2018

GREEN OFFICE WEEK
TOOLKIT

FOR THE DAY
WATER DAY ZERO
COULD COME YOUR WAY

ENGAGING ALL EMPLOYERS
INVOLVING ALL WORKPLACES
INSPIRING ALL EMPLOYEES

ACKNOWLEDGEMENTS

This toolkit was compiled with content provided from various sources, among which are:

- The Western Cape Government and The City of Cape Town websites

www.westerncape.gov.za

https://www.westerncape.gov.za/110green/files/atoms/files/Business%20Continuity%20Plan%20Guide.pdf

http://www.capetown.gov.za/Work%20and%20business/Greener-business/Saving-water-in-the-workplace/Make-your-office-smarter

http://resource.capetown.gov.za/documentcentre/Documents/Procedures%2c%20guidelines%20and%20regulations/SOH_How%20to%20write%20an%20action%20plan.pdf

http://resource.capetown.gov.za/documentcentre/Documents/Procedures,%20guidelines%20and%20regulations/Business%20Water%20FAQs.pdf

http://resource.capetown.gov.za/documentcentre/

- Water Wise

www.waterwise.co.za

GreenCape.

https://www.greencape.co.za/

http://www.waterwise.co.za/site/water/environment/situation.html

- WWF

http://www.wwf.org.za/our_work/water/

http://awsassets.wwf.org.za/downloads/WWFWaterFiles_06-business_continuity.pdf

http://www.wwf.org.za/bucket_list.cfm?24221/wednesday-water-file-06

http://wwf.panda.org/what_we_do/how_we_work/our_global_goals/water/

- Water Research Commission

http://www.wrc.org.za

http://www.wrc.org.za/Pages/KH_DocumentsList.aspx?dt=1&su=c5&ms=4;13;

- Rainharvest

http://www.rainharvest.co.za/2010/05/the-physical-causes-of-water-scarcity-southern-africa/

DISCLAIMER

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GREEN OFFICE WEEK 2018
MONDAY 16 APRIL TO FRIDAY 20 APRIL

Green Office Week in South Africa will focus exclusively on the important issue of Water and Business Survival.

Introduction

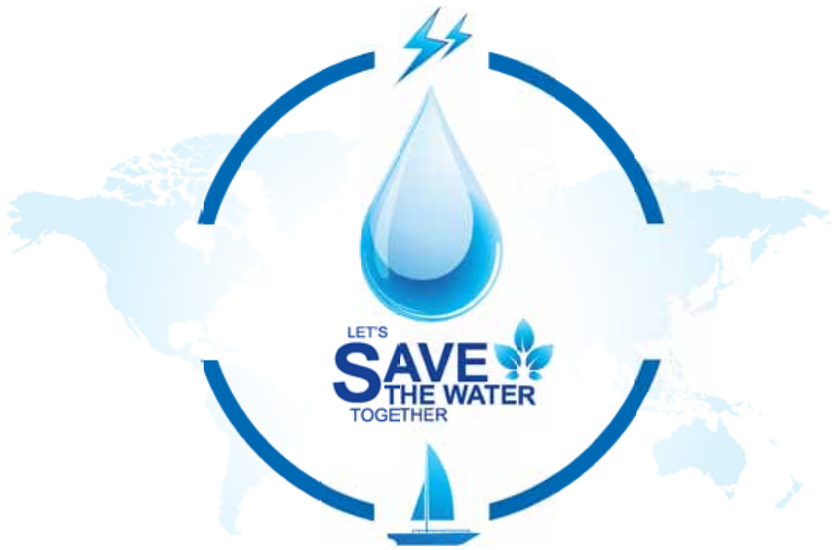
South Africa has experienced years of water scarcity but the very recent case of what happened in Western Cape, and a potential Day Zero scenario, has brought to the nation's attention the realities of what water scarcity really means as well as how inadequately prepared a number of organisations are.

The problem is not going to go away and it has to be seen as a challenge to be faced by all organisations regardless of which region in South Africa they operate from.

Ensuring the survival of the human species also includes fighting for the survival of economies that will ensure the earning power of organisations and of the people they employ.

As any good business person will know, planning for the future is absolutely essential. Now is the time to put in place business continuity plans that have water as a key focus area.

"We can only save water while there is water to save". *(wwf.water)*



Green Office Week has put together a toolkit for all organisations to use either as a tool to start conversations around this issue; to refine the knowledge they have or to broaden their message about the importance of water to their internal and external publics.

THE FACTS: South Africa is a water-stressed country

We are over-exploiting the resources we have!

Water conservation Water is a critical natural resource on which we all (humans, animals, plant life, sea life, etc.) depend. It is one of the most important life-support systems we have on our planet.

