



Gecko - Gold Coast and Hinterland Environment Council Assn Inc.

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Committee Secretary
Senate Standing Committees on Environment and Communications
PO Box 6100
Parliament House
Canberra ACT 2600
Australia

Per email to: ec.sen@aph.gov.au

Dear Sir

Senate Enquiry into recent trends in and preparedness for extreme weather events

Gecko- Gold Coast and Hinterland Environment Council (Gecko), thanks the committee for allowing an extension for submissions into the above enquiry. Gecko - Gold Coast and Hinterland Environment Council Assn. Inc. is a not-for-profit environment association founded in 1989 and has been active for the past 23 years in protecting the environmental values and ecological sustainability of the Gold Coast as well as across Queensland.

Gold Coast and SEQ impacts from severe weather events:

Extreme weather events include:

Fire; Storms and cyclones; drought; floods; storm surges; extreme heat;

These events are becoming more frequent and can result in:

- Loss of life
- Loss of property
- Power outage
- Loss of infrastructure- land and marine based.
- Landslips and general erosion
- Loss of marine and terrestrial ecosystems
- Downturn in tourism industry upon which the GC heavily relies
- Interruption to airport traffic; potential damage to infrastructure and possible airline disaster
- Interruption and damage to public transport infrastructure
- Interruption to the conduct of business
- Loss of agricultural production.
- Loss of wildlife and flora and their habitat.

- Massive economic costs of repairs and replacement of damaged infrastructure and putting people's lives back together.
- Increased insurance costs.

The Gold Coast is presently the sixth largest city in the nation with population set to double by 2031. There is a large proportion of elderly people among the population. The population is densest along the coastal strip with many very high buildings constructed on unstable ground close to the ocean.

Sea level rise and storm surge:

Flooding impacts from storm surges coupled with high tides and sea level rise will steadily undermine the integrity of many properties and eventually even bring about their destruction. However, construction continues with the present local and state authorities intent on further approvals from beachfront development. Particularly short-sighted projects centre around construction of a Gold Coast cruise ship terminal, a casino, and residential and commercial buildings in and around the Broadwater which, if implemented, represent a potential catastrophe of alarming proportions given regular extreme storms or a single very powerful storm. The massive dredging required to support a cruise ship industry will also affect tidal flow velocity in the Nerang River, potentially placing homes and lives at risk particularly those in canal estates and riverside properties during extreme weather events.

The city also has a significant itinerant population of domestic and international visitors; the latter especially can be assumed to have minimal experience of Australian thunderstorms and are at increased risk from underestimating the potential threat and lack of familiarity with emergency systems and procedures. The itinerant population also includes a large number of homeless people who are particularly vulnerable, lacking shelter and other resources.

The Gold Coast is under-resourced in relation to its population size and the area of population distribution in terms of emergency services, hospitals and shelters. An extreme weather event would place undue strain on police, ambulance and fire services as well as overcrowd hospitals and other medical treatment facilities.

Flooding also increases the introduction of litter and other pollution, such as sewage system breakdown, to the human and natural environments, the former requiring costly clean-up and increasing the potential of disease transmission (particularly when the increase of disease vectors is another predicted impact from climate change), and the latter unlikely to be comprehensively addressed. This exacerbates the impacts upon terrestrial and aquatic biodiversity.

Heat:

A general rise in temperature as well as localized extreme temperatures can impact on

- Elderly, very young and infirm people
- Homeless people
- Visitors unaccustomed to heat
- Transport (damage to infrastructure: road, rail, airport tarmac; fuel expansion and explosion)
- New and increased disease vectors

- Social unrest
- Bushfire risk
- Species loss and increase (imbalance)
- Oceanic warming impacts upon marine ecosystems (commercial and recreational fishing industries), such as southward movement of fish species seeking cooler water and influx of types of marine stringers and jelly fish, especially in tandem with increasing acidification.
- Rising sea levels are also due to expansion of ocean water bodies with increasing temperatures.

Council and State Governments country-wide need to provide strong leadership through meticulous planning and undertake proper engagement with residents. This is needed to ensure people are educated about and equipped to deal with climate hazard and are supported through adequate protection, evacuation, medical and transport services that may be needed. The ongoing cost of this must be adequately provisioned through local, State and federal budgets.

Further comment- extreme weather and climate change links.

