

Light Teams INSARAG(draft)

Discussion paper LTWG

Introduction

A Light Teams Working Group (LTWG) was established in March 2016 following the INSARAG Steering Group (ISG) meeting in Geneva on 3 February 2016. In response to feedback from the INSARAG network, the ISG has directed that the LTWG is established to investigate the roles and responsibilities of Light Urban Search and Rescue (USAR) teams in the international framework. A video conference was held on 14 April 2016 to scope the project and seek input from working group members to form a starting point for discussions.

The LTWG met for the first time in Geneva, Switzerland from 15-17 June 2016 to investigate and discuss the requirements for Light USAR Teams in International response environments.

Currently there are 46 INSARAG classified USAR teams globally, consisting of Medium and Heavy teams. There are also an unspecified number of 'Light USAR teams' that respond to international earthquake events that may or may not be aware of the coordinated response provided by UNOCHA and INSARAG. Discussions within the LTWG identified the resolve to *'make recommendations to the Steering Group of what can be expected of Light USAR teams in international response to earthquakes'*, and *'identify a system that can be used to measure quality for light teams'*. The early discussions resolved that light USAR teams need be encouraged to be *'in'* INSARAG, to provide them with leadership and a single operating system, as opposed to the possibility of the light teams banding together in an alternate group environment. This is seen as the optimum method of building the coordinated *Preparedness - Response* methodology within the light team fraternity. There are also teams, that are members of INSARAG but not classified, some of these teams are of a light makeup and further engagement through this process is necessary.

The concept of Light USAR teams has been discussed at length throughout the meeting, with a position taken that Light USAR teams must be:

1. Able to provide a level of service above that of a National Light USAR Team. Specifically the light team must be able to 'value add' to the response, not simply provide another resource at the same level of capacity as the in-country National resources.
2. Able to provide the five core functions of the USAR capacity: Management, Search, Rescue, Medical, and Logistics. Teams that are for example; specialist search; specialist medical or similar, are not classed as Light USAR teams under the INSARAG guidelines.
3. Able to provide one team member to support either the OSOCC, RDC, or UCC and still continue to function as an operational Light USAR Team for the entire period of the team deployment.

4. Self-sufficient in country for a period of five work days, plus travel in and out of country.
5. Aware and compliant with INSARAG reporting and coordination standards as listed in the INSARAG Guidelines.
6. Able to perform an USAR operation at one site for a period of 12 hours.

The concept of search capacity was discussed at length, with a recommendation that Light teams should have an option to provide Technical Search **or** Canine Search within their team, but that if only Canine search was used, that two dogs would be needed on the team.

The Benefits of Light USAR teams being affiliated with INSARAG.

Light USAR teams will respond to earthquake incidents irrespective of whether or not they are affiliated with INSARAG. The benefit of a coordinated response can be achieved with all responding teams having knowledge of INSARAG and the coordinated disaster response protocols that exist within the UNOCHA / INSARAG model. It must be acknowledged that individual teams will decide if they wish to become affiliated with INSARAG, and the Light USAR Team is the base level that is required for teams to be recognised as part of the INSARAG fraternity.

Light USAR teams may be made up of a single entity team, or may be formed from Classified Medium or Heavy teams, that are deployed in a light format. Flexibility is the key to successful operations, with classified Heavy and Medium teams already holding the capacity to deploy in a lesser team strength than their classification.

The gap between National Light Teams and International Light Teams is seen as more than the ability to coordinate and report within the INSARAG systems, which is imperative for international operations. The Light USAR teams for international deployment should have a higher capacity to ensure that they can provide more than the in country light teams. Specifically, the Light USAR teams deploying internationally should have the ability for USAR operations to:

1. Breach non-structural mesh reinforced concrete up to 100mm thick
2. Cut non-structural timber up to 200mm thick
3. Cut light steel plate up to 3.2 mm thick
4. Shore a window or door
5. Apply cribbing to stabilise a slab
6. Lift 500 kg (levers etc)
7. Tow a load of 500kg (Tirfor winch or similar)
8. Work safe at heights and rope rescue a patient from 4 metres above or below the work site
9. Provide worksite lighting

All these tasks and capacity are designed in reflection to the existing Medium and Heavy standard and possible to perform with hand tools and small mechanical tools.

