

# Storing mine waste—safety is no accident UN finds

November 15 2017

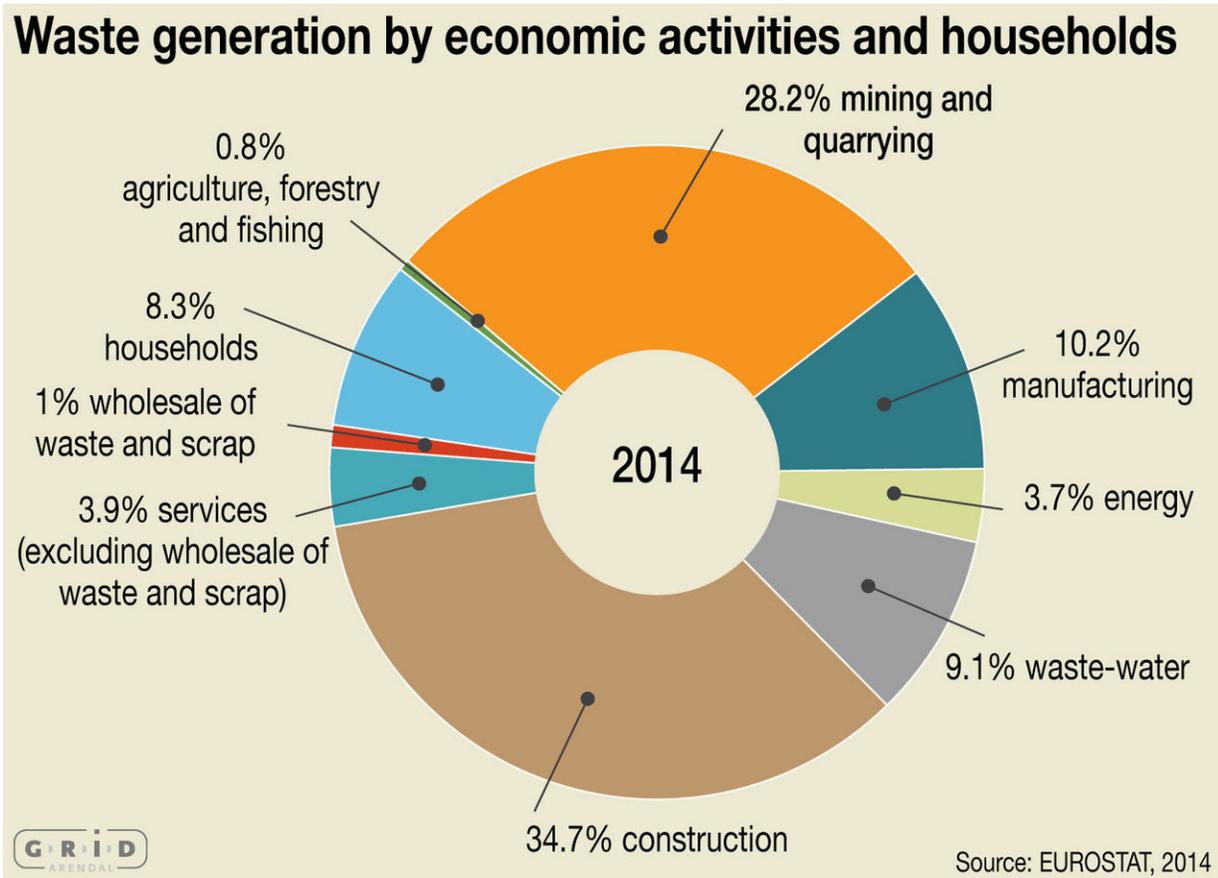


Diagram of waste generation by economic activities and households. Credit: Kristina Thygesen

A United Nations report just launched says mining companies can

simply reduce environmental destruction and death by changing the way they store and manage mine waste.

The report, by UN Environment and GRID-Arendal, calls for [mining companies](#) around the world to be bold and examine and change the way they operate. It points out that mine storage dams fail every year, sometimes killing people, but always massively damaging the environment.

Co-author Professor Elaine Baker, from the University of Sydney's School of Geosciences, said: "These dam failures are no accident - they are a testament to the inability of mining companies to reach a standard of construction and management that they themselves acknowledge is possible.

"The technical capacity and knowledge required to manage mine waste exists - it just needs to be implemented."

According to the report, a zero tolerance standard would be possible to implement but would require a longer-term approach, with dedicated personnel and funding.

Professor Baker said Australia, which has a large international mining presence, was is in a position to be a leader in developing the governance framework required to achieve zero tailings dam failures by implementing the recommendations and actions outlined in the report.



The township of Bento Rodrigues. On the 5 November 2015, the Samarco Mineração S.A Fundão tailings dam, containing approximately 55 million m<sup>3</sup> of tailings collapsed. The failure released an estimated 33 million m<sup>3</sup> of tailings, which travelled down a natural waterway first inundating the town of Bento Rodrigues, approximately 8 km from the dam site. The mud and debris continued to move downstream for 650 km along the Rio Doce River, reaching the Atlantic coast 17 days later. Sadly 19 people were killed, including 14 workers at the dam site, and 5 people in the Bento Rodrigues community. Hundreds more people were displaced in towns and cities downstream. Credit: Cover image from the UNEP GRID-Arendal report

The University of Sydney, in conjunction with GRID-Arendal and other international partners, is planning to host a policy forum in 2018 to discuss the development of an international convention on mine waste.

"There is a very strong commitment from many mining companies to ensure that [mining](#) supports sustainable development, which includes safeguarding people and the environment" Professor Baker says.

The report - part of the United Nations Environment Programme's Rapid Response Assessment series reserved for the most pressing environmental problems - examines why tailings dams fail and makes

recommendations to fix the problem.

The solutions to solving the problems of mine waste are relatively simple and have been identified by the industry in many post-disaster reviews and during the development of best practice guidelines. The [report](#) condenses this information into two main recommendations and associated actions:

- safety should be evaluated separately from economic considerations; and
- tailings dam government regulation should be improved.

Most important, however, is an effort to find better solutions than building enormous dams and filling them with potentially toxic sludge.

"We will need to think creatively to develop more options for the use or elimination of mine waste - mine [waste](#) can become a resource and this is slowly happening in some quarters," Professor Baker concludes.

Provided by University of Sydney

Citation: Storing mine waste—safety is no accident UN finds (2017, November 15) retrieved 19 September 2024 from <https://phys.org/news/2017-11-wastesafety-accident.html>

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