The amount of water on earth is constant and cannot be increased or decreased, but it is unevenly distributed across the earth. South Africa receives an annual rainfall of 492 millimetres whereas the rest of the earth receives 985 millimetres. This is nearly half the earth's average. Thus South Africa is classified as a water-stressed country.

South Africa is a water-stressed country due to limited renewable water resources. We are currently using water in an unsustainable manner, and there will not be enough water supplies for everyone in the future.

We are over-exploiting and polluting the resources we have. We must become aware of the impacts of our unsustainable water use, and change our behaviour.

Providing fresh drinking water to a growing population is both challenging and costly. With 98% of our fresh water supplies already allocated for use, the projected water demand for South Africa is not sustainable, and we are already experiencing water shortages in some parts of the country.

"The future of South Africa's water sector is uncertain. Nobody can be sure how much rain will fall over the coming decade. But what is clear is that the country is living beyond its water resources." Zachary Donnenfeld is a senior researcher, ISS Pretoria(ISS Today)

"South Africa will run out of water in 2030 unless there is a complete mind shift about the true value of water …"

This is a central message in the draft National Water and Sanitation Master Plan that outlines the dire situation of the country's water and lays out a turnaround strategy to avoid the country's demand for water outstripping supply in 12 years' time.

The change in mind-set will have to occur at all levels of government and in business and civil society in order to avoid this stark future.

The master Plan states: "The new reality: water will become more expensive. Everyone, except the indigent, must pay for water and sanitation. Everyone, except those without access to piped water, must use less water.' " Melanie Gosling, correspondent (News 214)

NB. Therefore, this toolkit covers the key areas that employers and employees need to focus their attention on.

FOCUS 1: Water scarcity and its impact on your business

It is important to evaluate the quality of water required for your various uses

What can your business do?

A: Start your business' sustainable water journey today to:

- **Improve** the understanding of your water use and risks.
- **Increase** your water efficiency.
- **Reuse** the water you use on-site.
- **Access** alternative supplies of water; and
- **Work** with other businesses to build a more resilient water future together.

B: Highlighting the steps and areas:

1. Understand water uses and risks

- ✓ You cannot manage what you do not measure. This is the first step on the sustainable water journey, and perhaps the most important. Businesses need to get a handle on what their water usage is, where it is being used and for what purposes.
- ✓ Each type of building faces unique challenges and has specific areas where the greatest reductions can be made, but significant water savings can be achieved indoors and out through improvements in equipment and operational practices.
- ✓ This can be done by conducting water audits, by installing smart-meters and/or sub-metering your business property. Metering has proven to be an incredibly effective strategy at identifying leaks, so that they can be fixed quickly. Metering alone has helped businesses reduce their consumption significantly due to the identification of leaks and the subsequent behaviour changes.
- ✓ Understand how much water is being used, where and how will help you create a resilience plan with the greatest impact. Furthermore, it is important to evaluate the quality of water required for your various uses, for example, potable water is not required for flushing toilets and therefore alternative water sources could be explored.
- ✓ You also need to evaluate where your biggest risk from a lack of water may arise. If you (or your suppliers or customers) do not have access to water, how will this impact on your business?

Once your current consumption has been benchmarked, the next step is to create targets for your organisation, linking them to individual users and interventions.

Useful notes for these three sectors.

COMMERCIAL SECTOR

The Green Building Council of South Africa's energy and water benchmarking tool provides a guideline for the calculation of your office building's water (and energy) use.

INDUSTRIAL SECTOR

Industrial water use is highly process specific and therefore varies greatly. This is reflected in the range of Natsurvs undertaken by the Water Research Council (WRC) to consider the benchmarks for different industries - full details of the Natsurvs available on the WRC website

SMALL ENTERPRISES AND HOUSEHOLDS

For individuals that want to get to grips with how they can reach the 50 litres a day target, the City of Cape Town's water consumption calculator helps you figure out where you are using water as an individual.

2. Water efficiency interventions

Once your business has identified where its water is being utilised, the next step is implementing water efficiency technologies, fittings, processes and behaviours.

- ✓ Toilets, taps and showers typically consume 40-60% of the total annual potable water use in domestic and commercial areas. Therefore, these fixtures are a high impact target area to address when looking to reduce water consumption. They are also relatively easy and cost effective to retrofit with water saving fixtures.
- ✓ These interventions will again vary significantly by sector, but some generic examples are included below.

Water efficient fittings (typically easy to retrofit):

- » Hold-flush or dual flush toilets
- » Waterless urinals
- » Cistern displacement item (older toilets)
- » Low-flow aerated taps
- » Low-flow shower-heads
- » High efficiency pre-rinse spray valves
- » Water efficient dishwashers and washing machines; and
- » Automatic switch off devices / motion sensor devices – e.g. for cleaning conveyor belts.

