



Gippsland Coastal Board

574 Main Street

Bairnsdale Vic 3875

(03) 5152 0451 www.gcb.vic.gov.au

Barriers to Effective Climate Change Adaptation
Productivity Commission
LB2 Collins Street East
Melbourne VIC 8003

21 December 2011

Dear Sir or Madam,

RE: BARRIERS TO EFFECTIVE CLIMATE CHANGE ADAPTATION

The Gippsland Coastal Board appreciates the opportunity to respond to this important inquiry into barriers to climate change adaptation. Our strategic planning role for the Gippsland coastal area means we are to contribute to the development and implementation of Government policy with regard to climate change matters.

Our Board advises the Minister for Environment and Climate Change on regional coastal matters and maintains working relationships with four local councils, two catchment management authorities, various departments of the state government, water authorities, regional development groups, academic institutions, recreational associations, and numerous other community organisations around Gippsland.

The Gippsland Coastal Board, along with our two associated regional coastal boards, is also responsible for facilitating the implementation of the *Victorian Coastal Strategy 2008 (VCS)* and its own Coastal Action Plans. The VCS gives direction for planning and managing the impacts of activities on and in foreshore areas, in the coastal hinterland - including private land - and in the catchments of coastal flowing rivers.

The VCS has identified a hierarchy of principles for development on the coast, which sets the foundation of the strategy and guides planning and decision-making about land use and development. These principles are:

- Provide for the protection of significant environmental and cultural values;
- Undertake integrated planning and provide direction for the future;
- Ensure the sustainable use of natural coastal resources, and (when the other principles are satisfied)
- Ensure development on the coast is located within existing modified and resilient environments where the demand for development is evident and the impact can be managed.

The attached submission addresses some of the questions posed in the *Barriers to Effective Climate Change Adaptation Issues Paper*.

I apologise for the delay in making this submission and it is hoped that you may still accept it. I hope these points are of use to the Committee in its deliberations. There is a critical need to ensure that the relevant policies and procedures are appropriate and effective to manage climate change.

Please contact Ms. Natasha Vasey-Ellis, Executive Officer of the Gippsland Coastal Board, with any questions or comments on our submission.

Regards,

Helen Martin
Chair

Gippsland Coastal Board submission to Barriers to Effective Climate Change Adaptation

Dealing with uncertainty

How is effective adaptation best defined? How can it best be assessed? In other words, is the rate of adaptation 'too much' or 'not enough', 'too soon' or 'too late'? What other considerations may be relevant for maximising the net benefits to the community from adaptation?

In the view of the Board, effective adaptation to climate change could be defined as: achieving a situation where human systems can continue to operate effectively, efficiently and in a socially equitable manner, whilst minimising pressures on the environment; ensuring that ecosystems are given room to adapt naturally, to the extent to which this is possible; and, where necessary, intervening actively to protect important environmental values, e.g. to improve the survival chances of key species.

There is a strong need to apply the precautionary principle, in terms of taking action now rather than waiting for greater certainty on the nature and rate of change that will be experienced. It follows that a precautionary approach to development should be adopted, particularly for 'greenfields' sites.

For an action to be considered 'effective adaptation', then it should have some positive outcome/s. Given the uncertainties, it is likely that a number of adaptation actions at this stage will be ineffective; others will not achieve the desired results whilst others are less effective than desired given the cost. However, any positive outcomes will be worthwhile, especially given that dollars spent now means less dollars spent in the future to rectify issues that are harder to treat when more advanced.

Some adaptation needs to be undertaken as soon as possible to minimise future impacts/costs. This could be difficult given most people are unwilling to pay for actions that will mostly benefit future generations.

Consideration of environmental/biodiversity impacts is essential. Protecting natural assets will have benefits to community (despite [perceived] negative impacts eg bushfires). Protect and in some cases reinstate Crown land frontages to maintain public access to rivers, lakes, ocean, etc.

What kinds of adaptation to climate change (and variability) have proven most effective to date?

