



SOUTH AUSTRALIA  
**COASTAL  
COUNCILS  
ALLIANCE**

# **SITUATION ANALYSIS OF COASTAL MANAGEMENT IN SOUTH AUSTRALIA**

**2019/2020**

## Background

The South Australian coastline stretches around 5,000 km including several offshore islands. It is home to approximately 80% of SA's population providing significant environmental, social, and economic benefits to coastal communities, businesses and industries.

Although coastal management in South Australia is a shared responsibility between state and local governments, coastal adaption and protection work, maintenance of coastal infrastructures and planning and development on the coast have been increasingly carried out mainly by local governments. Half (Thirty-four) of all councils in the state have responsibility to manage their coastlines and the majority are struggling to cope with increasing impacts from storm events, associated flooding and erosion and an upward trend in the cost and resourcing for coastal management.

Over many years there have been various attempts in South Australia to review the approach to coastal management and to establish an independent coastal authority with the aim of improving coordination between all levels of governments.

In 2018 the Limestone Coast Local Government Association - in conjunction with Metropolitan Seaside Councils, Eyre Peninsula Local Government Association, Southern & Hills LGA, Spencer Gulf Cities Association, Legatus Group of Councils and the Local Government Association of SA - received funding from the Local Government Research and Development Scheme (LGR&DS) to establish the foundation for a state-wide strategic coastal councils alliance. which aimed to:

1. Establish long-term governance and resourcing arrangements for South Australia Coastal Councils Alliance that supports an informed, coordinated advocacy voice;
2. Develop advocacy documents to highlight priority issues and explore options for more sustainable funding and cost-sharing arrangements.

The project partners, along with representatives from the Local Government Mutual Liability Scheme and Coast Protection Board (CPB) provided oversight and delivery of the initiative, supported by a project coordinator and researcher.

The project coordinator met with representatives from coastal councils from December 2018 through until February 2019 to collect information and insight into current and emerging issues, barriers, gaps and needs to better manage the coast within their council areas. Findings in this report are an analysis of data from these meetings and local site visits and consultation workshops and discussion sessions with council groups and regional local government associations, supplemented by information from literature reviews, government reports and various online sources.

The outcome from this initial project provides a sound and common understanding of issues impacting on coastal councils in South Australia. It also identifies priorities for further investigation, along with opportunities where councils can work together to manage the coast collaboratively and more effectively.

The formalisation of the SA Coastal Councils Alliance aims to enable stronger advocacy and influence with State and Federal Governments and other stakeholders, through more coordinated representation and advisory arrangements.

## Summary of key findings

- All Councils are under increasing pressure to do more, with less. Coastal Councils have an additional responsibility to provide, manage and maintain a wide range of coastal assets that not only benefit local residents and ratepayers, but a much wider visiting population.
- Regardless of their size or location, coastal Councils across South Australia face similar issues including: sand and beach management; cliff erosion; access management and signage; managing remnant coastal biodiversity; planning and development anomalies; illegal dumping and vehicle access; dredging; construction and maintenance of protection infrastructure like levees, seawalls and groynes; maintenance and replacement cost pressures of recreational infrastructure like jetties, boat ramps.
- The coast contributes to a wide range of benefits including economic, recreational, public health and wellbeing, local placemaking and liveability and ecosystem services. These benefits are often not often well considered or integrated through various legislative, policy and funding mechanisms.
- The impact of climate change and sea level rise and resultant increasing storm surge, erosion and coastal flooding events pose an increasing risk for councils and communities
- Local Government is carrying the greater burden of coastal management as both State and Commonwealth Governments have shifted more costs and responsibilities to Councils, and reduced funding and resourcing to support this task.
- Current legislative, funding and support arrangements for coastal issues are not well coordinated, often inconsistent and inequitable and, fundamentally, not enough for the rapidly escalating task ahead.
- There has been an array of reforms in coastal management regulation and practice occurring across state-level jurisdictions in recent years. There are strengths and challenges within each system and varying degrees of effectiveness in terms of development control, integrated management, coordination and incorporation of climate change. The South Australian Government shares some similarities and many of the challenges facing the other states in compliance, consistency and integration.
- With a number of legislative and operational reforms around planning and environment currently underway in South Australia; a clear priority by the current South Australian Government on the coast; an unrelenting escalation of coastal risks and hazards; and a clear and growing gap in resourcing to address this, there is a timely opportunity for local and state governments in this state to now work together to improve the legislative, policy and operational support for future coastal management in South Australia.

