OCHA United Nations Office for the Coordination of Humanitarian Affairs

INSARAG Preparedness – Response

INSARAG Guidelines

Volume II: Preparedness and Response

Manual B: Operations

Contents

Abbreviations

ACSU	Activation and Coordination Support Unit
ASR	Assessment, Search and Rescue
BoO	Base of Operations
GDACS	Global Disaster Alert and Coordination System
IEC	INSARAG External Classification
IER	INSARAG External Reclassification
INSARAG	The International Search and Rescue Advisory Group
NGOs	Non-governmental organisations
NDMA	National Disaster Management Authority
LEMA	Local Emergency Management Authority
OCHA	United Nations Office for the Coordination of Humanitarian Affairs
OSOCC	On-Site Operations Coordination Centre
RCM	Rapid Clearance Marking
RDC	Reception/Departure Centre
SAR	Search and Rescue
SOPs	Standard operating procedures
UCC	USAR Coordination Cell
UN	United Nations
UNDAC	United Nations Disaster Assessment and Coordination team
USAR	Urban search and rescue
VO	Virtual On-Site Operations Coordination Centre

Introduction

The INSARAG Guidelines comprise three volumes: Volume I: Policy; Volume II: Preparedness and Response; and Volume III: Operational Field Guide. This manual, Operations, is part of Volume II, which includes Manual A: Capacity Building and Manual C: INSARAG External Classification and Reclassification (IEC/R).

This manual is targeted at the national INSARAG Operational Focal Point, the Urban Search and Rescue (USAR) Team Management, and the INSARAG Secretariat with the purpose of providing guidance in the training, preparations and coordination of a USAR team for national and/or international operations. It is based on the minimal standards and it describes the required capabilities for coordinated operations.

Tactical and technical details are described in Manual A: Capacity Building, Manual C: IEC/R and Volume III: Operational Field Guide.

Important note: The Guidelines can be downloaded from www.insarag.org. Hard copies in English (and translated versions, where available) can be requested from the INSARAG Secretariat by email on insarag@un.org.

This internationally accepted document describes the International USAR Response Cycle, the roles and responsibilities of the key stakeholders in a USAR operation, such as the United Nations (UN), the affected and assisting countries, and the international USAR teams.

It also describes the five components of USAR capability (Management, Search, Rescue, Medical and Logistics) within the USAR Response Cycle. This manual also outlines the USAR coordination structures and methods, including the INSARAG Marking and Signalling System and the link to the new On-Site Operations and Coordination (OSOCC) Guidelines.

1. International USAR Response Cycle

An international USAR response has the following phases:

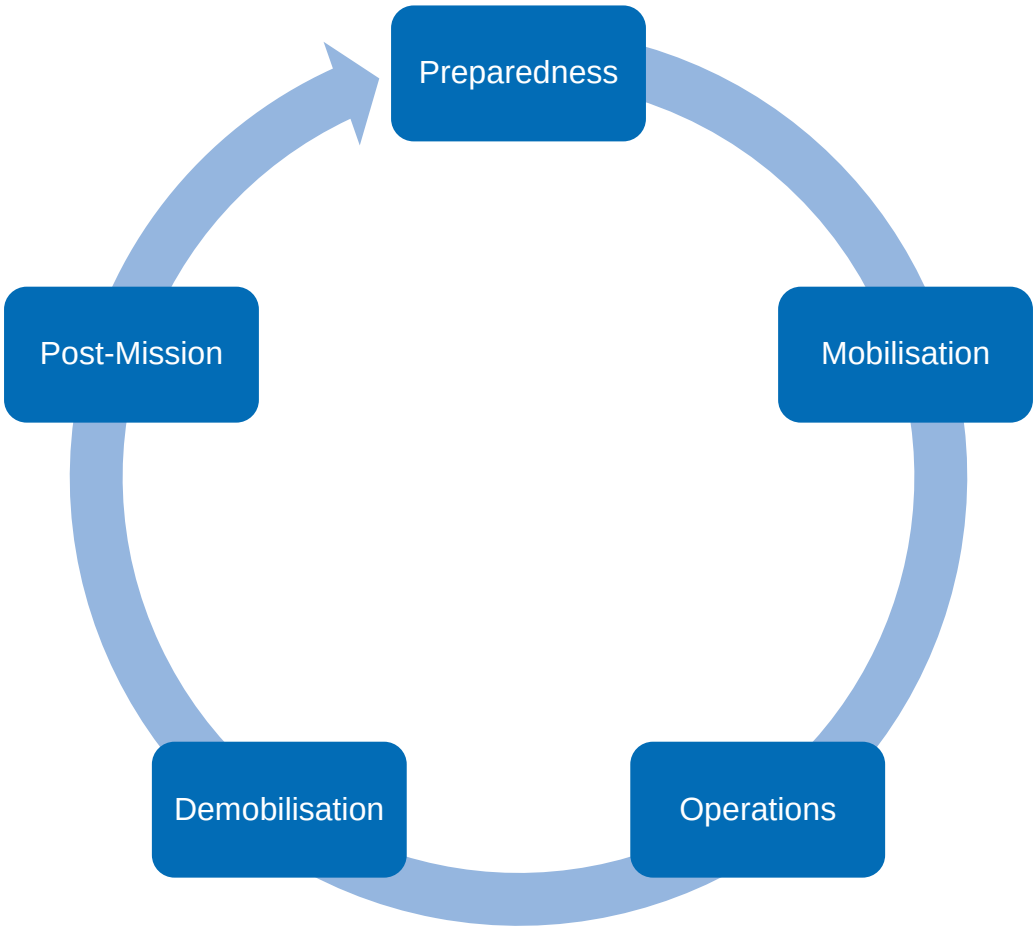


Figure 1: The International USAR Response Cycle

Preparedness

The preparedness phase is the period between disaster responses. In this phase USAR teams undertake preparatory measures to ensure that they are at the highest level of readiness for deployment as possible. Teams will conduct training and exercises, review lessons-learned from previous experiences, update standard operating procedures (SOPs) as required, and plan future responses.

Mobilisation

The mobilisation phase is the period immediately following the occurrence of a disaster. International USAR teams prepare to respond and travel to assist the affected country.

Operations

The operations phase is the period when international USAR teams are performing USAR operations in the affected country. It starts with arrival of a USAR team at the Reception/Departure Centre (RDC) in the affected country, registration with the On-Site Operations Coordination Centre (OSOCC), reporting to the Local Emergency Management Agency (LEMA) (or National Disaster Management Authority (NDMA)), and performing of USAR operations. The phase ends when the USAR team is instructed to cease USAR operations.

Demobilisation

The demobilisation phase is the period when international USAR teams have been instructed that USAR operations are to cease. USAR teams commence withdrawal, coordinating their departure through the OSOCC, and then depart from the affected country through the RDC.

Post-Mission

The post-mission phase is the period immediately after a USAR team has returned home. In this phase the USAR team is required to complete and submit a post-mission report and conduct a lessons-learned review in order to improve the overall effectiveness and efficiency for response to future disasters. The post-mission phase continuously merges into the preparedness phase.

2. Roles and Responsibilities in International USAR Response

This chapter lists those involved in the international USAR response cycle and what is expected of each party, including the parties from the affected country.

2.1 United Nations Offices

The UN Office for the Coordination of Humanitarian Affairs and the UN Disaster Assessment and Coordination teams

The UN Office for the Coordination of Humanitarian Affairs (OCHA) serves as the INSARAG Secretariat and is mandated to coordinate international assistance in disasters and humanitarian crises exceeding the capacity of the affected country.

Many organisations, such as governments, non-governmental organisations (NGOs), UN agencies and individuals, respond to disasters and humanitarian crises. OCHA works with all participants and responds to disasters to assist the government of the affected country in an effort to ensure the most effective use of international resources.

The UN Disaster Assessment and Coordination (UNDAC) team is an OCHA tool used for deployment to sudden-onset emergencies. OCHA dispatches an UNDAC team when requested to do so by the affected government or the UN Resident Coordinator in the affected country. UNDAC team personnel are available around the clock and are able to respond at very short notice. The UNDAC team is provided free of charge to the affected country.

UNDAC team members consist of trained emergency managers from countries, international organisations and OCHA. The UNDAC team is managed by Field Coordination Support Section (FCSS), which sits within OCHA, and works under the umbrella authority of the Resident Coordinator and in support of and in close cooperation with the LEMA. The UNDAC team assists the LEMA with the coordination of international response, including USAR, assessments of priority needs, and information management, by establishing an OSOCC, if one has not already been established, or assumes control of the OSOCC if a provisional OSOCC has already been established by USAR teams.

More on OCHA and the mechanisms OCHA offers for emergency response can be found at www.unocha.org.

INSARAG Secretariat

The INSARAG Secretariat is situated in Field Coordination and Support Section in Geneva, Switzerland. The task of the INSARAG Secretariat is to organise INSARAG meetings, workshops, INSARAG IEC/Rs and training events in cooperation with host countries.

The INSARAG Secretariat is responsible for the management and maintenance of the INSARAG website, the Virtual On-Site Operations Coordination Centre (VO), and the INSARAG USAR Directory.

In addition, the INSARAG Secretariat is responsible for the follow-up and the facilitation of any projects that have been agreed upon and launched by the INSARAG network.

Key functions of the INSARAG Secretariat are as follows:

Preparedness

- Advocate and promote international USAR preparedness.
- Facilitate and coordinate the development of internationally accepted USAR methodology and describes the Minimal Standards for international USAR operations.
- Act as point of contact for INSARAG related issues within the UN.
- Maintain the international USAR directory on the INSARAG website.

Mobilisation

- Activate the VO.
- Provide continuous updates regarding casualties and damage, entry points and procedures, and specific requests for assistance.

- Inform all international participants of any special cultural, religious or traditional practices of the affected country, weather, safety and security issues.
- Work closely with the affected country to expedite the timely and specific request for international assistance.
- Communicate with UN representatives in the affected country.
- Deploy an UNDAC team if required and request UNDAC Support Modules, as required.

Operations

- Moderate the VO and post regular situation updates.
- If not already done by the affected country/USAR teams, establish and maintain an RDC and OSOCC.
- Provide support to the UNDAC team as required.
- Request additional UNDAC Support Modules as required.

Demobilisation

- Moderate the VO and post regular situation updates.
- Provide support to UNDAC as required.

Post-Mission

- Perform an analysis of USAR team operations taking into consideration the Post Mission Reports from all USAR teams present.
- Convene a lessons learned meeting with all stakeholders, if necessary.
- Disseminate the report of the lessons learned meeting to all stakeholders and post it on the INSARAG website.

2.2 United Nations Monitoring and Disaster Alert Systems

Global Disaster Alert Coordination Systems

The Global Disaster Alert and Coordination System (GDACS) at http://www.gdacs.org, provides the international disaster response community with near real-time alerts about natural disasters around the world and tools to facilitate the coordination of response.

GDACS is activated in major natural, technological and environmental disasters that overwhelm the affected country's response capacity and require international assistance.

The Virtual On-Site Operations Coordination Centre

The VO is a web-based information management tool at http://vosocc.unocha.org. It is a virtual version of the On-Site Operations Coordination Centre (OSOCC).

The VO is an information portal for information exchange between international responders and the affected country after disasters.

Access to the VO is restricted (requires a password) to disaster managers from governments and disaster response organisations.

The VO is managed by the Activation and Coordination Support Unit (ACSU) in OCHA, Geneva.

2.3 Affected Countries

Affected countries are those that experience the sudden-onset disaster. UN General Assembly Resolution 57/150 recognises the important role of affected countries in streamlining processes to ensure the timely response of responding international teams as well as ensuring safety of the teams.

UN Resolution 57/150, 16 December 2002

"Urges all States, consistent with their applicable measures relating to public safety and national security, to simplify or reduce, as appropriate, the customs and administrative procedures related to the entry, transit, stay and exit of international urban search and rescue teams and their equipment and materials, taking into account the Guidelines of the International Search and Rescue Advisory Group,

particularly concerning visas for the rescuers and the quarantining of their animals, the utilisation of air space and the import of search and rescue and technical communications equipment, necessary drugs and other relevant materials;

Also urges all States to undertake measures to ensure the safety and security of international urban search and rescue teams operating in their territory."

Key functions of affected countries are as follows:

Preparedness

- Maintain a Policy Focal Point and an Operational Focal Point.
- Develop and maintain national USAR capacity according to the INSARAG Guidelines.
- Participate in INSARAG regional earthquake response exercises.
- Identify when international assistance may be required by analysing national risks and possible gaps in resources.
- Develop the capacity to conduct immediate situation and needs assessment. Identify priorities and report these to the international community.
- Implement and maintain a process for requesting international assistance in a timely manner.
- Implement and maintain procedures for receiving international teams into the country, including:
    - Establishment of an RDC
    - Visa assistance, which enables rapid entry of international USAR teams into the country, and, if possible, exemption of relief personnel from visa regulations and immigration inspections
    - Entry and exit permissions, with exemptions from custom duties, taxes and other changes for:
        - Specialised communications equipment
        - Search, rescue and medical equipment
        - Search dogs
        - Emergency medical pharmaceuticals
    - Simplified and minimal documentation for export, transit and import, to reduce or waive inspection requirements where possible
- Prepare to support the logistics requirements of USAR teams, including interpreters, guides, fuel, transport, shoring timber, water, maps, and a base of operations location.
- Prepare country briefings and fact sheets, to be used by incoming USAR teams.
- Address questions of liability.
- Develop a capacity to post regular updates and briefings to the VO.

Mobilisation

- When required, make the request for international assistance as soon as possible. Requests for international assistance can be directed through various channels, namely through OCHA, the VO, other regional networks, or on a bilateral basis.
- Identify the LEMA to manage the disaster.
- Establish the RDC.
- Conduct immediate situation and needs assessments. The priority needs of international assistance should be identified and the information passed to the international community as soon as possible through OCHA and the VO.
- Provide regular situation updates on the VO, including casualties and damage, entry points and procedures, specific requests for assistance and to inform all international participants of any special cultural, religious or traditional habits of the affected country, weather, safety and security issues.
- Provide or conduct briefings to arriving international USAR teams on the LEMA structure, in-the country situation and safety.
- Advise when no additional international USAR teams are required to arrive.

Operations

- Maintain representation at the RDC and the OSOCC to ensure a coordinated response and that national priorities are met.
- Utilise international coordination mechanisms provided by UNDAC teams, and the RDC and OSOCC structures.

- Establish mechanisms to integrate international USAR teams into ongoing national operations.

Demobilisation

- Declare the end of the USAR operations phase.
- Provide logistical support to assist the withdrawal of international teams.
- Facilitate (as required) USAR team's transition into other humanitarian operations.
- Facilitate donation of USAR team equipment left for the affected government.

2.4 LEMA

The LEMA is the ultimate responsible authority for the overall command, coordination and management of the response operation. All responding USAR teams (regional and international) are required to report to the LEMA upon arrival in the affected country. This may be coordinated by the RDC. The teams should be briefed and deployed to the disaster site/s by a LEMA official.

2.5 Assisting Countries: Bilateral Responders

Assisting countries are those with USAR teams who are deploying into the affected country, to provide USAR capabilities.

Key functions of assisting countries are as follows:

Preparedness

- Develop and maintain international USAR teams according to the INSARAG Guidelines and classified according to the IEC guidelines.
- Implement and maintain procedures to ensure access to transport for rapid deployment of USAR teams.
- Bear all costs related to international deployment.
- Establish a capability to re-supply USAR teams while abroad if necessary.
- Maintain a Policy and Operational Focal Point.

Mobilisation

- Once the decision is taken to deploy an international USAR team, make an entry into the VO stating the USAR team size and type, volume and weight of equipment, flight information with expected time of arrival, and team contact details.
- Identify and maintain an Operational Focal Point for the duration of the mission.
- Provide regular information updates during all phases of the operation via the VO.
- If necessary to transit through another country, be responsible for transit arrangements. The transit country should facilitate quick transit for international USAR teams.

Operations

- Provide all logistical and administrative support that may be required by the USAR team while it is on mission and be able to provide a liaison officer as required.
- Continue to assist the affected country as required where possible (engineering and medical assessments).

Demobilisation

- Continue to update relevant information on the VO.
- Once USAR teams are no longer required as advised by the affected country, provide transportation home.

2.6 International USAR Teams

International USAR teams are response assets that respond to carry out USAR activities in collapsed structures and other disaster/humanitarian support activities.

Key functions of international USAR teams are as follows:

Preparedness

- Maintain a constant state of readiness for rapid international deployment.
- Maintain a capability to conduct international USAR operations.
- Ensure that USAR team personnel have national USAR experience and expertise.
- Ensure self-sufficiency for deployed responders for the duration of the mission.
- Maintain appropriate team member inoculations and immunisations, including search dogs.
- Maintain appropriate travel documents for all USAR team members.
- Maintain a capacity to staff and support the UN coordination mechanisms of RDC and provisional OSOCC.
- Maintain a 24-hour Operational Focal Point.

Mobilisation

- Register the USAR team's availability to respond and provide pertinent updates on the VO.
- Complete the USAR Team Fact Sheet and have hard copies available for RDC and OSOCC upon arrival.
- Deploy a coordination element with its USAR team to establish or sustain a RDC and provisional OSOCC.
- Maintain a 24-hour Operational Focal Point.

Operations

- Establish or sustain a RDC and provisional OSOCC as required.
- Ensure proper conduct of USAR team members.
- Perform tactical operations in accordance with the INSARAG Guidelines.
- Coordinate with the LEMA, OSOCC and USAR coordination for USAR operations assignments and briefings.
- Participate in OSOCC meetings regarding USAR operations.
- Provide regular situation updates on the VO.
- Provide regular updates on activities to the LEMA via OSOCC.

Demobilisation

- When advised that operations are ceasing, report this to all relevant parties in the assisting country.
- Coordinate its withdrawal with the OSOCC.
- Provide completed documentations to the OSOCC or RDC prior to departure.
- Become available as required and if possible for other humanitarian operations, such as:
    - Support the larger humanitarian relief operations when the USAR phase is over
    - Structural engineering assessments
    - Medical support
- Consider donation of suitable USAR team equipment to the affected government.

Post-Mission

- Ensure that USAR Team Post-Mission Report is provided to the INSARAG Secretariat within 45 days.
- Analyse deployment performance and update standard operational procedures as required.

USAR Team Management

The Management component of a USAR team is accountable for all aspects of the USAR team's activities throughout the response cycle, including command and control, operations, assessments, coordination, planning, media, as well as safety and security.

USAR Team Search

The Search component of a USAR team is responsible for the systematic application of technical and/or canine capabilities for the location of persons trapped as a consequence of a disaster.

