

2 with 8

Safe drinking water for 2 bln. people with \$8 bln. by means of HWTS

Over 2 billion people use water sources that are contaminated with faeces (WHO, 2022). Providing safe drinking water with piped systems, water kiosks, or hand pumps would cost at least \$25 per capita for CapEx (investment cost) so for 2 billion people at least \$50 billion. A cheaper, be it intermediate, solution for quality is point of use treatment with Household Water Treatment and Safe storage (HWTS) which would cost around \$4 per capita.

HWTS

HWTS reduces water borne diseases by 60% or more if combined with hygiene (WHO, 2007). Each option has its limitations. Chlorine has a taste and does not eliminate cryptosporidium. Boiling requires fuel and filters are expensive. In general filters are effective due to the 3 Cs, the Correct, Consistent and Continuous use and many richer people buy inline filters of \$100 - \$300 or table top filters of \$20 - \$100.

Failures and success

HWTS is applied in many projects but not always with success. For instance in East Africa 900.000 filters were given for free and a large part were hardly used. Reasons include the complicated, no supply chain and as a gift there was no ownership. However increasingly there are successes. Over 4 million biosand and ceramic pot filters have been locally produced. 19 million table top filters produced in Brazil were sold there and in Africa. Water filters are market-based, and an estimated 500 million families worldwide have a filter.

An example of a successful dissemination is **Ethiopia** who has;

- A. **A national policy** that promotes Self-supply which includes HWTS
 - B. **Utilities** selling filters as additional service. Due to power cuts they can't deliver 24/7
 - C. **Local production** of good quality table top filters starting at sales price of \$22
- Some 500.000 filters were sold and funds to start up local assembly was around \$0.3 mln. which was partly funded with aid money. This example can be replicated in other countries.

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The "2 with 8" idea is to show that with a 1 time grant of around \$4 per person and many small projects, 2 billion people can have point of use treatment. An indication to use funds;

1. Awareness (30%)

Awareness that clear water can still be contaminated, the economic benefits of HWTS etc. This needs to be nationwide and for many years on radio, television, social media.

2. Supply chains & payment systems (10%)

In each city and towns shops or outlets that sell HWTS options with different prices, so people have a choice. Payment options for those who cannot pay in 1 time

3. Subsidies for the poorest (60%)

Some 1 billion people are too poor to buy a filter so need a subsidy. To avoid market distortion, vouchers can be used as were used for bed nets.