**A clear priority is to review the current arrangements for coastal management in South Australia and develop a new model that provides:**

- 1. Clear roles and resourcing responsibilities by all levels of Government**
- 2. A more strategic, long-term forward program of works to be funded**
- 3. More streamlined funding mechanisms to encourage and facilitate multiple outcomes for our coast, including protection, tourism, health, recreational and environmental benefits and minimise unintended or cumulative impacts**
- 4. Appropriate cost-sharing arrangements between public and private interests**



## Coastal issues and concerns

Consultation with representatives from coastal councils, including elected members and staff involved in coastal management, planning and infrastructure has provided relatively consistent feedback on the range of coastal issues facing councils. Key issues were reinforced through verbal and written responses and reflected in photographic records and predominately include:

- Sand and beach management
- Cliff erosion protection and stabilisation
- Managing coastal access for people and vehicles
- Environmental management including weeds, shorebirds, revegetation, illegal dumping, and the coastal interface with stormwater, effluent and in some cases inland river/channel drainage
- Capital and maintenance costs associated with coast protection infrastructure including levees, seawalls, groynes
- Capital and maintenance costs associated with coastal recreational infrastructure such as jetties and boat ramps, pontoons, swimming enclosures and in some cases marinas
- Planning and development for the coast

Results show that regardless whether they are small, or large, regional or metropolitan, coastal councils are facing difficulties in managing the coasts. These issues flow on and in some cases cumulate to cause significant impacts on local economies and communities, including decline in liveability and wellbeing, and a reduction in economic activity. They also add planning challenges and increase councils' exposure to legal liability.

Pressures on the coast are largely driven by rapid population growth within 2 kilometres of the SA coast, continued rises in real estate values and increasing coastal-based economies i.e. tourism. The impact of sea level rise, averaging 4.5mm per year in South Australia<sup>i</sup>, and more frequent and severe storm events are exacerbating risks and costs associated with coastal flooding and erosion, creating more urgency to act and generating heightened public and political awareness. There are considerable inter-linkages between these issues – some are consequences of others; some are caused by similar stressors and some can be addressed with a common strategy. Attachment 2 illustrates causal chain analysis of coastal management in SA, funding sources and current strategies that councils base their decisions upon.

Coastal hazard risks to shacks and settlements in high risk areas pose increasing concerns to coastal councils. Historically, some coastal settlements were developed prior to, or without contemporary knowledge regarding flooding, erosion, public access or environmental requirements. Most councils raised the maintenance of recreational marine structures, particularly jetties and wharfs, as a critical issue – this is surrounded in confusion, disparity and inequity in management and funding.

Stormwater and effluent issues also emerge as recurring theme for councils around Spencer Gulf and the Metropolitan area. In the Limestone Coast region where the landscape is highly modified and cross-catchment drainage system have been developed, drain outlets not only allow stormwater (polluted water in many cases) to flow into the marine environment, but also present a risk of tidal water backflowing into townships. The interface between coastal and inland river systems, particularly the Murray, also creates additional resourcing and management issues for some Councils.

In addition to overall sea level rise, coastal councils across the State are facing an increased intensity and frequency of storm events and in need for immediate and long-term coastal protection and adaptation. Damage to infrastructure associated with storm surge creates costs well beyond councils' ability to pay. This not only reflects in council's expenditure, but also an increase in requests for support for construction of protection works, along with an increase in risk and liability issues for Councils and unauthorised private protection works.

The Local Government Grants Commission data from Council supplementary returns identifies council expenditure on coast protection and management works (figure 1).

