Submission No 288

INQUIRY INTO FLOODPLAIN HARVESTING

Organisation: The Pastoralists' Association of West Darling (PAWD)

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Inquiry into Floodplain Harvesting

The Pastoralists' Association of West Darling (PAWD) has represented the interests of pastoralists in the far west of NSW since 1907, including those on the Darling River between Bourke and Wentworth. Pastoralists depend on the river to supply water for stock and domestic use, and water in the channel also acts as a boundary fence between neighbouring stations. Occasional inundation of the Darling River floodplain associated with flood events regenerates valuable floodplain ecosystems and facilitates opportunistic cropping on residual soil moisture once floodwaters have passed downstream unimpeded. River flows are also critically important for town water supplies, indigenous people, small scale high value irrigation enterprises and environmental health. With this background in mind, PAWD makes the following submission to the Inquiry into Floodplain Harvesting.

PAWD sought an independent critique of the features and values of floodplains associated with rivers in Australia's interior from Dr Gresley Wakelin-King, a Geomorphologist with over three decades' experience working in Australia's interior. Dr Wakelin-King provided the following synopsis on inland rivers and their floodplains:

Floodplain water is a significant part of drylands river hydrology, and is critically important to ecosystems in-channel, downstream, and laterally.

Australian drylands river systems have extremely variable flow regimes. Unlike the European rivers that our society views as 'normal' rivers, in Australian drylands rivers the floodplain can be just as important as the channel for downstream transmission of water. Floodwaters aren't an 'extra'; they are an important part of river hydrology.

For Australia's longest rivers, it is the floods upstream that permit volumes of water to penetrate across the dry interior. Capturing floodwaters upstream, or reducing flood peak volumes or frequency, ensures that the users downstream get less water than would otherwise be expected.

Floodwaters water the wider parts of the floodplain, inundating terrestrial ecosystems that need occasional flooding to survive. Typically these are the patches further away from the channels, or of slightly higher elevation that the rest of the floodplain. If a tree type needs a good soaking once every, say, ten years, then reducing upstream flood peak volumes or frequencies will starve those ecosystems – trees, understory, insects, birds, mammals.

Floodplains can be an important part of migratory fish habitat, and are a source for in-channel organic material. Because the highly-variable flow regime inundates floodplains then some of the water drains back into the channel, floodplain ecosystems contribute nutrients to aquatic ecosystems. Reducing upstream flood peak volume or frequency diminishes aquatic ecosystems and disrupts biological continuity.

Floodplains can be important in recharging local groundwater. Trees usually use groundwater as well as rainfall to sustain them, especially during dry spells. Reducing floods so that most river flow is in-channel denies local groundwater a chance to recharge.

This brief synopsis succinctly encapsulates the environmental value of floodplain water. The Darling River is almost totally reliant on inflows from its tributaries, and these inflows are negatively impacted by floodplain harvesting. Accordingly, there has been a significant reduction in the volume and frequency of flow events in the Darling River in recent decades. The subsequent decline in general river health, irrigated agriculture at Menindee and on the Lower Darling, and environmental catastrophes has been well documented. These serve as unequivocal notice that action must be taken to reduce the downstream impact of floodplain harvesting.

It is important to acknowledge that irrigation in the Murray Darling Basin is already supported by a network of large dams in the upper reaches of the catchment. These dams primarily exist for the benefit of irrigators, but they also reduce downstream flood peak volumes and frequency. So, floodplains are already deprived of flood events due to water being captured in upstream dams for use by irrigators. In the event that enough rain falls to overcome the impact of major dams and pushes water out onto the floodplains, then irrigators have historically been allowed unlimited access to this floodwater for their own purposes. This is in effect 'double dipping' into the water resources of the Murray Darling Basin, and serves to reduce flow events the Darling River downstream of Bourke. It is not fair or reasonable to expect that floodplain harvesting can continue be unlicenced, unmetered or unregulated.

