

# Management, exhumation and identification of human remains : A viewpoint of the developing world

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It is sadly ironical to note that the regions in the world that are hardest hit by armed conflicts and internal violence are also the hardest hit by poverty and human rights abuse. In these resource-poor countries, the tragedy of missing persons<sup>1</sup> resulting from such conflicts is often underestimated, untold or sometimes simply ignored, as a *fait accompli*, by the respective governments, the military, national and international non-governmental organizations and even the general public. Despite some spirited efforts to resolve the issue of missing persons, spearheaded in various countries by multinational teams and international organizations, many reports emerging from the countries affected suggest that only little progress is being made and leaves much to be desired.

It is also imperative to note that an overwhelming number of cases of missing persons are encountered in particular circumstances in which human rights are seriously abused, but that there are no mechanisms to prevent, deter or rectify such abuses. This is remarkably so in Third World countries where people go missing in various incidents, some isolated, others systematic, that fail to get publicity or cannot be directly labelled as armed conflict or internal violence. The tragedy that befalls the relatives of these missing persons in such circumstances is equal to that of war victims, if not worse, for the lack of the necessary facilities and organization in their respective local region means that a long time passes before any structured international effort is made to assist them.

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### The process of identifying human remains

The process of identifying human remains of missing persons begins with the recovery of those remains from their specific location. An exhumation is the disinterment of a buried body from a designated burial site, cemetery or other place that may be unmarked.<sup>2</sup> Exhumation serves several important purposes, including recovery of the remains for physical examination and analysis for their identification; release of remains to relatives so as to facilitate funeral arrangements and emotional healing; documentation of injuries and other evidence for legal proceedings and to uncover human rights abuses; the search for clues that may assist in the historical reconstruction of events and revelations to create awareness; and acknowledgement that is necessary for healing and to draw lessons for the future of the community.

The entire process of exhumation is intricate and delicate, requiring well-trained and highly skilled personnel with expertise in various disciplines of forensic science. Forensic pathologists are generally conversant with these disciplines and able to work with a team of technicians with specialized training in the various fields. These include forensic archaeology, which consists of applying standard archaeological techniques modified to suit forensic crime scene processing where human remains are thought to be present. The archaeological approach provides a rational way to recover remains and reconstruct events, ensuring that evidence is not damaged, recovery is complete and documentation adequate. Another area of expertise is forensic anthropology, which consists of applying methods and techniques from physical anthropology and forensic medicine to legal cases involving skeletal human remains. A basic exhumation team would consist of diggers, a pathologist, an investigating officer, a photographer to serve in documentation, and a transport coordinator. Additional personnel would depend on the specifics of the case, availability of trained manpower and capacity of the local Missing Persons Clearinghouse, or MPC centre. Such centres are described below.

The steps in exhumation are *inter alia* obtaining legal permission, depending on local jurisdiction; informing interested parties, including

<sup>1</sup> "Missing persons" in the context of this article refers to persons whose whereabouts are unknown by relatives and who consequently have been presumed dead, and those who are known to have died but whose remains have not been recovered or positively identified.

<sup>2</sup> M.A. Dada and D.J. McQuoid-Mason DJ, *Introduction to Medico-legal Practice*, Butterworths, Durban, 2001, pp. 341-343.

relatives where possible; organizing the exhumation team; identifying the site; ensuring that protective health measures are put in place; manual or mechanical excavation; documentation, preliminary examination, removal, collection and transportation of the remains and other specimens and proper identification; and finally sealing of the site for any future investigation and historical purposes, bearing in mind local legislation and cultural sensitivities. The entire exercise must respect the wishes of the communities concerned, judicial proceedings and the demands of professionalism.

The remains are transported to a mortuary or designated storage centre for complete examination and analysis. Standard traditional scientific methods must be employed and all findings must be properly documented throughout the process. Specialized techniques may be required in most cases dating back a long time. Correct procedure must be followed in handling the remains and obtaining samples for identification analysis. Acceptable methods of identification include visual examination based on anthropometric characteristics such as age, gender, height and unique identifying features, identification by radiological means, identification by dental records (forensic odontology) and identification by DNA. Most of the identification methods that are particularly useful in cases of missing persons, e.g. DNA testing, are extremely specialized, calling for highly trained personnel as well as expensive equipment and facilities. These factors must be taken into consideration when establishing local and regional MPC networks.