USAR Team Rescue

The Rescue component of a USAR team is responsible for the application of comprehensive suite of skills, techniques and equipment, including breaching, cutting, shoring, roping, rigging in order resolve complex extrication situations.

USAR Team Medical

The Medical component of a USAR team is required to ensure the health, emergency care and well-being of the USAR team members, including the search dogs, and victims (if permissible by the national health authority) encountered during USAR operations.

USAR Team Logistics

The Logistics component of a USAR team is required to support and sustain the USAR team through all aspects of the USAR response cycle, including the management of the cache, Base of Operations (BoO), communications, border-crossing and transportation.

2.7 Ethical Considerations in International USAR

INSARAG acknowledges and embraces the cultural diversity of countries around the world.

INSARAG operates in accordance with the Humanitarian Principles, which form the core of humanitarian action. The conduct of deployed USAR team members is a primary concern of INSARAG, the assisting and affected countries, and the local officials of the affected country.

USAR teams should always aim to be perceived as representatives of a well-organised, highly-trained group of specialists who have been assembled to help communities in need of specialist assistance. At the conclusion of a mission, USAR teams should have performed positively, and should be remembered for the outstanding way they conducted themselves in the work environment as well as socially.

Ethical considerations include human rights, legal, moral and cultural issues, and also concern the relationship between USAR team members and the community of the affected country.

All members of an INSARAG USAR team are ambassadors of their team and their country and represent the wider INSARAG community. Any violation of principles or behaviour unbecoming by team members is viewed as unprofessional. Any inappropriate behaviour may discredit the good work of the USAR team and reflects poorly on the entire team's performance and their home country, as well as the wider INSARAG community.

At no time during a mission should USAR team members take advantage of or exploit any situation or opportunity, and it is the responsibility of all team members to conduct themselves in a professional manner at all times.

USAR teams that deploy internationally must be self-sufficient so as to ensure they are at no time a burden to the already overwhelmed country they are trying to assist. Annex A lists a number of ethical considerations for USAR teams.

3. USAR Detailed Operations Following the Response Cycle

3.1 Preparedness

USAR Team Management

- Responsible for sustainable planning and conduct of staffing, training and deployment of the USAR team over the entire USAR response cycle.
- Responsible for respecting and training to INSARAG minimum standards.
- Ensure proper identification of USAR team functions.
- Ensure all personnel are trained in safety and security.
- Ensure that safety and security function is assigned to a team member.
- Responsible for maintaining coordination with national (team's governing body) and international stakeholders (i.e. INSARAG) and being active on the VO.
- Ensure the readiness of the USAR team all the times, and that a mobilisation organisation maintains an up-to-date immediate call-up system.
- Responsible for the registration of the USAR team in the INSARAG USAR Directory.

USAR Team Search

- Responsible for having in place canine and technical search structures and methods, and their regular training and constant readiness.
- Responsible for canine teams having the possibility to train with the other members of the USAR team (e.g. technical search, rescue and medical).
- Responsible for ensuring that all appropriate documentation for border-crossing for canine (e.g. microchip, vaccination) is ready.

USAR Team Rescue

- Responsible for rescue structures and methods being in place, regularly trained and in constant readiness.
- Responsible for ensuring that rescue teams have the possibility to train with the other members of the USAR team (e.g. canine and technical search and medical).
- Responsible for developing and implementing new rescue methods, standards and technical equipment.

USAR Team Medical

- Maintain a constant state of mission readiness and comply with all other general requirements as determined by USAR team policy.
- Have appropriate immunisations/vaccination/inoculation for working in the affected country recommended by national health authorities.
- Maintain the medical cache stored in clearly labelled containers with attached inventory list for deployment and border- crossing.
- Prepare processes to efficiently medically screen all personnel at the time of international deployment.

USAR Team Logistics

- Maintain logistical readiness for training and international deployment and equipment/staff to set up and maintain a BoO (technical equipment and supplies for entire deployment).
- Have appropriate documentation for border-crossing for the USAR team staff and equipment (i.e. passport, visa, certificate of vaccination, labelling of equipment, cargo manifest, shippers declaration of dangerous goods).
- Maintain up-to-date transportation arrangements for international deployment.
- Maintain communications equipment at all times ready for deployment (interoperable).
- Maintain a system to be self-sufficient (food, water, fuel) for the duration of deployment.

3.2 Mobilisation

USAR Team Management

- Ensure departure within ten hours after the request for assistance.

- The USAR Team Leader has the overall responsibility of personnel, equipment, and operations from the team's activation until its return home.
- Collect and analyse information about the disaster and the actual situation in the affected country (i.e. the VO).
- Exchange disaster related information with authorities in home country and Make recommendations for deployment of the USAR team;
- Await the request for international assistance by the affected country or offer assistance via the diplomatic channels.
- Provide and update planning and deployment details and team capacity and exchange information with the international community through the VO (coordination with the LEMA and other teams).
- For planning, liaise from the beginning on with the affected country if and what support is required.
- Prepare meetings with RDC/OSOCC and the LEMA (information about the teams' capabilities and the needed support by local authorities).
- Brief the USAR team on the disaster, the engagement and the affected country's cultural and political sensitivities and reinforce the ethics considerations.
- Prepare to establish and to run an initial RDC and OSOCC and to support UNDAC if needed.

USAR Team Search

- Ensure that the readiness technical and/or canines (health, fitness, hygiene, diet, etc.) for travel, including all specialised gear and equipment (including microchips) are ready for USAR operation (respect international standards and procedures).

USAR Team Rescue

- Ensure readiness of equipment cache and necessary documentations for restricted items.

USAR Team Medical

- Conduct remote information gathering to include the receiving country specific health and medical risks.
- Assess the local medical system to determine if it can effectively cope with the impact of the situation or if the system is extended beyond its capabilities.
- Conduct the medical screening process for USAR team personnel and search dogs as well as a review of the required international documentation.
- Coordinate with Safety and hazmat functions to clarify overlapping concerns.
- Determine medical plan for in-transit phase and be prepared to adjust en route.

USAR Team Logistics

- Ensure availability of transportation (air or ground; to/within country).
- Provide team members' lists and equipment manifest and shippers declaration for dangerous goods and prepare for international border control processes.
- Ensure self-sufficiency for the duration of deployment (pre-packed dedicated equipment cache so as not to deplete domestic capacity).
- Check compatibility of VHF and UHF equipment with local systems.
- Identify local support needs required by the team and forward these through the management to the OSOCC.

3.3 Operation

USAR Team Management

- The LEMA of the affected country is the overall responsible authority for the disaster response: USAR teams have to adhere with the policies and procedures of the affected country regarding incident operations.
- Team management is responsible for managing all aspects of team operations and ensuring all functional areas within the team coordinate operations. They are also responsible to assess the progress of operations. Team management must ensure ongoing coordination and communication between other response entities.

- Coordinate with the LEMA, RDC and OSOCC during the entire operation: all planning has to be done in close cooperation and information exchange with OSOCC and the LEMA.
- Ensure that the USAR team efforts are integrated into local operations.
- If first USAR team in place, and RDC and OSOCC are not in place, establish and operate provisional RDC and provisional OSOCC.
- Ensure that operations can start with first priority and set up in parallel the BoO.
- Establish a work cycle to ensure a sustainable work at worksite(s) and rest periods (maintain a reserve).
- Establish an information cycle to brief home base, USAR team members, OSOCC and the LEMA.
- Keep a detailed operations log.
- Assess and respect permanently the safety and security situation and procedures.
- Establish and enforce rules and regulations for safety and security on worksite(s) and BoO.
- Managing and coordinating the media together with the LEMA/OSOCC. A guide to managing relationships with the media can be found in Annex B of this document.
- Conduct contingency planning from beginning of the operation (safety/security, Medevac, demobilisation etc.)

USAR Team Search

- Perform technical and/or canine search in collapsed or failed structures of heavy wood/reinforced masonry with structural steel in close coordination with the USAR Team Rescue.
- Continually conduct a risk/hazard analysis of the assigned work area for USAR team members and canine and take appropriate mitigation action.
- Assess and respect permanently the safety and security situation and procedures.

USAR Team Rescue

- Perform rescue (extraction and transport) in collapsed or failed structures of heavy wood/reinforced masonry with structural steel (rigging and lifting) in close operation with USAR TEAM Search and USAR Team Medical.
- Continually conduct a risk/hazard analysis of the assigned work area for USAR team members and take appropriate mitigation action.
- Assess and respect permanently the safety and security situation and procedures.
- Establish worksite perimeter control procedures.

USAR Team Medical

- Coordinate with OSOCC/Health Cluster:
  - Availability of local and international medical resources
  - Local medical procedures such as; casualty handover, casualty transport, fatality management, and medical waste disposal
  - Methods of regular communications with local health authorities
- Provide medical input into USAR team decision making/planning process.
- Coordinate with Safety, hazmat, and Logistics functions to promote safe health and hygiene practices (BoO and work sites).
- Provide continuous health monitoring and medical care to USAR team members (to include canines).
- Integrate with Rescue function to provide emergency medical care to entrapped victims and to ensure safe patient extrication.

USAR Team Logistics

- Establish BoO. The BoO serves as the USAR teams' site for headquarters, communications hub, sleeping/resting/eating/health areas, equipment stock set-up and refuge from the elements while operational in a disaster-affected country.
- Run and organise the BoO over all of the operation including perimeter control procedures.
- Assess and respect permanently the safety and security situation and procedures for BoO.
- Support the work on the worksites (e.g. transportation, food, equipment).
- Ensure that all team personnel have reliable means of communications.
- Coordinate transportation requirements.

- Perform contingency planning for relocation of BoO and the demobilisation phase.
- Support the management on the contingency planning (e.g. transportation for medevac).

3.4 Demobilisation

USAR Team Management

- Demobilisation has to be planned and coordinated from the beginning of the operation. All players, including the OSOCC and the LEMA must be involved in the planning from the beginning.
- Ensure proper hand-over is conducted to USAR teams that take over the tasks of the departing team.
- Teams are required to complete and submit the Demobilisation Form to the OSOCC who, based on the team's request, should provide the team with an estimated stand-down date and time.
- Teams are required to complete and submit the documentation to the OSOCC.
- Plan and communicate possible donations to the LEMA and/or affected community.
- Prior to leaving the area, the USAR Team Leader must meet with the OSOCC, the LEMA, and political leaders of the community, as appropriate, to complete the team's participation.
- If appropriate communicate to the media the finishing of their work and the departure (in coordination with the LEMA and OSOCC).

USAR Team Search

- Resume work and prepare handover to the organisation taking over the tasks.
- Prepare canines and equipment for return transportation.

USAR Team Rescue

- Resume work and prepare handover to the organisation taking over the tasks.
- Prepare and pack equipment for demobilisation and departure.

USAR Team Medical

- Coordinate demobilisation with local relevant health authorities (i.e. through OSOCC/Health Cluster)
- Provide handover to relevant medical organisations
- Identify appropriate medical cache donations through OSOCC/Health Cluster
- Assess potential exposures and need for follow on medical care
- Maintain in-transit medical care for team to home base.

USAR Team Logistics

- The BoO site should be restored to its original state in so far as possible.
- Prepare the BoO equipment for return transportation.
- Ensure that the dangerous goods are prepared, packed and labelled according the International Air Transport Association regulations.
- Provide resources for logistics requirements during demobilisation (preparing of manifests, packing and loading, shippers declaration of dangerous goods etc.)
- Plan and ensure the required transportation.

3.5 Post-Mission

USAR Team Management

- The after-action process includes compiling a Post Mission Report documenting administrative issues and operational concerns which should be forwarded to OCHA within 45 days of returning home.
- Lessons-learned have to be included in planning and training.

USAR Team Search

- The canine group prepares and delivers a report on the mission to their USAR team.

USAR Team Rescue

- Provide inputs to the team report and identify lessons learnt.

USAR Team Medical

- Coordinate immediate and long term medical follow-up with USAR Team Management (including mental health)
- Rehabilitate USAR medical cache within timeline prescribed by USAR team policy
- Provide input into USAR team post mission operations report

USAR Team Logistics

- Safety equipment and supplies must be restored and restocked for next deployment.

4. USAR Coordination Structure

4.1 Core Coordination Elements

The coordination structure of an international USAR operation can involve many different stakeholders and can differ widely at each disaster. However, the core structure, key actors and how they should interact should be the same.

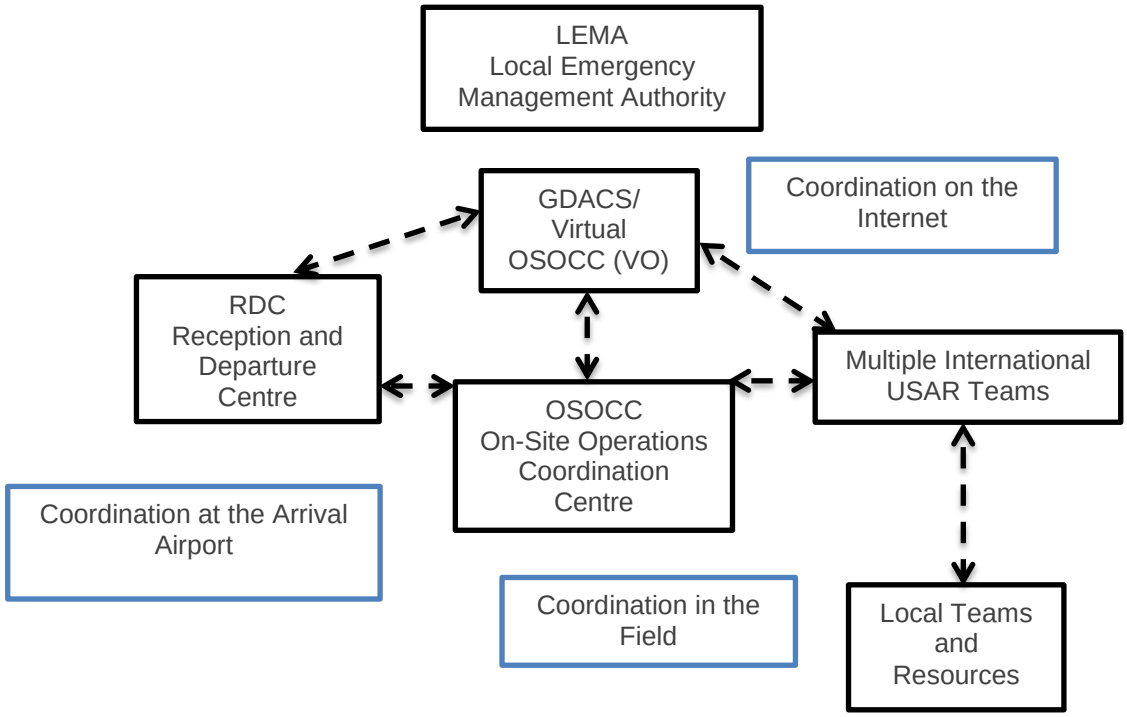


Figure 2: Core Coordination Structure and main information flow.

In this section, it will be explained how these tools/elements can facilitate the coordination process among international USAR teams, an UNDAC team, and the LEMA.

4.2 GDACS and Virtual On-Site Operations Coordination Centre (VO)

Global Disaster Alert and Coordination System (GDACS)

GDACS is a cooperation framework under the UN umbrella. It includes disaster managers and disaster information systems worldwide and aims at filling the information and coordination gap in the first phase after major disasters. GDACS provides real-time access to web-based disaster information systems and related coordination tools.

The ACSU in OCHA-Geneva acts as the GDACS Secretariat. GDACS sends automatic e-mail and SMS alerts to subscribers and provides impact estimations after major disasters through its on-line multi-hazard disaster impact assessment service. GDACS' alerts and impact estimations are managed by the European Commission Joint Research Centre.

GDACS also coordinates the creation and dissemination of disaster maps and satellite images. This service is managed by UNOSAT. Many governments and disaster response organisations rely on GDACS alerts and automatic impact estimations to plan international assistance.

The Virtual On-Site Operations Coordination Centre (VO)

GDACS provides the real-time disaster coordination platform – the VO – a to disaster managers worldwide. The VO facilitates information exchange among disaster responders in order to establish a better situational awareness in the early stages of a sudden-onset disaster, to inform deploying responders of the operational environment, and to track response to support decision-making and coordination. Access to the platform is restricted to disaster managers from governments and disaster response organisations.

VO also serves as a preparedness mechanism. It enables information exchange about upcoming meetings, training opportunities and other themes under the *Meetings*, *Training* and *Discussions* tabs. All users have access to a *Simulator*, which they can use to practice the tool and relevant procedures during exercises. A contact database of more than 18,500 disaster managers and aid workers worldwide is available under the *Users* tab.

The VO Handbook is available at http://vosocc.unocha.org/.

In the case of a large-scale earthquake, a new discussion will be created under the *Disasters* tab. Each relief team is requested to register their status (monitoring, stand-by, mobilising, deployed or mission complete). If the team is mobilising for deployment, it needs to fill out a Fact Sheet with the team's contact details, capacity, arrival and other information. The discussion structure in the case of an earthquake builds on the following Titles:

1. **Situation:** A moderator-produced disaster overview with crucial information (scale and scope, impact, immediate needs, state of response, status for request for international assistance). Users can provide comments with information pertinent to situational awareness.

2. **Operational environment:** Contains all necessary information for deploying relief teams and other responders (baseline data, customs and immigration, security situation, access and communications), as well as a comments section where users can provide relevant information on any of these issues and ask questions.

3. **Response coordination:** Provides a moderator-produced summary explaining the existing coordination set-up, serves as a 'bulletin board' to post assessment and other reports, and for LEMA and the RDC to communicate key messages. Registered USAR teams are listed under the 'Relief teams' subtitle. Users can post information and ask questions in the "Comments" section in each subtitle.

4. **Information tools:** Provides links to other relevant websites and information services, such as maps, relief item tracking (LogIK), secondary and environmental risks, and others.

For USAR teams, most of these titles provide information without an expectation of reply or comments. The exception to this is registration under *Relief teams*. That said, relief teams deployed to the affected area can provide invaluable information for other responders, and are invited to do so through comments and reports, which will be processed by moderators and incorporated into subtitle summaries.

5. **OSOCC:** When an OSOCC (or sub-OSOCC) is established, discussion moderators will 'insert' a corresponding subtitle in the discussion to facilitate the coordination in specific areas of operations. Each OSOCC (or sub-OSOCC) subtitle contains the following: a moderator-produced summary of current situation; a 'bulletin board' for OSOCC and other announcements; a space to deposit assessment and other reports on the area; and a space of USAR coordination. USAR coordination structure will be created as required, and will typically consist of a separate subtitle for each USAR Sector that has been established by the OSOCC, where teams can share related situation updates and ask questions.

