

# Climate Adaptation Roadmap for Melbourne's East

## Monitoring and Evaluation Framework

Milestone 4: March 2015

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## Climate Change Adaptation Roadmap Project: Monitoring and Evaluation Framework

This Monitoring &Evaluation Framework (M&E framework) is designed to assess the degree to which the longer term objectives of the Climate Change Adaptation Roadmap (Roadmap) project are being met and assess how well the Eastern Alliance for Greenhouse Action (EAGA) councils are adapting to climate change.

The United Nations Development Program (UNDP) recognises that “adaptation is not generally an outcome, but rather consists of a diverse suite of ongoing processes (including social, institutional, technical and environmental processes) that enable the achievement of development objectives<sup>1</sup>. Monitoring and evaluation of adaptation should be centered around the following two questions;

- 1) are we doing things right?
- 2) are we doing the right things?

The nature of adaptation makes it unsuitable for the traditional approaches to monitoring & evaluation due to the long timescales of climate change, multi-sectoral nature of adaptation, absence of existing performance criteria, and the wide range of potential adaptation actions<sup>2</sup>. As such it is more often that adaptation is evaluated based on process rather than outcomes, as outcomes may take up to 20 or 30 years to be realised. It is intended that this framework is used more as an ongoing decision making tool learning process than a formal auditing process.

Tracking the progress of adaptation allows EAGA to:

- 1) assess whether we are continuing towards our adaptation vision and goals;
- 2) to know whether the actions in the Roadmap are delivering the results that were anticipated

The Roadmap project centered around two types of adaptation interventions; embedding climate change in council organisational processes such as risk management, and ii) identifying and delivering regional adaptation actions. This M&E framework focuses on these two broad questions; how well has climate change adaptation been mainstreamed and embedded into council organisational processes, and how well has the Roadmap been implemented and led to regional action (see Table 1).

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<sup>1</sup> United Nations Development Programme, “Monitoring and Evaluation Framework for Adaptation to Climate Change”, <http://www.seachangep.org/node/139>

<sup>2</sup> Bours, D., McGinn, C. and Pringle, P. 2013. Monitoring & evaluation for climate change adaptation: A synthesis of tools, frameworks and approaches. SEA Change CoP, Phnom Penh and UKCIP, Oxford.

**Table 1: Purpose and audience of M&E framework**

	Embedding Climate Change	Delivering Adaptation Actions
<b>What is being monitored and evaluated?</b>	How well has climate change risks and responses been integrated into council decision making and organisational processes?	How well has the Roadmap been implemented and led to regional action?
<b>Who is the framework for?</b>	Individual councils seeking to further advance the process of embedding adaptation throughout their organisation	EAGA working group seeking to understand what has worked and what has not from the Roadmap, and how to further progress regional adaptation action

## Timing of monitoring and evaluation

Monitoring and evaluation of the effectiveness of the Roadmap should be undertaken at regular intervals by the EAGA working group. Monitoring should be undertaken in parallel with implementation to ensure that new opportunities are identified and realised.

**Progress on implementation of the Roadmap should take place annually prior to end of financial year by EAGA** to ensure that new projects can be identified for investment and the effectiveness of existing initiatives considered. Major reviews of the risk assessment, the Roadmap actions and shifting regional and council priorities should aim to take place every two years. Figure 1 sets out a proposed timeline for key aspects of monitoring and evaluation.



**Figure 1: Timeline for the M&E framework**

## Evaluation criteria and adaptation indicators

Developing indicators for adaptation actions is an emerging field and often the necessary baseline data is not available. For evaluating some of the Roadmap actions and the embedding work, it may be necessary to establish a baseline relating to climate and weather data, but also to staff capacity and existing organisational practices. When seeking to implement adaptation actions, indicators should be identified for each individual initiative. This should be developed and finalized before the initiative commences. The outcomes of the “How Well are We Adapting” project of the Western Alliance on Greenhouse Action on developing indicators for adaptation should be used as a guide.

## Progress on Delivering Adaptation Actions

The following assessment is for the EAGA’s councils to consider the effectiveness of the Roadmap in progressing regional actions.

### Where are we at?

1. Undertake a stocktake of Roadmap actions using the Checklist Table provided in Appendix 1
2. How many of the Roadmap actions have been started or implemented?
3. How well were they implemented and did they lead to positive outcomes towards the objectives? Do the initiatives adequately fit the objectives?
4. Do any of the actions exacerbate other impacts of climate change? That is, do any lead to maladaptation?

