

# NATIONAL RURAL ADVISORY COUNCIL

## River Murray and Lower Lakes Corridor EC–Declared Area Assessment January 2011



### Summary

Agricultural production in the River Murray and Lower Lakes Corridor EC-declared area is made up of perennial horticulture crops, annual vegetable crops and dairy, which are almost totally reliant on irrigation allocations from the Murray-Darling Basin storages. There is a very small component of dryland cropping and livestock production.

Adverse conditions of a heatwave in November 2009, combined with successive years of low water allocations and allocations provided too late into the growing season, continued to impact production. Current 2010-11 general irrigation allocations stand at 67 per cent.

High salinity levels after eight years of dry seasonal conditions resulted in extensive pruning of citrus trees and grape vines and in many instances producers reported to the National Rural Advisory Council (NRAC) they had to remove a large proportion of perennial plantings of vines and trees. The result of which is a further significant downturn in irrigated horticulture and pasture production across the EC area, with a return to more typical production levels not expected until the 2011-12 harvest.

On the basis of the available information, NRAC recommends that the River Murray and Lower Lakes Corridor EC declaration be extended until 31 March 2012.

### Assessment

NRAC has reviewed seasonal conditions in the River Murray and Lower Lakes Corridor EC-declared area. As part of this assessment, the Department of Primary Industries and Resources South Australia (PIRSA) arranged an itinerary for a NRAC on-ground inspection of the area which occurred on 26–28 October 2010. NRAC met with local producers and considered advice from the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) and PIRSA.

Agricultural industries for the majority of the area are reliant on river flows and irrigation allocations for the production of perennial horticulture crops (grapes, stonefruit and almonds), annual vegetable crops (potatoes, lettuce and brassicas) and pasture for dairy. There are also a very small number of dryland (livestock and crop) enterprises interspersed along the corridor.

There are three climatic zones in the region. A very small portion in the north is classed as desert with average annual rainfall ranging from 250–300 mm. In the middle section where the river runs north–south, the climate is grassland, with an annual average rainfall of 350–500 mm while in the south, there is a more temperate strip around the coast with an average annual rainfall of 600–900 mm.

Rainfall in the area is more reliable in winter and spring, and although rainfall is beneficial to production, it is of secondary importance as the area is primarily reliant on irrigation water from the Murray River. ABARES' data shows that for the period December 2009 to September 2010 rainfall across the EC-declared area ranged from average (30<sup>th</sup> to 70<sup>th</sup> percentile) to well above average (80<sup>th</sup> to 90<sup>th</sup> percentile). Updated ABARES' advice since NRAC's on-ground inspection indicates that above average to extremely high rainfall was received over the whole review period.

ABARES' advice (15 November 2010) indicates that rainfall and irrigation allocations during the review period generally provided at least average production opportunities. Following its on-ground inspection in October 2010, NRAC still had concerns about the extent to which conditions have provided the opportunity for producers to return to more typical production.

The majority of irrigation occurs from spring through to autumn, with the peak applications being in the summer months. Low water allocations in 2007-08 and 2008-09 were compounded when an eventual allocation in March 2010 of 62 per cent was too late to aid the 2009-10 harvest.

Producers told NRAC, that having endured several seasons of very low irrigation allocations as a result of critically low levels in the major storage dams of the Dartmouth, Mitta and Hume Weir, they had tried to conserve water and maximise their water use efficiency. Many producers told NRAC that during the period of restricted irrigation allocations by the South Australian Government, they had purchased some additional water at high prices.

Reduced water availability brought with it high levels of salinity, with producers in the horticulture and dairy sectors telling NRAC that purchasing additional water was not sufficient to negate the impact of rising levels of salinity in soils. The increase in salinity has been exacerbated by years of drought conditions and will continue until there are good flows through the river systems. As a result of the limited water availability, horticulture producers told NRAC they had to undertake rigorous pruning of citrus trees and grape vines.

