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# **Inquiry into Climate Change and the Environmental Impacts on Coastal Communities**

*A Submission prepared by Byron Shire Council,  
Byron Shire NSW*



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# **Inquiry into Climate Change and the Environmental Impacts on Coastal Communities**

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## **Terms of Reference:**

### **1. A review of existing policies and programs related to coastal zone management, taking in the catchment-coast-ocean continuum.**

NSW has a comprehensive 'Coastal Policy' progressively implemented since 1989 which was considered 'best practice' at the time of its introduction. That Coastal Policy has capacity in its current form to include Climate Change Adaptation and Mitigation Strategies. We would respectfully submit that the NSW Coastal Policy be reviewed in any Federal consideration of this issue.

Given the significant impacts of Climate Change, whichever level of government ultimately becomes responsible for management of the coastal zone will need robust integrated policies which support the implementation of coastal zone hazard management strategies. Any new policy and/or provisions in planning or environmental instruments need to be developed so that they do not undermine the intent and purpose of existing coastal zone management policies which may be considered paramount to robust planning approaches. For example if a local Council adopts a Coastal Management Strategy of Planned Retreat to attempt to alleviate the impacts of Climate Change on development, infrastructure, and the environment it is imperative that any new policy or provisions of State or Federal Governments support the application of that endorsed management strategy.

In Byron Shire Council's case, there has been a policy of "Planned Retreat" for certain beach compartments within the Shire for in excess of 20 years. Planned Retreat in this context means that certain limited and temporary residential development has been permissible on lands subjected to coastal hazards strictly on the basis that once those hazards are realised, that residential development must be relocated to a safe distances from the erosion risk zone.

The Federal Labour Party's Discussion paper "Meeting the Challenge of Coastal Growth." in 2006 cited Byron Bay as a 'case study in poor coastal management'. However the snapshot provided in that document contained errors and, with respect, we believe that Byron's coastal management policy of 'Planned Retreat' for certain beach compartments in the Shire is in fact an example of good planning, particularly in the face of climate change.

Byron Shire Council's "Planned Retreat" policy which applies only to certain beach components was developed to address erosion hazards, absent Climate Change impacts. The ability to be able to continue with a policy of Planned Retreat, in relation to coastal hazards, is fundamental to being able to adapt to potential Climate Change implications and this Council would support any formal recognition of Planned Retreat as a sustainable Climate Change Mitigation and Adaptation Strategy.

It is true that we have experienced some difficulties in implementing the Planned Retreat policy but this is largely due to a lack of statutory support, at times, and resources.

For example, the last occurrence of major non-compliances with the policy occurred during an erosion event in 1999 when under Emergency Order issued by the Police certain residents sought to protect their homes by the dumping of rocks. Byron was not the only Council to experience the effects of Police Emergency Orders during that event and Councils had no statutory support to override the Police powers in the 1999 circumstances. Lessons were

learned from this experience and the NSW Coastal Protection Act, 1979 was amended to make it clear that emergency services' powers did not extend to the issuing of Orders for the doing of anything which would be contrary to a Coastal Zone Management Plan. That is, what occurred in 1999 should never occur again, and Council have worked hard at improving its relationships with the various emergency services as well as their understanding of Council's Planned Retreat policy to ensure that it does not.

As this Council has had the benefit, or the misfortune, of testing a planned retreat strategy for just on 20 years, it has learned many lessons and identified many pitfalls and strengths in such a strategy. To the extent that 'planned retreat' is likely to become more common in the face of climate change impacts, we would be more than pleased to provide detailed information on this Council's experiences. If you would like further detailed information, please do not hesitate to inform us how we might be able to assist further.

### **1.1 Coastal Hazard Management - a significant problem with the NSW Template Local Environment Plan**

The single biggest threat at present to the entire NSW Coastal Policy and this Council's strategic management option of Planned Retreat, are the recent changes to the NSW Planning laws which seem, in the main, to have ignored the requirements of the NSW Coastal Protection Act, 1979, the NSW Coastal Policy, 1997 and the NSW Coastline Management Manual, 1990.

Inconsistencies between recent planning law changes and the NSW coastal policy have potentially weakened the Coastal Policy and "best practice" approach to coastal management which previously existed. It is critical, in the face of Climate Change, that the Coastal Policy be reinstated as the overarching guideline to coastal management that it was always intended to be, without incursions from short-term planning law amendments.