After examination and analysis, positively identified remains must be released to the relatives if they so wish. Those that cannot be identified must be "protected" for any future re-examination and re-analysis, or for release to relatives in the event of subsequent positive identification matching; they should preferably be stored unburied in above-ground sepulchres to decrease the organic effect of soil. If that is not culturally acceptable or if there are economic or technical constraints, the remains should be buried in the hardest possible inorganic container or concrete underground storage facility that would allow future retrieval. Throughout the entire process and until the very end, the remains must at all times be accurately labelled and catalogued, with information tracking their movements securely stored in the central database. Whenever more information about missing or unidentified persons is received or acquired, the database is utilized to make file entries and update personal files that may lead to positive identification matches. Relatives of missing persons would be asked to give DNA samples that would be used in DNA testing.

### **New initiatives: Missing Persons Clearinghouses (MPC)**

Spain was the first country to officially start a national programme, the "Phoenix Programme", to try and identify cadavers and human remains unidentifiable by traditional forensic approaches. It started in 1999 and its first phase, involving DNA typing of all unidentifiable human remains, is expected to be completed in December 2003, whereas hitherto only few identifications had been successful.<sup>3</sup> In Argentina, where 10,000 people are thought to have been killed between 1976 and 1983, efforts to recover and identify the missing dead using traditional forensic techniques have been hampered by the lack of official records of the identity of victims and burial locations and of ante-mortem physical information on many of the victims. There, too, DNA typing techniques have been applied.<sup>4</sup>

In the former Yugoslavia, the staff of the International Commission on Missing Persons (ICMP) is attempting the largest human identification effort in history.<sup>5</sup> The campaign has been making painfully slow progress, despite being fairly well established and better supported than similar such campaigns needed in Third World countries (especially in Africa, even basic traditional forensic approaches are lacking, as shown by an NGO report from Zimbabwe on the 1980s disturbances in Matabeleland and the Midlands<sup>6</sup>). Although the possibility of recovering and identifying many of the human remains was high, the inadequate structure, coordination and financing has meant that very little has been or could be done to recover and identify the dead, including missing persons in mass graves.

Any proper initiative to resolve the issue of missing persons *must be proactive* rather than reactive. As illustrated by the experience of various campaigns worldwide, reactive efforts to recover and identify remains of missing persons are usually arduous, unacceptably slow and often futile. This is even more true of campaigns instituted long after the incident that gave

3 J. A. Lorente *et al.*, "Identification of missing persons: The Spanish 'Phoenix' program", *Croatian Medical Journal*, Vol. 42, 2001, pp. 267-270.

4 D. Corach *et al.*, "Additional approaches to DNA typing of skeletal remains: The search for 'missing' persons killed during the last dictatorship in Argentina", *Electrophoresis*, Vol. 18, 1997, pp. 1608-1612.

5 E. Huffine *et al.*, "Mass identification of persons missing from the breakup of the former Yugoslavia: Structure, function, and role of the International Commission on Missing Persons", *Croatian Medical Journal*, Vol. 42, 2001, pp. 271-275.

6 *Report on the 1980s Disturbances in Matabeleland and the Midlands*, Catholic Commission for Justice and Peace in Zimbabwe, March 1997.

rise to missing persons. An apt proactive approach would involve establishing well structured, highly organized, adequately funded and properly equipped local, regional and international centres capable of handling the recovery and identification of missing persons. Such centres would actively participate in programmes targeted at past incidents, including the use of forensic archaeological methods, as well as at any new incidents. They would serve as Missing Persons Clearinghouses in their respective regions, with inter-regional and international links and networks.

The MPC programme in America was first established in a few States in the early eighties to liaise between citizens, private organizations and law enforcement agencies. The MPC operates as a division of the Criminal Justice Information Service and is used as a resource centre and information exchange service complementing federal computerized missing persons files; it also promotes public awareness of the missing persons issue. As soon as a person is reported missing, available pertinent information and individual identifying characteristics are entered into a database, which is expanded when necessary statewide and beyond. It is in addition to a General Police Incident Report, and serves as a standard database to collect and trace specific information on missing persons. Whenever further information about unidentified persons, alive or dead, is received or acquired, personal files in the database are updated and file entries made. It is the responsibility of each agency, on identifying a previously unidentified individual, to clear entries and update the database so as to close the case on that particular missing person. Law enforcement agencies, other interested parties and relatives of missing persons contact the MPC via appropriate established channels for assistance as required.

