



Health and WaSH

Impact of the Demographics and Health scenario on improved sanitation and safe water

Jakkie Cilliers

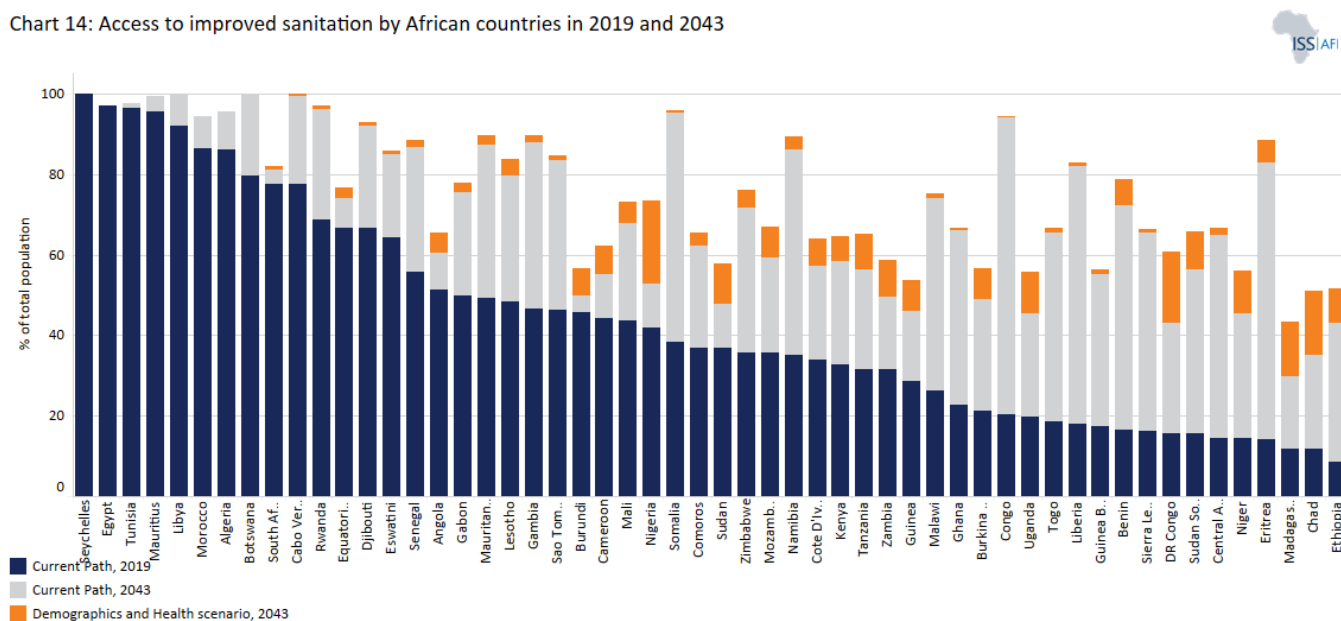
Last updated 24 March 2024 using IFs 7.84

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The Demographics and Health scenario represents an ambitious push for improved sanitation access in Chad and Nigeria, increasing it by 25% by 2043 compared to the Current Path forecast, see Chart 14.

The data in the chart is sorted in descending order, using percentage of access to improved sanitation in 2019. An additional column segment representing the progress by 2043 on the Current Path is added, and then, on top of that, a final column segment represents the improvement from the Demographics and Health scenario by 2043 for each country.

Chart 14: Access to improved sanitation by African countries in 2019 and 2043



Source: IFs 7.84 initialising from JMP / UNICEF

Despite aggressive improvements in the Demographics and Health scenario, CAR, South Sudan, Guinea Bissay, Madagascar, Ethiopia and Chad will not even achieve 50% access to improved sanitation by 2030, although all will get well beyond that by 2043. Disappointedly, Africa's most diversified economy, South Africa, is forecast to experience an improvement of only two percentage points over the forecast horizon and will be unable to reach full access by 2043, showing very little improvement compared to its peers. This represents a lost opportunity and, perhaps, poor allocation and management of resources.

