Assess the need for establishment of a SAR team in a community

A review of experience in response in an event that resulted in collapse of structures revealed that many of the victims of light entrapment are saved by people on the spot.

This underlines the importance of rescue skills, first effective aid and first aid in trauma events, as essential to reduce morbidity and mortality. Each community, which has a search-rescue team, will face a unique complex situation, requiring special equipment and training for an effective and safe solving of the problem.

Experience to date has shown that immediately after the most common major disasters, first response for entrapped victims under the rubble and injured, is given spontaneously by the people well-intentioned but unprepared and which not pays particular attention to security measures. In some cases, further loss of life is avoided.

But often, this is not the case, claiming the spontaneous relief action is for the serious injured and very complicated problem.

Minimum requirements of the management of a SAR team

Worldwide a large number of states have created search-rescue teams (SAR). To be used in search-rescue actions under UN International was created an international advisory group of search-rescue operations (INSARAG) in 1991 [1,2,3,4].

This group of experts established the minimum levels of equipment, training and operational procedures that SAR teams must follow to provide an effective international SAR aid.

And each component of the search-rescue team must perform their duties in a highly professional way (whether professional or volunteer).

Specific principles of SAR concept

- Clearly defined missions of SAR team;
- Flexible and varied organizational scheme;
- Appropriate equipment for specific missions of the team;
- Adoption of standard operating procedures to ensure a surge capacity;
- Adoption of standard procedures for selection, preparation and verification of SAR team members;
- Ensure adequate own logistical capacities SAR for team missions;

Search and rescue is an activity of utmost importance after events with building crushing and a number of entrapped victims in the rubble and different vehicles collisions. There are three different levels of SAR activities: light that can be performed by unspecialized people with a minimum of tools; medium that is performed by teams that could extricate the victims mainly from vehicles, and heavy that is performed by the specialized SAR teams, that had heavy tools that allow them to reach to the victims buried deep in the rubble.

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- Associating the team in the short term, some experts on specific issues in SAR missions;
- Ensuring operational compatibility with other SAR teams, as recommended by INSARAG. [1]

Theoretical principles of Search

Theoretical principles guiding the search are listed below as [2,3]:

- search and rescue is an emergency situation. Search is an emergency situation because:
  - in most cases, the subject of search and rescue requires emergency care;
  - in most cases, the subject of search is in need of protection;
  - time and weather conditions destroy traces;
  - Reduce the difficulty of a rapid response search.

To meet the emergency nature of the search, the team manager must:

- to ensure a rapid response;
- to continue research and rescue at night;
- to mobilize and maintain as much in search field;
- To create a positive motivation to the team with which they work.

Search is a task of solving the unknown

Finding a lost person can be compared to a detective story. Traces of missing persons can be found only if the search manager coordinates the actions by appropriate investigations, interviews and other related activities.

This principle refers to:

- Traces are more numerous than the subjects of search. Each subject leaves many traces in the ground (in number and in shape);
- Substantially reduce the difficulty of finding traces of search.

Search Management

The management of search actions means the effective coordination of efforts of those charged with finding the lost persons.
Search management actions are important because if the search effort is not well planned, organized, coordinated and executed, this is due to mistakes at the management level.

**Misunderstanding of the specifics of the search work [4,5,6,7];**

*In this context, the most common mistakes made by managers of the search actions are:*

- Absence of pre-planning or failure to follow recommended procedures in this;
- Misuse of existing resources (in different order than normal);
- Inability to provide effective leadership of all those involved in the search;
- Adoption of an inappropriate work program, which lowers the time manager’s performance.

Evaluation of vulnerabilities on the conduct of search actions

To do the initial planning of a search action is necessary to conduct an assessment of the kind of problems that will need to be solved for effective use of search. [8,9,10,11.12] Such an assessment will be useful for:

- Initial planning and training activities;
- Allocating resources and preparing standard operating procedures;
- Fitting choice and composition of the search team;
- Taking measures to limit risks requiring action search.
- Evaluation is a systematic investigation of the potential situation that may lead to search activities by analyzing the following elements (for a given area):
  - Area of geographical features;
  - Information on the demographic situation;
  - Available resources of the area to conduct search activities;

Based on information received and the initial plan of action, manager of search actions may draw the Plan of Action (POA), which represents the initial plan of action tailored to the specific case to be solved. Drawing sequences of POA are:

- Check (possibly redistribute) staffing of the management team and to the search.
- Switch position on the map and update it regularly.
- Establish a psychological profile of the person sought.