Along with the high salt levels, a heatwave in November 2009 led to fruit trees being stressed, resulting in significant negative impacts on citrus and stonefruit production. Many producers indicated they had not achieved a harvest consistent with their long-term average for the last three years, with citrus and stonefruit yields reportedly being reduced by approximately 40 to 50 per cent.

Many producers told NRAC that they were left with no option other than to pull out citrus trees and vines because plant stress associated with reduced water had halted fruit production. Producers with existing plantings and for those planting new citrus trees and grape vines following increased water allocations this year, project that it will take up to 18 months before a crop is established from current rootstock and up to four years for newly established perennial plantings.

On 1 October 2010, the South Australian Government announced a general irrigation allocation of 67 per cent; the highest allocation since 2005-2006. However, the agronomic benefit of this increased allocation will not be realised until the 2011-2012 harvest as fruit growth takes between eight to nine months to reach maturity with critical flowering and fruit set occurring in mid spring.

Producers informed NRAC that grape production in 2009-2010 was down by 20 to 35 per cent across the area. The Phylloxera and Grape Industry Board of South Australia reported in September 2010 that the Riverland recorded its second lowest crush since 2001. NRAC observed that vines looked to be in reasonable condition, however producers showed evidence that grape bunches were smaller than normal which were attributed to the November 2009 heatwave, salt incursion and the late water allocation in October 2010. Therefore producers do not expect to see an improvement in yields until the 2011-12 harvest.

Below Lock 1 on the Murray River, in addition to citrus, stonefruit and grapes, enterprises encompass dairy production and a very small number of dryland cropping and livestock producers. ABARES' advice indicates that rainfall in this region was well above average between December 2009 and September 2010. This was reflected in dryland cropping estimates of wheat and barley yields of 1.6 to 2.0 tonnes per hectare, which is well above average. Data sourced from ABARES and the Australian Bureau of Statistics (ABS) on Benchmark Yields for Major Crops in Exceptional Circumstances Declared Areas estimates that 10 year average wheat and barley yields are approximately 1.1 t/ha and 1.2 t/ha respectively.

Dairy producers told NRAC they rely on irrigation from the backwaters (swamp irrigation) of the Murray River tributaries. For many of these dairy producers, extensive work had been undertaken to improve on-farm performance, such as repairing, upgrading, and installing better water infrastructure. Notwithstanding this, water availability remained the inhibiting factor to irrigating pastures for cattle feed. Swamp irrigators had been unable to access water even though they had had irrigation allocations, because of minimal inflows to the backwaters due to lower flows upstream. A number of dairy producers indicated they had shifted from an irrigated enterprise to a dryland feed and total mix ration form of feeding to meet the required level of nutrients.

The December 2010 Regional Production Update provided by PIRSA reports that since NRAC's inspection, river levels have continued to rise, and seepage through the dry and deeply cracked clays of the Reclaimed Swamps between Mannum and Wellington has been increasing. A number of the 'swamps' are inundated from that seepage with the drainage pumps unable to dewater the system as intended and this is further hampering potential recovery from the drought.

Irrigators off Lake Albert who have intentions to restart irrigation are yet to recommence irrigation, as salinity has remained high.

NRAC heard from a number of producers throughout the EC-declared area of issues that are outside the scope of EC review guidelines. While the financial position of producers is not one of the criteria against which recovery is assessed, NRAC noted that a number of producers had delayed new tree and vine plantings due to already heavy borrowings and severely reduced income. Purchasing irrigation water at high prices and the heavy investment in rehabilitating infrastructure in the swamplands, which producers cannot currently access, has depleted financial reserves.

NRAC is aware that the River Murray and Lower Lakes Corridor EC area has a number of adjustment issues but with so many factors such as drought, industry restructure, government policy and commodity prices it is difficult to identify the relative importance of these impacts on farm viability.

