INNOVATION AND TRANSPARENT DECISION MAKING IN PLANNING FOR COASTAL CLIMATE CHANGE

B Norman
University of Canberra, Canberra, ACT

1. Introduction

Over recent decades we have had numerous inquires into coastal planning and more recently coastal climate change. The most recent Australian parliamentary report (Australian Parliament 2009) recommended in 2009 that an intergovernmental agreement is developed to:

- define the roles and responsibilities of the three tiers of government—federal, state and local—involved in coastal zone management;
- include a formal mechanism for community consultation;
- incorporate principles based on strategic regional coastal planning and landscape scale/ecosystem based coastal zone management;
- include an effective implementation plan with resources allocated to ensure that objectives are realized;
- be overseen by a new Coastal Zone Ministerial Council and
- be made public (Recommendation 44).

Five years on, there is no intergovernmental agreement and a relatively weaker policy framework at the State and Territory level in responding to coastal management and climate change. Overall the issues concerning the risks and impacts of climate change have been delegated to local government who in turn argue that they are insufficiently resourced or equipped to manage such a complex issue on their own. In this governance framework, or lack of, decisions continue on major coastal development with significant consequences for current and future communities and coastal environments.

Planning decisions by local and state or territory governments across Australia are made every day affecting the futures of communities, local and regional economies and the environment. In particular, decision making in contested spaces such as coastal environments are often complex and political. Furthermore, coastal development in the context of climate change combines the pressures on local land use decisions with the risks of a changing environment. This paper will argue that two essential ingredients are necessary for more sustainable coastal development solutions – *innovation* in finding on the ground solutions and *transparency in decision-making* processes.

2. Coastal development in a changing climate

The more recent IPCC 5 reports (IPCC 2013, 2014a,b) confirm that we are living with climate change with significant risks to the Australian coastline. The projections particularly highlight the impact on the southeast and southwest coastlines with hotter and drier environments, sea level rise and increased risk of extreme events. Planning to adapt to climate change is now necessary to minimise risk to our communities and needs to be a mainstream consideration across local government decision-making.

This is particularly necessary given the absence of action and responsibility by higher levels of government.

The IPCC 5 WG2 report highlighted the implications for Australia in relation to adaptation including cities and coastal development. The risks included increasing impacts of floods, fire and heat on communities and infrastructure, constraints on water resources and increased fire risk in southern Australia. Increasing risks to coastal infrastructure including road and rail networks and low-lying ecosystems in Australia with continuing sea level rise were also identified.

It is 'no longer business as usual'. There are also limits to adaptation, for example, limits to the Great Barrier Reef adapting to rapid rises in sea surface temperatures or the amount of heat that the human body can tolerate. The extent of impacts may mean shifting from incremental change to transformational adaptation, for example, *no development in high- risk areas*. This may have implications for institutional and governance arrangements. Overall, the lack of an adaptation strategy for Australia is making it very difficult for small local councils to implement a consistent and coordinated approach across Australia.

Discussed below is a recent research project that examined some of the critical issues facing coastal settlements in southeast Australia. It provides an insight into some of the challenges and opportunities facing sustainable coastal planning in the context of climate change.

3. South East Coastal Adaptation project

In a recent research collaboration, the *South East Coastal Adaptation (SECA report): coastal urban climate futures in SE Australia from Wollongong to Lakes Entrance* 2013[1] highlighted some of the key considerations in planning for coastal climate change. This research investigated the question of 'what a climate adapted Australian settlement would look like from the perspective of future climate adapted coastal small town communities to 2030'. The research project provided an opportunity to identify some of the key challenges and opportunities that would face coastal communities in the future. It was led by University of Canberra with The Australian National University and the University of Wollongong.

The southeast region from Wollongong to Lakes Entrance provided an excellent case study with a range of coastal settlements. Seven case studies were selected – Wollongong, Shellharbour, Kiama, Shoalhaven, Eurobodalla, Bega and East Gippsland. The south coast from Wollongong to Lakes Entrance contains a wide range of coastal settlements. Drawing on the work by Gurran et al (2008, 2012) a coastal urban hierarchy of towns, villages and hamlets was applied to investigating selected coastal settlements.

The SECA project involved focus groups with local government decision makers, community meetings and fieldwork. Importantly it also actively involved cultural practitioners from the beginning to facilitate dialogue and communication through the arts culminating in an art exhibition through the town of Eden of visions of a climate adapted community. There was significant involvement by local schools and community groups.

