

Water and Sanitation in the News

Desert Trek

- By Mike Nord

Recently Mayor of Cape Town Patricia De Lille spoke about Water to the citizens of Cape Town with a strong message regarding saving water and the dire situation we are in.

It's all very well increasing water tariffs, installing water meters and executing fines. But, at the end of the day, the onus lies on us as citizens in South Africa to protect our precious resource and take the lead as water custodians. Sure, Government plays the vital role of improving water infrastructure and implementing workable solutions, but without the general public participation and the finger pointing at Government we have only half of the holistic solution needed to survive the crisis we are now facing.

Yes, we have been educated in "Tips on Saving Water" and a lot of these do make sense, however, many people are still not taking the role of responsibility to protect and conserve this dwindling giving and sustaining resource.

What are the consequences of dry dams and the long term effects we will be facing if we don't start using initiative and sharing ideas in water conservation with everyday people we share our lives with?

Morbidity and mortality

The health burdens attributable to lack of water and sanitation are significant. Yet, more people endure the largely preventable effects of water scarcity and poor sanitation than are affected by war, terrorism and weapons of mass destruction combined. These effects are caused by exposure to pathogenic microbes through various routes. This large number of categories is an indication of the extent to which water-, sanitation- and hygiene-related diseases can affect populations.

Diseases related to unsafe water, poor sanitation and lack of hygiene are some of the most common causes of illness and death among the poor of developing countries. According to the World Health Organization (WHO), 1.6 million deaths each year can be attributed specifically to these health determinants.

Nearly 60% of mortality is linked to infectious diseases, mainly diarrhoea, schistosomiasis, trachoma and intestinal helminths.

Health burden for children

Each year 1.5-2 million children still die from water and sanitation-related diseases and many more are debilitated by illness, pain and discomfort. Although insufficient and unsafe water supplies and sanitation affect people of all ages, children's health and well-being is particularly compromised. Approximately 84% of the

global burden of diarrhoeal disease is experienced by children under five and 74% of the health burden from intestinal helminths affects children between five and 14.

Diarrhoea and intestinal parasites contribute much to malnutrition in children, by causing decreased food intake, impaired nutrient absorption, direct nutrient losses and by challenging their immune systems.

Moreover, poor water supply can affect growth in other ways. When a water supply is situated some distance away, this can contribute to heavy workloads for older children, causing them to burn calories that they depend on for adequate nutrition. Carrying overly heavy containers can even contribute to deformities in bone growth. ...

Without water, neither small businesses nor major global industries can function. Not family farms or major agribusinesses. Not energy production facilities or computer manufacturers or steel companies. Similarly, poor water quality, or limited or unreliable access to water means higher costs for all businesses – and all consumers. Water scarcity means greater risks for a community's long-term viability and a negative impact on their competitiveness. It also means that a community's ability to grow and create jobs is at risk. Regardless of whether water has become the new oil, one thing is certain: water is ironically both taken for granted and serves as the engine of our economy. If not properly managed, water scarcity will directly affect the local ability to grow and create jobs.

As we know the Minister of Water Affairs and Sanitation is the "Custodian of Water" in South Africa. Or is she? In my opinion each one of us using this life sustaining resource are water custodians in our Country and should take a measure of pride in the responsibility it holds. Only with an holistic approach can we reduce water consumption and still enjoy the luxury of having the number one resource available to us in our everyday lives. An interesting and also frightening fact is that less than 1% of all water available on Earth is fit for human consumption; the other 99% is in our oceans. So yes, the fact is we have a limited supply even without a severe drought we are facing now.

I have heard many people say: Why doesn't the Government build water desalination plants utilizing water from the ocean? To put you in the picture a desalination plant can cost anything over R10 Billion and upwards and it has annual operational costs that outweigh the more immediate need of improving our existing and outdated failing water infrastructure. The water tariffs would have to be drastically increased and taking into account our socio-economic climate in South Africa, where would the funds to pay

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for Desalination plants have to come from? This article is definitely not about directing blame towards nor vindicating the Government in any way. A recent media report on a Parliamentary sitting regarding our current water crisis has stated that Blue Drop and Green Drop scores were deliberately held back just before the elections last year. Why? It states that the BD/GD scores have been declining since the last report and very little has been done to improve water infrastructure over the past few years and that little spending has been done either to improve water infrastructure. So, ultimately it leaves us as every day water users to take up the responsibility and do what we can to improve the situation for our fellow citizens.

The question is “who are the real Water Custodians in South Africa” now? Who are the people who care enough to do what is right and conserve and protect this life resource we have available to us?

Sources: PLOS Medicine, Growing Blue

CALCULATE YOUR WATER USE

In order to conserve water more effectively as citizens, we need to take a moment to consider how much water we are consuming and using within our daily lives.

There are various useful indicators and calculators available to help us determine how much we could save by changing our habits and using and consuming water more efficiently and sparingly.

- For Household water use, feel free to make use of the **WAMTech Household and Global Use Calculator**

Household and Global Water Use Calculator

Global water footprint per month: 47110 liters

Water usage per month: 27738 liters Per day: 912 liters

Indoor water usage

Kitchen usage

- Dish washing: Number of times per day when dishes are washed by hand: 3
- Utensil water used: 6 (Change if required) (measure the volume you use with a measuring jug)
- Number of times per week when dishwasher is used: 5
- Utensil water used: 10 (Change if required) (Check the user manual of your dish washer or contact the supplier if required)

Outdoor water usage

- Drinking and food**
 - Glasses of water per person per day: 4
 - 200 ml glasses used: 208 (Change if required) (measure the volume of glasses)
 - Litres of water used for cooking per day: 1
 - Note: Cooking (rice, porridge, vegetables, etc.) and for washing vegetables or other food
- Cleaning and general use**
 - Flushing, mopping, hand cleaning, etc. (litres per day): 2
 - Note: Spend some time during a normal day and write down when you use the tap and for specific actions measure the quantity of water for each event with a measuring jug
 - Floor and window cleaning, etc. (litres per week): 8
 - Container volume (litre): 5 Number of containers: 2

Household members

4

SUMMARY

ACTUAL

RATES

EXIT

Global Footprint

- For Products:

Please see **Product gallery by Water Footprint Network**

Product gallery

Get a snapshot of the impact of your daily lifestyle. Compare how much water is used to make a variety of products so that you can choose to reduce your water footprint. For those that want to find out more, the green, blue and grey water footprint shows the source of water consumed and the volume of fresh water required for assimilation of pollutants.



Apple

Global average water footprint

On average, one apple (150 gram) costs 125 litres of water.

822 litre/kg

Apple juice costs 1140 litres of water per litre of apple juice. One glass of apple juice (200 ml) costs about 230 litres of water.

68% green, 16% blue, 15% grey

For government and water service authorities, there are also various tools and technologies to implement – aimed at improved water management and saving.

The **Municipal Assistant™** system supports water conservation in times of drought by means of the following core functionalities:

- **Water quality and quantity monitoring** and management (including demand and loads).
- **Evaluating and reporting compliance** with regulatory water quality standards and criteria.
- **Assists the user in the compilation of various reports** (including a Blue Drop/Green Drop reporting facility).
- **Asset management** to ensure optimal performance of facilities to produce good quality drinking water and safe discharge to help prevent rivers becoming polluted.
- **Operational management and maintenance scheduling** of equipment and staff utilisation (helps prevent asset failures and water losses).
- Assist with **routine and process control inspections and incident reporting**.
- Compilation of **operational and maintenance budgets** to ensure timeous preventative maintenance and replacement of equipment.

Contact Mike Nord:
Tel: +27 (0)21 887 7161

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