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30 May 2008

Committee Secretary  
Standing Committee on Climate Change, Water, Environment and the Arts  
PO Box 6021  
House of Representatives  
Parliament House  
CANBERRA ACT 2600  
AUSTRALIA

Submission No:	..... 27 .....
Date Received:	..... 30-5-08 .....
Secretary:	.....  .....

Dear Sir / Madam,

## RE: Review of Terms of Reference (TOR) for inquiry into climate change and environmental impacts on coastal communities

### Overview

The House of Representatives Climate Change, Water, Environment and the Arts are to be congratulated and commended for their recognition of climate change issues and their actions to conduct this inquiry. The Sunshine Coast Environment Council (SCEC) welcomes this extremely positive step towards achieving adequate and sustainable management of climate change and climatic vulnerability in coastal communities. It is hoped that this exercise will eventually result in Federal guidance that will filter down to State, Regional and Local levels to accomplish an integrated, holistic and united approach to climate change.

The comments in this submission have been made, in response to the TOR, using local Sunshine Coast issues to demonstrate their importance and the need for the Federal Government to conduct this inquiry into climate change and environmental impacts on coastal communities. It is assumed that many coastal communities would be facing similar issues and principles would be transferable. Development on flood plains is one of the greatest contributors to climatic vulnerability on the coastal community of the Sunshine Coast. Therefore, many of the comments made about the TOR relate to development on flood plains and respective climate change related environmental impacts.

### Comments about TOR

#### TOR 1. Existing policies and programs related to coastal zone management, taking in the catchment-coast-ocean continuum

It is suggested that 'existing policies and programs' should extend beyond those primarily concerned with climate change to include those that consider the economic, social and environmental aspects of coastal zones. On the Sunshine Coast there are several planning tools that have a major influence on how climate change is managed now and in the future (until 2026). The *South East Queensland (SEQ) Regional Plan* is a statutory instrument, developed according to section 2.5A of the *Integrated Planning Act 1997* (IPA). It aims to provide for sustainable growth management of the region. As a requirement of

the *SEQ Regional Plan*, each council has had to develop *Local Growth Management Strategies (LGMS)*. At present, these are in draft form and have not yet been fully implemented. The hierarchy of planning instruments dictate that the *SEQ Regional Plan* prevails over the *LGMS* while the *LGMS* preside over other planning schemes and / or Priority Infrastructure Plans. All of these documents relate to coastal zone management, development and planning for the impacts of climate change (mostly storm surge and flooding).

The risk of flooding and storm surge is anticipated to possibly increase on the Sunshine Coast due to climate change. The *SEQ Regional Plan* (policy 2.3.4, p. 32 and policy 2.4.3, p. 33) states that management of the coast must provide for “*natural fluctuations in coastal processes, including storm tide inundation, climate change and sea level rise.....[it is necessary to] assess the impact of potential climate change in preparing schemes and land use strategies*”. While this is a worthy policy, it is difficult for local councils to provide accurate planning for the potential risks. For instance, Appendix C of the *Maroochy Draft LGMS* states that in order to implement a flood safe community there must be action to investigate the impact of climate change on flood risk management which will be commenced between 2007 and 2012. This example illustrates that even though relevant planning instruments and policies provide for climate change impacts, local councils (in some cases) lack the expertise and resources to undertake the research necessary to provide valid and reliable data for planning purposes. Or, if the local councils have the means to conduct investigations it may be withheld awaiting Federal or State direction so that implementation is integrated, holistic and avoids subsection to time consuming policy amendments. As planning matters are subject to legal appeal, planning authorities such as local government, need to base their decisions on clear guidance and science. This illustrates that, while Governments consideration of climate change is to be commended, the present response to climate change needs review and co-ordination on all levels.

Climate change is an international issue. Policies and programs need to take international guidance into account as well as the importance of local indicators. There must then be a structured and sequential implementation of strategies at a Federal, State and Regional level that results in the generation of piloting community based tools in response to climate change and climatic vulnerability issues. Such an outcome would provide a co-ordinated response not only at different levels but also with respect to geographic range if the strategies were incorporated into all other relevant planning and management tools.

