A85 Management of the Dead After Disasters from Aquatic Environments in the Asia and Pacific Region

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Learning Overview: The goals of this presentation are to: (1) identify the problem of drowning in the Asia and Pacific Region; (2) provide information on how the search, recovery, and identification of the dead from aquatic environments within 12 contexts from this region are carried out within the various jurisdictional frameworks; and (3) provide suggestions to help improve the search, recovery, and identification of the dead from the water.

Impact on the Forensic Science Community: People are drowning at alarming rates in the Asia and Pacific Region. The bodies of these individuals are not always recovered or identified, in addition to the multifold problems associated with ambiguous loss for their families. Twelve contexts within the region are analyzed. This presentation will impact the forensic science community by offering suggestions to help improve this situation.

Much has been written about the management of the dead, in particular with regard to humanitarian forensic action following disasters, as included in the interagency manual, *Management of Dead Bodies after Disasters*, but there has been less attention given to the search and recovery of the dead following disasters from the specific context of aquatic environments.[1] With approximately 180,000 drowning deaths per year in the Asia and Pacific Region according to the World Health Organization (WHO), there is ample need for the authorities and first responders to be skilled in the management of the dead from various water contexts.[2]

As a result of natural disasters such as cyclones, tsunamis, earthquakes, volcanic eruptions, and floods, as well as human-made/influenced disasters such as boats capsizing and dam collapse, for example, the deceased can and do end up in the water. Aquatic conditions frequently complicate the search and recovery of the dead. Furthermore, the chances of recovery may be limited, and decomposition rates may be either accelerated or decelerated, when compared to those on land, depending upon many factors. To help avoid ambiguous loss and protect the dignity of the dead, best possible practices should be applied that may involve specialized forensic procedures, including the use of cadaver dogs in boats and specialized body bags for water recoveries.

National jurisdictions dictate who is responsible for the search and recovery of the dead at sea and/or other aquatic environments and these can vary from marine police to coastguards and navies, among others. The situation in international waters, on the other hand, is less clear. This research focuses on 12 Asia-Pacific countries (Bangladesh, India, Indonesia, Malaysia, Pakistan, Papua New Guinea, the Philippines, Thailand, and Vietnam and three land-locked countries: Afghanistan, Laos, and Nepal). The aim is to address how various authorities are searching for and recovering the dead in the water. The areas addressed in this research include, for example, who is the authority responsible for searching and recovering the dead in aquatic environments? Are cadaver dogs an appropriate use in the search for the dead in still water, such as in Malaysia? Is autopsy mandated for drowning deaths, such as it is in Thailand? Are the Search and Rescue Zones that are designed to provide structure to help in the search and rescue of the living used as well to help in the search and recovery of the dead in these contexts?

While each country within this study has different policies or approaches to the management of the dead from aquatic environments, some minimum guidelines are suggested to optimize recoveries and thus the identification of the dead, so that ultimately the dead can be returned to their families. The results of this study suggest that the search and recovery of the deceased from aquatic environments should be managed by trained professionals. For the lay person that finds a dead body or body part in the water, it is recommended that a Global Positioning System (GPS) reading is taken of where the dead body/body part is located and this location relayed to the responsible authority. Additionally, the use of cadaver dogs may aid in water searches, and the use of specialized body bags designed for water recoveries may ease water recoveries. In conclusion, various contexts in the Asia and Pacific Region manage the search and recovery of the dead differently in the water. Although there is no "right" way to undertake this often-challenging, time-consuming, and dangerous work, it is nonetheless important to help families find closure with the knowledge that their loved ones have been successfully recovered.

Reference(s):

1. Pan American Health Organization. (2016). *Management of Dead Bodies After Disasters: A Field Manual for First Responders*, Second Edition. Washington, D.C.: PAHO.
2. World Health Organization. (2020). *Drowning*. Retrieved from https://www.who.int/news-room/fact-sheets/detail/drowning.

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