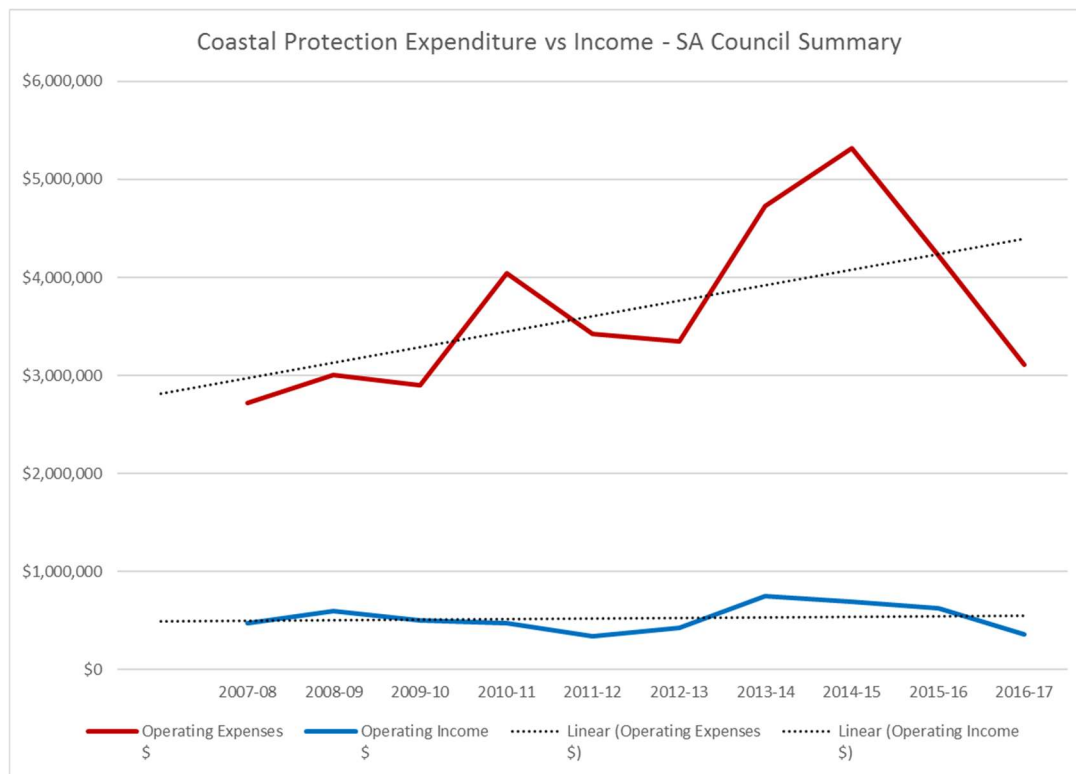


Figure 1; Coastal protection expenditure and income by councils across SA

The graph demonstrates a very clear upward trend in the expenditure over the past 10 years - both operating expenses and purchases/construction of fixed assets. To assist Councils manage their coastal risks, the state government (through CPB) has historically provided around \$350,000 grant support annually. This amount was increased by a further \$1 million per year for four years (for the term of the current Government).

Historical records of how CPB annual grants funding are spent indicate priority needs toward coastal engineering works (e.g. seawalls, groynes, breakwaters, levees, embankments), beach replenishment and storm damage repairs. These are followed by development and/or implementation of coastal strategies/management plans, studies and new or upgraded public coastal facilities. A relatively small amount is allocated to community education and awareness and effort to reduce pollution from land-based discharges.

For example, \$252,600 of \$335,800 (75%) was spent on coastal engineering works in 2011-2012; \$225,071 of 324,200 (69%) on protection works in 2013-2014; and \$185,000 (57%) of \$325,500 on coastal engineering work \$88,000 (27%) on storm damage repairs \$45,000 (14%) on beach replenishment and \$7,500 (2%) on development of coastal adaptation strategy in 2017-2018.

## Barriers to effective coastal management

In South Australia, the responsibility for managing the coast has been increasingly shifted on to councils. This has placed additional pressure on local government to maintain their day-to-day operations. Barriers impeding effective coastal management identified by council representatives were consistently reported across several key themes:

- **Limited funding** to meet demand for infrastructure and to address coastal hazards;
- **Lack of coordination** between levels of governments leading to gaps and inefficiencies
- **Limited expertise** and localised data for coastal planning and decision making to reduce hazard risks;
- **Limited resources and capacity** particularly in small and non-metropolitan councils to undertake the range of coastal management implementation, data capture and monitoring work.

These findings are consistent with the LGA coastal management study in 2003 and the recent Australian Coastal Councils Association survey (May 2019). The LGA's coastal management strategy from 2003 stated that, at that time, 25 coastal councils had a gross expenditure of \$17,546,200 on coastal management in 2002/03 and 12% of this was obtained from tied grants. Coastal councils spent an average of 3.5% of their operating expenses on coastal management.

Some fifteen years later, the costs of coastal protection and management has significantly escalated for a number of Councils. For example, Kingston District Council's average coastal operating cost represented 37% of total operating expenditure, whilst Port Augusta Council, with a rate base of \$20 million, has an estimated \$40 million in capital works associated with coast protection and recreational marine infrastructure.

In 2015, the Coast Protection Branch estimated that \$25 million of works were required just to address current legacy issues. In 2019 Councils have estimated over \$220million is required for a range of coast protection and management works. Whilst the South Australian Government increased the amount of coast protection funding from \$350,000 to \$1 million per year for four years, this is still insufficient to address the growing funding gap for coastal management and protection works over the longer term. Given local government's main source of revenue is property rates, addressing the escalating coastal management task is largely beyond the financial capacity of councils to solve, particularly in rural areas that do not have a large rating base.

In recent years, the Local Government Association of SA has been calling for a \$10 million per year increase in the State Government's coastal management funding, with a focus on supporting small regional councils to protect and enhance their local coastal assets.

In addition to limited budget and resources, some councils noted duplication and inefficiencies in many aspects of coastal management, both across neighbouring Councils, between different state government agencies and between different levels of government. In many cases, Councils seek advice and funding support in isolation with minimal coordination with others. Some Councils however, are well organised into pro-active groups in terms of coastal planning, data capture and on-ground action and monitoring.