TITLE **Subtitle**	**Purpose** **Type and format of information posted**
SITUATION	
Request for international assistance	Status of international request for assistance
Situation overview	Moderator-produced and constantly updated summary of the disaster situation: geographic extension and impact; trends, needs, disaster statistics, etc. Overview of media reports if relevant (very early stages).
Comments	Threaded user comments: new information which could contribute to common situational awareness, inquiries regarding the current situation.

OPERATIONAL ENVIRONMENT	
Country baseline data	Country name, time zone, population, capital, administrative division, ethnic groups, languages, religion, media landscape, currency, international dial code, medical advice and vaccinations.
Operational priorities	A moderator-produced summary about the immediate response priorities in terms of type and geographical areas, in order to inform decision-making at HQ level.
Customs and immigration	Relevant information about visas, customs, etc.
Security situation	Relevant information about safety and security, incidents, looting, etc.
Access	Entry points, roads, waterways, railways, damaged infrastructure, alternative routes.
Communications	Mobile network, internet access.
Comments	Threaded user comments: new information or inquiries about any of the issues above.
RESPONSE COORDINATION	
Coordination setup	National, international; in-country and outside coordination bodies. Location(s) of OSOCCs and RDCs; civil-military coordination; key contact details; UNDAC team information
Relief teams	Team registration; relief teams table
Reception/Departure Centre	Important information from the RDC
LEMA information	Important information from LEMA
Assessments and reports	A repository of situation and other reports – summary displays the most recent ones
Comments	Threaded user comments: new information or inquiries about any of the issues above.
OSOCC	
Situation	Moderator summary of state of response: team activities, trends, gaps, lives saved so far, etc.
Announcements	All inputs from USAR teams, to be used by moderators to provide the summary above
Assessments and reports	Reports covering the area of operations, with a moderator-produced summary of key highlights.
USAR Coordination Sector A	Moderator summary of state of Search and Rescue (SAR) in the sector: team activities, trends, gaps, lives saved so far, etc. Discussion space for USAR teams assigned to the sector.
USAR Coordination Sector B	Moderator summary of state of SAR in the sector: team activities, trends, gaps, lives saved so far, etc. Discussion space for USAR teams assigned to the sector.
USAR Coordination Sector C	Moderator summary of state of SAR in the sector: team activities, trends, gaps, lives saved so far, etc. Discussion space for USAR teams assigned to the sector.
Comments	Threaded user comments: information or questions relating to the area of operations, but not a space for USAR teams' discussion.
INFORMATION TOOLS	
Maps	UNOSAT, MapAction
Relief Items (Logik)	Tracking of in-kind relief items

Hazard Identification Tool	Environmental risks and hazards
Comments	Threaded user comments: users can make comments, inquiries or requests with regard to any of these tools.

Table 1: Model of VO discussion in an earthquake in one area of operations, with three USAR Sectors.

4.3 Provisional Reception and Departure Centre (RDC)

The RDC should be located at the arrival point of international relief teams in order to facilitate and coordinate their arrival and further deployment to the disaster site. The primary responsibility of the RDC is to register teams, provide a briefing of the latest information, direct them to the OSOCC and pass processed information of incoming teams to the OSOCC in order to facilitate the operational planning in the OSOCC.

Situational updates, operational information, logistical support and facilitation of immigration/customs procedures for staff, equipment and humanitarian aid are some of the services that will be expected by an RDC. When establishing an RDC, links with key components operating the airport is vital. There are several entities at an airport that will be involved in handling incoming relief teams and items and all of them must be informed of the roles and responsibilities of the RDC to ensure cooperation. These entities may include airport management (facility and operations), security, immigration, customs, air traffic control, ground traffic control, ground handling facilitators, and, possibly, military representatives at the airport (particularly if the airport is a military/civilian complex). It should be made clear that the RDC is there to support the airport authorities with the handling of the incoming relief traffic in a phase that may become chaotic due to the rapid influx of large numbers of responders and volumes of aid.

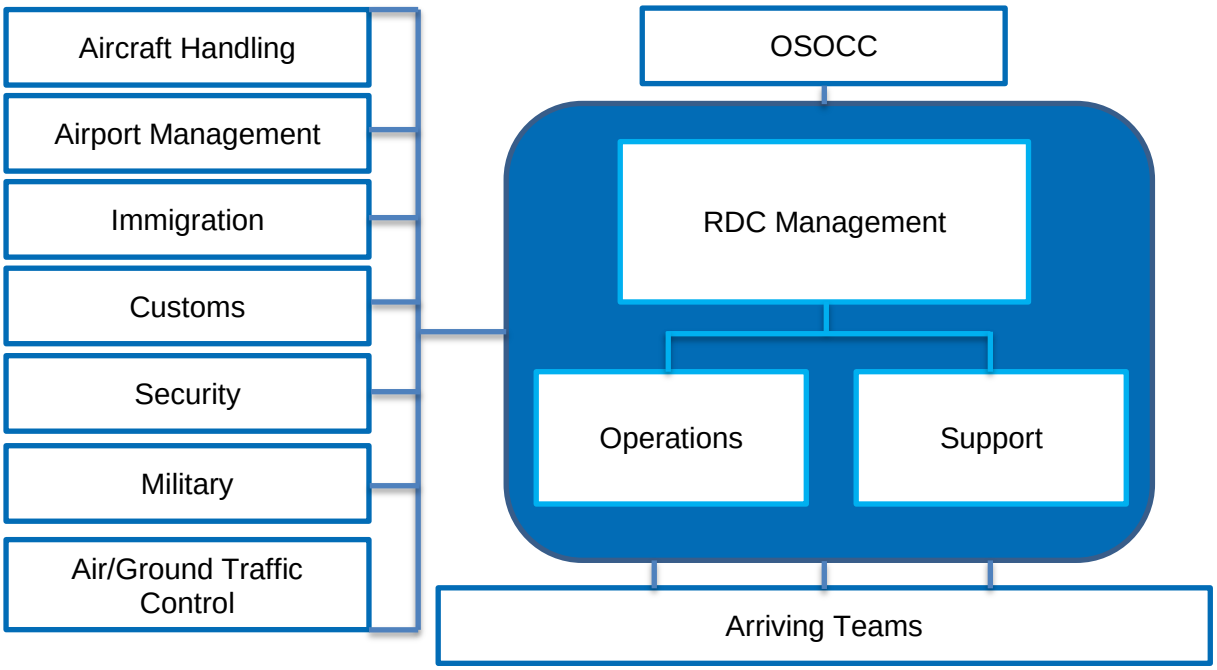


Figure 3: RDC's basic structure and functions and their interaction with typical airport authorities.

The RDC is especially important in earthquake situations due to the arrival of large numbers of international USAR teams. The first arriving USAR teams are responsible for setting up and staffing a provisional RDC until the UNDAC team arrives and takes over the responsibility of running the RDC (eventually with the support of international USAR teams). The RDC should be staffed at the beginning with a minimum of two trained people. The RDC Manager should ask the next incoming teams for additional staff, so that the RDC can operate 24/7 in a self-sustainable way (food, water, shelter). Each Heavy team needs to carry the adequate additional technical equipment, consisting of VHF radios, IT equipment like laptops, printers, scanners, user software, and administrative software, as well as electrical equipment like power generators, uninterruptible power supply, adapter, in addition it is necessary to carry minimum standard assessment equipment like satellite communication, GPS, and GPS camera.

4.4 Provisional On-Site Operations Coordination Centre (OSOCC)

The OSOCC concept was originally developed by OCHA and INSARAG. It was designed to assist affected countries in coordinating international search and rescue efforts following an earthquake. However, OSOCC's emergency management principles make it a valuable tool in any sudden-onset disaster involving international relief resources. Over the last decade, the OSOCC concept has been used during numerous disasters including floods, hurricanes, tsunamis and complex emergencies.

The role of the OSOCC is to work in close liaison with the LEMA to facilitate cooperation with, and coordination of, international humanitarian assistance. The first arriving USAR teams are responsible for setting up and staffing a provisional OSOCC until the UNDAC team arrives and takes over the responsibility of running the OSOCC. In preparation for that, each International USAR team should have trained staff as well as the same capabilities and basic equipment as to set up an RDC.

The first team preferable should start with a team of two. In order to complete the team they may ask each oncoming team for additional personnel, until the team is complete. The provisional OSOCC should be prepared to run 24/7. The OSOCC is constituted of different functions such as Information Management, Liaison, Safety and Security, Operations, Logistics, Media, Administration and Support. The organisation of the OSOCC for a certain emergency is adjusted to the specific needs of that situation.

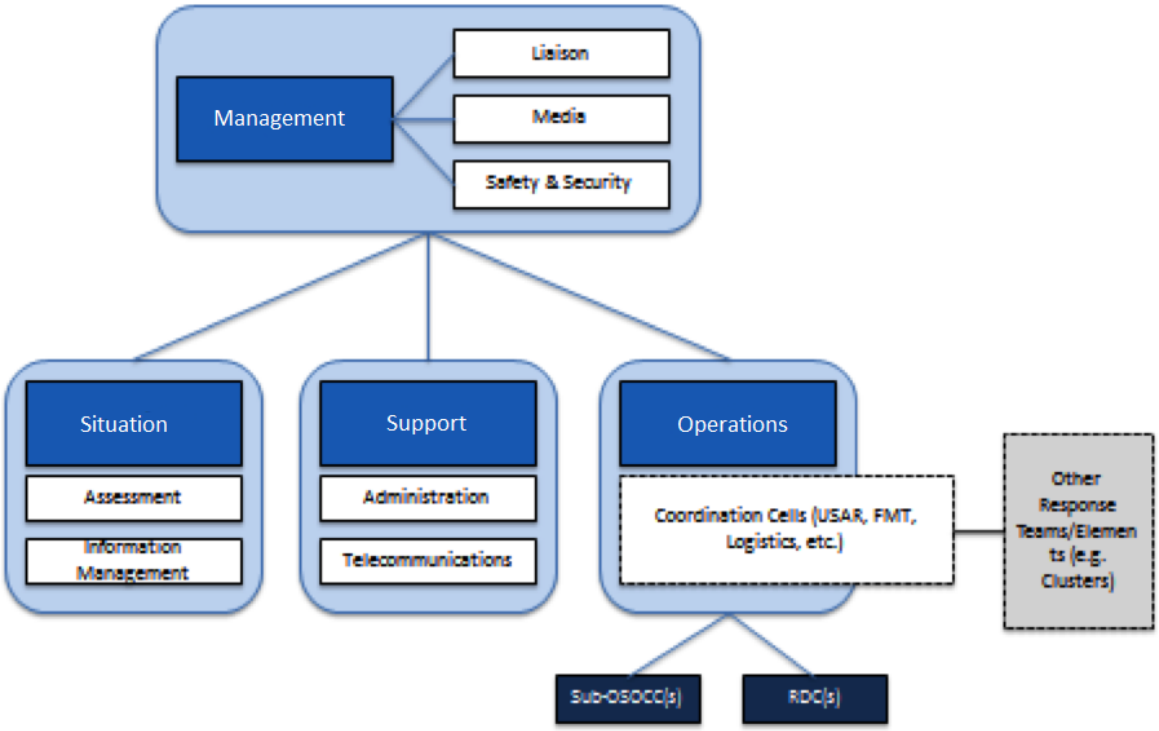


Figure 4: Map of the OSOCC's functions.

4.5 USAR Coordination Cell (UCC)

The UCC will be established at the discretion of the OSOCC Manager depending on operational circumstances. INSARAG classified teams may be required to allocate staff to the UCC.

The UCC uses INSARAG methodology to coordinate international USAR teams in cooperation with other OSOCC functions and national authorities.

Staffing in the UCC can be expanded based on the size and complexity of the response (e.g. manager, planning, information management and logistics). The personnel for the UCC will generally be supplied from some of the first arriving INSARAG classified teams. The staff in the UCC should have specialised USAR knowledge and experience with the complex task of coordinating multiple international USAR teams, as well as an ability to work as a member of the broader OSOCC team.

INSARAG IEC teams should also identify a liaison to work with the UCC. As USAR teams begin arriving in the affected country, they will register at the RDC or other point of entry mechanism. This includes indicating their capacity and capabilities by indicating their INSARAG classification. USAR teams are classified as Light, Medium or Heavy based on a set of INSARAG criteria. Typically Light USAR teams do not deploy internationally, however, it is possible that Light teams from the affected country will be active. International teams augment the national response in the affected area.

When the UCC is set up, it is critical to begin the systematic planning and assignment of USAR teams based on an assessment of known information regarding geography and populations, and where rescue efforts can have the greatest impact. This is done in close consultation and cooperation with the LEMA.

A spreadsheet is often used to track the utilisation and availability of international USAR teams in each geographical sector of the affected area, as well as the trends of each area (e.g. more resources are required). This snapshot of USAR operations can be easily displayed in the OSOCC to and serves to inform overall situational awareness.

When there are a large number of international USAR teams responding to an incident, sectors become essential for effective operational management. The UCC will work with incoming international teams to allocate the most appropriate number of teams to each sector. If necessary, a suitable USAR team in each sector can be designated as the Sector Coordinator, coordinating the activities of the teams in an assigned sector and working under the direction of the USAR Coordination Cell.

As Phase 1 begins to wind down, the activities of the UCC will turn towards supporting teams in returning home and/or transitioning USAR resources to support other areas of the operation. Further information on the OSOCC and the UCC coordination mechanisms can be found in the OSOCC Guidelines.

4.6 USAR Planning Process

Proper planning is a vital component of any response management practice. The planning process facilitates the adequate and safe use of resources through proper selection of strategies and tactics. These planning principles do not differ during large-scale incidents requiring international assistance. Therefore, USAR coordination must be aware of these principles and be ready to adopt them into their management process.

The following is a summary of the planning process phases:

1. Assess the situation
2. Establish/obtain (from the LEMA/OSOCC) incident objectives
3. Develop and disseminate the Action Plan
4. Request needed resources
5. Execute, monitor progress, update the plan as needed

In the INSARAG coordination methodology there are Assessment, Search and Rescue (ASR) Levels that define the different types of activity carried out at a major USAR incident and these can be used to help the planning process for further details refer to 5.5.

The first step of a planning process begins with a thorough assessment of the situation that provides information needed to make initial USAR coordination decisions. This is achieved by using the principles defined in ASR Level 1: Wide Area Assessment. Key results of this are a sectorisation plan, BoO locations and prioritisations for the initial Action Plan. This will allow teams to deploy and then carry out ASR Level 2: Sector Assessment, which primarily gathers details of the potential live rescue locations (worksites) so a more detailed action plan can be formulated and teams deployed to maximise life-saving opportunities.

The second step, which is often established alongside the initial assessment, in the planning process is for the LEMA to establish incident objectives. These are usually aimed at assisting the largest number

of people in the most efficient manner. The INSARAG system does this by using ASR Level 2 to identify the most likely life-saving opportunities and then uses ASR Levels 3 and 4 to brief, deploy and prioritise USAR resources to achieve the maximum benefits.

Incident objectives may cover the entire course of the incident or may be broken down into operational periods. Operational periods can vary but are usually 12 or 24 hours, which creates a cyclical planning process so that incident objectives can be broken down into tactical assignments. The use of operational periods usually dictates the structure for a reporting schedule and communication exchange. The INSARAG coordination documentation and reports help facilitate this process.

The USAR coordination's primary objective is to ensure the incident objectives and consequent Action Plan(s) are properly communicated to all international teams. International USAR teams have a responsibility to fully integrate in the coordination system to ensure the maximum benefit of the response effort is realised.

4.7 Sectorisation

A disaster that warrants international USAR response is inherently a large-scale event. The scale of destruction may just involve one city or it may affect a large area involving numerous cities and even more than one country. Geographical sectorisation of the affected areas can be needed to ensure effective coordination of search and rescue efforts. Sectorisation allows better operational planning, more effective deployment of the arriving international USAR teams and better overall management of the incident .The size of the sector will depend on the level of resources and the needs of the affected area.

Sectorisation Plan

Sectorisation should be undertaken at the earliest possible stage of a disaster response to ensure its effectiveness. It is expected that the LEMA should have a sectorisation plan in place and that international USAR teams should follow it.

However, if there is no sectorisation plan, it should be developed in close liaison with the LEMA. This may be done by the UNDAC team but will often be done by the provisional OSOCC or USAR Coordination Cell (UCC) personnel from the USAR teams. If the LEMA has no sectorisation plan, then a Wide Area Assessment may be necessary to get the relevant information to formulate a sectorisation plan. The expected volume of work, geographic area, geographic features, scale of response, span of control and other factors should be taken into account when determining a sectorisation plan.

Sector Identification

The default INSARAG sector identification system is to use a simple lettering system to code each sector; A, B, C, D and so on. A local name or description can also be added to ensure clarity e.g. Sector A, North Padang. If the LEMA has its own a coded sector identification system in place e.g. Sector 1, 2, 3, or Red, Blue, Green etc., it should be adopted and allow for it in any documentation or markings.

The diagrams below are simple illustrations of how geographical sectorisation can be done.

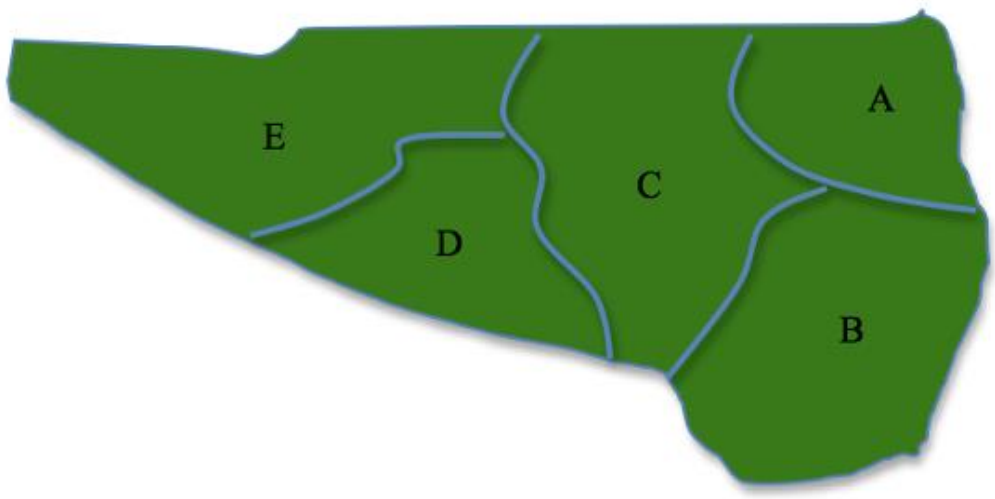


Figure 5: Sectorising the affected areas into smaller manageable sectors.