The configuration of USAR Light Teams (international)

The INSARAG guidelines provide a standard configuration for Light national teams, listing a standard light team as having 18 members. To determine the size and configuration of a Light team in an international environment the LTWG started with describing the tasks which should be performed in the five functions; Search, Rescue, Medical, Logistics and Management. ASR 3

and ASR 4 assignments are the most demanding on the capacity and capability of a team and that is why the tasks are designed on a ASR 3 assignment. The tasks which should be performed in the different functions during an international USAR operation are directive to the amount of staff which should be available to be effective. For every function the minimum amount of personal has been determined. The total overview of the tasks and the minimum of staff per function makes it possible to determine the highest level of integration of staff between functions. This method was used to design a Light team for international operations knowing the operational requirements mentioned in the introduction.

The LTWG discussed each component of the USAR deployment to determine the minimum number of staff required to complete the full list of USAR activities in a light team. The following list of capabilities was discussed as the base level for a Light USAR Team (international), with a summary of the minimum Light Team provided

Search tasks:

- To conduct Physical Search, especially initial Physical Search – depends on area assigned for line, hailing and 360⁰ search.

Staff: 2+2=4 ability to conduct 360⁰ and Line and Hail simultaneously

- Search capability will consist of either Technical Search (optical and listening/seismic devices) OR canine live-scent dog teams. It is preferable to have a combination of both. If only one canine team is available, this has to be in conjunction with Technical Search (dog team is one dog/one handler).

Staff: 1+2= 3 e.g. one dog hit should be backed up by another separate dog (and handler), equates to 2 USAR technicians or 1 USAR technician with technical search equipment.

- Technical search includes optical and listening/seismic devices requiring 1-staff for optical and 2-staff for listening/seismic devices.

Staff: 1+2=3 this provides an optical and listening/seismic capability within 1 team

- Site safety (including environmental monitoring) is required for each tactical worksite. As a light team will only be working on 1 worksite, careful consideration should be given to site safety in different areas of 1 worksites for site safety associated with site activity.

Staff: 1-staff is required from management (i.e., engineer, HM, occupational safety expert). 1=1

- Medical provision for initial treatment of member injury/illness. Paramedic will provide direct medical support to the scene of operations for team members and any victims rescued. Second medic is normally a Doctor available to the scene but will more than likely be at the Base of Operations (BoO)

Staff: 1 staff, 1=1 this should be of paramedic level.

- Translator/guide

Staff: 1=1 this could be provided by the before entry into the affected country or acquired once in country.

Search group configuration A:

- 2 dogs/2 handlers, or 1 dog/one handler, or 1 optical + 2 listening
- 1 safety officer for safety for structural assessment, environmental monitoring, staff welfare for PPE, R/R etc
- 1 Medical provider at worksite

Search group configuration B:

- 2 dogs/2 handlers and/or capability to have technical optical or listening capability.
- 1 safety officer for safety for structural assessment, environmental monitoring, staff welfare for PPE, R/R etc
- 1 Medical provider at worksite

Rescue tasks:

- Safety for structural assessment, environmental monitoring, site lighting, staff welfare for PPE, R/R etc.

Staff: 1 safety officer/(building)engineer

- Breaking/breaching with the ability to set up, operate and rotate tool operatives on the worksite.

Staff: 6 rescue technician, combined tasked

- Removal of timber frame, metal debris and mesh-reinforcement.

Staff: 6 rescue technician, combined tasked

- Shoring to create shores required for construction type, this can include horizontal, vertical, door and window shores.

Staff: 2 rescue technician

- Lifting/towing, rigging and moving a mass in the horizontal and vertical configuration

Staff: 3 rescue technician

- Rope work (vertical/horizontal lift systems, safety at heights) The operational use of rope work to access a single floor depth, approximately 4 Metres.

Staff: 3 rescue technician

- Medical provision for initial treatment of member injury/illness. Paramedic will provide direct medical support to the scene of operations for team members and any victims rescued.

Second medic is normally a Doctor available to the scene but will more than likely be at the Base of Operations (BoO)

Staff: 1 staff, 1=1 this should be of paramedic level.

- Information management, management of the worksite.

Staff: 1 technician as a SAR Group Leader

- Patient movement (internal, external)

Staff: 5 members, this equates to 4 technicians for patient loading and transportation and 1 medic for casualty management and overseeing loading and airway management.

