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Basin Plan science strengthened through independent review

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An expert independent review has found that the effectiveness of environmental water recovery is not being undermined by changes to the volume of water returning to the rivers after it has been used by farmers.

Head of the MDBA's Science and Knowledge Division, Colin Mues, said the review was commissioned to improve the evidence base and knowledge of return flows after some stakeholders expressed concerns.

"Much of our work is highly technical and we have always been committed to testing it and improving on it. This means we can all have confidence that the Basin Plan is on track and will deliver a sustainable future for the environment and the communities and industries that rely on it," Mr Mues said.

"This review looked specifically at how irrigation efficiency projects and growth in groundwater use might affect future river flows.

"Australian Government investment in more efficient irrigation has saved, on average, around 1180 gigalitres (GL) per year with two-thirds of that returned to the environment.

"The review found that more efficient irrigation could potentially reduce river flows by around 120 GL per year, though this is likely to take many years, decades or even centuries to happen. The long delay is because most of this impact would be caused by reductions in groundwater return flows which can take a very long time to change.

"The Murray–Darling Basin Plan is a world first policy that has been designed to be adapted as we go. We will need to closely monitor river flows and the outcomes for the environment to make sure we deliver the results we want to see from the Basin Plan," Mr Mues said.

"Analysing groundwater impacts is complex because the degree of connection between an aquifer and nearby rivers can vary widely. Groundwater response times can also vary from years to many decades depending on topography and proximity to the rivers.

"Growth in groundwater use, even under optimistic growth scenarios, was found to pose a relatively low risk to the environmental outcomes for the basin's rivers, streams and floodplains.

"Steady two per cent growth in groundwater use over the next 40 years was estimated to only reduce river flows by about 170 GL a year.

"This might seem to be a large volume of water, but it's uncertain whether groundwater use will grow that much, and even if it does then the changes will take many years or decades to happen. This gives the MDBA the time to monitor and respond.

"The review also took into account the work done to control salinity that dated back to before 2009, and which saw a substantial drop in surface water return flows and consequent improvements to water quality from that time.

"This review is not the end of the process—it is the business of the MDBA to continually incorporate new science into the management of the Basin through the Basin Plan.

"Commissioning and publicly releasing this review is also a demonstration of the MDBA's long standing commitment to openness and transparency."

To view the report visit the MDBA website.

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