NRAC considers that the size of holdings, mainly for citrus growers, is too small and that the inability to extend the size of production in not only citrus but also in stonefruit and dairy industries is impacting many producers' ability to remain viable. Commodity prices for wine grapes and the contractual conditions placed on producers by wine companies is also an inhibiting factor in production and profitability.

Producers repeatedly told NRAC that the South Australian Government's water policy presents challenges to effective farm management practices. Producers advised that the ongoing changes on the rules and irrigation allocation announcements occurring late in the growing season had affected their confidence to make informed business decisions.

Some producers voiced their concerns about the complexity and difficulty in filling out the EC Interest Rate Subsidy application forms. Although not validated, producers suggested that there may be an inconsistent approach in the assessment of Interest Rate Subsidy applications by the state Rural Assistance Authority.

NRAC notes that parts of the River Murray and Lower Lakes Corridor EC-declared area did experience severe weather in recent months. NRAC acknowledges the hardship endured by producers as a result of these events.

For those individual producers impacted by the severe weather, NRAC notes that the Australian and state governments have activated the Natural Disaster Relief and Recovery Arrangements (NDRRA) across a number of Local Government Areas throughout South Australia. NDRRA arrangements are triggered when a state or territory government declares an area of natural disaster. Assistance for individuals and businesses impacted by the severe weather is available in this context.

NRAC concludes that despite adequate irrigation allocations in 2010-11 plus purchased carry-over water from the 2009-10 allocation, production in the River Murray and Lower Lakes Corridor EC-declared area has not sufficiently improved. The majority of producers have not had the opportunity to commence a seasonal recovery. However with increased irrigation allocations this year and high level water supplies in the Murray Darling Basin storage facilities upstream, NRAC anticipates that the majority of producers will see perennial crops back to reasonable health, which should be evident in the 2011-12 harvests, allowing producers to return to more typical management practices.

## **Recommendation**

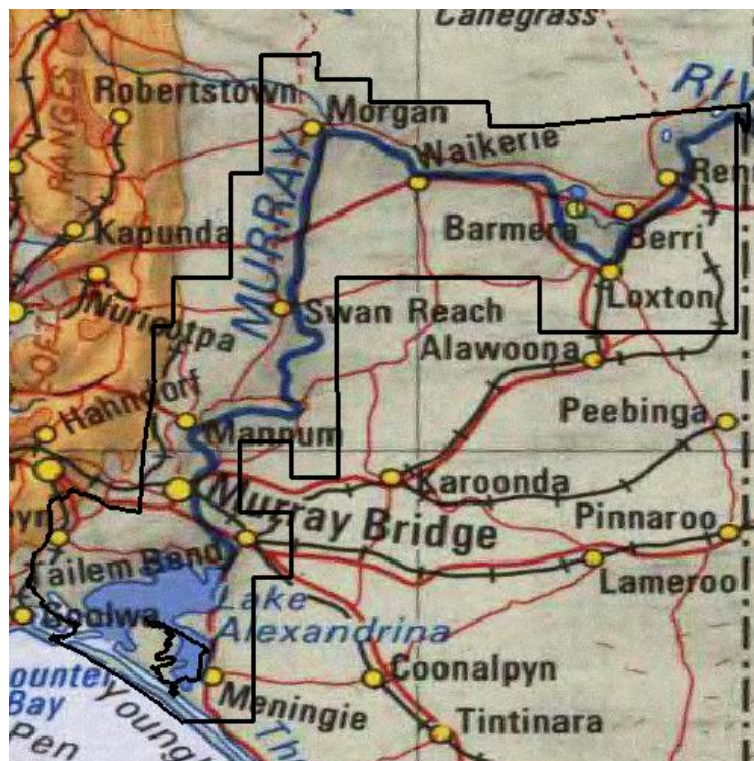
NRAC recommends that the Minister extend the River Murray and Lower Lakes Corridor EC declaration until 31 March 2012.

