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ENVIRONMENT AND COMMUNICATIONS LEGISLATION COMMITTEE
HEARING – 31 OCTOBER 2023

QUESTIONS ON NOTICE

QUESTION: With regard to the recent high flows that we've seen in South Australia, what has been the impact on the Coorong and the mouth of the Murray?

RESPONSE:

The recent 2022-23 River Murray flood event enabled the river, floodplain and estuarine environments to be fully reconnected, supporting the flow of water, movement of fish and export of salt and nutrients. The plume of freshwater also extended for many kilometres into the southern ocean, providing productivity benefits to the marine foodweb.

Following the flood, the South Australian Department for Environment and Water has been coordinating a range of surface water quality and ecological monitoring programs that continue to assess the condition of the Coorong, Lower Lakes and Murray Mouth (CLLMM).

The flood event supported the widening, deepening and scouring (i.e. removal of sand) of the Murray Mouth, with surveys detecting a maximum depth of 11.5 metres (m) compared to a pre-flood depth of 2-4 m. There has been no dredging at the Murray Mouth since November 2022.

The flood also facilitated greater water movement between Lakes Alexandrina and Albert resulting in salinity levels in Lake Albert dropping to below 1000 EC, the lowest average reading since salinity records began in 1968. Average salinity levels in Lake Albert are currently 1000 - 1100 EC, a welcome relief to local primary producers impacted by high surface water salinity since the Millennium Drought.

The flood resulted in a significant reduction in salinity and very high water levels throughout the Coorong. In the South Lagoon, water levels were maintained at 0.8 – 0.95 m Australian Height Datum (AHD) in summer 2023, well above the typical summer water level of 0 m AHD. Salinity remained below 60 parts per thousand (ppt) in the Coorong South Lagoon from winter 2022 – autumn 2023, approximately 50% less than typical summer/autumn South Lagoon salinity. High flows have also improved the health of the South Lagoon through a reduction in total nitrogen, total phosphorus and chlorophyll a (an indicator of microalgae density), highlighting the importance of the increased flows.

There have been numerous benefits to the ecology of the CLLMM from the flood, particularly in the southern Coorong. Widespread growth of aquatic vegetation has been observed throughout the Coorong, providing habitat and food for

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invertebrates, fish and some waterbirds. Filamentous green algae remains abundant in the Coorong but did not form extensive surface mats during the flood.

Invertebrate populations were abundant in autumn 2023 at sites in the northern parts of the South Lagoon (which are usually almost completely devoid of life). Invertebrates are a key food resource for migratory waders.

Fish sampling indicates improved abundance and diversity compared to previous years, attributed to low salinity and enhanced productivity in the Coorong. The increase in estuarine habitat extended nursery grounds (areas where juvenile fish can feed and grow) for many fish species including congolli, black bream, greenback flounder and yelloweye mullet. Improved fish stocks have also benefited many fish-eating birds and fishes. In addition, local commercial fishermen have reported increased catch of species such as flounder and mullet.

While conditions are shaping up to be excellent for wading birds in the Coorong this coming summer, the conditions in the Coorong during the flood event were not favourable for many waterbirds, including migratory waders. In January 2023, 70,000 less waterbirds were recorded in the Lower Lakes and Coorong than in January 2022. High water levels flooded Coorong mudflats, limiting the amount of feeding habitat for migratory waders. High Coorong water levels also inundated the nesting sites of the fairy tern (a nationally vulnerable listed species), leading to a failed breeding event.

Monitoring of the Coorong's ecological response to the high flows is continuing through The Living Murray and the *Healthy Coorong, Healthy Basin* Coorong Flood Response Projects.

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HEALTHY COORONG HEALTHY BASIN

Question:

Senator DAVEY: I want to turn your attention to the Healthy Coorong, Healthy Basin project, which I understand you've received Commonwealth funding for. How much funding has gone towards that project from the Commonwealth?

