Final Report

A national consultation on the Global Covenant of Mayors for Climate & Energy framework for local government climate action in Australia.

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GLOBAL COVENANT of MAYORS for CLIMATE & ENERGY

ICLEI Local Governments for Sustainability

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About Us

ICLEI—Local governments for sustainability is a global network of more than 1,750 local and regional governments committed to sustainable urban development. Active in 100+ countries, we influence sustainability policy and drive local action for low emissions, nature-based, equitable, resilient and circular development. The ICLEI Oceania Regional Secretariat serves the interests and needs of local governments in Australia, New Zealand and the Pacific Island Nations. ICLEI Oceania is the GCoM Regional Secretariat.

Project overview

Project Title: National Consultation on the Global Covenant of Mayors for Climate & Energy Framework for Local Government Climate Action in Australia.

This project sought to understand options for finding alignment between the international GCoM model and Australia's state and national climate policy settings. It raised awareness among stakeholders and explored complementary climate program development which may provide value to the diverse range of local governments in Australia.

ICLEI Oceania received funding from the European Commission (EC) *Strategic Partnerships for the Implementation of the Paris Agreement* (SPIPA) program to develop options for aligning national and state government climate responses more cooperatively and constructively with the GCoM framework. The project outputs were:

- To establish an initial policy paper to inform the initial National Roundtable.
- To undertake state-by-state consultations to raise awareness of the GCoM and understand the current approaches in each state.
- To research the range of local climate programs available and to identify and document programs and resources which may align with the GCoM framework.
- To undertake a scan of appropriate international tools and resources that might be useful to Australian councils.
- Examine data and measurement challenges.
- Undertake a Second National Roundtable to present findings and seek strategic guidance on the best way forward.
- This Final Report identifies the process, findings, opportunities and recommendations for future development of GCoM across Australia.

The final outcomes for the project provides recommendations for:

- An overall strategic direction for national delivery
- The provision of direct and technical support based on identified needs
- Capacity building and resourcing for the regional secretariat functional support

The results of the project are detailed in an **Executive Report** together with this detailed **Final Report** and the companion **Inventory Report.**

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Introduction

This project was supported through funding provided by the European Commission Strategic Partnerships for the Implementation of the Paris Agreement (SPIPA) program. The SPIPA program enhances international cooperation, partnerships and capacity building that accelerate climate action within G20 countries.

In Australia, accelerating, mobilising and more formally recognising the local government role in achieving national climate obligations has been identified as a priority. To understand options for achieving this, the SPIPA initiative supported ICLEI Oceania to undertake national consultations on programs, partnerships and approaches that support local government climate action in both reducing emissions and adaptation to climate change.

A primary objective of the project is to build support from all levels of government and partner organisations, to support the GCoM as an effective framework for local government climate action in Australia.

The project identified relevant climate programs and how to promote local government engagement in a robust, clearly understood and well supported national GCoM approach. However this needs to be sensitive to Australia's diverse bio-geographical and socio-economic regions and federated system of government.

Through research and structured consultations ICLEI Oceania investigated the barriers and opportunities for aligning Australia's diverse climate efforts with the GCoM framework for city level climate action. The GCoM is mobilising effective local action worldwide through approaches that enable international consistency, transparency and advocacy.

The report examined the possible design and role for GCoM in Australia, together with how to maintain the momentum generated by this National Consultation.

Background

The Global Covenant of Mayors in Australia is still emerging as an approach that adds value, via local government, in meeting Australia's climate challenges. There is only so much local government can do unless they are recognised and resourced to contribute to the national climate challenge.

The first output for this project **(Output 1)** was to produce a local government and climate change policy paper which would form the basis for consultation, in-depth discussion and strategic alignment of related programs.

The initial policy paper included details of the status and uptake in Australia and globally of the GCoM. The paper also explained the specific new compliance elements of the GCoM Common Reporting Framework and gave an overview of the global governance and coordination of the GCoM together with examples of national and other GCoM Region approaches. It also identified some of the existing climate programs and known greenhouse measurement and data challenges. These data access challenges, while only identified initially were the subject of further in-depth analysis and are presented later in this Final report.

A further purpose of the initial policy paper was as a discussion catalyst to support the initial **Roundtable** meeting held in the Australian National Capital, and from there was to draw program direction and inspiration from key stakeholders about the realistic assessment of the value of the GCoM framework in the Australian context.

Having confirmed the value, or at least an interest in the GCoM, the **Roundtable** process was useful to identify some current climate programs and confirm policy settings. It identified useful contacts within federal and state Government and with other stakeholders. These were followed up subsequently through state by state meetings. The results of the initial Roundtable and its initial policy paper were circulated at the time and fulfilled **Output 1 & 2** for this project.

While all project outputs are interrelated these initial steps provided the platform for the more intensive work through the remaining outputs to develop this Final Report.

The research phase occurred during a dynamic political period for climate change policy within Australia at the national, state and local level. Our work occurred during the Australian Federal election campaign and result period. This Report has now taken the opportunity to update the original policy paper to provide a more current and comprehensive assessment of the current Australian policy context.

Project Delivery

Throughout the first half of 2019, extensive national and state consultations were undertaken on exploring the suitability of using the GCoM framework for guiding and reporting on local government climate action in Australia. The primary objectives of the consultation was to explore the potential for the GCoM framework as an enabling framework, whilst also building understanding and support with state government, Local Government Associations (LGAs) and NGO programs. It also undertook to identify any potential for future national government support.

The consultation through meetings and presentations described the value of the GCoM thus:

- it provides a robust approach to measure and compare local actions on climate with others undertaking the same approach,
- it can aggregate that effort to show how local government action can help achieve local ambition and contribute to national targets simultaneously, and
- it considers mitigation, adaptation and energy justice issues strategically.

Consultations in all states and two national roundtables in the Australian capital examined the alignment between the GCoM framework and current national and state-based climate initiatives. The meetings also explored policy in development, supportive arrangements, future information workshops, the relationship to other ICLEI programs, future partnerships opportunities with government departments and other groups and strategic directions.

The premise of the consultations was to explore the pathways for the wider adoption of the GCoM Common Reporting Framework (CRF). Postulating that if widely adopted, this would enable local actions and local government to be more formally recognised nationally and internationally as contributing to the Paris Agreement targets. The stakeholder dialogue highlighted the direct benefits to local governments seeking increased engagement in a robust, internationally accepted framework for mobilising local governments action.

The purpose of this Report is to share information about the consultation process, the project's collective findings and specific outcomes. This report presents the results of the numerous individual meetings, investigations, research, and the multi-stakeholder National Roundtables during a charged political period which had a significant emphasis and focus on climate change and respective policy directions.

The project proposal identified likely outcomes to report on. The analysis on the recommendations and findings have played a part in determining and confirming outcomes for:

- An overall strategic direction for national delivery.
- The provision of direct and technical support based on identified need.
- The capacity building and resourcing for regional secretariat functional support.

The findings which inform the relevance of these original outcomes are the culmination of the significant research, engagement and analysis with a wide range of stakeholders with an interest in local governments' climate contribution. These findings have informed recommendations about the next steps and strategic directions for the GCoM in Australia in the context of the role and extent of future climate action.

Australian Climate Policy context

The Australian Government ratified the Paris Agreement in November 2016. Australia's current Prime Minister has confirmed Australia's commitment to the Agreement.

The goal of the Paris Agreement is to keep global temperature increase well below 2°C. Collectively, nations are not on track to meet that target and actions by local and regional actors are of the utmost importance to raise the ambition of existing Nationally Determined Contribution (NDC). The importance of local and subnational actors in supporting the implementation of the Paris Agreement has been recognised at all levels, including by Parties of the Agreement which states:

> *"Agreeing to uphold and promote regional and international cooperation in order to mobilize stronger and more ambitious climate action by all Parties and non-Party stakeholders, including civil society, the private sector, financial institutions, cities and other subnational authorities, local communities and indigenous peoples…"*

Australia as a signatory to the Paris Climate Agreement has flagged its intention to meet its 2050 target. The flagship program (post the recent 2019 Federal election) is the *Climate Solutions Fund* although various other initiatives and compliance approaches exist.

Emissions are still on a rising trajectory although per capita emissions are falling. The export of coal is one of Australia's largest export earners and may increase in the coming years. There is some question as to whether Australia can meet its target, and a path forward may be to genuinely engage all states, local government and all sectors of society and economy.

Nationally, the Australian Government has a number of climate change and environment programs to help local government and communities to reduce emissions and adapt to the changing climate. Communities can participate in environmental programs that deliver carbon benefits, such as Landcare, the Reef 2050 plan, 20 Million Trees, and the Green Army.

Climate and clean energy action at the city level in Australia is not mentioned in Australia's Nationally Determined Contributions (NDCs), but local action is significant, ambitious and gaining momentum. While there are numerous initiatives and programs, currently there is no pan-Australian framework linking these initiatives to the international climate action framework, or to compile, measure and report on the extent, impact and effectiveness of Australia's local government contribution.

State governments, while not signatories to the Paris Agreement, have set ambitious targets either for overall reductions in carbon or/and increases in renewable energy. They provide policy and legislation to help frame programs for reducing carbon, increasing renewables, adapting to climate challenges, building climate resilience or low carbon economy transition strategies. States have a role as part of the Council of Australian Governments (COAG) where national policy agreements may be negotiated.

Australia's Federal system of Government is a challenge to the application of specific national program of support for local government climate action. Local governments are under the direct authority of separate state governments and therefore few national programs are designed specifically for them. Nevertheless, local councils have a degree of autonomy and respond to constituents' desire for service and action beyond traditional expectations, including action on climate.

To understand the Australian context it is necessary to recognise that local governments have key but constrained roles in Australia's federated system of government. While they are the level of government closest to their communities and support local issues across Australia's diverse bio-geographical and socio-economic regions, their powers are constrained by the fact that they are established and empowered under state legislation, which varies in each jurisdiction. Local government is not recognised in the Australian Constitution which limits interaction with the Federal Government.

Australia's 537 local government authorities span diverse bio-climatic and socio-economic regions ranging from globally connected cities to the rural and remote. Many local governments are formally engaged in climate responses, reducing greenhouse emissions and responding to climate challenges—some for over two decades. The extent of involvement however depends on legislative responsibility, access to support resources, political direction, community ambition, capacity and motivation of council staff, the nature of risks, and competing local priorities.

In summary, with respect to climate change mitigation in Australia, it is fair to say that the Australian Government has the National targets and international obligations, the state governments have the majority of the legal powers and resources to assist communities, while the local governments are variously involved in local action, including significant action focused on adaptation. The nature of this involvement depends on many factors including capacity, resources, motivation, awareness of risks and competing local priorities.

We found that: To accelerate the pan Australian adoption of the GCoM model it may need to be carefully tailored to work effectively within the Australian policy context and federated governance system.

Subnational climate role

Municipal and subnational climate action is a well-recognised phenomenon in global environmental governance. The 1992 UN Local Agenda 21 identified local authorities as important stakeholders in global action, and in 1993, the International Council of Local Governments for Sustainability (ICLEI) initiated the Cities for Climate Protection program (CCP), which rapidly grew to involve hundreds of cities (Betsill and Bulkeley 2004).

The importance of cities is emphasised because they are part of the problem and part of the solution to climate change (Kamal-Chaoui and Robert 2009; Norman 2018). It is estimated that cities account for around 75% of global greenhouse gas (GHG) emissions and use around 75 % of global energy supply (UN-HABITAT 2011; UNEP 2015). Cities can also drive innovation and social change (Hoornweg et al. 2011; Alexandra et al 2017; Norman 2018) by bringing *'forward genuinely new ideas and solutions that in the end can have an impact on a larger scale'* (Gustavsson et al. 2009, p21).