Water efficient practices:

- » Fix leaks and faulty / leaking equipment and service equipment on a regular basis.
- » Put in place uncomplicated reporting procedure for staff to report leaks.
- » Optimise the operation of cooling systems.
- » Sweep or mop floors rather than spraying down floors.
- » Implement water wise gardening and do not irrigate with potable water.
- » Only operate dishwashers and washing machines when fully loaded; and
- » Introduce staff training and guest awareness programmes.

3. On-site re-use

Once water use has been clearly assessed and efficient processes implemented, the third step is to consider onsite re-use.

- The primary intention of re-use is to cascade water use between processes where fit-for-purpose quality water is required.
- Depending on the intended use, the wastewater may require treatment prior to re-use, and may either be treated to potable or non-potable standard.
- Grey water from commercial and residential properties can be re-used on-site either outdoors (for garden irrigation) or indoors for toilet flushing if treated. Current technologies for outdoor use range from simple low-tech adaptors to automated systems incorporating basic treatment and irrigation systems.

Types of Waste Water

INDUSTRIAL EFFLUENT

This is any wastewater generated by an industrial activity.

GREYWATER

Relatively clean wastewater from hand basins, showers, baths and laundries.

BLACKWATER

Sanitation (toilet) water.

4. Water partnerships

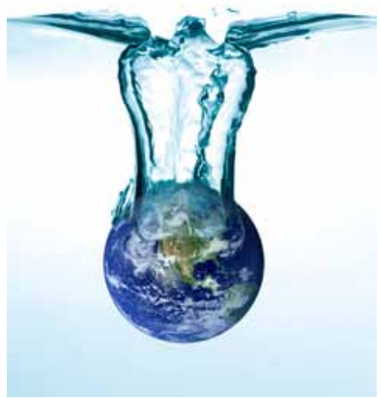
A drought cannot be fought alone, and it requires everyone in society to work together to ensure that we become more water resilient.

There are some great examples of what can be accomplished when organisations collaborate to ensure the scarce water resources are used effectively.

WWF-SA's Water Balance Programme links corporate water users to the health of our natural infrastructure through positive investment into critical catchments. These investments are used to clear invasive alien vegetation to balance the participant's operational water use, as well as to mobilise the collective action necessary to ensure the sustainability of these interventions.

FOCUS 2: Drafting a Continuity Plan

No business, no office, no people, can survive without water!



What are the basics?

Business Continuity Plan Businesses are all encouraged to develop their own Business Continuity Plans (BCPs) for use in the event of severe restrictions.

Focus on how, and which, service delivery requirements of the business CAN and MUST continue when there is constrained or no municipal water.

A: Plotting the plan

Below we provide you with suggestions for 3 areas, but for more areas that need to be covered please go to https://www.westerncape.gov.za/110green/files/atoms/files/Business%20Continuity%20Plan%20Guide.pdf

Objectives - Services

1. Identify critical services rendered.
2. Prioritise the critical services to be rendered.
3. Ensure employees have the appropriate technology to access their remotely.
4. Identify critical time periods/cutoff.
5. List services that cannot be delivered at all.
6. Ensure you know who has the right to make specific decisions regarding staff and operations.
7. Prepare the operational arrangements for staff working from the office/ factory; staff working remotely; staff going to regional offices/factories which are not affected; and/or staff working from a disaster recovery site.

NB Plot who is responsible for each of the above

Objectives - Water Demand Actions

1. Ensure continuation of all water saving interventions.
2. Plan for minimum water demand to ensure that focus remains on what is critical or not.
3. What is your plan for emergency potable water supplies – i.e. for drinking? Ensure essential supply of drinking water for a period of 6 months.
4. Develop a schedule of how and when essential staff could access their water allocation at their local collection points or from the office/factory.
5. Actively engage and align daily action and monitoring with landlord / tenants.
6. Shut down certain water-intensive facilities
7. Switch off air-con (where water cooled) for parts of the day if no windows can be opened or all the time if windows can be opened.
8. Close your taps when they're not in use to prevent damage when the supply returns.
9. Shut off systems which depend on water flow as they could be damaged or cause fires if no water flows through them (e.g. solar water heaters, hydro boils, etc.
10. Check that your multi-storey building's water supply system(pumps and rooftop storage) is in working order and complies with the municipal by-law.

NB Plot who is responsible for each of the above

Objectives - Staff

1. Identify key staff that will remain on site during critical water-restriction periods.
2. Identify staff that will work flexihours or reduced hours.
3. Identify staff that will work from home.
4. How would the functions of on-site staff and support staff be reassigned.
5. Develop an emergency plan that can be activated, to include an evacuation plan for staff.
6. Put your emergency/ BCP team on standby.
7. Ensure your staff know and understand the emergency plan.

NB Plot who is responsible for each of the above

B: : Establish a Water Committee or Green Teams

Invite volunteers

Request volunteers from units wishing to join and nominate participants to specific sub-groups or work areas.