**Search setting project goals.**

Determine the search area and its segmentation.
Determine the probability of finding missing persons in an area segment. Resources allocated team(s) of search.
Transmit orders to search team’s actions (required in writing).

**Coordinate the search.**

It is important to stress that the action plan divides the maximum period of 12 hours (after that, especially field staff, should be changed).

**How to conduct the investigations and interviews**

Investigative techniques often are not properly used or are used with delay. An investigation conducted and performed well in time can reveal important information to carry out search activities, achieving a significant savings of time, effort, money and lives can.

**General principles of investigation are:**

- Do yourself a picture of the situation, from the data and information we have at that time (avoid the first way to do form an opinion and then to search that data and information to confirm this view).
- Search activity trace is a continuous process (not stop until the missing person is found).
- Not start an investigation if you do not have a minimum of data and information.
- Not minimize the importance of traces.
- One person may not know, accurately, all facts that occurred.
- By finding traces of the missing person is reached. Greatly reduces the difficulty of finding their search activities.

**Tactical methods to limit and split the probable search area.**

When planning, organize and carry out the search, does not use the search likely derived from the calculation.

Starting with this area is a limitation (reduction) of it, justified by the following findings with practical considerations:

- The search area is smaller, the search time is reduced and the chances of finding of the lost person grow.
- Often the material and human resources are limited.
- Configuration and behavior of lost land are inefficient conduct search in parts of likely search area.

**General rules for intervention**

In general, the intervention includes the following phases:

- Research;
- Search;
- Save.

**Research**

Aims at providing continuous data necessary to conduct the search actions - saving by identifying characteristics of destruction districts and their evolution over time.

**Search**

Search is efficient if it is systematic and carefully avoids unnecessary duplication of efforts and ensures the necessary data rescue actions.

**The most common search techniques used are:**

a) Traditional Search

It usually runs in modules of three rescuers, a scheme based on research by voice call. The
rescuers are moving in a triangle in a given area and will mark areas to search.

b) Search by canine

Most countries have opted to organize a search mode of victims with dogs, composed of three people (one of whom is head of the team) and three dogs.

This organization facilitates in particular, issues of training, equipment, equipping, feeding, etc.

In case of intervention, the module can work group, or separately (as reinforcement for the different units and formations of civil protection, specializing in search-rescue actions).

Generally the head module, after receiving the mission, decides to meet its organizational scheme.

c) Know your limits

Many well-meaning volunteers were injured during rescue operations, because not paid attention to their physical and mental limits. As a member of a search-rescue mode you should know very well both physical and mental limits and always control your own state.

d) Using tools and equipment

Rescue tool can be any tool that can be used to find and reach to the victims or to move large objects in the path.

Tools and equipment can vary greatly and therefore their use should be as good, even if their need to be used is dependent on the type and extent of the damage. Therefore supply must be planned and equipped with tools and equipment before intervention to cope with the concrete situation of the accident.

The specific Search Management

The management actions search means the effective coordination of efforts of those charged with finding lost people.

Search management actions are important because if the search effort is not well planned, organized, coordinated and executed this is due to mistakes in management level:

- misunderstanding of the specifics of the search work;
- lack of knowledge and information in the field;
- lack of experience or motivation;
- Insufficient understanding of the responsibilities arising from making this work.

In this context, the most common mistakes made by managers of the search actions are:

- absence of pre-planning or failure to follow recommended procedures in this;
- misuse of existing resources (in different order than normal);
- inability to provide effective leadership of all those involved in the search;
- Adoption of an appropriate non-work program, which lowers the time of performance manager.

To meet the requirements listed above, the manager of search activities must possess the following qualities [11,12,13,14]:

- Integrity;
- Courage;
- Initiative;
- Tact;
- Enthusiasm
- Fairness;
- Endurance;
- Loyalty;
- Efficiency;
- Responsibility.

CONCLUSIONS

Attention should be given to assessment resources to full use of every resource. To better assess the resources needed for a mission time required to answer 6 basic questions:

- Availability (resource is ready for use or performance of preliminary proceedings are necessary?).
- Reaction time (how long the resource becomes available?).
- Capacity (resource can be used quickly, effectively and safely?).
- Limitations (what physical limitations, mental, communication, etc. Can occur in use of resources?).
- Book (which other resource may be used when the original is not available?).

References:

6. *** Search and Rescue ATP- 10 (D), STANAG 3552, N.A.T.O.