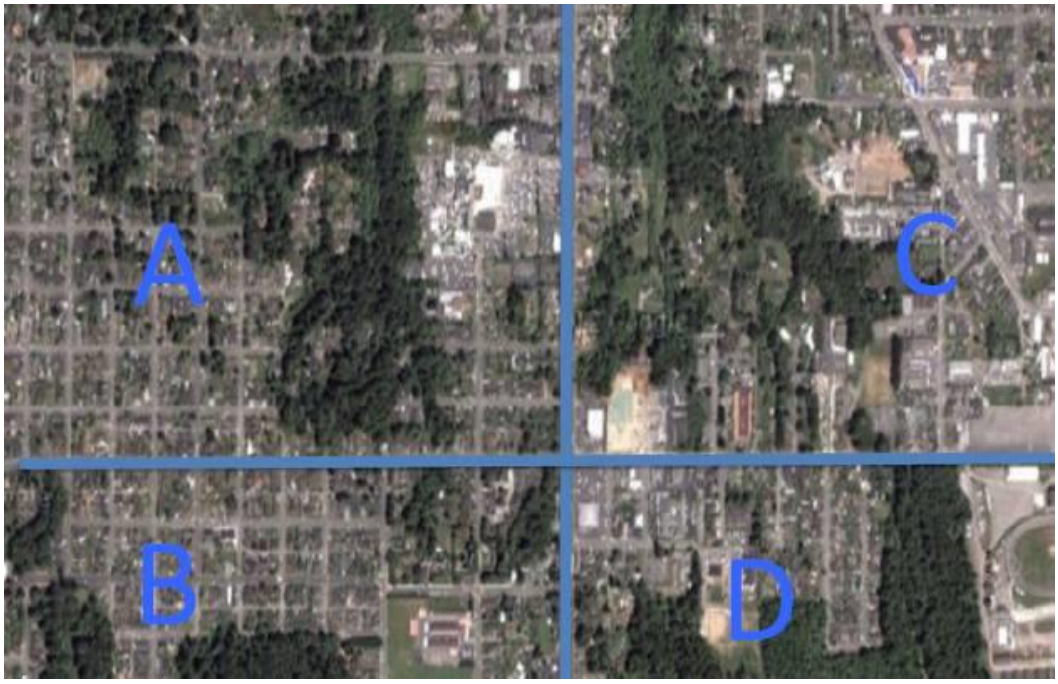


Figure 6: Sectorising an affected area using streets and city block layouts.

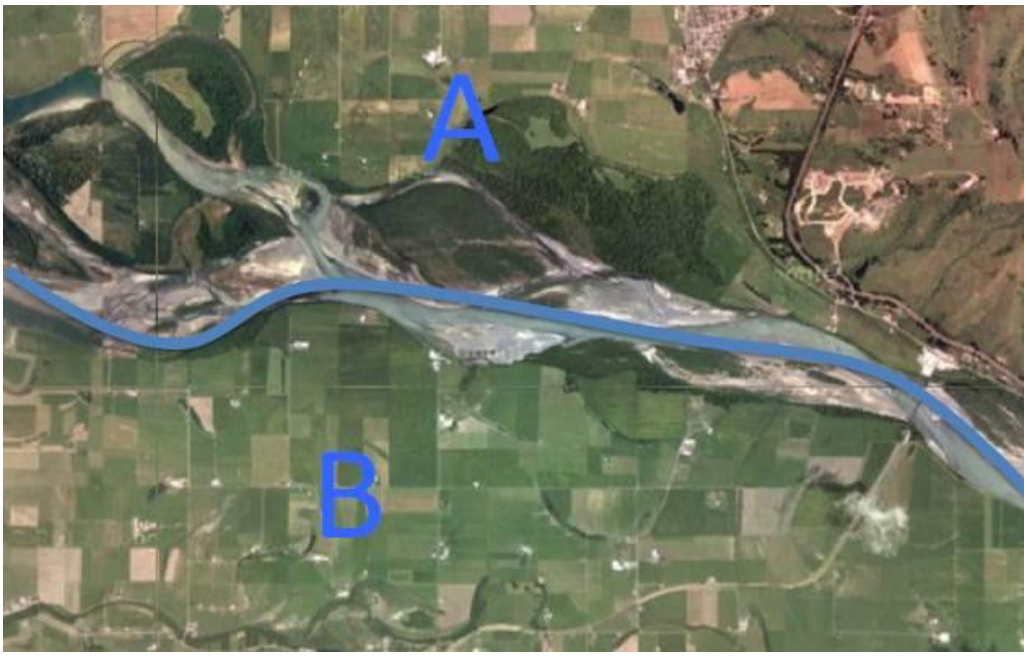


Figure 7: Sectorising an affected area using prominent features e.g. Sector A North of the river, Sector B South of the river.

4.8 Worksite

To allow effective coordination it is essential to uniquely identify every site where significant USAR operations take place. Each of these sites will be known as a worksite.

Definition of a Worksite

A worksite can mean different things but the simplest definition is “Any site where significant USAR operations are carried out.” Significant USAR operations normally only take place when there is thought to be the potential for a live rescue. Worksites will typically be one building where one USAR team or squad is working because of a potential live rescue. But a worksite could be much larger or much

smaller. A large building or complex of buildings, e.g. a hospital, may be identified as a single worksite. Alternatively the site of a single rescue in an area of only a few square metres would also be identified as a worksite.

Worksite Identification

When it is decided that a site will need significant USAR operations, usually rescue work, it should be given its own Worksite Identification (Worksite ID), which enhances the use of the primary geographical identification that should be the existing street name and building number, when possible. This can be done during Sector Assessment (see section on ASR Levels) but sites may also be allocated by the LEMA. In any case, each site should be allocated its own Worksite ID using the following protocol:

- The first part is the Sector letter allocated to the area the site is in e.g. A.
- As a worksite is identified a number is then sequentially allocated 1, 2, 3, etc.

The sector letter and allocated number produces the unique Worksite ID e.g. A-1, A-2, A-3 etc. If more than one team is in the same sector, then the UCC will instruct teams on which numbers to use e.g. Team 1 uses 1 to 20, Team 2 uses 21 to 40 etc.

If the LEMA uses a different sector code, e.g. numbers, then this should be used as the first part of the Worksite ID, e.g. 1-1 rather than A-1. In either case the sector code must be separated from the worksite number by a hyphen to prevent any possible confusion.

Important note: If sectorisation has not been completed, the use of plain numerals is recommended; these numbers can subsequently be integrated into the complete Worksite ID system once established. Control of number use is required to achieve this, e.g. give search teams batches of numbers 1 to 19, 20 to 39, 40 to 59 etc.

The diagrams below illustrate the process.

Figure 8: Sectorise the area of operation by assigning a letter to each area.

Figure 9: As potential rescue sites are identified, they are numbered and added to the Sector letter to produce a unique Worksite ID for each site.

Worksites within Worksites

It is probable that a relatively large worksite, e.g. a hospital, which is initially identified as a single worksite, e.g. B-2, could end up with more than one rescue site in quite different locations. For coordination purposes it is useful to identify each of these separately. To do this the original single Worksite ID should be kept for each site but with a suffix letter added, e.g. B-2a, B-2b, B-2c etc. to provide a unique “address” for each.

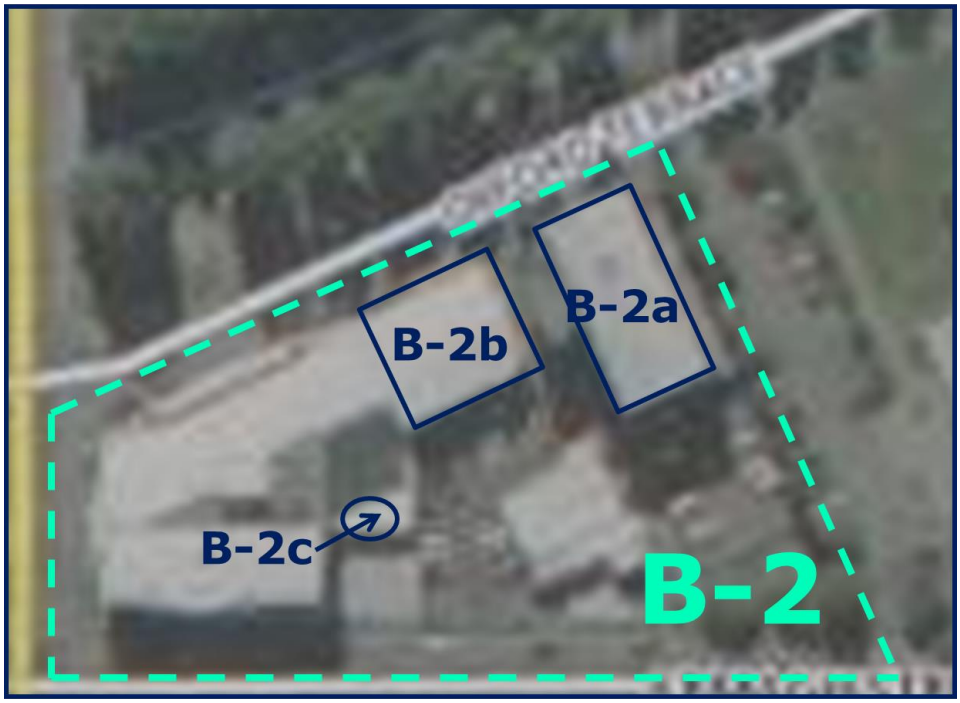


Figure 10: An example of worksites within a large initial single worksite.

The whole site was initially identified as a worksite (B-2) with potential live rescues but when teams did a detailed search they discovered three separate rescue sites in distinct locations. For coordination purposes, e.g. exact location, logistics support, reporting etc., it is important that each worksite has its own "address."

Important note: International USAR teams are deployed to support the LEMA. Any existing mechanism in use will be adapted by the international teams in order to better augment national resources already deployed for rescue work.

4.9 USAR Team Identification Code

In order to standardise the identification of all USAR teams within the coordination system a code or Team ID identifies each team. The code is composed of two parts:

- The three-letter Olympic code of the home country of the team
- A number to differentiate teams from the same country

For IEC classified teams the number will be decided by the home country at the time of classification and registered in the INSARAG USAR Team Directory. For non-IEC classified teams, the same country code system will be used; however, the number will be assigned by the RDC based upon sequence of arrival, starting from the number ten. Under this process the issue of a Team ID is temporary and is retained only for the duration of that specific deployment.

If a country indicates to INSARAG that they do not want the three-letter Olympic country code issued to teams, the following process will be used:

- The letters "SAR" (search and rescue) will be used to replace any country code
- Followed by a number starting at 10 – this may involve multiple countries
    - E.g. SAR-10 (country 1), SAR-11 (country 2) etc.

For ease of use and consistent application, the USAR Team ID system will also be used as the standard for radio call signs for deployed teams.

The following table shows some examples.

Team's country of origin	Team name	Team ID.
Japan	Japan Disaster Relief Team	JPN-1
Australia	Queensland USAR	AUS-1
Germany	THW SEEBA Team	GER-1
USA	Los Angeles County USAR Team	USA-2
USA	Fairfax County USAR Team	USA-1
Indonesia	XXX USAR Team (Non-Classified)	INA-10
Indonesia	YYY USAR Team (Non classified)	INA-11
United Kingdom	UKISAR Team	GBR-1
Australia (without national support)	ZZZ USAR Team (Non-Classified)	SAR-10
Germany	ISAR Germany	GER-2

Table 2: Examples of USAR team identification codes.

Important note: Teams may also be identified by their team name or acronym as provided and agreed upon with their national Focal Point.

4.10 Assessment, Search and Rescue Levels

Introduction

A key element of the INSARAG coordination methodology is a means of clearly identifying and defining every level, or type of work, normally needed during a major USAR incident. This can range from initial assessment of the affected area all the way through to deconstructing a building to recover the last deceased victim.

Having a clear definition of all the possible operational levels allows the coordination actors to be specific about the planning, tasking, specific USAR operations needed and the progress made. Information management tools (templates, forms, reports, marking system, VO etc.) used to facilitate coordination also relate to the level of USAR work being carried out.

The Levels

The five operational levels can define the phases of potential USAR related work. It should be remembered that not all these levels will always be carried out by international USAR teams; often the LEMA resources will do certain aspects. Levels can also be combined when appropriate and it is also possible that different levels of work are being carried out in different areas of the incident at the same time.

Important note: The five levels are identified as:

- Level 1: Wide Area Assessment
- Level 2: Sector Assessment
- Level 3: Rapid Search and Rescue
- Level 4: Full Search and Rescue
- Level 5: Total Coverage Search and Recovery

Each level is explained and defined in more detail in the tables below.

ASR Level 1		Wide Area Assessment Definitions and purpose	Carried out when and by who	INSARAG Tools	Outputs

Assessment, Search and Rescue Level	**1**	• The preliminary survey of the affected or assigned area.
		• For the purpose of:
		  ○ Determining the scope and magnitude of the incident
		  ○ Identifying scope, location and types of damage
		  ○ Estimating the urgent resource needs
		  ○ Developing a sectorisation plan
		  ○ Establishing priorities
		  ○ Identifying general hazards
		  ○ Identifying infrastructure issues
		  ○ Identifying potential BoO locations
		• Usually accomplished by; vehicle, helicopter, waterborne craft, on foot or from reports from others e.g. the LEMA.
		• Initial, fast visual check of the damaged or assigned area.
		
		Teams carrying out this level of assessment must remain mobile, not engage in rescue operations and report the results as quickly as possible.
			1. The LEMA often do this prior to the arrival of teams and provide all or some of this information.
			If it is not complete it may be beneficial to redo this.
			
			2. Can be done by members of the OSOCC/UNDAC team on their arrival.
			
			3. By assessment elements of USAR teams when allocated areas not already assessed.
				1. Information on the VO.
				
				2. RDC/OSOCC briefing.
				
				These could be supported by information such as: LEMA briefings, maps, GPS coordinates, photographs, and video.
					1. Briefing back to the OSOCC/UCC and the LEMA.
					
					2. Sectorisation plan.
					
					3. BoO location(s).
					
					4. Initial deployment priorities and plan (Where or to which sectors the first teams are sent).
					
					5. Resource requests e.g. more teams.
					
					6. Posts on the VO.

ASR Level 2		Sector Assessment Definitions and purpose	Carried out when and by who	INSARAG Tools	Outputs

Assessment, Search and Rescue Level	**2**	• The main purpose is to identify specific and viable live rescue sites within the allocated sector to allow assignment prioritisation and make a plan of action.
		• It needs to be a fast paced but methodical assessment.
		• The aim is to assess the whole sector in a timely manner.
		• The Worksite Triage form should be used to gather the essential information at this stage.
		• Information from the local population and local responders is often valuable and should be sought during the assessment.
		• Rescues are not usually performed during this level **unless** an unexpected opportunity arises.
		• If live victims are found the decision on whether the Assessment Team stays to start the rescue or carries on the assessment will be dependent on the situation and the brief the team received, some options are:
		  ○ Additional resources are called in to carry out the rescue
		  ○ The Assessment team stays but must ensure the sector
		  ○ Assessment is completed by others as soon as possible.
		  ○ Adopt a strategy to send a combined team able to do both ASR Level 2 sector Assessment and ASR Level 3 Rapid Search and Rescue
		• An ASR Level 2 Assessment can be repeated later if it is thought necessary, e.g. a night time assessment or an assessment with additional dogs, which may produce different results.
			1. It is preferably done closely behind the Level 1 Wide Area Assessment and as soon as possible after sectors have been established.
			
			2. The LEMA may have sectorised and started this process prior to assistance arriving. If this is not complete it may be beneficial for a USAR team to redo this.
			
			3. If the LEMA haven't done this then it should be the first action of the initial USAR team(s) in a sector.
			
			4. Usually carried out by a small mobile assessment/search element of the USAR team.
			
			5. Use of dogs or technical search equipment is optional and will depend on the situation. Using these will improve the detailed results but will slow down the process so a balance is needed.
				1. Worksite Triage form.
				
				2. Briefing from OSOCC/UCC.
				
				3. A map of the sector area being assessed is highly recommended and should be used to clarify the areas assessed and cleared.
				
				There could also be information such as: LEMA briefings, information from local teams, GPS coordinates, photographs etc.
					1. Completed Worksite Triage Forms identifying the sites teams are needed at.
					2. A completed worksite ID
					
					3. A map of the sector showing the area covered by the assessment.
					
					4. Development of the sector plan of action and priorities by OSOCC/UCC.
					
					5. Assignment of USAR teams to worksites.
					
					6. Further resource requests.

ASR Level 3		Rapid Search and Rescue Definitions and purpose	Carried out when and by who	INSARAG Tools	Outputs

Assessment, Search and Rescue Level	3	• Usually applies in the early stages of a large scale event when a relatively small number of teams are available.
		• Teams are assigned to one or multiple worksites (usually identified during Level 2 Sector Assessment).
		• Fairly rapid progress needed to ensure the allocated structures are all searched relatively quickly to maximise the lifesaving opportunities.
		• There is relatively modest commitment to each site with:
		  ○ Use of physical, canine or technical search techniques
		  ○ Rescue operations using debris removal and limited shoring, breaking and breaching etc.
		  ○ Limited penetration into the structure/rubble
		• The search and/or rescues are normally possible to complete within one operational period, e.g. a few hours.
		• Team should be able to work simultaneously at more than one worksite.
		• This level of operation should achieve the rescues just beyond the capability of local responders, “citizen” rescuers or where no rescue effort has yet taken place.
		• A team will not normally undertake long term operations (more than one operational period) to penetrate deeply into the structure.
		• Deeply entombed victims may not be found during this level
		• At this level teams should identify those structures or worksites where a Level 4 search might be worthwhile.
		• If a confirmed deeply trapped live victim is identified, team may extend to Level 4 operations if the terms of engagement allow or they get permission from sector coordination. But they must ensure Level 3 work is completed for the remaining worksites assigned to them.
		• If additional rescue sites are identified at any time then a new Worksite ID should be created.
			1. This is usually done when USAR teams are initially allocated into sectors.
			
			2. Should always be done at identified worksites.
			
			3. Done by Medium and Heavy USAR teams.
			
			4. This work might also be done by LEMA national teams.
			
			5. One USAR team may be able to operate simultaneously at more than one worksite due to the limited commitment.
				1. Worksite Report Form.
				
