



BACKGROUND PAPER

CLIMATE CHANGE ADAPTATION

DRAFT

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Date: September 2013

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Acknowledgments

I would like to acknowledge the input and support of the following people:

- SGGPCP Partners and stakeholders
- VCCCAR Implementing Adaptation Tools research team
- Work colleagues

EXECUTIVE SUMMARY

This paper outlines the background information gathered to inform planning around climate change adaptation for the 2013 – 2017 strategic planning process across the Southern Grampians and Glenelg Shires. Historically climate change impacts on health and wellbeing has focused on direct impacts such as extreme weather events and airborne disease. Evidence centered upon the indirect impacts of climate change on rural communities is lacking. The Southern Grampians and Glenelg Primary Care Partnership (SGGPCP) publication *Climate Change Adaptation: A Framework for Local Action*¹ describes indirect impacts of climate change as household energy efficiency, household water use, food security and social connection and this framework has been used to lead local work across the catchment over the last 5 years. Preliminary findings through comprehensive research conducted by ACOSS begins to fill research gaps to understand the impacts of rising energy prices on low incomes. More formal data sets concentrate on environmental impacts of climate change and further research to better understand the indirect impacts on our community needs to be undertaken.

Strong partnerships have been cultivated across the catchment to support future direction. These partnerships have developed through project work, networks and research and include SGGPCP partner agencies, state and federal government, universities and research partners, community and community groups. The 2014-2017 strategic planning period enables a timely opportunity to integrate and co-ordinate climate change adaptation work across the catchment to increase our capacity and to share learnings and resources.

We need to build the evidence base and document and share our learnings by continuing to support community based adaptation projects. Community driven projects will build local capacity and understanding while enabling opportunities for localized community engagement.

The goal over the next 4 years is that vulnerable communities will have increased their resilience through adaptation to climate change. We aim to achieve this by integrating our approach and conducting research to further understand the indirect impacts of climate change. Working closely with vulnerable communities to increase their capacity to adapt will ensure community engagement while adding to the local evidence base to inform best practice.

1. PURPOSE & SCOPE

This paper details the results of an extensive planning process to determine the relative priority and future direction for climate change adaptation in the Southern Grampians and Glenelg Shires. This has informed Southern Grampians and Glenelg Municipal Public Health and Wellbeing Plan and Southern Grampians and Glenelg Primary Care Partnership's (SGGPCP) Strategic plan. This paper will focus on the impacts of climate change on people rather than on environmental or sustainability issues. Moreover, this paper will refine the focus to the indirect impacts of climate change on people, such as household energy efficiency, household water use, food security, transport and social connection.

Recently SGGPCP facilitated a strategic planning workshop through the Victorian Centre for Climate Change Adaptation Research (VCCCAR) *Implementing Adaptation Tools Research Project*. The workshop utilised the Climate Change Adaptation Navigatorⁱⁱ as a facilitation tool to guide a conversation to determine priority action. The highest priority action agreed upon was to further understand and assess the effects of climate change on people, particularly vulnerable groups, across the catchment to add to the limited data currently available. Investigation into impacts could be conducted using an active research methodology, engaging the community in the process to increase understanding and inform the assessment. The workshop also identified the need for strategic leadership and co-ordination to share the limited resources and data available.

2. BACKGROUND

2.1 Quantitative Data

The focus of climate change data centres on temperature variation, extreme weather events, airborne disease and environmental impacts such as sea level rise. There is limited data available around climate change and health. Work completed by the Victorian Department of Sustainability and Environmentⁱⁱⁱ predicts rising temperatures stating that the future climate of this region is expected to be hotter and drier than it is today. By 2070, under a higher emissions growth scenario, Portland's temperatures would resemble those of present day Horsham, while annual rainfall would be similar to present day Hamilton. Under a higher emissions growth scenario, Hamilton's temperatures would resemble those of present day Horsham, while annual rainfall would be similar to present day Ararat. The Victorian Department of Health published a report into the health impacts of the heatwave in Victoria in 2009^{iv} found that there were 374 excess deaths in Victoria during the 5 days of Heatwave in January 2009 which was a 62% increase in all cause mortality with reportable deaths in those 65 years and over almost doubled.