Coastal protection strategies are increasingly occupying time and resourcing effort by Councils as the threat to coastal property and infrastructure increase. A report by the Australian Government (2011) estimated between 25,000 and 43,000 residential buildings in South Australia – valued at between \$4.4-\$7.4 billion – may be at risk of inundation from a sea level rise of 1.1m. The report also estimated 6,7000 km of roads (\$7 billion replacement cost), 200km of railway line (\$1.3b replacement), 1,500 commercial buildings (\$27b replacement) and 1,100 light industrial buildings (\$1.2b). While the study was based on a number of assumptions, it is clear that there are significant and growing threats to development in this state.

For some Councils and communities, hard infrastructure protection works remain as the primary response to address coastal erosion and flooding. A growing number of Councils however, are recognising that alternative strategies exist and should be considered, in a site-specific context. Alternative strategies include for example; 'soft' engineering and 'living shoreline' options to stabilise and attenuate wave impact and erosion through to relocation of buildings and infrastructure away from areas subject to erosion and inundation hazards (ie retreat, planned retreat or managed realignment).

A number of coastal Councils have represented concern about unauthorised, ad hoc and often dangerous coast protection works by residents to protect private property occurring along their coasts. These can subsequently present legal risk to Councils. The current update of the LGA Coastal Adaptation Guidelines 2019 suggests that risk at a local/settlement scale has become more and more evident since 2012. The study finds that councils' concerns involve the release of hazard risk information, failure to release hazard information, negligence in providing protection infrastructure.

Unauthorised private protection works built on non-engineered base and sometimes outside the landholders boundary on public land are becoming more common and are often the result of a legacy of former planning and development decisions. There are many factors contributing to misaligned decision making that may result in disregard of planning guidelines and coastal expert advice. Strong community or developer pressure, a desire to increase local economic development and limited internal resourcing or capacity can be influential in many cases.

Between 2004 and 2013, 276 dwellings and 126 extra allotments were approved by local council development assessment panels contrary to the CPB advice regarding coastal hazards. This may not only increase the number of potentially vulnerable coastal properties but also expose individual councils to liability and future legal challenge.

The freeholding of coastal shack settlements by the South Australian Government has also caused repercussions for local government in a number of cases right across the state, making it challenging to protect the properties from increasing impacts of sea level rise, coastal flooding and erosion.

This matter is not unique for South Australia. In New South Wales (NSW) and Victoria (VIC) where state-based statutory coastal authorities have been appointed (which means there are statutory requirements for referral to an expert coastal body), a proportion of their advice is disregarded.

### **Current arrangements for coastal management in South Australia**

Local government in South Australia has a mandate under the Local Government Act 1999 and the Development Act 1993 (recently superseded by the Planning, Development and Infrastructure Act 2016) to contribute to the management of the coast.

There are several pieces of state government legislation which relate either directly to coastal management or influence the way the coastal zone is governed or managed. The principal state agencies and institutions involved are Department of Planning, Department of Environment and Water (DEW), Transport and Infrastructure (DIT), Department of Primary Industries and Regions (PIRSA), Environmental Protection Authority (EPA). Responsibilities for local planning and non-major development decisions has been delegated to local governments, which must adhere to the SA government planning regulations and be approved by the SA government Minister for Planning.

The Coast Protection Board is the overarching body formed in 1973 in conjunction with the formation of the Coast Protection Act 1972. The CPB is SA's primary authority and prescribed body for managing the coast and providing advice on coastal development. The Board has power to advise the Minister and pursue initiatives generated within the agency, Department of Environment and Water (DEW).

The Act provides for the creation of seven Coast Protection Districts: Eyre, Fleurieu, Kangaroo Island, Metropolitan, South East (Limestone Coast), Spencer and Yorke. After nearly 50 years of the operation of the Coast Protection Act, the range of responsibilities of the CPB has developed and evolved. Core responsibilities under the Act include to protect and restore the coast from erosion, damage, deterioration, pollution and misuse. The CPB is also a statutory body in South Australia for referral, advice and/or direction on coastal development applications. Monitoring and research (including beach profile records, seagrass monitoring, vegetation studies etc) have continued through the CPB as a minor expenditure item.

There are a range of existing coastal strategies, regulations, and policies in place for protecting the coast and responding to sea level rise scenarios (e.g. Coast Protection Regulation 2000, The Living Coast Strategy 2004, Adelaide Living Beaches, regional coastal adaptation plans). However, the success of the policies relies to a large extent on implementation and monitoring by local Councils. A lack of financial resources and capacity at the local government level to fulfil these responsibilities is having a significant effect on coastal management in the State.

The lack of a coordinated state-based approach to coastal governance and cost shifting has also strained intergovernmental relations between local and State government.

## Funding

In other Australian states, management of the coasts lie within local governments responsibilities. But funding support from state governments in recent years has reduced pressure on Councils. NSW government recently (2018) provided funding of \$83.6 million for coastal reforms and introduced new coastal legislation.