PAWD supports the adoption of water management policy that protects flows in our river systems. As a starting point, the Objects and Water management principles of the Water Management Act 2000 No 92 are an excellent guide for the implementation of fair and reasonable water sharing arrangements across NSW. Accordingly, PAWD recommends that floodplain harvesting policy adheres to the Objects and Water management principles in the Water Management Act 2000, and not doing so will be widely viewed as a policy failure.

Development of on-farm storages in recent decades and the volume of take from floodplains in the Northern Basin have been repeatedly identified by Governments as a significant risk to water availability. PAWD understands that the Water Management Act 2000 requires that water extractions are to be limited to the level of development in place on the 30th June 1994 (the Murray Darling Basin Cap). We are aware of consultancy firm Slattery and Johnson's recent findings of 142% growth of on-farm storage capacity in the Northern Basin since 1994, and the recent NSW Independent Commission Against Corruption (ICAC) enquiry into management of water resources in NSW that found that *"the rights of productive water users were given priority over the rights of other stakeholders and that there was a clear alignment between the department's strategies and goals and those of the irrigation industry."* All this points towards an undeniable need for significant floodplain harvesting reform.

Importantly, the volume of floodplain harvesting extractions must be limited and accounted for as part of the Murray Darling Basin Cap agreement, as required by the NSW Water Management Act 2000.

PAWD strongly supports licensing of floodplain harvesting in order that a high degree of water sharing equity between all stakeholders (including the environment) is achieved. PAWD supports the prohibition of floodplain harvesting until licensing is in place. A permanent ban on all unlicensed floodplain harvesting should be enforced, regardless of harvest volume or frequency.

Floodplain harvesting licences must not be transferable. Allowing the transfer of floodplain harvesting licences would permit stakeholders to aggregate licences and/or move them to localities where a larger take of water from individual flood events is more likely, with a corresponding reduction in downstream water volumes. Furthermore, the proposed accounting rules allowing 500% of licence volume when licences are issued and 500% take in any one year over three consecutive years are manifestly excessive and should be limited to 100% in both instances.

All structures on floodplains should be assessed for legality, and those deemed to be illegal must be removed promptly. Legal structures must not impede water flow across the floodplain when harvesting is disallowed or full volumetric entitlements have already been extracted.

PAWD notes that the Water Management (General) Amendment (Exemption for Rainfall Run-off Collection) Regulation 2020 permits the unlicensed and unmetered harvesting of rainwater runoff from an irrigated field. This is important in terms of preventing chemical residues and nutrients from entering waterways and causing water quality problems. However, a clear distinction must be made between rainfall run-off from irrigated fields and floodwaters, so that landholders cannot harvest floodwater under the guise of capturing rainfall run-off from irrigated fields. Rainfall run-off taken into storage in excess of 10% maximum harvestable rights provisions should be accounted for as part of the volumetric limits associated with the relevant water licences.

Floodplain harvesting licences must have the following conditions attached:

- Appropriate "pump start" and "pump stop" trigger points that are tied to downstream flow targets for stock and domestic, town and environmental water requirements.
- "No meter, no pump" and "broken meter, no pump" rules, with independent oversight of meters and storage gauges so that regulators are not relying on floodplain water users to report on their own water take.
- Individual daily extraction limits and total daily extraction limits should be enforced to prevent the excessive extraction of water that would otherwise go towards meeting downstream flow targets.
- There must be no carryover, such that any licensed volume not taken in a particular year is forfeited at the end of that year, irrespective of whether there was an opportunity to take that water or not. Allowing carryover would facilitate a situation where the first (and possibly only) flood event after a multi-year dry spell could be excessively harvested, denying downstream stakeholders of an opportunity to receive water.

Access to water for irrigation is a privilege available to the fortunate few. With this privilege comes an obligation to minimise the negative impact on downstream stakeholders, including the environment, as per the Objects and Water management principles of the Water Management Act 2000. The development and implementation of rules for floodplain harvesting in NSW must be in accordance with these legislative guidelines and also the expectations of the wider community.

Thank you for the opportunity to contribute to the Inquiry into Floodplain Harvesting.

Lachlan Gall.
Councillor.