

greenhouse gases, particularly methane, because of the higher presence of nutrients in the water and the effect this has on algal growth and decaying organic matter.

Irrigation dams were assumed to produce similar emissions, but Dr Webb's research has refuted that assumption by showing that semi-arid irrigation dams, which usually don't receive as much overland flow, had significantly less output than global averages.

The 38 irrigation dams tested

in the Murrumbidgee Valley had estimated yearly methane emissions about five times lower than the IPCC's emission factor of 183kg. "This vast overestimation would be an unfair assumption for some of Australia's irrigation growers and industries," Dr Webb said in her report.

Previous studies had shown small water storage bodies around the world were significant contributors of methane. "Given Australia recently joined the Global Methane Pledge to reduce meth-

ane emissions by 30 per cent, this is a promising finding to the irrigation sector that their farm dams are negligible methane emitters," Dr Webb said in her report.

A baseline of irrigation dam carbon footprints will give agricultural industries the ability to better refine their emissions budgets.

The study will embolden farmers seeking to reduce their emissions by reducing nutrient run-off into their dams.

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