



INTERPOL

**DISASTER VICTIM
IDENTIFICATION GUIDE**

ANNEXURE 3

PHASE 1 > SCENE

NOVEMBER 2023

As a rule, the search for the human remains of victims of a disaster cannot begin until all survivors have been rescued. The emergency rescue units that arrive at the disaster site ahead of the recovery teams should be informed that, while life-preserving rescue measures and medical management take precedence, care should be taken during their activities so the disturbance to the scene is kept at a minimum, with any human remain and other evidence (e.g., personnel effects, etc.) are left untouched as much as possible.

In most cases the initial activities at the scene are chaotic and disorganised but it should be remembered that the recovery of human remains and the preservation of evidence/personal effects represent the first crucial steps in the victim identification process. This is often made more difficult by the large number of very different organisational units that are frequently involved in this process and the inevitable issues with communication and coordination functions this early in the DVI operation.

To overcome this initial chaos, a structured search and discovery plan should be prepared as soon as possible. This should be undertaken in consultation with the Evidence Collection Team, Disaster Investigation Team, the Access Control and Security Teams and relevant specialists (e.g., forensic pathologists, forensic anthropologist and/or forensic archaeologist). This plan includes the search for, collection and documentation of, human remains, property and evidence (all of which may also be used in the subsequent investigation into the causes of the disaster).

In cases of disasters with large numbers of victims, the establishment of an Operational Section for recovery and evidence collection is an absolute necessity. This Operational Section is responsible for:

- Accurately recording the location of human remains and evidence at the disaster site.
- Recovery of all bodies and body parts at the disaster site.
- Collection and preservation of property found at the disaster site that does not correspond directly to the recovery of human remains.
- Collection and preservation of other personal effects of disaster victims found in the extended surroundings of the disaster area (e.g., personal belongings of victims in hotels).

Wherever possible, responsibility for recovery and evidence collection operations should be placed in the hands of the police who may, in turn, call on various specialists. Specialist knowledge in recording complex scenes can for instance be provided by forensic archaeologists, whilst forensic pathologists, forensic anthropologists and some forensic archaeologists have expertise in recognising, recovering and documenting human remains in varying degrees of preservation.

3.1. Mapping the Scene and developing a search protocol

[Return to Contents](#)

To ensure thorough search and photographic documentation, recovery and victim identification teams require accurate maps of the disaster area. The disaster scene should therefore be appropriately mapped and planned before the scene is made accessible to recovery teams, before the search and recovery of human remains and other evidence starts. This mapping provides an understanding of the extent and complexity of the scene. It also provides a guide as to which additional experts may be required, and the most appropriate way to enter and start recording and recovering human remains and evidence.

For a wide disaster area, aerial photographs can greatly assist in preparing maps or plans, while for buildings consecutively numbered floor plans may suffice. Initial mapping of the scene and establishing a recording methodology may benefit from input from specialists, such as a forensic archaeologist. This is specifically the case in complex scenes, for instance those related to explosions, fires and/or collapsed buildings. Specialists can also advise on the use of mapping techniques to record the scene, e.g., Total Station, photogrammetry or GPS.

The disaster site should be searched and processed methodically on a sector-by-sector basis, to ensure that every part of the site is properly searched and that all relevant finds are precisely recorded. The DVI Scene Controller prioritises sectors and makes sure that possible competing priorities with other expert examination teams are considered, such as Bomb Scene Examiners (BSE). It is important that there is a combined approach taken to establishing search sectors based on agreed priorities in line with forensic investigations.

As a matter of priority, entry and exit routes should be established to define the path responders take when accessing the scene. These routes may be the first sector that is processed to clear it for access to other sectors. The scene controller needs to consider ease of access within the scene for responders so that human remains recovery and the removal and securing of property and other evidence can be made. Each individual team should be assigned a specific sector of the disaster area which is defined by the DVI Scene Coordinator. These teams are responsible for ensuring that a thorough search of the assigned sector is conducted. They ideally include relevant forensic experts where possible.

Before entering the disaster area, operational personnel should be equipped with appropriate safety equipment and clothing (PPE) such as helmets, overalls, boots, rubber gloves, and masks). Based on an assessment of the condition and preservation of the human remains and associated evidence, appropriate recovery equipment and documentation are required. This latter equipment/documentation should be provided through the Recovery Command Centre.

The most straightforward method to subdivide and search the disaster site is by applying a grid. Such a grid, briefly, consists of a baseline running between fixed and recognisable points on the ground, and parallel lines marked out with tape at intervals (such as 10-metre intervals), to form spaces in which to search methodically. The size of the grid square required will depend on the size and complexity of the scene. Specialist mapping techniques can be used within the squares, particularly if they are large. Fence lines, edges of building, kerbs, and corners are good points of reference from which to lay out the grid, in urban environments.

In rural settings, field boundaries, ditches and trackways which might appear on a map can be utilised. Wherever possible, the grid should cover the entire disaster area. Recovered human remains, personal effects, data, etc. can be catalogued according to the grid area in which it is found, using the appropriate page in the Disaster Victim Recovery Booklet.

