



Climate Change Adaptation Gap Analysis Part Three

Document Control

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1. Introduction

The Department of Environment, Land, Water and Planning (DELWP) is conducting a climate change adaptation regional gap analysis to develop regional priorities for adaptation based on the climate change impacts the region is likely to experience, the needs and values of regional communities, and work undertaken to date. The DELWP Port Phillip Region team have engaged the Northern Alliance for Greenhouse Action (NAGA), working with the other metropolitan Alliances (WAGA, SECCCA and EAGA), to deliver part of this analysis by February 2018.

2. Scope

2.1 Reports

The gap analysis to be delivered by NAGA consists of the following defined pieces of work:

Part One

- Regional Snapshot
- Stakeholder Analysis
- Climate Change Impact Assessment

Part Two

- Vulnerability Mapping

Part Three

- Existing Adaptation Responses

Part One was delivered on 22 December 2017 and Part Two was delivered on 19 January 2018. This report forms the output from Part Three of this work.

2.2 Adaptation Responses

Existing Adaptation Responses have been captured through interviews with Greenhouse Alliance Executive Officers, through a survey of stakeholders identified in the Stakeholder Analysis carried out for Part One, and through desktop research of funded projects. This includes current and recently completed projects and identified needs for future support.



3. Existing and planned responses

The following section summarises some of the projects taking place in the Port Phillip region, in the context of the communities and assets identified as potentially vulnerable to climate change in Report Two. Existing adaptation responses collected here typically relate to projects carried out by local governments and the Greenhouse Alliances. Please note that while this research has not identified projects in certain sectors, this could be due to a lack of connection and communication between organisations carrying out such projects, and the Greenhouse Alliances.

Also included are several projects which also relate to mitigation, such as housing insulation, and installing solar for low income households. These are included because they can also work towards adaptation: well insulated buildings allow for more thermal comfort, a concern in the context of rising temperatures; solar for low-income households allows these households to cool their households, without concerns of fuel poverty - this is particularly a concern for low-income households who are also vulnerable to heat, such as older people and babies and young children.

For a full list and details of projects identified by this work and described below, please see Appendix A.

3.1 Populations and Communities

No specific projects were identified relating to improving climate change resilience and adaptive capacity for:

- Aboriginal and Torres Strait Islander peoples (individuals or communities);
- Culturally and linguistically diverse communities, refugees and newly arrived migrants;
- Community wellbeing impacted because of climate change;
- Alcohol and Other Drug users. However, this population could be best served through improved mental health services, to reduce vulnerability resulting from problem use of alcohol and other drugs. Linkages could also be made with emergency services, as people with problem use of alcohol and other drugs are vulnerable to heat impacts (see Report 2).

Programs were available for:

- People with complex health needs can access some projects, such as Victorian Healthy Homes;



- No specific programs were identified to improve resilience for babies and young children (programs here could be targeted towards parents, childcare facilities, and state services delivering care services for babies and young children). However, Knox are planning on installing better insulation for their childcare facilities;
- Some projects responded to the needs of older people on low-incomes, such as Solar Savers, and those receiving Home Care services, such as Hume Heatwave Help;
- People with a disability may be able to access Healthy Homes for Victoria, if they are on a low-income and have complex health needs, or Hume Heatwave Help, if they are receiving Home Care Services;
- Several projects were identified for public housing (for example, EnergySmart). Victoria's Climate Change Adaptation Plan 2017-2020 identifies new design guidelines for public housing to be built to a 7-star minimum standard.¹ The City of Melbourne has measures to assist people experiencing homelessness in extreme heat events, though these are temporary measures such as pool passes;
- Several services were available, according to certain criteria, for low-income households, including Hume Heatwave Help, Victorian Healthy Homes, Solar Savers and Energy Smart;
- No specific programs were identified to assist transient populations to improve resilience to climate change, however the Australian Open has a heat policy. VicHealth and City of Melbourne also installed 60 water fountains throughout the City of Melbourne, a measure that will improve health outcomes during heat events.

3.1.1 Bushfire & Flood Responses

- For communities living in the Yarra Ranges, the shire has adopted an emergency management approach to incorporate climate change. In the Upper Yarra, the ABC may be rebroadcast with emergency communications;
- Knox City Council are installing solar with a battery back-up at one of their evacuation centres (the Knox Regional Netball Centre);
- Emergency Management Victoria is developing a community resilience framework for Victoria's emergency management sector.

¹ DELWP 2016, Victoria's Climate Change Adaptation Plan, Victorian Government, p.35.



3.1.2 Urban and rural communities

- The 20 million trees project, as well as Cooling Communities, Melbourne's Urban Forest Strategy, and several energy efficiency projects are working towards mitigating the Urban Heat Island Effect.

3.1.3 Coastal Adaptation Responses

- The Association of Bayside Municipalities are undertaking adaptation in the Port Phillip Bay. CoastAdapt also provides resources, relevant to coastal adaptation.

3.2 Assets

3.2.1 Natural Assets

- Several projects are being undertaken in the East on a regional level, to protect biodiversity (Biodiversity Monitoring in Melbourne's East, and Bushland and Urban Biodiversity Management in a Changing Climate).
- Greening the West are engaged in greening projects in Melbourne's West, including the 20 million trees project.
- The Green Army are involved in supporting local conservation projects;
- ClimateWatch use citizen science to engage individuals about the changes taking place in their natural environment, and to collect data and monitor the climate themselves.

