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JOURNAL

PROTECTION | PREVENTION | PREPAREDNESS | RESPONSE | RESILIENCE | RECOVERY



WATER & RESILIENCE

CAN TECHNOLOGY DELAY A GLOBAL WATER CRISIS?

NOVICHOK POISONING | CBRN & MEDICAL STOCKPILES | DIGITAL SECURITY | MANAGING
SPORTING VENUE RISK MANAGEMENT | CAR CYBERSECURITY | DATA PROTECTION |
PLANE CRASH IN AUSTRALIA | REPUTATION CRISIS MANAGEMENT | CHINA EARTHQUAKE
PREPAREDNESS | HUMANITARIAN SEXUAL ABUSE | ROLLERCOASTER RESCUE IN UK

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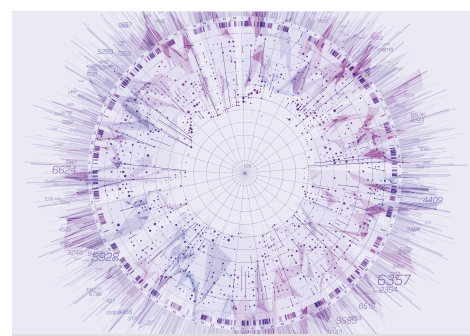
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Our water feature this issue highlights how this most precious resource, which is the most vital element to any aspect of human survival, is treated casually by so many people around the world. Most people and businesses in developed countries take it for granted that if we need water, it will be there – clean, abundant and in the quantities we need. And let's not forget that almost one billion people have no access to clean water at all.



Water supplies are under threat – population growth, climate change, over-abstraction, agriculture and infrastructure all play their role. Even worse, plastic in oceans and its effects on marine life and the dangers of plastics entering human food chains, along with toxic elements and poisons being discovered in water, are all occurring today. Worse still, water can be used as a political or military tool by state and non state actors, as well presenting an attractive target to terrorists.

Given the above, it is clear to see why water is classified as such a vital element of critical national infrastructure – it is not only essential to our survival, but also to our security, wellbeing, health, businesses and livelihoods.

One only has to turn to recent events in Cape Town to gain an understanding of just how cataclysmic it would be if a city simply runs out of water. All aspects of life would be affected, raising the spectres of disease and threats to security.

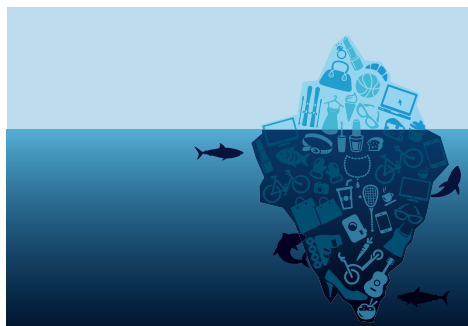
Thankfully, Cape Town's Day Zero has been postponed to 2019, thanks to extreme water conservation and other measures, but other cities around the world face similar threats. See p34 for an article on how the Brazilian city of São Paulo coped with its own water crisis, and what measures need to be undertaken to conserve its future supplies and the viability of the city itself.

There are always solutions, but they can be extreme. Communities, businesses and individuals – including all those involved in emergency management, preparedness and response – must all recognise the contribution they can make towards ensuring water supplies are sustainable, and remain so.

Technology can also play its part. Both Laurie Reynolds (p38) and Matt Minshall (42) discuss how artificial intelligence, machine learning, sophisticated digital technology and geospatial information – among others – can help secure, protect, monitor and conserve supplies.

It is time to afford this vital resource the respect and attention it needs.

Counterfeiting p80



Chris Pettican

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Katisa | 123rf

The management of dead bodies in open water

Moving away from the societal and emergency management aspects of all issues involving water, **Erik de Soir** brings a more practical focus to the theme by examining the retrieval, identification, investigation and family liaison required when a body is discovered in water

T

his article provides some basic principles regarding the management of dead bodies in open water. It also aims to give a better insight in the standard procedures on behalf of family members of missing

persons, who are often left with questions regarding the specific context in which their loved ones disappeared, and who are sometimes discovered a considerable distance from where they were originally reported as missing.

For psychosocial caregivers and psychological assistance team officers, the right provision of information for families marks the beginning of a balanced grieving process.