The Great South West Community Report Card^v developed a set of indicators to measure vulnerability of communities to climate change. The Shire of Southern Grampians was given a rating of 42 and Glenelg 44, while the Victoria average is 22 (a lower score is better). Other data that is available focusses on household recycling and energy use. Residents of the Shire of Southern Grampians recycle 42% of household waste while residents in Glenelg Shire recycle 36% (The Victorian average is 51%). The Department of Sustainability and Environment (DSE) has compiled data from Victorian electricity and gas distributors to provide a state-wide picture of Victoria's household energy use. The data shows household energy use in the Southern Grampians Shire to be 42 gigajoules per household and Glenelg Shire 36 with a state average of 51.

More recently (2013) ACOSS^{vi} have published a detailed study into energy efficiency and people on low incomes detailing the increasing vulnerability to rising energy prices. The paper found that people on low incomes are more likely to use inefficient appliances such as heaters and refrigerators and they tend to conserve energy as a response to higher prices resulting in people on low incomes

using their air conditioner and heaters less frequently than people on higher incomes. They are also more likely to live in houses that have gaps in doors and windows and less likely to have insulation. The report identifies that single parent families are more likely to seek emergency assistance to help pay for their medical bills and that rising energy prices can drive people with medical needs to reduce their heating to the detriment of their health.

Given that the Shires of Southern Grampians and Glenelg shires have a high percentage of their community living on low income, rising energy prices could have significant impact. Southern Grampians Shire scores 994.5 on the index of relative socio-economic disadvantage^{vii} while Glenelg Shire scores 960.2. (The Victorian Average is 1010.0)The index is derived from attributes that reflect disadvantage such as low income, low educational attainment, high unemployment, and jobs in relatively unskilled occupations. A higher score on the index means a *lower* level of disadvantage. A lower score on the index means a *higher* level of disadvantage. The population of Southern Grampians and Glenelg Shires are also aging with the median age in Southern Grampians Shire 44, and Glenelg 43 compared to 37 for Victoria.

2.2 Evidence

Climate Change and health impacts were identified by SGGPCP as a priority area for action in the 2009 -2013 strategic plan. Previous work by SGGPCP was facilitated by the publication of *Climate Change Adaptation: A Framework for Local Action*^{viii} identifying indirect impacts of climate change including household energy use, water use, food security, transport and social connection with a focus on vulnerable communities. The publication highlighted that the most vulnerable groups in Australia are likely to include the elderly, the chronically ill, the socio-economically disadvantaged, those with poor access to essential services such as good housing and adequate fresh water and those whose economic prosperity depends heavily on climatic conditions.

Neil Barr^{ix} in his paper *Understanding Rural Victoria* details the range of social/demographic landscapes in Victoria and the transition landscapes. He describes the transition landscapes as: areas experiencing rapid land change, decline in small towns and migration away of young people, decreasing number and increasing average age of farmers, shift of population to some small towns due to housing affordability pressures in Melbourne and regional towns, increasing numbers of newcomers raising issues of tolerance and trust and low social bridging capital (connection with others outside their area). Barr expects that these transitional characteristics are likely to amplify as a result of climate change. He describes the increase in public health issues including; increasing vulnerability in isolated small towns with few services (health, transport, fresh food); increasing social isolation as a result of higher fuel costs and hence affordability to travel to services; reduced social “bonding” capital (connections within and between communities) resulting in reduced

community strength; and poorer health outcomes for those living in disadvantaged towns.