To assist a search/recovery team in processing a sector where there is a high volume of evidence present, the team leader may choose to adopt a 'sub-gridding' approach within their given sector. This will assist in their ability to process and record their given sector. This 'sub-gridding' approach follows the same principles as for the main grid.

See the final paragraph of this appendix for a more detailed discussion of an example of a basic grid layout for a disaster scene (Fig. 1).

If the incident occurs over a wide area or in rough terrain, experience has shown that a grid, with its regular squares may not be logistically feasible. The better option in such cases is to obtain maps and aerial photographs, for instance using UAVs (drones) which cause minimal disturbance to evidence on the ground. These images can then be divided into sectors based on natural or man-made features such as riverbanks, hedges, fields, roads, cliffs or buildings. These sectors may then have to be further subdivided into smaller, more manageable areas. Special consideration should be given to challenges related to recovery from bodies of water (e.g., lakes, sea), as these will require specialist input to deal with the complexities of recovery on and beneath the water surface.

3.2. Recovery and Evidence Collection

[Return to Contents](#)

The Recovery and Evidence Collection Team performs the following tasks relating to the recovery of bodies:

- Identify and record the location of all human remains - (using the Victim Recovery booklet)

- Exposure, uncovering and retrieval of the human remains, (if necessary with the aid of appropriate support personnel and suitable equipment).
- Marking of human remains with an evidence plate or numbered post on which the recovery number is clearly readable and cannot be erased.
- Assignment of a separate, unique number for each human remain.
- Documentation of the discovery site (description, photos, sketch or survey of the position of the human remains with the aid of GPS and/or crime scene surveying instrument).
- Photographic documentation of the human remains for recovery files and forensic medical examination.
- Attachment of the recovery number to the human remains. This number is used as the body reference number and remains affixed to the human remains during the entire identification process.
- Completion of the INTERPOL DVI Victim Recovery documents, with reference to the recovery number.
- Placement of the human remains in a body bag; attachment of the recovery number to the outside of the body bag and sealing of the body bag.
- Removal of the human remains and transport to the Recovery Command Centre/Mortuary.
- Preparation and compilation of recovery documents and submission of documentation to the Recovery Command Centre/Mortuary; procurement of new recovery documents as needed.

To perform the tasks in an appropriate manner, the following principles should be observed:

- The matching of separate human remains should be performed only by authorised forensic medical experts, and not by recovery personnel. More generally, it must be avoided and each body part should be labelled. Medical (including anthropologists) and dental experts may be needed at the scene to assist the police in collecting human remains, including bones and teeth.
- During recovery operations, personnel should not search for evidence of identity or remove objects from victims' clothing or place such objects in victims' clothing.
- Should it become evident during the recovery operation that the condition of human remains may change rapidly due to external influences (e.g., weather); a DNA sample should be obtained by a suitably qualified person from the victims prior to commencement of the recovery operation. (The Commander of the Recovery and Evidence Collection Team should issue a corresponding order). All necessary evidence collection, labelling, transportation and storage precautions should be used.

General methodology when removing the human remains:

- Use a search plan that is adapted to the area.
- Adequate stocks of stakes, body bags and tags should be available
- The exact location of human remains within the scene and in relation to other remains and evidence must be recorded
- Only human remains and property that are directly connected must be numbered and recovered together. Caution must be observed, as in some disasters, human remains of separate individuals can be 'fused'.
- The re-association of human remains at the scene should only be performed by authorised forensic medical experts. A good alternative is to recover the human remains separately and record the possible association for follow-up in the mortuary.
- Human remains and body bags should be labelled with the same number.
- Utilise photographs and written documents (INTERPOL DVI Forms) to record human remains and property.

- Body Bags should be marked with Occupational Health & Safety (OHS) markings on the outside such as Heavy, Insect Contaminated, Sharps for body handlers and Funeral Directors.

Only in the case of many highly fragmented, numerous and/or small human remains, the DVI Scene Coordinator can decide that for efficacy reasons, fragments are recovered together and further processed at the mortuary. However, such a decision should never be made without consultation with the relevant specialists, and the potential effect of DNA contamination should be considered. When fragments are recovered together, the 'Human Remains Fragments Form' within the Disaster Victim Recovery Booklet can be used to document the fragments.

Medical experts including pathologists, anthropologists and dental experts can assist the police in identifying, collecting and documenting human remains at the scene, especially when remains are highly fragmented, degraded and/or burnt. Medical experts can also assist with triage at the scene and liaising with the mortuary team so that 'fast-track' identifications can be made. When portable digital ridgeology devices are available, 'fast-track' fingerprinting on the scene may be considered.

Should it become evident during the recovery operation that the condition of human remains may change rapidly due to external influences (e.g., weather); a DNA sample of the remains can be obtained by a medical expert prior to commencing the recovery operation. This is at the discretion of the DVI Scene Coordinator.

