GIPPSLAND REGIONAL COASTAL PLAN 2015-2020 SUBMISSION [by 20.3]

[redacted]

If you don't have a plan for climate change, you don't have a plan for the future. John Connor

The greatest threat to the coast and the lakes system is climate change (ie global warming) and associated factors. These threats are sea-level rise caused by warming and storm surges, increased wave heights, more intense rainfall events, coastal erosion and other natural occurrences directly or indirectly affected by the warming. These threats should be combined with the possibility of land subsidence caused by the depletion of aquifers by offshore and onshore mineral extraction and indirectly affected by prolonged droughts and other unknown factors. [redacted]

Generally your Draft downplays the above threats. The section on climate change is small – less than 5% of a Draft which considers this an 'overriding problem'.

p.10
Under the page 'The Dynamics of the Coast' it should be emphasized that the effects of a warming climate will be additional to the normal natural processes. In many, or most, instances that makes them much worse. The threats are better understood if the changes wrought by warming are added to those of the natural processes. Expensive coastal works such as in the illustration at San Remo should not be pursued as in the long term they will be a waste of money.

Recommended Actions

1. The heading of the section 3.2 "A Changing Climate" be changed to "A Warming Climate" or at worst "Climate Change". The heading used implies that the changes are natural and not man-made and that there is nothing we can do about them.
2. Expensive coastal works should be abandoned except in rare circumstances. Fixtures and works within the 2m above high tide level should be low cost, temporary or relocatable.
3. Planning should concentrate on a long term retreat from the coast
4. Change the wording of the first sentence of 3.2 to "Climate change will increase..."

p.11

Subsidence gets a single mention in this report in the title of the 2008 GCB Report otherwise is not dealt with. The threat of subsidence and the lack of information on, or appreciation of, this possible problem is appalling. An examination of the Southern Rural Water measurements of the top level of four Giffard bores indicates that two of the bores showed no discernible level loss over the last 10 years and we must assume have been replenished naturally and two show a slight downward trend. Surely there must be more information available than this? Also many questions remain unanswered. Which aquifer or aquifers are affected by the offshore rigs drawing their oil and gas? Are they being monitored? If so are these records available to the public? Are any of the offshore rigs reinjecting water removed during the oil and gas extraction process? What is the experience of areas that have experienced substantial subsidence? Whilst I realise the region is being monitored by satellite for any significant subsidence the fact remains that this is of no use to us once it has occurred. This draft

is merely a continuation of the Victorian Coastal Hazards paper where the threat is mentioned but there is no action.

Recommendations

1. This page of the draft be re-edited to publicise the latest information on subsidence, especially in relation to information of the depletion or otherwise of aquifers in the Gippsland basin.
2. Increase the monitoring of aquifers, quantify the levels of water removed from them by industrial, agricultural and extractive operations and make this information readily available to the public.
3. Plan for worst case scenarios of subsidence and sea level rise at specific places on the Ninety Mile as indicated by the 2007 CSIRO report

p.12

Some of the emerging markets identified on this page are part of the problem. The region's 'oil, coal and gas' has to be phased out as quickly as possible. Of the emerging energy industries identified on this page Coal Seam Gas is also part of the problem. See https://www.youtube.com/watch?v=o78j77I7XUw&noredirect=1
The conundrum is the more these industries are promoted, even business as usual, the more likely the coast will be completely destroyed. All the bodies participating in the management of the coast will eventually be forced to recognise this. The sooner this is recognised the better.

p.13
Maximising access should be done on a low cost basis only in line with long term planning for a retreat from the coast.

p.15
The Gippsland Lakes are "one of Victoria's most important environmental assets" and may be gone in as little as 100 years.

p.16
Both climate change and subsidence are missing from key challenges and actions.

p.17
Some of the Traditional Owner's cultural assets are under threat. Both climate change (and possibly subsidence) with currently slow but inexorably rising sea levels threatens many archaeological sites. The midden immediately east of the Red Bluff (near Lake Tyers) is one site already experiencing severe erosion.

Recommendation
Mapping and monitoring of the most threatened cultural sites and plan for possible excavation of those identified as the most important and or most endangered. (I am aware some work has been done on this)

p.21
Planning for coastal flooding and erosion should also consider the salinity and other environmental problems of the Gippsland Lakes. Salinity can only make the problem of erosion with sea level rise worse

Recommendations

1. In 6.3 first sentence substitute "warming" for "changing'.
2. In box first column 1st point substitute "warming climate" for "climate variations".
3. More information be made available on salinity in the Lakes.
4. The monitoring of the salinity in the Lakes system.

p.23
The illustrations on this page are misleading and the schematic interpretation is incorrect. Presumably these diagrams are based on Bruun's Law. This is a general rule that states the coast will retreat 50 to 100 times for each unit rise in sea level. Since this rule encompasses all types of shores it seems logical that that the retreat of vulnerable sandy shores will be at the top end of Bruun's spectrum or possibly even greater. The second diagram in the right hand column of this page illustrates a coastal retreat of 2 units per 1 rise whereas in fact it may be 100 times or more.

Recommendation
That the page states Bruun's Law clearly and indicates that the diagrams are schematic only and that the coastal retreat per unit rise can be quite extensive and severely damaging.

p.24/25

Adaption is not enough. If the whole Lakes and coastal system is threatened with destruction within one hundred to one hundred and fifty years why bother with any draft? Why bother with sometimes expensive coastal works which may be doomed in the medium to long term? The GCB must convince all levels of government that serious and substantial action is required to mitigate climate change. It may be a battle already lost but it is still one worth fighting.

Recommendations

1. That the GCB urge all participatory bodies to work urgently on various ways of mitigating climate change as well as adaption.
2. That the energy future work of the GCB be directed to and focused on this purpose.

Submitted by

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