				2. Victim Extrication Form.
				
				3. Worksite marking system.
					1. Completed Worksite Reports.
					
					2. Marking of worksites.
					
					3. Completed Victim Extrication forms.

ASR Level 4		Full Search and Rescue Definitions and purpose	Carried out when and by who	INSARAG Tools	Outputs
Assessment, Search and Rescue Level	4	• This is the search and rescue work that should identify, locate and rescue the small number of heavily trapped or entombed survivors that local rescuers, first responders, LEMA resources or ASR Level 3 operations did not achieve. • It will usually be at a single worksite or a small number of worksites . • Teams will penetrate into most or all of the survivable voids. • These are likely to be longer term (more than one operational period) operations requiring a wide range of USAR skills, e.g.: ○ All possible search techniques and equipment and often repeated as access is achieved ○ Possibly extensive shoring to make the structure or access routes safe ○ Heavy and repeated breaking and breaching of the full range of structural elements ○ Lifting and/or moving of large elements ○ Some delayering may take place at this level if access is needed to an identified potential live rescue ○ Working in confined spaces, sometimes deep inside structures • This may involve several teams on the same worksite. • Complete command and control of the worksite is needed.	1. This level is normally carried out after or in conjunction with Level 3 Rapid Search and Rescue. 2. If the LEMA has identified specific sites already, a team may go straight into Level 4 operations as their first tasking. 3. Carried out by Medium and Heavy USAR teams.	1. Worksite Report. 2. Worksite Marking system. 3. Victim Extrication Form.	1. Completed Worksite Reports. 2. Marking of worksites. 3. Completed Victim Extrication forms.

ASR Level 5		Total Coverage Search and Recovery Definitions and purpose	Carried out when and by who	INSARAG Tools	Outputs
Assessment, Search and Recovery	5	• This usually means operations carried out at a worksite to recover the deceased victims. • This level is not normally carried out by international USAR teams. • Normally done after the rescue phase has been exhausted and the incident has moved into the recovery phase. • It is conceivably still part of the rescue phase if this is deemed necessary by the coordinating authority. • There may be a "miracle" find of a live victim that is achieved as the structure is de-layered or deconstructed. • If the work relates to collapsed structures or rubble pile worksites this work can include: ○ Searching or making access into every possible void ○ All the USAR skills listed in Level 4 ○ Delayering of large elements to allow access to all parts of the structure or rubble pile ○ Working with heavy machinery, e.g. cranes and demolition equipment, to achieve this access ○ Complete command and control of the worksite is essential	1. This is usually done **after** the rescue phase. 2. This level is not normally carried out by international USAR teams. 3. Usually done by the LEMA resources for their own body recovery purposes. 4. International USAR teams can be asked to undertake this task where area clearance and body recovery is a high priority. 5. Some international teams may do this and some will not, each team will make their own decision.	1. Worksite Reports. 2. Worksite Marking system. 3. Victim Extrication Form.	1. Completed Worksite Reports. 2. Worksite Marking. 3. Completed Victim Extrication forms.
		Area Clearance to ASR Level 5 • This level can also apply to areas where damage is less but USAR skills are needed for access or safety to enable complete clearance of all possible victims. In this case the operations will include: ○ Systematic search of every room of every structure in the assigned area of operation. ○ This operation should quickly clear relatively large areas. ○ If necessary forced entry is used to gain access to all areas ○ Heavy machinery may occasionally be needed to clear smaller rubble piles • This may specifically be for deceased victim location/recovery. • The rules of engagement (brief) have to detail what teams do if they locate a live or deceased victim, e.g. call in other teams or stay and deal with it themselves. • Full control and coordination is needed with detailed recording by the teams of the exact areas they have cleared.	**Carried out when and by who** 1. LEMA resources usually do this but international USAR teams may be asked to do this in some circumstances. 2. USAR teams may or may not decide to move to this phase of work based on various factors e.g. other rescue possibilities, capacity of teams at the event, policy of the team, mandate from sponsors etc.	**INSARAG Tools** Victim Extrication Form if necessary.	**Outputs** Report on the work carried out as agreed with the OSOCC/LEMA. Maps of areas cleared as part of reporting results.

4.11 Worksite Triage

The objective of Level 2 Sector Assessment is to identify specific and viable live rescue sites within the allocated sector to allow assignment prioritisation and make a plan of action. One of the considerations for the prioritisation of worksites is the triage category.

Triage categories from A to F are identified relating victim information, void size and assessment, search and rescue level required.

Triage Category	Victim Information	Void Size	ASR Level Required
A	Confirmed Live Victims	All voids	Level 3 Rapid SAR
B	Confirmed Live Victims	All voids	Level 4 Full SAR
C	Unknown or possible victims	Big Void	Level 3 Rapid SAR
D	Unknown or possible victims	Small Void	Level 3 Rapid SAR
E	Unknown or possible victims	Big Void	Level 4 Full SAR
F	Unknown or possible victims	Small Void	Level 4 Full SAR

Table 3: The triage categories.

The following definitions are useful in the process of assigning a triage category to a worksite:

- **Confirmed live victims:** Means that the assessment team knows that there are people alive in the collapsed structure.
- **Unknown victims or possible victims:** Means that people are missing, but the assessment team does not know whether these people are alive or even in the structure.
- A **big void** is big enough for a person to crawl. The chances of survival for a victim are greater in big voids than small voids. "Big" is a relative term, i.e., a big void for a child will be considerably smaller than a big void for an adult.
- A **small void** is where a person can hardly move and has to lie more or less still while waiting for help. In small voids, the chances of injury are higher as people trapped inside have less space to avoid falling objects and collapsing structural elements.

The objective of a triage process is to evaluate the triage factors in order to compare collapsed structures and decide the order of priority. The key to triage is consistency in the comparison of triage factors (bigger or smaller, less or more stable, less or more time), not the exact size of voids or level of shoring.

Important note: Other considerations when prioritising and tasking:

- The triage category result
- Numbers of likely victims at worksite
- The type of construction
- The size of the site
- The resources and time available
- Any strategy declared by the OSOCC/LEMA

	Level 3 Rapid ASR Needed	Level 4 Full ASR Needed
Confirmed Live Victims	A	B
Unknown Victims and Big Voids	C	E
Unknown Victims and Small Voids	D	F

Table 4: The triage table is useful in the planning process.

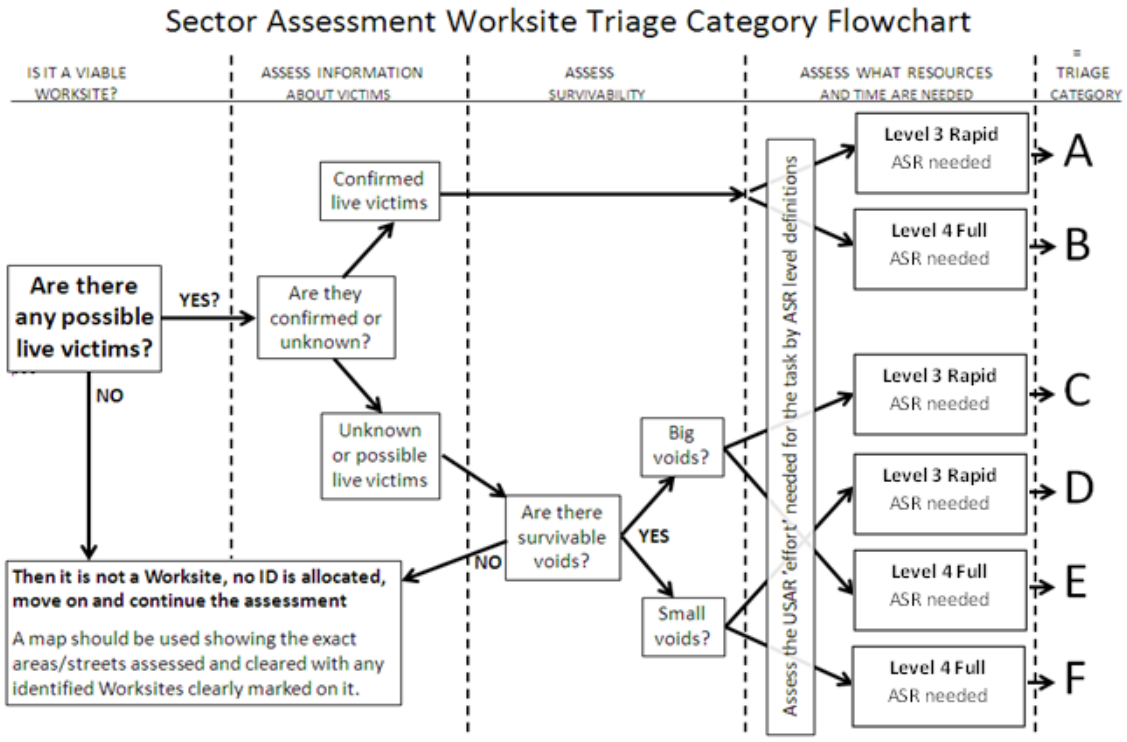


Figure 11: Decision-making process for determining a triage category for a worksite.

4.12 Information Management

Introduction

Larger, more complex and frequent USAR operations result in increased workloads and potentially in loss of situational awareness if the information gathered is not managed properly. Hence, to assure the

coordinated response of multiple international USAR teams, information management becomes a critical issue across the whole structure and all stages of the response cycle. All gathered information in relation to victims should be treated as confidential.

It is acknowledged that the efficient and effective capture, processing, dissemination and use of information will underpin the success of large-scale coordination efforts. Particularly, information management is needed to improve field coordination in USAR operations to obtain efficiency and effectiveness. It is also acknowledged that responding teams want to limit the time and effort spent on information management. So the requirements have been restricted to the absolute essential information that is critical to USAR coordination. It is recognised that broader information is often needed for various other purposes but this manual only covers the essential USAR coordination requirements.

All stakeholders of the INSARAG community need information management, hence the need for a standardised and systematic approach to collect and report information at all levels. An information management system was designed and constructed to support the coordination methodology addressing the “end to end” system requirements. The following basic principles were considered in the design process:

- **Field oriented:** The tools were designed for ease of use in the field, accounting for the difficulties encountered in such environment.
- **Reliable:** Information collected and stored in the system must be reliable and readily available for the coordination structure, even under adverse conditions and limited resources.
- **Scalable**: The system must adapt to different response scales.
- **Adaptable:** The disaster response needs to adapt to different types of disasters and environments.
- **Traceable:** The accountability of the information managed must be available to allow scrutiny and decision-making process,
- **Integral:** The system must cover as many of the different aspects of the USAR response as possible in pursuit of standardisation.

In the following subsections the basic information management components are explained.

Tools developed

Tools for information management were developed and grouped in two main categories as follows:

- **USAR teams:** These are a set of tools to be used by USAR teams and were designed mainly to collect information in the field and are formatted for easy use and completion.
- **USAR coordination:** Set of tools to be used mainly within the Sector Coordination, UCC, OSOCC or RDC to coordinate the overall response, facilitating the information management through the integration and analysis of information in order to maintain situational awareness.

Specific tools were developed for the different components of the USAR coordination structure, reducing the workload and attention needed to complete information management tasks. This avoids overwhelming USAR teams and the coordination structure, but still achieves situational awareness and coordination. The following two tables summarise the essential information management tools in these two categories.

Name	Description
USAR Team Fact Sheet	Team information to be uploaded in the VO before departure and given to RDC/UCC on arrival.
Worksite Triage Form	Used during assessment to collect information from identified worksites with rescue opportunities.
Worksite Report Form	Report of activity at a worksite for a specific work period or to handover the worksite.
Victim Extrication Form	Form used to collect basic information of all victims extricated to be handed to the UCC or the LEMA as instructed.
Demobilisation Form	Form with demobilisation information form USAR teams sent to the OSOCC/UCC.

Table 5: Forms used by USAR teams

Name	Description
Team Fact Sheet Summary	Tool used to collate information from Team Fact sheets from all teams involved in the response.
USAR Operations Management Tool	Tool used to collate Worksite Triage forms, Worksite Reports and manage USAR operations.
Incident/Sector Situation Report	Tool used to summarise operations and situation in an incident or sector.

Table 6: Tools used by USAR Coordination

Important note: The tools developed include detailed guidance notes that explain how to use them by providing instructions for each field that is required to be completed. These forms will be available for teams in various electronic formats to facilitate ease of input and to facilitate input to the OSOCC. Please refer to Annex E for the complete set of tools and guidance notes.

Information Management during USAR Operations

When core USAR operations take place and teams are fully engaged in field operations, special consideration is taken to minimise information management tasks to the essential components required to achieve coordination and efficient resource management. This is achieved by, firstly, reducing the reporting tasks, and secondly, by standardising formats and reducing information relating to only what is essential.

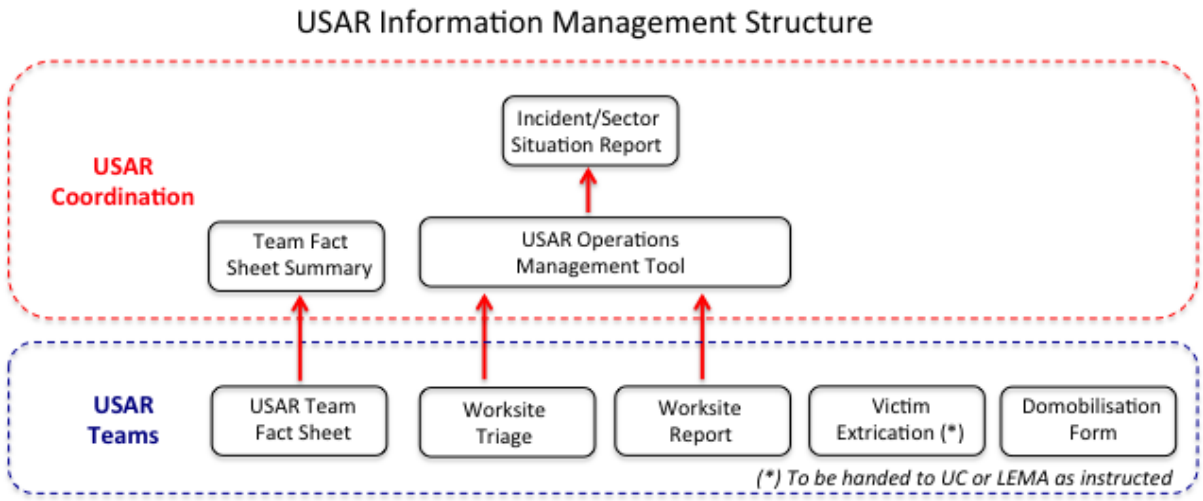


Figure 12: Information flow during core USAR operations

Figure 12 shows the information flow during the peak of USAR operations. Information is collected and reported in the field by crews, integrated by Team Management and reported to USAR Coordination within the OSOCC.

Important note: It is paramount for all national USAR teams to maintain consistent links with the OSOCC to ensure two-way information sharing. Teams are especially advised to participate in regular Team Leaders meetings held at the OSOCC to update and receive the latest information from the VO.

5. INSARAG Marking and Signalling System

5.1 INSARAG Marking System

Marking systems are an essential tool used in USAR operations to display and share key information between rescue teams and other field personnel. They should also be a mechanism to strengthen coordination and minimise duplication. To maximise the value of using a marking system in an event it is necessary to identify and universally use a single, common methodology. For this methodology to be effective, it must be used by all responders, remain simple to apply, simple to understand, be efficient in the use of resources and time, communicate the information effectively and be consistently applied.

The INSARAG Marking System strives to achieve these things and consists of three principle Marking elements, these being: Worksite Marking, Victim Marking and Rapid Clearance Marking. These components deliver a comprehensive suite of visual displays that capture critical information to both inform situational awareness and support planning and coordination.

The INSARAG Marking System is used by teams as the default marking system in the absence of any national system in countries where operations are occurring. Marking system use will be determined by the OSOCC in liaison with the LEMA.

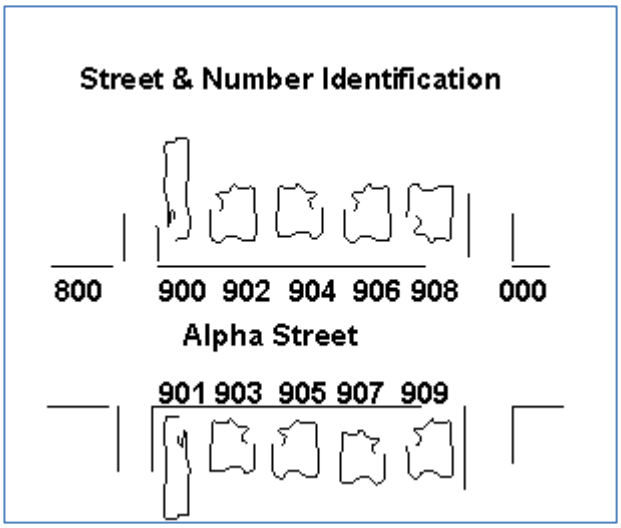
Countries are encouraged to use the INSARAG Marking system as their national standard which will assist in times of crisis when international teams are required to be used. The INSARAG Marking System is designed to complement not compete with national systems.

Important note: The following is defined:

- General Area Marking
- Structure Orientation
- Cordon Markings
- Worksite Marking
- Victim Marking
- Rapid Clearance Marking (RCM)

General Area Marking

At times some general marking will be required to be applied to assist in navigation and coordination. This should be limited to essential information only and be as concise as possible.

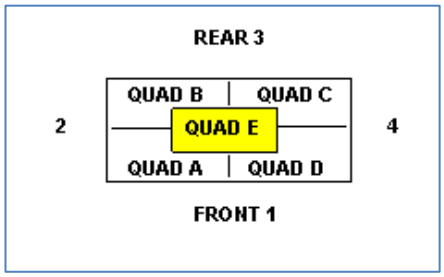


- General area marking can be applied using spray paint, builders crayon, stickers, waterproof card etc. as determined by the team.
- The colour should be highly visible and contrasting to the background.
- It may include:
  - Address or physical location
  - Landmark or code name (e.g. sugar factory building 1)
  - Assigned area or worksites are to be identified individually (see Worksite Marking
- If no maps are available, sketch maps are to be produced and submitted to the OSOCC/LEMA.
- When producing maps, primary geographical identification should be the existing street name and building number, when possible. If this is not possible, landmarks should be used as reference and should be used universally by all actors.

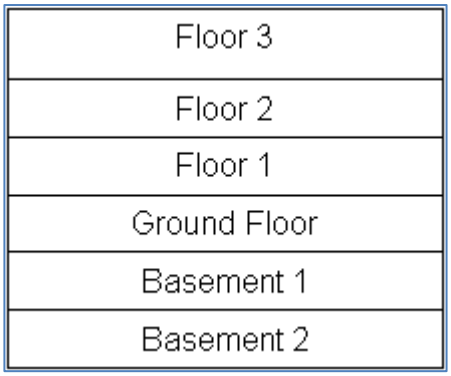
Structure Orientation

Structure orientation includes both an exterior and interior identification:

- **Exterior Identification:** The street address side (FRONT) of the structure shall be defined as “1”. Other sides of the structure shall be assigned numerically in a clockwise manner from “1” (see graphic).
- **Interior Identification:** The interior of the structure will be divided into QUADRANTS. The quadrants shall be identified ALPHABETICALLY in a clockwise manner starting at the corner where Side 1 (FRONT) and 2 meet. Quadrant E (central lobby, elevators, staircases, etc) applies to buildings with multiple storeys. (See graphic).



