

Village Eco News

A publication of Bangalow Land and Rivercare.

Saving Precious Water

by Dawn Lotty

Australia is the driest inhabited continent on Earth and yet despite this scarcity of water, Australians are among the highest consumers of water per capita in the world.

With climate change making rainfall less predictable and in many cases much lower than long-term averages, saving freshwater has never been more important however only when we are in drought or water restriction apply do we give our water usage a second thought.

Here are a few ways we can all play a part in reducing water use, protect the freshwater environment and save money on our water bills.

Ways to Save Water Indoors



- Check all faucets, pipes and toilets for leaks.
- Install water saving showerheads and ultra-low-flush toilets.
- Take shorter showers.
- Never use your toilet as a wastebasket.
- Turn off the water while brushing your teeth or shaving.
- Defrost frozen food in the refrigerator.

- Rinse vegetables or dishes in a full sink or pan of water.
- Fully load your dishwasher.
- Wash full loads of clothes.

Ways to Save Water Outdoors



- Don't hose hard landscaping.
- Water your lawn or garden early in the morning or late in the evening.
- Adjust sprinklers so that they don't water the sidewalk or street.
- Don't water on cool, rainy or windy days.
- Equip all hoses with shut-off nozzles.
- Use drip irrigation systems.
- Plant drought-tolerant or low water-use native plants and grasses.
- Place mulch around plants to reduce evaporation and discourage weeds.
- Set your mower blades one notch higher, since longer grass means less evaporation.
- Use a pool cover to cut down on water evaporation.
- Use a bucket not a hose to wash your car.
- Use a broom to clean sidewalks, driveways, loading docks and parking lots.

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Landcare Working Bee

Our team of friendly volunteers work every Saturday morning, weather permitting from 8.30am to 10.30am rotating through the various sites around Bangalow. All welcome.



5G Cell Phone Towers

what price better mobile coverage?

5G stands for 5th generation cellular technology. This is the latest development in the cellular world. Major cell phone companies and other tech giants are making progress right now to be ready to launch 5G capable devices by 2020.

Soon mini cell stations will be placed throughout our neighborhoods and cities. They will be installed on the sides or tops of buildings and on street light poles.

Studies by health experts including the World Health Organisation believe 5G cell towers are more dangerous to our health than other cell towers for two main reasons. First, 5G is ultra high frequency and ultra high intensity. 3G and 4G use between a 1 to 4 gigahertz frequency. 5G uses between a 24 to 90 gigahertz frequency.

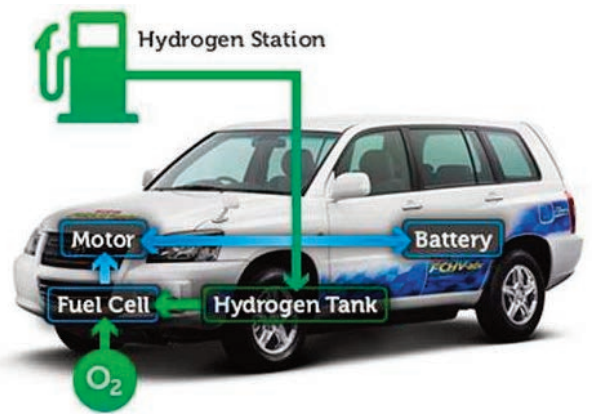
To put this in perspective, 90 gigahertz is 90 billion electromagnetic waves hitting the cells in your body per second. This is a whole lot more radiation than we are exposed to naturally.

Second, according to experts, because of the shorter length of millimeter waves (MMV) required by 5G to support the bandwidth, these shorter waves do not travel as far or through objects.

This means with our current number of cell towers the cell signal will not be reliable. To compensate many more mini cell towers must be installed. It is estimated that they will need a mini cell station every 2 to 8 houses.

There's no doubt 5G will change our physical and virtual landscape. However, it's clear this technology comes with major health concerns.

Sources: WHO, Uni of California, Uni of Albany.



Hydrogen Power

Can it help cut emissions?

Hydrogen could become a significant part of Australia's energy landscape within the coming decades, competing with both natural gas and batteries, according to the CSIRO's 'National Hydrogen Roadmap' responsible for providing a blueprint for the development of a hydrogen industry in Australia.

The Roadmap predicts that the global market for hydrogen will grow in the coming decades and Australia's extensive natural resources, namely solar, wind, fossil fuels and available land lend favourably to the establishment of hydrogen export supply chains.

Hydrogen gas is a versatile energy carrier with a wide range of potential uses. However, hydrogen is not freely available in the atmosphere as a gas. It therefore requires an energy input and a series of technologies to produce, store and then use it.