This submission is focused mainly on the impacts of bushfires as an example of extreme weather events caused by climate change.

Gecko welcomes this enquiry which we see as a significant opportunity for the government to consider the impacts of climate change as contributing to extreme weather events and on local communities, landscapes and economies. Rather than offering comment on fire prone areas, fuel load reduction strategies, community preparedness and other on-ground issues that will be covered by other informed sources, this part of the submission relates to the context of increasing climate change, within which the fires and storm events are occurring. A failure to address the issue of human-caused climate change as a contributor to increased fire risk will not serve the interests of this and future generation.

This section of the submission addresses that aspect of the enquiry examining the progress made in developing an effective national coordination of climate change response and risk management. **Simply tinkering around the edges of the causation of an increase in severe fire situations with fire management and fire response plans is a totally inadequate response. Current Government and Opposition as well as future ones must face the facts that failure to reduce greenhouse gas emissions causing global warming and climate change, will condemn the Australian population to a future of more and more extreme weather events leading to catastrophic fires and all the horrendous repercussions of this.**
Bushfire

While the Gold Coast has not recently experienced fires on the scale seen in other parts of the State and in other States, there is the potential for fire to sweep through remnant bushland, endangering homes located in and adjacent to vegetated areas. As temperatures continue to rise, this threat will only increase. New housing should not be located in such areas and existing homes should undertake an appropriate level of vegetation management to protect their homes. It must be borne in mind that bushland is also wildlife habitat and large scale clearing should not be undertaken under the guise of fire-preparedness.

Large fires could potentially destroy our valuable forested areas, particularly in the Border Ranges, Lamington National Park and the World Heritage Springbrook National Park. It is the

federal government's responsibility to ensure these areas, some of Australia most valuable natural assets, are fully protected under the Environmental Protection and Biodiversity Conservation Act (EPBC) and the World Heritage Convention and accordingly activities that may increase fire hazard (tourism infrastructure and accommodation beyond a basic level, construction of trails and cableways and incursion into wilderness areas is kept to a minimum or altogether avoided. SES volunteers and firefighters cannot access remote or steep terrain should human intrusion cause a fire and this is one area over which some control can be exercised.

Increased Fire Risk as Climate Change accelerates

Extensive research has been undertaken by scientists on this issue, particularly by contributors to the Inter-governmental Panel on Climate Change (IPCC) Reports. Most recently the IPCC Special Report on Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptations (SREX) published in 2012 has come to the attention of governments, councils and community groups across the country. In this document, The Summary for Policy Makers

http://www.ipcc.ch/news_and_events/docs/srex/SREX_slide_deck.pdf,

we read that "Climate models project more frequent hot days throughout the 21st century".

Fuller discussion is contained within the SREX Report at http://ipcc-wg2.gov/SREX/images/uploads/SREX-All_FINAL.pdf.

As the temperature records tumble we are recording more and more extremely hot days and seeing long spells of low precipitation interspersed with flooding events. These are conditions which create extreme fire danger.

From the Bureau of Meteorology report, "SPECIAL CLIMATE STATEMENT 43 – INTERIM Extreme January heat" at <http://www.bom.gov.au/climate/current/statements/scs43c.pdf>, we learn that **51 records** for daily maximum temperature were set during the current heatwave event which commenced with a build-up of extreme heat in the southwest of Western Australia from 25-30 December 2012. [Table 1: New daily maximum temperature records set during the event (stations with 30 or more years of historical records); highlighted records indicate the monthly record is also an annual record.] Some of these records have stood for over a century and while the argument "it's been hot before" may be proffered, the clustering of these events over less than a month, in a dome of heat covering 70% of the continent, is the key issue. The website has only been updated to 14th January and does not include the record temperature recorded in Sydney on January 18th when 45.8 degrees Celcius was recorded.

Many stations have also approached but not exceeded historical records including Adelaide (45.0 °C, its fourth warmest day on record). Many stations with shorter periods of observation (i.e. less than 30 years) have also broken records. (BOM Statement 43).

IPCC models refined by data from ongoing research strongly point towards increasing incidence of extremely hot weather which, coupled with decreasing rainfall, means we may expect an increase in the incidence, severity and duration of fires in the future.

