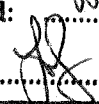


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Our Reference: 100010412
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30 May 2008

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

Submission No:	54
Date Received:	30-05-2008
Secretary:	

Dear Sir,

INQUIRY INTO CLIMATE CHANGE AND ENVIRONMENTAL IMPACTS ON COASTAL COMMUNITIES - SUBMISSION FROM THE SUNSHINE COAST REGIONAL COUNCIL

Thank you for the opportunity to provide a submission regarding the climate change and environmental impacts on the coastal communities for the Sunshine Coast.

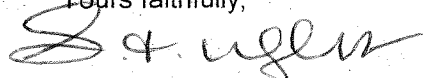
The issues addressed in the Terms of Reference are extremely relevant to the Sunshine Coast Regional Council (SCRC) and the broader community. While our detailed submission is attached, a summary of the key issues from the SCRC are as follows:

- Past and current growth has had significant environmental impacts on the coastal zone and future growth will exacerbate these impacts;
- The character of the area and its natural systems are in decline or, in parts, has been lost;
- Policy and programs are not comprehensive in relation to their consideration of the catchment-coast-ocean continuum, Integrated Coastal Zone Management or the application of the principles relating to sustainability;
- Environmental actions have been limited across all levels of government and poorly co-ordinated;
- A coordinated approach from all levels of government is essential if appropriate actions are to be developed and implemented in relation to sustainability, climate change and environmental protection and restoration;
- While there is much emphasis placed on local government to address these issues, solutions cannot be developed and implemented unless appropriate support is provided by state and federal agencies in the form of strategies, funding and resources.

SCRC is extremely concerned about the implications of climate change, population growth and associated environmental impacts. We hope that the information provided will lead to a greater understanding of local issues in relation to coastal zone management and, potentially, cooperative initiatives from all levels of government to provide sustainable outcomes in the future.

Thank you again for the opportunity to make the inquiry aware of the many issues that are impacting the Sunshine Coast Regional Council.

Yours faithfully,



PP. DR STEPHEN SKULL
MANAGER - ENVIRONMENT BRANCH

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

There were no identified policies which were considered to address/integrate the broad aspects of the catchment-coast-ocean continuum.

There are a range of existing policies related to coastal zone management as indicated below. The state policy and projects that have been identified are directly related to roles and responsibilities of the Sunshine Coast Regional Council (SCRC).

State Government Policy: Southeast Queensland Regional Plan (statutory), Coastal Management Act and subordinate legislation (statutory), Integrated Planning Act and subordinate legislation (statutory), Water Act (statutory), Vegetation Management Act (statutory), Southeast Queensland Regional Infrastructure Plan (statutory), Environmental Protection Act and subordinate legislation, Queensland Water Resource Management Plan (non-statutory).

Sunshine Coast Regional Council Policy: Planning Schemes (statutory), Draft Local Growth Management Strategies (statutory), Shoreline Management Plans (non-statutory). Please note that there are three of each of these policies across the region (for Noosa Council, Maroochy Shire Council and Caloundra City Council) as these have not yet been integrated following the amalgamation of councils to form the Sunshine Coast Regional Council.

The statutory policies that most closely address the catchment-coast-ocean continuum are the Coastal Management Act and its subordinate legislation and Local Government Planning Schemes.

For the balance of the policies, only elements of the catchment-coast-ocean continuum are addressed, such as land use, riparian corridors or protection of vegetation. They are not comprehensive or integrated, and they do not generally consider whole of catchment implications.

While the State Coastal Management Plan and its subordinate legislation addresses climate change in detail, these provisions are dated and it is expected that these provisions will be updated as part of the current review of that policy. The need to consider climate change is also identified in the Southeast Queensland Regional Plan and the Draft Local Growth Management Strategies for the SCRC. Unfortunately these policies do not provide any guidance in relation to the impacts that should be considered or the methodologies that should be used. More detailed guidance in relation to the Southeast Queensland Regional Plan is expected to ensue from the current review process, particularly the development of the SEQ Regional Plan Climate Change Management Strategy.

