

## **Submission from MEHMG to the Climate Health WA Inquiry (using examples from the City of Cockburn)**

This submission to the WA Department of Health's inquiry focusses upon the actions available to Local Government in respect to the Public Health implications of climate change. It is divided into three sections, Mitigation, Adaptation and the Doomsday Scenario if governments fail to control global warming.

### **Climate Change Mitigation**

In terms of the health effects of climate change it is difficult to discuss this as a separate issue from a mitigation perspective. The measures available for Local Government here are similar to all businesses and entities everywhere. Local Government typically plays a leadership role and raises awareness of the need for sustainable practices. We are moving too slowly towards reducing our carbon footprints and use of renewable energy, but we are the third tier of Government in Australia and we are looking to the other 2 tiers for leadership and funding on mitigation measures.

The potential for loss of hope and mental health impacts related to not dealing with climate change are only going to increase as impacts increase and the options for mitigating more significant impacts become more difficult, more expensive and less effective.

Some examples of mitigation action from the City of Cockburn are provided below:-

The City of Cockburn has been taking action to mitigate the effects of climate change for 20 years.

- Cockburn currently holds the largest inventory of solar photovoltaic systems for Local Government in Western Australia, having installed over 1400kW on its buildings
- The City recently exceeded its 2020 renewable energy target and currently generates 23 per cent of energy for council facilities from solar power. Other renewable energy systems include geothermal pool heating at the City's Aquatic and Recreation Facility and methane gas extraction at Henderson Waste Recovery Park.
- Cockburn has maintained a Zero Emissions Fleet since 2011 by offsetting the emissions with carbon credits generated from biodiverse tree planting projects in Western Australia's Wheatbelt.
- Since 2011 the City has sustained a revolving 'greenhouse action fund' using savings from previous emission reduction initiatives. To date this fund has allocated over \$2 million towards energy saving projects including a 1 mega watt solar PV system on the Cockburn Aquatic and Recreation Centre.
- There are four electric vehicle charging stations located at Council facilities across the municipality

The City is developing a climate change mitigation strategy that will drive strong action for the next decade. We are engaged and prepared to meet the challenges of the future and developing a plan to reduce emissions by:-

- Increasing our renewable energy target and transitioning towards locally-produced electricity from renewable resources in all major facilities
- Allocating three per cent of the budget for all new Council buildings (over \$1 million in value) towards innovative Environmentally Sustainable Design
- Exploring innovative ways to utilise renewable energy technology to establish a local network of energy generators and micro grids
- Investigating the feasibility of developing a renewable energy park on capped landfill cells
- Rolling out energy efficient street lighting across the municipality
- Exploring the viability of technology (such as electric hybrids and hydrogen cells) to reduce emissions from the City's fleet.

## **Climate Change Adaptation**

### Infectious diseases/pandemic

As the climate changes, vectors of disease such as mosquitos, flies and rodents will change. Its likely that this will occur gradually over time and there will be hot spots most likely where the vectors of disease commonly breed. There will be new and emerging diseases causing outbreaks that will require attention. It is difficult to predict where these outbreaks will occur but this highlights the critical need for every community to have readily available experts with local knowledge and the skills to safely deal with them. These experts must take proactive actions to minimise the potential for disease outbreaks, they must have the skills to be able to deal with outbreaks without placing themselves or others at risk of becoming infected. This commonly involves quick and decisive actions and the use of extensive authority in the community setting without the luxury of having medical personnel or facilities on hand. The expert in Local Government in WA is a professional officer position that was developed within Local Government over many decades from a base as a sanitary inspector to today's Environmental Health Officer (EHO).

### Regulatory Response for Local Government

The powers in the new Public Health Act and expectations of EHO's in emergency situations make is very clear that both Local Govt and State Govt will be significantly dependent upon the expertise of EHO's in these scenarios especially if/when a pandemic or other catastrophic event such as a cyclone hits Perth.