### Where could we do better?

1. Consider the list of priority actions that have not yet been implemented. What are the key barriers to implementing the actions?
2. Have conditions or other priorities within councils changed enough to enable implementation now?
3. Based on the number of actions being implemented, how well is the region addressing the broader adaptation objectives in the Roadmap? What objectives appear not to be progressing?
4. How have regional stakeholders been engaged in the implementation of the Roadmap? Are there other stakeholders that should be engaged with more closely?
5. How are successes being communicated?

## What new options could we pursue?

1. Is there potential new funding options? Are previous funding sources still available?
2. Could any of the complementary actions be pursued?
3. Are there any existing or planned regional programs/projects that adaptation actions could be integrated with?

## Progress on embedding climate change in council organisational processes

The following assessment is for the individual council staff seeking to consider how well adaptation is being embedded into their organisational processes.

### Where are we at?

1. Undertake a stocktake of your council's adaptation activity (risk registers, plans, strategies, actions)
2. To what extent have climate change risks been integrated into operational risk registers and service delivery plans?
3. To what extent is climate change considered in the Council Corporate Plan?
4. Where are the overall successes? What could be done better?
5. Is there high level support for adaptation? Who are the potential champions?

### Where could we do better?

1. What areas of council could be prioritised for building adaptive capacity? A whole of council approach or a focused service area approach? (See [ACELG Climate Adaptation Manual Volume 1](#) for choosing an approach)
2. List activities that could be happening to achieve good adaptation, using the Roadmap actions and regional risk assessment as a guidance
3. What best practice adaptation initiatives are happening within the EAGA region that could be pursued by your council?
4. Consider the key questions for embedding climate change in the Council

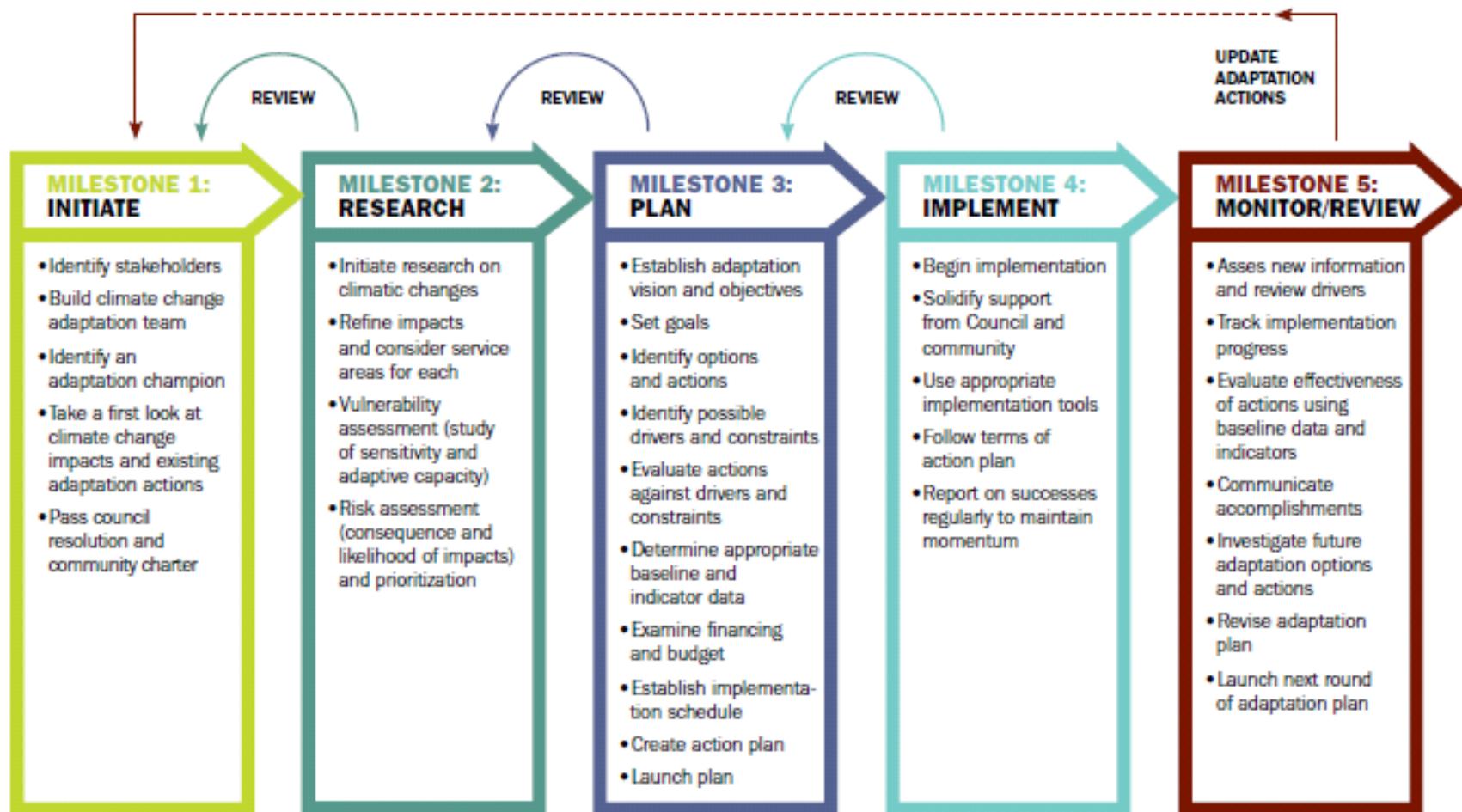
Corporate Plan (see Appendix 2)

