depending on military regulations of the warring sides and other elements of their creation.

Mine planting records are original documents on executed mine planting (mine planting log). Its contents reveal relevant indicators based on which mine obstacles can be found and removed, i.e. demined. The records may include other (incidental) information on mines in the wider area (e.g., data on minefields linked to the one from the records, types and positions of missing orientation marks other records, etc.), which are important to notice during the analysis process.

3.2. Analysis of records on removing mine obstacles (demining)

Records on removing mine obstacles (demining log) is an original document on executed military (and not only military) demining of previously planted mine obstacles. Data on executed demining are documented by the executor in Records on Removing Mine Obstacle (military units of warning sides, international peacekeeping forces and other possible executors). Its contents reveal relevant indicators on demining mine obstacles (position for each detected mine, number of deactivated mines according to type, how were they handled, number of activated mines upon their discovery, mines not found and possible reasons for not finding them, demining effectiveness control, type and structure of demined MEO (mine-explosive obstacles) and other data. Particularly important are data pertaining to total or partial demining of mine obstacles.

3.3. Analysis of reports of mine reports, the existence of mines and other ordinances

Reports of persons – witnesses of mine obstacles are data that are built in initial analysis as more or less reliable (presumed) and the process of creating an initial analysis can be useful as realistic data or guidance during survey of MSA.

This group of data is composed of collected information from people that planted mines, recognized mines, removed mines on their own, saw or experienced a mine incident, noticed fortified facilities and obstacles, UXO, etc.

In accordance to the level of assessed legitimacy, during analysis procedure it is necessary to create a link to original documents. Otherwise, there is no knowledge of its affiliation to available mining or demining documents, and they need to become objects of general or technical survey.

3.4. Analysis of mine incident data

Mine incident records are original data on locations where mines and other ordinances have been activated, causing injury or death to members of military units, civilian population and animals. Its contents give relevant information for confirming mine locations according to known records on mining and information on unknown mine locations.

3.5. Analysis of results of humanitarian demining

Humanitarian demining records are original documents that, in accordance to the Humanitarian Demining Act, confirm that an area that was treated by pyrotechnical methods is completely clear of mine threat and has no mine contamination. Its contents offer reliable indicators useful to create initial analysis and reconstructions of the mine situation in the planned area for survey.

During the process of reconstructing mine situation, demining records on unknown mine obstacles are particularly important, as they provide a source of information on previous mine positions.

Positions of mines located and demined (or mini-explosive obstacles as wholes) are drawn in vectors on topographic maps during reconstructing the overall mine situation.

3.6. Analysis of cartographic data on mine obstacles

A work map (or plan) of mine obstacles is a document that depicts barrier zones (or areas) of the combat responsibility of military units.

In analyzing maps of mini-explosive barriers it is necessary to establish a close link and possible agreement

between the map and available data with all indicators of wartime mine planting reached in the analysis process:

- Records on mini-explosive barriers (number of mine obstacles, position, width and depth, number of entrenched mines according to type and activation methods),
- Records on demining unknown mine obstacles (position, amount of removed mines according to type and activation method, width and depth of removed mine obstacle),
- Records of humanitarian demining of unknown mine obstacles (position, number of mines found according to type and activation method, width and depth of space where the mines were found),
- Records on mine incidents (position of mine incident, type of mine that was activated, activation method),
- Data on fortified facilities and obstacles (positions, types, distance from mini-explosive barriers presented on the map),
- Other collected information on wartime mine planting indicators (statements of people, etc.).

Positions of mini-explosive barriers that are not confirmed by existing data from other sources are drawn into the map (transferred) and id marked as presumed and is under further investigation.

3.7. Analysis of cartographic data on fortified facilities and obstacles

Data on fortified facilities and obstacles are original information that can be in shown textual form as orders, table form or schematic form on topographic maps. They are drafted as per organized defense (or other combat activity) in a certain area. They portray elements of combat organization and as analytically concluded information, possible mini-explosive barriers in defense organization.

By analyzing data on fortified facilities, their positions and linear spread need to be established as mine indicators. By comparing and linking fortified facilities and obstacles (position, type, kind, number) with other available information, the effectiveness of assessing the position of mine obstacles will increase, as will reconstruction of mine situation and the boundary of MSA. Particularly valuable are data on topographic maps (and other documents) with graphic descriptions of positions and linear spread of deployed fortification.

Positions, i.e. vector spread of fortified facilities and obstacles are drawn onto a map with precise measurements and presumed natural position.

4. Analysis of data by inter-linkage

Linking data includes detailed investigation of two or more documents in order to establish possible cause and effect relations and draw the appropriate conclusions.

With individual data analysis, not a single bit of information that is any less reliable than others, cannot be eliminated as unreliable or useless. Further procedures take less reliable data and connect it to other data in order to try and remove information gaps, rendering them (objectively possible) useful.

In linking data, the reliability of mine indicators needs to be investigated as less reliable data. Thus, for example:

- linking data on fortified obstacles with individually established mine positions may put forth valuable information on the linear spread of mine obstacles,
- or based on data about a mine incident (position and type of activated mine) it is possible to get a more precise location of mine obstacles in the wider vicinity, if records show unreliable data on their positions , or
- based on data on positions of found mines through demining, their original location and, distance from fortified facilities, it is possible to conjure an entire systematic mine situation in an area for which there is no original data, or
- by comparing data from a work map on mine obstacles with available records on mines, it is possible to increase the reliability of both data sources, or

- by comparing records on making a path through a minefield with information on control points or assault activities (or retreat) it is possible to reconstruct the existence of minefields in the area, locations of storing mines for future closing of the path, causes of missing mines in minefields in the direction of assault paths, etc.

The analysis of data through inter-linkage is a systematic process leading to conclusions. It depends on experience, professional judgment, as well as understanding sources and areas where the data was collected from. New information is compared to already known data and/or suspected data. This procedure may increase the trust in the legitimacy of data sources, or bring up new questions on the state of MSA and the necessity to collect more information through technical survey.

Analyzing data by inter-linkage is applied through general survey activities while creating an analysis for survey of MSA, especially in the final analysis of the survey in reconstructing the mine situation.