Some of the issues and impediments that need to be recognised in relation to the application of state policy at a local government level around coastal zone management include:

- The limitations of the policies which can delay or impact on adequate responses to local issues i.e. the SEQ Regional Plan specifies 'targets' for population growth without an adequate understanding of the carrying capacity of the Sunshine Coast region and amending planning scheme provisions takes a minimum of two years and significant time and resources;
- The continuing cost shift from state government to local government i.e. the continued requirement to transfer matters of state interest into local government planning schemes;
- The lack of integration of state and local government policies and strategies i.e. state government infrastructure projects, particularly for roads and pipelines, will result in the majority of vegetation loss on the Sunshine Coast over the next 10 years;
- The failure to appropriately recognise local needs for environmental protection and management particularly in relation to quantifying the impacts of development i.e. unlike other States, the Queensland Government is progressing with an Environmental Offsets program which does not incorporate local government;
- The 'injurious affection' provisions in current Queensland legislation provides an opportunity for landholders to litigate against local government for loss of income should development rights be removed. While there has been a recognised need to address some historic planning provisions,

the implications of 'injurious affection' has prevented/deterred action by former councils to protect natural areas for fear of being subject to significant damages payments.

- Historic planning decisions have placed a large amount of urban development in locations that are vulnerable to high tides, storm surges and flood events under current climate conditions.

2. Existing programs related to coastal zone management, taking in the catchment-coast-ocean continuum

While the award winning Maroochy River Recovery Project addresses many of the coastal zone management elements, SCRC does not have a program which, on its own, is considered to address/integrate all of the broad aspects of integrated coastal zone management.

Generally, programs are focussed on particular aspects of the environment. Examples of the various programs, including those that fall under the Maroochy River Recovery banner and address aspects of coastal zone management include:

- Biodiversity Strategies (non-statutory) and Waterways Management Plans (non-statutory);
- Biodiversity partnerships programs;
- Community grants for waterways and biodiversity;
- Waterway Health monitoring programs;
- Environment levy funding of land purchasing and projects to advance natural resource management (NRM) objectives;
- Integrated Water Management including flood assessment and management and water sensitive design initiatives;
- Development of Shoreline Management initiatives; and
- Environmental Education Programs.

While these programs are providing adequate environmental outcomes, the outcomes could be significantly enhanced if increased funding and resources were available. This would particularly apply in relation to programs for rehabilitation of habitat, wildlife corridors and riparian corridors, including targeted land purchasing.

3. Environmental Impacts of Coastal Population Growth

It can be generally said that coastal councils including the SCRC, are faced with correcting 100 years of environmental degradation due to population growth, tourism and recreation activities. In addition, there are significant demands for infrastructure and council has had to significantly expand and diversify its roles and responsibilities. In general, this has limited action to address the environmental impacts of population growth.

The extent of the environmental damage also varies. Those areas with the greatest growth in population and, therefore, development, have been most affected. Adverse impacts on the environment include:

- Vegetation and fauna loss due to development. In many cases, the remaining natural vegetation is less than 40% of the extent that was present prior to European occupation of the area;
- Remaining vegetation is being further impacted by fragmentation of habitat, incursion of weed pests, loss of connectivity of corridors and inappropriate use or over use for recreation purposes. In turn, these impacts are significantly influencing the nature and presence of fauna species;
- Loss and degradation of riparian corridors with associated impacts on water quality;
- Loss of ecosystem services;
- Loss of environmental flows due to extraction of water; and
- Declines in water quality due to sediment and nutrient runoff from development sites and increased pollutants released to waterways.

Expected impacts from future development include:

- The significant loss of native vegetation due to state government driven infrastructure. These impacts are expected to exceed the impacts of most other approved development in the SCRC area;
- Continued loss of vegetation and open space as greenfield sites are being developed;
- Deterioration of the remaining vegetation and fauna in development areas as connectivity is further compromised;
- Inability to compensate for loss of vegetation that is occurring as a result of land prices and suitable compensatory mechanisms;
- Time lags between the loss of vegetation and replacement of that vegetation once suitable compensatory mechanisms are developed and implemented;
- Increased demand for recreation activities and subsequent degradation due to increased usage of natural areas;
- Increased demands for water extraction and impacts on environmental flows particularly to provide potable water to other areas of SEQ. This will relate to actions such as increased water extraction at dams and weirs, sewer mining and increased collection of rainwater from roofs and stormwater runoff; and
- Increased greenhouse gas emissions which will, in turn, increase the impacts of climate change.