Examples (and these are not the only ones) of potential significant conflicts between the current NSW planning regime, in particular the "standard instrument Local Environment Plan" and the NSW Coastal Policy are provided below:..

#### **A. Lack of dedicated coastal land zone/s in the NSW 'standard instrument' LEP.**

The entire NSW Coastal Policy was developed on the basis that coastal lands were a unique category of land with prime economic, social, cultural and aesthetical value to the State. Ignoring this, the current standard instrument LEP, mandated by NSW legislation, relegates coastal lands to a 'risk category' (akin to flooding or bushfire).

Because the current NSW planning regime does not recognise coastal lands as a unique category of land, there are no dedicated coastal land zones. Therefore, Councils are left with attempting to deal with coastal management issues via generic land use zones, e.g. residential, rural commercial, industrial etc, with a local provision 'overlay'. Recent experience of other Councils indicates that local provisions may not receive adequate support at a State level. Any inability to include local provisions addressing coastal management issues will significantly impact on the ability of Councils to develop and implement locally responsive coastal management strategies.

Further, as the current 'standard instrument' template LEP mandates certain land uses as permissible (with or without consent), there are no template land use zone/s, or combination of zone/s, which could be applied with sufficient flexibility to implement the multitude of possible types of strategic coastal management policies. For example:

- dwellings are permissible in nearly all 'non-environment protection' zones, so in circumstances where a Council wanted to limit further residential development

in particular areas, there really would be no option available other than to use 'Environmental Protection Zones'; however,

- in all 'Environmental Protection zones', development for the purposes of "environmental protection works", which includes "erosion protection works", is mandated as being permissible with consent, rendering the current Environmental Protection zones, incompatible with any coastal management strategy which seeks to implement a regime of planned retreat in response to coastal hazards and climate change implications;

## B. Definition of "Environmental Protection Works"

The template LEP mandates 'Environmental Protection Works' as permissible with consent in all Environmental Protection land use zones.

'Environmental Protection Works' is defined in the template LEP to mean:

*"... works associated with the rehabilitation of land towards its natural state or any work to protect land from environmental degradation, and includes bush regeneration works, wetland protection works, **erosion protection works**, dune restoration works and the like"* (emphasis added).

That is, in all Environmental zones "work to protect land from environmental degradation ... [including] erosion protection works" must be permissible with consent. Subject to how Courts ultimately interpret this definition, it could prove to be inconsistent with this Council's existing, and proposed future, policy of 'planned retreat'.

On a simplistic interpretation, the definition indicates that erosion protection works will be permissible with consent and this is the interpretation that most members of the public would be most likely to use. Wide spread public interpretation in this fashion could lead to considerable dispute and distress at later stages if a more technical interpretation is upheld by the Court. 'Setting up' lay-members of the public for future disappointment can never be in the public interest.

The complex, legalistic, interpretation will no doubt be argued along the lines that 'any type of work to protect land from environmental degradation' will be permissible with consent. This will give rise to questions such as:

- what is 'environmental degradation';
- can coastal erosion or other hazards result in 'environmental degradation';
- and, if so, in what circumstances will erosion equate with 'degradation' etc.

Such a definition, and its operation in valuable coastal areas (assuming environmental zones are used), will no doubt lead to protracted and expensive litigation. Further, given that development application appeals are concerned with the merits of a particular proposal and that each matter has to be determined on its particular facts, this issue could be repeatedly litigated, both within a Shire as well as across the State.

If for no other reason than to ensure that Councils are able to avoid unnecessary litigation, they should have the autonomy to implement adopted coastal management policies through allowing or prohibiting 'environmental protection works' (assuming the definition will not be changed) as each Council sees fit.

## C. Proposed Exempt and Complying Development Codes

Further changes to the NSW planning regime are apparently proposed, including the introduction of State mandated "Exempt and Complying Development" codes. These will

dictate what development can be carried out without any development consent (exempt) and what may be carried out with only a complying development certificate which can be issued by a private certifier and not necessarily the Council.