Australians have a long history of living with climatic variability, particularly floods, storms and droughts, and other natural phenomena such as bushfires. There have been improvements in the past 30 years in planning for flood-affected areas (i.e. accepting Moss Cass's 1974 dictum

that 'Floodplains are for floods'), which have involved demolition/relocation of some properties at high risk and avoidance of intensification of development in other hazard areas. Planning for areas of high fire risk has been less successful, largely due to the greater difficulty in predicting fire behaviour and extent (compared with floods) and the relative infrequency of major fires in specific areas. The cumulative effect of hundreds of small decisions about whether houses can be built in 'at risk' areas has meant a virtual urbanisation of areas that should not have been developed. Planning for adaptation to climate change faces similar problems of unpredictability and (apparent) long time frames.

How can uncertainty be addressed in the context of adaptation to climate change?

Uncertainty can be addressed by defining appropriate adaptation pathways, that set the direction for the immediate future, and identify decision points at which adaptation strategies will need to be reassessed, or the next stage of adaptation action implemented. These decision points can be related to observed physical changes or the availability of more definite scientific information, rather than defined time frames.

Continue gathering data, monitoring of process (sea level rise, land subsidence, biodiversity, ecosystem health, distribution of plants/animals/communities etc, storm events, temperatures etc). Data can then be used to justify and refine adaptation activities.

The Gippsland Coastal Board, with funding assistance from the National Heritage Trust, commissioned the CSIRO to undertake three reports on the effects of climate change on weather patterns, storm surges, and extreme sea levels in Gippsland, Victoria, between 2005-6. Such studies are critically important for our future; research and information access increases the adaptive capacity of coastal communities.

Government intervention could address some of the barriers

What is the most useful way to classify, define and identify barriers to adaptation? Are the categories set out above – market failures, regulatory barriers, behavioural & cultural barriers and organisational barriers – appropriate? Are there other types of barriers?

There may also be environmental barriers to adaptation, at least in the case of the built environment. For example, planners responsible for a coastal township threatened with inundation of its low-lying areas may seek to direct new development to the inland margins of the settlement. In many cases, this could not be achieved without impacting on biodiversity values, either directly or through vegetation clearance that would be required to lessen the bushfire risk to properties. Environmental barriers represent as a choice between the priority to be given to adaptation of human settlements and that of maintaining the resilience and adaptive capacity of natural systems.

As noted in the Issues Paper (p.8) the absence of a regulation that might otherwise be appropriate could be just as much a barrier to effective adaptation as inappropriate existing regulation or policy.

There appears to be some reluctance from government (at all levels) to take action, due to a variety of reasons including lack of funding or direction, not wanting to accept responsibility, unsure of the best course of action, votes/re-election or waiting for the next tier of government to take action first.

A key issue to be addressed by government is the question of compensation for affected landholders. Many property owners in coastal or lakeshore settlements in our region are in the lower income brackets and, if the value of their home declines, would have no alternative resources to enable them to relocate or make substantial changes to their property. It is essential that long-term owners – who meet specified socio-economic criteria – should be given some assistance through tailored structural adjustment programs, to ensure that they have the capacity to adapt.

What market failures could inhibit adaptation in any specific sector or region?

Failure of Governments to make publicly available all information that they have on the potential impacts of climate change, e.g. potential inundation in coastal areas.

Failure of the property industry (developers, real estate agents) to communicate to potential buyers the information that they may be aware of concerning the potential risk to a property.

Are there examples of policy or regulatory barriers that could inhibit adaptation? What are these? Could the objectives of these policies or regulations be met in alternative ways that have greater benefits and/or lower costs and distortions?

Some policy such as that recently introduced with regard to establishment of wind farms is a barrier to advancing alternative energy sources. Some compromise may be required in future in order to advance alternative energy sources to reduce (or eliminate) reliance on coal-fired energy.

Planning schemes and building codes cannot be applied retrospectively. Being able to retrospectively apply conditions on developments may assist in adaptation; for example, building construction standards within a bushfire prone area, or floor levels for development in areas at risk of flooding or coastal inundation.

What other significant barriers (for example, behavioural or organisational) might inhibit adaptation? What effects might these have on decisions about whether and how to adapt to climate change?

Organisational barriers include the short-term nature of political cycles at Commonwealth, State and local levels, which make it difficult to adopt a planning horizon appropriate to dealing with climate change. (See earlier notes above re: reluctance of government to make decisions.)

Behaviour barriers include fear of the unknown and the unpredictable, which can result in denial – particularly where a person's or family's only capital asset is threatened, therefore potentially threatening their quality of life for the rest of their lives.

