



## ***Regional Climate Change Adaptation Plan for the S.A. Murray-Darling Basin NRM Board Region***



*“An integrated step toward economic, social and environmental wellbeing in the face of long-term climate change”*

### **Climate change will have an impact**

In South Australia, the expected impacts of climate change are likely to be rising sea levels, warmer temperatures, lower rainfall and more extreme weather events. These impacts will affect everyone and everything. It will affect water resources, agriculture, forestry, fisheries and the natural environment. It will impact on development of our towns and cities, and it will contribute to concerns of human health.

At the same time our environment will be enduring pressure from increasing populations, an aging demographic and increasing demand for resources. It is likely that there will be changes in land use and shifts in the geographical distribution of agriculture.

Conventional farming of marginal agricultural land may become unviable due to water shortages. New biosecurity hazards and more environmental degradation due to extreme events are also likely. Other areas may become suitable to grow new crops or those displaced from other regions.

Physical infrastructure such as roads, bridges, dams, buildings and other assets are likely to be affected by the increased extremes in climate such as heat-waves, flooding, bushfire or extreme wind events.

Effects will also be felt at a social level and plants and animals will need to adapt.

### **Regional Adaptation Action - How we propose to combat climate change impacts**

In the South Australian Murray-Darling Basin (SA MDB) Region adaptation planning is occurring with social, economic and environmental sectors to prepare for future climate change. We are developing a new project that invites major stakeholders to participate in a regional planning approach.



### Phase One

- How climate change will impact the region
- Collect information and identify parts of the environment, society or economy who are most vulnerable to the effects of climate change

### Phase Two

- Fill the information gaps
- Create a regional adaptation plan from risks identified
- Identify priorities for regional action

## Integrated Vulnerability Assessment (IVA) - A tool used to assist planning

An IVA builds on a regional risk assessment looking at social, economic and environmental factors and focuses on 5 key areas:

- **Human capital** – *the social and personal contribution of individuals to produce economic value*
- **Social capital** – *the way people live and work together*
- **Natural capital** – *the value of goods and services relating to the natural environment*
- **Physical capital** – *the value of tangible goods and assets, including infrastructure, equipment and improvements in genetic resources, that is not used up in production*
- **Financial capital** – *Income/ wealth derived from various sources that has stable value and can be traded in most places and with most people*

Discovering which sectors will be most vulnerable to possible climate change, the IVA aims to identify actions to reduce vulnerability by either reducing the impacts of climate change or enhancing adaptive capacity.

Actions to adapt to climate change may include;

- Establishing early warning systems and improved responses to extreme events,
- Improving water use and energy use efficiency
- Changing agricultural practices or variety / species selection
- Modifying planning or building codes to optimise energy efficiency
- Promoting resilience to farming communities.



### *Where to from here*

Assess the environmental, social, and economic status within the SA MDB region. The project will develop a comprehensive vulnerability assessment for regional action.

The project aims to achieve:

- A high level of understanding and adaptive capacity by local government and key regional partners
- A coordinated approach to planning for and managing climate change across the region
- Contributions to emergency risk management in the region by the provision of information and project findings
- Improved efficiencies across agencies and key stakeholders
- An ongoing commitment and process to enable social leaders in regional and community organisations to remain informed with up to date, locally relevant information.

The methodology has been developed by the Local Government Association (LGA) “Guidelines for undertaking an integrated climate change vulnerability assessment as part of developing an adaption plan” - Draft April 2012.

[http://www.lga.sa.gov.au/webdata/resources/files/LGA\\_Guideline\\_for\\_undertaking\\_an\\_ICCVA\\_draft\\_April\\_2012.pdf](http://www.lga.sa.gov.au/webdata/resources/files/LGA_Guideline_for_undertaking_an_ICCVA_draft_April_2012.pdf)

We will be looking to contact local government representatives within the MDB region to partner in this initiative.

*Further information can also be obtained from the SA MDB NRM Board website or by contacting:*

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