

Six ideas to reach SDG6 for rural water supply



1 Household Water Treatment.

The most cost effective option for safe water is treatment at the household level with boiling, chlorine or filters (WHO 2015). Chlorine does not eliminate Cryptosporidium, the no 2 baby killer (GEMS 2015) has less consistent use than filters and therefore at the household level 50% less effective in reducing waterborne diseases (Cochrane 2015).

New quality and low cost filters; Swach, Kent, NAZAVA and Tulip filters, the last now also produced in Africa. Cost 15-25 US\$

New locally produced filter. 20US\$

Pump maintenance with FLOM

2 Shift from VLOM to FLOM.

Experiences with the VLOM concept Village Level Operation and Maintenance are mixed and is often not working. One way to improve is to shift to FLOM, Family Level Operation and Maintenance.

Example. Mrs Teresa is pump caretaker. 50 families fetch water, 3 US cent/ bucket. This gives salary for Teresa and money for repairs. Teresa now has money to buy a 2nd pump. She pays 50% of the investment cost (400US\$) the other 50% is NGO subsidy.



3 Innovation in Technologies, use SMARTechs.

Use where possible innovative, low cost technologies that can be produced decentralized and by the local private sector. This results in cost reduction and increased functionality of rural communal water supply and increases options for Self-supply. Examples are manual drilling of wells, Rope pumps, Solar pumps, Emas pumps, Blue pumps, Tube recharge to store rainwater in the ground, Wire cement tanks, etc

Manual drilling, percussion, jetting

Self-supply pump for irrigation



4 Scale up Self-supply.

Improve existing wells and make new family wells. Results will be increased family incomes (50-500US\$/yr. Roosendahl, Maltha 2015)

Self-supply results in convenience, productive use like irrigation and less health related cost and more food security. Self-supply should be combined with HWT. **Example Tanzania** After critical mass of Rope pumps was created, over 5000 families bought a pump for Self-supply



5 Focus on the 3 Ts: Training, Training, Training.

Over 3 million new water jobs needed to reach the SDG6 (IWA 2016) Water managers and technicians need training in technologies in conventional and new technologies and non-technical aspects like business skills and marketing and building up supply chains. NGOs and government need training in new technologies and lessons learned (Simple is not easy), exchange of experiences in both failures and success. SMART Centres now can give this type of training.

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6 Equal subsidies.

Family pump, on 40 m tube well

Every person has the same (human) right to subsidies. In general people who now have an improved water source were subsidized with 40\$ in rural areas to 80\$/cap. in urban areas. The remaining 660 mln unserved have a 'right' to the same subsidy. To reach 'the last mile' families can use this subsidy to make a communal well or invest it in their own well.

Low cost options for drilling family wells are possible even in hard soils and till depths of 80 metres (EMAS 2015). Urban water users can support rural areas.

