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22nd May 2008

The Secretary

The House Standing Committee on Climate Change, Water, Environment and the Arts.

ccwea.reps@aph.gov.au

SUBMISSION TO

Inquiry into climate change and environmental impacts on coastal communities

Dear Sir/Madame

I am a retired forester and a resident of the coastal community of Apollo Bay, Victoria. I have been a regular visitor to Apollo Bay since 1952 and I have resided here for the past 12 years. Apollo Bay is the largest coastal community in the Colac Otway Shire (COS) in western Victoria.

I believe that one of the principal requirements of coastal communities is for clear policies and guidelines on planning issues related to climate change. My hope is that this inquiry will result in the Federal government taking immediate action to provide the policies, guidelines and the necessary legislation to prevent development in coastal areas that will be subject to inundation by rising sea levels.

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

While both the Federal and State governments are acting to protect the environment from the effects of climate change they have given little more than lip service to the problems associated with the impact of climate change on planning in coastal areas. To a great extent they have both left local councils to manage coastal planning problems without providing them with any legislative tools to prevent unsuitable development taking place.

Federal and State Government planning must consider the impact of rising sea level on any proposal to extend coastal communities. Any extension of a coastal community should also be clearly related to the ability of the community to provide long-term access, water supplies, sewerage, power and other essential services to meet the desired growth.

Development on public lands adjacent to the sea should be restricted to the minimum required to service current public needs. Development on private land adjacent to the sea should also be strictly controlled. The government should not sell off or lease any crown land on the foreshore for development of any facilities that do not require direct access to the sea or a water frontage. Sunset clauses should be placed in all existing leases that will ensure that the crown land areas are vacant by the time that coastal recession is likely to occur.

The COS council recently approved the C29 Amendment to the Colac Otway Planning Scheme that was sought by the developer '.....'. The amendment removes the Land Subject to Flooding Overlay (LSIO) from the company land in the Barham River estuary and permits the construction of 537 residential house lots on elevated pads and an 18-hole golf course. The earth pads are designed to elevate the lots to 60cm above the current 1 in 100 year flood level. The estuary is currently between 1 and 1.5 meters above sea level (AHD).

Although the C29 proposal includes the impact of a rise in sea levels (up to 80cm) it does not satisfactorily address the matter of coastal recession. If coastal recession continues at the current

rate it will remove the sand dune that protects the estuary from the sea or ultimately erode the pads. The primary dune on Mounts Bay which carries the Great Ocean Road, the town water supply pipe, sewerage pipes and telephone cables, has been eroded by approximately 2.5 meters in the past 5 years by wave action. It will continue to erode as sea levels rise. Neither the council nor the C29 Planning Panel (Set up under Section 153 & 155 of the Planning and Environment Act 1987) considered that there would be any danger of coastal recession. The fact that little evidence of coastal recession was presented to the C29 Planning Panel by any of the responsible authorities indicates that there is an appalling lack of information in relation to this subject. The Panel did not accept that the observations reported by local residents were sufficient evidence that coastal recession was taking place.

Too little value is placed on local knowledge by planning authorities and government appointed Planning Panels. Time and time again both the state and local government authorities ask for and then proceed to ignore the information provided by local residents in relation to the development of facilities on the coast. There are very few long-term records of coastal recession and storm surge.

One example of this is the impact of storm surges on Apollo Bay. The only evidence presented to the C29 Planning Panel on storm surges were contained in the Apollo Bay Sand Report 2005 that refers to a storm surge crossing the Great Ocean Road (GOR) near Marriners Lookout Rd. Local residents have observed storm surges crossing the GOR on a number of occasions. In January 1946 during a major storm the shops in the main street had to be sandbagged to protect them from waves spreading across the GOR. At the time the beach commenced at the edge of the GOR. In the 2005 storm the main shopping area was protected by sand dunes deposited as a result of the construction of the breakwater. Personal recollections also indicate that during the 1923 floods waves were observed running up the Barham River above the GOR Bridge.

Few councils that manage coastal communities appear to consider the impact of climate change on the provision of services such as roads, sewerage and water supply when making decisions.

Much of the current planning undertaken by the authorities responsible for catchment management and water supply appear to be based on historical records and do not appear to include predictions of events that will occur as a result of climate change. There is an urgent need to ensure that the impacts being wrought by climate change on rainfall and flood events are factored into the future predictions on flooding (the 1 in 100 year flood events) and on the availability of water supplies.

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

The expansion of coastal towns must be curtailed until there are sound predictions of the areas that will be effected by rising sea levels and storm surges and the impact that these events will have on the delivery of services in the town and the surrounding areas.

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.

Rising sea levels will create a number of problems in coastal communities. Some of the problems are as follows.

Rising Sea Levels

The Federal government should prepare and distribute high resolution plans and overlays of the coastal land that will be subject to inundation by rises in sea levels of 50cm, 100cm, 150cm and 200 cm. The plans should include the areas of land that will be subject to storm surge and wave erosion. The plans should be provided to state government and local councils and form the basis for all future planning decisions in coastal communities.

The Federal government should impose an immediate ban on new residential and commercial development in areas that will be subject to inundation by rising sea levels. Councils must be

given the power to reject planning applications for development on land subject to inundation by rising sea levels and storm surge.