The importance of non-state actors in global climate change governance increased following the 2015 Paris Agreement. In 2016, the Paris Agreement entered into force to provide the platform for reducing the global greenhouse gas emissions to a level that would minimise the rise in global temperature to 2C degrees, and hopefully track towards or below 1.5C degrees. Overall, contributions from nations do not yet reach these global targets.

Subnational and private sector actors have been identified as some of the keys to tackling the 'emissions gap' and therefore contributing to keeping global warming below dangerous levels. This increases the importance and urgency of cities and local governments making ambitious, robust and transparent contributions to the global effort, including through partnering with their communities and the private sector.

Local actors in the form of city networks or climate related NGOs have already established some highly effective, linked and influential global campaigns. These 'peer networks' enhance local governments' capacity for climate initiatives by providing support, advocacy, and the sharing of inspiration and information on solutions. Many of these networks are cooperative, supporting each other's endeavours.

Local councils are under the jurisdictional control of each state or territory government and seek to align to state legislation, policy and direction. Therefore matching local government action in the first instance with the generally more progressive climate policy of each state may be a necessary and useful pathway. Meeting or aligning with state government targets may also have the positive effect of not just meeting but exceeding our National targets set to achieve the Paris Agreement targets.

We found that: In Australia, local action may be best supported at a state level, rather than federal, with support by state government and/or state based local government associations and related groups.

Local government climate action

Australia's local governments are active in delivering climate adaptation and mitigation outcomes being involved in a diverse array of initiatives focused on reducing emissions and equipping and supporting communities prepare for climate challenges.

The *Australian Local Government Climate Review 2018* (Beyond Zero Emissions, ICLEI Oceania & Ironbark Sustainability) reported on a comprehensive assessment of local councils' actions tackling climate change .
Key findings regarding Australian councils' efforts indicated that:

- Over half of all councils provide public information on climate change;
- Many have emission reduction targets (20%) and baseline inventories;
- About 80% intend to develop corporate emission targets.

Since the Review was published there has been continuing rapid progress. ICLEI Oceania estimates that about 20% of all councils now have community-based greenhouse gas profiles and many have targets that are consistent with GCoM reporting obligations.

In the report 'Local Leadership: Tracking Local Government Progress on Climate Change' (2017) the Climate Council stated that Australia's local councils have been leading climate action "despite periods of instability and inaction at the state and federal climate policy level." They found councils responding to the climate imperatives are escalating their efforts to:

- Inform and motivate their communities;
- Shift to renewable energy sources for electricity generation;
- Increase the energy efficiency of buildings; and
- Support more sustainable transport measures.

Other important findings are that:

- Australia's councils are important information hubs on climate change;
- Urban areas are major contributors to emissions; and
- 70% of emission reductions required to meet the Paris Agreement can be achieved by changing energy use and production

Of councils surveyed, 20% are aiming for "100% renewable energy" or "zero emissions." Prominent examples include Adelaide, Canberra, Melbourne and Sydney along with smaller councils, like Byron Shire, Lismore, Yackandandah and Uralla Shire. Local councils and community groups are investing hundreds of millions of dollars in renewable energy. Examples include the Lismore and Sunshine Coast solar farms, and Alice Springs' solar city initiative.

This project's consultation identified extensive local government activity across Australia, some of which is already formally linked to GCoM. Interest and involvement in GCoM has also been increasing, beginning with capital cities like Melbourne, Sydney, Hobart, Adelaide, Perth and Canberra then spreading through medium sized cities such as Wollongong and Newcastle and some smaller suburban, and regional councils.

Australian Climate Targets and Policies

Emissions reduction targets

The Australian Government has set a national target for emissions reduction in line with requirements under the Paris Agreement. The Queensland, New South Wales, Victorian, South Australian, Tasmanian and Australian Capital Territory governments have emissions reduction targets which exceed the national target by 2050. Table 1 below shows Australia's emissions reduction targets.

Table 1 Australia's Emissions Reduction Targets, converted to a 2005 base year (year announced)

	2020	2030	2050
Australia	14 per cent below 2005 levels (2010)	26-28 per cent below 2005 levels (2015)	-
States and Territories			
Queensland	-	30 per cent below 2005 levels (2017)	Net zero (2017)
New South Wales	-	-	Net zero (2016)
Victoria	15-20 per cent below 2005 levels (2017)	-	Net zero (2017)
South Australia	-	-	60 % below 2005 levels (2007) Net zero (2015)
Australian Capital Territory	40 per cent below 2005 levels (2010)	65-75 per cent below 2005 levels (2018)	Net zero by 2045 (2018)
Tasmania	-	-	64 % below 2005 levels (2008) Net zero (2017)
Northern Territory	-	-	-
Western Australia	-	-	-

Renewables Targets

The Australian Government and most states also have targets to increase the proportion of renewable energy in the energy supply mix. Australia's national target is 33,000 GWh by 2020 committed to in 2015. State and territory targets are:

Table 2 Australia's Renewables Targets (year announced in brackets)

	2020	2025-30	2050
Australia	33,000 gigawatt-hours	-	-
States and Territories			
Queensland	additional 3,000 MW from small-scale projects	50% by 2030 (2015)	Net zero
New South Wales	-	-	Net zero
Victoria	25% renewables	40% by 2025 (committed in 2016)	Net zero
South Australia	33% by 2020 (announced in 2009)	75% by 2030	Net zero
Australian Capital Territory	100% by 2020 (2016), 36MW of energy storage by 2020	-	Net zero
Tasmania	-	100% by 2022 (2017)	Net zero
Northern Territory	50% by 2030 (2017)	-	-
Western Australia	-	-	-

To achieve the renewable energy targets, state and territory governments have established a range of strategies and programs. The Victorian Renewable Energy Action Plan 2017, for example, is funded to enhance energy storage, new technologies, and for empowering communities and consumers. South Australia is supporting large-scale renewable energy generation and storage technologies, and the Tasmanian Renewable Energy Alliance has a range of roles that promote the use of renewables across the state. The Australian Renewable Energy Agency also supports activities across the innovation chain, from research to large-scale deployment.

We found that: The policy context for local government mitigation action is strong. Already many local councils have established 100% renewable for city operations or have invested in renewable power through purchasing agreements or other mechanisms. Community demand for a low emissions future is being turned into operational practice at the local level.

National Climate Programs

The Australian Government's Emissions Reduction Fund ($2.55 billion allocated in 2014, with an additional $2 billion in 2019 and now called the Climate Solutions Fund) is the key program to support measures towards reaching Australia's 2020 and 2030 emissions reduction targets. This will bring the total investment in the Fund to $4.55 billion and seeks to deliver around another 100 million tonnes of emissions reductions by 2030. The Fund supports practical actions by businesses, local councils and land managers to reduce emissions and improve the environment that comply with eligible methods and that can earn Australian Carbon Credit Units (ACCUs).These ACCUs can be sold to the Australian Government through a carbon abatement contract.

The National Carbon Offset Standard (NCOS) is a voluntary standard to manage greenhouse gas emissions and achieve carbon neutrality. It provides best-practice guidance on how to measure, reduce, offset, report and audit emissions for organisations, products & services, events, precincts and buildings. This is generally suited for corporate response and not yet designed for municipality wide application.

Many more programs are being delivered by state governments that contribute to emissions reduction outcomes including the Victorian Take2 pledge for climate action, or Queensland's programs for energy efficient buildings and electric government fleet vehicles. While our research found at least 29 programs that have links to local government climate action many more state based programs exist which are directed at other sectors, communities or individuals.

Climate Adaptation strategies

The Australian and state and territory governments have also each created strategies for adapting to climate change or are addressing risks through broader planning and resource management legislation and policy. In 2015, the Australian Government released a National Climate Resilience and Adaptation Strategy. The Strategy articulates how Australia is managing the risks of a variable and changing climate. It identifies a set of principles to guide effective adaptation practice and resilience building, and outlines the Government's vision for a climate-resilient future.

The Australian Capital Territory, Queensland, South Australian, Tasmanian and Victorian governments have also implemented specific policies to address climate change adaptation, support the development of adaptation responses and manage risks. These include the ACT Climate Change Adaptation Strategy and the *Victorian Climate Change Act 2017 and Climate Change Adaptation Plan*.

For example the *Victorian Climate Change Act 2017* requires the development of five-yearly sector-based Adaptation Action Plans to drive adaptation action in core systems across the economy such as health and human services, primary production, water, transport and the natural environment and works with local government to implement those across regions.

New South Wales and Western Australia address the risks of climate change and adaptation measures through broader planning and resource management legislation and policy. The Northern Territory is currently developing a Climate Change Strategy, which will be finalised in 2019. Planning principles for flooding and storm surges are included in the Northern Territory's existing planning scheme which applies to local councils..

Adaptation strategies in Australia are however variable in content, with some reflecting general statements of intent rather than clear commitments for reform to build resilience in a changing climate. Hernandez et al, 2017 identified the essential requirements for successful adaptation in the frame of the GCoM, and highlight the need for measures to address current and future climatic hazards, risks to critical infrastructure, active stakeholder and citizen participation, maladaptation, and to build understanding of adaptation action costs relative to inaction.

We found that: Having a consistent approach to strategically manage, report and implement Adaptation Plans would assist building Australian climate resilience while meeting our international obligations.

Table 3 National and State adaptation strategies and programs in Australia with links to GCoM

Policy	National, State or Regional measures
VICTORIA	
Victoria's Climate Change Adaptation Plan 2017-2020	Plan identifies partnership with local government including capacity building (community of practice, training and guidance), targeted project support and Greenhouse Alliances, and initiatives to tackle shared challenges (insurance and emergency management) Regional NRM Climate Change Adaptation Plans delivered across state (2013-2016)
QUEENSLAND	
Pathways to a Climate resilient Queensland – Queensland Climate Adaptation Strategy 2017-2030	Queensland Climate Resilient Councils program (2017-2020). Includes support for 32 Councils to develop adaptation plans QCoast2100 program supports enhanced coastal hazard planning in up to 45 Councils
SOUTH AUSTRALIA	
Prospering in Changing Climate: A Climate Change Adaptation Framework for SA (2012) Towards a resilient state - The SA adaptation action plan (2018)	Regional Adaptation Plans (11) covering the State delivered 2014-2016 (outlining regional actions and priorities)
WESTERN AUSTRALIA	
Adapting to our Changing Climate (2012)	Planning and resource management within other legislation and policy
TASMANIA	
Climate Change Action Plan 2017-2021	Climate Change Action Plan 2017-2021 Includes measures relevant to local government on adaptation pathway planning, risk management and integration into strategy and decision-making
NEW SOUTH WALES	
NSW Climate Change Policy Framework (2016) includes adaptation	Climate Change Fund ($30M) helps households, businesses and councils reduce their exposure to natural hazards and climate risks. Increasing Resilience to Climate Change local government grant scheme - Support for councils, communities and agencies to prepare for extreme weather through resources such as infrastructure risk quantification using the Cross-Dependency Initiative (XDI) AdaptNSW – guidance on risk assessment and checklists for planning
AUSTRALIAN CAPITAL TERRITORY	
ACT Climate Change Adaptation Strategy – Living with a Warming Climate (2016)	Climate Change Adaptation Strategy -Local adaptation measures for sectors delivered by ACT Government Includes measures for regional adaptation collaboration
NORTHERN TERRITORY	
Climate Change Mitigation and Adaptation Opportunities Discussion Paper 2018	Planning and resource management within other legislation and policy
NATIONAL	
National Climate Resilience and Adaptation Strategy 2015	Guidance and information on adaptation relevant to local governments and communities, including CoastAdapt and AdaptNRM

GCoM's role in Australian climate responses

Adopting the GCoM approach and framework in Australia may provide significant opportunities for improved coordination and reporting on local examples that will enable the better telling of success stories by individual local governments to their communities and more widely. However for this to occur the value proposition of adopting a standardized internationally accepted reporting framework needs to be clearly articulated.