- ✓ Schedule regular meetings that report on specific activities or objectives.
- ✓ Hold monthly review sessions to assess progress or agree to alternative course of actions.
- ✓ Review the business continuity plan.
- ✓ Undertake all required preparations for a potential Day Zero.
- ✓ Useful supply preparation - Send out lists of things that staff need to purchase in advance.
- ✓ Stay abreast of both local (neighbourhood) and regional (the municipal areas) developments.
- ✓ Source publicly available communication materials for staff education on sanitation and health.

FOCUS 3: A Contingency Plan

Businesses are all encouraged to develop their own Business Continuity Plans (BCPs).

What are the key areas of uncertainty?

Should a serious water crsis/day zero arrive:

- Will you be in an economic area protected from water reticulation shut downs?
- What systems would be in place to enable your business not in the protected areas to collect water for business use, and how would the volumes allowed be calculated? And
- If you are a large business - could you provide 'sub-points of distribution (PODs)' i.e. where you could allocate your employees' daily water rations?

A: What would a contingency/action plan contain?

12 basic points for businesses to consider in developing business continuity plans:

1	Work out your needs – actual minimum vs. historic use
2	Reduce water consumption to as low as possible (while maintaining production)
3	What you need to do to store or capture more water? (E.g. rainwater tanks, capturing stormwater into pools etc.)
4	What you need to do provide own water supplies (e.g. boreholes, desalination, water from air)
5	Ways to treat the stored or other water supplies (Unless you treat the water to a potable standard, you can only use it for non-potable water functions)
6	Plan for emergency potable water supplies – i.e. for drinking, cooking and basic hygiene?
7	Have a plan for sanitation? (If your system has no water or low water pressure, the normal toilet facilities will be compromised)
8	Plan for water supplies in case a fire breaks out?
9	Engage with your insurance company with regards to cover should a fire occur;
10	Know how many people you can supply for should the water mains be switched off? (direct and sanitation use)
11	If the system cannot supply enough for all employees, map out which functions are critical and which functions can be performed at home? And
12	Engage with suppliers to check that they have done their own business continuity plans too.

B: How will fires in buildings and businesses be handled?

It is advised that all businesses and facility managers in the public and private sector get up to speed about how to treat fires during a period of extreme drought especially when water pressure may also be lowered dramatically in an effort to suppress demand.

According to building regulations sprinkler systems need to be installed however, during the disaster phase no water will feed into a fire sprinkler system.

Tips

- » Ensure that water pressure remains adequate for your needs.
- » Ensure all fire hydrants are in working condition and serviced and acquire more if required.
- » Ensure that all staff and occupants know the emergency processes that are related to a fire i.e. conduct regular fire drills.
- » Speak to your insurer to ensure that you are aware of all requirements and consequences of pressure management/flooding and fires.
- » Conduct ongoing staff and occupant awareness initiatives.

C: What measures should be put in place to combat likely disease outbreaks?

Preventative measures

- ✓ Introduce health and hygiene programmes.
- ✓ Have health talks or posters about the prevention of water- and food-borne diseases and diarrhoea danger signs.
- ✓ Employees should be encouraged to continue with their routine visitations to health clinics and ensure all immunisations of all family members are up to date.
- ✓ When persons display symptoms of dehydration they should drink a sugar/salt solution (Half a teaspoon of salt, eight teaspoons of sugar in one litre of water) and if the symptoms persist then proceed to the nearest clinic for treatment.

D: What is water rationing?

Water rationing forms part of a Critical Water Shortages Disaster Plan. It will last as long as is necessary to ensure all have access to basic water supply and until dam levels increase sufficiently or alternative water supply measures become available.

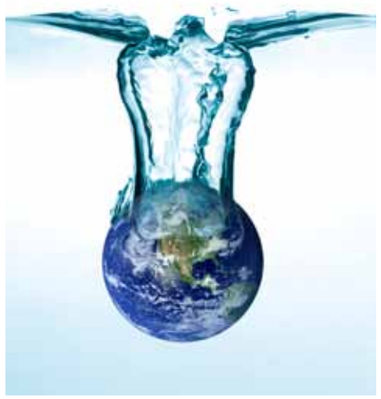
A city or a region can be divided into pressure zones. Pressure controls the flow rate of water and is managed by manipulating pressure valves in the reticulation network.

Rationing will obviously continue until the limit is reached. Some areas may be without water for short periods of time.

Forewarned is forearmed!

FOCUS 4: Climate Change and impact on availability of water

No water, no life. No blue, no green (Syliva Earle)



The Scenarios

Climate Change has been identified as one of the country's threats on its path towards sustainable development in future and an equitable society. (South Africa's Second National Communication to the UN Framework Convention on Climate Change (DEA, 2010).

Climate change is not expected to have a uniform impact across the country, and is projected to be accompanied by increased variability in precipitation and temperature.