Why would we bother? Because hydrogen has several advantages over other energy carriers, such as batteries. It is a single product that can service multiple markets and as it burns without greenhouse emissions, it is one of the few viable green alternatives to natural gas for generating heat.

Compared with batteries, hydrogen can release more energy per unit of mass. This means that in contrast to electric battery-powered cars, it can allow not only passenger vehicles but even heavy vehicles such as buses and trucks which already carry heavy payloads to cover longer distances without refuelling. Refuelling is quicker too, and is likely to stay that way.

While this industry is not expected to scale up until closer to 2030, Australia is well placed to capitalise on this fast growing technology.

Here's what happens to our plastic recycling when it goes offshore

Last year many Australians were surprised to learn that around half of our plastic waste collected for recycling is exported, and up to 70% was going to China and only then when China imposed a strict ban on further imports.

By July 2018, which is when the most recent data was available, plastic waste exports from Australia to China and Hong Kong reduced by 90%. Since then Southeast Asia has become the new destination for Australia's recycled plastics, with 80-87% going to Indonesia, Malaysia, Thailand, Vietnam, Philippines and Myanmar.

In the middle of last year Vietnam announced it would stop issuing import licences for plastic imports, as well as paper and metals, and Thailand plans to stop all imports by 2021. Malaysia has revoked some import permits and Indonesia has begun inspecting 100% of scrap import shipments.

The reason these countries are restricting plastic imports is because of serious environmental and labour issues with the way the majority of plastics are recycled. In Vietnam, for example, more than half of the plastic imported into the country is sold on to "craft villages" for household processing.

This processing involves washing and melting the plastic, which uses a lot of water and energy and produces a lot of smoke. The untreated water is discharged into waterways and around 20% of the plastic is unusable so it

is dumped and usually burnt, creating further litter and air quality problems.

Burning plastic can produce harmful air pollutants such as dioxins, furans and polychlorinated biphenyls and the wash water contains a cocktail of chemical residues, in addition to detergents used for washing.

Working conditions are also hazardous, with burners operating at 260-400°C. Workers have little or no protective equipment. The discharge from a whole village of household processors concentrates the air and water pollution in the local area.

During 2018 the flow of plastics increased so much that households started running their operations 24 hours a day. While Australia's contribution to the flow of plastics in Southeast Asia is smaller than the USA and Europe we estimate it still represents 50-60% of plastics collected for recycling in Australia.

Australia and other advanced economies need to think seriously about the future of exports, our own collection systems and our 'waste' relationships with our neighbours.

The ethical and environmental question is should we be sending our recyclables to countries that lack capacity to safely process it? The obvious answer is that we must limit our use of plastics and increase our own domestic capacity for recycling.

Source: UTS edited by Dawn Lotty



Saving the Darling River

For more than 100 years the Darling River provided inland south eastern Australia with its most important water highway. Paddle Steamers and barges supplied towns and out-back stations with their daily needs and carried wool and other produce to the cities.

Now the Darling River is a series of disconnected pools. Quite apart from specific warnings given to the NSW government by their own specialists in 2013, scientists have been warning of this devastation since the 1990s.

Water diversions have disrupted the natural balance of wetlands that support the massive ecosystems. So, how has this hydrological harmony of regular flows and fill-and-spill wetlands changed? And how does this relate to the massive fish kills we are seeing in the lower Darling system?

All the main tributaries of the Darling River, see diagram on right, have floodplain wetland complexes in their lower reaches (such as the Gwydir Wetlands, Macquarie Marshes and Narran Lakes). When the rivers flow they absorb the water from upstream, filling before releasing water downstream to the next wetland complex; the wetlands acting like a series of tipping buckets. Regular river flows are essential for these sponge-like wetlands.

While high flows will still make it through to the Darling, filling the floodplains and wetlands the low and medium flow events have disappeared. Instead, these are captured in the upper sections of the basin in artificial water storages and used in irrigation.

Any water not diverted for irrigation is now absorbed by the continually parched upstream wetlands, leaving the lower reaches vulnerable when drought hits.

Unless we allow flows to resume we are in danger of seeing one of the worst environmental catastrophes in Australian history and witnessing an ecosystem in collapse.

Source: ABC, SMH, The Conversation, RMIT



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Village Eco News

Our aim is to inform, interest, amuse and educate our readers on all things environmental. We welcome you to submit your contributions or to subscribe to this free Newsletter send your name and email address to:

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Please pass this publication on to your family and friends. Receiving our Newsletter online will help to save the environment we work to preserve.

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