The South Australian Government has an allocation of \$5.2 million (2018-19) across five coastal initiatives (\$1m sand replenishment on metropolitan beaches, \$1m on sand retention research, \$1m for seagrass restoration, \$1m for Gulf St Vincent wetland plan, \$1.2m to establish three artificial reefs).

A recent announcement of \$52.4 million (2019-20 State Budget) over four years does highlight a desire to address longstanding deficiency in the protection and management of coastal assets and address climate change risks. However, the equity of funding which has an allocation of \$48.4m for sand and beach management along a small portion of the metropolitan coast, and only \$4m for the remaining regional and outlying metropolitan areas has frustrated many Councils.

The value of assets exposed to climate change hazards demands an ongoing need for coastal protection; however, the challenges of funding coastal protection have not been addressed. Funding coastal protection works in Australia has traditionally been achieved through the allocation of public funds by local and state governments alone or in partnership. Repairs or reconstruction due to damaged infrastructure after extreme weather events is often funded through either State or Federal government funding.

In addition to government entities, consideration of funding coastal protection must recognise a number of significant non-government actors involved e.g. owners of foreshore properties exposed to coastal hazards, as well as local residents, tourists and businesses as the users and beneficiaries of coastal assets such as beaches and estuaries. These non-government actors can have a significant role in many coastal protection projects. There are examples of private property owners pooling resources to self-fund the construction of coastal protection works such as seawalls to protect their properties from erosion. For example, private property owners at the Belongil Spit in Byron Bay (NSW) have taken legal action against governments to establish their rights to undertake coastal protection works.

When protection works provide a benefit to private landowners, the process for reaching agreement to fund such projects can create significant tension between state and local governments and between foreshore property owners and other residents or rate payers. The tension between different parties



delays and adds planning costs, compounding the already contested nature of many coastal protection projects (Banhami-Zakar et al, 2016).

Current funding arrangements in South Australia are not supportive to sustainable management of the coast, nor the protection of coastal assets. There is a need to investigate alternative funding models, with particular attention to:

- all levels of government involved;
- long-term strategy and forward program of works, rather than annual grants;
- negotiated funding arrangements – based on multiple uses, multiple outcomes;
- public private partnership; and
- non-government financing.

Current funding, investment and support arrangements for coastal management issues are disparate, often inconsistent and inequitable and, fundamentally, not enough for the rapidly escalating task ahead. State Grants Commission data shows that over the past decade expenditure by Local Government on coast protection, management and infrastructure has nearly doubled, while the level of income to support this (i.e. grants) has remained largely static. The level of operating expenditure incurred by Councils has remained at approximately three times any income to support this work, with capital works trebling since 2011-12, again with supporting income remaining static.

State funding for coast protection works is managed through the South Australian Coast Protection Board. The board receives an annual budget allocation of approximately half a million dollars, of which around 75%, or \$350,000 is provided to coastal Councils for priority works. Allocation of funds is based on a long-standing, rigorous risk assessment methodology that considers the public benefit of the project, anticipated likelihood and time criticalness, along with anticipated losses and consequences if the proposed project is not implemented. A co-contribution of a minimum 20% towards the cost is expected from Councils. Projects typically funded include levee banks, revetment and seawalls, general foreshore protection, flood mitigation works, erosion control, cliff stabilisation, groynes, regional beach replenishment and coastal settlement protection strategies.

Separate to this program, the South Australian Government has, for over a decade, fully funded - via the Adelaide/Mt Lofty Ranges NRM levy - the 'Adelaide Living Beaches' sand transfer scheme along the metropolitan coast. Prior to this, metropolitan beach management was fully funded through the Coast Protection Board.

A new allocation of \$48.4 million was announced in June 2019 by the Minister for Environment, comprising \$20 million for short-term additional sand and \$28.4 million for the longer term completion of a sand recycling pipeline from Semaphore to West Beach, as well as sand dune restoration and revegetation in partnership with local councils and community groups. In addition, \$4 million over 4 years was allocated to regional coastal Councils for coastal repair, restoration and sustainability projects.

Funding of this sand transfer initiative will come from the \$120 million Green Industries Fund, which is sourced from a levy charged on Councils and private waste operators across the state for all waste to landfill.

In addition to coast protection, there are also a range of additional grant programs that support Council activities and facilities along the coast, including for example, the Boating Facilities grants, managed through the Department of Planning, Transport and Infrastructure.

This program is funded through a levy collected on the registration, inspection or survey of marine vessels and held in the Marine Facilities Fund (\$8.7 million balance at 30/06/18). Most of the boat ramps in South Australia are owned by local councils, which are responsible for making sure the facilities under their care are kept in safe working order. Exceptions to this include the North Haven,

Outer Harbor, Garden Island, West Beach Adelaide Shores and Wirrina boat launching facilities, which are either privately or state government owned and managed. Councils and community groups can apply for grant assistance to establish and improve boating facilities, including boat ramps; temporary mooring facilities or wharves; channel improvements; aids to navigation; or emergency marine radio services. Grant funding is conditional on the Council or grantee accepting on-going ownership, operation and maintenance of the facility.