Environmental Health Officers are especially valuable where emergencies and disasters occur due to their experience with pollution, noise, toxicology, food and

water safety, contaminated sites, waste management, emergency management especially involving damaged asbestos structures, nuisances and infectious disease control.

Under the new Public Health Act the Chief Health Officer of the DoH may authorise the use of serious public health incident powers if they are necessary for the purpose of preventing, controlling or abating a serious public health risk. These powers are most likely to be used in the case of infectious disease. These powers allow for such things as closing premises, directing persons to leave or remain at premises, entry into any premises to inspect, search or seize, require cleaning or disinfection of premises, destruction or disposal of items, quarantining of persons, medical treatment of persons and any other action that is reasonably necessary to prevent, control or abate the serious public health risk such as an outbreak of infectious disease.

The new Public Health Act while recognising the position of EHO has moved to refer to the title Authorised Officer instead. This has assisted some in Local Government to move to replace qualified EHO's with lesser qualified officers. This is short term thinking and fails to recognise the most unique quality of a Local Government EHO which is their ability to deal with a wide range of Public Health and Environmental issues. The EHO qualification was essentially developed for Local Government around the world because of the need for a multi skilled professional who could deal with issues threatening Public Health. Any measures that effectively reduce the number of EHO's employed in LG will also reduce the States capacity to respond in these circumstances.

#### Sea level rise

From the City of Cockburn's perspective we developed an initial Climate Change Adaptation Action Plan based upon the Dept of Health document released in 2008 and the various other Commonwealth and State Government guidance at the time. We carried out an assessment of the impact of sea level rise and ensured that planning for future development in flood risk areas was restricted. Inevitably we look at our neighbours and scale our response against the problems that they will encounter. The coastal areas in Cockburn are protected against massive storm surges by Garden Island, whereas coastal areas located north of Cockburn are unprotected. High tides up the Swan River will cause extensive damage and decisions need to be made to save or sacrifice affected infrastructure. Key threatened infrastructure must be identified without delay and plans to protect or replace must be made. For example in Cockburn there is no threatened essential infrastructure located near the ocean until the freight rail line in North Coogee. If this rail line comes under threat of flooding due to sea level rise then there will have already been numerous other pieces of essential infrastructure destroyed. Not to mention the BP Oil Refinery and large swathes of Mandurah.

It is welcome to see that the State Govt has carried out an assessment of all of WA to prioritise infrastructure and property that justifies expensive protection, because funding will be limited and Local Councils are unable to consider anything beyond their boundaries.

## Heatwaves

Local Governments will need to develop Heatwave Management Plans but there is an important difference between Perth and other countries such as France where there are numerous deaths during heatwaves. It is reported that there are less than 10% of homes in Europe with Air Conditioning therefore it is challenging for some people to keep cool. In Perth heatwaves are common and air conditioning systems are not expensive so people who are at risk are extremely likely to ensure that they have an air conditioned environment available. In Perth our weather forecast is particularly dependable so people are forewarned about heatwaves. Local Governments will initiate a very simple Heatwave Plan whereby we post the typical DoH alert information on our web site and we ensure that via Seniors Centres, and all Community Services that have contact with vulnerable people, we attempt to check each of these people to ensure they are safe and cool. As the number and extent of heatwaves increase we would simply activate the same plan and if necessary add further layers of checking of vulnerable people. The initial proposal to open aquatic centres for free and encourage people to sit in air conditioned shopping centres is now recognised as overkill.

However the effectiveness of this response is completely dependent upon our current reliable power supplies. If a severe heatwave coincided with power outages and air conditioners could not be operated, then emergency measures would need to be developed otherwise there could be mass casualties of vulnerable people. Given the reliability of our power supplies these emergency measures are not currently contemplated.