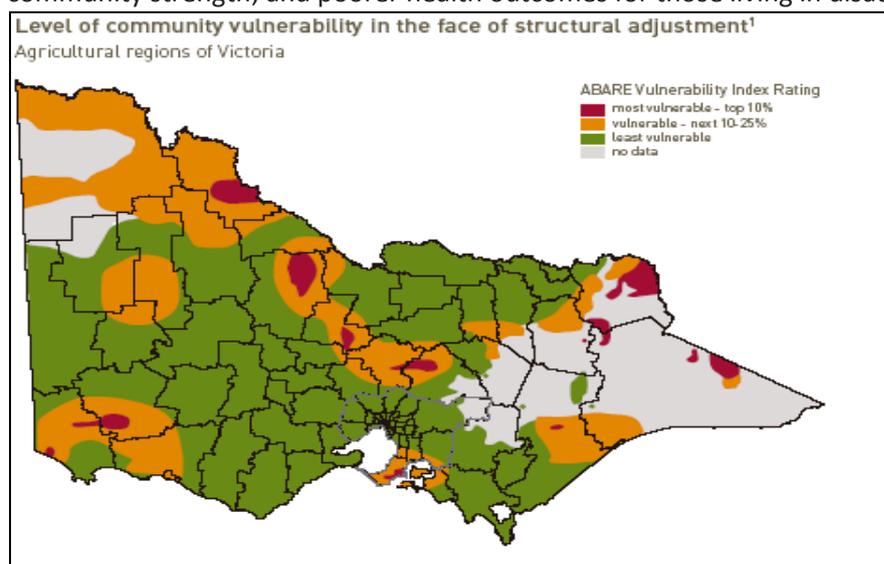


Figure 1 Community Vulnerability in the face of rural adjustment

3. CONTEXT

3.1 Federal

Current Australian Government Policy-Securing a Clean Energy Future – The Australian Government Climate Change Plan^x outlines the existing policies already underway to address climate change and cut carbon pollution and introduces several critical new initiatives. The plan has four pillars: a carbon price; renewable energy; energy efficiency; and action on land. The plan also details how the Government is supporting Australian households, businesses and communities to transition to a clean energy future. To support Australian households, the plan details mechanisms to support households to become more energy efficiency including efficiency through a number of government programs. Current federal policy direction is likely to change with installation of a new government in September 2013.

3.2 State

The Victorian Climate Change Act through the Victorian Climate Change Adaptation Plan^{xi} advocates the inclusion of climate change in Municipal Public Health and Wellbeing Plans advocating integrated planning across all levels of government. This first Climate Change Adaptation Plan for Victoria focuses on government preparedness by ensuring that: appropriate risk management strategies are in place for public assets and services; enhanced disaster resilience strategies are being implemented; and government policies and programs encourage and facilitate climate resilience and adaptive capacity across the Victorian community

3.3 Regional

Climate change adaptation is highlighted in the Great South Coast Regional Plan^{xii} under the pillar *Sustain our Natural Assets* stating that disadvantaged groups with limited adaptive resources are likely to be disproportionately hurt by extreme weather and the long term impacts of climate change. The plan advocates reducing the potential for harm from climate change impacts on our people, particularly disabled, aged and disadvantaged people.

3.4 Local

Southern Grampians and Glenelg Shires have considered strategic direction in sustainability and have ten year strategic plans^{xiii xiv} to guide councils work to ensure environmental sustainability throughout the catchment. Both municipalities employ a sustainability officer to guide council and work with the community to achieve objectives set out in the plans.

Climate Change Adaptation: A Framework for Local Action – the framework developed by SGGPCP continues to provide direction locally particularly in relation to indirect impacts of climate change with a focus on community vulnerability.

4. LOCAL CAPACITY

4.1 Strengths of past experience to build current capacity on

Climate change Adaptation: A Framework for Local Action guided SGGPCP work with vulnerable communities through a demonstration project in Merino focusing on household energy efficiency. The demonstration project in Merino investigated a community development approach to engage the community and stakeholders to improve household energy efficiency. This led to the Sustainability Victoria funded initiative *Pass the Parcel* which drew on the learnings from Merino and expanded the project across the SGGPCP catchment to extend the community engagement and to build the capacity of SGGPCP member agencies. Alongside the development of these projects SGGPCP increased knowledge and leadership in climate change adaptation by participating in Heatwave Planning with the Victorian Department of Health and supporting initiatives and plan development with local government. SGGPCP has continued to build capacity, networks and leadership in climate change and health and recently participated in the *VCCCAR Implementing Adaptation Tools Research project* enabling further development of skills and knowledge.