A: What Does Climate Change Imply for South Africa

Impacts of climate change and the need for adaptation hold particular significance for South Africa for a number of reasons (Schulze 2005; 2007; 2011):

- **South Africa is already subjected to a high risk climate** with a low conversion of rainfall to runoff and very high year-to-year variability.
- **Any changes in rainfall are amplified by hydrological responses**, e.g. a 10% change **in rainfall can result in up to a 20-30% change in runoff.**
- **Many fragile ecosystems** (both terrestrial and aquatic) are directly or indirectly dependent on water
- **Climate change is superimposed onto existing, already stressed catchments** on which land degradation can further amplifies climate change impacts.
- **A large proportion of South Africa's population is impoverished**, subjected to the vagaries of climate and are hence vulnerable to any changes in climate.
- **Water related infrastructure has a typical design life of 50-100 year**s, i.e. well into the era of increasing climate change impacts.
- **Water quality in South Africa has deteriorated and is getting poorer**. Significantly, with a 2-3°C increase in temperature most chemical reactions will speed up markedly.
- **Given the link between climate change, hydrological response**s, land use and economic development, climate change can play out very differently at the local level, implying that adaptation also becomes a local issue.

NB: In order for the issue of implementing a water-saving culture, the leaders of an organisation may need to use adaptive management strategies.

B: What is Adaptive Management?

1. Understanding the context (water as essential for business survival) is critical.

This reinforces the importance of a broad-based, inclusive and participatory structure in order to develop a comprehensive grasp of the scope and detail of context.

2. Honest, and open discussions.

It is not "business as usual". It is critical to move beyond rhetoric and engage in explicit discussions that are purposeful and deliberate, are characterised by careful documentation processes, and are designed to promote learning that translates into action.

3. Purposeful and deliberate.

Begin with the framing of good questions. Only then can problems (in our case climate change impacts) be clarified and framed in a way that ensures that subsequent management actions are relevant and useful.

4. Careful documentation.

Good documentation, including monitoring, is necessary to facilitate examination and analysis of data, and for sharing the lessons learned and any new knowledge gained, including those who will make decisions in the future.

5. Promote ongoing learning processes that translate into action.

Organisations need to acknowledge that organisational commitment, the will to act, as well as a capacity to act, is crucial in the process.

6. Supporting the "right" people is critical.

People who bring enthusiasm and energy to the water s issue , who have established respect and trust among their colleagues and who have a commitment to change and the capacity to cope with ambiguity and uncertainty, are essential.

NB: Such leadership is not always at the top of the organisational hierarchy. Indeed, advocates and champions are needed at multiple levels in any organisation as well as from internal and external sources.

C: Why Should YOU Act?

Adaptation activities themselves mostly take place within peoples' daily lives and therefore mostly in a local context (e.g. Adger, 2001).

In order to make knowledge and choices for adaptation available, adaptation must be included on a governance and longterm planning scale.

Gaining a holistic view of adaptation can only be achieved by participation which can give insight into the status quo of peoples' perceptions, needs, and vulnerabilities.

Consequently, stakeholder engagement is seen as vital for adaptive water management

- ✓ First, as a means of jointly framing the priority issues and questions to be addressed,
- ✓ Secondly, as a means of collaborative sense-making leading to joint agreement of appropriate solutions
- ✓ Thirdly, as a mechanism for building ownership of the implementation of these solutions.

The severity or our water problems today will only be exacerbated in a future under climate change.

FOCUS 5: What all employees should know

You can improve your company's social and environmental profile

Being water-wise is a shared responsibility

All people at work need to understand and implement water conservation.

Water conservation is the implementation of one or several measures to reduce the amount of water used in your office, and the water used to produce the goods and services that your office uses.

A. Implementing a water-wise office

Implementing water conservation measures and promoting a water-wise office will have many benefits:

- It will result in cost-savings (cheaper water bills).
- Make the company more competitive.
- Reduce the company's carbon and water footprints; and
- Contribute to local, national and global water conservation.

If you reduce your company's water footprint, you will improve your company's social and environmental profile and make it more competitive in an increasingly environmentally-aware market. Increasing urban development and the impacts of climate change.