**TOR 2. The environmental impacts of coastal population growth and mechanisms to promote sustainable use of coastal resources**

**AND**

**TOR 3. The impact of climate change on coastal areas and strategies to deal with climate change adaptation, particularly in response to projected sea level rise**

- ***Environmental impacts of coastal population growth / impacts of climate change on coastal areas***

On the Sunshine Coast one of the major concerns, stemming from coastal population growth, is development (residential development and other infrastructure) that is occurring on flood plains. This development will be subject to flooding and storm surge which are the impacts of climate change. Such development also requires infill to raise the infrastructure above the 1 in 100 year flood level. A report, titled ‘*Fighting for the Flood Plain: Maroochy River (March 2008)*’ by Jane Beck (Environmental Consultant) explores development applications (in Maroochy Shire from 2004 – 2008) with their associated flood immunity decisions and estimated infill volume. As a result of this investigation Jane Beck’s report states “*Evidence shows that for every cubic metre of fill placed in the floodplain, a cubic metre of water is displaced, i.e. the level of flood waters rises on upstream, downstream or adjacent properties (p. 14)..... Although new areas are infilled to raise their properties above the 1:100 flood level this does not protect people against severe flooding. As well, many of these areas such as Twin Waters will be islands in a 1:100 flood as all roads for evacuation lie on the floodplain. This will have very serious consequences for a timely evacuation. For the period 2004-2007 developments approved on the floodplain cover some 149 ha. Infilling of these developments will lead to a reduction of the flood capacity in the event of 1 in 100 year of about 3 million m3.*” (p. 22).

The same report also explains that the issue of placing fill on flood plains is a 'double edged sword'. Not only is it displacing flood water and adding to cumulative impacts, but there is also the question of where the soil originated from. The removal of fill from one area for development in another could be having undetected impacts on flooding or the environment at the site where the fill originates. As *'Fighting for the Flood Plain: Maroochy River (March 2008)'* demonstrates, development on flood plains due to population growth is a major contributing factor to climatic vulnerability.

- ***Mechanisms to promote sustainable use / strategies to deal with climate change adaptation***  
At present mechanisms to promote sustainable use and strategies to deal with climate change adaptation in respect to development on flood plains is limited on a local level. The Maroochy area of the Sunshine Coast Regional Council requires individual development applications to consider the cumulative impacts that their individual development has with respect to impacts on flood levels in flood plains. While it is true that each individual development application can argue that its own cumulative impact on flood plains is minor, examination of the collective impacts of all development is staggering (as discussed previously when examining a report by Jane Beck) and there is no current (or convenient) mechanism to address this issue locally.

This is strong evidence to suggest that there needs to be a holistic and controlled approach to the cumulative impacts of development on flood plains with respect to climate change. A beneficial outcome of this inquiry might be an insight into how Federal and State Government might assist Local councils to develop tools, which have a sustainable approach, to address these issues. There is a great need to implement a system that can be used by local councils everywhere, to measure, monitor and regulate cumulative impacts. It is most important given the statutory and legal nature of planning frameworks such as the SEQ Regional Plan and LGMS. Such a system, entailing recognition of cumulative impacts, could extend from development on flood plains to other issues such as coastal erosion and might be applied through strategies and planning tools such as the SEQ Regional Plan or the LGMS.

#### **TOR 4. Mechanisms to promote sustainable coastal communities**

None of the TOR specifically address the impacts of climate change on biodiversity in coastal areas. It is hoped that the vagueness of the wording of this TOR leaves intent to address biodiversity. After all, if biodiversity and ecosystems are protected it contributes to managing climate change.