Southern Grampians Shire has participated in a project to reduce vulnerability for Home and Community Care Clients to heatwave.. The Glenelg Shire were active participants in the SGGPCP *Pass the Parcel* Project and also conducted an Energy Efficiency Workshop series across the shire which led to the establishment of *The Glenelg Masters Project* training community champions to build local capacity. Local Government is also involved in natural resource management, biodiversity, environmental planning and waste reduction. Emergency Management Planning is core business for both shires with extreme weather events such as fire, flood and heatwave incidents increasing throughout the catchment.

4.2 Leadership and Governance

- SGGPCP have been recognised as innovative leaders in indirect impacts of climate change on vulnerable groups. SGGPCP staff have taken on this leadership with the Executive committee support on behalf of partners with aim to building partner capacity along the way.
- SGGPCP have focused on indirect impacts of climate change while others more focused on direct impacts, bushfire, flood, heatwave. These approaches have not been well integrated in the past and there could be opportunities for sharing across all impacts on people

4.3 Partnerships

- There exist strong partnerships across the catchment to support future direction including partnerships with:

- Local health services, Local Government and community organisations, particularly through past participation in SGGPCP *Pass the Parcel Project*, Heatwave development and other community projects and initiatives.
- Local Government Home and Community Care (HACC) particularly as a result of participation in SGGPCP *Pass the Parcel Project*, Heatwave development, and the upcoming *Glenelg SAVES* (Low Income Energy Efficiency Project) project in Glenelg Shire. The Glenelg SAVES project brings significant capacity into the catchment and is a 3 year partnership with SGGPCP, Glenelg Shire, University of Ballarat and Energised Homes.
- Local communities through involvement in climate change adaptation projects, particularly the Merino community who participated in a demonstration project with SGGPCP.
- Local experts including Portland Sustainability Group, Hamilton Community Orchard and particularly two local consultants who have participated in SGGPCP *Pass the Parcel Project* and planning for future projects .
- Research & Data expertise particularly through networks established with Universities through VCCCAR, University of Ballarat (through the National Centre for Sustainability) and Deakin University. Over the past 12 months SGGPCP has built strong relationships with VCCCAR particularly through participation in the *Implementing Adaptation Tools* research project. This has enabled SGGPCP to embed climate change leadership and further build capacity and networks. The VCCCAR project has facilitated strong links to the research sector particularly providing opportunity to increase knowledge across the catchment.
- The Victorian Department of Health, particularly through the Environmental Health Unit and established relationships with Sustainability Victoria and the Victorian Commissioner for Environment and Sustainability. Strong Federal Government links have been established through the Australian Department of Resources, Energy and Tourism through the Glenelg Saves (LIEEP) Project.
- Relationships have been cultivated with advocacy organisations such as VCOSS and ACOSS as well as the Climate and Health Alliance adding to opportunities for increase in knowledge and networks.
- Kildonan Uniting Care who have been leading work in energy efficiency and low income households

There also exist opportunities to leverage off other complimentary behaviour change goals such as those relative to food security, active transport and telehealth.

4.4 Information and information systems

There is a recognised deficiency in local data, particularly relevant to the effects of climate change on people.

Both municipalities have a strong commitment to climate change adaptation with involvement in the *Climate Resilient Communities of the Barwon South West*, a partnership project to assess vulnerability of the Barwon South West to climate impacts. The project aims to assess climate risk and variability through research and modeling and to develop climate adaptation planning based on the research findings. This project will increase the knowledge across the catchment about our environmental vulnerability however the project scope does not enable a strong focus on the indirect impacts of climate change on people.

4.5 Financing and resource allocation

Although knowledge and capacity throughout the region has increased over the past few years, co-ordination and resources are limited. There are some potential funding opportunities through government and community grants programs.

SGGPCP has funded some of climate change leadership work from untied reserves. SGGPCP will lead the Glenelg SAVES (LIEEP) project providing a 3 year commitment to working with a vulnerable community to improve energy efficiency.