The annual allocation for 2018/19 to 2021/22 towards these projects is \$2.1 million. Funding assistance can be provided at up to 80% of the total project costs depending upon the strategic importance of the project when assessed against the SA Boating Facilities Strategic Plan.

Other funding sources include the former \$2.25 million SA Recreational Fishing Grants programme (managed by DEW), which was available from 2014-2017 during the transition to the new Marine Parks system. This program assisted 107 projects to enhance recreational fishing, including jetty and wharf upgrades, access stairways and boardwalks, fishery restocking, breakwater and lighting, fish cleaning/cooking facilities, educational programs.

In addition to specific grant programs, by far the largest source of funding for coastal infrastructure and management come from ad-hoc Government commitments.

Following the 2016 storms for example, the State Government provided \$3.5 million to repair several recreational jetties, including state managed jetties and those under Council care and control, where costs were not covered by insurance. More recently, \$20 million has been allocated towards repair of the state owned and managed Granite Island causeway and a commitment by the Liberal Party in the lead up to the 2018 state election of \$20 million to reinvigorate the Council owned Glenelg Jetty as a key piece of tourism infrastructure. In addition, special budget allocations for large, priority coast protection works are often made, including for example the 2017-18 contribution of \$600,000 towards the Wyomi Beach sea wall in Kingston and \$1.25 million towards Charles Sturt Council's \$5.2 million West Beach Rock wall.

Support for managing and preserving coastal biodiversity and landscapes rest mainly with the regional Natural Resource Management Boards (to be replaced by Landscape Boards). Following the introduction of the South Australian Natural Resources Management Act in 2004, the key source of state-based environment funding (including coastal) was, and remains, through NRM levies, which are collected by Councils on behalf of the State Government for allocation and expenditure by each regional NRM board. As such, the level of engagement, funding and support to Councils and communities around coastal management is considerably inconsistent across the state.

Notwithstanding these regional variations, the overall level of state funding into local environment management, including coastal, has declined significantly since the introduction of the NRM Act. For example, between 2008/09 and 2011/12, the regional NRM levy collected from communities across the state rose from \$20.9 million to \$28.8 million. Last year, it was \$46.6 million. In that same period, State Government funding into regions via the 'NRM fund' declined from \$15.5 million to \$7.9 million. It is now \$2.4 million.

While the Commonwealth – as the collector of over 80% taxation revenue - has also historically played a role in funding of coastal management, the level of contribution and focus has varied significantly over the years. The Howard Government's \$125 million 'Coast and Clean Seas' program (1996-2002) as part of the Natural Heritage Trust was arguably the most substantial and sustained investment into coastal management and included \$27.3 million for Coastcare, along with a range of local community capacity building, coastal monitoring and vulnerability assessment initiatives.

The Coastcare program was designed around a small grant scheme, with community groups and Councils supported by a network of regional facilitators and a state coordinator. In South Australia the

state coordinator position was funded by the state (through Coast Protection Board) and based within the Local Government Association.

Since that time serious Commonwealth investment into coastal issues has been sporadic. From 2002-2008 Commonwealth funding was reduced and channelled through regional NRM bodies for allocation against regional priorities. From 2008-2013 funding and priorities were determined on national priorities and environmental hotspots and included a strong focus on better understanding of vulnerability and building resilience to sea level rise and climate change risk. The view of the current Federal Government is that coastal management is 'a state issue'.

Active and well considered investment into the coast - be it to provide asset protection, recreational infrastructure, environmental management – also contributes to a wider range of more intangible benefits including public health and wellbeing, local placemaking and liveability and ecosystem services. These benefits are often not well considered or integrated under the array of various, disparate grant and funding streams. Perhaps over-riding all of these considerations, the impact of climate change and sea level rise and resultant increasing storm surge, erosion and coastal flooding events must be more strongly integrated into future decisions about when, how and if, public funds should be invested into the coast, and who should be the beneficiaries when this occurs.

Whilst considerations about the relative share of public and private benefit from taxpayer funded investment are well documented, the increasing threat of private harm arising from legacy decisions by all levels of government, necessitate a re-evaluation. Most critically for example, past decisions by planning authorities to approve private development in areas subject to coastal hazards are now being challenged, not just in this state, but across the nation and the globe. The implications and mounting pressure for government to fund private development and infrastructure is increasing. Similarly, providing 'safe' public access to the coast is becoming increasingly complex and costly for Councils.