Current planning legislation does not provide Councils with the power to reject developments on land that will be subject to inundation in the future. In fact the current State planning laws favour development without giving any real consideration of the impact of the proposal on the needs of the community.

Councils should be funded and required to undertake detailed assessments of the impact of rising sea levels on road access, water supply, sewerage, storm water drainage, electricity supply, telephone services, beach fronts, ports and harbours, etc.

Council should be required to take the impacts of rising sea levels into account when planning new services and to consider the options and time frames that are required to relocate and replace such services.

Australian Height Datum – 1966-68 (AHD).

AHD Australian Height Datum - the datum used for the determination of elevations in Australia. The determination used a national network of bench marks and tide gauges, and set mean sea level as zero elevation. All topography levels are based on this level. Discussion is required to determine if there is a need to amend the description of AHD to cater for change in sea level. A strong case can be made to retain the datum as all map contour intervals are based on AHD. If AHD is to remain unchanged at the level set in 1966-68 then a new name and definition is required to define the current and future sea levels in legislation and regulations.

Ownership of private land below high tide?

A decision is required on whether private land that is inundated by rises in sea level will revert to the Crown or remain in private ownership? I believe that all land that is below sea level (the current High Tide level) should revert to the Crown. This should include the areas of land that are subject to normal wave action - the beach. Compensation should not be paid to the owner for any land lost due to coastal recession.

Rights of private landowners to construct barriers to the rise in sea levels.

The Federal government must ensure that legislation is in place at both the Federal and State level to prevent private landowners constructing barriers to rising sea levels on their property without approval. The construction of platforms or sea barriers in a random fashion will effect sea levels and wave action on surrounding area and could create significant changes to wave patterns and coastal recession.

Costing the Strategies of Protection or Retreat.

There is a real need to establish and compare the costs of the strategies of protecting a coastal community against rising sea levels with the cost of abandoning the community. None of the decisions will be easy but they need to be assessed to ensure that funds available are allotted in the most productive manner. For example the economy of Apollo Bay is based on tourism and if the Great Ocean Road were to close then the income to the town would all but cease. The question of protection of the town is therefore closely related to protection of the GOR.

Impact of severe weather events (high rainfall) on flood modelling and flood levels.

Current flood modelling is based on long-term weather records. The 1 in 100-year flood event is based on this data. Climate change can significantly increase severe weather events and the frequency of the current predicted 1-in 100-year events. There is a need to model the impact of increased severe weather patterns on flood events. Modelling the impact of severe flood events in areas that will also be subject to inundation by rising sea levels should also be undertaken.

4. Mechanisms to promote sustainable coastal communities.

Adequate water supplies. – Many coastal communities depend on finite water catchments for their water supply. In the past few years water restriction have been in force in many areas. Most of the current water supply predictions are based on rainfall and run off data collected in the past. Many water supply authorities appear to over estimate the volume of water that will be available for consumption and thus approve the expansion of the customer base in the supply area. Future estimates of water supply by authorities should be based on a worst case scenario as there is no way that many of the coastal town supplies can be augmented without tapping into another community water supply area.

Tanks. - All residents in coastal communities should be encouraged to provide a minimum of 10,000 litres of water storage on their property.

Grey Water – The use of grey water should be encouraged. In most modern houses the same waste pipes are used for the collection of sewerage and grey water. If the use of grey water is to increase then legislation is urgently required to ensure that separate waste pipes are provided so that it is not polluted with sewerage until it is outside the building where it can be tapped.

5. Governance and institutional arrangements for the coastal zone.

There is need to establish a Federal Coastal Management Authority (FCMA) with the power to undertake the necessary assessments of the impact of climate change on existing coastal communities. The FCMA should be required to record all changes in sea levels, wave action areas, coastal recession and storm surges.

As most of the damaging coastal events are related to storms during high tides the FCMA should establish a coast watch system whereby trained local observers file reports on tide heights, storm surges, wave actions, flood levels, etc via the Internet to a central database.

The FCMA should develop expertise in the design and costs of alternative protection strategies available to coastal communities. They should design a system to assess the options and the costs of protection and cost of retreat for coastal communities.

The FCMA should assist the coastal councils to assess the options available in regard to dealing with the changes that will occur in each community. There will also be a need to determine the priority for works undertaken to ameliorate the impacts of climate change.

The first major impact on coastal communities will occur as a result of coastal recession and storm surge. In Apollo Bay the sewerage system manholes are already subject to periodic inundation during minor flooding in the Barham River estuary as a result of the sea water entering the river system. All access to and from Apollo Bay is via the Great Ocean Road. The GOR is under threat due to coastal recession and storm surge on both sides of the township. Alternative access is needed before the GOR is subject to regular flooding at high tide or storm damage cuts off access.

The problems associated with climate change occur over long periods and they are cumulative. Addressing the impacts of climate change requires long term planning and preventative measures rather than a reactionary response. Politicians at all levels of government have ignored them for too long.

I hope that the inquiry results in better long term coastal planning at all levels of government. I thank the committee for the opportunity to comment on these matters and look forward to the report and Federal Government leadership in addressing these problems.

Yours faithfully

Edward Stuckey