Standardised reporting is one of the many benefits for local governments being involved in a robust international approach like GCoM. However, local governments need to be able to clearly see the relevance and value in such initiatives. In short, programs must be useful, enabling, cost effective and supportive. Further, they must not appear to be partisan or confusing, overly complex or compliance/reporting heavy but rather have clear links to and align with local priorities, such as local employment, liveability and safety.

GCoM is currently active in Australia through the C40 cities of Sydney and Melbourne. ICLEI Oceania supports, through help desk and other means, a further 24 local governments in its capacity as Oceania Regional Global Covenant of Mayors Secretariat.

The benefits of more widely activating the GCoM framework in Australia are potentially significant for more local governments taking climate change action where efficiencies and innovation can arise from collective action and combined advocacy. Support to prepare for adverse climate impacts while realising benefits from implementing low carbon solutions will benefit all communities and helps contribute to Australia's NDC task.

The core requirements of commitment to GCoM (inventory, targets and assessment, action plans, and reporting) are generally consistent with climate change policy in Australia both at the state and national levels, although there is heterogeneity in approaches. GCoM compliance is voluntary and not yet linked formally to any national or state obligations. The commitments to GCoM do however suggest that the local government emissions target matches or exceed the National target, if possible.

The value proposition of adopting a standardized internationally accepted reporting framework needs to be clearly articulated. It should not be overly complex or compliance/reporting heavy but rather have clear links to and align with local priorities, such as local employment, liveability and safety.

We found that: Keeping track of local responses and measuring that impact remains a challenge given the scale of local activities and the lack of a coordinated national reporting framework.

National and State meetings

Consultation meetings in each state and territory aimed to identify climate programs directed to local government, discuss possible partnerships and support resources, and raise awareness of the GCoM reporting framework. This aligns with **Output 3** of the project.

The consultation phase extended over a 6 month period and involved meetings with state government program and policy managers, state climate advisory groups, local government associations, NGOs, academia and local council representatives. This provided an opportunity to discuss the GCoM broadly, consider progressive findings, identify omissions and changes and identify any new policies, legislation, programs and initiatives in development.

At least 77 individuals were consulted about the SPIPA project through 33 formal meeting. In general, departmental staff represented their relevant Premier or Minister. Over 60 invited stakeholders provided input at the first and second National Roundtables held in Canberra in March and June.

Our discussions identified that:

- Numerous climate programs have some alignment with GCoM CRF already
- There is significant variability in state's program focus and financial investment
- National leadership and intergovernmental agreements would be beneficial
- Reporting approaches are currently ad hoc, with few set standards or methodologies
- There is interest in common reporting and comparisons and case studies
- While wider program alignment could take time, action plans for emissions reduction and adaptation could be recognised sooner through GCoM reporting
- GCoM could be more visible and widely promoted and adopted in Australia with the appropriate financial support
- Further discussion with groups of Mayors and councillors would be useful in each State.

The consultations were undertaken to identify the suitability of the GCoM framework in Australia. These consultations examined climate initiatives targeted at local government and explored their alignment with the GCoM framework. It also explored the potential for supportive arrangements and possible future partnerships with governments and other organisations.

We found that: A major focus was to understand whether using the GCoM model should build on existing programs rather than introduce a new, arbitrary and possibly competing set of requirements. The intention was to identify ways of assisting councils already involved or considering engagement in GCoM to do so supported by existing or future programs.

While Australia has committed to the Paris Agreement and is obliged to report on progress, it is important to note that the consultations were conducted in the lead-up to the Federal election, when aspects of national climate policy remained heavily contested and unresolved. However, many interviewees stated that a lack of ambitious national policies, along with community demands, were further motivating local efforts.

The extent of local government action has been widely reported, including in the *Local Government Climate Review 2018* (BZE, ICLEI Oceania & Ironbark Sustainability). That report and this research identifies Australian local government's willingness to participate in climate programs.

Programs such as the Cities Power Partnership (100 members), the former Cities for Climate Protection (240+ members), Victoria's Take2 Pledge (42 members) WALGA's council climate declaration (40 members), GCoM (26 members) or those coordinated by Greenhouse Alliances are all effective. Climate Emergency declarations (29 members) are also gaining in popularity.

We found that: Strongly aligning with existing programs may benefit participating local governments and each program also has the potential to aggregate support/resources and to provide a common voice on local governments climate ambition.

Interviewees in several states noted the interest in local government climate action in the aftermath of climate related disasters such as floods and fires. Recent local government elections have seen many candidates promoting strong climate and environment platforms, while throughout the country community groups, students, and individuals are consistently demanding stronger climate action.

It is also clear that the community voices for climate action are becoming clearer, louder and more demanding. Local councils, as the sphere of government closest to the community, are not deaf to these demands and are responding in the context of their resources, accountabilities and political advocacy. However, councils also often seek reassurance, guidance and support from policy directions from higher levels of government.

In line with this growing interest, Local Government Associations have observed increased climate "resolutions" from members, including the proposal for declaring a "climate emergency". Many climate change focused resolutions were debated at the Australian Local Government Association National General Assembly in June 2019. These may help determine and provide further clarity about local government climate policy directions in Australia.

We found that: The general reaction to the consultation was overwhelmingly positive. Almost every stakeholder endorsed the important roles played by local governments in meeting community ambitions and responding to the Paris Agreement.

Summary

The national consultation was timely given the renewed demand for greater local climate action. However, there were diverse responses from different states on the potential of GCoM that ranged from enthusiasm for engagement in parts of the GCoM program, to viewing it as worthwhile, but not central to program outcomes.

The State governments with clearly defined policies or legislative obligations were interested in understanding the methodology for measuring community-wide emissions and the requirements for climate risk-reduction assessment. Most accepted that consistent inventories, assessments and reporting can add significant value.

Stakeholders were generally receptive to what is offered by the GCoM, including the rigour and measurement of commitments, based on the underlying standards and methodologies, but the willingness to endorse GCoMs full adoption varied across stakeholders.

State government stakeholders indicated they will need more time to consider the value of the various compliance requirements, standards and reporting requirements and how best to promote or incorporate these into their programs. However they invite further discussion in the near future.

A common point of discussion was that the promotion of a coordinated, unified national approach to local government climate action, complementing State based programs, requires adequate resourcing.

Historically state or federal governments have provided this type of resourcing but it is more by exception. Therefore, identification of partners to provide resourcing remains critical to providing an adequate and sustained level of support to participating local governments.

We found that: Through 33 formal meeting at least 77 key individuals were consulted about the SPIPA project. In general, departmental staff represented their relevant Premier or Minister. In addition over 60 invited stakeholders provided input at the first and second National Roundtables.

The list of meetings and participants is provided as an Appendix.

Strengths and areas of concern

The state-based consultations identified a number of strengths and areas of concern which adds to the overall assessment and guides the strategic direction of GCoM in Australia.

Throughout the consultation the following were identified as the **strengths** of GCoM

- Robust standards
- Confidence in methodology
- Access to free resources
- Standardised reporting
- Political recognition - local to global
- Strong community connection
- Direct connection to international local government efforts
- Clear demonstration to community of council action

The matters of **concern** expressed included:

- The name 'GCoM' with its focus on Mayors
- Is the focus just on big cities, how effective in rural areas
- Cost for undertaking emissions inventory might be high
- Time taken to get political commitment and buy in
- Over emphasis on annual reporting - could this be flexible
- Ability of councils to control or influence community wide emissions
- Too technical for smaller councils
- Change occur in local council policy/resources/directions regularly
- Support funds to complete steps would be needed
- Possible misalignment with other initiatives
- Too ambitious as a national program
- National Government support is unclear
- Yet *another* program.
- Need for an Australian intergovernmental agreement for this to be effective
- Uncertainty around an Australian Local Government Association policy position
- Uncertainty around a Federal climate policy position
- Program sustainability if funding runs out
- The need for multi-level coordination and effective management
- Uncertainty around State based programs over time (change in governments).

State by State inventory and program assessment

Programs and policies assessed against the Global Covenant of Mayors framework

The project used a combination of desktop research and face-to-face meetings, to identify climate programs and policies that support climate local governments' action, generally at the scale of an entire state. Initiatives of individual council or regional clusters were not the focus of this research. This inventory of current and planned programs and approaches targeting local government is identified as **Output 4** and is a significant element of the entire project.

The investigation focused selectively on identifying and assessing programs targeting local government with structured, resourced and supported approaches, rather than "one off" initiatives or grants for specific actions. Programs were filtered to find alignment with some or all of the elements of the GCoM approach and the CRF.

The research identified at least 29 state government, LGA and NGO programs that support local government reporting on adaptation and/or mitigation outcomes. Adaptation assessment initiatives significantly outnumber mitigation reporting initiatives.

Some Australian state governments are now developing comprehensive methodologies for tracking mitigation and/or adaptation efforts, while some LGAs and NGOs also provide similar outcomes. In some states, there are joint programs between government and peak associations

(LGAs). In others, individual programs are undertaken separately (or not at all) or may be available through NGOs exclusively.

There are numerous state government mitigation initiatives run under different banners including: energy efficiency, disadvantaged communities, street lighting, solar programs, renewable energy, clean transport and waste management. For example, Victoria has a voluntary pledge program focussing on promoting local government mitigation (TAKE2) and the Western Australian Local Government Association (WALGA) has an endorsed Climate Policy with climate declarations from 40 councils.

Many state programs support structured local government adaptation strategies, identifying risk and hazards and developing adaptation plans, often in regional clusters, which show strong alignment to that part of the GCoM Common Reporting Framework.

Programs focusing on assessment of climate risks and hazards are prominent in Tasmania, New South Wales, Queensland, and South Australia. Queensland and South Australia state government programs engaging with local government focus predominantly on adaptation strategies. Region based approaches to adaptation are a strong feature in several states.

In some states, such as Queensland and Western Australia, there is a focus on coastal regions and coastal impacts. Other states adopt a model based on collective regional efforts, where local governments are members of multi-stakeholder alliances. The multi-stakeholder approach features in South Australia and Victoria where regional adaptation strategies identify and consider risks and hazards. Nationally he Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Bureau of Meteorology (BOM), among others, provide support information and advice on future climate scenarios.

Several states are in the process of developing, overarching policies that consider both mitigation and adaptation. The research assessed that these initiatives by state governments, LGAs and NGOs that are consistent with, or potentially well aligned to the GCoM common reporting framework.

The non-government (NGO) sector is mainly active in assisting local governments often through the community groups to scale up carbon reduction activities. They are playing important roles in promoting and sharing better practice examples, building staff capacity, behavioural approaches and encouraging political leadership.

NGOs have been effective in communicating on climate opportunities, encouraging more local climate action, and providing opportunities to advocate for more ambitious national climate and energy policies. NGOs have supported commitment or declaration programs more commonly focussed on highlighting councils' corporate mitigation efforts, low carbon and renewable energy actions.

