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Governmental Planning to Create Sustainable Coastal Communities

In response to

Australian House of Representatives

Inquiry into Climate Change and Environmental Impacts on Coastal Communities

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Executive Summary

Over the next 20 years Australian communities along our coast are going to come under stress from an increased population and the impacts of climate change. Australia's response to these changes must be pre-emptive and include all levels of government working together to form a strategy that considers all aspects of the problem. When preparing for climate change adaptation to the effects is not enough, we must also mitigate our carbon emissions and subsequent impact on the environment. Our response to diminish our effect on the environment must include enthusiastic local communities considering such things as water and energy management, transport, both in and between coastal communities and the localisation of food production. Global warming is a huge problem for Australia and if it is not addressed now its impact will be compounded upon us in the future.

1 Governance and Coastal Urban Planning

1.1 Adopting a 'whole-of-government' approach

The current system of approving urban development along the Australian coast needs to be improved to simultaneously consider the applications impact on the interests of all levels of government and the environment.

1.2 Current System of Management in NSW

Most development applications are handled at the local government level, these councils decide which applications will be approved or rejected. From here if the developer is unhappy with the result they can apply to the Land and Environment Court. The NSW State government has the authority to overrule these decisions.

The population on the Australian Coast is expected to grow by two to three million in the next 20 years. This extra population will put an increased strain on coastal communities and their resources including available coastal land.

The additional strain put on these communities is likely to create conflict between local and state governments. Although mostly to do with issues of heritage an example of intergovernmental conflict can be seen in the ongoing conflict at Catherine Hill Bay over the proposed development of a 'Superclub' by Rosecorp. Lake Macquarie Council rejected the proposal and the subsequent appeal by Rosecorp was rejected in the Land and Environment Court. The issue continues on however and the Minister for Planning Frank Sator has intervened on behalf of Rosecorp.

(Catherine Hill Bay Progress Association)
(<http://www.csiro.au/people/ps105.html>)

1.3 An Improved System of Coastal Land Management

With the increased strain on Coastal resources the interests of Local and State governments are going to conflict more often in the future especially as environmental concerns begin to play a larger role in policy. As a result an improved framework needs to be developed for making decisions in regards to development applications and the impact these applications will have on the local community and the environment.

When making a decision that effects the environment a governmental body needs to be able to consider the impacts of a proposed development on both the local community as well as in terms of any carbon emissions that would be produced by the proposed development. The economic needs of state and local (and occasionally Federal) governments also need to be considered. Because of these factors Australia needs a government body with representatives from local and state Governments as well as environmental authorities to be established to better manage development applications along the coastline.

Local Governments should retain their job of approving basic housing infrastructure and other similar applications but decisions for larger projects should be given to this body. There should be room for appeal but the power over the result of this should be kept firmly out of both local and state (especially ministerial) jurisdiction.

2 Sustainable Local Communities

2.1 No adaptation without mitigation

Making plans to adapt to the effects of climate change without mitigating our impact on the environment is duplicitous. Any strategy to deal with climate change must include measures to both adapt to and mitigate its effects.

In order to deal with changes already made to our coastal environment as well as mitigate impacts, future developments on our coastline must be soundly planned to efficiently utilize limited resources.

2.2 Protection of the Local Environment

Over the coming years the changing climate will have an increased effect on our environment at a local level, it is important that we put strategies in place to ensure that these local ecosystems are protected as much as possible from the effects of global warming.

2.3 Sea Level Rise – Impact on Estuaries and Wetlands

As sea levels rise estuaries and Wetlands will be placed under pressure to adapt to changing conditions. (Increased salinity and a higher water level) “Global research indicates that estuaries and coastal wetlands have coped with historical sea-level rise—for example, by migration landward... However, these past rates of natural adaptation may be insufficient for higher rates of future sea-level rise; in many cases, landward migration will be blocked by human infrastructure such as causeways, flood protection levees, and urban development, leading to a reduction in the area of the wetland or mangrove.”

(1997, IPCC Special Report on The Regional Impacts of Climate Change
An Assessment of Vulnerability)

As coastal regions in Australia become increasingly populated and demand for coastal land increases it is essential that we protect these vulnerable ecosystems. Land around and along the river systems that the estuaries/wetlands exist on needs to be sheltered to allow these ecosystems to adapt to the changing sea level. When considering development applications councils need to consider the immediate impacts of development as well as future ones. It is important that local ecosystems such as estuaries are able to adapt to the effects of global warming.