- Site recovery, to breakdown and strip out all equipment from worksite.

Staff: 2 technicians

Rescue configuration:

- 6 staff for breaking/breaching/cutting/shoring/rope-work/movement/recovery
- Group Leader includes information management
- Safety Officer
- Medical provider-paramedic

Medical tasks:

- Medical treatment and support of the USAR team and canines (if used)

Staff: 2, minimum 1 Doctor (to provide clinical governance); minimum 1 paramedic, critical care nurse. (Must meet same medical treatment requirements for medical care as required for Medium and Heavy USAR teams)

Logistical tasks:

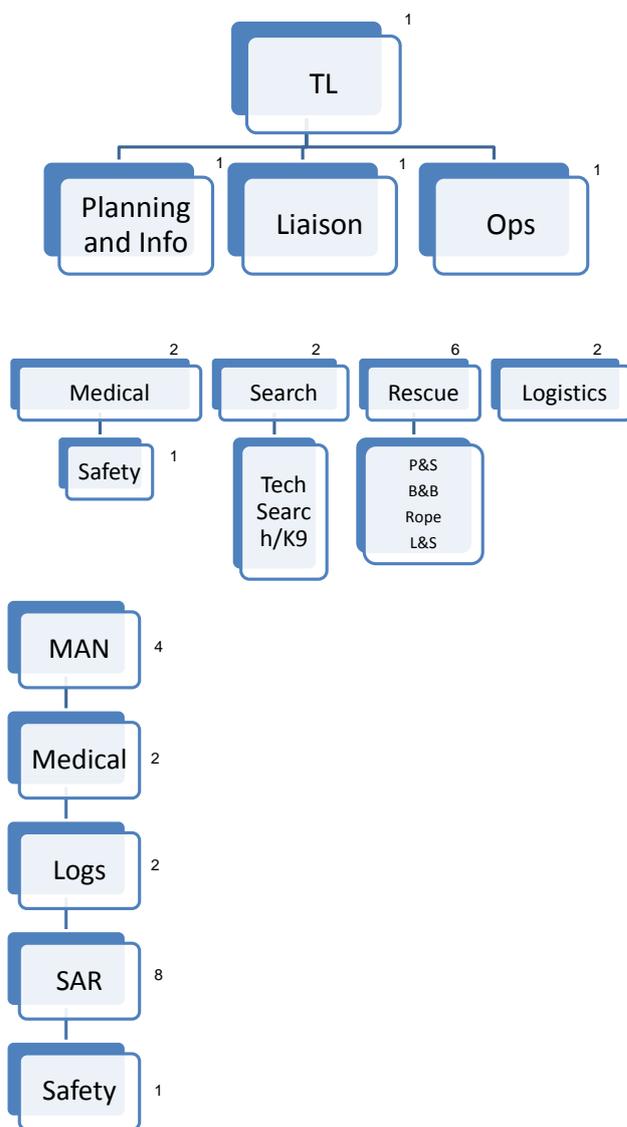
- BoO management, in liaison with team management
- Equipment management and repair, booking equipment in and out and tracking all assets
- Supply/resupply, of equipment consumables
- Food/water, food & water management and/or water filtration management
- Sanitation management for team
- Safety including industrial hygiene, although on site safety will be managed by site safety and group management
- Decontamination, following gross contamination on site and prior to return to BoO and inside BoO
- Communications, overall management and logistics of team communications systems, including team to team comms, team to command comms, team to international comms.

Staff: 2 logistical technicians, to provide the management and operations of logistics for an International Light USAR team.

Management tasks:

- Management of the team
Staff: 1 team leader
- Planning and information management
Staff: 1 planning officer
- Coordination support
Staff: 1 liaison officer

And 1 Operational officer (who is also Group Leader) to manage work on the single worksite.



Thorough discussions were undertaken to determine the appropriate size of a light team for international deployment, with the underlying factor being that the team must have the ability to deploy one staff member to support the OSOCC, RDC or UCC for the duration of the deployment if necessary, without affecting the team's performance.

The LTWG discussed about the possibility to combine a Light team with only a search component to a Light team with only a rescue component during an earthquake incident. The LTWG has the opinion that an integration in the field during an earthquake incident is not achievable without safety risk for the personnel involved. Teams who work together after an earthquake should integrate before an incident and so make it possible to train their search and rescue procedures together to minimize the occupational risks which can occur during an urban search and rescue operation.