A starting point for the police forces who lead the search for missing persons, will be collecting the specific facts and conditions in which the person went missing. In most countries in Western Europe, jumping into water (canals, harbours, etc) appears to be a frequent way of committing suicide.

In Belgium, between 1995–2017, some 26,689 missing person files were registered.

Most of these people (25,962 or 97.2 per cent) were located thanks to the efforts of police and rescue services. But 727 cases are still open and 3,064 persons have been found dead.

Of the deceased, 2,034 were ruled to be suicide, 235 died as a result of a criminal act, 172 from natural causes, 511 from accidents and 112 from suspicious causes.

Taking a closer look at suicides, one quickly learns that out of a total of 3,064 missing persons, 1,171 (38.2 per cent) were found in water after committing suicide.



Adding the missing persons who died from accidental causes to this number, this percentage grows above 40 per cent. Thus, in terms of missing persons, water is a serious opponent for specialised rescue and police services.

On September 4, 1995, the Belgian Federal Police Missing Persons Unit (MPU) received its mandate from the Minister of Justice to take the lead in all missing person cases. Chief Commissioner Alain Remue pioneered this unit, which works closely with rescue services, civil protection, fire service and centres such as Child Focus, the reference centre for missing and sexually exploited children in Belgium. It came into being after a paedophile scandal, better known as the Dutroux paedophile case, which hit Belgium in 1996.

This cell supports the Federal Police, which co-ordinates searches and offers support and expertise to forensic services and identification teams. The unit, part of the Directorate of Judicial Operations, within the General Directorate of the Belgian Federal Judicial Police, also increasingly works for public prosecutors and examining magistrates.

The MPU's three basic missions are:

- Co-ordination of all efforts to trace missing persons, both at police and non-police level;
- Providing support to investigating police services, both local and federal; and
- Acquisition and delivery of expertise regarding the phenomenon of missing persons and the ways to deal with them.

The MPU's area of responsibility includes:

Disappearances giving cause for concern; unidentified bodies and/or body parts (not from a disaster); and identification of patients suffering from amnesia.

When a person appears to be missing and significant others report his or her disappearance to the police, it is crucial to have the right knowledge of procedures that must be followed. Family members and significant others will immediately be informed of the police's staged activation process.

Throughout this whole process, communication and networking are of utmost importance; the MPU is the first link in the activation procedures.

When a corpse is discovered in open water, one of the

In Belgium, bodies discovered in water are automatically considered to have died in suspicious circumstances

Hynek Gazsi | 123rf

Table 1: Suicide methods among (2,034) missing persons in Belgium, 1995–2017

- Hanging: 358
- Water: 1,171
- Firearms: 74
- Medication: 240
- Other means: 191

Table 2: Competencies of personnel working with bodies discovered in the water

- Case knowledge
- Empathy
- Training in how to notify bad news
- Availability
- Honesty
- Network capacities