Exempt development is proposed to include such things as carports, garden sheds, fences retaining walls and pathways etc. While benign in non-coastal lands, many will not be appropriate in coastal zones, particularly on private properties with right-line boundaries. Examples of the inappropriateness of some of these types of development on private property on or adjacent to an active dunal system, include:

- Private access pathways onto the beach – multiple beach access points have been long understood to be detrimental to dunal systems, and can actually exacerbate erosion. The NSW Coastal Policy recognises this and encourages the rationalisation and minimisation of beach access points. Yet the proposed “Exempt and Complying Development Codes” would render Council’s powerless to stop every beachfront property owner from constructing and maintaining their own beach pathway.
- Retaining Walls – the proposed Exempt Code would enable retaining walls, albeit only 600mm high, to be constructed on coastal dunes without any need for consent. While the draft Code limits the height of retaining walls it does not limit the depth of foundations for such walls. Therefore, at least theoretically, the draft Exempt Code could potentially allow private property owners to construct retaining walls, even a system of retaining walls, as quasi erosion protection which again would be contrary to any strategic approach to holistic management of the coastal zone.
- Fences – the proposed exemption of fences from the need for development consent could result in fences on beaches, where the beach has receded onto private property, which occurs in a lot of places around the country. Again, this would be contrary to the NSW Coastal Policy which mandates maintenance of public access to beaches.

The above is just a quick overview of how recent NSW Planning law changes appear to have ignored the existing statutory coastal management regime. The inconsistencies and omissions will make it increasingly difficult for Councils to be able to strategically manage the coastal zone. It is fundamentally important that the NSW Government review its position in relation to coastal zone management and either take over control of the coastal zone, in which case it can introduce whatever planning regime it wants, or, if management of the coastal zone is to remain a responsibility of local government, then the NSW planning regime needs to ensure that it does not fetter the ability of any Council to properly implement its adopted strategic management policies.

Robust data sets (approximately 100 years of data) indicate that sea levels are rising. Rising sea levels threaten coastal lands now, and the future is indeed looking bleak for low lying coastal areas. It is, therefore, absolutely essential that planning provisions and controls are consistent in their application. This relates directly to Planned Retreat, being a sustainable approach to managing coastal erosion and recession in exposed sandy embayment’s, however, implementation of this management strategy is currently hindered by inconsistencies in the provisions of the NSW Governments Template LEP.

**The current NSW statutory ‘standard instrument’ template LEP creates great difficulties for Council in implementing any robust policy for coastal hazard management.**

#### **A Solution-**

**Absent a national policy, Councils need statutory support from the state and federal government’s for strategic planning policies of planned retreat and other climate change adaptation measures.**

## **1.2 The Catchment – Coast - Ocean Continuum**

As noted above this Council is doing a great deal of work on implanting coastal zone management regimes but at the same time is also beginning to update its floodplain management strategies to take into account potential climate change implications.

The single biggest difficulty faced by local Councils to developing a 'catchment to coast' response to climate change is resources. Resources at a local level are generally only available for individual projects aimed at specific tasks which are often linked to external funding sources. So floodplain management projects subject to floodplain grant funding only deal with individual flood catchments, with head and tail water information fed into the projects, for example. To undertake a 'catchment to coast' assessment of potential climate change implications would be far beyond the resources of most local Councils.

The next difficulty which would be faced by Councils, assuming they had the resources to undertake a whole of Shire assessment, would be which predicted parameters should be used – see further comments under item 3 below.

It would be most beneficial if Council was provided with greater financial support from state and/or federal government to perform a catchment to coast climate change impact assessment. The assessment would need to include impacts to agriculture, ecosystems, road infrastructure, general infrastructure, water quality, and human health.

Council have so far only undertaken climate change risk assessment on two flood plain catchments, and on the Shire's coastline by way of completing a Coastline Hazard Definition Study. These assessments need to be combined to determine the level of risk associated with combined flooding and coastal erosion events to identify lands, ecosystems and infrastructure at greatest risk. Identifying areas of greatest risk to long term impacts will inform better land use zoning in planning instruments and in the application of local provisions in planning instruments.

Further impact assessments might include;

- What and where are the critical habitats in the flood plain which may be adversely affected by increases in rain fall intensity resulting in more frequent flash flooding.
- What and where are the critical habitats along the coastline which may be adversely affected by increases in coastal erosion resulting from rising sea levels.
- What roads are likely to become permanently inundated due to sea level rise, and where might an alternative route be laid?
- What is the extent of infrastructure (sewage, electrical, communication) that may be inundated by rising sea levels and where are appropriate locations for the removal of this infrastructure?
- Is the Building Code of Australia sufficient in the standards it provides?
- To what landward extent will salt water intrude up estuaries and creeks and into wetlands under certain timeframes due to sea level rise?

Clearly, more detailed whole catchment assessments need to be undertaken to determine probable impacts under climate change so as to implement early mitigation management strategies. This may require a review of catchment management policy and development of statutory legislation which requires Councils to assess the threats to Coastal Zone ecosystems and communities under climate change. This assessment may be part of Coastal Zone Management Plans. This legislation should further support more stringent development controls in areas determined as high risk, as identified through the risk analysis process.

