goulburn broken greenhouse alliance

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Inquiry into Tackling Climate Change in Victorian Communities

The Goulburn Broken Greenhouse Alliance (GBGA) is pleased to take this opportunity to submit a response to this inquiry. Please contact the Executive Officer of the Alliance, Bronwyn Chapman for any further information at eo@gbga.com.au and 0411 544 858. This submission can be made public and the GBGA requests the opportunity to provide information at a public hearing.

GBGA is a formal alliance of the thirteen councils and two Catchment Management Authorities across the Goulburn Broken and North East regions of Victoria, committed to delivering actions to achieve climate change mitigation and adaptation and sharing initiatives that support sustainable, low carbon communities.

The GBGA area comprises 30% of the area and 28% of the number of regional-rural municipalities in the state. The member councils are Alpine, Benalla, Campaspe, Indigo, Mansfield, Mitchell, Moira, Murrindindi, Shepparton, Strathbogie, Towong, Wangaratta, and Wodonga, partnering with the Goulburn Broken Catchment Management Authority and the North East Catchment Management Authority.

The member councils range from small rural to largely urban and fringe metropolitan councils with population ranges from 8,300 to 63,300. This brings a variety of council and community issues, but climate change impacts are a shared issue for all.

Collaboration in the alliance assists all members to keep abreast of developments in mitigation and adaptation, and share their range of experience to initiate larger projects. The shared knowledge and projects of the alliance also gives additional assistance to smaller councils. Smaller council must address the same range of issues as all councils with very limited resources. As an example, the six smaller councils in the GBGA have 3.5 FTE officers between them and area of 21,500 km2, dealing with planning referrals, waste, biodiversity, climate emergencies and more.

Through studies and larger projects, members can build capacity to respond to climate change, lead the community by demonstration, and assist the community in key regional climate change issues.

The Impact of Climate Change in the GBGA Area

Studies by GBGA and members in the Goulburn Broken and North East Victorian catchments have modelled the projected climate to 2030 and 2050, using the current climate trajectory. These studies and website links are described on page 6-7.

This modelling shows the region will experience hotter conditions. This varies across the catchments with northern plains areas experiencing average temperature increases of 2-3ºC by 2050, with lower increases of 1-2 ºC in southern and eastern areas that are more elevated.

The future impact on rainfall patterns also varies across the catchments. Regional modelling shows significant decreases in rainfall in the northern plains areas, including the irrigation district of the Goulburn Valley. Due to rainfall changes and a drier catchment, runoff will decrease. This is modelled to have a marked impact on the water yield from these catchments. The Goulburn Broken and North East Victorian catchments together contribute 49% of the water yield of the Murray Darling Basin. Recent modelling shows a projected water reduction in streamflow in the North East catchment of the order of 20% by 2030 and 30% by 2050. Expected hotter conditions in the Goulburn Broken catchment mean the same or higher decreases are expected. This order of streamflow decrease from these key catchments is a very significant climate change impact and threatens the regional economic basis in the area's $3 billion agricultural sector.

This raises major concerns for water availability and these conclusions need additional modelling to better understand the impacts.

These studies show this level of climate change will impact agriculture, most markedly in the Goulburn Broken. This includes the Goulburn Valley food bowl area. The heat effects and decrease in water availability overall will impact Council services, including the condition of important community assets like native vegetation, urban forests, reserves and sports fields. More detailed modelling in north east Victoria shows increases in days over 35ºC in January - expecting 3 more hot days, and 6 more hot days on the northern plains. Given Wangaratta experienced 20 days over 35 ºC in January 2019, in what was the hottest January for many areas, an increase of up to 6 days poses significant health issues for communities.

The effects on local communities means action on climate change is pressing. The Indigo Shire recently declared a climate emergency and other councils are considering this course. Councils can play a key role in the adaptation of communities to climate change through council services and partnerships in the community. In 2020 GBGA councils intend to examine and trial different opportunities to incorporate climate action in all governance areas of councils. The Victorian government could assist with ongoing research and increased funding to accelerate this process.

Collaborative actions by GBGA members to mitigate the severity of climate change on communities, including actions to reduce greenhouse gas emissions

Learning and planning by the GBGA and members

The work of the GBGA increases the capacity of members to act and reduce greenhouse emissions. The GBGA facilitates real outcomes from learning and building on the experience of other alliances and amongst the GBGA. Joint investigations assist members to plan for mitigation projects. These produce the financial, environmental and social case for action and also tools for members to understand future opportunities.

