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Dams: rotting plants soil climate claims

Online title: Hydropower: don't waste climate money on more dams

Philip M. Fearnside

I disagree with Mike Muller's claim that dams are good for the climate and so warrant financial backing (Nature 566, 315–317; 2019). Hydropower development is expected to occur predominantly in the tropics, where emissions of methane from large reservoirs are particularly high, owing to the decay of plant matter that is flooded during dam construction (see, for example, [go.nature.com/2tcuxyp](https://www.nature.com/2tcuxyp)). Over a 20-year period, methane's impact on global warming is 86 times more per tonne than that of carbon dioxide (see IPCC 5th Assessment; [go.nature.com/2tyj6if](https://www.nature.com/2tyj6if)). These emissions peak in the first few years after a reservoir is filled and so are likely to reach their maximum during the crucial period for meeting the December 2015 Paris climate agreement. Subsidizing the construction of more dams with 'green' money could drain funds from alternatives with real climate benefits, such as expanding wind and solar power.