Facilitating insurance markets

Are any existing regulatory arrangements (including state-based insurance taxes and disaster recovery policies) impeding the efficient operation of the Australian insurance market, or reducing incentives to take up insurance?

The payment of benefits – from governments and public subscriptions – to victims of natural disasters needs to be equitable. For example, not based on the size of the event, not dependant on whether the recipient was insured/not insured etc. It is questionable that such benefits could be funded on an ongoing basis, particularly if disasters are more frequent. People need to be discouraged from locating in vulnerable areas or under-insuring, and encouraged to reduce or eliminate risks that can be reduced or eliminated (such as through relocation, housing construction methods, maintenance, etc).

How well are Australian insurance markets coping with climate change and any associated uncertainties? What new insurance products might be developed by the market in response to climate change (for example, insurance for land values or insurance linked to weather indexes)? Would regulatory changes be required to accommodate these, or to improve the operation of the insurance market in a changing climate?

Insurance coverage for inundation is – or has been until recently – inconsistent in its application. Whereas most policies cover ingress of water from storms (leaking roofs or roof drainage, backups from stormwater drains, etc), coverage for flood damage – where the water rises up out of a watercourse to inundate the property – is (quite rightly) much rarer and more expensive and had a poor take-up rate in Victoria (at least prior to the 2010-2011 floods). Inundation involving salt water – even where this is in combination with a catchment based flood or a storm – is not insurable. Insurance companies have indicated that, if State Government information about the number of properties at risk from coastal inundation could be used as a basis, they might be willing to create a new insurance product directed at this market.

Regulatory responses

What reforms are needed to improve the efficiency of existing regulations? Are there alternative ways to achieve the desired objectives?

By making planning controls very restrictive in susceptible areas, including reducing or eliminating existing use rights, and simultaneously reducing planning controls on suitable areas (perhaps in conjunction with other incentives such as reduced taxes), this may encourage the voluntary relocation in the short to medium term of businesses as well as residents. As noted above, structural adjustment support will be needed for low income owners.

Are any new regulations justified to facilitate adaptation? What would be the costs and benefits to the wider community?

For areas likely to become uninhabitable due to the effects of climate change, such as low lying parts of coastal settlements, there needs to be a consistent message delivered to the community, to encourage appropriate action. In addition to information and regulatory responses, this might involve a gradual pull-back over time in service standards and expectations of government agencies, e.g.: reduction in infrastructure maintenance (roads, services, sea walls, etc); reduction in benefits or pay-outs for victims of natural disaster (floods, fires etc); greater responsibility on incoming landowners for poor decisions in location or actions; greater responsibility on continuing landowners for own maintenance or protection; increased pressure to relocate (or take other suitable actions as required); establishment of triggers to undertake various actions (such as relocation); changes in existing legislation eg planning schemes to remove existing use rights (in certain circumstances). There will need to be changes to legislation to commence these processes. Many of these actions would obviously be disliked by the general public, but there needs to be a point where the balance shifts and government isn't expected to constantly take the blame or pay for poor individual decisions. A gradual plan to implement these changes over decades would prepare people for these changes and encourage them to take responsibility themselves (with the structural adjustment assistance discussed above, where warranted).

How have state and local governments responded to the potential impacts of climate change through their planning and zoning policies? Are there existing planning policies that could constrain the ability of individuals and businesses to adapt, or reduce their flexibility?

There are numerous examples of State/local government planning policies that may need to be reconsidered in the light of the potential impacts of coastal climate change. The most obvious is the Activity Centres policy that strongly encourages the intensification of commercial development and community service provision in designated activity centres, such as central business districts, and construction of additional high or medium-density housing in areas around them. A number of designated District Activity Centres in metropolitan Melbourne and regional Victoria are at least partially subject to potentially severe impacts from coastal climate change, and could only be protected (physically) at substantial expense. Development of an alternative activity centre outside the hazard zones, with gradual transition of businesses to the new location, may be far more cost effective in the long run.

What reforms may be needed to meet community objectives while facilitating effective adaptation — are there good examples?

South Gippsland Shire Council's planning policies provide an interesting way forward (S173 agreements on title). Link:

http://www.southgippsland.vic.gov.au/Page/Page.asp?Page_Id=842&h=-1

However, the Board considers that this type of approach – which is inequitable in being applied only to new development – should be used only in the short term, while more sophisticated and broader adaptation strategies are developed for whole settlements.