Things to do

1. Restroom and washing facilities

- ✓ Use only non-toxic and biodegradable soaps.
- ✓ Taps should be fitted with aerators, which can reduce the water flow from 20-30 litres per minute to 6-10 litres.
- ✓ If your office has showers, encourage the users to close the taps while shampooing, and to only take short showers.
- ✓ Fit water-efficient showerheads, which save water and energy (and money). • Install water-efficient toilet flush systems with cisterns not exceeding 9.5 litres.
- ✓ If your office has a new plumbing system, make sure that the settings are correct (especially for flush-master toilets).
- ✓ Ensure that any dripping taps or toilets are fixed as soon as possible. Garden or outdoor spaces

2. Garden or outdoor spaces

- ✓ Remove alien vegetation and replace with water-wise and local indigenous plants. Alien vegetation is often very thirsty, and in South Africa this is one of the biggest threats to our fresh water supply.
- ✓ Only water your outdoor office garden and office plants when really necessary, and avoid watering when it is very hot or windy (the water will evaporate and not be absorbed by the plants).
- ✓ Install a drip irrigation system: By slowly dripping water to the roots of the plants instead of using sprinklers or a hose for watering, the water use is made more efficient and directed to the right place. Sprinklers and hoses are less precise, and often cause unnecessary run-off as the soil gets saturated.
- ✓ Ensure that sprinkler systems are set and directed correctly to prevent water from running off paved areas into stormwater drains.
- ✓ Avoid hosing down hard surfaces or paved areas to prevent water from going into the stormwater drains (which basically wastes water and contributes to blocking and overflowing of the system). If it is absolutely necessary to use a hose, then try not to use drinking water, rather grey water or rain water.
- ✓ Cars should be washed on permeable surfaces where possible, to prevent wasting water and blocking or overflowing of stormwater drains.
- ✓ Install rainwater tanks to harvest and store water for your office gardens, pot plants, cleaning, and flushing.
- ✓ Design a roof garden with some plants and shade for staff to relax over lunchtime.
- ✓ Lay permeable paving on your office property to encourage natural drainage; hard surfaces contribute to water runoff and debris overflowing and blocking stormwater drains.

3. Kitchen, canteen and catering

- Avoid letting the tap run without actually using the water for anything – it sounds odd, but you'd be surprised how many people actually do this!
- Only boil the amount of water you need when using the kettle – if you boil too much, keep the rest warm in a flask to be used later.
- Reduce office-related water pollution to zero: Only use biodegradable cleaning products and make sure you do not dispose of hazardous waste in the sink or toilet. •
- Use the economy cycle on your dishwasher and washing machine.
- Only run the dishwasher when full; and when rinsing glasses, do so in a bucket or plugged sink rather than under a running tap.
- For cold water, keep a jug or a bottle of tap water in the fridge instead of letting the tap run to get rid of warm water (this can be reduced by insulating the pipes).
- Make sure your fridge is air-cooled and not water-cooled.
- Do not boil more water than is needed for cooking.
- Switch from bottled water to tap water, even if you need to invest in a filter.

In South Africa, water is now everybody's business, and consequently there is hope that our businesses and workplaces will continue to function – keeping us financially and economically secure.

B: FAQS

In South Africa, water is now everybody's business, and consequently there is hope that our businesses and workplaces will continue to function – keeping us financially and economically secure.

1 How will a severe drought impact on my workplace?

Your work life is likely to be affected in a variety of ways.

» If water is an essential part of the business you are in, you will probably be doing things differently in order to adhere to water restrictions.

» If you are in an office job, there might be radical changes in operations, such as shorter shifts, flexitime or work-from-home arrangements. There might also be complete shut-downs and possible retrenchments. It will depend on your industry and the level of continuity planning your workplace has been able to achieve.

2 What plans should be put in place and what questions should I be asking my employer?

» All workplace have cut levels of water use drastically.

» Ask management if your workplace has a business continuity plan and incident response plan around the drought. If so,

» Request that it be circulated or communicated once it is ready, so you can see what your work has done in terms of risk assessment, drought preparation and to see what plans there are in the event of a potential Day Zero.

» Request further clarification if needs be so that you know what to expect.

- See if there is clarity around reduced working hours, shifts, flexitime or work-from-home.
- Who has to be at work no matter what (essential services)?
- Are individual staff circumstances, such as parents with young children whose crèche might close, factored into such a scenario
- How will the time needed to queue at distribution points for water be managed?

3 I have been told by my boss that there is a risk of shut-down and me losing my job. What can I do?

Retrenchments are a very realistic and worst-case possibility for employees in industries that are completely dependent on water, for example:

Laundries, textile manufacturers, printers, food-and-beverage manufacturers, gardening services, pharmacies, gyms, plant nurseries, agriculture, hairdressers, bottle-washing factories or pool companies. Domestic workers and gardeners might face a similar risk.

When organisations face significant water pressure drops it will make normal operation of business difficult.

In case you are faced with a risk of retrenchment, or are worried about it, then it is important for you to have clarity on what decisions your workplace may have to make. The usual, formal procedures around retrenchment should apply during a water crisis. Staff should be consulted, given sound reasons, given the option of representation, exploring alternative options and fulfilling the correct administrational obligations.

4 As an employee, how can I put together a water-crisis response-plan for my office?

Ask yourself:

What are your risks?

How are you preparing and how will things continue during a water crisis scenario and beyond?