### **A Solution –**

**Increases in funding need to be allocated by the State and Federal Government for climate change impact assessment to better safeguard future development and the future of biodiversity and ecosystem health. Legislation needs to be cemented to**

**support more stringent development control on lands determined as high risk under climate change scenarios.**

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

Research from the NSW Department of Planning suggests that population growth in coastal NSW (encompassing the NSW North Coast) is strongly driven by interregional migration rather than natural increase or immigration. The annual population of Byron Shire is currently estimated at approximately 28,225 with an annual growth rate of 0.4% per annum (2006 National Census). However, permanent population figures are masked by tourism visitation to the area, which averages 1.7 million annually and trending upwards.

Therefore, the transient population of Byron Shire, largely influenced by broadscale tourism drivers at the national and international scale holds significant implications for environmental resource use in the Shire, including demand for urban land, potable water, open space as well as scenic and natural amenity values. Increased population growth will serve to further constrain the availability and quality of bioregional resources amid shifting climatic conditions.

### **Suggestions;**

- Sustainable management of coastal resources will necessitate judicious and sensible allocation of sufficient land zoned and serviced to accommodate projected population growth away from highly sensitive areas, such as riparian, estuarine and flood prone areas, endangered ecological communities, biodiversity corridors and foreshore zones.
- It is vital that streams, estuaries, sand dunes, Ecologically Endangered Communities, High Conservation Value Vegetation, and patches/areas of poorly represented habitat are protected with the use of development and infrastructure free buffers. Buffering of habitat will allow for the migration of habitat under the impacts of climate change including sea level rise, drought, flooding, and climate shift. Buffers must be supported by policy and legislation so that they may be incorporated into Local Environment Plans and/or Development Control Plans.
- Council needs statutory support on sustainable approaches to managing the environmental risks associated with climate change and need guidance from state and/or federal government on the range of assessments needed to appropriately identify the constraints and possible impacts associated with climate change.
- Significant community educational initiatives will become requisite in ensuring community acceptance of necessary climate change adaptation measures, including coastal planned retreat.

To provide example; Council is limited in its incorporation of more stringent land use planning for environmental conservation and protection due to a lack of policy support. There is limited cohesion and compatibility between environmental policy outlined in the Far North Coast Regional Strategy and the NSW Governments template LEP. The guidelines in the regional strategy present realistic and good planning approaches but do not necessarily address climate change and may need to be reviewed. Further, the regional approaches must be supported in the template LEP.

Local Councils can not go it alone on an approach to climate change impact mitigation. State and/or federal policy support is essential to achieve the desired and responsible outcomes.

### **A Solution-**

**Council respectfully request it be considered that the development of a Federal Planning Policy be undertaken to provide statutory support to the preparation of local land use plans which implement more stringent approaches to mitigate the impacts of climate change with relevance to coastal zone environmental and land use management.**



### **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.**

#### **3.1 *Climate Change Parameters***

This Council has taken a lead role in NSW in as far as it resolved to adopt certain parameters for the purposes of flood modelling so that its decisions of floodplain management plans might be better informed. We are aware that other NSW Councils are now taking similar steps in terms of adopting certain 'climate change parameters', however each Council having its own 'climate change parameters' is an ad hoc approach to an issue which is in desperate need of a systematic and holistic approach

That is why local government have been strongly lobbying for federal and/or state government set 'climate change parameters' incorporating anticipated regional variables. Such parameters would ensure a consistent, 'best practice', approach to this issue and would ensure that under-resourced Councils are not 'left behind' on this critically important issue which has the potential to significantly affect generations of landowners.

It is considered appropriate that the advice of the IPCC 2007 in conjunction with advice from CSIRO on regional effects be adopted by the federal government as the parameters to be used by Council for planning purposes over given planning horizons. We encourage the government to require councils to perform their climate change risk analysis using low, medium and high scenarios and believe the 'high' scenario should be adopted as the planning scenario. It is pertinent to good planning to use a conservative and precautionary approach as it will be far more expensive, socially destructive and environmentally destructive to remove approved development should the risk associated with climate change be realised in the future, than it will be to restrict it now under current knowledge.

