

**Paper prepared for the Assemblée Générale 2010**

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**Réponses potentielles stratégiques des régions et marques  
Adaptations potentielles en Australia**

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## Abstract

Over the last century, the mean temperature in Australia has risen by 0.7°C, leading to an increase in the number of very warm days and a decrease in frost and cold days. The total annual rainfall over Australia has also increased by about 6% over the last hundred years. The prognosis is for an acceleration of climate change during the rest of this century (Pittock *et al.*, 2003).

In a previous paper prepared by the authors<sup>3</sup> we have outlined the importance of climate as a vital component in determining the quality of the grape and ultimately the quality of the wine. Increases in temperature and changed rainfall patterns in both premium cool climate and warm climate regions mean that viticulturists and wine makers are being forced to alter traditional methods to maintain quality in wine. Today's viticultural regions for quality wine production are located in narrow climatic zones that put them at particular risk from both short-term climate variability and long-term climate change.

Because of the strong association between terroir and quality of wine, any change in grape growing attributes due to climate change will have serious economic and social impacts unless producers can adjust. The authors have argued that a very real challenge is how to ensure that the regulatory system is such that will permit the vitivinicultural sector to appropriately adjust to changed conditions and to continue to produce high quality wine.

To respond to future climates, changes to wine sector practices and government policies may be required. In this paper we look at the current national and international developments and what strategies the Australian wine sector can put, and is putting in place to adapt for climate change.

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<sup>3</sup> Hayes, P. and Battaglene, T.; (2006); Regulatory Response to climate change; Le Bulletin de L'OIV; Organisation Internationale de La Vigne et du Vigne, November-December 2006; Vol 79-No 909-910, pp 697-708