A water-crisis response-plan should form part of your oorganisation's business continuity plan, focusing on what will happen while in the midst of a crisis. Refer to Focus 2 of this toolkit. Focus 2 is aimed at management.

If you work for a small business or your management does not have a business continuity plan focussing on water then you may need to:

Take the Initiative yourself!

You could decide to draw up a simplified management system. Your Environmental Management System (EMS) needs to include the 2 key elements:

- Your motivation: Providing your colleagues or boss why you need to have an EMS..
- Your strategy: Outlining what needs to be done, and by whom.

An EMS can form the basis for the creation of a GREEN TEAM at your office.

NB. Once you become aware of the importance of saving water and managing water usage at the office, the next step is to introduce that mindset at home.

C: : Taking home the water-wise behaviours

1. Some guidelines for water rationing

Do:

- Check that your fire extinguishers are in legal working condition. If possible, increase the number of fire extinguishers;
- Check that your multi-storey building's water supply system (pumps and rooftop storage) is in working order
- Close your taps when they're not in use to prevent damage when the supply returns;
- Check what your insurance covers;
- Cut your water use during peak water use times, e.g. shower (for no longer than one minute) or do your washing later in the evening
- Keep non-drinking water for flushing toilets;
- Store between 5 and 10 litres of drinking water for essential use only during rationing; and
- Keep additional water for pets.

Do not:

- Flush wet wipes and sanitary pads down toilets as these cause blockages;
- Leave your taps open when you have a loss of water supply;
- Shower for longer than one minute;
- Store excessive amounts of municipal drinking water.s

2. For those with boreholes and wellpoints

Conservative usage of borehole water is encouraged.

- The main consideration here is that private boreholes are not recharged.
- Private users do not replace the underground water that is used.
- It is suggested that use of borehole water should be for indoor purposes but not for outdoor purposes, such as gardening.

3. Should geysers be switched off?

People are advised to switch off their geysers to avoid any damage that may be caused by water suspension when the water comes back online again.

- Check your home insurance cover.
- Switch off all plumbing that could result in leaks or water damage when the water comes back on.

4. Water collection points

In cases of need, signage will be placed in each community indicating where the nearest water collection point is situated. Typically, this could happen:

- **All essential information on the Water Collection Sites will be communicated via multiple communication channels:**
- **including electronic communication channels such as SMS, email and social media and physical communications in the form of posters, signage and pamphlets.**
- **The containers recommended:**
  - A dedicated container is needed for the collection of drinking water – clearly labelled 'drinking water'.
  - If possible, use hard plastic, durable containers that can be sealed.
  - This container should not have been used previously for the storage of harmful substances such as cleaning detergents, pesticides, etc.

5. How should we store water collected?

In cases of need, signage will be placed in each community indicating where the nearest water collection point is situated. Typically, this could happen:

- ✓ All essential information on the Water Collection Sites will be communicated via multiple communication channels:
- ✓ - including electronic communication channels such as SMS, email and social media and physical communications in the form of posters, signage and pamphlets.
- ✓ The containers recommended:
  - » A dedicated container is needed for the collection of drinking water clearly labelled 'drinking water'.
  - » If possible, use hard plastic, durable containers that can be sealed.
  - » This container should not have been used previously for the storage of harmful substances such as cleaning detergents, pesticides, etc.

D: Water-borne diseases

Water-borne diseases will likely become more prevalent, linked to the improper storage of water where contaminated containers are used. These include: Diarrhoea, Hepatitis A, and Typhoid Fever.

Handwashing and washing of fruit and vegetables is imperative.

Food-borne diseases will likely become more prevalent, due to cross contamination and insufficient sanitisation of foods and food preparation surfaces.

The five key food safety tips are:

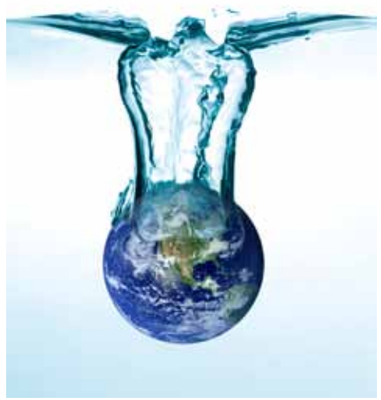
- Wash your hands with your allocated water.
- Separate raw and cooked food.
- Cook food thoroughly.
- Keep food at safe temperatures.
- Use clean water and fresh food.

Freshwater is the source of life. It's what makes Earth unique in the known universe. It's also a resource under threat. Just 3 per cent of water on the planet is freshwater, and only about 1 per cent is readily available for human use.

The one-two punch of global population growth and climate change means we must be innovative and committed when it comes to water management and conservation.

FOCUS 6: What causes water scarcity?

A growing and mismanaged demand for water will hasten the arrival of conditions of scarcity.