A base line concept was established on a maximum of integration of tasks in and between the five functions. This provides a suggested minimum size of seventeen staff, consisting of:

1 x Team Leader

1 x Deputy Team Leader/ Liaison, UCC, RDC, OSOCC as needed
1 x Planning/information officer
1 x Operations Officer/SAR Group Leader,
8 x Search and Rescue (including dogs if deployed)
2 x Medical staff (Including at least one Doctor)
2 x Logistics
1 x Safety

TOTAL = 17 staff

The legislation of a country or the organisational conditions can have influence on the possibility of integration of tasks. Therefore it is suggested to aim for a staff which is variable between 17 to 20.

Governance and Quality Assurance

The inclusion of Light USAR teams (international) into the INSARAG response fraternity will bring with it a need to recognise the teams at some level. Significant discussions were undertaken during the LTWG meeting with the following options agreed, for discussion with the INSARAG Team Leaders at the September 2016 meeting. The INSARAG Secretariat suggested that the concept should be around "Light Teams – Light Process". The options are provided in no particular order.

- Option 1. Light Teams (international) could be classified at the same level as Medium and Heavy teams. This would require an IEC/R process with mentors, classifiers and engagement at international level by the Team leaders. This option is not recommended or sustainable due to the dramatic increase of classifications and reclassifications that would be required.
- Option 2. Light Teams (international) could be 'Classified, Affiliated, or Compliant' with INSARAG by:
 - Engaging a mentor from a classified team to provide assistance and explanation of the INSARAG requirements and guidelines.
 - When the Light team and mentor is confident that the Light USAR team has achieved the required standard, a single assessor from another Classified team will conduct an assessment of the team including checks of documentation and readiness, including the observation of an exercise (24 hour) to prove field competency, and advises the INSARAG secretariat of the result.
 - Conducting a re-currency exercise every five years as per the IER schedule.
- Option 3. Light Teams (international) could be 'Classified, Affiliated or Compliant' with INSARAG by:
 - Engaging a regional mentor from a classified team to provide assistance and explanation of the INSARAG requirements and guidelines.
 - When the Light team is competent in capacity, the mentor signs off the team and advises the INSARAG secretariat of the result.
- Option 4. Light Teams (international) could be 'Classified, Affiliated or Compliant' with INSARAG by:
 - Completing a desktop capacity assessment against the INSARAG Guidelines to determine the team's ability to participate internationally. This would in effect be

a local or national sign off, with no engagement with INSARAG. This option would need to consider the consequences of quality assurance if INSARAG is not involved in the assessment.

- For all options, the question of funding was discussed. Currently the costs of engagement are covered by the engaging team. In the scenario that Light Teams do not have classifiers appointed, does the classifying team cover the cost of travel and accommodation for classifiers.
- Is there an option to have Light Teams classify light teams, as per the current IEC/R protocols?

Identification

The question of identification of INSARAG Light Teams (International) was discussed at length, with option including: INSARAG Light Badge, Plain INSARAG Badge, Green INSARAG Badge, Square INSARAG Badge, No Badge. There is a common thought that teams will be desirous of having an INSARAG badge if they are successful in achieving the requirements of a USAR Light Team (international).

Following significant discussions it was recommended that teams that meet the requirements of USAR Light teams (international) could be provided with a standard INSARAG blue badge, without a weight or year of classification, to distinguish between the Light, Medium and Heavy teams.

Beyond the Rubble Pile

International Light USAR teams will also have the capacity to provide medium term support to a disaster affected country, by offering up specialist skills, such as coordination, WASH, structural engineering etc.

Points for discussion by the Team Leaders:

1. That USAR Light Teams (international) should be encouraged to join the INSARAG fraternity and become familiar with the coordination and reporting processes for operations.
2. That the Light Teams (international) must be able to provide a higher level of capacity than a National Light Team (as listed)
3. That the size and configuration of the Light Team is appropriate at 17 (nominal).
4. That an assessment and quality assurance option is discussed and recommended, including discussion on the terms 'Classification, Compliance or Affiliation' with INSARAG.
5. That an appropriate identification method (badge) is agreed for the Light teams.
6. That Medium and Heavy teams can change their configuration to Light if asked for.