In addition, Wellington Shire Council has developed an interesting plan for dealing with the inappropriate subdivisions within their Shire, which may be useful as a basis for future climate change action (for example buy-backs of land).

http://www.wellington.vic.gov.au/Page/Page.asp?Page_Id=562

What implications might climate change have for local councils' planning policies and development approval processes? Has concern about legal liability restricted the ability of councils to achieve good economic, social or environmental outcomes?

Some councils appear to be reluctant to take action on climate change until more specific guidance or advice is provided by higher levels of government. For example, the Victorian Coastal Strategy 2008 directs local authorities to plan for at least 0.8 metres of sea level rise by 2100 and this requirement is reinforced in the State Planning Policy Framework in all planning schemes. A practice note on planning for coastal hazards and an advisory note on sea level rise accompanied the release of the VCS. Nevertheless, few councils have been willing to take the initiative in making substantial changes to planning schemes in response to this policy. In part, this is due to the expectation that a State-wide approach would result from the recommendations of the Coastal Climate Change Advisory Committee commissioned by the Victorian Government. The Advisory Committee reported in December 2011 but the Government is yet to respond to or release the report.

An exception to the above was the Borough of Queenscliffe, which tried to take a proactive approach, utilising inundation hazard mapping prepared by the Corangamite Catchment Management Authority. The public backlash led to the introduction of the new policy being delayed.

Local governments on the Victorian coast are seeking, through the Municipal Association of Victoria, an explicit exemption from legal liability for decisions made on the basis of the best available information, along the lines of that which operates in New South Wales [*Local Government Act* 1993, Section 733]. However, senior legal opinion contends that this protection is already available to Victorian councils through common law.

Some other aspects of the operation of the Victorian planning system may need to be reconsidered, such as the balance between net community benefit and the rights granted to third parties to appeal planning decisions. There needs to be more infill development and medium-density development to increase the housing capacity within existing settlements. Planning controls may need to be amended to allow these to occur more easily and reduce to the ability for adjoining/nearby landowners to object to individual developments (refer to the report 'Housing we'd choose' by Jane-Frances Kelly of the Grattan Institute). This would allow

increased development in resilient areas as well as reducing development of farmland and minimising impacts on natural areas fringing development/cities.

What implications might climate change have for local councils' planning policies and development approval processes? Has concern about legal liability restricted the ability of councils to achieve good economic, social or environmental outcomes?

Some councils seem to want development at any cost. There is a lack of foresight, or adopting the precautionary principle, especially when votes are at risk. Unsure that the risk of legal liability has really penetrated many councils yet. There is still the belief that the developer/land owner will assume the risk, but historically this isn't entirely the case.

The Board previously applied for a Victorian Civil and Administrative Tribunal (VCAT) review of decisions by South Gippsland Shire to grant several permits for residential housing in a farm-zoned coastal floodplain protected by a seawall. A mandatory coastal climate change overlay on that land, for instance, may have prevented the Shire from going against their own planners' recommendations not to develop that area. If a decision by a court in South Australia (*Walker v Minister for Planning* [2007] NSWLEC 741) is any indication, governments are going to be held to task for not accepting the adverse impacts of climate change as a threat to ecologically sustainable development. However, it is in all of our interests to build the capacity in governments for them to control development in inappropriate coastal zones.

What would be the costs and benefits of changing the way that the building code is applied across different geographic or climatic zones, or to establish new zones (for example, to allow for greater variation across regions)?

Building covenants, often applied to land titles by property developers in order to establish an 'upmarket' image for their subdivisions, can be an impediment appropriate variations in building and neighbourhood design and construction (eg use of recycled materials, colours, landscape, etc). Varying covenants through the legal system can be costly and time consuming.

How might regulation covering network infrastructure affect how infrastructure owners adapt to the impacts of climate change — for example, by discouraging investments in infrastructure upgrades or strategies that give them greater flexibility to adapt? What would be the costs and benefits of any changes to existing regulations?

Some discussions of adaptation options in coastal areas have proposed the use of time-bound or conditional permits, where the property owner has an obligation to remove or relocate the buildings and associated services either at the end of a specific period or when certain physical triggers or thresholds occur. Consultation with infrastructure provision agencies, particularly those supplying water and sewerage reticulation, indicates that this policy would provide a very difficult environment in which to plan for development and maintenance of their networks.

