



Fact Sheet

Water use in coalmining – an underregulated issue for Australian governments



2nd largest
water user
behind agriculture



~80% of water
used in coalmining
is freshwater



~667L
per tonne of coal
produced

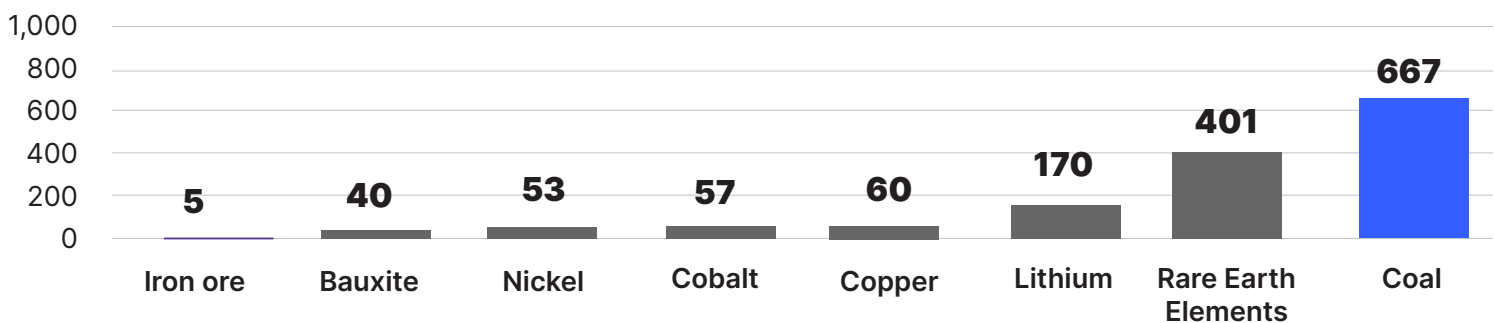


Responsible for
~90% of regulated
mining discharges
into the environment

Coalmining is Australia's most water-intensive mining process

- Coalmining **relies on a secure supply of water**. Large volumes of water are required for separating minerals from waste, dust suppression and cleaning mine equipment, with no viable alternative.
- About 80% of water used is freshwater** captured from rainfall and runoff or extracted from surface or groundwater sources. The remaining 20% usually comes from tailings (mine residue), recycled water or seepage from mines.
- The Australian mining industry's water consumption increased 20% between 2018 and 2022, reaching 1,504 gigalitres in 2022, **the equivalent of three Sydney Harbours**.
- Large open-cut coalmines** tend to have the highest total water use. With Australian open-cut coalmine operations expanding, this will likely increase total water requirements.
- Enormous amounts of water may also be required to **fill the large voids** left by open-cut mines post-mining. For example, the Hazelwood mine proposed to use 638GL of water (almost double Melbourne's annual consumption) to fill in the mine pit, plus ongoing volumes as water evaporates.

Australian mining's average water requirements (L/tonne)



The penalties for contamination events are not sufficient to deter repeat offences



Mines **self-regulate** and are required to report non-compliance. However, many reported contamination events were only detected after community monitoring, reporting and complaints.

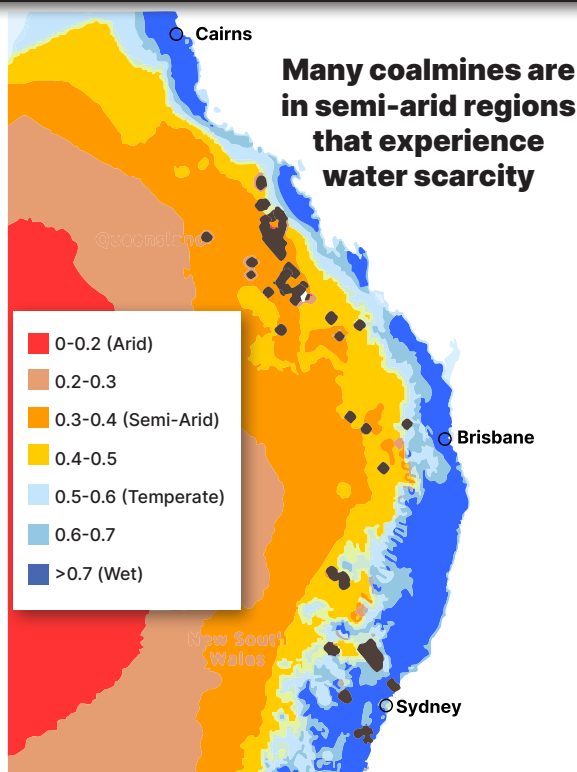


Penalties do not always provide enough financial incentive for miners to invest in better water infrastructure.



Illegal discharges and contamination events are **likely to worsen** with increased rates of flooding and severe weather events driven by climate change.

Mining often occurs in fully allocated water catchments where competition between different users is high



Coalmine water requirements do not decrease when water becomes scarce. Instead they either remain constant or increase.

- Water withdrawn for coal activities in NSW and Queensland is **more than double the domestic water use** in these states, and about 30% of the amount withdrawn for agriculture.
- Water use and discharges by coalmining can have **direct impacts on the quality of water available for other landholders and industries** in these areas – such as agriculture.
- Water licences held by mining companies are usually high security, meaning they have **priority over most other users** except town water supplies and basic landholder rights.

Coalmines' illegal water take exceeds 12 gigalitres, with fines lower than the market value of water stolen

- Coalmines have taken about 12 gigalitres of water illegally between 2016 and 2023. This is equivalent to about **4,800 Olympic pools**.
- This has cost coalminers at least A\$9 million in fines and other costs. This equates to about A\$750 per megalitre, **well below the typical cost of water entitlements** in coalmining regions. (For example, tradeable entitlements costs were above A\$2,500 per megalitre in NSW in FY2022-23.)

About IEEFA

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