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Lien de la Vigne

*Peter Hayes and Tony Battaglione*

# DAFF Irrigation Industries

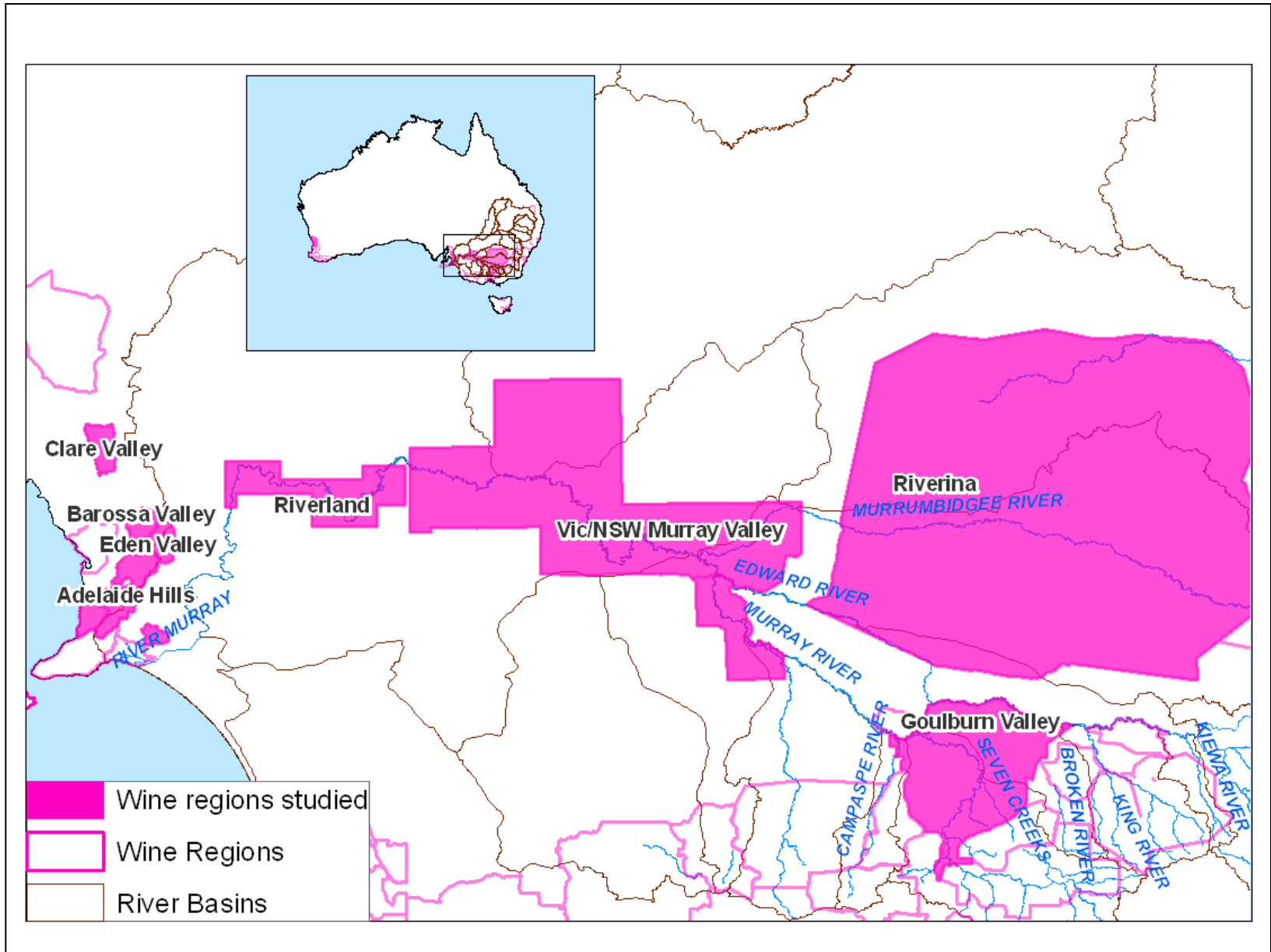
## Workshop Programme-2008/09

### KEY TOPICS

- post-harvest care of vines
- managing the conversion to drip and sub-surface drip irrigation
- sustainable salinity management on your vineyard
- insights into varietal and rootstock differences in water use
- insights into the relationships between grape yield and water
- water allocation scenarios in key regions within the Murray Darling Basin for the 2008/09 season and beyond
- regional case studies (practical 'how did I manage this season')
- how water allocation decisions are made
- adaptation and delivery of the Water Purchase and Budget Tool
- painting the picture - what to look out for your business
- understanding how vines cope with periods of hot weather and extended drought conditions.