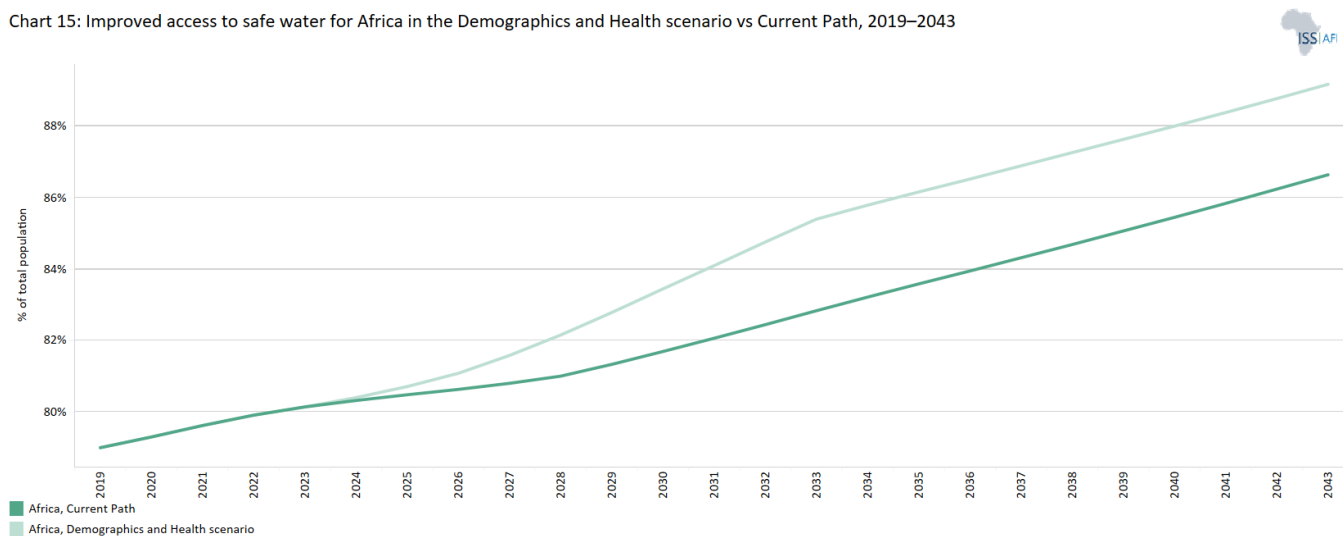
Almost 1.5 billion Africans will be connected to improved sanitation services by 2043 (70% of the total population), but with 12% still using shared sanitation and the remainder using so-called 'unimproved' sanitation facilities such as open pit and bucket latrines. Although the continent will not achieve the 2030 SDG target, a push to combat communicable diseases and improve WaSH infrastructure would still have significant benefits for human and economic development.

Even with the significant push on WaSH infrastructure in this scenario, many Africans will not have reliable access to clean water by 2043. At that point, 207 million Africans will still depend on water connections that do not adequately protect the water source from contamination, in particular faecal matter.

Technological advances will undoubtedly help the drive for improved basic infrastructure at a lower cost. For example, since 2011, the Bill and Melinda Gates Foundation has invested more than US\$200 million in the 'Reinvent the Toilet' challenge. Among the early successes was the **Tiger Toilet**, which costs about US\$350 to install and requires no traditional sewer system. Instead, it uses Tiger worms (*Eisenia fetida*), which feed on human faeces. Once a person has used the toilet, they flush their waste down into the worm-filled compartment below using a small bucket of water. The process removes

99% of pathogens and leaves behind no more than 15% of the waste by weight, much better performance than a septic tank. The leftover product is also an excellent fertiliser. After five years, the first Tiger Toilets have yet to require maintenance. The market for this new toilet technology is estimated to amount to US\$6 billion a year by 2030, which is more than the current GDP of 16 African countries.

Chart 15: Improved access to safe water for Africa in the Demographics and Health scenario vs Current Path, 2019–2043



Source: IFS 7.84 Initialising from JMP / UNICEF

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About the authors

Dr Jakkie Cilliers is the ISS's founder and former executive director of the ISS. He currently serves as chair of the ISS Board of Trustees and head of the African Futures and Innovation (AFI) programme at the Pretoria office of the ISS. His 2017 best-seller *Fate of the Nation* addresses South Africa's futures from political, economic and social perspectives. His three most recent books, *Africa First! Igniting a Growth Revolution* (March 2020), *The Future of Africa: Challenges and Opportunities* (April 2021), and *Africa Tomorrow: Pathways to Prosperity* (June 2022) take a rigorous look at the continent as a whole.

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