

INQUIRY INTO FLOODPLAIN HARVESTING

Public hearing: Friday 24 September 2021

Supplementary questions Mr Michael Murray, General Manager, Cotton Australia

H1. IN YOUR SUBMISSION YOU STATE “OUR RECENTLY RELEASED SECOND SUSTAINABILITY REPORT DEMONSTRATES

PRODUCING A BALE OF IRRIGATED COTTON COMPARED TO OUR 1992 BENCHMARK NOW REQUIRES: 48% LESS

WATER, 34% LESS LAND AND 97% LESS INSECTICIDES.”

A. DOES THE BENCHMARKING INCLUDE TAKE OF FLOODPLAIN HARVESTING WATER?

The benchmarking is based on a range of activities overseen by the New South Wales Department of Primary Industry. The long running project utilises a wide range of data sources, but a key component is the collection of detailed data from a cross-section of participating irrigation properties.

The property-based data collection includes calculation of Water Use Efficiency calculated from the total available water use by the cotton production system, including water from all extraction sources, as well as rainfall.

Floodplain Harvested water is included in these calculations as part of the total available water, however, the total volumes of Floodplain Harvested water used by the cotton industry is not calculated as part of this process, as the industry’s Water Use Efficiency is agnostic to the water source, and the program is largely based on a cross-representative sample, rather than any claim that every farm producing irrigated cotton is included in the project.

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B. IF YES, CAN COTTON AUSTRALIA PROVIDE THEIR DATA ON FLOODPLAIN HARVESTING TAKE TO THE INQUIRY?

Given the limitations explained in answer 1A , the exact floodplain harvesting data is not available, but further detail on the cotton industries WUE project can be found here - <https://www.cottoninfo.com.au/sites/default/files/documents/Spotlight%20Spring%202021.pdf> (Page 9) .

C. ANY COMMENT ON THE SUBMISSION FROM THE FENNER SCHOOL AT THE ANU AND SLATTERY AND JOHNSON, WHICH ESTIMATED FLOODPLAIN HARVESTING TAKE TO BE ON AVERAGE 778GL/YR IN EACH YEAR SINCE 2004/5?

Not on the submission specifically, as I am not privy as to what assumptions and data sources were used. However, I would be much more confident of any estimates produced by the NSW Government experts who have rolled-out the Floodplain Harvesting Licencing project, investing in excess of \$20 million, conducting very detailed modelling, coupled with extensive ground-truthing to develop the best available estimates of take, than the view of a paper written by two authors who have a long history of demonstrated bias in water policy.

2. IN YOUR SUBMISSION YOU STATE “CURRENT ANNUAL AVERAGE FLOODPLAIN HARVESTING TAKE IN NORTHERN NSW

MAKES UP JUST 3% OF THE MDBA MODELLED TOTAL WATER”

A. WHAT DOES TOTAL MODELLED WATER MEAN? DOES TOTAL MODELLED WATER INCLUDE WATER THAT INFILTRATES INTO THE GROUND, AND EVAPORATES FROM STREAMS/RIVERS?

This question would be better answered by either the NSW Government hydrological modellers or the Murray-Darling Basin Authority modellers, but my understanding is it is the total combined stream flow, measured at agreed and known points across the system. Therefore, it should exclude most direct infiltration into the ground, but may include some seepage and evaporation depending at what point (above or below the measurements points) the losses occurred.

B. WHAT PERCENTAGE OF IRRIGATION WATER USAGE IS FLOODPLAIN HARVESTING?

It varies significantly from catchment-to-catchment and from year-to-year depending on the seasonal conditions, and the relative scarcity of the other water sources. The most accurate answer to this question should be able to be made by the NSW Government, especially for the Gwydir and NSW Border Rivers catchments where the modelling has been completed.

3. IN YOUR SUBMISSION YOU STATE “90% OF COTTON OPERATIONS ARE FAMILY FARMS”

A. WHERE DOES THIS FIGURE COME FROM?

An internal Cotton Australia review of our growers which assessed whether the growers were a “family” farming business or a corporate business.