#### **3.2 *Liability for Climate Change Impacts***

Local government, rightly or wrongly, are at the forefront of threats of claims for damages for climate change impacts. While common law and statutory provisions may to ultimately prove successful in defending such claims, the reality is that Councils will incur significant sums of public funds in defending such claims, either in terms of insurance excess payments (assuming local government insurance policies will continue to extend cover to such claims) increased insurance premiums and/or funding and staff resources.

It is imperative that funds and resources be used in the most efficient and effective means, namely in development and implementation of climate change adaptation and mitigation strategies rather than on defending past actions. Federal and/or State statutory exemptions against 'climate change' litigation are imperative to the protection of public funds.

#### **3.3 *Compensation for Properties Affected by Climate Change***

If current Climate Change predictions are realised significant numbers of properties will be adversely affected, many so much so as to become uninhabitable. In those circumstances it is inevitable that some property owners will look for compensation in return for any strategic actions any level of government may take to alleviate climate change risks.

It is critical that planning for the financial implications of climate change, in terms of property compensation, commence without delay. Many models have been mooted by various experts, for example special rates/taxes/levies for 'climate change properties' forming a pool of funds from which compensation might ultimately be paid, through to statutory 'no compensation' policies etc.

Staff at this Council do not have the necessary expertise to comment further on this issue, save that to say that climate change implications are likely to have significant social and economic pressures on this Shire and that a clear and considered funding framework to deal with this issue is needed.

### **3.4 Clarification of the Law in relation to Right-Line Property Boundaries**

Titles to land in Australia either have fixed 'right-line' property boundaries or boundaries based on some natural (usually water) feature. Right line property boundaries do not change even if the beach recedes into those properties. That is, in areas affected by coastal erosion, changing estuary mouth positions or sea level rise, the beach can end up on private properties.

It is critical that the government have the ability to be able to amend property boundaries, or exercise powers of acquisition, in the event that erosion intrudes significantly into those private properties and the beach becomes privately owned.

Current regimes of land acquisition are expensive in terms of litigation costs and compensation payable. A review of these regimes is necessary to ensure that they are able to cope with any acquisitions which might become necessary as a result of climate change impacts. Various models might be possible, for example a statutorily set per square metre rate of compensation (taking into account the fact that once land becomes a beach with no prospect of accretion within a foreseeable planning horizon, then it really has little to no development capacity and therefore should have little to no value, except in terms of public use and environmental management) etc. Again, staff are not qualified to comment on preferable models, save to say that the regime as currently exists in NSW would not accommodate, except at considerable public expense, the mass acquisitions which may be necessary in response to climate change impacts.

### **3.5 Statutory Support for Coastal Hazard Management Strategies**

Please refer to Section 1.

## **4. Mechanisms to promote sustainable coastal communities**

Broadly applied, a unified approach to Coastal Zone management would have significant benefits. It is probable that many Councils whom manage coastal lands are unable to implement their preferred sustainable coastal management approaches due to the limitations of, and conflict within, NSW policy and legislation. This problem may indeed be nation wide and Section 1.1 provides a local example of this.

- If sea levels continue to rise, the coastal hazard management approach of planned retreat may indeed become a more commonly adopted approach. Councils need support from state and federal government to aid the implementation of this strategy and require more robust legislation to support its implementation. The most fundamental issue in the application of the sustainable management strategy of Planned Retreat in NSW is the discrepancies in the template LEP.
- Community education is a fundamental step in implementing a sustainable coastal management approach. It is only recent that the idea of climate change is becoming accepted as a reality. Council has for some time been questioned by members of the local community on its approach to managing the coastal hazard of erosion. Given sea levels are rising, erosion will no doubt become a dominant process on the

Australian coastline. It is, therefore, paramount to the successful management of the risks associated with sea level rise that there is a nation wide education campaign to inform the broader public of the likely implications of sea level rise and climate change. Although not to scare monger, it is considered vital that the general public are informed of the likely risks to the coastal zone and its resources.

- The greatest mechanism of all in promoting sustainability with in coastal communities is to limit development of any kind on coastal lands which are likely to be eroded under rising sea levels. This coupled with an increase in the density of development on low risk lands might be considered good planning.

## **5. Governance and institutional arrangements for the coastal zone.**

Staff are not qualified to make comment on constitutional issues in terms of Federal Government intervention on this issue, save to say that climate change is such a significant issue that it does warrant a national approach and that local governments will severely struggle to adequately deal with potential climate change impacts absent considerable support from Federal and State governments.

Please note that this submission has been prepared by staff and has not been reported to Council for consideration prior to lodgement, due to lack of time.

Yours sincerely,



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