We found that: Despite this diverse range of state-level initiatives, the research found no comprehensive and integrated programs covering both mitigation and adaptation for municipalities within a single framework, excepting GCoM.

Strategic development of the GCoM in Australia needs to be aware of the considerable variation in program priorities between states. An outcome for further assessment is to modify the compliance and reporting requirements of GCoM in Australia to recognise these priorities to ensure program alignment and support.

The full details of the State by State inventory is provided in the separate Inventory Report.

Table 4: Summary of the GCoM CRF alignment of mitigation and adaptation programs across Australia.

	Vic	NSW	Qld	Tas	WA	SA	NT	NGO/ other	Total
Project consultations	4	3	4	4	4	5	1	5 3 Govt	33
Programs with local govt. engagement	3 (3 Govt)	5 (3 Govt, 2LGA)	3 (2 Govt, 1 LGA)	4 (2 Govt, 2 combined)	5 (1 Govt, 4 LGA)	2 (1 Govt, 1 LGA)	2	4 3	29
Pledges and declaration program	1	0	0	0	1 (LGA)	0	0	1	3
Emissions inventory (community)	1	2	0	1	1 (LGA)	0	0	1	6
Mitigation target (community)	1	2	1	0	1 (LGA)	0	0	1	5
Mitigation action plans	1	3	0	0	1	1	1	3	10
Risk & hazards assessment	2	3	3	2	1	1	1		13
Adaptation goals	1	2	3	1	1	0	0		8
Adaptation action plans	1	2	3	2	2 (LGA/1Govt	1	0		11
Guides/Grants	3	3	2	2	4	1	1	4	20

Scan of EU & international organisations' tools and resources

A scan and assessment was undertaken *to assess the applicability of European Union and other international tools and resources* which provide support and guidance for GCoM signatories and local government more widely. The scan identified suitable programs, tools and guides (PTG) that may be suitable for wider adoption in Australia. This is identified as **Output 5** for the project.

A major purpose of this project is to support local government in developing comprehensive and relevant climate mitigation and adaptation action plans and to report and share these approaches. Together with assessing the alignment of programs and approaches within Australia (the state by state inventory), identifying useful international resources — **programs, tools and guides** (PTG) can reinforce the global nature of the GCoM and identify practical solutions and resources that may assist and improve local government climate strategies and action plans.

For the purpose of the scan, PTG were defined as follows:
Programs – are a set of related measures or activities with a particular long-term aim. Programs are used as an organising framework – e.g. for budgets and work programs within an individual entity (eg a specific council or government agency) and across groups, networks or through other entities. For the purpose of this analysis we defined programs as those operating at a scale larger than a single council, supporting them in various ways.

Tools – specific methods, planning and other frameworks, standards, interactive web based platforms, on-line calculators, reporting techniques etc. that are available and can be used by LGA and others.

Guides – information and other resources like guidance notes, training modules and links to professional support or networks that will enable councils to develop their strategies and use the tools.

Local authorities using the Global Covenant of Mayors' approach participate in a phased process, which after initial commitment involves:

1. Assessment: produce an accurate inventory of community GHG emissions and identify city-wide climate risks and hazards.
2. Target or goal setting: for mitigation and adaptation.
3. Planning: developing local action plans which integrate, where possible, mitigation and adaptation solutions.
4. Implementation: of those climate actions plans according to budget and timelines
5. Monitoring and reporting: for transparency and sharing outcomes.

Methodology

The approach in undertaking this task was structured to first **Scan** as a preliminary step, then to make an **Assessment** on suitability, and then to provide a level of **Analysis** on the resource's usefulness in the Australian local government climate context.

Scan (preliminary search)

As part of the GCoM support community, ICLEI Oceania has been involved in developing, assessing and supporting relevant resources designed to assist Australian local government. Using this background and through a series of web based searches, programs, tools, and guides were collated from major international groups and individual programs, including:

- European Covenant of Mayors and other resources
- Federation of Canadian Municipalities (FCM)
- ICLEI Regional Offices (inc. Europe, USA, Canada, Oceania)
- C40 cities
- UN Habitat
- World Bank
- World Resources Institute
- Red Cross
- Urban Climate Change Research Network (UCCRN)

Assessment

The second step involved narrowing the scope. This step was needed because there are many initiatives, programs, tools and guides that aren't considered to have high application potential

or relevance to Australian local governments. These were also sorted using the 5 GCoM planning phases identified earlier. Criteria were:

1. Applicability to developed countries, e.g. Australia
2. Assumptions regarding access to international finance and development aid
3. Applicability in a Federal and State governance system
4. Compliance with relevant Standards, Australian legislation, e.g. accounting, risk assessment, environmental legislation etc.
5. Accessibility, availability and cost
6. Value Add (i.e.would it fill a gap in the array of PTG available to Australian local governments already or would it complement/support existing Australian PTG)

Analysis

Initial recommendations from the assessment and analysis are provided identifying the resources considered most suitable for Australian local government, and suggested next steps for fully evaluating these resources.

However before endorsing particular PTG to Australian councils it would be necessary to undertake a deeper assessment of the preferred resources using additional criteria, such as:

- Currently used and tested in Australia
- Demonstrated success of approaches suited to diverse local government
- Supports councils involvement in local, national and international networks
- Enables analysis, comparison and evaluation of results
- Based on principles and approaches that enable multi-level governance
- Enables diverse Australian local governments to comply and report in a format acceptable internationally
- Works within Federated system – flexible to different state requirements
- Wider adoption in Australia could be supported with R&D, financing, incentives and other support
- Enables a wide range of partners and complementary programs to be integrated with the core approach
- Supports integration across mitigation, adaptation and other planning and program goals
- Supports mainstreaming and institutional strengthening within local governments and across other departments – e.g. waste, planning
- Provides access to technical support, quantification and targeting of priorities
- Supports integration with local government budgeting and other responsibilities
- Supports a shift from awareness raising to action
- Potential for strong support of national and state governments

Identified Resources

The complete snapshot of resources and matrix of assessment of each of the PTG using the 6 criteria is provided in the Appendix.

This summary list identifies each resource against each of the 5 identified GCoM phases:

- Assessment
- Target Setting
- Planning
- Implementation
- Monitoring and Reporting

1. General guides

- European Covenant of Mayors online Library
- SECAP guidebook
- ICLEI Green Climate Cities (GCC)
- ICLEI ACCCRN Process (IAP)
- UN Habitat "Guiding Principles for City Climate Action Planning"
- UN Habitat "Planning for Climate Change – A Strategic, Values-Based Approach for Urban Planners"

2. Assessment

- EU Climate Risk Typology
- EU Risk Systemicity Questionnaire
- EU RAMSES (Reconciling Adaptation, Mitigation and Sustainable dEvelopment for citieS)
- EU IVAVIA (impact and vulnerability analysis for critical infrastructures and built-up areas)
- Global Protocol for Reporting Community Emissions (GPC)
- ICLEI US GHG emission contribution analysis
- C40 CIRIS City Inventory Reporting and Information System
- Red Cross Red Crescent Climate Centre, Heatwave Guide for Cities, 2019

3. Target setting

- WRI Mitigation Goal standard
- ICLEI US ClearPath
- World Bank CURB: Climate Action For Urban Sustainability

4. Planning

- Including integrated action planning (adaptation and mitigation)
- EU Resilience Maturity Model
- EU Transition Handbook and Training Package
- EU RESIN Urban Adaptation e-guide
- EU "On Urban Resilience" audio-visual resource
- EU Climate Adapt. Urban Adaptation Support Tool (UAST)
- UK Climate Just
- ICLEI Canada Building Adaptive & Resilient Communities (BARC)
- C40 Adaptation and Mitigation Interaction Assessment Tool (AMIA)
- C40 – ICLEI Climate risk and adaptation framework and taxonomy (CRAFT)
- UCCRN ARC3.2 Summary for City Leaders
- UNFCCC "Assessing the Costs and Benefits of Adaptation Options: An Overview of Approaches"

5. Implementation

- EU City Resilience Dynamics Tool

Findings

Internationally there are many programs focused on accelerating local government climate action. These provide step-by-step planning guides, technical tools and programs and support in areas like: R&D, networking, collaboration and finance provision that recognise the importance of local government, industry and sector partners' contributions to mitigation or adaptation initiatives.

Many organisations have a strong focus on provision of tools and resources that include improving professional capacity, development and application of methods, improved and standardised techniques, coordinated learning and transfer of best practice, data, intelligence and analytical tools that together provide ways of aligning local action to national targets and reporting frameworks.

The scan identified that a range of programs, tools and resources in use internationally may have relevance to Australia. This scan relied largely on the materials provided on the organisations websites, although peer reviewed papers outlining critical evaluations were also referenced.

Financing for accelerated climate responses is increasingly recognised as important with a wide range of finance initiatives focused on assisting bold implementation measures. For example,

the World Bank has a major funding program focused on accelerating city climate actions. Since late 2017 the World Bank has partnered with the GCoM to provide technical and financial assistance to 150 cities across the world undertaking aggressive climate action programs. However, it should be noted that the majority of financing guides have relevance mainly for developing and least developed countries and may only be applicable to Australia in indicating approaches to developing financing options, rather than actual sources of finance.

A defining feature apparent from the scan is that while Australian local governments have access to a similar action planning frameworks (via ICLEI , GCoM and other networks), and some of the same conceptual tools and resources as their counterparts in Europe and elsewhere, they do not have the similar national programmatic support.

Australian councils already have access to the Global Reporting Protocol for Community Emissions (GPC) as part of the GCoM package. ICLEI Global has also developed, and launched in Bonn in June 2019, the Green Climate Cities planning guide. This covers both mitigation and adaptation and will soon be offered to Australian councils to support the GCoM.

All the programs, tools and resources listed in this scan are considered to be suitable for developed countries and many potentially add value to, or complement, existing Australian PTG. Any PTG which did not meet these entry-level criteria were excluded at the outset.

The scan identified an impressive range of European resources, most of which sit under the Covenant of Mayors banner. In Europe these programs are complemented by effective helpdesk support to cities. For example the EU-EC provides office support, referred to as the CoMO (Covenant of Mayors Office) along with other support via R&D coordination and financing facilities and guides. As a result of consistent support the EU-Covenant of Mayors has achieved high levels of involvement from large and small municipalities throughout Europe.

Kona, et al. (2018) document the CoM's success in involving smaller councils, by area and population, with small municipalities (defined as those of less than 10,000 inhabitants) representing almost 66% of signatories, as at October 2017, out of a total of more than 7,600 signed up local authorities representing over 238 million inhabitants.

The ICLEI USA resources also are well-suited to Australian local government and there has been great alignment and tradition in sharing of approaches. The useful resources includes all elements of the Clearpath accounting and reporting and analysis approach, technical tools and webinar resources.

Likewise the Federation of Canadian Municipalities (FCM), in partnership with ICLEI Canada, couples their climate action approach with many other programs about local resilience such as biodiverse cities, urban sustainability and community resilience that are delivered through a range of support programs, resources and tools. These enable local governments to address integrated long and short term priorities that include mitigation, adaptation and community resilience.

The use of the C40 Cities resources by non-C40 Cities is encouraged and relevant. C40 research covers a range of tools, standards and frameworks. Its program of *Research, Measurement and Planning* supports cities implement mitigation and adaptation programs and measure their effectiveness. The C40 Planning Programme provides support to develop ambitious and equitable climate action plans in line with the Paris Agreement. The technical assistance, delivered by C40 in partnership with expert city climate planners, covers a wide range of support including training, workshops, peer-to-peer collaboration, stakeholder engagement, planning tools, and research. In Australia the C40 Cities of Melbourne and Sydney have shown a willingness to share outcomes and strategic approaches with other cities.