- Watts Working Better business case: upgrading residential streetlights to energy efficient lights (2014)
- Electric Vehicles in Council Fleets: using real data to understand electric vehicle opportunities with tailored tools for future fleet planning (2016)
- Main Road Streetlights Business Case: upgrading main road streetlights to LED (2019)
- Jointly with other Victorian alliances, developing a business case to examine bulk procurement of renewable energy by 39 councils, including 8 councils in the GBGA (2019)

Consequent mitigation action

This collective planning process allows members to implement mitigation actions:

- Changeover of 13,600 residential streetlights in 11 councils to reduce emissions from this source by 42% (2015/16)
- Purchase of electric vehicles by one council and uptake of hybrids as an interim measure by others. (2019)
- Working to accelerate and normalise electric vehicle use in regions by joining with 43 other councils in 'Charging the Regions'; an investigation of a rollout of a Victorian charging network. (2019)
- Budget planning by council members to achieve LED streetlight upgrades (2020 onwards)
- Eight GBGA councils joined a Power Purchase Agreement tender (with 40 other councils) to upgrade council electricity use to renewable energy. Five of these councils intend to convert to 100% renewable energy, and three others will use between 30% and 60% renewable energy. (2019/20). This demonstrates to our communities the confidence in the renewable energy industry.

Action by GBGA members to assist their communities to use renewable energy and mitigate emissions

Education campaign with the Watts Working Better streetlight changeover (2015 and 16)

The campaign linked the efficiency actions of this project to efficiency opportunities for households. Demonstration models and workshops across the region helped residents to understand efficiency opportunities in their homes through behaviour change and careful consumption.

Solar bulk buys and public education

Councils place an emphasis on public education associated with any bulk buy program they conduct. Examples are the Bogie Bulk Buy and the Dindi Bulk Buy in 2017 and 2018 including public workshops to assist people to understand and make decisions about solar and battery options. In the North East region, five councils, that are now part of the GBGA, ran a solar bulk buy across this region in 2012. Each council hosted a solar education officer to run workshops and assist residents to understand solar power options.

Community education is a central part of council bulk buy projects, unlike many commercial operations. Feedback showed residents value councils as an independent source of information in a complex and sometimes confusing market environment.

Members use of renewable energy helps to normalise and encourage solar uptake.

Council members use solar installations on public buildings linked with public information and also demonstrate emerging technology to residents. This includes smart meters and control systems and batteries.

Improving adaptation in native remnant vegetation areas

Rural-regional councils and catchment management authorities take responsibility to improve the health of roadside vegetation other council/crown remnant vegetation. These remnants are an essential natural setting for rural communities and are integral to the character of municipalities. Being in good health and biodiverse gives flora and fauna the best chance to cope and adapt to pressures caused by climate change. This work will become more and more critical as we start to feel the impacts of climate change into the future, Less predictable weather patterns and higher rates of fire and drought stress native habitats, leading to a higher rate of pest plant and animal incursions. Councils welcome the support from the Victorian government wed and pest control funding, but need longer term funding and programs to meet community expectations.

In many of these programs, Councils work in partnership with Landcare and landholders in the identification and control of weeds and pests.

Council members assist local sustainability and renewable energy groups

A range of assistance actions include providing meeting venues, officer assistance in meetings and public events, local council grant programs, providing auspice for government grants and projects, and providing liaison with other community groups and government agencies.

Most councils have participated in partner projects with their community at different times. Examples by all alliance councils of current and recent partnership projects that directly mitigate emissions or inform the community about their mitigation actions are:

- Renewable Albury Wodonga Energy community solar project - the Wodonga Community Solar project, auspiced by Wodonga Council (funded through the Climate Change Innovation Grants).
- Greater City of Shepparton has identified suitable council land to facilitate the establishment of a community solar project
- Rural City of Wangaratta is working with a commercial energy company and a local community in a test of concept for a micro-grid.
- Indigo Shire established a public battery storage "demonstration/pilot" site at the Beechworth Library Complex with a public education workshops.
- Councils are fostering the work of 14 community energy groups across the GBGA area. For example, Indigo Shire has supported work by Totally Renewable Yackandandah to establish community uptake of renewable and test microgrid technology.
  These community groups are driving projects that will contribute to the emerging distributed energy resource network in the region.
- The DELWP (Hume region) Renewable Energy Mini Grants program inspired a number of these groups to initiate community projects, assisted by councils who auspiced grants or supported groups in early work while groups are establishing. Examples include Mitchell Shire and Mitchell Community Energy, Indigo Shire and Totally Renewable Beechworth, Alpine Shire and Sustainable Upper Ovens, and Rural City of Benalla and Benalla Renewable Energy.
- Council assistance for energy efficiency and solar installation on local public buildings where the community is committee of management.
- Wodonga council works with City of Albury and many community sustainability groups to produce the Albury Wodonga Sustainable Living Festival.
- Several councils have assisted business greenhouse reduction projects through Energy Upgrade Agreements (EUA). Examples are the councils of Moira, Shepparton and Wangaratta. Moira Shire facilitated the largest EUA project in regional Australia.
- Enabling solar uptake through bulk buy projects. Very successful examples are the Strathbogie "Bogie Bulk Buy" and Murrindindi "Dindi Bulk Buy" projects. The model established by Strathbogie Shire with Yarra Energy Foundation was the first in Victoria and this model was then adopted in Gippsland.
- Local environmental projects in partnership with social housing and local food organisations and the Rural City of Wangaratta assisted formation of the Community Food for All network, with a continuing council connection. Council provided resources and knowledge to allow Beyond Housing network to embed energy saving education to clients in its program.
- The Campaspe Shire piloted the innovative engagement initiative Ramp Up Resilience to build the capacity of residents to initiate actions to address climate change impact.
- The Catchment Management Authorities facilitate the success of Landcare programs across the catchments

Actions by GBGA members to assist community and organisations to adapt to the current and future impacts of climate change

Mitigation to reduce the cause and intensity of climate effects benefits the broader community, and the opportunity to adapt to climate effects tend to benefit local users and areas. All GBGA members recognise that the agricultural sector underpins the regional economy and the communities that depend on this. ABARE reports that in 2017–18, the gross value of agricultural production in this region was $3 billion, which was 20 per cent of the total gross value of agricultural production in Victoria ($15 billion). About two thirds of this agricultural value is produced in the Goulburn Valley irrigation area. The GBGA has initiated innovative mapping tools to help farmers identify pathways to understand their adaptation decisions in a hotter drier future.

Modelling and mapping show the impacts of climate change in the GBGA area. For instance, several fruit varieties in the Goulburn Valley could experience a 20% reduction in productivity by 2030 due to hotter drier conditions.

In Climate Smart Agricultural Development (CSAD) the GBGA produced mapping of the projected climate in the Goulburn Broken. This was extended to model and map the projected productivity of commodities for the likely climate conditions in 2030 and 2050. These seventeen commodities are in the groups of livestock, horticulture, forestry, cropping and vegetables. The mapping shows the productivity of many crops are significantly affected by 2050. It also shows substitute crops that better suit future climatic conditions or mature at more suitable times for future seasonal conditions.

Growers of the different commodities were involved during the project to check modelling of current conditions. The map products are available publicly on the website of the GBGA (http://www.gbga.com.au/climate-smart-agriculture-development.html).

The knowledge and skills of the Goulburn Broken Catchment Management Authority GBCMA were essential in this project. The GBCMA has recognised adaptation expertise, having assisted regional communities in the Strathbogie Ranges to plan adaptation to climate change and build farmer resilience. GBCMA planned a program to assist growers in the Goulburn Broken catchment to plan future adaptation, but this stage has not been funded. The 'on again, off again' funding of adaptation work is a major challenge to effective action.

Embedding Climate Adaptation in Agriculture - North East Catchment Management Authority
The GBGA assisted member North East Catchment Management Authority (NECMA), to build on the CSAD work in this NECMA project to plan and improve climate mapping and adaptation in this catchment. This completed the modelling of projected climate for the entire GBGA area for 2030 and 2050. This project extended the CSAD work to produce an interactive tool 'Regional Climate Explorer'. Involving growers from the start of this project, NECMA established 20 climate factors that are important in decisions to adapt on-farm management to changing climate conditions. In the Regional Climate Explorer, users can examine seasonal changes in these 20 factors in 2030 and 2050 to a 15 square km area around their property or township. (https://www.necma.vic.gov.au/Solutions/Climate-Change/Embedding-Climate-Adaptation-in-Agriculture)

Crucially, NECMA has secured further commonwealth funding over 4 years to assist growers to apply this information to adaptive planning. A particular pilot study to use this tool for adaptive planning by

the dairy industry (recently funded by a Victorian government 3CA grants) will show the application to future decisions of this industry in North East Victoria.

Transferring adaptation knowledge

The NECMA work provides a significant tool needed to make meaningful agricultural decisions for a changing climate. The NECMA method could provide local climate information to improve the CSAD mapping for the Goulburn Broken agriculture region. The knowledge of the GBCMA would benefit work in both the North East and Goulburn Broken agriculture adaptation projects. The synergies are clear, but resources cannot be obtained to advance adaptation for this crucial sector of the region.

