

Victorian Climate Change Adaptation Program



Research Theme



Institutional Adaptation

Spatial locations possess varying capabilities that influence their capacity to adapt to climate change. A region's capacity for adaptation is influenced by both natural resources and human capability. By focusing on regional institutions and their capacity to respond to changing climatic conditions, this research seeks to highlight regional adaptive capacity around three key areas:

1. Knowledge resources - intellectual capital
2. Relational resources - local networks that link people together
3. Mobilisation capabilities - the capacity of institutions to capture and utilise resources.

Regional institutions in this research are defined as structures and mechanisms that provide social order and include both informal and formal dimensions:

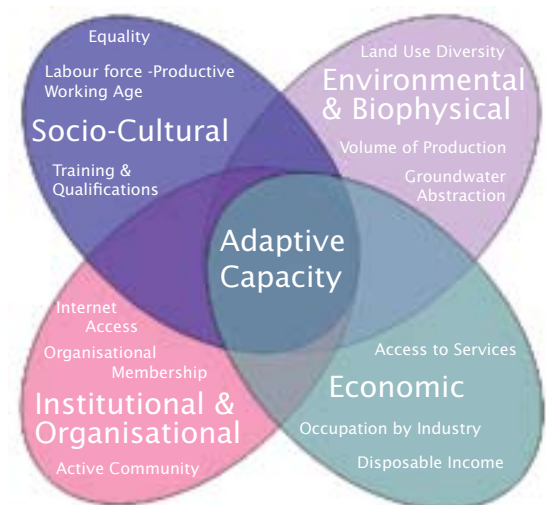
- Informal - customs, behaviours and practices linking people together.
- Formal - organisations of government, the public service and community based organisations.

The research focusses on four major areas:

- i. Institutional Adaptation:** Develops our understanding of the way in which human values influence adaptation to climate change and the social, political and institutional dynamics required to enhance resilience. A focus on regional governance assists in identifying potential barriers and thresholds to adaptation as well as innovative strategies that enhance institutional responses to climate change.
- ii. Regional Economic Impacts:** Seeks to identify regional changes in agricultural productivity, including technological adaptation, develop a

state-wide comparison of the economic performance of agriculture and identify vulnerabilities to climate change.

- iii. Adaptive Capacity:** Development of a decision support tool aimed at highlighting the capacity of regional communities to adapt to climate change. Research findings will inform decision makers and policy experts through greater understanding of the elements and drivers of change. The tool develops strategies and interventions to build regional adaptive capacity.



Indicators used to identify the Adaptive Capacity of Regional Communities

- iv. Practice Change Research:** Understanding how different practice groups respond to new climate change policies given motivations, learning preferences and adaptive strategies at the regional scale. The purpose is to identify challenges for regional level adaptation to climate change, to facilitate interaction between practice groups and develop joint action strategies.

Achievements

- Practice change research that identifies the various regional practice groups and their perceptions to climate change aimed at enhancing regional agricultural adaptation based on a practice interplay model.
- Two stakeholder surveys conducted with grains industry leaders in north-west Victoria. The surveys presents comparative data for 2006 and 2007. They identify regional institutions, attitudes towards climate change and the local networks through which information flows. A summary report clearly identifies changes in attitudes towards climate change and adaptive responses.
- A stakeholder survey conducted with dairy industry leaders in south-west Victoria. The survey identified regional institutions, their attitudes towards climate change and the local networks.
- Report reviewing the Adaptive Capacity decision support tool with future priority developments identified for 2008–09.
- Development of linkages with a range of international and national research groups focused on adaptation.

Next Steps

- A regional economic profile of the south-west pilot region highlighting current and forecasted agricultural productivity under climate change scenarios.
- A survey of industry leaders in the pilot region from the grains, dairy, and forestry industries, examining perceptions, attitudes, knowledge networks and adaptations strategies to climate change.
- Development of adaptive capacity decision support tool using agent based simulation and statistical analysis.
- Presentation of survey results with the stakeholders.



Matrix of Grains Industry Leaders in north-west Victoria

- Integrate Institutional Adaptation outcomes with other DPI VCCAP research themes, contributing to the programs' overall outcomes on climate change adaptation for primary industries.

Institutional Adaptation research is contributing to DPI VCAAP by developing expert knowledge and decision support tools focussed on enhancing the resilience of regional institutions to climate change. The research seeks to assist decision makers and policy experts to design policy responses, communicate effectively with stakeholders and enhance investment decisions on regional infrastructure requirements.

Futher Information

DPI VCCAP website: www.dpi.vic.gov.au/vro/vccap



Patricia Fitzsimons, DPI Parkville
Project Leader
Phone: (61) 3 8341 2400
patricia.fitzsimons@dpi.vic.gov.au



Larissa Tiller, DPI Parkville
Senior Research Scientist
Phone: (61) 3 8341 2400
larissa.tiller@dpi.vic.gov.au

If you would like to receive this information/publication in an accessible format (such as large print or audio) please call the Customer Service Centre on 136 186; TTY: 1800122 969, or email customer.service@dpi.vic.gov.au.

Published by: Department of Primary Industries
1 Spring Street, Melbourne, Victoria, Australia. July 2008
© The State of Victoria, 2008

This publication is copyright. No part may be reproduced by any process except in accordance with the provisions of the *Copyright Act 1968*.

ISBN 978-1-74217-071-8 (print)
ISBN 978-1-74217-072-5 (PDF)

Authorised by: Victorian Government 1 Spring Street,
Melbourne, Victoria 3000 Australia

Disclaimer

This publication may be of assistance to you but the State of Victoria and its employees do not guarantee that the publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence which may arise from you relying on any information in this publication.

For more information about DPI visit the website at www.dpi.vic.gov.au or call the Customer Service Centre on 136 186.