A number of other tools have been identified from international bodies such as World Bank, UN Habitat, UNFCCC/IPCC or the Urban Climate Change Research Network (UCCRN) all are worthy of further evaluation.

Recommended next steps

While these resources and many more are generally available to all local governments through organisations website we believe testing their application in Australian circumstances is useful. Therefore before endorsing any particular PTG to Australian councils, it would be necessary to conduct a deeper evaluation through field testing and stakeholder assessment, of:

- their applicability and usefulness in the Australian context
- their consistency with the Australian regulatory and finance environment
- whether some PTG offer limited free access but charge fees for the full range of features and functionality

We found that: The effectiveness of many of the resources (PTG) in this scan would be dependent on the availability of additional **Technical Advice** and training for local government to draw out the real value. Without this additional support the attempts to make sense of and effectively use some of these resources might be limited or even counter-productive.

Assessment Matrix and Snapshot of Resources is provided as an appendix

Data, measurement and reporting

One of the major issues for local councils considering the GCoM is having access to data and confidence in the development of community emissions inventories. As a major compliance step within the GCoM CRF and with a high level of importance allocated to transparent reporting, local governments are keen to ensure this step is both accurate, replicable over time and affordable.

Throughout the consultation and through preliminary research the community emissions inventory and the development of science based targets has been a priority concern. It has been an area of increasing interest for all stakeholders involved in supporting the accurate measurement of emissions and the standards and access issues, including NGO, private sector and governments. This research is a major element of **Output 1 f**or this project**.**

Data and measurement for robust climate change action is recognised as critical to understanding baseline positioning, to developing clear and meaningful action plans and to tracking and reporting on progress.

Key research points identified that:

- The GCoM Common Reporting Framework is uniquely positioned to provide a robust mechanism that aligns local, national and international reporting.

- Currently there are gaps and challenges in data and measurement capacities and approaches at local scales for both emissions reduction and adaptation activities. These impact on the ability of local governments to develop and implement plans that drive additional outcomes. One example of this is the lack of granularity in the national inventory.
- There are a range of programs and initiatives provided by Zero Carbon Communities, Cities Power Partnership, National Carbon Offset Standard, Victorian Coastal Monitoring Program, Greensense Emissions Reporting Platform and ClimateAsyst tool that are generating modest insights into measurement approaches tailored to Australian application.
- A centrally administered platform on data and measurement (spanning commonly used datasets and data standards, guidance on accessing data and on estimating the impact of measures, and data provider negotiations) could meet local needs, deliver substantial efficiencies, and support achievement of outcomes.

Current state of play and emerging issues

Robust approaches to data and measurement for climate change action plans that underpin effective progress and reporting are complex for many local governments. There is currently a lack of standard data sources and emissions conversion methods that means that there is substantial variation in approaches to developing emissions profiles for local governments and in their reporting.

Ironbark Sustainability and ICLEI Oceania have been working on this issue for some time so collectively are getting closer to an accepted standard. Further current challenges include:

- Gaps in data provision by for example stationary energy distribution companies;
- A lack of consistent approaches to developing local metrics to scale state data;
- Local capacity gaps in defining requirements to data providers; and
- Gaps in the ability to estimate the impact of a measure in a specific municipality.

A major outcome from the consultation was the need to settle on standards which provided an increased level of recognition for the GCoM reporting approach and where the standardised GCoM approach to data, measurement and reporting approaches provided significant value. State governments, for example Victoria, New South Wales and Queensland, recognise the GCoM reporting capacity in providing uniform action outcomes, examples of strategies and case studies that could be used to widen the uptake of best practice.

The GCoM staged and standardised approach is also recognised as valuable by organisations providing technical support, such as for carbon budgets or emissions profiles, to resource-constrained local governments, as it provides a well-defined path for capacity building and clarifies where investment in data and methods may be required.

Support for greater consistency and/or sharing of approaches with regard to climate change risk and adaptation data also emerged through the consultation process. While adaptation programs in states are heterogeneous, the need for robust methods for adaptation was widely identified, including by the NSW Enabling Adaptation program and the Queensland Climate Resilient Council program.

Throughout Australia risk and hazard analysis is a priority. However, measurement approaches regarding the impact of adaptation actions are still developing. While many local councils have been involved in some form of risk assessment or planning most would be classed as first pass or awareness raising although standards are becoming clearer and more strongly embraced and shared.

The complexity of data and measurement for adaptation was also noted, for example by the 2018 NSW Local Government survey, identifying that support is still required for applying localised climate change information, knowledge and tools.

The consultation process also identified that there are many initiatives underway that are building data or testing measurement methods relevant to climate change action planning, that can contribute to a refinement of GCoM contribution to data and measurement in Australia. Examples include:

- The Victorian Coastal Monitoring Program – a partnership between community groups and universities to collect data on different climatic risks and hazards
- The Adapting Priority Coastal Recreational Infrastructure for Climate Change (APCRICC) Excel spreadsheet tool commissioned by the Sydney Coastal Councils to support decisions in response to the effects of coastal hazards and climate change
- The WALGA's Greensense Emissions Reporting Platform, which enables participating councils to track and report their greenhouse gas emissions, energy consumption, and energy production
- The regional emissions inventories completed for Resilient Sydney and the City of Melbourne – C40 have used the GPC standard, the first step in the GCoM framework and often seen by some councils as a barrier to greater involvement in the GCoM
- The Cities Power Partnership tools, including an online knowledge hub and a power analytics tool to help track corporate or internal operations emissions, energy and cost savings
- Tasmania's Climate Asyst tool which assists infrastructure owners, managers and planners to use customised future climate projections to assess the exposure of infrastructure assets to local climate change

At a national scale there are several data and measurement initiatives of high relevance to local government emissions profiles. These include:

- The National Greenhouse Gas Inventory,

- The National Greenhouse and Energy Reporting (NGER) scheme on corporations energy data, including methods, criteria and technical guidelines for the estimation of greenhouse gas emissions, and
- CSIRO's National Energy Analytics and Research (NEAR) program which includes energy data from Australian cities and zone substation businesses.
- National Carbon Offset Standard (NCOS)

The GCoM, with its Common Reporting Framework (CRF), is uniquely positioned to provide a robust mechanism to align local efforts and reporting with national and international emissions and risk reporting.

Importantly, the methodology used by GCoM Framework is consistent with the Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories, which are also nearly universally adopted by national governments for national emissions accounting purposes.

In Australia, the national inventory is developed in accordance with international guidelines and is contributed to by the National Greenhouse and Energy Reporting scheme and by state inventories.

Unfortunately state-based reporting in the national inventory does not include granularity across local governments and inconsistent approaches have emerged at local and regional scales. There are also opportunities to include local government emissions reduction activities that differ from but could add value to those used in the national accounts. The GCoM Common Reporting Framework enables flexibility to suit differentiated local circumstances and needs as a general principle.

Of note is that Australia's national greenhouse gas inventory has a different sectoral allocation of emissions to that of many other OECD countries. In particular, Australia has a higher proportion of emissions from land use change and forestry, and agriculture, than many developed countries and this difference requires appropriate data standards and measurement methods that many not be transferable internationally. Further, Australia's local governments are diverse in terms of biogeography, demographics and socio-economic conditions and any standard reporting framework needs to be flexible enough to accommodate this diversity.

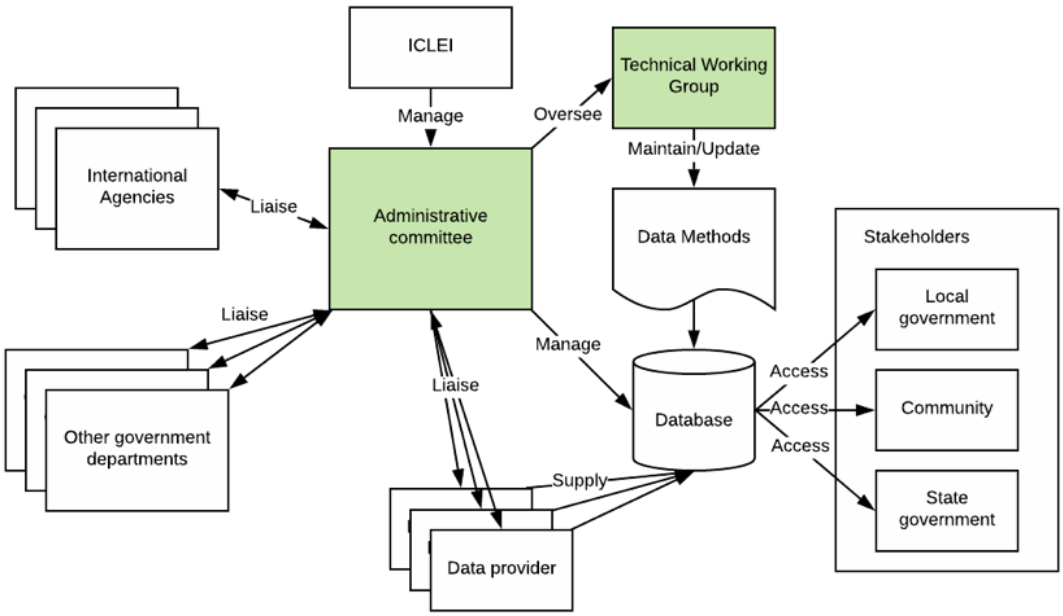
Opportunities

The consultation process identified that the GCoM data and measurement approach could be widely applied (if supported) and that this could deliver substantial benefits in the development of emissions or risk profiles, reporting, compliance and measure effectiveness.

A partnership approach to co-development of data access standards and methods would be welcomed by states as it would assist both local government and state program goals, and allow for leading best practice approaches currently in use to be transferred and incorporated appropriately in a national approach. Such a partnership approach would be relevant to methods for both risk and hazard documentation, and emissions profiling, and it would also most likely be sought by relevant national government or NGO initiatives.

A national approach to data and measurement methods for GCoM uptake in Australia, as conceptualised by Ironbark Sustainability (unpublished 2019), would be based on a centrally administered platform for climate change data and technical methods relevant to local governments, with elements such as:

- Standard and meta-datasets and tools that support calculation of emissions for municipalities across Australia, including emissions activity data and conversion coefficients
- Data standards information and common assumptions
- Guidance on when and how to access and use national or state datasets for emissions and risk profiling and reporting
- Centralised negotiations with data providers on commonly needed information
- Guidance on how to measure the impact of measures



Conclusion

There is currently a lack of standard data sources and emissions conversion methods that means that there is substantial variation in approaches to developing emissions profiles for local governments and in their reporting.