## Area Description

The River Murray and Lower Lakes Corridor EC declared area includes the hundreds of:

Bonney, Baker, Alexandrina, Bremer, Strathalbyn, Freeling, Brinkley, Malcolm, Seymour, Burdett, Mobilong, Younghusband, Finnis, Angas, Ridley, Forster, Bagot, Fisher, Bowhill, Nildottie, Paisley, Skurray, Murbko, Hay, Eba, Cadell, Lindley, Stuart, Markaranka, Waikerie, Holder, Pooginook, Parcoola, Moorook, Pyap, Loveday, Katarapko, Bookpurnong, Gordon, Paringa, Murtho and includes all other land north of the River Murray up to a line from the northeast corner of the Hundred of Parcoola to where the River Murray crosses the Victorian border at Chowilla.

This includes the District Councils of Berri-Barmera and Renmark-Paringa.



## EC Event

- The application was based on the effects of two separate events on dryland and irrigation farmers.
- For dryland farmers the application sought assistance based on below average rainfall across the majority of the area from April 2002 to October 2006. The cumulative effects of prolonged dry conditions, severe frosts in 2002 and hot dry winds in 2004 eroded farmers' capacity to carry out typical farm management practices.
- For irrigation dependent farmers, the application was based on severely deficient rainfall in the Murray–Darling Basin between March 2002 and February 2006. This led to record low levels of water in storage facilities and reduced water releases that subsequently restricted the amount of irrigation water available from the River Murray. While the event occurred in the Murray–Darling Basin there was direct and delayed impact on water availability in the River Murray in South Australia.

## EC Declaration History

Declaration	Industry	Start Date	Expiry Date
EC declared	All producers	27 March 2007	31 March 2009
EC extended	All producers	1 April 2009	31 March 2010
EC extended	All producers	1 April 2010	31 March 2011

- There are 1620 primary producers in the River Murray and Lower Lakes Corridor EC-declared area.

## **Production Systems as Recorded in the Original Application**

### Enterprises

- Irrigated horticulture is the dominant industry in the Riverlands, where wine grapes, citrus and to a lesser extent vegetables and stone fruit are grown.
- In the Lower Lakes area dairy, viticulture and some cropping (mainly supplementary feed for dairy cattle) are the dominant industries.
- There is also some sheep and beef cattle production.
- Some irrigated vegetable cropping (in the centre) and dairying (in the south) occurs in the area which is minor relative to total production.

### Water

- Water supplies in the area are almost solely reliant on pumping water from the Murray River.
- South Australian Murray River licence holders are able to access 67 per cent of their entitlement from 1 October 2010.
- The South Australian Government reported on 1 October 2010, that this allocation compares with a 25 percent allocation at the same time last year, exceeds the total allocation for 2009-10 of 62 percent and represents the highest allocation since 2005-06.

### Production

- Production varies significantly across the area. In the northern part, the 'Riverlands' is almost entirely dependent on irrigation water drawn from the Murray River. Production in the south, including the Lower Lakes district, while still dependent on irrigation has higher reliance on rainfall.
- Irrigation water is required for perennial horticulture from spring through to autumn, with peak rates occurring in the summer months. In the citrus industry, irrigation is required all year round.
- Pasture production peaks in spring with a secondary peak in autumn. Livestock carrying capacity is generally lower in the east and higher in the west.

## **EC Review Guidelines**

The review process includes, but is not exclusive to, consideration of whether:

- seasonal, agronomic and resource conditions have provided an opportunity for the majority of producers within the Exceptional Circumstances declared area to begin to carry out typical farm management practices relevant to their enterprise type and production cycle;
- climatic conditions have enabled the majority of crop producers to carry out typical farm management activities such as allowing the planting and harvesting of their average crop area;
- rainfall and temperature in the main growing season has resulted in an increase in plant growth to enable the majority of livestock producers to carry out typical farm management practices and taking into long term trends, a return to average livestock numbers is underway; and
- there is sufficient water for livestock and domestic water use.

## **Attachment**

ABARES Advice