In addition, these tools can be updated from the 2019 Victorian Climate Projections project to improve the reliability of the tools. As adaptation concentrates on local impacts, locally relevant and reliable climate information is essential to successful adaptation decisions.

Increasing the Understanding of Adaptation in the Agriculture Sector

The GBGA has combined with members and other partners to develop two agriculture and climate change conferences for the region

- 2018 Managing Climate Change in Agriculture (Farmers for Climate Action, GBGA and others)
- 2019 Embedding Climate Adaptation in Agriculture (NECMA, GBGA and others)

More than 250 people attended these conferences.

Adaptation through Environmentally Sustainable Subdivisions

Regional-rural councils have spearheaded work to ensure homeowners can design sustainable houses in the future that are adaptive to a hotter drier climate. The fundamental principles for environmentally sustainable design (ESD) of subdivisions have been developed. ESD planning will enable communities to live with the benefits of passive design, energy efficient houses, optimal use of solar energy, natural cooling of streets and water saving and reuse. Of the GBGA, the councils of Wodonga, Wangaratta and Shepparton have joined with 10 other councils in this project.

A Regional Focus

A strength of the GBGA is the connection between state government, local government and community. Over many years key connections have been established, both formal and informal. The GBGA provides a formal vehicle for councils to join in action with the Catchment Management Authorities. The alliance enables a flow of information that leads to collaborative action between alliance members, working to assist each other in key regional projects. DELWP (Hume Region) is an associate member of the GBGA. The alliance provides strong consultation pathways for regional planning projects like the Hume Renewable Energy Roadmap and development of the Hume Regional Climate Change Adaptation Plan.

The involvement of DELWP (Hume Region) is built on years of active cooperation. This relationship was built during the period when the Victorian Adaptation Sustainability Partnership was administered at a regional level. This was a vehicle for active relationships between DELWP (Hume Region) and councils. The following program, Collaborative Councils Sustainability Fund Partnership, has also been successful; however, the centralisation of this program does not build the benefits of a

regional presence. The region is missing opportunities to strengthen regional collaborative action on climate mitigation and adaptation.

The relationships built with DELWP (Hume Region) are strengthened through association with the GBGA. The GBGA hopes that the Planning for Regional Adaptation program will value and foster local and regional partnerships as this program includes implementation after the planning stage. The opportunity for a focus on regional needs provides inspiration and direction to the region.

Victorian Government Support for Community Climate Action

Ongoing and Consistent Regional Climate Transition Planning and Support

Members need long term flexible funding at a regional level and council level, as adaptation is generally associated with local impacts. Communities also expect that all councils will respond and deliver local climate adaptation and mitigation planning and programs. A grant funded approach can appear like a lottery with winners and many losers. This was demonstrated by recent State Government programs - the $4.3 million Victorian Climate Change Innovation Partnerships and the $1 million Community Climate Change Adaptation program. Both funding streams were significantly oversubscribed and demonstrate the need and desire for such funding for local solutions.

The work of the GBGA shows the alliance model initiates planning, fosters innovation and is cost effective in delivering shared projects that include councils and community. With additional resources, the GBGA can provide a climate facilitation and support role like the very effective Landcare facilitators network.

Funding to show the Victorian government will implement policy is also needed for an ongoing role for regional DELWP. The Hume Region Renewable Energy Roadmap and the region's Climate Adaptation Plan (in development) are examples of planning based on extensive community consultation. DELWP (Hume) is enhancing the knowledge and capacity of the community through these processes, but this capacity and momentum is at risk of stalling when these projects end. Ongoing and committed staff positions are needed to raise the profile of state climate policies in the regions, coordinate implementation of these regional plans, including liaison with local government, business and community groups that could be partners in implementation.

The Australian Local Governance Association has estimated that a $10 billion fund is required to support local government and communities across the country to address climate change, both in terms of improving the resilience of local communities and reducing emissions. At the state level this could equate to approximately $1.5 billion over 10 years if purely divided by number of councils.

Prioritise Support for Mitigation and Adaptation for Agriculture

The fundamental value of agriculture for rural communities and economies means action for agriculture needs to be prioritised. Producers need climate information to be presented in practical tools that assist their adaptation decisions, such as the tools explained on page 6-7 and the CSIRO Climate Analogues tool. Assistance is needed through Bureau of Meteorology to update these tools as better climate information is available, including the 2019 Victorian Climate Projections project.