Multi-storey structures must have each floor clearly identified. If not obvious, the floors should be numbered as viewed from the exterior. The ground level floor would be designated the “ground floor” and, moving upward the next floor would be “Floor 1”, etc. Conversely, the first floor below ground level would be “Basement 1”, the second “Basement 2”, and so on. (See graphic).

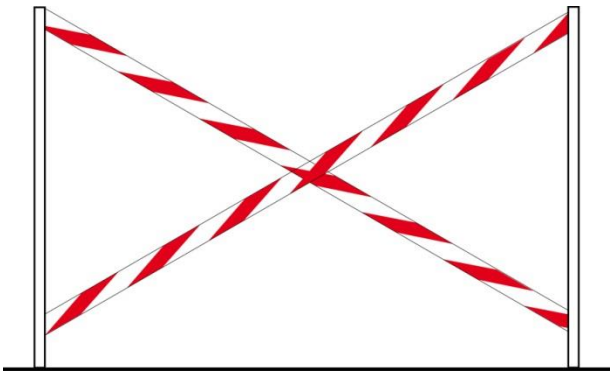


Cordon Markings

Cordon markings are used to identify operational work zones as well as hazardous areas in order to restrict access and warn of dangers.

Operational Work Zone

Hazard Zone

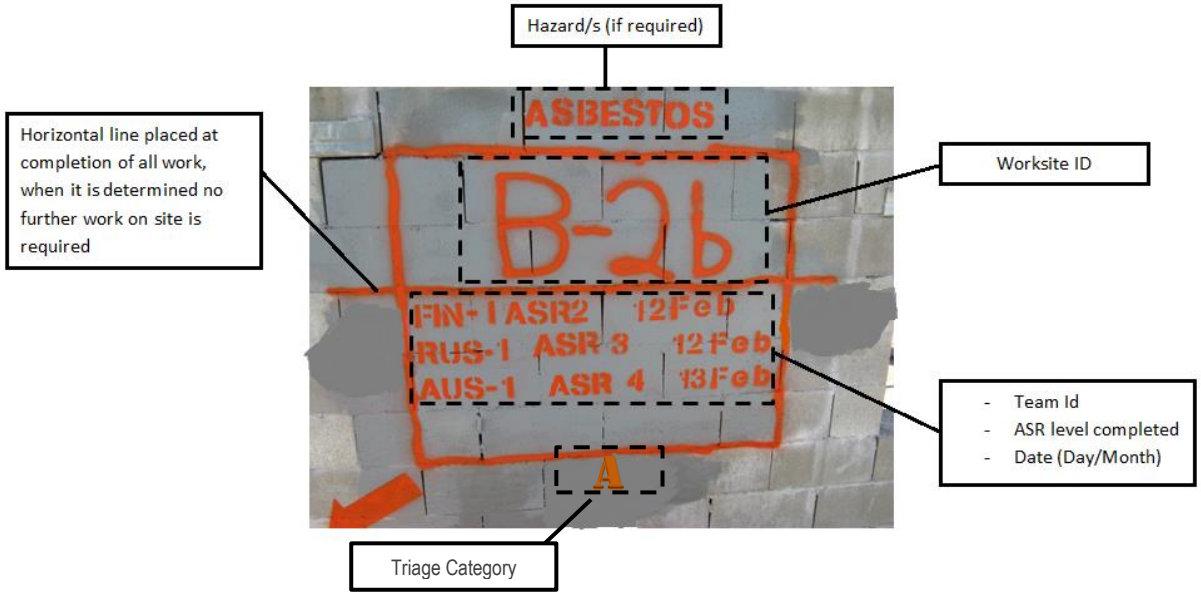


5.2 Worksite Marking

Worksite marking is intended to uniquely identify specific and potential live rescue sites and is therefore an essential part of the coordination system. It displays critical information and is simple to understand and apply. It allows Worksites to be easily recognised and should be applied on collapsed structures

assessed by USAR teams. The marking should be placed near the point of entry on the exterior of the collapsed structure that offers the best visibility. All assessment results are to be reported to the OSOCC immediately.

Whilst key information is required teams can exercise discretion and adapt to environmental impacts within these boundaries whilst still maintaining a common, effective and consistent marking system. The system also compliments LEMA/National systems and can be adapted to work alongside these as required.



Above: Example of completed worksite marking system, with all required work completed.

Marking Method

Worksite marking should be applied during initial ASR Level 2 Sector Assessment after a site has been deemed to be a worksite. The marking should be applied to the front, (or as close as possible) or main entry to the worksite. The following method should be used when applying worksite marking:

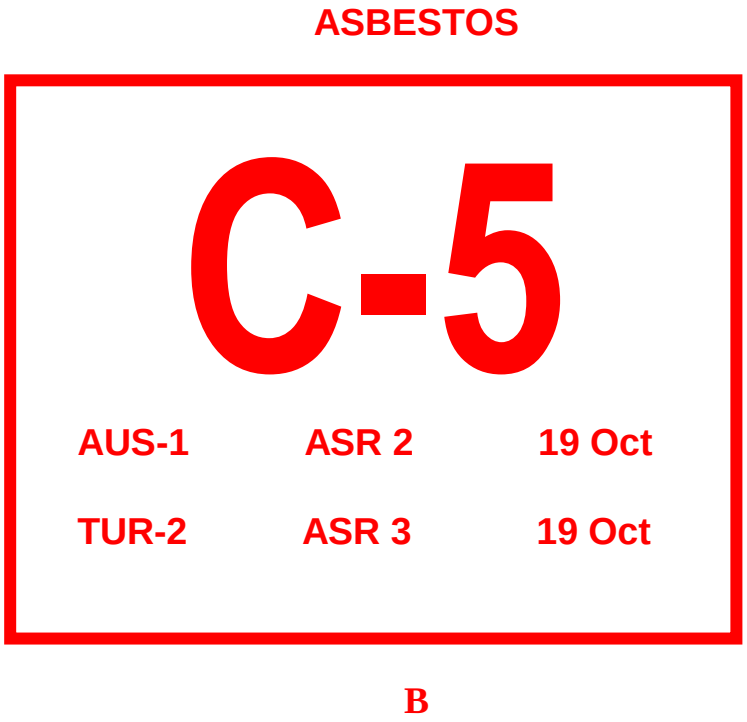
- Draw a 1.2 metre x 1.0 metre (approximately) box.
- May draw a directional arrow to confirm exact location of worksite/worksite entry.
- Inside box – displays:
  - Worksite ID
  - Team ID
  - ASR Level completed. and
  - Date
- Outside of box – displays:
  - Any hazard requiring identification e.g. Asbestos (top),
  - Triage category (bottom)
- Updated with Team ID, ASR Level completed and date as further levels of work (ASR) are completed.
- Updated missing persons, victims rescued and deceased victims extricated as these occur.
- Material used can be spray paint, builders crayon, stickers, waterproof card etc. as determined by the team.
- The Worksite ID should be approximately 40cm high.
- The Team ID, ASR Level and date should be smaller, e.g. approximately 10cm.
- The colour should be highly visible and contrasting to the background.
- After all work on the worksite has been completed and it is determined no further work is required a horizontal line is to be drawn through the centre of the entire worksite marking.

If a team considers there is a need to leave critical additional information at the worksite this can be added to the worksite marking using plain language in full view when required. This and all other

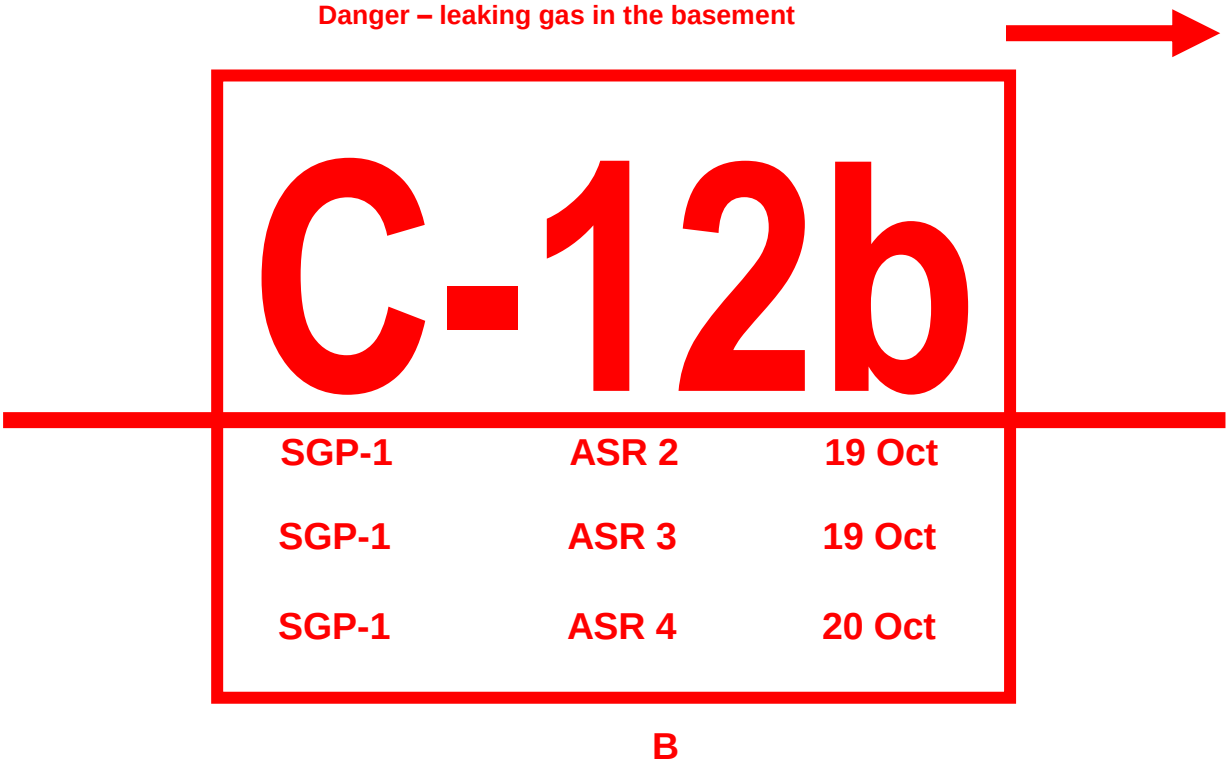
relevant details should be recorded on the Worksite Triage or Worksite Report forms and submitted through the information management process.

Progressive Examples

Above: Charlie Sector, Worksite 5, Australia 1 completed ASR 2 Sector Assessment on 19th October. Asbestos was identified as a hazard. Triage category determined as “B”.



Above: Here the Turkey 2 team were assigned to rescue operations on the C5 Worksite following the Sector Assessment completed by Australia 1. Turkey 1 completed ASR 3 Rapid SAR operations on 19th October.



Above: Here the Singapore 1 team have completed work at the specific Worksite C-12b **within** Worksite C-12. An arrow has been added to the marking to make it clear that C-12b is to the right of the marking. A hazard warning about gas leaking into the basement has been added in plain language. Triage category determined as "B". Operations to ASR 2 and ASR 3 were completed on 19th October. Operations to ASR 4 Full SAR were completed on 20th October. No further operations are required on this worksite.

Practical examples could look similar to the photographs below:

Above: Here Finland 1 have completed an ASR 2 Sector Assessment at the specific Worksite B-2b **within** Worksite B-2 on the 12th February. An arrow has been added to the marking to make it clear that B-2b is to the left and below the marking. A hazard warning identifying asbestos has been added in plain language. Triage category determined as "E".

Above: Here Russia 1 were assigned to complete an ASR 3 on the B-2b Worksite following the Sector Assessment completed by Finland 1. Russia 1 completed ASR 3 Rapid SAR operations on 12th February.

Above: Here Australia 1 were assigned to complete an ASR 4 on the B-2b Worksite following the ASR 3 Rapid SAR completed by Russia 1. Australia 1 completed ASR 4 Full SAR operations on 13th February.

Above: Here Australia 1 having completed ASR 4 Full SAR on the worksite have determined no further work is required on this worksite. Marking has been updated with horizontal line through the centre.

5.3 Victim Marking

Victim marking is used to identify potential or known casualty (Live or Dead) locations that are not obvious to rescuers e.g. below debris/entombed.

Method

The following method should be used when applying victim marking:

- When teams (e.g. Search teams) are not remaining on site to immediately commence operations.
- At incidents involving multiple casualties or where any confusion on exact location from search operations is possible.
- Markings are done as close as physically possible to the actual surface point identified as the location of the casualty.
- Material used can be spray paint, builders crayon, stickers, waterproof card etc. as determined by the team.
- The size should approximately 50cm.
- The colour should be highly visible and contrasting to the background.
- Not intended for use when rescue operations are completed.
- Not to be applied to the front of a structure with the Worksite ID unless that is where the casualties are located.

Progressive Examples

Description	Example
Large “V” applied to location of all potential victims – live or deceased.	V

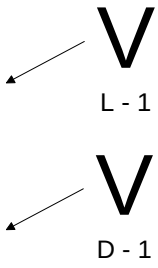
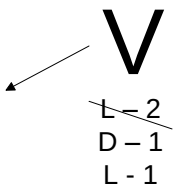
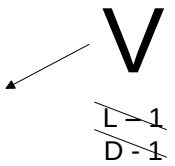
Optional arrow from “V” to clarify location if required.	
Under the “V” either: - An “L” indicating confirmed live victim, followed by a number (e.g. “2”) indicating the number of live victims at that location – “L-2,” “L-3” etc. and/or - A “D” indicating confirmed deceased victim, followed by a number (e.g. “3”) indicating the number of deceased victims at that location – “D-3”, “D-4” etc.	
On removal of any casualty the relevant marking is crossed out and updated (if required) below; e.g. “L-2” may be crossed out and an “L-1” applied indicating only one Live victim remaining.	
When all ‘“L” and/or “D” markings are crossed out, all **known** victims have been removed.	

Table 7: Progressive examples of victim marking.

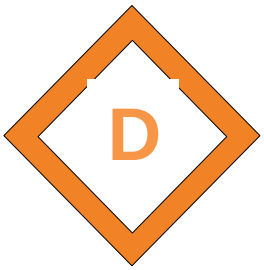
5.4 Rapid Clearance Marking System

The Worksite ID system is only used at potential live rescue sites, with other sites, where no rescues are possible, or required normally remaining unmarked. This allows teams to move faster, maximise life-saving opportunities and simplifies coordination. However there are situations where it is beneficial to have a marking that can be left at sites where teams have established there are no live victims or ’deceased’ only. Leaving a recognised ‘**clear’** marking will prevent duplication and have other advantages. When it is decided this level of coordination and marking is necessary the Rapid Clearance Marking (RCM) system can be used. The decision to use the system can be at the discretion of the USAR Team or be a requirement set by LEMA/OSOCC/UCC.

Method

The process for applying RCM is as follows:

- A decision has to be made, by the team or by the LEMA/OSOCC to implement this level of marking.
- RCM can only be used when sites can be fully searched quickly or there is strong evidence confirming no live rescues are possible.
- Two RCM marking options are available, they are: Clear and Deceased Only.

	**Clear:** Equivalent to ASR Level 5 search completion – indicating that the area/structure is clear of all Live and Deceased casualties.
	**Deceased Only:** Indicates same level of comprehensive search has been completed but only **Deceased Casualties** remain in-situ. **Note:** When deceased are removed, apply "clear" RCM adjacent to original mark.

- Can be applied to structures that are able to be searched rapidly or where information confirms there are no live victims or only deceased remain.
- Can be applied to non-structural areas – cars/objects/outbuildings/debris piles etc. – that have been searched to standards indicated above.
- Applied in the most visible/logical position on the object/area to provide the greatest visual impact.
- Diamond shape with a large "C" inside for Clear, or with a large "D" inside for Deceased Only. Immediately below, the following is applied:
    - Team ID: _ _ _-_ _ e.g. AUS-1
    - Date of Search: _ _/ _ _ _ e.g. 19/Oct
    - Material to be used can be spray paint, builders crayon, stickers, waterproof card etc. at the discretion of the teams
    - Size: Approximately 20cm x 20cm
    - Colour: Bright, contrasting colour to background

Progressive Examples

Examples	
Rapid clearance marking indicating Level 5 ASR complete on object/area applied. Applied by Australian Taskforce 1 on 7 July.	

Rapid clearance marking applied to car – indicating Level 5 ASR search complete on car only. Completed by Australia Taskforce 1 on 19th October.	 
Rapid clearance marking applied to area indicating Level 5 ASR completed of area inside defined marked limits – paint or otherwise define edges. Completed by Australia Taskforce 1 on 19th October. **Note:** This pile has been turned over by machinery to confirm ASR Level 5 standard.	
Rapid clearance marking indicating comprehensive search complete on object/area applied, only deceased casualties remain in-situ. Victim Marking would be applied as required. Applied by Australian Taskforce 1 on 7 July.	 AUS – 1 07Jul

Rapid clearance marking applied to car – indicating comprehensive search complete on car, only deceased casualties remain in-situ. Victim Marking would be applied as required. Completed by Australia Taskforce 1 on 19th October.	
Rapid clearance marking applied to area indicating comprehensive search completed of area inside defined marked limits – paint or otherwise define edges. Deceased casualties only remain in-situ. Completed by Australia Taskforce 1 on 19th October. **Note:** This pile has been turned over by machinery to complete comprehensive search.	

Table 8: Rapid clearance markings.

5.5 INSARAG Signalling

Effective communications underpin safe field operations, particularly in multi-agency environments. This is even more critical in international environments where language and cultural differences also exist. Effective emergency signalling is essential for safe operation at a disaster site. Having a universally understood emergency signalling system ensures that all personnel operating on a worksite know how and when to react to signals on the site to ensure safe and effective operations for rescuers and victims alike. The following steps must be considered:

- All USAR team members should be briefed regarding emergency signals.
- Emergency signals should be universal for all USAR teams.
- When multiple teams are operating on a single worksite, this common understanding should be reinforced to all personnel involved.
- Signals must be clear and concise.
- Team members are required to immediately respond to all emergency signals.
- Air horns or other appropriate hailing devices should be used to sound the appropriate signals as follows and located to allow immediate use:

Evacuate

(3 short signals, 1 second each – repeatedly until site is cleared)

Cease Operations – Quiet

(1 long signal, 3 seconds long)

Resume Operations

(1 long signal + 1 short signal)

6. Hazardous Materials Operations

6.1 Introduction

International USAR teams locate, extricate, and provide emergency medical treatment to victims entrapped as a consequence of structural collapse. Operations involving collapsed buildings normally include some form of hazmat component – examples include, broken heating oil pipes, domestic or industrial refrigerants, broken sewerage pipes, body fluids, etc. USAR teams should have the capability to deal with these issues as a normal part of search and rescue operations.