### What new options could we pursue?

5. Is there potential new funding options? Are previous funding sources still available?
6. Are there new opportunities for embedding climate change in any new plans, strategies or reviews?
7. Are there any emerging adaptation issues that would be best addressed regionally?

## Adaptation Planning Cycle

At some point in time (>5 years), it will be necessary to undertake the adaptation cycle for the region again, to integrate new information and identify new areas of vulnerability and priorities. The recommended adaptation cycle is proposed below (Extracted from ICLEI Canada):



## Appendix 1: Adaptation Roadmap Objectives and Actions Progress Checklist

Adaptation objectives	Actions (Bold action is a priority Roadmap action)	Implementing? (Y/N)	New Opportunity (Y/N?)	Performance indicators		
				2015/16	2016/17	2017/18
<b>1. Improve the resilience of existing and new built infrastructure to cope with projected climate change impacts</b>	Conduct a regional building vulnerability assessment and conduct targeted upgrades					
	Continue to advocate through MAV and CASBE for a state-wide ESD Policy in the Victorian Planning Provisions					
	Research life cycle costs and payback periods of different ESD standards for council buildings					
	Develop a coordinated and consistent ESD policy and guidelines throughout the region for council buildings					
	Analyse the comparability and complementarity of ESD standards and adaptation options					

	Facilitate broad adoption by councils of the latest Built Environment Sustainability Scorecard (BESS) in statutory planning processes				
	Integrate climate change risks into Asset Management Plans and capture trend data on asset damage and reduced lifespans from climate change impacts				
2. Reduce urban heat through the region to mitigate projected temperature increases	<b>Develop a Greening for a Cool East Strategy</b>				
	Ensure linkages and connections are made between strategy and integrated water management principles and open space planning projects such as the MPA Metropolitan Open Space Strategy				
	Review existing development controls for heat island effect, seeking to ensure new developments do not exacerbate heatwaves				
	Work with regional agencies such as VicRoads, Public Transport Victoria and gas and water retailers to implement and coordinate investment in green infrastructure when they are doing works for other purposes.				
	Work with regional stakeholders to pilot more heat tolerant, permeable and reflective bitumen/pavement materials				
	Work with research institutions to map thermal hotspots and social vulnerability at higher resolution				
3. Reduce impacts of heatwaves on communities	<b>Solar rates for low income households</b>				
	Development of state-wide material and education for Culturally and Linguistically Diverse (CALD) groups around energy efficiency, heatwave preparedness and sustainability.				
	State-wide capacity building program for Home and Community Care (HACC) staff to engage with vulnerable communities on energy efficiency and heatwave preparedness				
	Identify designated council cooling facilities and plan for 'cool precincts'				