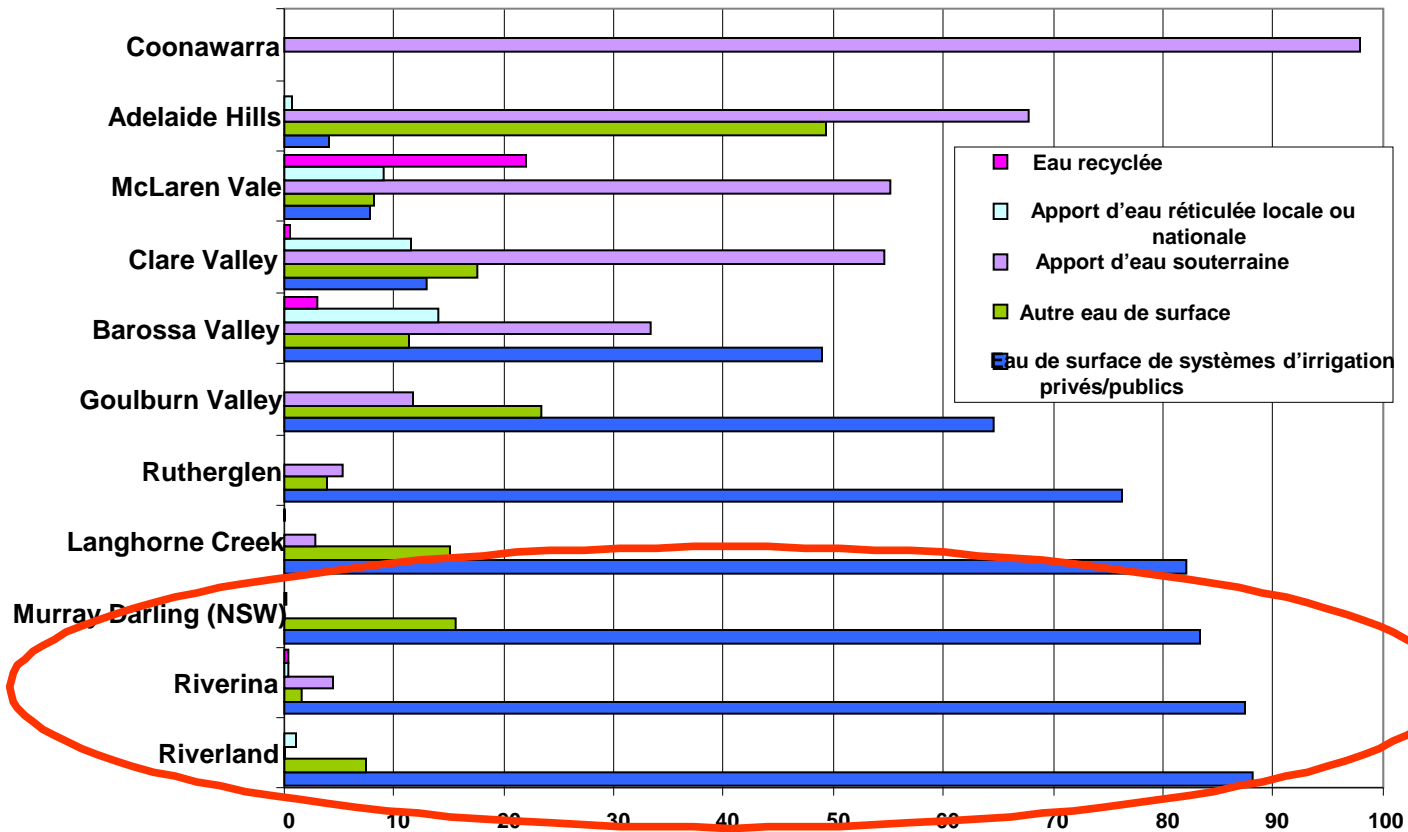
# Objectifs de l'OIV

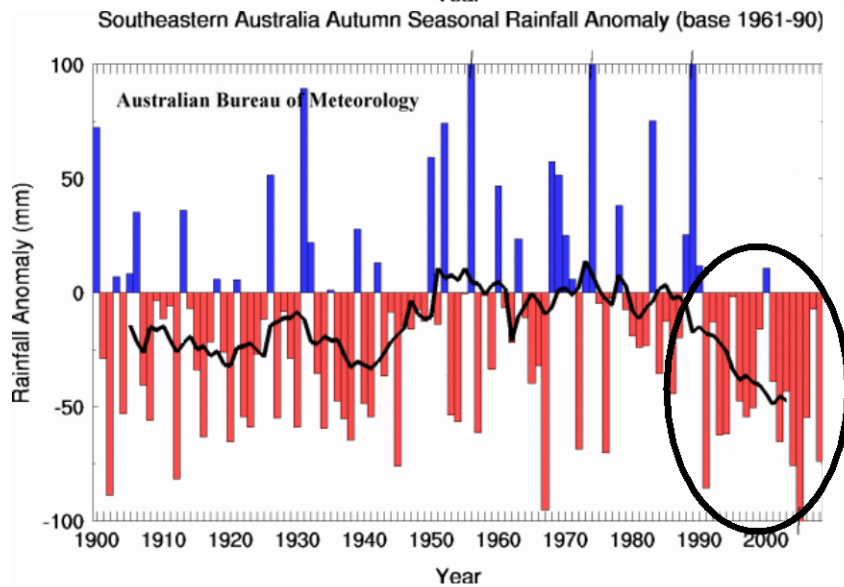
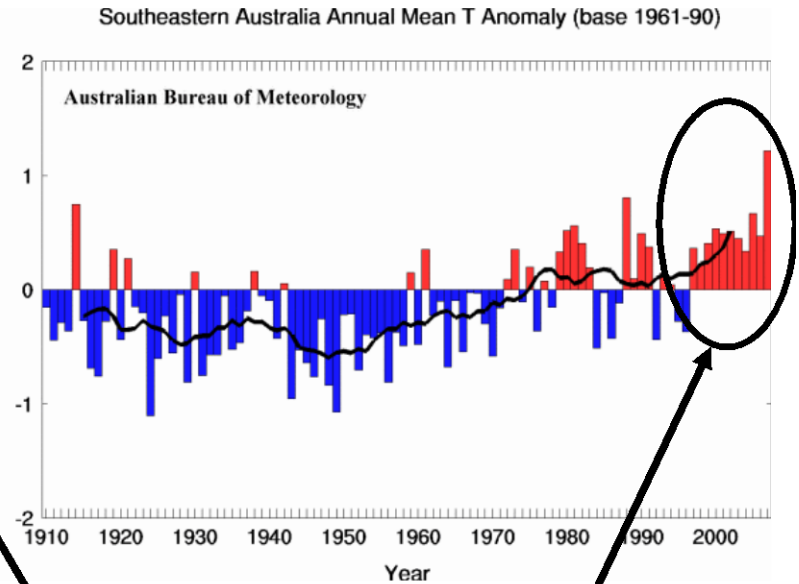
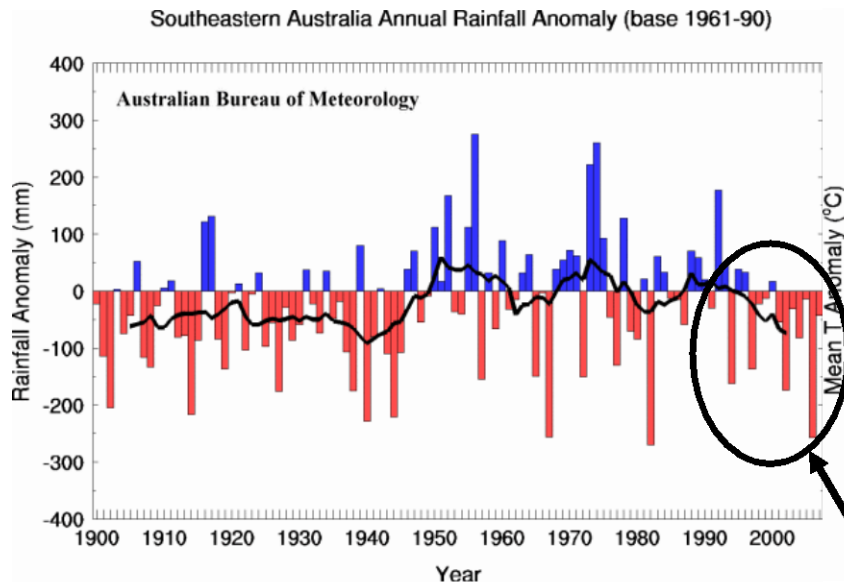
- **Informerses membres** des mesures par lesquelles les intérêts des producteurs, consommateurs et autres acteurs du secteur viti-vinicole doivent être pris en compte
- **Apporter un appui aux autres organisations internationales**, à la fois intergouvernementales et non gouvernementales, en particulier à celles qui exercent des activités de normalisation ;
- **Contribuer à l'harmonisation internationale** des pratiques et normes existantes et, dans la mesure du nécessaire, à la préparation de nouvelles normes internationales destinées à améliorer les conditions de production et de commercialisation des produits de la vigne et du vin mais aussi à s'assurer que les intérêts des consommateurs sont pris en compte



# Sources d'eau d'irrigation dans les vignobles dans les régions à Indication Géographique

Proportion of water source used in some wine regions of Australia





lack of sustained intervening wet periods

combined with record high temperatures

most notably in autumn

→ a drought impact without historical precedent in Southeastern Australia

# Répartition actuelle

Répartition de l'irrigation au :		15/08/08
NSW-Murray Valley	High Security	25%
	General Security	0%
NSW-Murrumbidgee Valley	High Security	40%
	General Security	0%
NSW Lower Darling	High Security	100%
	General Security	0%
Victoria- Murray Valley	High reliability	0%
Victoria- Goulburn Valley	High reliability	0%
South Australia	Irrigation Allocation	15/09/08 11%