Government provision of public goods

What government-provided goods and services might be significantly impacted by climate change? What decisions or trade-offs may have to be made — for example, about the balance between emergency response and preparedness, or the best way to protect natural environments when species may need to migrate?

Key government services include emergency response and recovery. If the liability for the consequences of choosing to develop in a hazardous environment is to be increasingly placed on the individual, this may create difficulties or inequities in relation to emergency response. Emergency services officers cannot distinguish between people who have knowingly placed themselves in a position of risk (those who have 'come to the risk') and others whose location decisions were made before information on the hazard was available. They are obliged to assist both lots impartially, provided they do not put their own lives at risk.

What kinds of information are already provided by governments to help individuals or businesses to understand risks? Is there a case for more government provision of climate-related information, or to disseminate this differently?

Yes, more information should be provided and it needs to be in a form that is readily understandable and customised to particular areas and the risks they face. It also needs to give positive messages about response options, rather than just the 'bad news'.

Direct assistance

What pressures might be placed on the existing social safety net as the impacts of climate change are felt by households?

Pressure is likely to be significant, particularly in the medium to long term (30+ years). The workforce is aging, therefore fewer people to pay for high aged care/health costs and low incidence of home-ownership in retirement coupled with likelihood of significant costs associated with climate change (infrastructure maintenance or replacement, costs of alternative energy sources, costs of climate change adaptation, management of natural areas, insurance, etc) will increase pressure on individuals/businesses/government. Taxes would need to be high to continue current social security benefits for unemployment, sickness etc as well as caring for the aging population as well as coping with climate change. There is potential that government can not carry all these costs into the future.

Are current relief payments, such as those funded through the Natural Disaster Relief and Recovery Arrangements appropriate?

These may not be sustainable into the future at current levels, given the number/frequency of major disasters is increasing and an increasing number of people in vulnerable areas (eg coastal areas). Also they may be an incentive for people to not insure or be under-insured if government will provide a safety net. Recent assessments of the increasing property-related

costs of natural disasters in Australia over recent decades emphasise that the main component is the increase in the intensity of urban development in hazardous areas.

Which governments are responsible for addressing the barriers to adaptation?

Are there significant overlaps or inconsistencies between the adaptation policies of different levels of government? If so, what are these and what problems might they cause for effective adaptation? Alternatively, where differences exist, are there good examples of cooperative arrangements that could be adopted more broadly?

There are good examples of co-operative arrangements between local governments, particularly in metropolitan Sydney and SW Western Australia in developing a shared understanding of the implications of climate change for their areas and some of the policy options available. As far as we are aware, these have not yet led to significant implementation action. A project is also underway in metropolitan Melbourne – coordinated through the Municipal Association of Victoria, with the Central Coastal Board, Port Phillip and Western Port CMA and other agencies – to identify climate change adaptation pathways for the areas covered by the Bayside municipalities.

The Victorian Government's Future Coasts project is carrying out local climate change vulnerability assessments in a number of areas of the State, in conjunction with local governments and regional agencies. The information from these case studies will provide a basis for adaptation planning in the relevant areas.

Are local governments adequately resourced and equipped to respond to climate change and implement policies developed by state and territory governments?

No, local government – particularly in rural and regional areas – is not adequately resourced even to plan effectively for climate change adaptation, let alone bear the costs of implementing effective plans.

What are the most appropriate governance arrangements for overseeing adaptation responses at the local level?

The Board sees a strong role for regional organisations, including Regional Coastal Boards, in establishing broad principles and pathways for adaptation within a region. These can then be developed in more detail at the local level, by local governments, natural resource management agencies or communities, as appropriate.

Setting priorities for reform

Are there other considerations or criteria the Commission should take into account to assess the likely costs and benefits of reform options?

The criteria set out on pages 23-24 of the Issues Paper appear to deal with the economy and the community, but do not mention the environment. Referring back to our definition of effective adaptation, this needs to minimise the impact of adaptation of human systems on the

environment, increase the resilience of natural systems and thus the likelihood that they can adapt spontaneously, and finally, to make direct interventions to protect important environmental values. Evaluation methodologies need to be sophisticated enough to deal with non-monetary values in assessing the likely effects of potential reform and ensure that changes to market mechanisms and regulatory regimes do not have unforeseen effects.