4. Improve emergency preparedness and response	<b>Work with Emergency Management Victoria to improve heatwave preparation and response</b>				
	Improved standardised emergency communications to CALD community and people with disabilities for extreme weather (including fire) education programs				
	Conduct a regional emergency preparation exercise that considers multiple widespread events				
	Work with regional bodies such as SES and other councils to develop maps which identify roads susceptible to flooding, the location of vulnerable populations and alternative routes to reach these vulnerable populations and other key areas in the case of road closure.				
5. Improve the adaptive capacity of the regional economy	<b>Understand economic impacts of climatic events on strip shopping precincts and identify opportunities for building resilience</b>				
	Develop an eastern adaptation network with government agencies, businesses and other stakeholders				
6. Improve the resilience of electricity infrastructure to projected increase in extreme weather events	<b>Work with Distribution Network Service Providers to identify initiatives for improving electricity network reliability and community resilience</b>				
	Critical council infrastructure requiring reliable electricity could include potential for off-grid renewable energy backup supply during heatwaves and other extreme weather events				
	Continue EAGA projects to increase energy efficiency in council operations and assets				
7. Improve the regions drought and flood resilience by adopting the principles of integrated water cycle management and improving water use efficiency	<b>Collectively work with Melbourne Water and water retailers to maximise opportunities for alternative water use including identification of regional stormwater capture and reuse opportunities</b>				
	Continue to advocate through MAV for new revenue streams for councils to fund Water Sensitive Urban Design				

	Promote IWCM and WSUD design principles at plan making and development assessment stages and promote water sensitive precincts					
	Seek to use existing heat vulnerability data to identify priority areas for WSUD					
	Promote water recycling initiatives and fit for purpose water sources					
	Work with other stakeholders such as the CRC for Water Sensitive Cities to improve regional downscaled modelling of climate change and associated hydrological projections					
<b>8. Build organisational capacity across EAGA councils to respond to climate change risks</b>	<b>Develop a regional adaptation capacity building program</b>					
	Work with Victorian Government adaptation mentors to scope and implement the adaptation capacity building program					
	Continue to embed climate change risks and responses in council risk registers, strategies and plans					
	Develop adaptation resources/tools and regional events for sharing of knowledge, consolidating best practice case studies between councils					
	Research on the potential financial impacts of climate change on existing land use planning and estimate costs of inaction versus costs of adaptation					
<b>9. Improve biodiversity and open space management responses to climate change</b>	<b>Seek further funding for reporting and analysis of the EAGA Biodiversity Monitoring Framework and developing regional responses</b>					
	Develop a procurement project for regional sharing arrangements of arborists after major storm events					
	Identify opportunities to improve and increase biodiversity in the region					
	Consider provisions for migration of animals and plant within a regional greening strategy eg. Corridors					
	Work with the community to increase awareness and capacity for support strategies for animal and plants in extreme weather events and fires and heatwaves					
	Participate in and support the Port Phillip and Western Port Catchment Management Authority (PPWPCMA) Climate Change Adaptation Strategy for biodiversity across the region by ensuring council plans compliment the strategy					

<b>10. Increase regional food security</b>	<b>Understand the regional food network and work together to diversify and promote urban food production</b>			
	Develop a food business network with regular networking events including a food forum focused on business			
	Support community food projects eg. local food swapping activities such as the Whitehorse Urban Harvest Food Swap and Croydon Food Swap			
	Advocate for recognition of urban food production in the State Planning Policy Framework			
	Develop a composting hub (eg in-vessel composter) as a demonstration project for how food waste can be managed locally.			
	Develop council policies regarding growing of food in public spaces eg verges, parks, roadsides etc. to increase the visibility of food growing in the community.			
<b>Summary</b>	<b>Number of actions being implemented</b>			

## Appendix 2: Checklist for embedding climate change adaptation risks and responses

The following questions could be considered by council staff when reviewing plans and strategies:

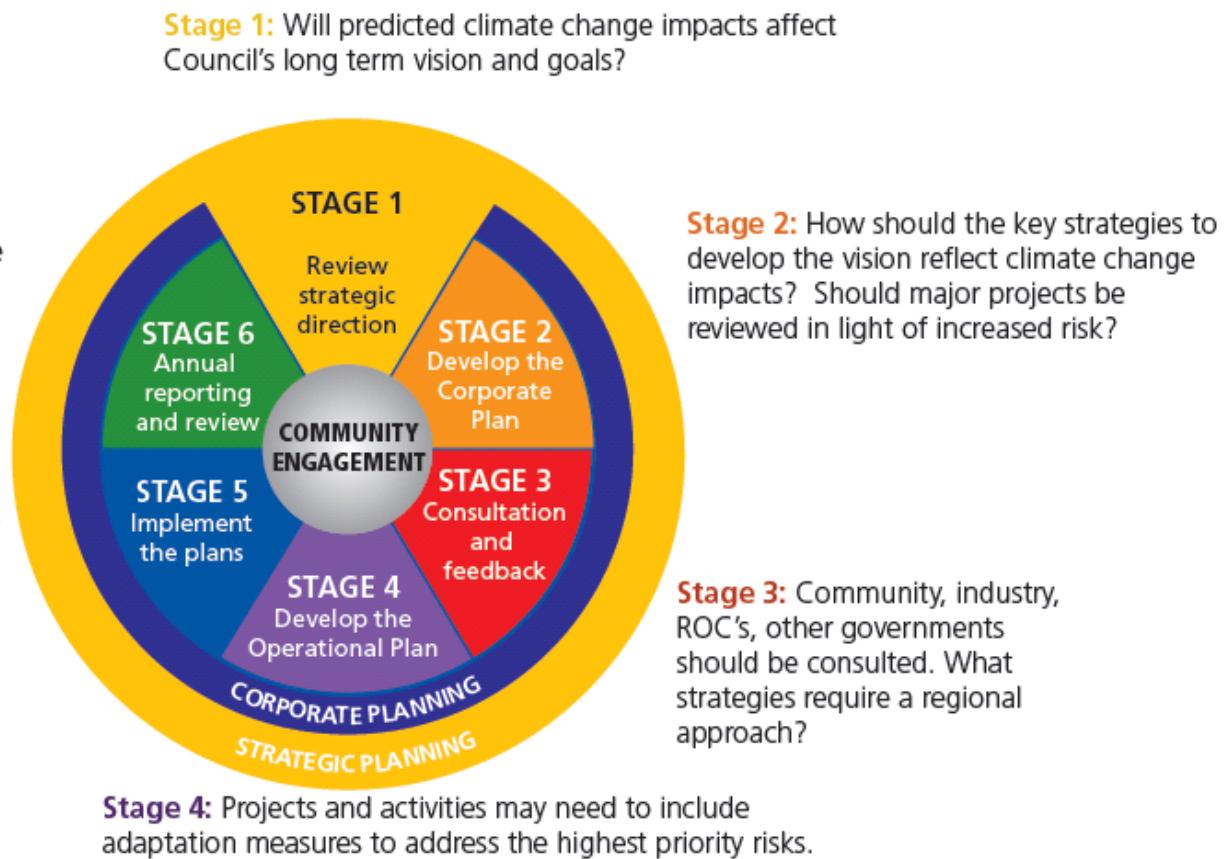
1. Does the plan or strategy need to consider climate change?
2. If so, does the plan or strategy already consider climate change in detail?
3. Has the plan considered adaptation response as well as mitigation?
4. Are there strong elements that would be considered adaptation but are not necessarily labelled as a climate change adaptation activity?
5. Are there specific actions beyond simply referring to the risks of climate change?
6. How well integrated throughout the different areas of council is climate change adaptation?

It is recommended that the plan/strategy be rated according to the following scale or similar:

Rating description	Suggested action
Climate Change well referenced and integrated across multiple service objectives	Identify service areas where integration could be strengthened
Climate change mentioned but only as an environmental issue or mitigation issue	Seek to develop concept of climate change to adaptation in future updates/review and pursue integration across other areas
No reference to climate change, but includes what could be considered adaptation activities	Likely to need active awareness raising and capacity building across council, seek to engage with key staff in next review and potentially develop an issues brief for your Executive Management Team (EMT)
Poor consideration of climate change, where plan does not address key risks or areas of vulnerability in the face of climate change projections, and or is likely to exacerbate adverse consequences.	Needs immediate attention. Likely to need active awareness raising and capacity building across council, seek to engage with key staff in next review and develop an issues brief for EMT

## Corporate Planning Cycle

The Corporate Plan's planning cycle has six stages. Important questions related to climate change and how it could affect the future should be built into each stage.



Extracted from Local Government Association of Queensland (2007) Adapting to climate change; a Queensland local government guide