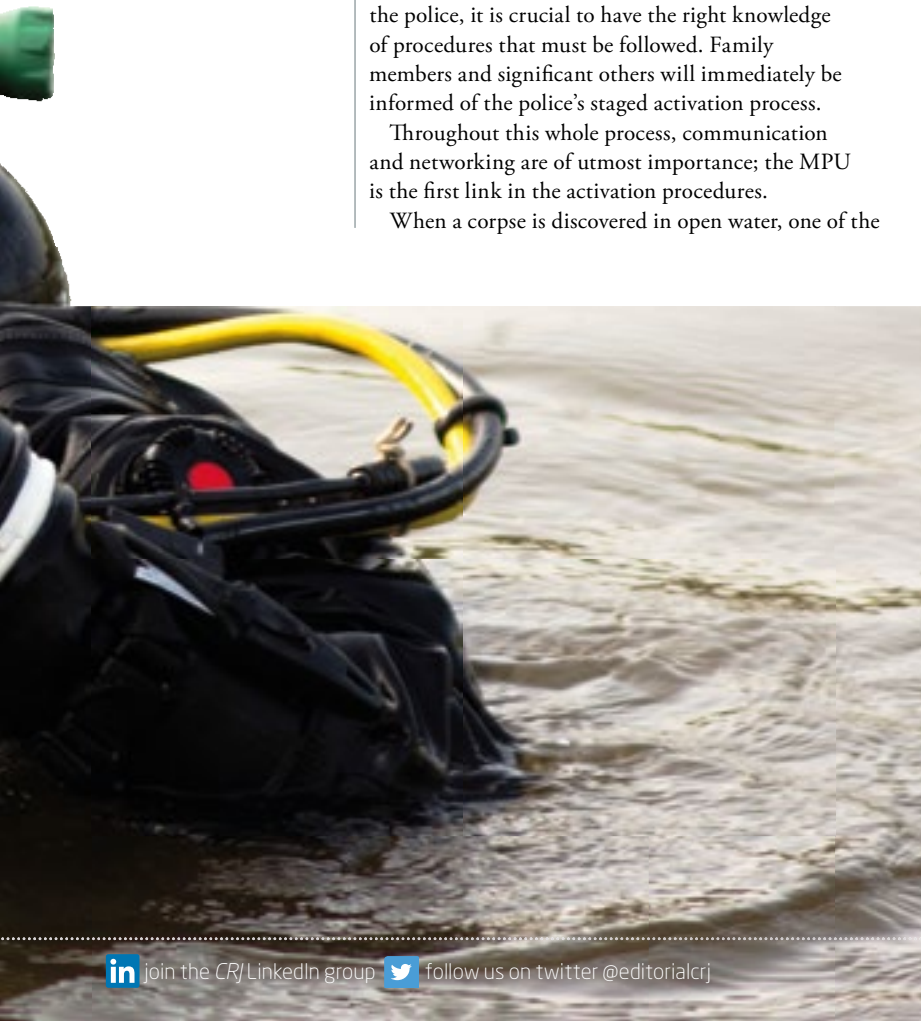
first problems is to match the body with existing files on disappearances. Dealing with the family immediately and assessing the context is crucial, since some of bodies show traces of violence or other cues indicating a possible criminal context (for example, when a body is found with its hands tied or a stone around the neck). Often, it will take some time before the right hypotheses can be formulated. Deceased persons can be found in their vehicles in canals, others in the sea. Bodies discovered in water are automatically considered to have died in a suspicious context; a body in a car may indicate an accident, suicide or murder. Therefore, forensic services have to work hand-in-hand with the missing persons search unit and identification teams. Another angle is the search of missing cars that have been reported stolen, since many suicides occur when people drive their car into a canal, lake or river.

Difficult situations

The most difficult situations are often those in which police have to search under high media pressure, for example when people have witnessed a child falling into water or a car driving into a canal, or the disappearance of a well-known person. When a child is missing and has been reported near a canal or a dam, the family will not wait patiently while the search is underway and may pressure the police

Table 3: CSI team activities at the scene of a discovery of body in water

- Taking photographs of the (crime) scene, the surroundings and the body;
- Making a video of the (crime) scene and the body
- Look for specific (suspect) traces on the body or in the surroundings;
- Checking available clothes (clues for the post-mortem identification procedure, matching of ante-mortem and post-mortem characteristics);
- Investigation of the (crime) scene: is this the place where the person has fallen/jumped into the water?
- Detailed search of body and face;
- Wait for the right moment to get retrieve the body (once out of water, decomposition will be accelerated);
- If body is confirmed deceased, no further medical action;
- Always start from worst-case scenario (murder) and then exclude impossible or less plausible causes of death



The most difficult situations are often those in which people have to search under high media pressure, such as when a child has been seen falling into water

services. In all cases, it is important that families themselves do not undertake their own search for missing loved ones.

Further pressures – especially when working with search and rescue (SAR) divers or the fire service – include climate conditions and hazardous water currents.

Family members and significant others will be wondering: What if you do not find my child or loved one? How long are their chances for survival? If you do find them, what will they look like? Will I be able to see them? Why does there have to be an autopsy? What will the autopsy involve?

This means that psychologists or psychosocial caregivers must work closely with a multiplicity of both police and non-police services, including: SAR teams with rescue dogs; port police services; crime scene investigation (CSI) personnel; detectives; police air support services (helicopter search); civil protection; fire and rescue services; military; victim support; lock keepers; and hydraulic engineers. In such an interdisciplinary context, everyone involved needs a thorough and clear understanding of the challenges in these situations and the procedures and tactics of the other services involved. During the crisis event is always a bad time to learn.

Experience dictates that the only way of handling delicate situations and information regarding missing persons with regard to the families involved is honesty and truthfulness.