On a global level, Australia is at the cutting edge of providing research that proves how valuable biodiversity is for managing climate change. Professor Brendan Mackey (from the ANU WildCountry Research and Policy Hub) suggests that his research will contribute to more effective carbon accounting in natural forests and quantifying the impact of deforestation and forest degradation (more information available at [www.wilderness.org.au/campaigns/climate/green-carbon/](http://www.wilderness.org.au/campaigns/climate/green-carbon/)). Restraining or halting deforestation will have a significant input into solving climate change issues.

At a regional level, the combined impacts of coastal development, land clearing and climate change will have a devastating effect on biodiversity in the future which will neglect achievement of intergenerational equity. Coastal erosion (which is a major issue on the Sunshine Coast) as well as saline soils and other climate change impacts will result in destruction and extreme alteration of ecosystems. For instance, at the Australian Academy of Science in Canberra an Emeritus Professor from the Sydney University, Ian Hume, presented findings that suggest that koalas could be at risk of climate change impacts. Higher levels of carbon dioxide have the potential to increase toxicity in eucalyptus leaves. There are many other threatened species beside koala that co exist in eucalyptus communities which will also be at risk of climate change impacts.

The above points demonstrate that a collective effort (On a Federal, State, Regional and Local level) to promote sustainable communities may not be enough to adequately tackle climate change. While promotion of sustainable communities is essential, climate change is a serious issue and promotion it must be supported by action to be effective. Climate Change legislation (Federal and State) that supports restraining land clearing, development and biodiversity loss will have a valuable contribution to creating sustainable communities. On a Regional level it may be beneficial to incorporate mechanisms, such as the Sunshine Coast Regional Councils Biodiversity Strategies or the SEQ Regional Plan, to address biodiversity loss and to promote sustainable coastal communities.

## **TOR 5. Governance and institutional arrangements for the coastal zone**

Governance and institutional arrangements have been discussed throughout this submission. The Sunshine Coast Environment Council would like to extend on this TOR by highlighting the need for recognition of legal liability issues that may result from climate change impacts.

In March 2006, Griffith University's Urban Research Program published a paper titled '*Climate Change: What Are Local Governments Liable For?*' (authored by Philippa England and available at [www.griffith.edu.au/centre/URP](http://www.griffith.edu.au/centre/URP)). The findings of this research indicate that;

- "Local governments are at risk of incurring legal liability if they unreasonably fail to take into account the likely impacts of climate change when exercising a wide range of their service, planning and development activities" (p. 1)
- Sea level rise, flooding and extreme weather events are the impacts that will be most likely to lead to individual law suits against councils
- Predicted law suits will challenge "appropriateness of development approvals in flood prone, coastal zone or at risk areas" as well as "failure to preserve public natural assets in the face of climate change" (p. 4)
- Local governments are potentially legally liable for private nuisance, public nuisance and negligence (see page 5 to 11 of the report for details of these legal implications) with respect to failing to plan for climate change impacts
- Local government needs to be vigilant in development of planning strategies to negate liability.

Given the evidence in response to TOR 1, 2 and 3, it is obvious that Federal, State, Regional and Local institutions are in urgent need of understanding the consequences of climate change as well as legal liability due to climate change impacts. Governance and institutional arrangements, stemming from this inquiry, may need to take this factor into consideration.

## **Recommendations**

- There should be investigation into refining and developing local and regional plans that are driven by and conform to justified State and Federal strategies / principles / objectives / criteria. In effect, the process should be holistic and incorporate a top down – bottom up approach so that all levels of government have strong collaboration with respect to planning for the impacts of climate change and environmental impacts on coastal communities.
- A reporting process that measures the 'State of the Climate' on a National, State, Regional and Local scale would be beneficial for defining issues, generating indicators, implementing pragmatic management regimes and creating greater public awareness to achieve more sustainable coastal communities.

The Sunshine Coast Environment Council welcomes this urgently needed inquiry into climate change and environmental impacts on coastal communities and will look forward to holistic, tangible, pragmatic results that can be applied through out all levels of government.

Regards



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Sunshine Coast Environment Council

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