



## **CASE REPORT**



# **Identification of Victims of Airplane Accident Cases**

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### **Abstract:**

**Introduction:** Indonesia is an archipelagic country consisting of 13,667 islands with an area limit of 2,027,087 km<sup>2</sup>, has approximately 129 volcanoes, geologically Indonesia is located at the confluence of 4 plates of the world's plates that are still actively moving, accompanied by 2 series of world volcanoes ( Circum Pacific and Eurasian), whose tail is in Indonesia, causing Indonesia to be in a very unstable geological position. Demographically, Indonesia also consists of various ethnic groups, religions, social backgrounds, cultures, customs and an increasingly dense population (in 2005, 213 million with an annual population increase of 1.3 %), where this situation provides clues that Indonesia is at high risk as a country prone to natural disasters such as earthquakes, tsunamis, landslides, floods and accidents on land, sea and air.

**Case Report:** a case was reported with the victim being a male corpse, the victim was involved in a CASSA 212-200 aircraft crash that occurred on Thursday, September 29, 2011 at Pkl. 07.28 WIT in the Gunung Kapur Forest, Bahorok District, Langkat Regency, North Sumatra Province, Indonesia.

**Results:** external examination found multiple traumas: the face, chest, abdomen and limbs. Examination in found multiple fractures of the skull, ribs, upper arm bone (os.humerus), thighbone (os.femur), lower limbs (os.tibia, os.fibula). it was concluded that the cause of death of the victim was due to the expulsion of brain tissue, torn right and left heart, profuse bleeding accompanied by bruises, abrasions, lacerations, fractures due to blunt force, and the process of decay.

**Discussion:** This case is a case of a mass disaster and the identification of victims of a mass disaster is carried out according to the Disaster Victim Identification (DVI) procedure, based on observations of the trauma experienced by victims in accordance with general accident cases.

**Conclusion:** from external and internal examination, it was concluded that the cause of death of the victim was the expulsion of brain tissue, torn right and left heart, profuse bleeding accompanied by bruises, abrasions, lacerations, fractures due to blunt force trauma.

**Keywords:** blunt trauma, Disaster Victim Identification

## I. Introduction

Since the promulgation of Law No. 24 of 2007, concerning disaster management in April 2007, there has been a change from a disaster management model to a disaster management model, from being a government affair to being a joint business between the government and the community, from sectoral to integrated, from responsive to preventive, from being centralized to decentralized, from handling disaster impacts to managing disaster risk in an integrated manner.

As it is known that a disaster is a sudden, unexpected event that can happen to anyone, anywhere, anytime and results in damage and loss of property, relatively large human casualties, both dead and alive.

Entering the era of globalization and free markets with a sharp level of competition, we need standards that can be used nationally and with international standards but still pay attention to the needs / conditions in Indonesia (taking into account local wisdom).

In handling victims of mass disasters, national and international standards must always be a reference, because in principle, identification of victims of mass disasters is a difficult thing, this is due to the large number of victims, the condition of the victims and poor (difficult) field conditions. inadequate implementing resources and large funds. In addition, because mass disasters tend to require

good handling/coordination through existing cross-sectorals.

Definition of Disaster; Disaster is an event or series of events that threaten and disrupt people's lives caused by natural and/or non-natural factors as well as human factors, resulting in human casualties, environmental damage, property losses and psychological impacts. Several types of disasters

- Natural disasters are disasters caused by events or a series of events caused by nature, including earthquakes, tsunamis, volcanic eruptions, floods, droughts, hurricanes, and landslides.
- Non-natural disasters are disasters caused by events or a series of non-natural events, including technological failures, failed modernization, epidemics, and disease outbreaks.
- Social disaster is a disaster caused by an event or series of events caused by humans which includes social conflict between groups or between communities and terror.

