

# Water cremation: What are the benefits of this sustainable form of body disposal?

May 8 2024, by Georgina Robinson

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Already a popular option in the U.S., and famously chosen by Archbishop [Desmond Tutu](#) who died in 2021, [alkaline hydrolysis](#)—a sustainable method of disposing the body after death—is set to be regulated in Scotland.

Alkaline [hydrolysis](#) reduces the body to its basic components. Using a heated, alkali-water-based solution (think diluted soft-soap), the process reduces the body to bones. As with cremation, the bones are then crushed and returned to kin in an urn.

A nutrient-rich residual fluid also remains following the process. This is usually released into the wastewater treatment system but is sometimes used as fertilizer on personal gardens and conservation land.

Also known as [resomation](#), [water cremation](#) or [aquamation](#), alkaline hydrolysis has some [economic and practical similarities](#) to cremation—principally, the cost is comparable and kin receive an urn containing "ashes" following the process.

Additionally, choosing alkaline hydrolysis doesn't involve changing the desired funeral service, or lack of service, of the deceased. And the process takes a similar length of time to complete as cremation.

Following a [public consultation](#) in 2023, the Scottish government has announced plans to introduce regulations that would permit the use of alkaline hydrolysis.

The [consultation](#) found that [84% of respondents](#) supported the introduction of alkaline hydrolysis as an alternative to burial and cremation in Scotland. As a result, Scotland could be the first devolved nation in the UK to do so.

My analysis of this [consultation](#) showed that [Scottish support](#) for alkaline hydrolysis is based on four key aspects: environmental considerations, widening choice, alignment with personal values and cost.

[My research](#) largely corroborates these responses and found that alkaline hydrolysis has been chosen in the US for four key reasons, largely drawing support from those who would otherwise choose cremation. These [four motivations](#) are rooted in the perception of alkaline hydrolysis as an environmental, gentle, water-based and natural choice.

In the Scottish consultation, the environmental benefits of alkaline hydrolysis carry the most weight. This is unsurprising and with [80%](#) of Brits already choosing cremation, [my research](#) suggests that alkaline hydrolysis is most likely to be adopted as an environmental and economical alternative to cremation.

[My own Ph.D.](#) and several other academic [studies](#) show that alkaline hydrolysis is significantly better for the environment than conventional burial and cremation. It avoids the release of harmful airborne emissions produced by cremation (such as nitrogen oxides and mercury). It also offers a solution to the problem of diminishing land space for future burials.

Most respondents to [the consultation](#) supported the provision of alkaline hydrolysis for the particularly sensitive deaths of children under the age of four and stillborn babies. While the consultation notes that "no ashes are likely to result" in these circumstances, it fails to acknowledge that alkaline hydrolysis is far more likely than cremation to return remains to kin.

With cremation, bereaved parents must prepare themselves for the possibility that, sadly, no remains will be returned to them (because of the heat of the cremation process). In these circumstances, alkaline

hydrolysis could transform the experience of bereaved parents. I was recently told about a remarkable case of a small 100ml urn containing the reduced remains of an 11-week-old baby being returned to their parents.

## A UK first

Alkaline hydrolysis was first offered as a funeral option just after the turn of the 21st century and is available in a growing number of countries. It was first commercially offered in the U.S. in [2011](#) and the process is now legal in more than half of the 50 states of America.

In the US, where the option to use the watery residues of alkaline hydrolysis [as fertilizer](#) is sometimes offered, kin have found real solace in being able to "use" their dead to nourish soil and plant life. Many respondents to the consultation also welcomed this opportunity.

In recent years, popular awareness of alkaline hydrolysis, legalization efforts and the installation of alkaline hydrolysis facilities, has rapidly increased in the U.S., Canada, South Africa, Australia, New Zealand and [Europe](#).

The status of the technology is dynamic, with the number of US states legalizing the process and European countries [expressing an interest](#) in the technology regularly on the rise.

Even in Malta—a country which only legalized cremation in 2019 but hasn't yet made this option available—it is hoped that alkaline hydrolysis [will be introduced](#) at the same time as cremation.

Given the overwhelmingly positive response to the consultation, the Scottish government's regulation of alkaline hydrolysis could be a real game-changer. While the time frame for the government to implement

the regulations is undetermined, this is a significant step in the right direction.

For the first time in more than a century, an alternative to burial and [cremation](#) could enable Scots to align their life values with their funeral choices and [death style](#) in new and meaningful ways.

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