

# RIVERS SOS 2020 SUMMIT SUBMISSION

## Topic 3: Sustainability, population, climate change and water

### **b) How does Australia best plan for its long-term water needs?**

We do not have a very good record in Australia of sensible planning for conserving water, especially in our capital cities. As we inhabit the driest continent in the world, however, this should be an area that is considered top priority and should be where we excel – in water conservation methods.

Unfortunately, though, we still see our meagre natural water resources being depleted and degraded by entirely avoidable activities, especially mining, and particularly coal mining.

Sydney's drinking water catchment areas are currently being severely compromised by longwall coal mining which causes surface subsidence. This results in streambed cracking leading to loss of surface flows and upwelling of contaminated groundwater due to chemicals being released from fractured sandstone. Soil cracking also occurs, with gaping fissures hundreds of metres long and up to 1 metre wide being recorded. This means that runoff that should be collected in dams runs down into these cracks that are at least 15m deep. 90% of Sydney's catchment areas are covered by mining leases.

Coal mining also threatens our important groundwater supplies, our near-surface aquifers. This is especially so in the Gunnedah/Liverpool Plains area where BHP-B is currently doing exploratory work. This extremely fertile food basin relies utterly on the integrity of the huge aquifer underlying the plains. The breaching of this aquifer, which could occur if the coal underneath is mined, would mean that priceless water resource would be lost forever.

Over 30 rivers in NSW are already suffering from degradation due to mining and a further 10 are under threat. The Goulburn River, a major tributary of the Hunter is a prime example. It has suffered serious degradation due to the close proximity of two coal mines to its headwaters.

Coal mines are huge users of water. The Ulan and Wilpinjong mines near Mudgee take 11 and 6 million litres per day respectively from underground aquifers at no cost to the mines!

Coal-fired power stations are also huge users and polluters of water. Wallerawang and Mt Piper power stations near Lithgow take 23,000 million of water per year from Sydney's drinking water catchment also at no cost! They also discharge huge quantities of highly polluted waste water back into the catchment under licence.

- We need to protect our precious river systems for drinking water supply, irrigation and eco-system integrity.
- We need to harvest storm water in cities on a much larger scale.
- We need to recycle water on a much larger scale, as in other countries.
- We need to reduce water demand through education/legislation.

Expensive desalination options should not be needed, especially in Sydney, if the above steps are taken.

The very different future that is looming for us all will probably not rely on coal but will be utterly dependent upon us having secure water supplies. Security of our water resources, therefore, should be given priority over other activities such as mining.