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Water audit finds less than thought

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AUSTRALIA may be an even drier continent than thought, the most comprehensive study of the nation's water resources to date has found.

The National Water Commission's audit, released today, calculated Australia's total water resource at about 360,000 gigalitres for 2004-05, 20 per cent lower than in 1996-97 which was the year of the last major assessment.

The drop was mostly due to the drought, but also because in some cases water managers had counted volumes of groundwater and surface water separately when they actually overlapped.

The finding means many of Australia's rivers may be under greater threat than previously thought.

The commission looked in detail at 51 representative water management areas and found a "high connection" between surface and ground water for 17 - including Sydney, Adelaide and the Australian Capital Territory's water supply areas and the Snowy River.

"Double counting" of water resources was commonplace and had occurred during the last audit, the report said.

Commissioner Peter Cullen acknowledged that although the latest audit had cleaned up some of the double counting, "there is probably still some more".

"One of the mistakes that we have been making ... has been we've been treating surface and groundwater as though they are separate systems," Professor Cullen said.

"In a number of our systems they are highly connected, so if people take too much surface water then the groundwater drops. And similarly, or more importantly, if we allow uncontrolled extraction of groundwater - and of course that's been happening as an emergency measure during this drought - that has an immediate impact on stream flow."

And although the groundwater was "a buffer" that could be used when surface water was low, it was also dependent on rainfall and therefore affected by drought.

"The groundwater isn't a magic pudding that we can use whenever we have a drought ... it also runs out," Prof Cullen said.

He said about 90 per cent of the average 364mm of rain that fell across the country in 2004-05 - well below the 457mm long-term average - either evaporated or was used by plants.

Only 10 per cent could be considered a water resource, with about 83 per cent of that becoming runoff to rivers and lakes and about 17 per cent recharging groundwater supplies.

Many water authorities had placed caps on surface water use in response to the drought, such as the Murray-Darling Basin cap, the commission found.

But their failure to acknowledge the link to groundwater and limit its use "may pose a serious threat" to the long-term surface water availability.

Yet many states were "flying blind" on their water resources, because only Tasmania and Victoria were regularly assessing the impact of water use on river and wetland health, the commission found.

"I think we've all been trapped in a bit of a fool's world, thinking we have more water than really we have," Prof Cullen said.

"As we've confronted water scarcity in the last few years, the critical importance of knowing what we've got has become more and more obvious."

National Water Commission chairman Ken Matthews identified the three ongoing water management failings as decisions being made without proper data, without considering groundwater-surface water interaction, and without nationally-consistent methods to assess river and wetland health.

Overall, the report found about 18,800 gigalitres were consumed in 2004-05, including 11 per cent by households and 65 per cent by agriculture.

It found all of Australia's capitals except Darwin and Hobart were under water stress.

The audit aimed to assess Australia's water resources to set a baseline against which improvements made under the national water initiatives could be measured.

Mr Matthews said the report was "a call to arms for all water managers - right through state, territory and other decision-making bodies - to improve the quality of water management".

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