Lead researcher Jackie Webb, who examined 30 farm dams in the Murrumbidgee Valley, an

The Australian models currently used to calculate the carbon footprint of farm dams in the national greenhouse gas inventory, which is provided to the UN, mostly represent livestock dams from other climates.

"A lot of agricultural industries are committing to net-zero emission goals for 2030 and 2050 so we need to get it right in terms of where the emissions are happening, where they can be reduced and where there might even be carbon storage happening. Everything counts," Dr Webb said. The study was confined only to a sample in the Riverina, and Dr Webb said results could be different in other regions, but the majority of Australia's irrigation dams are within the Murray-Darling basin.

"Given that 41 per cent of farm dams exist within the Murray-Darling Basin which accounts for 60 per cent of irrigated land in Australia, the contribution of irrigation dams to countrywide farm dam emissions needs to be reconciled," Dr Webb said in her report.

The research project, funded by federal statutory corporation AgriFutures, was the first detailed assessment of the carbon footprint of irrigation dams in Australia.

Previous research has suggested Australian farm dams, of which there are about 1.76 million, contribute between 1 and 3 per cent of methane emissions attributed to Australian agriculture each year.

Earlier studies looked at the emissions of dams on livestock farms which emit higher levels of