In some instances structural collapse may involve the significant release of substances that have the potential to injure and/or cause death as well as resulting in significant environmental damage. These substances can include nuclear, biological, or industrial chemical contaminants. Hazmat incidents may also occur in conjunction with an explosive or incendiary device.

Medium and Heavy USAR teams are required to have a basic capability to detect and isolate hazardous materials and report the situation to the OSOCC. Teams locating a hazmat source must cordon off the area and mark accordingly to alert other rescuers of the danger. If there is a suspicion that contamination exists, treat the site as contaminated, until proven otherwise.

6.2 Strategic Considerations

Medium and Heavy international USAR teams need to possess the inherent knowledge to recognise a hazardous environment, thus minimising the risk of harm, injury or death to its members, the affected population and the environment. It is also expected that teams will be able to communicate its findings regarding contamination to others. As indicated, an international USAR team should:

- Have the ability to recognise situations where contaminant(s) may be suspected.
- Possess the technical expertise to offer sound advice to the LEMA, OSOCC and other actors.
- Possess the capability to provide basic protection for team members by performing environmental detection and monitoring.
- Implement basic decontamination procedures.
- Be aware of the team's limitations in dealing with complex hazmat operations.

6.3 Operational Considerations

If a determination is made that a site is contaminated or if a site is suspected to be contaminated, no USAR operations should be conducted until an appropriate assessment has been undertaken. If it is within the capability of the team, the source of the contamination should be isolated. If it is beyond the capability of the team to isolate the source of contamination, the area should be cordoned off, marked accordingly, with the OSOCC being notified immediately.

For operational considerations at worksite see Volume III, Operational Field Guide.

Annexes

Annex A: Ethical Considerations for USAR Teams

1. The conduct of deployed USAR team members is a primary concern to INSARAG, the assisting and affected countries, and the local officials of the affected country.
2. USAR teams should always aim to be perceived as representatives of a well organised, highly trained group of specialists who have been assembled to help communities in need of their specialist assistance. At the conclusion of a mission, USAR teams should have ensured their performance has been positive, and they will be remembered for the outstanding way they conducted themselves in the work environment and socially.
3. Ethics considerations include human rights, legal, moral and cultural issues and concern the relationship between USAR team members and the community of the affected country.
4. All members of an INSARAG USAR team are ambassadors of their team, their country and represent the wider INSARAG community. Any violation of principles or behaviour unbecoming by team members will be viewed as unprofessional. Any inappropriate behaviour may discredit the good work of the USAR team and will reflect poorly on the entire team's performance, their home country as well as the wider INSARAG community.
5. At no time during a mission should USAR team members take advantage of or exploit any situation or opportunity, and it is the responsibility of all team members to conduct themselves in a professional manner at all times.
6. USAR teams that deploy international must be self-sufficient so as to ensure they are at no time a burden to the already overwhelmed country they are trying to assist.

INSARAG operates in accordance with the Humanitarian Principles, which form the core of humanitarian action. See https://ochanet.unocha.org/p/Documents/OOM_HumPrinciple_English.pdf for more details.

Sensitive Issues to Consider

1. The value that the local community attaches to life
2. Cultural awareness including race, religion and nationality
3. Wearing of sunglasses during conversations may be deemed to be inappropriate
4. Communication barriers due to language differences
5. Differences in work ethics and values
6. Different local apparel
7. Local customs with regard to food and manners
8. Local law enforcement practices
9. Local policy on weapons
10. Local living conditions, local driving habits and customs
11. Local policy on the use of different medications
12. Use of alcohol and illegal drugs
13. Handling of sensitive information
14. Use of search dogs
15. Care and handling of patients and/or the deceased
16. Dress code or standards
17. Gender restrictions
18. Recreational restrictions
19. Local communication restrictions and accepted use
20. Taking of and showing pictures of victims or structures
21. Collecting of souvenirs (building parts etc.)
22. Defacing property such as occurs with the use of the structural marking system
23. Access into restricted areas (Military, religious, etc.)
24. Moral standards
25. Consideration for other teams' capabilities and operating practices

26. Use of gratuities to promote cooperation
27. Political issues
28. Any actions or behaviour that may aggravate stressful situations
29. Smoking indiscriminately

Annex B: Media Management Guide

Interviewing "Do's"

- Ask the reporter's name. Then use it in your response
- Use your full name. Nicknames are not appropriate
- Choose the site (if possible). Make sure you are comfortable with the location of the interview. Consider what is in the background
- Choose the time (if possible). If you would be more comfortable waiting another five minutes, ask the reporter if it's okay. However, you should bear in mind that the reporter has a deadline for the report
- Be calm. Your demeanour and apparent control of the situation are very important in establishing the tempo of evolving events
- Tell the truth
- Be cooperative. You have accountability to explain to the public. There is an answer to most questions, and if you don't know it now, let them know you will work diligently to determine the facts needed
- Be professional. Don't let your personal feelings about the media, or this reporter in general, affect your response
- Be patient. Expect dumb questions. Do not get angry to those ill-natured or ill-tempered questions. If the same question is asked again, repeat your answer without irritation
- Take your time. If you make a mistake during a taped or non-broadcast interview, indicate that you would like to start over with your response. If appearing live, just start over again
- Use wrap-around sentences. This means repeating the question with your answer for a complete 'sound bite'

Interviewing "Don'ts"

- Do not discriminate against any type of press or any specific press agency. You should be open to all media such as TV or radio, nationwide or local paper and foreign or national press
- Do not reply with 'no comment'
- Do not give your personal opinion. Stick to the facts
- Do not go off the record. Anything you say can and will be used against you
- Do not lie. To tell a lie unintentionally is a mistake. To intentionally tell a lie is stupid
- Do not bluff. The truth will come out
- Do not be defensive. The media and their audience recognise a defensive attitude and tend to believe you are hiding something
- Do not be afraid. Fear is debilitating and is not a characteristic you want to portray
- Do not be evasive. Be upfront on what you know about the situation and what you plan to do to mitigate the disaster
- Do not use jargon. The public is not familiar with much of the language used in this field
- Do not confront. This is not the time to tell a reporter how much you dislike the media
- Do not try to talk and command a disaster at the same time. You won't do either well
- Do not wear sunglasses
- Do not smoke
- Do not promise results or speculate
- Do not respond to rumours
- Do not repeat leading questions
- Do not run down the efforts of the affected country or any other organisation
- Do not compare the response to one disaster with that of another

Annex C: Aircraft Capacity

The cargo capacities and cruise speeds listed in the table are averages for that type of aircraft. Actual capacities will vary based on the altitude, ambient air temperature, and actual fuel on board.

Aircraft type	Cruising Speed (knots)	Maximum cargo weight metric tons (2,200 lb)	Cargo hold size L x W x H (cm)	Door size W x H (cm)	Usable cargo volume m^3	Pallet qty. 224 x 318 (cm)	Desired runway length (m)
AN-12	361	15	1,300 x 350 x 250	310 x 240	100	6	1,230
AN-22	302	60	3,300 x 440 x 440	300 x 390	630	20	1,300
AN-26	243	5.5	1,060 x 230 x 170	200 x 160	50	3	1,160
AN-32	243	6.7	1,000 x 250 x 110	240 x 120	30	3	800
AN-72/74	295-325	10	1,000 x 210 x 220	240 x 150	45	3	1,200-1,800
AN-124	450	120	3,300 x 640 x 440	600 x 740	850	29	3,000
A300F4-100	450	40	3,300 x 450 x 250	360 x 260	320	20	2,500
A300F4-200	502	42	3,300 x 450 x 250	360 x 260	320	20	2,500
A310-200F	458	38	2,600 x 450 x 250	360 x 260	260	16	2,042
A310-300F	458	39	2,600 x 450 x 250	360 x 260	260	16	2,042
B727-100F	460	16	2,000 x 350 x 210	340 x 220	112	9	2,134
B737 200F	522	12	1,800 x 330 x 190	350 x 210	90	7	2,134
B737 300F	429	16	1,800 x 330 x 210	350 x 230	90	8	2,134
B747 100F	490	99	5,100 x 500 x 300	340 x 310	525	37	2,743
B747-200F	490	109	5,100 x 500 x 300	340 x 310	525	37	3,261
B747 400F	490	113	5,100 x 500 x 300	340 x 310	535	37	3,250
B757 200F	460	39	3,400 x 330 x 210	340 x 220	190	15	1,768

Aircraft type	Cruising Speed (knots)	Maximum cargo weight metric tons (2,200 lb)	Cargo hold size L x W x H (cm)	Door size W x H (cm)	Usable cargo volume m^3	Pallet qty. 224 x 318 (cm)	Desired runway length (m)
B767 300F	460	55	3,900 x 330 x 240	340 x 260	300	17	1,981
DC-10 10F	490	56	4,100 x 450 x 250	350 x 260	380	23	2,438
DC-10 30F	498	70	4,100 x 450 x 250	350 x 260	380	23	2,438
IL-76	430	40	2,500 x 330 x 340	330 x 550	180	11	853
L-100	275	22	1,780 x 310 x 260	300 x 280	120	6	903
L-100-20	275	20	1,780 x 310 x 260	300 x 280	120	6	1,573
C130 / L-100-30	300	23	1,780 x 310 x 260	300 x 280	120	6	1,890
MD-11F	473	90	3,800 x 500 x 250	350 x 260	365	26	3,100

Annex D: Types of Helicopters Typically Used During Disaster Operations

Helicopter type	Fuel type	Cruising speed (knots)	Typical allowable payload for hovering In ground effect (kg/lb)*	Typical allowable payload for hovering out of ground effect (kg/lb)†	Number of passenger seats
Aerospatiale SA 315B Lama	Jet	80	420/925	420/925	4
Aerospatiale SA-316B Allouette III	Jet	80	526/1,160	479/1,055	6
Aerospatiale SA 318C Allouette II	Jet	95	420/926	256/564	4
Aerospatiale AS-332L Super Puma	Jet	120	2,177/4,800	1,769/3,900	26
Bell 204B	Jet	120	599/1,20	417/920	11
Bell 206B-3 Jet Ranger	Jet	97	429/945	324/715	4
Bell 206L Long Ranger	Jet	110	522/1150	431/950	6
Bell 412 Huey	Jet	110	862/1900	862/1,900	13
Bell G-47	Aviation Gas	66	272/600	227/500	1
Bell 47 Soloy	Jet	75	354/780	318/700	2
Boeing H 46 Chinook	Jet				
Boeing H 47 Chinook	Jet	130	12,210/26,918	12,210/26,918	33
Eurocopter (MBB) BO-105 CB	Jet	110	635/1,400	445/980	4
Eurocopter BK-117A-4	Jet	120	599/1,320	417/920	11
MI-8	Jet	110	3,000/6,6139	3,000/6,6139	20–30
MI-17					
Sikorsky S-58T	Jet	90	1,486/3,275	1,168/2,575	12—18
Sikorsky S-61N	Jet	120	2,005/4,420	2,005/4,420	n/a
Sikorsky S-64 Skycrane	Jet	80	7,439/16,400	7,439/16,400	n/a
Sikorsky S-70 (UH-60) Black Hawk	Jet	145	2,404/5,300	1,814/4,000	14–17

Annex E: Tools and Guidance Notes

USAR Team Fact Sheet Form

USAR TEAM FACT SHEET

Team details to be uploaded in the VO before departure and given to RDC/UC on arrival.

INSARAG Preparedness – Response

TEAM INFORMATION

A.0 Team-ID

A.1 Team name _____ A.2 Home country _____

A.3 Number of persons _____ A.4 Number of dogs _____

A.5 Team type **responding** Light ☐ Medium ☐ Heavy ☐ Other _____

A.6 INSARAG Classification None ☐ Medium ☐ Heavy ☐

Responding elements:

A.7	Technical Search	yes ☐	no ☐			
A.8	Canine search	yes ☐	no ☐			
A.9	Rescue	yes ☐	no ☐			
A.10	Medical	yes ☐	no ☐			
A.11	Hazmat detection	yes ☐	no ☐			
A.12	Structural engineers	yes ☐	no ☐	Number	☐	
A.13	RDC/OSOCC support	yes ☐	no ☐			
A.14	UC support	yes ☐	no ☐			

A.15 Other capabilities _____

A.16 Self-sufficiency (number of days) Water _____ days A.17 Food _____ days

A.18 Expected arrival date [DD-MMM] DD MMM

A.19 Expected arrival time [hh:mm] hh mm

A.20 Point of arrival _____ A.21 Aircraft type _____

SUPPORT REQUIREMENTS

Transport for

B.1 Persons (number) _____ B.2 Dogs (number) _____

B.3 Equipment (ton) _____ B.4 Equipment (cubic metres) _____

Supplies

B.5 Gasoline (litres per day) _____ B.7 Cutting Gas (cylinders) *Type*

B.6 Diesel (litres per day) _____ *Number*

B.8 Medical Oxygen (cylinders) *No.* _____ *Size*

Size _____ B.9 BoO Space Requirement (m²) _____

Type	Oxygen	Propane	Acetylene
Number			
Size			

B.10 Any other logistical needs _____

CONTACTS

C.1	Contact 1 Name		C.5	Contact 2 Name	
C.2	Mobile phone		C.6	Mobile phone	
C.3	Sat phone		C.7	Sat phone	
C.4	E-Mail		C.8	E-Mail	

C.9 Base of Operations Address (if known)

C.10 Radio Frequency (BoO) ☐☐☐.☐☐☐ MHz

C.11 BoO GPS coordinates (if known)

		(GPS coordinates normally in Datum WGS84)	
C.11	GPS Coordinates ***decimal format***	±dd.dddd °	±ddd.dddd °
C.11	GPS Coordinates ***other formats***		

Form completed by: Name _____

Date DD MMM Title/Position

USAR TEAM FACT SHEET

Form guidance notes

A.	TEAM INFORMATION
A.0	Three letter Olympic Country code, these are listed on the separate worksheet; followed by- The national team number; 1,2, 3 for classified teams, 10, 11, 12 etc for unclassified teams.
A.1	Team name as known internationally or domestically
A.2	Team's country of origin
A.3	Total number of persons deployed
A.4	Total of number of dogs deployed
A.5	Type of team responding according to INSARAG guidelines
A.6	The official INSARAG External classification (IEC) level of the team, medium or heavy (if held)
A.7	Has the responding team deployed with technical search capability?
A.8	Has the responding team deployed with canine search capability?
A.9	Has the responding team deployed with rescue capability?
A.10	Has the responding team deployed with medical capability?
A.11	Has the responding team deployed with hazmat detection capability?
A.12	Has the responding team deployed with structural engineers? Give the number of engineers
A.13	Has the responding team got the capacity for establishing a provisional OSOCC/ RDC?
A.14	Has the responding team got the capacity for supporting a UC?
A.15	Detail any other capabilities e.g. own tranpsortation, water rescue capability with boats etc.
A.16	Number of days with self-sufficiency of water supply.
A.17	Number of days with self-sufficiency of food supply.
A.18	Estimated arrival date to affected region - day as a number, month as 3 letters e.g. 13 APR
A.19	Estimated arrival time to affected region - 24hr clock using local time
A.20	Point of arrival to affected region (airport, city, port, etc)
A.21	Type of aircraft (model, size)
B.	**SUPPORT REQUIREMENTS**
B.1	Total number of people to be transported
B.2	Total number of dogs to be transported
B.3	Total weight of equipment expressed in ton to be trasnsported
B.4	Total volume of equipment expressed in cubic metres to be transported
B.5	Gasoline requirement expressed in litres to be supplied daily expressed in litres
B.6	Diesel fuel requirement expressed in litres to be supplied daily expressed in litres
B.7	Cutting gas cylinders to be filled daily
B.8	Medical oxygen cylinders to be filled daily
B.9	Space requirement expressed in square meters for the location of the Base of Operations
B.10	Other logistical requirements
C.	**CONTACT DETAILS**
C.1	Name or title of Contact 1
C.2	Mobile phone number of Contact 1
C.3	Satellite phone number of Contact 1
C.4	E-Mail address of Contact 1
C.5	Name or title of Contact 2
C.6	Mobile phone number of Contact 2
C.7	Satelite phone number of Contact 2
C.8	E-Mail address of Contact 2
C.9	Location or address of Base of operations - if known
C.10	Radio Frequency (BoO) in MHZ
C.11	GPS coordinates of the Worksite, taken at the Worksite marking: Standard GPS format is: Map datum WGS84 If possible use decimal coordinates e.g. Lat ±dd.dddd° Long ±ddd.dddd° If another format is used then use the lower boxes and state the format used.

Worksite Triage Form – Front

Worksite Triage Form

Used during assessment to identify worksites with rescue opportunities

INSARAG Preparedness – Response

E1. Worksite ID			E2. GPS Coordinates ***Decimal format***	±dd.dddd °	±ddd.dddd °
		or	E2. GPS Coordinates ***other format***		
E3. Address				
E4. Worksite boundary description:				
F1. Team ID	AAA	00	F2. Date DD MMM	F3. Time hh mm	
F4. Building Use				
F5. Construction type				
F6. Floor area	m x m		F7. No. of floors	F8. No. of basements	
F9. Total number of missing/unknown persons at the Worksite				
F10. Of the total number, how many are confirmed live?				
F11. Triage category: Input letter using matrix: →			→ ↘ F11	
F12. Degree of Damage (%)				
F13. Type of collapse:				
F14. Any unusual hazards at the Worksite?				

