

## Climate Health WA Inquiry

### About your submission

Are you responding on behalf of an organisation or group?

- No  
 Yes

If yes, please identify the organisation: 350.org

### Your contact details

The following information will not be published without your permission but enables the Inquiry to contact you about your submission if required.

First name	██████████
Surname	██████████
Address	████████████████████
Phone	██████████
Email	████████████████████

### Publication of submissions

Submissions will be published with the name of the submitter unless otherwise indicated below. Do you consent to be identified in the published submission?

- Yes, I / my organisation agree to be identified  
 No, I / my organisation request to remain anonymous

### Terms of Reference

You are encouraged to address at least ONE of the Terms of Reference as listed below. Please select which item/s you will address:

1. Establish current knowledge on the implications of climate change for health in Western Australia (WA) and recommend a framework for evaluating future implications.
2. Identify and recommend a program of work to manage the implications of climate change for health in WA, which will protect the public from the harmful health impacts of climate change.
3. Identify and recommend a program of work to manage the implications of climate change for health in WA, which will strengthen the preparedness and resilience of communities and health services against extreme weather events, with a focus on the most vulnerable in the community.

- 4. Identify and recommend a program of work to manage the implications of climate change for health in WA, which will reduce the contribution of WA health services to climate change and other detrimental impacts.
- 5. Identify and recommend a program of work to manage the implications of climate change for health in WA, which will enable WA Health services to implement change, including energy efficiency, to a more sustainable model.
- 6. Evaluate the likely benefits (health and wellbeing, social and economic) arising from climate change mitigation strategies, with a focus on WA health services.
- 7. Define the role of the Department of Health in leading public policy on climate change and health.
- 8. Recommend the Terms of Reference, scope and preferred methods for undertaking a climate change vulnerability assessment for the health sector.
- 9. Recommend the Terms of Reference, scope and preferred methods for developing a Climate Change Adaptation Plan for the health sector.

### Submissions response field

**Please type your response to the item(s) selected above into the field below. Alternatively you may provide your submission as a separate attachment (suggested maximum 5 pages).**

We at 350 Perth, a local chapter of the global climate justice movement 350.org, are deeply concerned about the impacts of climate change on physical health and emotional wellbeing. Often the pollutants driving climate change have a direct and concentrated effects on their immediate surroundings. We think that these health impacts are of utmost important and need to be addressed as soon as possible.

Regional Western Australians are subjected to many direct health impacts from proximity to coal mines, liquid natural gas facilities and fracking operations. [REDACTED]

Chevron has failed to get its carbon sequestering facility working and therefore hasn't complied with EPA regulations. These regulations are not being enforced. The idea was to inject 80% of its emissions into a reservoir 2km under Barrow Island, situated 85km of the north-west coast of Western Australia. This process is estimated to reduce the Gorgon facilities total emissions by 40%. [REDACTED]

As well as carbon, the pollutants released at the plant include BTEX vapours (benzene, toluene, ethylbenzene and xylene) and mercury. There are serious health and environmental concerns with these being released directly into the atmosphere as benzene is a known carcinogen and mercury can be highly toxic to marine and terrestrial ecosystems and tends to recirculate through a system ending up in the food chain.

The Department of Water and Environmental Regulation has monitored air quality and are yet to announce the results yet but have flagged health and safety

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concerns. George Crisp, from Doctors for the Environment has stressed that mercury pollution and BTEX chemical pollution should be treated as two separate issues. He also stated that toxicity is assessed with individual chemicals, so we don't know how they affect people in combination.

We, as 350.org, are calling for WA Health to hold corporations accountable for their emissions and the safety of their staff by requiring that they offset emissions and pay their taxes. We are calling for the operations at the Gorgon facility to be halted until the sequestering facility is in full operation and the conditions have been determined as safe through an independent assessment.

Another health issue requiring immediate attention in WA is the community impact of the large lime-making facility operated by Cockburn Cement Limited (CCL) and situated in the Russell

Road, Munster. This facility is one of the largest and oldest quicklime-making factories in the Southern Hemisphere, annually producing about 1 million tonnes of quicklime. It is the only polluter licensed under the Environmental Protection Act 1986 (WA) operating in the Perth metropolitan which is permitted to burn coal to fuel its kilns. It burns in excess of 250,000 tonnes of coal every year, immediately adjacent to thousands of residences in the suburbs of Beeliar, Yangebup, Munster and Coogee.