Any property may be crucial evidence that may assist the investigation. The following tasks should be performed with respect to property and personal effects.

- Identification and recording of the location of property at the disaster site as well as of personal effects within the extended area of the disaster.
- Marking and documenting the area in which property is found.
- Completion of the evidence list in the recovery documentation, including entry of the body recovery number.
- Labelling and packaging property; evidence-preserving packaging of large objects (e.g., luggage items) is not required. Evidence tags can be used to identify such objects.
- Once objects have been documented and prepared as evidence, property should be transferred without delay to the Evidence/Property Collection Centre, accompanied by the corresponding evidence list. If the Evidence/Property Collection Centre is not located in the immediate vicinity of the site, a site evidence administrator should be appointed and tasked with collecting and forwarding property/personal effects to the Evidence/Property Collection Centre.
- Personal effects of victims in the extended surroundings of the disaster site (e.g., hotel rooms) should also be localized and collected and managed in the same way as mentioned earlier. These items should also be listed in an evidence list provided with the recovery documents.
- The receipt/transfer of personal effects is recorded in a receipt/transfer record signed by the receiving and transferring parties (preservation of the "chain of custody").
- Received personal effects are also forwarded to the Evidence/Property Collection Centre, accompanied by the evidence list and the receipt/transfer record.

3.3. Collection Centres

[Return to Contents](#)

In consultation with the Operations Sector Commander, the Recovery Command Centre is to be set up in the immediate vicinity of the disaster site. It may serve as a temporary mortuary station/mortuary – in any case it serves as a collection centre (site) for human remains delivered by the Recovery and Evidence Collection Teams. The Command Centre ensures proper temporary storage of human remains and maintains victim recovery lists based on data obtained from recovery reports.

The Recovery Command Centre also provides for the issue of recovery documents/equipment to the Recovery and Evidence Collection Teams such as:

- Recovery report (INTERPOL DVI Victim Recovery/PM Form - pink)

- Evidence lists
- Number plates / Tag numbers
- Body bags
- Security Seals.

The recovery documents are reviewed by the Recovery Command Centre to ensure completeness/accuracy both at issue and on return.

3.4. Evidence / Property Collection Centre

[Return to Contents](#)

The Evidence/Property Collection Centre should also be established in the vicinity of the disaster site in consultation with the Commander of the Recovery and Evidence Collection Team. Evidence/property found at the disaster site is collected at the Collection Centre along with personal effects of disaster victims.

Based on the large number of evidence lists reviewed for completeness and correctness by the Collection Centre, a master evidence list of all found and registered objects is prepared. Collection Centre staff are responsible for deciding which incoming objects are relevant and suitable for identification purposes and which should be handled as items of property.

Objects of relevance to identification are identified and listed accordingly. Information relating to personal identification derived from these objects is forwarded to the Victim Identification Team.

The Evidence/Property Collection Centre also performs the following functions:

- Assurance of proper packaging and storage of collected objects
- Preparation of hand-over records for items of evidence that should undergo further examination for purposes of identification or forensic analysis before completion of scene-of-crime operations
- Examination of property items for information of relevance to identification and classification as evidence, as required (e.g., items of value/personal documents) Separate storage of objects identified as property and notation as “property” in the “Remarks” section of the evidence list
- Preparation of photographs of items of property as required for purposes of identification/matching
- Arrangement for return of property to owners/entitled recipients.

Fig 1. Example of a basic grid layout for a plane crash

[Return to Contents](#)

Figure 1 is provided as a general guide only, to highlight the need to sectorise and maintain an accurate overview and recording of where human remains, property and other evidence was located. It must also be remembered that each jurisdiction may apply variations to this example.

Scene gridding may be used to record where human remains, property and items of evidence are located at a scene. Each grid is referenced by using horizontal and vertical co-ordinates. For example, all Vertical co-ordinates could be marked with alphabetical letters and all horizontal co-ordinates could be marked with numerical values. In the diagram depicted below (Fig. 1), grid references have been marked as Grid A1 through to Grid O16. These grid references should be recorded on scene recovery documentation together with GPS co-ordinates where possible.

DVI phase 1 teams are allocated specific grids to examine, record, process and clear human remains and other evidence. The Scene Controller should maintain a detailed record of the specialist teams allocated to each grid. The record should also identify the number of grids processed and the exact detail of human remains, property and other evidence located in each grid.

It must be remembered that each disaster scene will be different due to a range of factors such as location, topography, environmental elements, the nature of the disaster, safety issues and the complexity involved in the management of human remains, property and other evidence. Grids may therefore not all be the same uniform size. The order in which the scene is processed will largely

depend on priorities. For example, there may be several disciplines that need to be involved in the scene processing such as post blast examiners, crime scene examiners and those requiring intelligence for investigative purposes. Communication and co-operation between those key entities processing the scene is therefore vital to ensure that the scene is appropriately managed. This should ideally take place at the planning stage so that joint strategies can be formulated.

Fig. 1