The research findings included seven key messages and seven principles that could inform coastal adaptation practice in southeast Australia. A core message was that governance arrangements are critical to effective decision-making. Overall the report concluded that 'a prescriptive approach to settlement and infrastructure for coastal communities is less important than a decision making process that is open, transparent, inclusive and adaptive, involving all levels of government and the community' (Norman et al 2013, p7).

Seven principles for coastal planning in SE Australia

1. An integrated approach should be adopted for sustainable regional and local planning (social, economic, environmental and cultural). The approach should consider the catchment-to coast-to marine continuum and the different levels of government and stakeholders involved in planning and implementation.

2. The precautionary principle to decision making should be applied to the location of new and redeveloped urban settlement and infrastructure and other relevant decisions, particularly where environmental risk currently or potentially exists.

3. Risk management approaches should be incorporated into local and regional strategies for coastal settlements responding to climate and environmental change including progressive learning from experience to ensure adaptability.

4. Appropriate forums should be established at the regional level to enable collaboration across institutions at the local and regional level.

5. There should be an ongoing process of community engagement This needs to be informed by the latest science, in developing and regularly reviewing coastal urban plans to gain community support, and where possible support by all levels of government and across government agencies.

6. The skills and knowledge of regional and local communities should be connected by relevant organisations to provide a foundation for long- term support, co-production of knowledge and monitoring of coastal urban futures.

7. A process of continuing monitoring, evaluation and reporting of adaptation actions should be implemented to ensure 'learning by doing' and to avoid past mistakes. The impacts of climate change on the coastal environment will require more attention to evaluating impacts of adaptation measures over time (summary of Norman et al 2013, p6).

The principles outlined above are for a climate adapted coastal community in southeast Australia. The discussions throughout the project emphasized that the region was already experiencing extreme events including floods, storms inundation and droughts. They also emphasized the social economic change the region was experiencing and future green growth opportunities. Most importantly the focus groups emphasized the need for improved governance mechanisms for

> 'There is a strong need for better coordination and integrated decision-making that considers immediate and longer time frames to support sustainable coastal planning and adapting to climate change. Past planning mistakes have led to more vulnerable coastal communities, compounding maladaptive practice. Adaptive planning and management (i.e. learning by doing) is core to improving coastal decision-making' (Norman et al p5).

The SECA project provides an insight into what could be a set of principles for responding to coastal climate change. These include adopting the precautionary

principle and integrating a risk management approach into local regional planning strategies. There was also a clear message for the need for leading science and evidenced based policy. Effective governance arrangements that involved both vertical and horizontal integration of policy, was also seen as a critical factor for coastal planning in the future (see diagram 1).

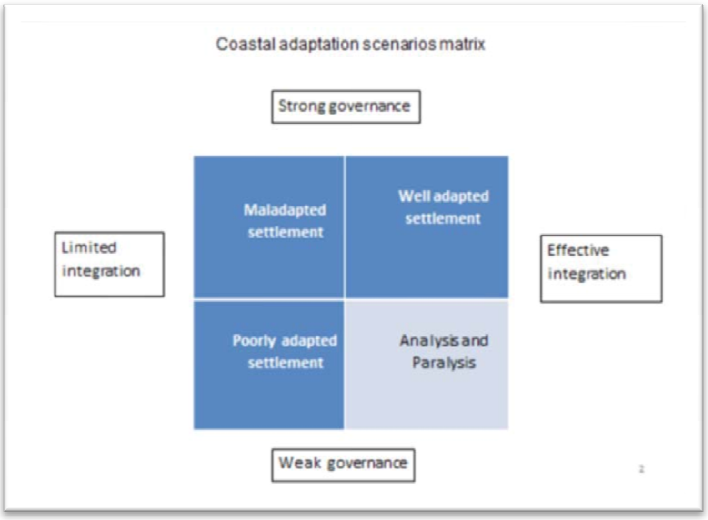

Diagram 1 Coastal adaptation scenarios matrix (Norman et al 2013, p52)

The above SECA project is valuable in highlighting the concerns of local government and regional organisations dealing with the challenges of daily decision making in developing strategic coastal plans and determining coastal development applications. A critical part of that process is the integrity of the planning system and its ability on the one hand to deal with complexity and the other to ensure a transparent and accountable decision- making process for the community