To establish well structured, highly organized, adequately funded and properly equipped local and regional centres worldwide, especially within developing countries where no proper set-up exists, would be a suitable proactive approach towards resolving the issue of missing persons. These centres would be akin to the MPC, capable of handling the work of recovering and identifying missing persons and aimed at resolving past and newly reported cases irrespective of the circumstances in which they occurred. Rather than being concentrated only in areas where publicized cases of missing persons have been reported e.g. from wars and violent atrocities, these centres must be established in all regions of the globe. Thus each region would be enabled to undertake the task of investigating and resolving missing person cases, including those newly reported from day to day.

### **Forensic services in developing countries: the example of Kenya**

Forensic science, as a group of interrelated disciplines which utilize diverse scientific methods to analyse physical evidence related to legal cases, is recognized as indispensable for the recovery and identification of human remains. Unfortunately forensic services, including the examination of both dead and living persons, are downright meagre or completely lacking in most developing countries.<sup>7</sup> In these economically-challenged regions where food, security, health care and preventive medicine are in reality the foremost and greatest concern, forensic services rank low on the priority list, with dire consequences for the observance of human rights.

To cite Kenya as an example, it is a fact that no reliable information on missing persons is available. An unknown number of people went missing during the First and Second World Wars, as well as during the fight for independence – the 1950s Mau Mau uprising. There was no properly constituted formal effort to recover and identify human remains; although huge numbers of unidentified human skeletons were sporadically found. As a result, countless relatives of missing persons had given up on ever finding out what happened to their loved ones or recovering the remains. Several cases of unidentified human remains of national historical significance are yet to be resolved, such as that of Field Marshal Dedan Kimathi, one of Kenya's most celebrated freedom fighters in the Mau Mau uprising, whose burial site remains a mystery half a century after he was reportedly buried at a prison cemetery.

But sadder still is the fact that even today the country lacks the capability to properly investigate and resolve cases of missing persons. There are no standard databases on missing persons, and anyway the reporting relatives usually do not have adequate ante-mortem records of the deceased such as medical and dental records. The medico-legal services department is generally underfunded, ill-equipped, seriously understaffed and therefore unable to carry out forensic analysis on human remains beyond the basic forensic autopsy. This has contributed to the apathy and lack of coordination among governmental departments, law enforcement agencies and non-governmental organizations concerned with the issue of missing persons. Consequently, there is no public confidence in the system and in most cases people ultimately give up hope of ending their agony of uncertainty.

<sup>7</sup> "Human rights and forensic science", United Nations Commission of Human Rights Resolution 2000/32.

The Kenya Police estimates that 80 cases of missing persons occur every month countrywide, while media reports suggest that every day someone in the country goes missing, never to be found again.<sup>8</sup> It is general speculation that some of the main reasons why people go missing include being held by police without their relatives' knowledge, death in custody, abduction of females and minors, and mental and psychiatric problems, as well as the abandonment of responsibilities owing to socio-economic pressures and the search for a new identity. Our own experiences at the City Mortuary, which is the main morgue serving the country's capital Nairobi and its environs, shows a completely different picture. First of all, the above figure of 80 is a gross underestimate because at the City Mortuary in Nairobi alone we have records indicating that an average of 350 bodies which are unclaimed by relatives or unidentified are left uncollected each year. In the year 2001, the remains of 759 males and 94 females were brought to the mortuary by police as "unknown deceased". Of these, 409 males and 64 females were identified and their remains collected by relatives. The remaining 350 males and 30 females were never collected by relatives mainly because they were unidentified. Similarly, in the year 2000 the remains of 717 males and 78 females were brought there by police as "unknown deceased", of whom 383 males and 55 females were identified and their remains collected by relatives. The remaining 334 males and 23 females were likewise never collected by relatives mainly because they were unidentified. This means that in a period of two years, 737 missing persons with almost zero chances of ever being recovered or identified were being sought by their relatives, yet their bodies had been examined by the authorities. In June 1992 about 100 people were reported dead following "land/ethnic clashes" in Kenya's Rift Valley Province and some bodies were eaten by dogs, while 16 unclaimed bodies from the Molo and Olenguruone ethnic clashes were buried by the local municipal council.

Furthermore, contrary to the aforementioned police statements, most of these bodies show signs suggestive of death by homicide.<sup>9</sup> The relatives are certainly unlikely ever to find out what happened to their loved ones, and

8 "Gone forever: they are lost without a trace", "The Big Issue", reported in the *East African Standard Kenyan Daily Newspaper*, 27 September 1999 to 11 October 1999; "Where are you?", *Wednesday Magazine*, appearing in the *Daily Nation Newspaper*, 26 August 1998.