In addition to other matters raised in this discussion, examples of other economic, political, policy and social factors that have been key factors regarding the environmental impacts are as follows:

- The sugar cane industry which occupied our coastal flood plain has collapsed in the region leaving this low lying land subject to development pressures;
- Much of the former cane fields are now fallow and weed infested, potentially creating greater pressures on native vegetation;
- State and regional economic and social imperatives (i.e. roads and pipelines) are overriding local environmental imperatives;
- There is a lack of integrated planning between all levels of government;
- The integrated demands and impacts of recreation and tourism activities are seldom considered particularly: in relation to waterway usage; recreation area demand and usage; and pollution;
- The implications of having considerable development in coastal zones which are vulnerable to flooding and storm surge.

4. Mechanisms to promote sustainable use of coastal resources

In relation to council policy, particularly planning schemes, integration of some sustainability focussed provisions has commenced.

Sustainable use of coastal resources is an imperative identified in the draft Local Growth Management Strategies. The draft Local Growth Management Strategies are intended to demonstrate the mechanisms that local governments will use to achieve sustainable growth and the objectives of the SEQ Regional Growth Management Strategy. While significant work has been undertaken in order to promote more sustainable growth through draft Local Growth Management Strategies, it can be reasonably argued that they are not a true mechanism for promoting sustainable use of coastal resources as:

- The size of the future population has been determined at a regional level;
- There has not been a broad assessment of the carrying capacity of the area to determine whether the area can actually cater for the population growth specified;
- While there has been consideration of a range of biophysical constraints when determining areas for population growth, there has not been a more detailed assessment to determine additional impacts on the environment across the SCRC that are likely to ensue from the population growth; and
- We end up making generalised decisions regarding environmental impacts as we do not have sufficient targeted monitoring or understanding of ecological systems and processes at the local level.

While a number of the state level policies have an intent to address sustainability (the Coastal Management Plan, Environmental Protection Act and subordinate legislation) and sustainable development (the Integrated Planning Act), it is clear from practical application that there is a definite gap between the purpose of these policies and the outcomes that are actually achieved. In real terms, much of this gap relates to the ease with which social and economic imperatives can be quantified, understood and endorsed at the expense of desirable environmental outcomes.

There is a clear need for mechanisms which promote sustainable use of coastal resources. From a local government perspective, none of the policies that are currently in place actually address sustainable use of coastal resources.

From a local government perspective, SCRC is and has undertaken a range of initiatives which promote sustainable use of coastal resources. These include:

- The continuing implementation of the Maroochy River Recovery Project and its component projects;
- Addressing peak oil by working with community groups in their development of a local Energy Descent Action Plan;
- Promoting the development of a Regional Environmental Offsets Project;
- Developing and implementing sustainable design initiatives within planning schemes;
- Undertaking a range of community visioning projects and other community engagement projects;
- Developing and implementing sustainable purchasing provisions for sectors of council; and
- Having part of the SCRC area internationally recognised as a Biosphere.

SCRC also promote biofuel production and the provision of environmental offsets. There are conflicts, however, that SCRC is not currently equipped to address in relation to determining policy which is suitable to manage the location and nature of biofuel production and offset delivery. In both cases it will be necessary to optimise possible outcomes. There are also funding and resource issues with respect to suitable options for these activities. Key concerns are:

- Carbon sinks are being promoted and used as the best method for managing greenhouse gas emissions without due regard for the carbon hierarchy which identifies carbon sinks as the lowest priority;
- Rehabilitation using natural vegetation should be targeted so that broader environmental offsets are provided which achieve integrated biodiversity, water quality and greenhouse gas outcomes;
- Offsets for biodiversity and water quality are the priority for SCRC and this has significant implications in relation to the location and extent of any forestry based carbon sinks;
- Most of the biofuel solutions have proposed the use of plants that are or have a potential to be weed species and most of the currently proposed production areas are located upstream of native vegetation which would be further threatened by additional weed species incursion; and
- There is a high potential for significant loss of local agricultural production areas.

5. Impacts of Climate Change on Coastal Areas

There are a range of climate change impacts that are of concern to the SCRC. The following table identifies a range of the expected changes in climate and their associated issues:

<p>Increased temperatures including heat waves and droughts</p> <ul style="list-style-type: none"> • This will impact on available water resources • Decreased lifespan and increased maintenance of all above ground infrastructure • Increased mortality and morbidity during heat waves • With expected maximum temperature changes of between 2.5 and 6.5°C expected, significant native flora and fauna will be lost and the time frame of less than 100 years is not sufficient to allow adaptation for most species • Increased salt build-up in soils and associated impacts on vegetation and infrastructure • Damage to pipes and other infrastructure due to ground subsidence • Increased risk of failure of essential infrastructure due to overheating e.g. air – conditioning, water and sewer pumps, power transformers • These impacts will also result in: increased GHG emissions as demands for air conditioning increases; an increased demand for medical facilities and similar refuges during heat waves; increased demands for emergency services and increased number of black outs or brown outs due to stresses put on the electricity supplies .
<p>Reduced rainfall</p> <ul style="list-style-type: none"> • Reduced availability for water resources resulting in additional demands for alternatives such as rainwater capture, stormwater harvesting and sewer mining • Reduced environmental flows and further degradation of water quality in all waterways • Increased water resource demands for future populations competing with demands for environmental flows • Increased potential for dry weather blockage of sewers and resulting surcharges
<p>Increased coastal erosion</p> <ul style="list-style-type: none"> • Modelling suggests that up to 34m of coastal erosion could occur by 2100. • This will have a direct impact on infrastructure such as: coastal defences, boat ramps, beach access points, etc. • This will also destabilise dunes and expose development immediately behind the dunes to impacts
<p>Increased intensity of rainfall events</p> <ul style="list-style-type: none"> • This will result in increased flooding and more frequent flooding; • There is likely to be isolation of residential areas and emergency facilities such as hospitals
<p>Increased frequency and intensity of strong winds, storms and cyclones</p> <ul style="list-style-type: none"> • While there is uncertainty about the frequency of cyclones, there is increased risk as warmer coastal waters will increase the occurrence of cyclones in southern areas of Queensland and cyclones are projected to be stronger and to last longer • This will result in increased damage from stronger winds and increased rainfall • This will require the capability and capacity to manage the impacts of these events
<p>Increased sea levels and increased height and power of storm surge events</p> <ul style="list-style-type: none"> • The change, not only in the mean but also peak tides, will increase risk for those areas that are currently vulnerable and new areas will also become vulnerable • There will be inundation and increased flooding which will result in loss or damage to land and infrastructure particularly in the extensive urban areas on the coastal fringe of the SCRC • Blockage of stormwater drainage is also likely to occur and this will increase impacts from localised flooding • There is increased potential for saline intrusion into ground water due to sea level rise and extraction of ground water • Greater storm surge will impact further inland due to increased wave build up and associated shoreline run-up

A range of associated concerns for SCRC are as follows:

- There is a lack of awareness of climate change within the broader community;
- Vulnerability and adaptive capacity are not yet quantified and understood to a sufficient degree for appropriate planning to be undertaken;
- There is a need to recognise adaptive capacity within the community and focus planning and policy accordingly i.e. sectors of the community that are more susceptible to climate change impacts would include the aged and very young, single and low income families;
- There is often a people first focus on climate change fact when natural systems and infrastructure are more vulnerable as they cannot adapt rapidly and, often, cannot be relocated;
- There is potential for litigation against the SCRC due to; the time lag between becoming aware of climate change and the implementation of actual measures to address it and; when implementing adaptation initiatives, due to loss of development rights;
- There is a lack of legislation and policies at federal, state and local government levels which are directed towards mainstreaming climate change into policy and practices, particularly decision making;
- Proponents and administering authorities need to be made accountable for ensuring that appropriate mitigation and adaptation initiatives are implemented for new development;
- The financial and resource demands to change policy and implementing initiatives will be an additional burden for local government;
- In relation to the coastal margins, Council's still need to determine when and where they will defend, adapt or retreat;
- There is concern that simplified risk assessments that are subjective and, therefore incomplete or inaccurate, are being promoted in preference to undertaking broader consultation processes within the community;
- There is a need for each level of government (federal, state and local) to have integrated policy and adaptation/mitigation initiatives;
- There is already difficulty associated with changing community behaviour to reduce greenhouse gas emissions. This will need to increase in order to achieve deep cuts in greenhouse gas emissions.

6. Strategies to deal with climate change

In addition to policy and strategy actions that have already been discussed, SCRC has or will be undertaking the following actions to address climate change:

Adaptation

- 1) Initial draft scoping report from Climate Risk Pty Ltd completed for the former Maroochy Shire Council;
- 2) SCRC is an active participant in the SEQ Regional Plan Climate Change Steering Committee and Working Groups. As a result, SCRC is having direct input into the review of the SEQ Regional Plan in relation to incorporation of climate change.
- 3) Within SCRC:
 - a) Workshops on climate change vulnerability assessments are being conducted to inform new Local Area Plans for our coastal community.
 - b) There is an extensive knowledge of anticipated flooding extents for our major creeks and rivers based upon existing climate conditions and an analysis into the sensitivity of our flood plains to potential changes in hydrologic parameters due to climate change (i.e. increased rainfall intensities and sea level rises + more severe weather events) has commenced. This has led to determining new minimum fill levels for the Draft Maroochy Structure Plan.
 - c) A Flood Damage Analysis, based upon current climate conditions, has recently been completed which identifies at least \$29M of average annual damage due to flooding in our region (former Maroochy);