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## Water&Vine Fact Sheets

[Fact Sheet 01 - Post Harvest Care](#)

[Fact Sheet 02 - Conversion to Drip](#)

[Fact Sheet 03 - Salinity Management](#)

[Fact Sheet 04 - Varietal and Rootstock WUE](#)

[Fact Sheet 05 - Yield and Water](#)

[Fact Sheet 06 - Water 2008-09 and beyond](#)

Module 7 case studies will be available to download in the coming months.

[Fact Sheet 08 - Water Allocation Decisions](#)

[Fact Sheet 09 - CCW Water Tools](#)

[Fact Sheet 10 - Painting the Picture for your business](#)

[Fact Sheet 11 - Vine Physiology](#)

# Diffusion à l'échelle régionale



## MODULE TOPICS:

**Module 1** – Post Harvest Care

**Module 2** – Converting to Drip

**Module 3** – Salinity Management

**Module 4** – Varietal and Rootstock WUE

**Module 5** – Yield and Water

**Module 6** – Water 2008-09 and beyond

**Module 7** – Regional Case Studies

**Module 8** – Water Allocation Decisions

**Module 9** – CCW Water Tool

**Module 10** – Painting the Picture

**Module 11** – Vine Physiology Tool

Date	Region	Venue	Modules Delivered	Modules to be delivered (Nov/Dec)
29th Aug	Riverland - Renmark	Renmark Hotel	5, 6, 9, 10	1, 11
3rd Sept	Riverland – Berri	Berri Hotel	5, 6, 9, 10	1, 11
4th Sept	Riverland – Waikerie	Waikerie Hotel	5, 6, 9, 10	1, 11
12th Sept	Murray Valley - Mildura	Mildura Workingmans	2, 4, 5	1, 11
15th Sept	Murray Valley – Robinvale	Robinvale Golf Club	2, 4, 5	1, 11
16th Sept	Murray Valley – Swan Hill	Commercial Hotel	2, 4, 5	1, 11
18th Sept	Riverina	Gemini	2, 5, 6, 8	1, 11
25th Sept	Langhorne Creek	LC Bowling Club	3, 11	1, 4
2nd Oct	Barossa	Barossa Weintal Resort	4, 5, 6, 8, 9, 10	1, 3, 11
16th Oct	NE Victoria	Wangaratta Gateway	4, 5, 7, 8, 11	1, 10



# WATER & VINE

Managing the challenge

## MODULE 06

Water allocation scenarios  
in key regions within the  
Murray Darling Basin for the  
2008/09 season and beyond

### AUTHORS:

Leanne Webb, Greg Dunn and Snow Barlow - The University of Melbourne



These updates are supported by the Australian Government through the Irrigation Industries Workshop Programme - Wine Industry Project in partnership with the Department of Agriculture, Fisheries and Forestry and the Grape and Wine Research and Development Corporation.



[waterandvine.gwrdc.com.au](http://waterandvine.gwrdc.com.au)



# WATER & VINE

Managing the challenge



## MODULE 11

Understanding how vines cope  
with periods of hot weather and  
extended drought conditions

### AUTHOR:

Everard Edwards - CSIRO Plant Industry



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# National Climate Change Research

- Core program of investment by GWRDC addresses:
  - climate change modelling,
  - heat stress,
  - grapevine physiology,
  - water use,
  - climate change extension and
  - adaptable planting material.
- Additional funding from DAFF Australia's Farming Future Climate Change Research Program; A\$1.2M over 3 years addresses:
  - identifying new wine grape varieties, clones and rootstocks that are suited to warmer and drier conditions
  - increasing grapegrowers' abilities to manage more variable yields, shifts in ripening times and compressed growing seasons
  - delivery of knowledge, tools and strategies for climate change adaptation.

# PGIBSA Rootstock Adaptation