(1997, IPCC Special Report on The Regional Impacts of Climate Change
An Assessment of Vulnerability)

2.4 Local Government Water Management Practices

In 2005 the Australian government released a report entitled ‘Assessing and mapping Australia’s coastal vulnerability to climate change’, this report stated that “Water supplies in a number of coastal areas are already under stress as a result of increased demands and decreased rainfall over parts of coastal Australia over the last 50 years (**Figure 2**). Future precipitation changes are difficult to model but for much of Australia, the projected changes are for a decrease in the atmospheric moisture balance (rainfall minus potential evaporation). While there may be a reduction in average rainfall, extreme rainfalls (and hence flooding) may increase.”

(2006, Assessing and mapping Australia’s coastal vulnerability to climate change :
Expert Technical Workshop)

2.5 Water Supply

Our water supplies are vital to Australia and need to be secured for the future. Because of the predicted rainfall decrease coastal water supplies will be put under increased strain, it is important that this issue is pre-emptively dealt with this before it becomes a larger problem. The water supply is a significant issue for the future of communities and

although both State and Local governments are able to deal with parts of this issue all levels should be working together to put in place an effective strategy. This plan should include all parts of the issue from the storage and transportation of water to its distribution and effective conservation.

2.6 Promoting Community Enthusiasm

Policies that do not have the community's support will not succeed to their full potential. An example of this can be seen in campaigns regarding reducing water and energy use, despite advertising these campaigns have failed to make significant changes to Australia's overall consumption habits.

3 The Transition Town Concept

Transition towns are communities which work together to address the combined issue of Peak Oil and Climate Change. Transition towns aim to address the question of how to make a community sustainable, increasing its resilience to Peak Oil and reducing carbon emissions to reduce the effects of climate change.

(Transition Network)

3.1 Background and History of Transition Towns

The transition towns initiative began in Kinsale in Ireland when Rob Hopkins produced an 'Energy Descent Action Plan' with his permaculture university students. This concept was further developed and was accepted by the Kinsale Town Council as official policy. Since 2005 transition towns have spread and exist in 8 countries including Australia. (Sunshine Coast (QLD), Bell (VIC) and Armidale (NSW))

(Transition Network)

(2008, Transition Initiatives Primer, Ben Brangwyn and Rob Hopkins)

3.2 Thinking Big - Acting on a Local Level

A key feature of the Transition Town concept is that of promoting action on a local community level. Transition towns attempt to empower the local community to work together to make their towns as self sustaining as possible. This includes reducing energy use as well as the towns' dependence on imported goods especially food and oil. (And through these measures their carbon emissions) Above all Transition towns promote adaptation to the challenges we will face in the future (peak oil and climate change) while simultaneously mitigating the towns impact on the environment.

(Transition Network)

3.3 Transition Towns – Summary

Although the Australian government is not suited to launching a Transition Towns initiative across the country, the motives and reasoning behind the movement is. Peak oil and the effects of climate change are only a few years in the future (if they are not already here) and we must take pre-emptive measures to prepare for these changes and prevent further damage to our environment. Transition towns are an excellent example of how we could prepare for the future and examples of how Australia can prepare on a local level are included in the next section of the submission.

4 Reducing Carbon Emissions and Sustainability

If Australia is to adapt to climate change we need to address the cause of it at the same time. A community wide effort is needed to reduce our energy use and curb our carbon emissions. The Australian Federal Government should introduce measures on both Local and State levels to combat climate change and in the process gain the communities support.

4.1 Relocalisation

Rob Hopkins writes “For many writers, a radical relocalisation of the economy and every aspect of life is an inevitable outcome of Peak Oil. The future, Kunstler (2005:239) believes, will be “increasingly and intensely local and smaller in scale”. Indeed, Fleming (2006:109) states that “localisation stands, at best, at the limits of practical possibility, but it has the decisive argument in its favour that there will be no alternative”.” (2006) As the price of oil increases transport costs and through this imported goods will become increasingly expensive. It makes sense to prepare for this problem in advance and in the process create more sustainable communities.

Food production is one of the most important products to localise. Food is imported from around Australia as well as internationally, the transport costs of doing this are huge and can be seen by the rising food costs around the country. (As well as other factors such as the droughts) Locally grown food in the future will be far cheaper and we should take a pro-active response to this and establish a culture of consuming local food.

(2006, Energy Descent Pathways: Evaluating potential responses to Peak Oil.
By Rob Hopkins An MSc. Dissertation for the University of Plymouth.)

4.2 Energy and Water at a Local Level

Saving energy and water at a local level requires community enthusiasm and education. Past campaigns conducted by state and federal governments have taken a mainly educational role, describing ways in which water could be saved. A more effective strategy may be to take a more personal approach to these campaigns promoting the conservation of resources through community seminars which welcome the communities input.