B. WHAT IS THE DEFINITION OF A FAMILY FARM?

A farm where the ownership was dominated by family members.

C. WOULD THIS FIGURE INCLUDE LARGE AGRI-BUSINESSES, OWNED BY FAMILIES?

Yes

4. COTTON AUSTRALIA IS ON RECORD SAYING TOWNS AND RIVERS GET ALLOCATED WATER FIRST, AND IRRIGATION ONLY

PROVIDED FOR IF SUFFICIENT WATER REMAINS. IS THIS CORRECT WHEN DOWNSTREAM TOWNS LIKE WALGETT AND MENINDEE RUN OUT OF WATER, AND THERE ARE CONTINUED SUCCESSFUL COTTON CROPS IN UPSTREAM VALLEYS?

Yes. There was a perception/misconception, that suggested cotton growers were able to grow crops at the expense of towns.

The reality is, during the recent drought, national cotton production fell to a 40-year low, with only 590,000 bales being produced during 2019/20 (This compares to record production of up to 5.3 million bales in 2011/12).

The water used to grow this crop was either water (crop) outside the Murray-Darling Basin, groundwater from recognised sustainable groundwater sources, or water allocated to irrigators in previous years, and husband by them to spread their production.

The following table shows General Security Irrigation allocations for the 17/18 and 18/19 water years. It is clear with the exception of the very small Upper Namoi, no new water was allocated to irrigators. Over the same period there were no supplementary water events nor Floodplain Harvesting events.

| | Cumulative GS Water Allocation 2018/19 | Date of last Allocation | % of last Allocation | Cumulative allocation for 2017-18 |
|---------------------|--|-------------------------|----------------------|-----------------------------------|
| NSW Border Rivers | 0% | 31/01/2018 | 3.79% | 19.62% |
| Gwydir Valley | 0% | 7/02/2018 | 0.19% | 17.59% |
| Lower Namoi Valley | 0% | 7/08/2017 | 7.80% | 7.80% |
| Upper Namoi Valley | 100% | 1/07/2018 | 100% | 100% |
| Macquarie Valley | 0% | 14/08/2017 | 2% | 38% |
| Lachlan Valley | 0% | 14/08/2017 | 2% | 2% |
| Murrumbidgee Valley | 7% | 17/09/2018 | 1% | 45% |
| Murray Valley | 0% | 15/03/2018 | 2% | 51% |
| Lower Darling | 0% | 1/07/2017 | 100% | 100% |

5. IN YOUR SUBMISSION YOU STATE YOU ARE SUPPORTIVE OF THE GOVERNMENT'S PLAN TO UPDATE THE BASELINE DIVERSION LIMIT AND SUSTAINABLE DIVERSION LIMIT CHANGING WITH BEST AVAILABLE INFORMATION.

A. ARE THERE ANY CAVEATS AROUND THIS?

The baseline diversion limit is calculated using the best available knowledge/data, so if a review is based on the best data, and not changing the definition, then there are no caveats.

B. WOULD THE INDUSTRY BE SUPPORTIVE OF A FUTURE GOVERNMENT REDUCING THE BASELINE DIVERSION LIMIT OR SUSTAINABLE DIVERSION LIMIT, IF FUTURE BEST AVAILABLE INFORMATION INDICATED THIS SHOULD BE DONE?

As per the answer above, it is not about supporting or not supporting, the answer is the answer. Under either scenarios we may challenge the calculations if we dispute whether the best available data is being used, or if we believe the definition has been changed, but in general, the answer is the answer.

6. IF THERE ARE VALID CONCERNS ABOUT THE PROCESS, DOES COTTON AUSTRALIA AGREE THAT THE LICENCES FOR FLOODPLAIN HARVESTING SHOULD NOT BE COMPENSABLE?

Compensability of all water licences (with the exception of supplementary licences) is recognised under the Water Management Act and is an agreed outcome of the National Water Initiative (NWI). There are a range of conditions under which compensation becomes payable, and these should apply equally to Floodplain Harvesting licences.

Yours sincerely,

Michael Murray

2-11-2021