Research work by DELWP (Hume region) shows farmers look for practical information from local field trials and demonstrations, site visits, and learning from extension officers, peak bodies and other

farmers. The sector needs additional funding for these initiatives at regional level, so farmers can understand local adaptation opportunities.

Farmers have opportunities to reduce carbon and save resources using renewable energy and optimising fertiliser use. Research is developing carbon reduction products such as seaweed extracts for dairy cattle. Trials in this region would help farmers understand the effectiveness of this approach.

The Catchment Management Authorities have the experience and are trusted to assist growers to adapt their use of natural resources and farm planning to adapt to a changing climate. The contribution of this expertise is hamstrung by inconsistent and inadequate funding. Consistent resourcing is also needed for CMAs to assist the transition needed to preserve ongoing farm health and productivity.

Research in the increased occurrence of extreme events

Extreme weather events will damage local communities and economies well before the impacts of the trend in average temperature rise. Further research is needed to inform communities of the magnitude of extreme heat events in a heating climate, and the risk of occurrence of other extreme events. Including fire. This information is essential to help business, industry and community prepare for the increasing occurrence of extreme weather events. The information should be made available to communities through map and graphical products. This is challenging work, but communities need the best available information.

Extend Community Power Hubs

Extend the community power hub program to all regions, focussing on measures to assist low income and rental households, including energy efficiency and access to renewable energy options. By partnership with the 14 community energy groups, the development of distributed energy resources and networks can be accelerated to build community confidence and show leadership in distributed energy.

Assist Councils to include climate change in all areas of governance

In 2020 GBGA councils intend to examine and trial different opportunities to incorporate climate action in al governance areas of council. The Victorian government could assist with ongoing research and seed funding to accelerate this process. In 2017 and 2019 DELWP conducted relevant research to all councils:

A. Climate Change Adaptation Governance Assessment of Victorian Local Government 2017
B. Unpacking Legal Roles and Responsibilities for Local Government Under Climate Change 2019

GBGA councils are planning to use this work to introduce governance approaches related to climate change. Project A needs more work to analyse individual council profiles and project B appears to be complete and waiting for release by DELWP.

To advance this crucial governance work, GBGA councils are:

- seeking additional resources to allow application of the work in project A as pilot projects by members to transfer to the GBGA and other alliances. We also seek release of data.
- urging immediate release of the findings of project B which is a key piece of work.

Prioritise support for rural councils.

Councils play an essential role to assist their communities to understand and respond to climate change. The Victorian government has targeted some funding to assist these councils. However small councils often do not have the staff resources to apply for grants or manage funded programs. Their communities ask for action and involvement but are missing out on opportunities as these councils need additional capacity assistance. An analogous program provided by state government is the Rural Planners Flying Squad, which recognises the extra help needed on occasion by rural councils.

In a climate related area, the Local Government Energy Savers program identified that nearly half of regional-rural councils need additional assistance and resources to participate in mitigation and adaptation planning and action (within the Collaborative Council - Sustainability Fund Partnerships). This support program has been very helpful to these councils, but even this targeted program was beyond the capacity of some councils to participate. A climate focussed program should be continued with consultation from rural councils about the most effective use of ongoing support. It is essential that all small councils are assisted to participate in such grant opportunities.

Another Victorian program is the Roadside Weeds and Pests Program. As outlined, climate change will exacerbate weed and pest problems, and this type of funding will be needed in the long term. Currently this fund is for one year only, but has been four years in the past. Long term funds are essential to plan ongoing works. Rural communities understand the weeds and pests need ongoing control and expect councils to continue 'do their part' as responsible land managers. Again, many smaller shires have large areas of land to treat and need assistance to participate effectively.

Investment in programs that change attitudes and not just infrastructure.

As a community's ability to participate in mitigation and adaptation action requires community support, confidence and knowledge about opportunities as well as challenges. Locally relevant, ongoing and trusted education programs are an essential part of a transition to low carbon choices by individuals and communities.

MEMBERSHIP OF THE GOULBURN BROKEN GREENHOUSE ALLIANCE

Alpine Shire Council
Benalla Rural City Council
Campaspe Shire Council
Greater Shepparton City Council
Indigo Shire Council
Mansfield Shire Council
Moira Shire Council
Mitchell Shire Council
Murrindindi Shire Council
Strathbogie Shire Council
Towong Shire Council
Wangaratta Rural City
City of Wodonga
Goulburn Broken Catchment Management Authority
North East Catchment Management Authority
Department of Environment Land Water and Planning (Hume regional office) (associate member)