Indonesia is an archipelagic country consisting of 13,667 islands with an area limit of 2,027,087 km<sup>2</sup>, has approximately 129 volcanoes, geologically Indonesia is located at the confluence of 4 plates of the world's plates that are still actively moving, accompanied by 2 series of world volcanoes (Circum Pacific). and Euroasian),

whose tail is in Indonesia, causing Indonesia to be in a very unstable geological position. Demographically, Indonesia also consists of various ethnic groups, religions, social backgrounds, cultures, customs and an increasingly dense population (in 2005, 213 million with an annual population increase of 1.3 %), where this situation provides clues that Indonesia is at high risk as a country prone to natural disasters such as earthquakes, tsunamis, landslides, floods and accidents on land, sea and air. On the other hand, it must also be remembered, there are other forms of disasters made by humans (Man made disasters) such as acts of terrorism. World climate change also has an impact on global warming, which in itself also increases the frequency of natural disasters due to climate change.

There have been several mass disasters that have occurred in Indonesia, such as: Bali Bombings 1 & 2, Situbondo Bus accident, Marriot Hotel Bombing, Bukit Lawang Flash Flood, Silk Air Palembang, Mandala Medan Plane, Garuda Medan Plane, Aceh Tsunami, Nias Earthquake, Mentawai Sunami, Krakatoa Eruption and so on.

In classifying mass disasters, they are divided into 2 types, first, Natural Disasters such as tsunamis, earthquakes, floods, landslides and so on. While the second is known as "Man Made Disaster" which can be in the form of human negligence itself such as air, sea, land accidents, forest fires and the like, as well as pre-planned human activities such as in the case of terrorism.

### I. GENERAL PROCEDURE DVI

Handling the identification of victims of mass disasters based on Interpol standards

is a process that can be accounted for both scientifically and legally. It requires good cooperation and understanding among all parties involved in its implementation, so that the identification process achieves accuracy in identification and not only speed in the process.

The purpose of implementing this DVI procedure is in order to achieve the results of identification that can be accounted for by law, perfect and complete as much as possible as a manifestation of basic human rights needs, where even a corpse has the right to be 'recognized'. Another interest is that in some cases, if there is strong evidence, it can be used as the beginning of an investigation process, as well as for the interest of the civil legal aspect of a person or his heirs, such as insurance, inheritance, marital status and so on.

The DVI process includes 5 phases, where each phase has a relationship with one another, which consists of:

- Fase 1 : TKP / The scene (involve the investigation of the scene of the disaster).
- Fase 2 : Data Postmortem / The mortuary (involves the collection of post mortem data from deceased individuals).
- Fase 3 : Data Ante mortem / Ante mortem Information Retrieval (involves the collection of ante mortem information from the community in relation to persons possibly involved in the disaster).
- Fase 4 : Rekonsiliasi / Reconciliation (involves the matching of the ante-mortem and post

mortem information and presentation of the finding to a constituted Reconciliation Board).

Fase 5 : Evaluasi / Debriefing (involves the process of debriefing all personel in the DVI process).

In carrying out this process there are various methods and identification techniques that can be used. However, Interpol determined Primary Identifiers consisting of Fingerprints, Dental Records and DNA and Secondary Identifiers consisting of Medical, Property and Photography. The principle of this identification process is to compare Ante Mortem and Post Mortem data, the more matches, the better. Primary Identifiers have a very high value when compared to Secondary Identifiers.

In determining a person's identification positively, the DVI Indonesia Identification Board has rules, namely that at least one of the Primary Identifiers is declared positive with or without the support of Secondary Identifiers data, or at least two secondary identifiers are declared positive if the Primary identifiers data is not found.

Universally, DVI is the responsibility of the police, which in its implementation requires assistance from experts. As a member country of Interpol, in identifying the bodies of victims of mass disasters, Indonesia also uses the Interpol DVI Guide which has been issued since 1984 and continues to be refined.

