

'Making every drop count' project summary

Water security and sustainability

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Limestone Coast Landscape Board

A new holistic and strategic approach to water security in the Limestone Coast to sustain community, environment, First Nations and industry in a changing climate.

Water resource management in the Limestone Coast

The Limestone Coast region has, through its climate refuge status and precious groundwater resources, been identified as a region with substantial potential for economic growth through its primary production industries. The region's Gross Regional Product is estimated at \$3.83 billion, which represents more than 3% of the Gross State Product, but potential exists to increase this. Realising this growth will demand secure and sustainable water resources and will require us to do more with less water availability. We need to make every drop count.

Water is central to the environment, community, First Nations and industry and balancing the resources across these purposes is complex and unachievable without a strategic approach and carefully considered trade-offs.

Through its Regional Landscape Plan the Limestone Coast Landscape Board has identified protecting and balancing the region's water resource as one of its five key priorities. As such the Limestone Coast Landscape Board seek to ensure water resources are managed for all purposes and that First Nations, primary producers, environmentalists, communities and government recognise and understand this balance.

A partnership approach

This project brings together partners that represent the key water use purposes through a partnership and shared outcome approach, underpinned by the principle of managing our water resources for all purposes. Partners include;

- Nature Glenelg Trust
- South East Aboriginal Focus Group
- South Eastern Water Conservation and Drainage Board
- SA Water
- Goyder Institute for Water Research
- Primary Industries and Regions SA
- Primary Producers Sustainable Water Group
- Department for Environment and Water
- National Parks and Wildlife Services
- Lake George Management Committee

Funding

The Limestone Coast Landscape Board uses funds collected through the levy to support key water resource management work such as water allocation planning and water affecting activities. To broaden the scope of the water resource management work additional funding has been sought.

The Limestone Coast Landscape Board has been successful in securing funding from the South Australian Governments Landscape Priorities Fund and funding from the Australian Government through the National Water Grid Authority to support this innovative approach to water resource management.

'Making every drop count' concept

Under climate change predictions the Limestone Coast landscape region will be drier and hotter. Coupled with this a decreasing rainfall and a hotter climate will increase demand from users for water, placing pressure on the regions water security and sustainability. On top of this regional trend is the global reality that feeding a world population of 9.1 billion people by 2050 will require raising food production.

Demand for water will continue to increase as the climate dries, a new era of landscape-scale water management is required to balance this pressure across the environment, industry, First Nations and community. Doing more with less and ensuring all water resources, from traditional groundwater sources to alternate water supplies, are considered to ensure every drop of our water resources count towards a secure and sustainable future.

Under the limited tools and policies available to manage water resources today the balance of use across purposes has been lost, demand for water is outstripping supply and is forcing reductions in allocations to industry in an attempt to meet environmental objectives. At the same time perceptions exist around large volumes of wasted or unused water. This contradiction creates a platform for organisations, predominantly industry and environmental, to propose concepts to maximise this 'wasted water' but to outcomes that don't consider a balance of this use for all purposes.

This project will support on ground works, feasibility studies and the generation of foundational knowledge to support water security and sustainability in the Limestone Coast landscape region for all water use purposes. Through these works and studies a water security strategy will be formed, consisting of practical pathways and mechanisms to expand on ground works, inform new feasibility studies and identify the knowledge gaps to be filled. Through this strategy the Limestone Coast Landscape Board will make every drop count.

Key elements in the 'Making every drop count' project

On Ground Actions

❖ Hutt Bay (Middle Point Swamp) Groundwater Dependent Ecosystem Recovery Demonstration Site

- Proof of concept- retaining water in the landscape or recycling water for environmental benefit.
- Retain water in the wetland through backfilling internal artificial drains, regulation of the artificial drainage outlet and trialling recycled wastewater delivery/reuse as a supplementary water source.
- Engagement, economic and employment opportunities throughout the on ground works for Burrandies Aboriginal Corporation.

❖ Mt Burr Swamp

- Proof of concept of holding water in the landscape for environmental and social benefit.
- Enhance retention of water through backfilling of internal artificial drains.

❖ Moot Yang Gunya Swamp Restoration Trials

- Proof of concept of holding water in the landscape for environmental and social benefit.
- Test the feasibility of re-establishing a wetland system for social and environmental outcomes, balanced against maintaining the current ecological condition of Mundulla Swamp and limiting impact on groundwater recharge.

❖ Cultural Watering at Kungari Waterholes

- Supporting First Nations of the South East to plan, undertake and evaluate a series of cultural watering activities at a historic site and to redirect and reconnect water in the landscape for cultural benefit.

Feasibility Investigations

❖ Managed Aquifer Recharge Feasibility Study

- Investigation into the opportunities, risks and benefits of establishing managed aquifer recharge schemes to achieve water quantity and quality outcomes for consumptive (e.g. irrigation and forest water use) purposes.

❖ Revitalise Lake George and Lake Frome

- Hydrological and engineering feasibility to explore adapting the drainage system to provide additional water to Lake George.

Foundational Knowledge

❖ Understanding Our Water Resources Now and into the Future

- An understanding of current water resources, user needs, and future options provides the foundation for developing a water security strategy that allows for transition to a climate resilient future.
- A climate resilience assessment assess current water availability, allocations and use and the economic value of water provisions and use and their relationship with climatic drivers. This will be used to identify the key water related climate vulnerabilities for the region.

❖ Landscape Feasibility Analysis of Recharge Farms and Surface Water Expression of Groundwater

- Future capacity to hold water in the landscape to buffer groundwater levels and retain soil moisture.
- Assessment will identify feasible locations of recharge farms:
 - Identify areas where the surface water expression of groundwater is vulnerable or resilient to climate change.
 - Identify where there are opportunities to maintain, protect or augment surface water expression of groundwater to mitigate climate change vulnerabilities.
 - Identify potential industry and environmental beneficiaries.

Acknowledgment

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