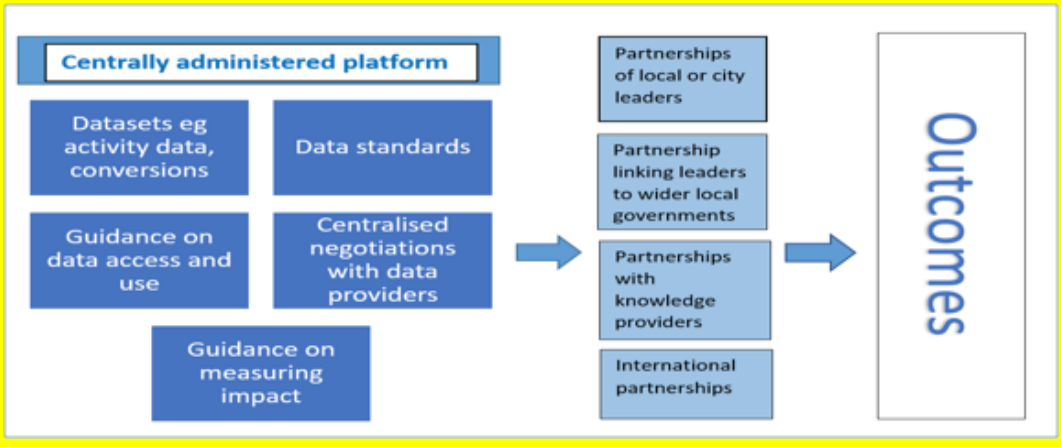
Support for collaborative approaches to data and measurement is essential. The GCoM reporting approach and underlying its standards provides significant value in identifying and measuring local governments climate contribution.

Robust data contributes to all steps of the GCoM Common Reporting Framework which is seen as very important. Open and transparent access to data, methods, and assumptions together with access to comparable results and approaches is desirable.

The best way to move forward is to:

- Establish a GCoM Data and Measurement Technical Working Group to guide work in this area.
- Encourage the adoption of the GPC as the standard for all local government reporting and promote the use of the GCoM unified reporting platform across other programs
- Create and then provide open access to the underlying data sources and conversion methods for each reporting year
- Encourage service providers to local governments to draw this information to maintain accuracy of reports over time.
- Work with Governments and other reporting agencies to align reporting efforts to assist in identifying the local government contribution

We found that: There is currently a lack of standard data sources and emissions conversion methods that means that there is substantial variation in approaches to developing emissions profiles for local governments and in their reporting.



National roundtable outcomes

Many of the strategic issues and ways of addressing them were discussed at the second National Roundtable held in June in Canberra. The key messages arising from this Roundtable are that there is genuine support for the wider adoption of the GCoM framework in Australia, with participants encouraging ICLEI Oceania and the European Commission (through SPIPA) in taking the next steps to clarify and consolidate an effective way forward and functions of an Australian GCoM Chapter.

The second National Roundtable Consultation was effective in identifying priority issues for the future growth, support and refinement of the GCoM in Australia, which identified a number of strategic approaches including:

- The establishment of an interim GCoM Advisory Group to advise on the wider adoption of GCoM in Australia, including mobilising integrated approaches to priority issues.
- Identifying management arrangements and funding models that reflect the diversity of interests, capacities and legislative requirements.

- Together with international funding (such as from the EU-EC or Bloomberg etc), any funding strategy will need to be broad based and innovative engaging Australian Governments but also should consider participation costs, and support from businesses, NGOs and philanthropic organisations.
- Clarifying the GCoM value propositions for local government participation identifying that they are aligned with the priorities and core functions of local government including risk management, liveability, jobs, and regional economies.
- Establishing regional and national partnerships or networks that enable greater capacity for sharing of ideas about feasible solutions, opportunities and benefits of collective action. These broader partnerships could include councils, regional associations, peak associations, NGOs, R&D agencies and agencies with policy responsibilities for health, regional development, planning etc.
- Opportunities to align enhanced data provision and measurement capabilities with the GCoM framework which build on current successes. Efficiencies could be realised from a centrally managed platform for data and measurement support that add value to the national inventory through aggregating local action.
- A diverse array of relevant tools and resources; that testing and applying these would benefit from coordination; and that the potential to access, apply and refine relevant international tools and resources will depend on levels of support.
- Identifying possible funding sources from National Government in the areas of Measurement, Risk and Resilience, Adaptation, Health, Innovation, Mitigation and Clean Energy. The SDG-NDC links are a possible area of increased partnership with subnational government in Australia.
- Promote the effectiveness of the GCoM framework to a wide audience and to capitalise on the use of case examples to demonstrate its effectiveness.
- Maintaining a strong working relationship between the EU-EC via programs like SPIPA and through international diplomatic opportunities and philanthropic support to reinforce the value of GCoM.

The Roundtable recognised the different roles of the three levels of government in Australia, and of NGOs and knowledge providers as they relate to GCoM. The following summary sketches the relevant roles of GCoM, Governments, Associations and NGOs and a role for a new GCoM Advisory Group.

Australian Government:

- National accounts and targets, including measuring and reporting on progress towards targets
- Data provision (of nationally important datasets) to LGAs and regions
- National scale climate disaster risk reporting
- Coordination (e.g. via COAG) and resourcing processes for developing long term strategy
- Aligning policies to link reporting initiatives (eg NCOS) with LGA efforts
- Narratives about local actions and enhancing recognition of LGA efforts

- Support for international comparisons and peer learning
- Enhancing sharing and adoption of best practice models
- Enabling and resourcing R&D and technical support for integrated responses to mitigation and adaptation that enhance population health, liveability and prosperity
- Research and Development partnerships
- International partnerships and diplomacy

State Governments:

- Map alignment of current programs to GCoM models
- Align state legislation and programs to GCoM model
- Facilitate initiates and support state-wide coordinated responses
- Recognise value in unifying (harmonising) data, measures, indicators and reporting frameworks to inform policy
- Engage in national coordination processes
- Share information, tools, resources, experience and case study materials across State Boundaries
- Work through Regional Organisations of Councils (and similar) to create scale (e.g. councils with similar issues) and exemplars
- Provide resourcing and support to local governments to create climate action plans reflecting state targets

Local Government Associations (state and national):

- Ensure climate responses also deal with material changes in conditions - critical issues linked to matters of importance like jobs, quality of life, transport and health (the 'so what' questions)
- Facilitate coordinated approaches amongst states and councils
- Ensure climate change remains on ALGA agenda – with the need to pursue strategic goals with governments
- Development, documentation and promotion of case studies

NGOs:

- Alignment of major programs
- Promotion and sharing successes
- Community engagement and mobilisations
- Philanthropic support

Diplomatic, Embassy and international:

- Support High level diplomatic discussions
- Support for international comparison and examples
- Build International partnerships and access to resources
- Support funding for program development and implementation

GCoM advisory group potential role:

- Mobilising a unified national effort
- Identification of opportunities, resources, funding, partners etc.
- Development of proposals with strong value propositions across many parties

- Engagement of multiple partners (public, private, research and civil society actors)
- Communication across scales from local to international
- Facilitate national, state and regional alliances and linkages
- Catalysing partnerships at regional, state and national scales
- Cross pollinating good ideas about what is possible and feasible in terms of local responses to climate change

Taking a 2-3 year time horizon the major issues identified at the second Roundtable included:

- **Implementation and governance** arrangements and funding models with further dialogue needed on the optimum governance and funding. This needs to reflect the diversity of interests, capacities and that the states establish local governments. Any funding strategy needs to be broad and innovative exploring roles for businesses, NGOs and philanthropic organisations, as well as governments. Core funding may be needed from the EU-EC or global philanthropies like Bloomberg to continue to support GCoM effectively

- **Communication and implementation** delivery needs to clarify the value propositions for local government participation. The capacity for cross pollination of ideas about feasible solutions, opportunities and benefits of collective action is needed. Climate change action needs to be aligned with the priorities and core functions of local government: risk management, liveability, jobs and transition, and regional economies.

- **Broader partnerships:** opportunities for partnerships were identified throughout the Roundtable. These include between councils with the capacity to share experience, with councils who have pledged to act on the “climate emergency”, and those with shared interests in partnering with research agencies to tackle priority issues. (ie health, green infrastructure, biodiversity, agriculture). Partnerships with governments, Local Government Associations and with NGO, academia and the private sector should be encouraged. Enabling the formation of thematic or regionally focused partnerships could build more diverse support for GCoM.

- **Data and measurement:** opportunities exist to align measurement approaches with the GCoM framework. State government and national measurement approaches and those from NGOs need continued recognition and alignment. Efficiencies could be realised from a centrally managed platform for data and measurement support that could also add value to the national inventory through aggregating local action.

- **Tools and resources.** The Roundtable noted the diversity of relevant tools available, and recognised that many local governments appreciate support and guidance on preferred tools that are regionally suitable. The potential to access, apply and refine relevant international tools and resources needs to be supported.

The Roundtable participants supported the establishment of an interim advisory group to progress consideration of the wider adoption of GCoM in Australia, including mobilising an integrated approach to the priority issues above that could deliver benefits in a near-term horizon.

The development of a “roadmap” of the relevant roles of organisations and programs would be useful to show the effectiveness of local climate action and support the use of the GCoM framework.

Critical **players and roles** have been identified and suggestions on how certain measures or approaches could enhance local action and support the effectiveness of the GCoM delivery in Australia.

Recommendations from the Second National Roundtable

To advance GCOM priorities and opportunities it is recommended to:

- initiate an interim national GCoM working group and other ad hoc groups (eg data/measurement)
- establish formal agreements with identified peak local government associations and NGO partners
- continue the positive discussion regarding alignment with priority State Government programs
- develop a comprehensive plan for the strategic delivery of GCoM in Australia
- Seek immediate funding support to maintain the momentum generated by this project and to provide an adequate level of direct support to participating local governments

A full report on the National Roundtables is available on the website.

Conclusions and next steps

To accelerate the Australia wide adoption of the GCoM model its delivery may need to be carefully tailored to work effectively within the Australian policy context and federated governance system. Local action may be best supported within a State's context with support by state government and/or state-based local government associations and NGOs.

In some States the GCoM model should build on existing programs rather than introduce a new and possibly competing set of requirements. It should identify ways of assisting councils already involved or considering engagement in GCoM to do so supported by existing or future programs.

More directly aligning with existing programs may benefit participating local governments and each program also has the potential to aggregate support/resources and to provide a common voice on local governments climate ambition.

The policy context for local government mitigation action is strong. Community demand for a low emissions future is being turned into innovative responses at the local level. Having a consistent

approach to strategically manage, report and implement Adaptation Plans would assist building Australian climate resilience while meeting our international obligations.

Stakeholders see the benefit and value of consistent reporting and providing comparisons. Most accepted that consistent inventories, assessments and reporting can add significant value.

Those State governments with clearly defined policies or legislative obligations were most interested in understanding the methodology for measuring community-wide emissions and the requirements for climate risk-reduction assessment.

Keeping track of local responses and measuring that impact remains a challenge given the scale of local activities and the lack of a coordinated national reporting framework.

The general reaction to the consultation was overwhelmingly positive. Almost every stakeholder endorsed the important roles played by local governments in meeting community ambitions and responding to the Paris Agreement.

The development of a "roadmap" of the relevant roles of organisations and programs would be useful to show the effectiveness of local climate action and support the use of the GCoM framework.

The development of **Strategic Directions** plan for the continuation of GCoM in Australia is needed. This combined with a work plan of activities is the best way to maintain the momentum and goodwill established through the project.

Strategic Directions

There are 3 major Outcome areas identified as part of this project (also identified in **output 8** of the project)

- Strategic alignment and direction for national delivery of GCoM
- Provision of direct and technical needs-based support to councils
- Capacity building and resourcing for GCoM Secretariat function

Potential work program

A major focus area for ICLEI Oceania will be the development of work packages to consolidate the delivery of GCoM in Australia, subject to funding support.