Managing risk is a rapidly escalating feature of coastal management for local government, and equally, if not more than the expected benefits. The multitude of risk and benefit considerations add further weight to the need for a thorough review of coastal funding / investment approaches and methodologies.

In Summary, current funding arrangements for coastal management in South Australia are not supportive to sustainable management of the coast, nor the protection of coastal assets. There is a need to investigate alternative funding models, with particular attention to:

- all levels of government involved;
- long-term strategy and forward program of works, rather than annual grants;
- negotiated funding arrangements – based on multiple uses, multiple outcomes;
- public private partnership; and

To unpack a number of these issues SACCA has recently invested in a research project in partnership with the Department for Environment and Water (DEW) titled 'Funding the Future – A New Approach for Coastal Management'. The principal objectives of this project include identifying:

1. The roles and most appropriate cost-sharing and resourcing contributions towards future coastal management by all levels of Government
2. Opportunities to develop strategic, long-term forward program of works, rather than the current year to year grant/works arrangements
3. More streamlined funding and investment mechanisms to encourage and facilitate multiple outcomes for the coast, including protection, tourism, health, recreational and environmental benefits
4. Appropriate cost-sharing and consideration of public vs private benefit gained from investment of public funding into coastal management and protection

5. Principles and thresholds for triggering Government financial intervention/support vs default market/insurance driven response

In recent years, Federal government has played a relatively minimal role in managing the coast. Nationally funded programs have included the National Climate Change Adaptation Research Facility which develop CoastAdapt to support adaptation to climate change, Coast and Clean Seas program, Coastcare, National Coastal Resilience Program etc.

Non-government organisations, such as the Australian Coastal Councils Association (ACCA), have escalated national advocacy on behalf of local government. Known as the National Sea Change Taskforce until July 2015, the association is a national body representing the interests of coastal councils and their communities. ACCA commissions research on a range of coastal issues and advocates for the interests of coastal councils to various levels of government.

Many of the pressures affecting the coast are national in scale, pointing strongly to the need for national management frameworks. South Australian Coast Protection Act 1972 was the first piece of legislation related to coastal protection in the country. Since then the legislation remains unchanged. This contrasts with other states (NSW, VIC, QLD) where coastal reforms have been a priority. Nearly fifty-year-old legislation makes SA lingers behind other states in this respect.

#### Literature review of Australian coastal policy and legislation

The United States and Australia both have a federated governance structure and a significant coastal management role for state authorities. But unlike the US, Australia has no federal coastal management legislation. The UK government has no national coastal legislation but has facilitated the production of national guidelines on coastal planning policy and reports on issues such as coastal heritage. At the national level, the UK Environment Agency has overall responsibility for a strategic overview of coastal management by working with local authorities and other coastal bodies to develop a consistent approach on managing coastal risks.

In Australia, coastal management is largely the responsibility of the eight separate states and territory. Under the Australian constitution, responsibility for land use is vested with the state governments which regulate the use of coastal resources, coastal planning and development, and coastal management. State governments in turn delegate many coastal management responsibilities to local government.

Australian coastal management has undergone several reforms in response to policy initiatives such as *Agenda 21* and the various IPCC (Intergovernmental Panel on Climate Change) reports, but these reforms have largely occurred at the state level and lack national consistency. By the end of the 20<sup>th</sup> Century, only four states had specific pieces of coastal legislation (QLD Coastal Protection and Management Act 1995; NSW Coastal Protection Act 1979; SA Coast Protection Act 1972; and VIC Coastal Management Act 1995). Most had coastal policies or strategies linked to various pieces of planning and development control legislation. The policies varied from non-statutory guidelines through to statutory state-wide policies. (See table 1 for details in comparison).

The consistent message from IPCC and the United Nations (UN) about the need for an integrated approach to coastal management incorporating climate change has triggered the next evolutionary step in Australian coastal management. Several national reports were produced in the early 2000s which set the stage for the significant change to coastal management in Australia between 2010 and 2019. The first national coastal vulnerability assessment for climate change was probably the most influential in raising awareness of coastal vulnerability, particularly for state and local governments.

The need to incorporate the potential impacts of climate change and sea-level rise into coastal risk and hazard assessment was problematical in its implementation for various reasons. The earliest Australian



state to create a sea-level rise policy was SA in 1991 but it was not incorporated into the SA planning regulations until 1994. Like in QLD and NSW, difficulties experienced in implementing coastal climate change reforms indicated a need for strong integration between coastal and planning legislation in each state.

The review of Australian coastal policy and legislation by Harvey and Clark (2019) notes that the latest wave of coastal reform in Australia represents a non-uniform state-led push for a more integrated approach to coastal management including, adaptation to climate change, sustainable development, a system-based approach to coastal processes and inclusion of both marine and terrestrial environments.