- d) The climate sensitivity analysis will be fed back into the flood damage analysis to provide estimates for potential costs due to changes in climate conditions (due to flooding);
 - e) A partial economic model has been developed which identifies the value of the Maroochy River system to our local economy and this can be used to test variations to the value due to changes conditions, such as climate;
 - f) There is a team of dedicated professionals who are well versed in climate change matters;
 - g) There has been engagement with the University of the Sunshine Coast (USC), including professional development of a number of staff.
- 4) Sunshine Coast Regional Council (Environment Policy (South)) was successful in receiving a grant of \$50,000 from the federal government Department of Climate Change to undertake a climate change risk assessment and develop an action plan as part of the Local Adaptation Pathways Program;
 - 5) SCRC has been involved in a range of sustainable housing, biofuel trials and other initiatives.

Mitigation

- 1) SCRC is a member of the Cities for Climate Protection Program and has developed greenhouse action plans which identify corporate and community mitigation initiatives;
- 2) There are regular greenhouse gas inventories developed for areas of the SCRC;
- 3) SCRC are undertaking a Carbon Accounting Project which will undertake a marginal cost abatement analysis for Council's central region which will be extended to the northern and southern parts of the SCRC.

7. Mechanisms to promote sustainable coastal communities

As already identified, council is using a range of mechanisms to promote sustainable coastal communities, these include: planning and policy initiatives at both local, council and SEQ regional levels, community engagement and support and implementation of demonstration projects.

One key initiative which was in place prior to amalgamation has been the development of Sustainability Reference Groups. These groups include local community members, eminent scientists, and other selected people who can provide advice and direction to SCRC in relation to promoting and achieving sustainable coastal communities.

Another of the key initiatives will be the development of a Sustainability Plan for the SCRC. This document will assist in the development of a plan for achieving sustainable coastal communities. It is proposed that a broad community consultation process will be utilised to finalise the Sustainability Plan which will provide a template for progressing broader sustainability initiatives in the SCRC area.

8. Governance and institutional arrangements for the coastal zone

There are a range of issues in relation to governance and institutional arrangements for the coastal zone that impact on the SCRC.

The most pressing issue at this time is the process of developing the Sunshine Coast Regional Council following the amalgamation of the three former local governments on the Sunshine Coast in March 2008. While SCRC is attempting to maintain a 'business as usual' approach, there are significant implications in relation to the need to develop a new organisational structure and particularly the need to transition three separate sets of policies and strategies, such as planning schemes, Local Growth Management Plans, Biodiversity Strategies, etc., to individual policies and strategies for the SCRC area;

Additional priorities will be:

- Engagement with the State government in relation to the reviews of the SEQ Regional Plan and the Coastal Management Act, and

- Engagement with other local governments to progress priority issues for SEQ local governments as identified through the Council of Mayors, particularly issues such as environmental offsets, regional carbon sinks, etc.

SCRC is not a catchments based local government. While the SCRC is responsible for the whole of the Maroochy, Mooloolah and Noosa Rivers, a significant part of the regional council area contains a small part of the Mary River catchment. This has implications in relation to local government coordination. Much of this relates to differing priorities and local government capacity.

It also creates the situation that the region is serviced by two Regional NRM groups – the Burnett Mary Regional NRM Group (BMRG) and SEQ Catchments, which has implications regarding the ability of SCRC to access available funding and the other local governments within each of the NRM Regions. The Mary River catchment is within the BMRG area. This catchment does not cover the coastal growth areas of the region and, as a result, it does not have highest priority for projects which in turn creates difficulty when trying to align projects with BMRG priorities. Conversely, SEQ Catchments are attempting to manage the competing interests of a range of local governments across the SEQ region, which places a stronger focus on regional projects and makes it difficult for individual councils to access what are, per capita, limited funds. In addition, the regional NRM groups have an additional concern relating to short-term guarantees to state and federal government funding.

Thank you for the opportunity to make the inquiry aware of the many issues that are impacting the Sunshine Coast Regional Council in relation to our coastal communities.