- further develop local government familiarisation and capability building around the GCoM reporting framework;
- continue to develop broad based partnerships and strategic approaches based on recognition of the respective roles and responsibilities within the federation system of governance and structure of local government representation and civil society engagement;

- facilitate representative advocacy opportunities to progress the understanding and support for the GCoM to complement local climate action;
- undertake the selective refinement of internationally developed tools and resources in the Australian context to assist local government signatories;
- improve data access and local platforms for data sharing, measurement and reporting using the GCoM's Common Reporting Framework (CRF);
- provide analysis, documentation and promotion of case studies that motivate successful adoption of better practice models at local and regional scales;
- identify financial resources for regional and national coordination, support for participants and peer to peer learning networks;
- seek funding for major R&D programs focused on accelerating adoption, policy and financing innovations;
- build more local and regional partnerships from a broader diversity of Australian society;
- develop and regularly review the strategic operations plan for GCoM in Australia to assist in delivery, resourcing and focus.

Next Steps

Considerable momentum and goodwill has been established through the project through its consultation, research, meetings and national roundtable events. Information of the project has been shared through the internet, print and social media. Presentations at national and regional conferences and workshops raised awareness of GCoM to a significant and targeted local government audience.

To advance GCOM priorities and opportunities it is recommended to:

- initiate an interim **national GCoM** working group
- Initiate a data/measurement **working group** and other ad hoc groups as needed
- establish **formal agreements** with identified peak local government associations and NGO partners
- continue the positive discussion regarding **stronger alignment** with priority State government and other local climate programs
- develop a **comprehensive work plan** (1-3 years) for the strategic delivery of GCoM in Australia
- Seek **immediate funding support** to maintain the momentum generated by this project and to provide an adequate level of direct support to participating local governments.

The purpose of the **comprehensive work plan** is to establish the operational responsibilities of the GCoM (chapter or covenant) in Australia and the support for participant cities and local governments. This will be completed when available funding becomes available and the extent of activities (eg number of workshops, reports activities) will be dependent upon the size and focus of the budget.

The GCoM Secretariat would undertake both a Strategic and an Operational role.

Strategic role:

- Coordination of national approach for GCoM in Australia
- Establish the Regional and National decision making forums in Oceania
- Ensure connections to GCoM Board and participate in regional coherence approaches
- Undertake a key Advocacy role and way to effectively deliver this
- Continually assess fundraising and resourcing plans
- Establish the country appropriate data management protocols/standards

Coordinate annual implementation plans to:

- Undertake city outreach & engagement responsibilities
- Provide effective and timely helpdesk support
- Arrange technical support for compliance and reporting
- Contribute to continual Verification, Monitoring & Evaluation tasks
- Complete aggregation of results and progress reporting annually
- Undertake recognition activities and provide evaluative reviews

Strategic Directions

The proposed GCoM Australia Strategy is structured around the three SPIPA Project Outcomes:

1. Strategic alignment and direction for national delivery of GCoM
2. Provision of direct and technical needs-based support to councils
3. Capacity building and resourcing for GCoM Secretariat function

Outputs and work packages will be developed from this structure along the following lines:

1. **Strategic alignment and direction for national delivery of GcoM**

- continue to develop broad based partnerships and strategic approaches with federal and state governments and civil society
- map and align relevant programs to assist local governments to understand the range of offerings
- undertake advocacy to progress high level understanding and support for the GCoM to complement local climate action;
- identify funding for regional and national coordination, support for participants and peer-to-peer networks;
- establish formal agreements with peak local government associations and NGO partners

2. **Provision of direct and technical needs-based support to councils**

- further develop local government familiarisation and capability building around the GCoM reporting framework;
- undertake refinement of selected international tools and resources for the Australian context;
- improve data access and local platforms for data sharing, measurement and reporting using the GCoM Common Reporting Framework (CRF);
- provide analysis, documentation and promotion of case studies that motivate successful adoption of better practice models at local and regional scales;
- seek funding for R&D programs focused on accelerating adoption, policy and financing innovations;

3. **Capacity building and resourcing for GCoM Secretariat function**

- develop and regularly review a GcoM Australia Strategic Plan to guide focus, delivery, resourcing;
- develop a comprehensive 3-year work plan;
- identify resourcing needs and develop capacity building plan for Secretariat

Immediate Steps

Considerable momentum and goodwill has been established through the project to date. It is important to continue this momentum through some immediate action while the detailed work plan is developed and funding is secured . These steps are considered to be critical:

- Initiate an interim national GCoM working group
- Initiate a data/measurement working group and other ad hoc groups as needed
- Continue the positive discussion regarding stronger alignment with priority State government and other local climate programs
- Finalise formal arrangements with identified partners
- Seek immediate funding support for these steps and explore funding options for the Strategic and operational functions of the GCoM Oceania secretariat.

Appendices

Appendix 1: GCoM Australia Strategic Plan 2019 - 2021

Outcome	Objective	Actions/work packages	Timeframe
Strategic alignment and direction for national delivery of GCoM	Establish Advisory Group to develop Strategic Plan for Australian GCoM Chapter	Invite participation from stakeholders	Short
	Design and agree on governance and working group structure	Terms of Reference for committees	Short
	Secure funding for GCoM regional coordination and coherence	Proposals to EC , Bloomberg etc and other sources	Medium
	Broaden partnerships with organisations supporting programs, campaigns, and priority issues	Establish Agreements and MOUs Promote connections between programs	Short
	Continue advocacy on city level climate action to governments	Establish State-by-State forums Initiate a Mayors Advocacy forum	Medium
	Continue development of partnerships from State Government, Local Government Associations, NGO, academia, civil society etc	Establish formal partnership statements and agreements	Short
Provision of direct and technical needs-based support to councils	Confirm alignment with relevant programs, initiatives, service providers	Examine tailoring of GCoM to meet State based priorities and alignment with current programs	Short
	Establish value proposition of GCoM for council consideration	Host feedback and evaluation sessions. Highlight mentoring between current and new cities	Short
	Communicate value, promote and recruit additional local governments to GCoM	State-by-State officer forums and workshops	Medium
	Establish data management, measurement and reporting working group	Establish technical working groups	Medium
	Align measurement and reporting programs and standards with other programs	Host evaluation workshops with stakeholder	Medium
	Continue to scan and evaluate international tools and resources and support requirements	Carry out assessment of new resources as they emerge	Medium
Capacity building and resourcing for GCoM Secretariat function	Develop business continuity plan for Secretariat function	Develop funding proposal	Short
	Quantify resourcing needs inc staffing finance, systems	Establish staff tasks and allocate activities to support GCoM delivery	Short
	Undertake needs assessment and develop capacity building plan	Host evaluation and information sessions to refine signatory needs	Medium

Appendix 2: Snapshot of EU and other tools and resources

1. General guides

1.1 European Covenant of Mayors online Library
This offers a wide range of useful resources such as the core documents, technical materials, thematic leaflets, event reports, webinar recordings and many more. However most of these are either specific to the EU Covenant context, or are already in the public domain e.g. case studies. Specific European Covenant tools are also listed below. link

1.2 SECAP guidebook
European Covenant of Mayors Guidebook "How to Develop a Sustainable Energy and Climate Action Plan" (SECAP). This gives excellent coverage of all aspects of institutional commitment, coordination of the planning exercise, identification and mapping of stakeholders. The earlier version which focussed only on mitigation is referred to as "SEAP". link

1.3 ICLEI Green Climate Cities (GCC)
ICLEI's global GreenClimateCities (GCC) program supports local communities that are on the front lines addressing the challenges and opportunities of urban growth, exploring the potential of green economy and green infrastructure and pursuing a low emission development trajectory.

The GCC methodology is a nine step process offering access to tools, instruments, good practices and process management support. It provides an Integrated Climate Planning approach, and can also be used for either Mitigation or Adaptation planning. link

1.4 ICLEI ACCCRN Process (IAP)
This guide was developed by ICLEI for the Rockefeller Foundation funded "Asian Cities Climate Change Resilience Network" (ACCCRN). While designed mainly for Asian cities it would apply equally to Australian cities. link

1.5 UN Habitat "Guiding Principles for City Climate Action Planning"
An excellent overview of key steps and principles, applying to both climate mitigation and adaptation. link

1.6 UN Habitat "Planning for Climate Change – A Strategic, Values-Based Approach for Urban Planners"
This provides an excellent, detailed guide on conducting both climate change mitigation and adaptation planning. It is a useful resource for a range of analytic tools and for integrated climate planning approaches, particularly from an urban planning point of view. Link

2. Assessment

2.1 EU Climate Risk Typology

Interactive online map that helps you to visualise, describe, compare and analyse climate risk in European cities and regions. Particularly useful during the early stages of assessing vulnerability and risk link

2.2 EU Risk Systemicity Questionnaire

Available as an Excel spreadsheet to help identify and prioritise risk scenarios as part of a preliminary risk assessment. Answer questions about the likelihood of a series of defined risk scenarios to generate a list of risk mitigation actions for each, capturing interrelations with other risks and their cascading effects. link

2.3 EU RAMSES (Reconciling Adaptation, Mitigation and Sustainable dEvelopment for citieS)

This is an assessment tool to estimate the cost of health impacts caused by climate change. Developed by the World Health Organisation, it helps planners and decision-makers at the local level to estimate and analyse health-related costs. Available as an Excel spreadsheet along with an accompanying guidance report, the tool provides suggested indicators for estimating climate-related impacts on health and supports a holistic cost assessment, including the estimated economic impacts of climate change on health, as well as the costs and benefits of corresponding adaptation measures. link

2.4 EU IVAVIA (impact and vulnerability analysis for critical infrastructures and built-up areas)

A seven-module methodology to assess climate-related risks and their effects (along with related Impact Chain Editor Plus [ICE+] and IVAVIA Workflow Support tool). IVAVIA provides guidance on how to prepare, gather, and structure data for the assessment; quantify and combine vulnerability indicators; assess risk; and present outcomes. Includes:

- Qualitative risk analysis through developing Impact Chains, potentially aided by the ICE+ tool. Modules 1 & 2
- Defining indicators as a basis for a vulnerability assessment. Module 3.1
- Data collection for various vulnerability indicators. Module 3.3
- Quantitative risk analysis, through Workflow Support tool. Modules 3-6 link

2.5 Global Protocol for Reporting Community Emissions (GPC)

GHG Protocol establishes comprehensive global standardized frameworks to measure and manage greenhouse gas (GHG) emissions from private and public sector operations, value chains and mitigation actions. Building on a 20-year partnership between World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD), GHG Protocol works with governments, industry associations, NGOs, businesses and other organizations. All GCoM cities in Australia and NZ are required to use the reporting protocol. link

2.6 ICLEI US GHG emission contribution analysis

GHG emission analysis – on-line tool has been developed to track progress in GHG mitigation. It has been built to overcome multiple challenges include coarse date, time lags and diffuse responsibilities. The tool equips cities to perform their own GHG Contribution Analysis of the biggest drivers influencing GHG performance. It aims to provide better signals to evaluate overall progress and more through understanding of the nature of the problems link

2.7 C40 CIRIS City Inventory Reporting and Information System

This an Excel-based tool for managing and reporting city greenhouse gas inventory data. link

2.8 Red Cross Red Crescent Climate Centre, Heatwave Guide for Cities, 2019

This newly released practical guide is "designed with, and for, people working in city government to understand, reduce the risk of, and respond to, heatwaves in their cities. The guide provides information and recommendations for technical staff within city government, including on: working with partners to understand city-specific heatwave risks; operational approaches to prepare for an imminent heatwave; response strategies to reduce human harm during a heatwave; and ways to learn from a heatwave that has just ended". link