4.3 Desalination Plants

In 2004 Australia released 564.7 million tones of carbon dioxide into the atmosphere. The desalination plant that was proposed for Sydney would produce up to 500 Mega liters of water per day and would require 906 Giga Watt hours per year. This equates to between 480 000 and 950 000 tones of greenhouse gasses per year (Depending on the energy source) or a total increase of Australia's carbon emissions of between 0.085% and 0.168%. These greenhouse gasses do not include the 2 billion dollars it would cost to build the plant and the subsequent carbon emissions its construction generate.

At a time in which we have to decrease our carbon emissions building a plant that will likely increase our carbon emissions by over 0.1% is irrational. Instead of focusing on purifying sea water to increase our inflow of water we should be aiming to create more sustainable communities and promoting efficient water use in our towns and cities.

(Desalination Fact Sheet, Sydney Coastal Councils Group Inc)
(2007, Australian Bureau of Statistics, Greenhouse Gas Emissions and Climate Change)

4.4 Coal Power Stations

The majority of Australia's power is run by coal-fired power stations across the country. Cutting these off immediately is not an option however we do not need any new coal-fired power stations to be built. Instead of building new power stations Australia needs to phase out existing reliance on coal power in favour of energy efficiency and a suite of renewable energy sources.

4.5 Alternative Transport Measures

In Australia the primary form of transport is the private car. As effective a transport mode cars have been in the past 50 years, Australia needs to look to a more sustainable future. The Australian Government needs to promote more sustainable transport for the population, these include (but aren't limited to) busses, trains, ferries, bicycles and other energy saving methods such as car pooling.

4.6 Coastal Public Transport

“Approximately 86 per cent of Australians live in the coastal zone, relying on the resources here for their work, rest and play. In the next 20 years it is anticipated that this population will grow by two to three million people.”
(<http://www.csiro.au/people/ps105.html>)

The amount of people on the coast has created an almost continuous line of cities along Australia's coast. (More so the east coast) The increase of population predicted in the next 20 years along our coasts will likely accelerate this trend. Because of the close proximity of these towns there is an excellent opportunity to expand the use of public transport in these communities. Transport lines in the form of busses and trains already

exist but these could be expanded and improved to encourage commuters to use them more frequently.

4.7 Coastal Bicycle Facilities

Although only suited for relatively short distances bicycles are a cheap and sustainable method of transport for coastal communities. When a survey of local councils was taken that "asked 'What is the status of your Council's bicycle strategy or plan?' , 64 percent of all authorities that responded have a current bicycle strategy or plan. A further six percent are developing one now."

(2007, Cycling survey of Australian Local Governments, Australian Local Government Association and Australian Bicycle Council)

The lack of any bicycle plan for 30% of local councils shows the need for this form of transport to be considered more heavily in the agenda of all levels of Government. If introduced effectively bicycles can play a strong role in creating sustainable coastal communities. A bicycle plan would need to include well planned cycle ways within and connecting Australia's coastal towns. A plan developed by all levels of Australian government would go a long way to achieving a successful bicycle strategy.

Conclusion

Climate change is an emergency requiring an emergency response, Australia needs to act now to reduce the impact climate change has on us in the future. Environmental groups and the three levels of government need to come together to form a cohesive strategy to combat climate change. This plan needs to include adaptation to climate change through careful planning to protect our local environment as well as broader planning to reduce our carbon emissions and mitigate our impact on the climate. In Australia's strategy to counteract climate change we need to include all levels of participation from local community groups to our Federal Government. If Australia forms an effective strategy against climate change we will ease our way into the future, if we do not act decisively however the problems created by our inaction will be disastrous.

Recommendations

1. The creation of a body with representatives from all levels of government and environmental authorities to manage development and environmental issues on Australia's Coast.
2. Any plan created for adaptation to the effects of climate change must include strategies to mitigate our impact on the environment.
3. Future campaigns for energy and water efficiency encourage community involvement instead of simply being educational.
4. No new coal-fired power stations or desalination plants should be built in Australia.
5. All levels of government should work together to improve public transport and bicycle facilities along our coast.

References

2008, Transition Network – <http://transitiontowns.org>

2008, Transition Initiatives Primer, Ben Brangwyn and Rob Hopkins

2008, Catherine Hill Bay Progress Association - <http://www.catherinehillbay.org.au>

CSIRO - <http://www.csiro.au/people/ps105.html>

(2007, Australian Bureau of Statistics, Greenhouse Gas Emissions and Climate Change)

(2007, Cycling survey of Australian Local Governments, Australian Local Government Association and Australian Bicycle Council)

2006, Assessing and mapping Australia's coastal vulnerability to climate change : Expert Technical Workshop)

(2006, Energy Descent Pathways: Evaluating potential responses to Peak Oil. By Rob Hopkins An MSc. Dissertation for the University of Plymouth.)

(Desalination Fact Sheet, Sydney Coastal Councils Group Inc)

1997, IPCC Special Report on The Regional Impacts of Climate Change
An Assessment of Vulnerability