During the search, close collaboration with personnel from the department of watercourses (including specialists with specific knowledge on locks, the movements and morphology of watercourses, estuaries, sediment transport, coastal water systems, etc) will be essential. Each watercourse is different and it is therefore vital for personnel conducting a search to be informed about specific dangers, underlining the need for police to collaborate with experts in the field of watercourses.

Owing to the specific behaviour of water in a river, a canal or a lake, which can be influenced by bridges and locks for example, specialists can often predict the most likely areas where a body might be found.

Different diving teams may have different tasks: Fire and rescue divers in the first line are more likely to act in a lifesaving way, while civil protection divers in the second line engage in enhanced search operations and third line divers may work to identify specific objects related to the body and cause of death.

Nefarious intentions

Incidents involving people falling into water accidentally rather than having jumped in deliberately, represent almost 20 per cent of fire and rescue service interventions. Working with death and/or victims who have been in the water for some time, does not involve lifesaving activities and will always need a more prudent approach based on microsearch or necrosearch.

In some cases, a Federal Harbour Police technical support team may be required to use a sonar for in an

in-depth search. When a body is located and it becomes clear that this is not a recent drowning, with no need for urgent medical assistance and lifesaving procedures, death must always be confirmed by a medical doctor, whose job it is to determine whether there are reasons to believe that death was not accidental and related to ante-mortem aggression or nefarious intentions.

In this approach, three roles have to be considered:

- A technical role for CSI personnel;
- A special police investigation role, which is for police detectives/inspectors who will look for motives and narratives behind the death; and
- A medical role (thanatologist).

One of the most crucial roles is that of the doctor who has to assess whether the passing of a human being is suspicious. Only very few doctors have been specifically trained for this and it is to be expected that, in many cases, the medical certificate of a natural death is incorrect.

Psychosocial caregivers will lead the family through this whole process because, if possible, they will have to confirm the identity of the loved one (through visual recognition of the body, providing necessary ante-mortem data on the loved one or post-mortem recognition of specific characteristics or objects found on the body).

As this short article has shown, the management of deceased persons found in water requires the collaboration of a number of different services and caution must be exercised in order not to harm the investigation, which is the crucial starting point of the acceptance and grieving process of the bereaved family. Small errors in the management of bodies recovered from water may rapidly have considerable consequences and hide the truth. Uncovering the reality, even if this initially seems to worsen the pain of the family, will always lead to better results in the long term.

Author

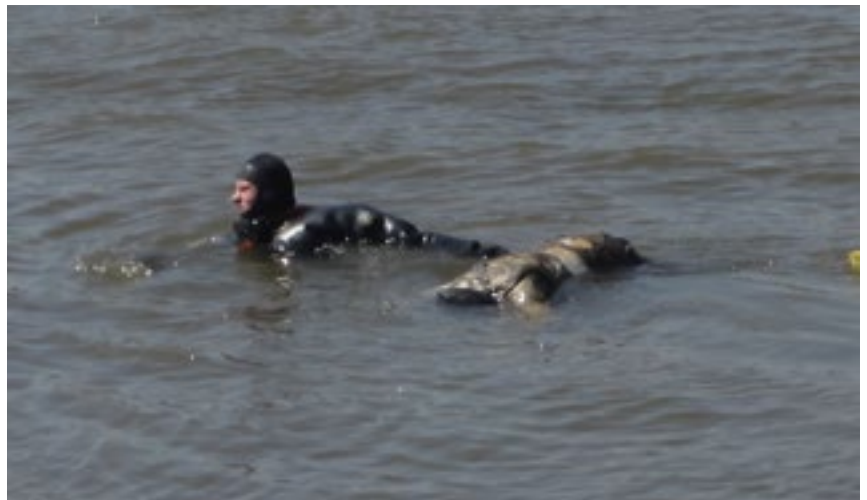


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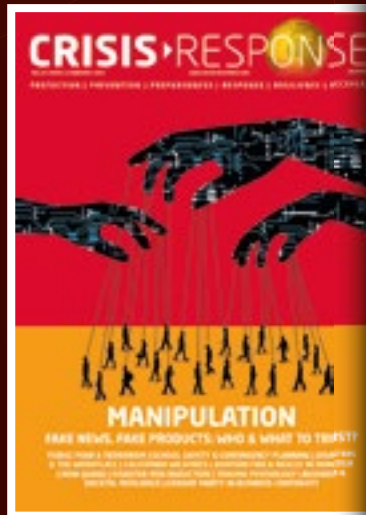
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