GROWING ALMOND LEADERS

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Water Security and the Future of Australian Almonds

Creating a framework for identifying the threats and responding to them

Introduction

The future of the Australian almond industry is underpinned by reliable access to quality and affordable irrigation water.
Since the end of the Millenium Drought (2010), the almond industry has expanded greatly throughout the Southern MDB. Over the same time period, the water industry has experienced fundamental changes to how it is regulated and how much is available for irrigation. Together, these significant changes have created an environment of uncertainty over the exact threat posed by water security to the future of the almond industry. Currently, there are many knowledge gaps regarding which threats require the most attention and what can be done to alleviate them. The purpose of this project is to create a framework for identifying the most significant water security threats to the almond industry, and to allow for an industry wide strategy to identify, prioritise and develop the most effective and appropriate responses to them.

Current threats to water security can be broken down into four sub categories: Availability, Affordability, Deliverability and Regulation

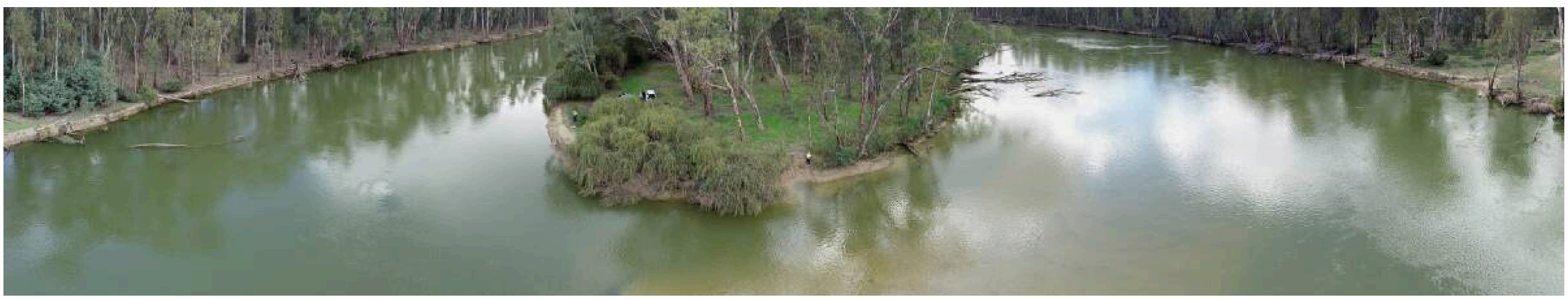
- **Availability**
  - As a result of the Murray Darling Basin Plan and earlier water reforms, approximately one third of consumptive irrigation water in the MDB has been removed from agricultural production and returned to the environment. While this has shown to be of great benefit for the health of our rivers, it has created additional competition for water throughout the horticultural industry. Availability (or lack of) will be exacerbated during the next significant dry period.
  - Climate Change has resulted in an environment with increased weather variability and greater weather extremes. During extended dry periods, overall water quality will decrease. This will significantly affect the industry, as almond trees are susceptible to changes in water quality, especially high salinity and pH.
- **Affordability**
  - During periods of sustained dry weather, competition for an already scarce water resource will result in rapid and significant increases in water prices. Further exacerbating this, is the recent addition of the Government as a participant in the water market, willing to pay a premium above market price. This development further reduces the supply of irrigation water.
  - Developing an understanding of the almond industry's weighting to certain water licence classes will be crucial to determining how susceptible the profitability of almond operations are to sudden water price changes, and therefore how vulnerable the overall industry is.
- **Deliverability**
  - Delivering the right amount of water at the right time is crucial to successful almond production.
  - The Barmah Choke is a natural narrowing of the Murray River upstream of most large scale almond production. Previously up to 11,500 ML/Day could be moved through the Choke at all times of the year. However, due to increased silting over of the Choke, this volume has been reduced to 9,200 ML/Day, and will continue to reduce by a further 30% capacity over the next 30 years. Although there have been many recent reports and inquiries into the matter, there has been very little physical action in implementing a strategy to deal with the threat.
  - One option to counter the system shortfall, is the increased use of Inter Valley Trade (IVT) from the both the Murrumbidgee and Goulburn Rivers, combined with releases from less reliable water sources such as the Darling River. However, this is having significant environmental impacts in those rivers and on downstream users, and may not be a sustainable solution into the future.
  - Instances of lengthy and unpredicted extreme heat events will create challenges for water operators to effectively move the required water through the system to meet user demands during peak water consumption periods.
- **Regulatory**
  - In 2026, the MDBA will be reviewed. Although the exact regulatory responses to the review remain unknown, one suggested response is for a further 740GL of Water Buybacks. This is more than SA's entire yearly irrigation volume. This will continue to erode the pool of water available for horticultural production, further impacting annual irrigation agriculture in the MDB.
  - In conjunction with this, is the proposal for increased water licenses to be issued to environmental and indigenous water users, further eroding irrigation water availability.

Prioritising the threats and developing solutions

- **Research**
  - In order to better understand the challenges posed by the threats listed above, a thorough and contemporary analysis of them is required by the industry using current data.
  - This will inform the prioritisation of the threats to the industry and the development of an appropriate overarching strategy to respond to them.
- **Advocacy**
  - Once a strategy is developed, the focus needs to shift to promoting it effectively throughout the industry to increase awareness and implement solutions.
  - The most effective strategy would be a combined approach put forward to all levels of government from all irrigated agricultural Peak Industry Bodies (PIB) promoting the importance of our industries to Australia's future prosperity.

Conclusion

There have been significant changes to both the almond and water industries over the past 20 years. This has created a situation of uncertainty regarding the threats posed by water security to the future of the almond industry. Identifying these threats and the impact they have on the the almond industry has been the purpose of this project. The next step in the process, is to initiate a thorough and contemporary, industry wide analysis to prioritise these threats according to the needs of the industry and develop a unified strategy for responding to them.



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australian almonds

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