3.2.2 Built Environment & Infrastructure

- Several projects exist relating to developing design frameworks, such as the Sustainable Urban Design Framework;
- Buildings can be eligible for a retrofit to improve energy efficiency, through programs such as 1200 buildings; EUAs are now offered by 18 councils across Victoria
- Several projects relate to improving the security and reliability of the National Electricity Market, such as demand response trials (a mechanism to shift electricity usage away from peak periods, a concern with rising temperatures and increased use of cooling devices);
- Stormwater management and water-sensitive urban design projects exist, such as the Banyule Stormwater Harvesting project;
- However, there are currently no minimum mandatory energy efficiency standards for building *use* (as opposed to design). This could provide support



to adapt to climate change for renters, where the split incentive is a barrier. Both landlords and tenants believe this is a viable solution to achieve energy efficiency for rented housing².

3.2.3 Industry

- Climate Kelpie connects farmers with the latest tools and research available to them;
- The City of Whittlesea have incorporated changing precipitation patterns in their information available to farming communities;
- No specific tourism projects were identified, though CoastAdapt have published information relating to how climate change will impact tourism;
- Climate change adaptation projects in the health and social services were not identified. While many of the organisations here were partnered in service delivery of some of the projects listed, projects to improve the resilience of the sector were not identified. It is recommended speaking to the health and community services stakeholders identified in Report 1 to gain a fuller understanding of adaptation responses in this sector.
- No projects were identified for small and medium enterprise, or for outdoor workers.

3.2.4 Cultural Assets

- Programs designed to adapt cultural assets were not identified during this research.

Details of the projects discussed above can be found at Appendix A.

4. Local government climate adaptation plans

A short review of each of the 31 LGAs in the region identified whether they had a stand-alone climate change adaptation plan or not. Some councils incorporate climate change adaptation into a wider climate change strategy or sustainability strategy (which is noted in the analysis). The lack of an explicit adaptation plan does not

² Wrigley, K & Crawford, RH (2015) Bridging the gap: energy efficiency improvements for rental properties in R.H. Crawford and A. Stephan (eds.), Living and Learning: Research for a Better Built Environment: 49th International Conference of the Architectural Science Association 2015, pp.322–331. ©2015, The Architectural Science Association and The University of Melbourne.
http://anzasca.net/wp-content/uploads/2015/12/031_Wrigley_Crawford_ASA2015.pdf



necessarily mean that a council is not carrying out action in this area. Some councils may include actions to adapt to climate change in other policies e.g. Health and Wellbeing Plan, Emergency Management Plan, Water Strategy etc. However, a more in-depth piece of work would be needed to identify this comprehensively across all 31 councils.

14 of the 31 councils have Climate Change Adaptation plans or include adaptation as part of a wider climate change strategy, and one council is currently preparing a climate change adaptation plan. Others reference adaptation in their Sustainability Strategy.

See Appendix B for full list

5. Identified needs for future support

Areas in need of future support, identified through the survey conducted, and through interviews with Executive Officers, relate to:

- Information on climate change impacts, both in how it is disseminated, linked to actions, and implemented;
- Taking a more holistic approach. Climate change adaptation is necessary on a broad scale, though it often remains a 'sustainability' issue, and discrete projects are carried out without a consideration of systems and interconnectivity;
- Engaging broader sections of the community, both within government, in the private sector, and within local communities.

These themes also relate to each other - for example, the way in which information is accessed and shared will impact the capacity to take a holistic approach to climate change adaptation, or community engagement.

5.1 Information on climate change impacts

An issue repeatedly raised related to information on climate change impacts. It was acknowledged that while there is a lot of information available on climate change impacts, local governments and communities often had difficulty interpreting that data and understanding the relevant implications. This also relates to implementing adaptation responses: if relevant implications are poorly understood, or local governments do not have the time and capacity to interpret the available information,



adaptation responses will not eventuate. It was suggested that stronger linkages should exist between researchers and academia, local government and industry, to ensure the data and information available can be understood, with recommendations resulting in tangible projects and benefits for the community.

5.2 Holistic responses

A lack of coordination was raised as an issue. This relates to integrating known risks into local government strategic management; sharing information across councils and across portfolios about what actions are being undertaken and need to happen; and linking responses across planning schemes, according to future needs because of population growth, urbanisation and climate change. This was raised in relation to critical infrastructure planning, and synchronising local and state planning schemes, to ensure responses are complementary. There was a concern about the lack of coordination on existing adaptation responses, particularly where these responses did not exist within sustainability teams. For example, it would be useful to have a discussion in relation to different responses across community and health care in the region, so that knowledge and capacity building could take place.

5.3 Engaging broader sections of the community

A lack of knowledge and understanding outside of those working on climate change was raised as a concern, and a barrier to future actions. This was raised as a concern for engaging relevant stakeholders to allow for adaptation responses to take place. Poor understanding of impacts, risk and implications outside of those working on climate change was also raised as a concern within councils: while climate change will impact all sectors of society and the natural environment, climate change impacts are often not incorporated into the planning of other portfolios. A lack of engagement with the community, in relation to adaptation, is also an issue. Communities will be deeply impacted by climate change, and it is important that they understand the risks and implications, and how they can begin to adapt and respond to a changing climate, on both a community and individual level.

Discrete gaps in adaptation responses, and suggested projects, as well as the needs identified above, are included at Appendix A.



List of appendices

Appendix A

Project list - existing, pending and future support needed

Appendix B

LGA adaptation plans