Mr Bruce: I have to check. I think it's about \$35 million to date. Don't quote me on that; I'd need to verify the number. The original arrangement was that the remaining budget in the state priority project funds, which was provided to jurisdictions based on an [inaudible] part of millennium drought—the unspent amount—would be assigned to that. We have one other project still operating at the moment in addition to Healthy Coorong, so it's in the order of \$70 million, plus or minus, which is set aside for that capital change, depending on how much the other project ends up—

Response:

The total budget for the approved Healthy Coorong, Healthy Basin project is \$37.903 million, with the Australian Government contribution being \$34.113 million and South Australia's contribution being \$3.790 million. As at the time of this Committee hearing, the Australian Government has paid \$32.750 million to South Australia.

The South Australian Department for Environment and Water is in negotiations with the Australian Department for Climate Change, Energy, the Environment and Water for a second stage that will further refine management and potential infrastructure options through detailed assessments, further modelling, incorporation of cultural, ecological, social and economic values, risks and benefits and potential climate change impacts. If supported, the final outcome will be the delivery of a business case outlining potential future investment options to contribute to a long-term, sustainable and functioning Coorong.

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PRODUCTIVITY COMMISSION INTERIM REPORT

Question:

Senator HANSON-YOUNG: Have you had a chance to look at the Productivity Commission's report released today?

Mr Bruce: No, I haven't.

Senator HANSON-YOUNG: Perhaps you could take this on notice. We don't have long, but there are some key recommendations in there about the use of purchasing water, including not just for the 450 gigalitres but that outstanding gap of 315 gigalitres of the bridge-the-gap water. If you could have a look at their recommendations and give us the South Australian government's position, that would be very helpful.

Mr Bruce: Yes, no problem.

Response:

The Interim Report of the Productivity Commission was released on 30 October 2023. The South Australian Department for Environment and Water (DEW) is reviewing the detailed analysis, findings and recommendations and will respond accordingly by the Productivity Commission's requested deadline of 20 November 2023.

While the Department has not had sufficient time to be able to provide a considered position at this stage, it does provide the following preliminary comments, in addition to the positions already outlined in the South Australian Government's submission to the Committee:

- The Commission's comment that "*...it makes little sense for the Australian Government to rapidly pursue the 450 GL/y target when a significant shortfall in the Bridging the Gap target is expected*" is flawed. The current outstanding Bridging the Gap target is 46 GL, of which around only 14.9 GL needs be recovered from the Southern Basin, which is where the 450 GL is required to be recovered from. As such, there is no material conflict between Australian Government efforts to meet the remaining Bridging the Gap target in the Southern Basin (while overdue by up to five years, it aims to meet this target before 30 June 2024) and the Australian Government's intent to recover the 450 GL by 31 December 2027, which would be the target date under the proposed Water Act amendments. Moreover, should the Water Act amendments be passed by the Australian Parliament, the new statutory deadline for delivering Sustainable Diversion Limit (SDL) offset projects and the Murray-Darling Basin

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Authority's reconciliation determination would be 31 December 2026. Contrary to the Commission's comment, the better approach would be to recover as much of the 450 GL as practicable before this point, noting that any consequential increases in SDLs and Gap Bridging water recovery requirements as a result of reconciliation are unlikely to take effect until 1 July 2027 (at the earliest).

- It is also the case, as highlighted in testimony from the Commissioner for the River Murray in South Australia, Mr Richard Beasley SC, that the Commission's view on this matter did not have regard for the context of an unlawful Basin Plan. Any move to delay recovery of the 450 GL ignores the legal requirement that extraction under the Basin Plan must be reduced to an Environmentally Sustainable Level of Take (ESLT). At best, based on the best scientific evidence, recovery of the equivalent of 3,200 GL would be the minimum amount of water recovery required for this purpose, irrespective of when or whether constraints are addressed.
- The Commission has also inaccurately stated that: "*The additional 450 GL/y cannot be delivered within the existing budget*". While this statement is correct if referring to the current balance of the Water for the Environment Special Account, the Australian Government has publicly announced that it has provisioned additional funding within the Federal Budget to enable the Basin Plan to be delivered, but has kept the amount confidential to reduce any consequential impacts on water prices. Unless privy to this confidential information, the Commission does not have the evidence base to make the statement that it has.