Lime-making (and cement-making) are major emitters of greenhouse gases, including carbon dioxide. To make quicklime (calcium oxide – CaO), calcium carbonate (CaCO<sub>3</sub>), usually in the form of limestone (or, in the case of CCL, shell sand from Cockburn Sound), is heated to drive off the carbon dioxide. Thus, lime manufacture inevitably creates large quantities of carbon dioxide. Further, the burning of coal to manufacture quicklime not only releases carbon dioxide and carbon monoxide into the atmosphere but generates a broad range of other toxic gases and particulates of various sizes. Other natural impurities in the coal are changed in one of two ways. Firstly, some impurities in the coal such as sulphur and chlorine combine under heat to create toxic gases such as sulphur dioxide, oxides of nitrogen, hydrogen chloride, hydrogen fluoride, volatile organic compounds, polycyclic aromatic hydrocarbons and polychlorinated dioxins and furans.

Secondly, toxic heavy metals in the coal are concentrated and can attach to fine particulates (up to 2.5 µm) generated by combustion and be emitted into the atmosphere. These heavy metals include mercury, lead, cadmium, arsenic and uranium. Fine particulates can be inhaled and these toxic heavy metals pass into the bloodstream where they can lodge in various organs and, in the longer term, cause cancers. Many residents in the City of Cockburn have reported respiratory, eye, skin and neurological symptoms which they attribute to the CCL factory burning coal and emitting large quantities of toxic gases, particulates and heavy metals. Tests conducted by the National Measurement Institute on dust falling in Beeliar confirm that heavy metals in the coal burnt by CCL are escaping the premises and falling on local residents and their homes. A recent hair test conducted by Southern Cross

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University on a 9 year old child living in Beeliar found elevated levels of cadmium (5 x sample population), chromium (4 x sample population) nickel (3 x sample population) and uranium (3 x sample population). All of these heavy metals are found in coal burnt by CCL.

350.org wants government to ban the burning of coal by all manufacturing facilities in Western Australia both on the grounds of reducing the impact of greenhouse gases but, equally importantly, to reduce the potential health impacts of continued exposure to large quantities of toxic gases and particulates containing heavy metals.

Those living in the city face a different set of health threats from pollutants. Exposure to traffic pollutants poses a serious health threat, with recent studies comparing sitting in idle traffic to smoking tobacco cigarettes. These issues have been exacerbated by a loss of tree canopy in the city, which acts to intercept and break down air particle pollutants. Trees in urban areas also encourage outdoor exercise and nature play, which offer residents in those areas a range of physical health benefits. The shade offered by tree canopies helps to mitigate the urban heat effect, that will increase with climate change and make it more difficult for those with mobility issues to get around. Visual exposure to green spaces, including trees, shrubbery, green walls and grasses can increase emotional well being and cognitive ability. It's imperative that we ensure that our cities have green spaces that are accessible to everyone in the community.

There is an increased level of community anxiety in relation to climate change, penned "eco-anxiety". This stress is exacerbated in young people, who have the most to lose from the impacts of climate change and who find it the most difficult to implement widespread change. With increased reports of depression, anxiety and suicide in Australia, we need to be addressing societal stressors for young people such as housing affordability, job security and physical health all of which are threatened by climate change. Loss of access to nature has made it more difficult for people to seek respite from their increasingly stressful and busy lives. The thought that the government is not taking serious action on climate change is keeping children and adults like up at night. The adults in our society need to take responsibility for climate change so that kids have the chance to be kids.

Climate change will bring with it health risks through air pollution, an increase in natural disasters and extreme weather events and exposure to hunger and poverty related health issues. We at 350.org hope that both the state and federal government prepares for the health impacts of climate change as much as possible and acts to mitigate it however they can

**Please complete this sheet and submit with any attachments to: Climate Health WA Inquiry**