	Level 3 Rapid SAR needed	Level 4 Full SAR needed
Confirmed live victims	A	B
Unknown victims and big voids	C	E
Unknown victims and small voids	D	F

F15. Assess the main USAR operations likely to be needed at this Worksite:

Indicate main work needed:		Give an estimate of the time, personnel and equipment needed:
A: Dog/technical search	×	Details:
B: Shoring and propping	×	
C: Breaking, Breeching	×	
D: Lifting and moving	×	
E: Rope/height working	×	
F: Medical Needs	×	

F16. Local Safety/Security situation:

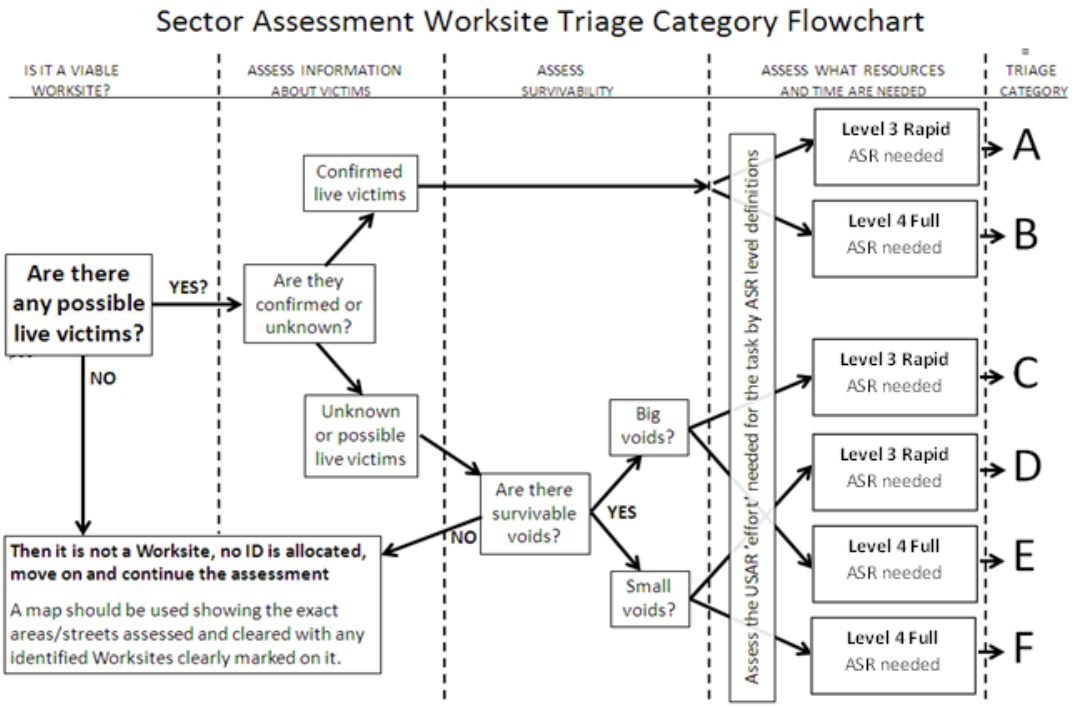
F17. Other Information:

Completed by: Name		Title/position	

Worksite Triage Form – Guidance Notes

Worksite Triage Form Guidance Notes	
E1	Worksite ID: part 1 is the allocated Sector letter, part 2 is the number allocated to the Worksite e.g C-6 If no sector letter is allocated yet then just apply a number. The sector letter has to be inserted when possible.
E2	GPS coordinates of the Worksite, taken at the Worksite marking:
	Standard GPS format is: Map datum WGS84 or other if indicated by LEMA
	If possible use decimal coordinates e.g. Lat ±dd.dddd° Long ±ddd.dddd°
	If another format is used then use the lower boxes and state clearly on the form the format used.
E3	Street address or local name of the Worksite
E4	Additional Worksite boundary description if it is not clear what the Worksite ID includes. E.g a hospital may be a Worksite but include several associated buildings, this should be explained here, possibly with a sketch plan on the rear of the form to make it clear.
F1	Team ID of the team carrying out the assessment: 3 letter Olympic country code followed by national team number
F2	Date when the triage assessment was completed; the date written as a number, the month given by 3 letters e.g. 13 APR
F3	Time when the triage assessment was completed; 24hr clock using local time
F4	Describe the main use of the building e.g. hospital, factory, office, temple, dwelling, school, apartments with car park in the basement etc.
F5	Describe the main construction type e.g. reinforced concrete, steel frame, brick, masonry, timber frame
F6	Give the dimensions of the 'footprint' of the building/debris pile in metres x metres e.g 25m x 40m
F7	Give the number of floors above ground
F8	Give the number of basements (if applicable)
F9	Give the estimated **total** number of persons trapped, missing or unkown at the Worksite
F10	Of the total number, how many confirmed **live** contacts are there?
F11	Determine the Triage letter; using the triage matrix opposite and the separate full triage tree
Definitions of voids	A ***big void*** is big enough for a person to crawl. The chances of survival for a victim are greater in big voids than small voids. "Big" is a relative term, i.e., a big void for a child will be considerably smaller than a big void for an adult.
	A ***small void*** is where a person can hardly move and has to lie more or less still while waiting for help. In small voids the chances of injury are higher as people trapped inside have less space to avoid falling objects and collapsing structural elements.
F12	Estimate the degree of damage as a percentage e.g. 50%, 75%,
F13	Briefly describe the type or types of collapse/damage e.g. pancake, lean to, total, upright but with dangerous cracks etc.
F14	Provide brief details of any unusual hazards that might affect USAR operations at the Worksite
F15	Give a brief assessment of the USAR operations that are needed:-
	Mark the tick boxes to show the types of USAR work likely to be required and;
	Use the text box to give an initial estimate of the **personnel, equipment** and **time** likely to be needed to carry out the operations.
F16	Briefly describe the **local** safety and security situation at the Worksite
F17	Other Information e.g. Any photographs attached, local contacts details, number of known dead bodies at the site etc.

Worksite Triage – Category Flowchart



Worksite Report Form – Front

Worksite Report form

Report of activity at a Worksite for a specific work period (or to handover the Worksite)

INSARAG Preparedness – Response

E1. Worksite ID			E2. GPS Coordinates ***Decimal format***	±dd.dddd °	±ddd.dddd °
		or	E2. GPS Coordinates ***Other format***		
E3. Address				
E4. Worksite Boundary description:				

Worksite Situation Report

Operational reporting period:	G1. Start date	dd	mmm	G2. Start time	hh	mm	
Assigned team(s)	G3. Team ID	AAA	00	G4. 2nd Team ID	AAA	00	
G5. ASR Level being carried out		G6. Completed / In progress?					
G7. Number of live rescues completed in this reporting period							
G8. Number of dead persons recovered in this reporting period							
G9. Other operational activities at the Worksite:							
G10. Resources able to be released from site							
G11. Local safety and security situation:							
G12. Operationally relevant Worksite contacts:							
Operational reporting period:	G13. End date	dd	mmm	G14. End time	hh	mm	
G15. Report number		G16. Assignment complete (yes or no):					

Worksite Planning Information

G17. Number of persons still missing at the worksite	
G18. Number of live contacts / rescues still in progress	
G19. Outline Plan of Action for next operational period:	
G20. Logistical needs and other Information:	

Estimated completion of assignment:	G21. Date	dd	mmm	G22. Time	hh	mm
G23. Completed Victim Extrication forms:- Ref No.s						
Form completed by:	Name:		Title/position:			

Worksite Report Form – Guidance Notes

Worksite Report form

Guidance Notes

E1	Worksite ID: Part 1 is the allocated Sector letter, Part 2 is the number allocated to the Worksite e.g C-6. If no sector letter is allocated yet then just apply a number.
E2	GPS coordinates of the Worksite, taken at the Worksite marking: Standard GPS format is: Map datum WGS84 If possible use decimal coordinates e.g. Lat ±dd.dddd° Long ±ddd.dddd° If another format is used then use the lower boxes and state clearly on the form the format used.
E3	Street address or local name of the Worksite
E4	Additional Worksite boundary description if it is not clear what the Worksite ID includes. E.g a hospital may be a Worksite but include several associated buildings, this should be explained here, possibly with a sketch plan on the rear of the form to make it clear.
G1	Start date of the current operational reporting period; Day shown as a number, month shown by three letters e.g 12 NOV
G2	Start time of the current operational reporting period; 24hr clock local time
G3	Team ID of the team assigned to carry out USAR operations at the Worksite: 3 letter Olympic country code followed by national team number
G4	Team ID of a second team if two teams are assigned to the same Worksite: 3 letter Olympic country code followed by national team number
G5	State the Assessment, Search and Rescue (ASR) level; insert 3, 4 or 5 in the box
G6	State whether the ASR level work is completed or still in progress, circle it.
G7	Enter the number of live rescues **completed** in the reporting period, there should be a completed Victim Extrication Form for each victim.
G8	Enter the number of dead persons recovered in the reporting period, there should be a completed Victim Extrication Form for each victim.
G9	List other relevant operational activities taking place at the Worksite e.g. Extensive shoring operations, local crane operators assisting with heavy lifting operations.
G10	List any resources that could be released from the Worksite e.g. cranes no longer needed.
G11	Briefly describe the **local** safety and security situation at the Worksite
G12	List any relevant local contacts at the Worksite e.g. building owner, local rescue team leader, local crane operators.
G13	End date of the current operational reporting period; Day shown as a number, month shown by three letters e.g 12 NOV
G14	End time of the current operational reporting period; 24hr clock local time
G15	If lengthy operations at a Worksite generate multiple Reports then each F3 for the same Worksite should numbered sequentially.
G16	Mark here if the assignment at this Worksite is complete or not (Y or N)
G17	To help with planning; show the number of persons still thought to be missing at the Worksite
G18	How many live, positive contacts or rescues are still known at the worksite?
G19	Give an outline of the intended Plan of Action at the Worksite for the next operational period
G20	List any logistical needs the teams has for it's ongoing operations at the Worksite plus any other relevant information e.g. Any photographs attached, number of known dead bodies at the site etc.
G21	Give an estimated date of when the Worksite assignment might be completed
G22	Give an estimated time of when the Worksite assignment might be completed
G23	List the reference numbers of any Victim Extrication forms completed during the reporting period. This is the Worksite ID and the victim number combined

Victim Extrication Form

Form used to collect basic information of all victims extricated to be handed to the UC or LEMA as instructed.

E1. Worksite ID		**V1.** Victim Number	

The Worksite ID combined with the Victim Number gives a unique reference used to record and track victims.

E2. GPS coordinates of victim location	**E2.** GPS Coordinates ***Decimal format***	
or	**E2.** GPS Coordinates ***Other format***	
E3. Street address		
G3. Team ID		
V2. Date of extrication		
V3. Time of extrication		

V4. Other victim information; **only** if requested by LEMA/UC e.g. name, nationality, gender, age etc.

Location of the victim:

V5. Floor Level		**V6.** Position in structure	

V7. Level of work needed to extricate victim (mark with an x):

Assist only		Light debris removal		ASR3		ASR4		ASR5	

V8. Total time taken for extrication		hrs		mins	
V9. Condition of the victim	Live		Deceased		
V10. Injuries of the victim	None		Stable		Critical

V11. Victim handed over to:

Locals/family		Ambulance		Medical team		Field hospital	
Helicopter		Hospital		Mortuary		Other	

V12. Name and contact details of who victim was handed over to:

V13. Other information (e.g. other teams involved in the extrication)

Form completed by	Name:		Title/position:	

Victim Extrication Form – Guidance Notes

Victim Extrication Form Guidance Notes	
E1	Worksite ID: Part 1 is the allocated Sector letter, Part 2 is the number allocated to the Worksite e.g. C-6 If no sector letter is allocated yet then just apply a number.
V1	Victim Number: A number should be allocated for each victim that is extricated from a Worksite, simply use 1 for the first victim, 2 for the second and so on. The Worksite ID combined with the victim number provide a unique identifier for each victim so records and victim tracking is possible.
E2	GPS coordinates of the victim's specific location: Standard GPS format is: Map datum WGS84 If possible use decimal coordinates e.g. Lat ±dd.dddd° Long ±ddd.dddd° If another format is used then use the lower boxes and state clearly on the form the format used.
E3	Street address or local name of the Worksite
G3	Team ID of the team assigned to carry out USAR operations at the Worksite: 3 letter Olympic country code followed by national team number
V2	Date of extrication: the day should be shown as a number, the month as a 3 letter code e.g. JAN, FEB, MAR
V3	Time of extrication: 24hr format, local time
V4	Location of victim, Floor level: State or estimate the floor level the victim was extricated from
V5	Location of victim, Position in structure: indicate whereabouts in the structure the victim was extricated from e.g. kitchen, South east corner.
V6	Level of work needed by the USAR team to extricate victim, preferably referring to ASR levels
V7	Total time taken for extrication: Hours and minutes
V8	Condition of the victim: mark the relevant box for Live or Dead
V9	Injuries to the victim: mark the relevant box
V10	Victim handed over to: mark the box relating to the person/group the victim is handed to
V11	Contact details of who the victim was handed over to as detailed in previous field
V12	**Victims personal information only to be collected if instructed by the UC or LEMA due to patient confidentiality restrictions applicable in affected country or region.** Name of victim: If known or indicated by identification information Nationality of victim: If known or indicated by identification information Age of victim: estimate if necessary Gender of victim, male or female
V13	Other information: This box can be used to add any other details e.g. other teams involved in the extrication

Incident/Sector Situation Report – Front

Incident/Sector Situation Report

Tool used to summarise operations and situation in an incident or sector.

INSARAG Preparedness – Response

Mark the intended use of this form:	1 Incident Report				2 Sector Report		
If a Sector Report, complete the following:					3 Sector Id		
					4 Sector Name		
Reporting Period	5 Start date:	dd	mmm	6 Start time:	hh	mm	
	7 End date:	dd	mmm	8 End time:	hh	mm	

Situation - *this Reporting Period*

9 Number of USAR teams	Heavy:		Medium:		Other:	

10 Total Number of Identified Worksites				
11 Worksite situation information	Total	ASR 3	ASR 4	ASR 5
12 Number of currently active Worksites				
13 Number of currently pending Worksites				
14 Number of currently completed Worksites				

15 Victim situation information	Current Period	Overall
16 Number of live victims rescued		
17 Dead victims recovered		

18 Other activities:

19 Safety issues:

20 Security situation:

Planning

Next operational/reporting period	21 Start date:	dd	mmm	22 Start time:	hh	mm
	23 End date:	dd	mmm	24 End time:	hh	mm

25 Objectives for next operational period:

26 Are any additional Teams needed?	Heavy		Medium	

27 Are any other resources needed?

28 Are any teams or other resources available for reassignment?

29 Other planning issues

Form completed by:	Name:		Title/position:	

Incident/Sector Situation Report – Back

USAR Teams currently in Incident/Sector

	Team ID		Team name	Comments
1	AAA	00		
2	AAA	00		
3	AAA	00		
4	AAA	00		
5	AAA	00		
6	AAA	00		
7	AAA	00		
8	AAA	00		
9	AAA	00		
10	AAA	00		
11	AAA	00		
12	AAA	00		
13	AAA	00		
14	AAA	00		
15	AAA	00		
16	AAA	00		

Other Teams and resources in Incident/Sector

	Name	Type	Comments
1			
2			
3			
4			
5			
6			
7			
8			
9			

Incident/Sector Situation Report – Guidance Notes

Incident/Sector Situation Report Guidance Notes	
i.1	Mark the box with an 'x' if the intended use of this form is to provide a situation report of the whole incident
i.2	Mark the box with an 'x' if the intended use of this form is to provide a situation report of a specific sector
i.3	If this is a situation report of a sector, state the Sector's code (e.g. Letter)
i.4	If this is a situation report of a sector, state the Sector's name, if given.
i.5	Start date of the current operational reporting period; day shown as a number, month shown by three letters e.g. 12 NOV
i.6	Start time of the current operational reporting period; 24hr clock local time
i.7	End date of the current operational reporting period; day shown as a number, month shown by three letters e.g. 12 NOV
i.8	End time of the current operational reporting period; 24hr clock local time
i.9	Number of USAR teams in incident/sector according to INSARAG guidelines
i.10	Total number of identified worksites within incident/sector with or without operations in the current reporting period
i.11	This section is used to summarize the current situation of the worksites in the incident/sector. -Total: Is the total worksites in the incident/sector in their respective current status, that being active, pending or complete -ASR3, ASR4. ASR5: Assessment, Search and Rescue Levels of the Worksites as defined in the INSARAG Coordination Handbook
i.12	Number of Worksites with active USAR operations in the current reporting period, detailing the number of worksites per ASR level.
i.13	Number of Worksites with pending USAR operations in the current reporting period, detailing the number of worksites per ASR level.
i.14	Number of Worksites with completed USAR operations in the current reporting period. Only the furthest ASR level that has been completed at the worksites must be recorded.
i.15	Victim information incident/sector -Current period: victims recorded in the current reporting period -Overall: accumulated number of victims recorded since the USAR operation begun.
i.16	Number of live victims rescued in the incident/sector
i.17	Number of dead bodies recovered in the incident/sector
i.18	Other on-going activities in the incident/sector (e.g. Engineering assessment of critical infrastructure within the sector)
i.19	Safety issues to be reported in the incident/sector
i.20	Security situation to be reported in the incident/sector
i.21	Start date of the next operational/reporting period; day shown as a number, month shown by three letters e.g. 12 NOV
i.22	Start time of the next operational/reporting period; 24hr clock local time
i.23	End date of the next operational/reporting period; day shown as a number, month shown by three letters e.g. 12 NOV
i.24	End time of the current next operational/reporting period; 24hr clock local time
i.25	Objectives to be achieved in the next operational period
i.26	Additional USAR Teams needed for the incident/sector must be specified according to team type
i.27	Additional resources needed within the incident/sector
i.28	List resources available for reassignment form the incident/sector
i.29	List other planning issues that must be addressed in the next operational period.

Demobilisation Form – Front

Demobilisation form

(Form to be handed to OSOCC/UC with demobilisation information of USAR team)

A1. Team Id.

A2. Team Name

Departure information

A3. Date [DD-MMM] DD MMM

A4. Time [hh:mm] hh mm

A5. Point of departure

A6. Transport/Flight information

Team information

B1. Number of persons

B2. Number of dogs

B3. Equipment (Ton)

B4. Equipment (m³)

Special requests

C1. Need for ground

C2. Need of loading/unloading

C3.Need for accomodation at point of

D.1 Other Information

Form completed by: Name

Date: DD MMM Title/Position

Demobilisation Form – Guidance Notes

Demobilisation Form
Form guidance notes

A.1	Three letter Olympic Country code, these are listed on the separate worksheet; followed by- The national team number; 1,2, 3 for classified teams, 10, 11, 12 etc for unclassified teams.
A.2	Team name as known internationally or domestically
A.3	Departure date - day as a number, month as 3 letters e.g. 13 APR
A.4	Departure time - 24hr clock using local time
A.5	Point of departure from affected region (airport, city, port, etc)
A.6	Transport used to leave affected region, such as flight information
B.1	Total number of people to be transported
B.2	Total number of dogs to be transported
B.3	Total weight of equipment expressed in ton to be trasnsported
B.4	Total volume of equipment expressed in cubic metres to be transported
C.1	Ground transportation requierements from BoO to point of departure
C.2	Loading/unloading assistance requirements such as forklifts, etc.
C.3	Need for temporary accomadation at point of departure
D.1	Any other information or logistical needs