9 A. K. Olumbe, "A report of medico-legal autopsy cases performed in Nairobi 1997-1999", paper presented to the 2001 INPALMS congress meeting in Melbourne, Australia.

the system is unlikely to help them clarify their fate. Kenyan law states that a person missing for a period of seven years is legally declared to be dead. Media reports recount the pain and tragedies of families unable to resolve issues such as inheritance or perform cultural mourning rituals, or to accept that their loved ones are dead. Obviously the above figures, recorded in peacetime, are appalling and are comparable to cases of missing persons resulting from armed conflicts and internal violence. The problems are further compounded by the lack of proper registration of citizens by the Central Bureau of Registration (fingerprinting). The big question that therefore arises is: are Third World countries such as Kenya capable of handling the problem of missing persons resulting from armed conflicts and internal violence?

The 1998 US Nairobi Embassy terrorist bombing, in which over 211 people died, showed that a properly instituted and well equipped international network of forensic investigation teams and experts is imperative in assisting in areas of the globe where substantive resources are lacking.<sup>10</sup> Such a network could be employed in establishing the MPC concept globally. Basically, the MPC should consist of a Data Management Division, a Forensic Investigation Unit, a Public Relations Office and a team of forensic experts. The Data Management Division maintains ante-mortem and post-mortem records of missing persons and human remains, as well as reconciling information whenever possible. The Forensic Investigation Unit consists of investigating officers and forensic detectives concerned with gathering information from the public and establishing the background facts of the cases involved. The Public Relations Office would serve as a link between the MPC and other parties such as the public, relatives of missing persons, law enforcement officials and other agencies. The MPC centre should also have a team of forensic scientists such as forensic pathologists, anthropologists, odontologists, ballistics experts, radiologists, archaeologists, geneticists and others at their disposal. A number of indispensable forensic team members should preferably be appointed full-time to handle specific forensic work, with access to specialized assistance whenever the need arises. When the workload exceeds the capabilities of local personnel, multidisciplinary teams should be assembled from a wider area within the international network and sent in to assist.

<sup>10</sup> A. K. Olumbe, "The Nairobi US Embassy Bombing 1998: Interdisciplinary collaboration and cooperation in investigation of mass fatalities", paper presented to the 2001 INPALMS congress meeting in Melbourne Australia.



## Conclusion

A network for identification of missing persons should be established in all regions of the world. However, the need for such a network is particularly acute in the developing world. In essence, each MPC centre would have the capability to investigate cases of missing persons and manage human remains. All reports of missing persons, both newly incoming and of past decades, would be forwarded to the MPC, where the information would be entered in a database. Priority should generally be given to those cases that are likely to be easily resolved e.g. those where the history and facts of the case are known and the human remains are likely to be speedily recovered. Human remains that are found by chance would be examined and analysed, any information obtained would also be entered in the database to be matched against reports and records of missing persons and samples from relatives. The human remains that are identified should be released to relatives or interested parties, while those that are not should be appropriately stored and protected. All sites where human remains are recovered must be treated as forensic crime scenes, and those from which many persons are recovered should be respectfully treated in accordance with the local legislature and cultural sensitivities of the local communities. Well instituted, highly organized, adequately funded and properly equipped local, regional and international centres that are capably involved in handling the recovery and identification of missing persons, with retrospective and proactive approaches, are the key to human rights protection work, restoration of family links, management of human remains, exhumation, identification, collection and management of personal data that would help to resolve the issue of missing persons.

## Résumé

### ***Gestion, exhumation et identification de restes humains: une perspective du monde en développement***

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Les personnes portées disparues sont celles dont on est sans nouvelles et qui sont donc présumées décédées, ou celles qui sont décédées mais dont la dépouille n'a pas été retrouvée ou n'a pas été identifiée. Le problème des personnes disparues en raison d'un conflit armé, d'une situation de violence interne ou de violations des droits de l'homme touche essentiellement les pays en développement, qui sont pourtant mal préparés à y faire face. Le compte rendu de première main que les auteurs donnent de l'ampleur et de la gravité de la situation au Kenya en témoigne. Toute initiative qui serait prise pour régler ce problème de manière adéquate doit être dynamique plutôt que réactive. Les auteurs estiment qu'un réseau d'identification des personnes portées disparues, fondé sur le concept des bureaux de centralisation des informations sur les disparus, devrait être établi dans toutes les régions du globe. Ce concept est examiné dans l'article, qui contient une description détaillée des étapes de l'identification des restes humains dans la perspective des pays en développement.