3. Target setting

3.1 WRI Mitigation Goal standard

The GHG Protocol Mitigation Goal Standard provides guidance for designing national and sub-national mitigation goals and a standardised approach for assessing and reporting progress. link

3.2 ICLEI US ClearPath is an all-in-one suite of online tools to complete greenhouse gas inventories, forecasts, and climate action plans at the community-wide or government operations scale. link

3.3 World Bank CURB: Climate Action For Urban Sustainability

This is a climate action planning tool developed by the World Bank in partnership with C40 Cities Climate Leadership Group, Global Covenant of Mayors, and AECOM Consulting that helps cities prioritize low-carbon investments based on cost, feasibility, and impact on energy use and greenhouse gas emissions. CURB allows cities to plan across six sectors in an integrated way: private buildings, municipal buildings and public lighting, electricity generation, solid waste, transportation, etc. link

4. Planning

Including integrated action planning (adaptation and mitigation)

4.1 EU Resilience Maturity Model

This illustrates recommended policies with a database of case studies from European cities. A wiki feature allows city staff to expand the database by uploading their own case studies. link

4.2 EU Transition Handbook and Training Package

The Transition Handbook outlines the phases of an integrated process management cycle, drawing upon the framework of the European Environment Agency's Urban Adaptation Support Tool. Descriptions of each phase and steps within are complemented by advice on supporting methods and city case studies. The Training Package complements the handbook with worksheets and exercises. link

4.3 EU RESIN Urban Adaptation e-guide

An Online platform that supports the entire process of developing and implementing an adaptation plan with guidance, checklists, practical examples, and advice on supporting tools and measures link

4.4 EU "On Urban Resilience" audio-visual resource

An audio-visual guidance tool compiling over 100 short interviews from 33 experts, designed to help cities find information on climate change adaptation, and covering topics from local climate modelling to how to secure political commitment for climate action. link

4.5 EU Climate Adapt. Urban Adaptation Support Tool (UAST)

The Urban Adaptation Support Tool guides European adaptation decision-makers and practitioners in cities through the main steps of the adaptation process. The tool is based on the policy cycle, which highlights that climate change adaptation is an iterative process. UAST is divided into six steps and a number of sub-steps. UAST is updated and for each sub-step it provides links to carefully selected resources that can be of the greatest use to cities. link

4.6 UK Climate Just

This is an information tool designed to help with the delivery of equitable responses to climate change at the local level. Its main focus is to assist the development of socially just responses to the impacts of extreme events, such as flooding and heatwaves, as well as supporting wider climate change adaptation. It also includes issues about fuel poverty and carbon emissions. link

4.7 ICLEI Canada Building Adaptive & Resilient Communities (BARC)

The Building Adaptive & Resilient Communities Tool has been designed to assist local governments with climate change adaptation planning. This interactive web-based tool takes users through a Five Milestone process. This tool is made up of a series of exercises designed to assist communities in adapting to the impacts of climate change through the development of a municipal climate change adaptation plan. link

4.8 C40 Adaptation and Mitigation Interaction Assessment Tool (AMIA)

The AMIA tool enables cities to methodically identify potential interactions between climate adaptation and mitigation measures. The tool highlights opportunities and conflicts and provides users with case studies to guide their decision-making. link

4.9 C40 – ICLEI Climate risk and adaptation framework and taxonomy (CRAFT)

CRAFT is a standardized reporting framework that enables cities to perform consistent reporting of local climate hazards and impacts, risk and vulnerability assessment, and adaptation planning and implementation as part of their compliance with the GCoM. CRAFT provides:

- a means to monitor and evaluate adaptation planning progress to help cities improve adaptation efforts by enhancing knowledge of best practices;
- a means for cities to identify priorities and target their advocacy for climate adaptation resources;
- the data to improve the ability for cities and their partners to identify peers and aspirational examples to help inform their own adaptation planning process and implementation. link

4.10 UCCRN ARC3.2 Summary for City Leaders

The ARC3.2 Report presents downscaled Climate Projections for approximately 100 cities and catalogues urban disasters and risks, along with the effects on human health in cities. ARC3.2 gives concrete solutions for cities in regard to mitigation and adaptation; urban planning and design; equity and environmental justice; economics, finance, and the private sector; urban sectors such as energy, water, transportation, housing and informal settlements, and solid waste management; and governing carbon and climate in cities. Other key topics include ecosystems and biodiversity, and urban coastal zones. link

4.11 UNFCCC "Assessing the Costs and Benefits of Adaptation Options: An Overview of Approaches"

This publication was developed under the Nairobi work programme on impacts, vulnerability and adaptation to climate change and provides an introduction to a range of different assessment approaches and methodologies and shares best practices and lessons learned. It builds upon activities and contributions from the Nairobi work programme and its partners. link

5. Implementation

5.1 EU City Resilience Dynamics Tool

In combination with the Resilience Maturity Model, allows user to try out different policy combinations, and simulates the progress of implementation starting from a baseline maturity stage. link

Appendix 3: Matrix Assessment of EU and other tools and resources

Assessment Matrix **Key: NFA = needs further assessment**

Program, tool, resource	Criterion 1 Developed countries suitability	Criterion 2 Appropriate Financial assumptions	Criterion 3 Federated governance system suitability	Criterion 4 Compliance with Aust standards, laws	Criterion 5 Access, cost	Criterion 6 Value Add
GENERAL GUIDES						
1.1 EU Covenant Library	Yes	NFA	Yes	NFA	Free	Yes
1.2 SECAP	Yes	NFA	Yes	NFA	NFA	Yes
1.3 ICLEI GCC	Yes	Yes	Yes	Yes	May be a cost for non-ICLEI cities	Yes
1.4 ICLEI ACCCRN	Yes	Yes	Yes	Yes	Free	Yes
1.5 UN Habitat Guiding Principles	Yes	Yes	Yes	Yes	Free	Yes
1.6 UN Habitat Planning for CC	Yes	Yes	Yes	Yes	Free	Yes
ASSESSMENT						
2.1 EU Climate Risk Typology	Yes	NFA	Yes	NFA	NFA	Yes
2.2 EU Risk Systemacity	Yes	Yes	Yes	NFA	NFA	Yes
2.3 EU RAMSES	Yes	NFA	Yes	NFA	NFA	Yes
2.4 EU IVAVIA	Yes	NFA	Yes	NFA	NFA	Yes
2.5 GPC	Yes	Yes	Yes	Yes	Free	Yes
2.6 ICLEI US GHG Emissions Analysis	Yes	Yes	Yes	NFA	NFA	Yes
2.7 C40 CIRIS	Yes	Yes	Yes	NFA	Free	Yes
2.8 Red Cross Heatwave Guide	Yes	Yes	Yes	Yes	Free	Yes

Program, tool, resource	Criterion 1 Developed countries suitability	Criterion 2 Appropriate Financial assumptions	Criterion 3 Federated governance system suitability	Criterion 4 Compliance with Aust standards, laws	Criterion 5 Access, cost	Criterion 6 Value Add
TARGET SETTING						
3.1 WRI Goal Standard	Yes	Yes	Yes	Yes	Free	Yes
3.2 ICLEI US Clearpath	Yes	NFA	Yes	NFA	Limited access, costs now apply	Yes
3.3 World Bank CURB	Yes	NFA	Yes	Yes	Free	Yes
PLANNING						
4.1 EU Resilience Maturity Model	Yes	NFA	Yes	NFA	NFA	Yes
4.2 EU Transition Handbook	Yes	NFA	Yes	NFA	NFA	Yes
4.3 EU RESIN	Yes	NFA	Yes	NFA	NFA	Yes
4.4 EU "On Urban Resilience"	Yes	NFA	Yes	NFA	**Free**	Yes
4.5 EU UAST	Yes	NFA	Yes	NFA	NFA	Yes
4.6 UK Climate Just	Yes	NFA	Yes	NFA	Limited access, cost applies?	Yes
4.7 ICLEI Canada BARC	Yes	NFA	Yes	NFA	Limited access, cost applies?	Yes
4.8 C40 AMIA	Yes	NFA	Yes	NFA	NFA	Yes
4.9 C40-ICLEI CRAFT	Yes	Yes	Yes	Yes	Free	Yes
4.10 UCCRN ARC 3.2	Yes	NFA	Yes	NFA	Free	Yes
4.11 UNFCCC CBA	Yes	NFA	Yes	NFA	Free	Yes
IMPLEMENTATION						
5.1 EU City Resilience Dynamics Tool	Yes	NFA	Yes	NFA	NFA	Yes

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Appendix 5: List of acronyms

100RC	100 Resilient Cities
ACCARNSI	Australian Climate Change Adaptation Research Network for Settlements and Infrastructure
ACE CRC	Antarctic Climate and Ecosystems Cooperative Research Centre
ALGA	Australian Local Government Association
BZE	Beyond Zero Emissions
C40	C40 Cities Network
CANA	Climate Action Network Australia
CHRMAP	Coastal Hazard Risk Management and Adaptation Planning
CCP	Cities for Climate Protection
CDP	CDP Cities Carbon Disclosure Project
CMA	Catchment Management Authority
COAG	Council of Australian Governments
CPP	Cities Power Partnership (Australian Climate Council)
CRF	GCoM Common Reporting Framework
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CURF	Canberra Urban and Regional Futures (City of Canberra)
DELWP	Department of Environment, Land, Water and Planning (Victoria)
DES	Department of Environment and Science (Queensland)
DPAC	Department of Premier and Cabinet (Tasmania)
EPA	Environmental Protection Authority
FCM	Federation of Canadian Municipalities
GCoM	Global Covenant of Mayors for Climate & Energy
GHG	Greenhouse Gases
GPC	Global Protocol for Community Scale Greenhouse Gas Emissions Inventories
ICLEI	ICLEI Local Governments for Sustainability
IPCC	Intergovernmental Panel on Climate Change
IRCC	Increasing Resilience to Climate Change
IRVA	Integrated Regional Vulnerability Assessment
ISCA	Infrastructure Sustainability Council of Australia
LEED	Low Emissions Energy Development Fund (Western Australia)
LGA	Local Government Association

LGA SA	Local Government Association of South Australia
LGANT	Local Government Association of the Northern Territory
LGAQ	Local Government Association of Queensland
LGAT	Local Government Association of Tasmania
MAV	Municipal Association of Victoria
NDC	Nationally Determined Contributions
NGER	National Greenhouse and Energy Reporting
NGO	Non-governmental organisation
OEH	Office of Environment and Heritage (NSW)
OPCC	One Planet City Challenge
QCRC	Queensland Climate Resilient Councils program
R&D	Research and development
RCCAP	Regional Councils Climate Adaptation Project (Tasmania)
RCCCAP	Regional Councils Climate Change Adaptation Program (Tasmania)
RCCI	Regional Climate Change Initiative (Tasmania)
SDGs	Sustainable Development Goals
STCA	Southern Tasmanian Councils Authority
TASMARC	Tasmanian Shoreline Monitoring and Archiving Project
TCAP	Tasmanian Coastal Adaptation Pathways
TCCO	Tasmanian Climate Change Office
UNAA	United Nations Association of Australia
UNFCCC	United Nations Framework Convention on Climate Change
UTS	University of Technology Sydney
VASP	Victorian Adaptation & Sustainability Program
VCMP	Victorian Coastal Monitoring Program
VLGA	Victorian Local Governance Association
WALGA	Western Australian Local Government Association
WS AAP	Water Sector Climate Change Adaptation Action Plan (Victoria)

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