4. Innovation and transparency in decision-making

Planning is never far from controversy and coastal planning is no exception. There are always many factors to be considered and trade-offs will be made. The SECA project and the recent Independent Commission Against Corruption investigations into planning and land use highlight the need for transparency and accountability in decision- making processes. However it is not simply the coastal development application process that is important but increasingly it is being recognised that early strategic planning is essential. ICAC emphasizes the importance of strategic planning to provide the policy framework for considering development applications. In an investigation into Anti Corruption Safeguards and the NSW planning System (2012), ICAC concluded that:

'*In recent years, there has been an increasing tendency towards departures from the stated requirements. The existence of a wide discretion to approve projects, which are contrary to local plans and do not necessarily conform to state strategic plans, creates a corruption risk and community perception of lack of appropriate boundaries. A re-emphasis on strategic planning, clear criteria to guide decisions and a consistent decision- making framework will help address this issue'.'* (ICAC 2012. P5)

It is suggested that 'strategic planning' in coastal planning is even more necessary when factoring in the risks of climate change to reduce uncertainty for local decision makers. It is also necessary for a long-term perspective in managing the coastline. While there continues to be some excellent strategic plans in some states (Victoria and WA) and at the local level (Mandurah), the inclusion of climate change as a major criteria has lessened in recent years particularly in Queensland and NSW and to some extent Victoria. This winding back of coastal climate change impacts in strategic planning makes it very difficult for local councils to plan effectively to minimise risk to coastal communities in the future. The lack of a national adaptation plan is exacerbating the situation.

Despite the above and on a positive note, in recent years there have been a number of innovative regional collaborative approaches in coastal planning throughout Australia. These include the Sydney Coastal Councils – a coastal alliance of 15 urban councils within Australia's largest capital city in New South Wales; The Peron Naturaliste- a coastal alliance of nine coastal councils on the south coast of regional Western Australia; The Geelong regional alliance – a coastal alliance of five councils on the urban edge of an expanding metropolis in Victoria and the Dhimurru Sea Country Plan – a coastal alliance of Indigenous land owners in North East Arnhem Land, Northern Territory. The voluntary nature of these organisations has been a significant common characteristic alongside a commitment to local knowledge and community input. Such innovation and collaboration at the regional level suggests that this could be the best level to develop sustainable coastal plans – more than one local council but still close to the local communities.

The other important consideration for innovation is the investment in continuing research, evaluation and monitoring. 'Learning by doing' based on evidence provides the basis for informed policy development and leading practice. The SECA project highlighted this and the need for excellence in strategic planning demands this. In summary, investing in the front end of the decision making process including strategic planning, research and effective monitoring provides a sound platform to better manage the risks of coastal climate change.

5. Implications for sustainable coastal planning

The SECA project, the ICAC investigations into land use planning decisions and the most recent coastal climate change projections of the IPCC each raise implications for coastal planning in the future. All highlight the need to manage risk and a decision making process that is transparent and open to community involvement and scrutiny. They also highlight the need for new approaches to land use decision-making that allows innovative solutions without compromising the integrity of the planning process. The voluntary regional collaborations around Australia are an example. Coastal planning decisions will require careful consideration of a range of inputs and an adaptive planning process within an overriding objective to protect the coastal environment for the long term.

Arising from the above discussions are some key significant considerations for coastal planning in the context of climate change. These include: the early public release of leading scientific information on coastal climate change including mapping of the coastal risks; community engagement at the start of planning process to build community knowledge and involvement in possible coastal urban futures; evaluation and monitoring publicly available to facilitate 'learning by doing'; transparent and accountable decision making process in the planning process and continuing investment in leading research and practice to encourage innovative sustainable solutions in the coastal environment. Underpinning these factors is a strong and effective system of governance.

6. Conclusion

Land use planning in Australia is based on the British planning system developed over 100 years ago and has largely provided an effective basis for decision making throughout Australia. However as our cities expand, and new significant risks such as climate change come into consideration, pressures are increasing stress on the traditional planning system. For example, land falling into the ocean was never a consideration, nor was planning for the extreme weather events that are projected in the climate change scenarios (Norman et al 2014, p54).

The politicisation of planning decisions is not new but is increasing as development pressures continues on the coastal and urban edge of our cities and coastal settlements. The above discussion highlights some of the risks that need to be managed and points to some key considerations to improving coastal planning in Australia. How we manage the increasing risks in a transparent and accountable manner lies at the core of sustainable coastal planning in the future.

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