Decreasing urban forests are also contributing to the heatwave issues. Despite efforts by many local governments in developing urban forest strategies, cover is still reducing leading to greater urban heat island effects. Much greater effort and expenditure (for planting and maintaining trees) as well as changes in policies (such as limiting site cover on new lots, provision for deep soil zones, higher density living, underground power, and leaving aside areas for trees) are required to reverse this trend.

## Shade

Local Govt can install shade over playgrounds and in public areas though typically this is limited to larger scale playgrounds. We can also plant trees in these areas and within streetscapes to reduce the heat island effect. State Government Town Planning guidelines and support would be useful to achieve a consistent approach. Sun smart awareness programs and similar can be delivered by Local Government but consistent messaging coordinated by DoH would be appreciated.

## Bushfires

More frequent and intense bushfires already appear to be occurring with the drying climate in South West WA. The appropriate authorities are ramping up preparedness and this is one area that can be seen to be receiving appropriate attention.

## Changes to agriculture and food availability

This complex area requires significant further research to address potential reduced crop yields caused by droughts and changing regional temperatures. Meat, fish and egg farming practices may require review to increase sustainability. It is likely that a version of Veganism will need to be promoted for future populations in 10-20 years. The risk associated with the use of specific herbicide and pesticides will become further refined leading to their removal, requiring the agriculture industry to have site specific and holistic pesticide and herbicide management program to ensure sustainability.

## Extreme weather events

Perth already experiences storms and heavy rainfall events so preparedness exists here. If the frequency and intensity of these events increases as predicted then there may be a need for the relevant authorities to alter the BCA to require structures to be built to a higher standard to withstand more extreme winds and rainfall events.

## Saline contaminated bore water and wetlands

Sea level rise will cause physical damage to coastal infrastructure (natural and built) but it will also result in saline groundwater, and bores used to reticulate parks etc will become unusable. In a worst case scenario a bore will become saline and a sports oval will become unusable. This will have an impact especially on sporting ovals. Cockburn is considering this issue now but like most of the impacts of Climate Change, the pace of change is slow so the pressure for a response increases gradually over years. Councils have numerous options in this space and will progressively implement solutions which are not predicted to be enormously cost prohibitive. Increased permeation of saline water into wetlands will result in the deterioration of the important ecosystem. Wetlands are considered the kidneys of the Earth and their reduced function is likely to have dramatic effects on the water cycle.

## Prepare for increasing numbers of refugees

This is an issue that needs to be properly considered by Commonwealth and State Governments. Local Government is likely to be prepared to play a role.

## **Doomsday scenario**

The relative speed of warming is likely to result in dramatic changes to ecosystems resulting in increased incidence of currently known and emerging diseases and conditions in humans around the world. Candidia auris causes a sometimes fatal fungal disease in humans that is rare, but recent increases in cases throughout the world have been linked to Global Warming. This is a massive topic that is receiving significant attention internationally because microorganisms especially pathogenic microorganisms are predicted to be the ultimate disrupter of human kind. There will be dramatic changes to all flora and fauna and its difficult not to take an alarmist

view. Human populations will struggle to cope with the change and the number of 'climate' refugees is likely to increase. It is difficult to retain such a global issue in a context relevant only to WA and even more difficult to focus only on options for mitigation and adaptation in any individual Local Government area.

In very broad terms we can plan for the initial stages of Global Warming but if the predicted doomsday scenario associated with a 2 degree or more rise in temperatures occurs, it will be catastrophic for every country on earth. It is likely that the doomsday scenario will commence with a massive pandemic caused by one or more microorganisms possibly complicated by huge numbers of refugees. Countries will start by trying to limit the spread of disease across international borders but once this is seen to fail they will reinforce their borders and focus all efforts on their own population. In WA the State and Local Governments will implement ever more drastic plans to try and minimise the pandemic in circumstances where normal life in Perth is extremely compromised. The fabric of society will be extensively disrupted and it is almost impossible to imagine how any form of government will function.

If you have any questions or would like further information, or if you would like an officer to contribute to any focussed workshops please contact Nick Jones.