We need to understand

A: Population growth:

The main cause of growing water scarcity is the growing demand resulting from population increase.

B: Food production

It's been realised that there is insufficient water available to ensure self-sufficiency in some countries in our region and in cases food has had to be imported.

C. Climatic change and variability

There is a great deal of debate regarding the issue of global climate change. The consensus is that the effect will be to accentuate the extremes with more pronounced droughts and more severe flooding.

D: Land use

Land use changes have a variety of impacts on water resources. The need for improved farming methods and greater understanding of the soil/water interface is evident in many parts of the country. The consequences of poor land management and farming methods is to push communities ever closer to the point of vulnerability where even small changes in conditions can have disastrous effects. Another issue related to land use is the development of "thirsty" crops, particularly in sensitive areas such as mountain catchment.

E: Water quality

Pollution of water supplies reduces the availability of water for use. This is particularly severe during times of water shortages. As water becomes more scarce, therefore, rivers and streams become increasingly sensitive to the effects of pollution, as do those human and other living organisms which depend on the water.

Water contamination can result from a variety of causes including agricultural return flows, industry, and domestic uses.

F: Our mismanagement of Water

A growing and mismanaged demand for water will hasten the arrival of conditions of scarcity. The widespread misconception by many people that there is plenty of water and that the only problem is getting it to the right place at the right time still persists as a residue from the era of supply driven water resources management. Moving to a deliberate and purposeful policy scenario of demand management is urgently required of South Africa and other governments in the SADC region.

Reducing and managing the demand for water, enforcing greater efficiency of use and introducing water conservation measures requires everyone's attention.

FURTHER READING

- Some useful posters and guidelines from this website:

http://www.capetown.gov.za/Document-centre#Default=%7B%22k%22%3A%22thinkwater%22%2C%22s%22%3A51%7D#1ebf4cc1-d64c-4e73-8761-9a24311b57ca=%7B%22k%22%3A%22thinkwater%22%7D

1. Water Rationing Guidelines Poster (Afrikaans) Poster,Guideline - 131.9 KB
2. Water Rationing Guidelines Poster (isiXhosa) Poster,Guideline - 181.6 KB
3. Top Ways to Save Water Poster (Afrikaans) Poster - 117.3 KB
4. Top Ways to Save Water Indoors Poster (isiXhosa) Poster - 120.1 KB
5. Top Ways to Save Water Indoors Poster Poster - 128.9 KB
6. Water-saving Tips to Help Avoid Day Zero (isiXhosa) Poster,Checklist - 146.4 KB
7. Water-saving Tips to Help Avoid Day Zero (Afrikaans) Poster,Checklist - 134.4 KB
8. Water-saving Tips to Help Avoid Day Zero Poster,Checklist - 143.8 KB
9. Household Water Usage Guideline Guideline - 158 KB
10. Water Management Device FAQs FAQs - 757.5 KB
11. Critical Water Shortages Disaster Plan Presentation Presentation - 458.9 KB
12. Alternative Water Resources Pamphlet (Xhosa) Pamphlet - 341.7 KB
13. Critical Water Shortages Disaster Plan Summary Plan - 601 KB
14. Alternative Water Resources Pamphlet (Afrikaans) Pamphlet - 315.8 KB
15. Alternative Water Resources Pamphlet Pamphlet - 246.2 KB

- Posters from: Waterwise

Posters: http://www.waterwise.co.za/site/water/Downloadable_Posters/

- For buildings:

https://www.gbcsa.org.za/news_post/water-energy-benchmarking-how-does-your-building-measure-up/

Advice for buildings: http://www.waterwise.co.za/export/sites/water-wise/water/Water_use-in_the_home/Water_Wise_Buildings/Buildings_Rev4.pdf

https://www.gbcsa.org.za/news_post/green-building-saves-water-sa-green-building-council-celebrates-world-water-day-2017-by-sharing-useful-water-saving-tips/

- Useful advice from abroad:

https://www.epa.gov/sites/production/files/2017-02/documents/watersense-at-work_final_508c3.pdf

Green Office Week

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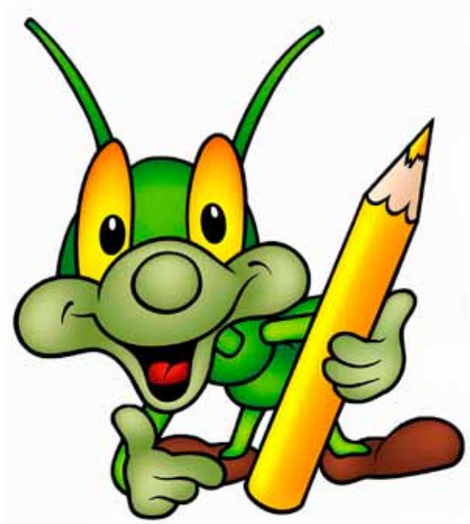

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