

Coal

Coal plants use as much water as 1 billion people and consumption set to double: report

World Water Day research finds 44% of coal plants, and 45% of planned coal power plants, in areas of water stress



Coal-based power plants and factories in an industrial park along the Yellow river in Huinong district of Shizuoshan in Ningxia, China. Photograph: Lu Guang/Greenpeace

Coal power plants use enough water to supply the needs of 1 billion people and that will almost double if all the world's planned power plants come online.

Almost half the new power plants will be built in areas that are already in high water stress, a report commissioned by Greenpeace says.

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“We now know that coal not only pollutes our skies and fuels climate change, it also deprives us of our most precious resources: water,” said Harri Lammi, a Greenpeace campaigner.

The research, released on [World Water Day](#), examined the water usage of each of the world's 8,359 existing coal power plants, as well as of all the proposed power plants that could be identified. It combined the water used in producing the electricity, as well as that used in mining the coal.

The research found 44% of current plants, and 45% of planned coal power plants, were in areas that were in a state of water stress – where water use is already considered to be having significant ecosystem

impacts.

And about a quarter of the proposed new coal plants were planned in regions that were already running a freshwater deficit, where water is used faster than it is naturally replenishing – areas that Greenpeace put on a “red list”.

A water stress map of the world released by Greenpeace, showing distribution of coal plants and areas of heavy water use. Photograph: Greenpeace

That figure was largely driven by China, where most of the world's coal is used and almost half of the proposed coal fleet was in red-list areas. India and Turkey were next, each with 13% of planned coal power stations set to be in red-list areas.

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The research uses more precise data, and provides more in-depth findings, but is broadly in line with figures released by the International [Energy Agency](#) in 2012, suggesting the amount of water used in electricity generation would increase by 85% between 2010 and 2035.

The agency noted that much of the increase in water use in future would, ironically, be driven by a move towards plants that produced less carbon dioxide.

More carbon-efficient technologies would actually make the water problem worse, since they generally use more water, [it said](#).

The new report found that although coal mining used a significant amount of water, the vast majority from energy production, which used 84% of the water.

A pond in Khomnal village at Mangalwheda in Solapur, Maharashtra, has become completely dry. It serves primarily as recharge for ground water sources in the village and usually has water around the year. Photograph: Subrata Biswas/Subrata Biswas / Greenpeace

Greenpeace concluded that coal expansion in “red list” areas should simply not go ahead. It also called for existing plants in those areas to be phased out and replaced with renewable energy like solar panels and wind.

It called for coal-fired power plants that are more than 40 years old to be shut, since they were often the least efficient. The country that would save the most water by doing that was the US, the report found, saving 74% of the water used by the industry and 76bn cubic litres of water.

“Governments must recognise that replacing coal with renewable energy will not only help them deliver on their climate agreements, but also deliver huge water savings,” said Iris Cheng of Greenpeace, who is the lead author of the report.

“It's more urgent than ever that we move towards a 100% renewable future.”

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