Likewise, Interpol recommends that the head of the DVI team is a senior police officer who has the qualifications and experience in science and emergency

management, he also has experience in leading his team, controlling and coordinating with the various elements involved in it. Of course, in its implementation there are various obstacles, some of the main issues that are often found are religious, social culture, communication, control and coordination, management, pressure from outside parties (society, mass media, politics), while the obstacles that are often found in the field are when very large number of victims were found in a wide area (tsunami and earthquake).

## II. Case Report

a case was reported with the victim being a male corpse. The victim was involved in a CASSA 212-200 aircraft crash which occurred on Thursday, September 29, 2011 at Pkl. 07.28 WIT in the Gunung Kapur Forest, Bahorok District, Langkat Regency, North Sumatra Province, Indonesia. The victim was evacuated from the crime scene in the limestone mountain forest by the SAR (search and rescue) team to the District City (Bahorok), then the victim was taken to H.Adam Malik Hospital Medan for the next 4 phase DVI process. Request for post-mortem No. Pol: VER/132 / X /2011 / LKT. signed by US investigator, rank Adjunct Police Commissioner (AKP), dated October 2, 2011. In the letter, the victim is suspected of being a pilot of a CASSA 212-200 aircraft.

General examination: Corpse attire, Wears a short-sleeved white shirt, with a yellow stripe motif 4 pieces of black base on the right and left shoulders (pilot's official attire)





**Figure 1. The pilot's dinar suit looks**

Wearing black kepper trousers with the name "Mr. F.I"

Identification card with a size of 8 cm x 5 cm, plastic material, white base color, bearing PT. N.B.A with passport photo under the name of F.I,



**Figure 2. ID card view**

External inspection; Head: Found skull bones crushed to pieces



**Figure 3. The forehead and facial bones are broken into pieces**

Upper limbs: There were signs of fracture in the right upper arm. Signs of a fracture of the upper left arm were found



**Figure 4. Right upper arm fracture**



**Figure 5. Left upper arm fracture**

Internal examination: Found broken breastbone. Found blood in the chest cavity right and left



**Figure 6. chest cavity bleeding**

On removal of the heart; Found lacerations on the right and left heart

Lungs: Found right and left lung destroyed

#### **SUPPORTING INVESTIGATION**

Toxicology examination was carried out to the POLDA POLDA SUMUT Crime Lab with the following ingredients: blood, stomach contents, urine, bile with negative results.

### III. DISCUSSION

Cassa type 212 aircraft belonging to the Nusantara Buana Air (NBA) route Medan-Kutacane crashed in the Bahorok forest, Langkat Regency, North Sumatra after a few minutes of taking off, the radar lost contact with the plane carrying eighteen people with 14 passengers, 4 crew members. . The Search and Rescue Agency (BASARNAS) and the North Sumatra Regional Police dispatched personnel to search for the location of the plane crash in a mountainous area bordering Southeast Aceh Regency, NAD. This small plane departed from Polonia airport in Medan on September 29, 2011 at 07.28 WIB. As of September 30, 2011 afternoon the location of the plane's whereabouts could not be found, the SAR team together with Paskhas TNI AU were trying to reach hard-to-reach locations. On October 1, 2011, Saturday, the Director of Operations and Training of Basarnas Marsma TNI Sunarbowo stated that all passengers were confirmed dead. On October 2, 2011, the body was evacuated to H.Adam Malik Hospital in Medan and a forensic medical examination was carried out. The results of external examination found bruises, abrasions, lacerations, skull fractures, facial bones and upper and lower limbs. On internal examination (autopsy) found the destruction of brain tissue, broken ribs, torn right and left heart. On investigation (toxicology) negative results. From the results of the examination according to the DVI procedure, the victim was declared identified, where the victim was an airplane pilot, from the negative toxicological examination results, it is believed that the accident was caused by bad weather while above the crime scene. Seeing the bodies of these flight crews

who are still intact, it may be necessary to think ahead for the crew and passengers of a small plane like the Cassa 212 with a low flight cruising, it is necessary to provide PPE (Personal Protective Equipment).

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