Some causes of fire, such as lightning strike, are beyond our control or are almost impossible to counter, such as the acts of arsonists; however, humans are able to act in mitigating the anthropogenic factors accelerating climate change. **The Senate can through**

its deliberations recommend acceptance from all political parties of the science of climate change and a commitment to reduce the build up of CO₂. This is an essential step if we are to address the grave changes humans have set in motion through the uncontrolled and profligate combustion of fossil fuels. . Australia is known to be the highest emitter of greenhouse gases per head of population and is failing through lack of political will to address this, the most serious problem of our era.

There is only a narrow range of adaptations that can be applied, including location of dwellings away from dense bushland, fire-proofing homes to the greatest extent possible, educating the community about fire and constructing evacuation centres.

Current Response to Climate Change

While the current government has taken the responsible step of introducing a carbon tax, this has not been set at a high enough level to drive the needed carbon emission reductions the world must embark upon. It is however a start and thus far has not had the disastrous impact on our economy or society so fervently predicted by those opposing it. **Bipartisan support is urgently needed to deliver more comprehensive and more effective policy in this area.**

Direct Action Policy

In this election year Gecko strongly supports a complete review, by all parties, of their Climate Change Policy. In addition to a reconsideration of its stance on the carbon tax, we recommend that those Senators from the Opposition reject the notion of the Direct Action Policy' as it currently stands, as the primary means of action against climate change. The proposal to rely upon the planting of millions of trees to capture and store carbon as biomass is a wholly commendable strategy but only as **part of a suite** of more effective actions such as a speedy switch from reliance of fossil fuels to renewables, improved public transport to reduce car travel and of course, an effective price on carbon that is applied to the heaviest polluters.

The enormous costs involved and the logistics of sourcing enough land upon which trees can be planted, and delivering a successful planting and maintenance regime have already been commented on in great detail over the past year. Such a project could never be more than a minor means of mitigation and would only be effective if tree planting was massively funded and maintained over many decades, if the trees thrived in this drying climate, the sites were protected in perpetuity from any clearing for other land use, if this was a strategy in tandem with the protection of existing vegetation and was carried out within a low-fire risk regime.

What hope would trees planted for this purpose have if fires such as we have witnessed recently (and which are still burning in many places) swept through? In a flash this costly mitigation strategy would be wiped out and yet the carbon emissions would continue to climb. The CO₂ released from fires in 2012-13 (so far) alone is incalculable, with many hundreds of thousands of hectares of bushland being destroyed. The loss of this vegetation has to be made up for before any Direct Action scheme might kick in. Thus business as usual cannot rely on current Coalition CC policies to offset growing carbon pollution.

Both major parties must also consider the illogical economic strategy of mining and exporting coal and gas overseas where the emissions add to global emissions while at the same time attempting - inadequately at present - to reduce emissions in Australia. **Australia**

purports to have some influence on the global political scene, but fails to offer any leadership in this most difficult of global issues. All politicians must imagine what a terrible world our children's children will inherit if global temperatures rise by 4 degrees C or more as is being projected. It will be a world of frequent extreme weather events, severely reduced water and food supplies and millions of climate change refugees and displaced persons, no doubt including many Australians no longer able to live in many parts of our country. Social unrest could escalate to be out of control if people are extremely stressed for long periods.

Since the disastrous Black Saturday fires in Victoria sound steps in warning and responding to severe and catastrophic fires have been taken, and the benefits of these actions can be seen in the recent responses to fires in Tasmania, Victoria and New South Wales. Human life has been saved by these measures.

As an environmental organisation we further wish to raise the issue of care of wildlife caught in these fires. It is clearly not practical to evacuate wildlife, but some coordinated and funded response to rescuing those that survive is very much needed. The severely injured need to be put out of their misery, those that can be saved should be provided with care and those left to starve to death should be provided, where possible, with food and water. At present all of these measures are left to wildlife care volunteers who mainly pay the costs of such care out of their own pockets or rely on the generosity of veterinary staff willing to give their expertise free of charge. Australia has an appalling record of extinctions of wildlife and a growing list of rare and threatened species. Extreme weather events are certain to push our fauna to the edge, but little consideration is given to an adequately funded rescue response.

It is incumbent on the current Government and Opposition to produce plans to better manage extreme weather events, but more importantly those who would rule our country must address the issue of climate change as the source of these extreme weather events. The human and economic cost of not taking action does not bear thinking about.

We thank the Enquiry for its close consideration of our comments.

Yours sincerely

Rose Adams
Secretary