4.6 Workforce development

The workforce skills and knowledge across the catchment have developed over the past few years particularly as a result of the increased leadership of SGGPCP and the partner agencies participation in the development of the climate change publication, as well as participation in the Merino demonstration project and the *Pass the Parcel* Project. The development of strong networks both within and external to the catchment will enable support to extend current capacity and knowledge.

5. FUTURE DIRECTION

Although there is some emerging data to increase evidence to inform planning around climate change and health, this is extremely limited. A better understanding of the community's vulnerability will create a platform to develop a strategic approach to reduce the vulnerability of our community. Strong evidence published through ACOSS identifies the impact of rising energy prices on low income households particularly and work by SGGPCP has begun to build capacity and awareness throughout the facilitation of the *Pass the Parcel project*.

Consultation across the catchment, together with a review of current knowledge and capacity, points to the need to learn more about the impact of climate change on our community and to co-ordinate work with the community to build awareness while developing a strategic approach to increase the adaptive capacity of the community and stakeholders. This could be achieved by:

- developing a co-ordinated approach
- further researching the vulnerability of our community to climate change
- increasing the capacity of our community to adapt to climate change
- developing pilot projects and sharing our learnings

The shared goal, objectives and strategies are as follows:

Goal: Vulnerable communities have increased their resilience through adaptation to climate change.

Objectives	Strategies
By 2017, we will integrate our approach to climate change adaptation across the Glenelg and Southern Grampians shires to share knowledge and increase our capacity.	Establish a mechanism to network and co-ordinate our efforts and share our knowledge.
By 2017, we will document research to better understand our community's vulnerability to climate change.	Conduct vulnerability mapping across the catchment Work with the community to determine the perception of risk, potential impacts and

	generate solutions. Review strategic direction informed by vulnerability mapping
Increase the capacity of vulnerable communities to adapt to climate change	Engage community through awareness raising, training and education, networking and shared learning
Build evidence base for Climate Change adaptation in rural settings	Implement programs and projects to test local solutions to inform future planning Expand the implementation of successful programs

ⁱ Rowe, R and Thomas, A (2008) ***Climate Change Adaptation: A Framework for Local Action***. Southern Grampians and Glenelg Primary Care Partnership. The McCaughey Centre, Melbourne School of Population Health The University of Melbourne.

ⁱⁱ <http://www.adaptation-navigator.org.au/>

ⁱⁱⁱ http://www.climatechange.vic.gov.au/_data/assets/pdf_file/0006/73077/GlenelgHopkins_WEB.pdf

^{iv} [http://docs.health.vic.gov.au/docs/doc/F7EEA4050981101ACA257AD80074AE8B/\\$FILE/heat_health_impact_rpt_Vic2009.pdf](http://docs.health.vic.gov.au/docs/doc/F7EEA4050981101ACA257AD80074AE8B/$FILE/heat_health_impact_rpt_Vic2009.pdf)

^v <http://www.gswreportcard.org/index.htm>

^{vi} Australian Council of Social Service (2013) ***Energy Efficiency and People on low incomes***. ACOSS

^{vii} <http://www.abs.gov.au/census>

^{viii} Rowe, R and Thomas, A (2008) ***Climate Change Adaptation: A Framework for Local Action***. Southern Grampians and Glenelg Primary Care Partnership. The McCaughey Centre, Melbourne School of Population Health The University of Melbourne

^{ix} Barr Neil (2005) ***Understanding Rural Victoria***. State Government of Victoria, Department of Primary Industries.

^x <http://www.cleanenergyfuture.gov.au/clean-energy-future/securing-a-clean-energy-future>

^{xi} http://www.climatechange.vic.gov.au/_data/assets/pdf_file/0006/158640/4493_DSE_Climate_Change_Adaptation_Plan_WEB.pdf

^{xii} http://www.greatsouthcoast.com.au/images/stories/GSC_Regional_Strategic_Plan_Web.pdf

^{xiii} http://www.glenelg.vic.gov.au/files/GSC_Environment_Strategy_2010_2020.pdf

^{xiv} <http://www.sthgrampians.vic.gov.au/Files/AmendmentC25-SGSCSustainabilityStrategy2010-2020Final.pdf>