South Australia, which has the oldest piece of coastal legislation (1972), had a formal review conducted in 1992, along with a government green paper but no action eventuated. In 2004 the SA Living Coast Strategy promised the development of a new Coast and Marine Act but again, nothing transpired.

The existing coastal legislation in SA is dated and does not facilitate the more integrated approach to coastal management that is needed. With the recent passage of the new Planning, Development and Infrastructure Act (2016) and escalating landuse and development pressures along the coast and the transition of the Natural Resource Management Act to Landscapes SA legislative and operating framework, there is an urgent need to better define the operational linkages between the new planning system and the older coastal legislation.

Table 1 Recent coastal reforms in Australia.

State	Lead agency or body	Coastal Act (pre 2010)	Coastal reform (post 2010)	Key influences	Financial assistance
WA	Western Australian Planning Commission (WAPC) the peak body for land use, planning and development	No dedicated legislation particular to management of the coast or marine environment	2013 Hazard Policy WA	2007 IPCC 4AR	
QLD	Department of Environment and Resource Management (DERM)	Coastal Protection and Management Act 1995	2012 Coastal Plan 2014 Coastal Plan 2016 QCoast2100 2016 Climate Change Strategy 2016 Planning Act (active 2017)	2007 IPCC 4AR 2012–2015 Changing political ideologies - Local Government Association of QLD	After lobbying by the Local Government Association of QLD, the state government, in 2016, launched an AU\$12 million Qcoast2100 program to provide financial assistance to local government in the preparation of their local hazard strategies.
NSW	Department of Environment, Climate Change and Water (DECCW) NSW Coastal Council (until 2003), NSW Coastal Panel and the Coastal Expert Panel (2013-18) NSW Coastal Council (under section 24 of the Coastal Management Act 2016)	Coastal Protection Act 1979	2016 Coast Management Act (active 2018) 2016 Coastal Reform funding package 2018 Coastal Council 2018 Coastal Manual 2018 SEPP coastal	2004 Australian 'seachange' population movement 2007 IPCC 4AR 2009 National parliamentary inquiry into coastal management and climate change Legal cases over coast protection and sea-level rise benchmarks	In 2016 the NSW government announced a funding package of AU\$83.6 million for Coastal Management from 2016–17 to 2020–21, including a Coastal and Estuary Grants Program. The grants program was a key instrument of coastal reform to provide assistance, particularly to local government, in developing coastal management programs (CMPs).

VIC	Victorian Coastal Council (1995-2018), recently transferred to the Marine and Coastal Council (MCC) under the new Marine and Coastal Act 2018	Coastal Management Act (CMA) 1995	2018 Marine and Coastal Act 2018 Marine & Coastal Committee 2019 (pending) Marine & Coastal Strategy 2019 (pending) Marine & Coastal Policy	2007 IPCC 4AR 2014 Victorian National Parks Association N. Harvey and B. Clarke Marine Policy 103 (2019) 27–32 31	In August 2018, the VIC government had successfully enacted new coastal legislation, the Marine and Coastal Act 2018. The amount of funding support for the coastal reforms package is unclear although Parks Victoria which manages around 70% of the VIC coastline plus all its marine protected areas received AU\$70.6 million in the 2018/19 state budget over four years plus AU\$20 million ongoing in operational funding.
SA	Coast Protection Board (CPB)	Coastal Protection Act 1972	Planning, Development and Infrastructure Act 2016	Various data sources	\$52.4M over 4 years. 2019/20 State Budget
TAS, NT	TAS state-wide statutory coastal policy 1996 (under review since 2013); 80% of NT coastline under Aboriginal ownership (proposing state-wide coastal and marine management strategy)		-	?	?

Adapted from Harvey N. and Clarke B. (2019)

## Key findings and where to for South Australia

- All Councils are under increasing pressure to do more, with less. Coastal Councils have an additional responsibility to provide, manage and maintain a wide range of coastal assets that not only benefit local residents and ratepayers, but a much wider visiting population.
- Regardless of their size or location, coastal Councils across South Australia face similar issues including: sand and beach management; cliff erosion; access management and signage; managing remnant coastal biodiversity; planning and development anomalies; illegal dumping and vehicle access; dredging; construction and maintenance of protection infrastructure like levees, seawalls and groynes; maintenance and replacement cost pressures of recreational infrastructure like jetties, boat ramps.
- The coast contributes to a wide range of benefits including economic, recreational, public health and wellbeing, local placemaking and liveability and ecosystem services. These benefits are often not often well considered or integrated through various legislative, policy and funding mechanisms.
- The impact of climate change and sea level rise and resultant increasing storm surge, erosion and coastal flooding events pose an increasing risk for councils and communities
- Local Government is carrying the greater burden of coastal management as both State and Commonwealth Governments have shifted more costs and responsibilities to Councils, and reduced funding and resourcing to support this task.
- Current legislative, funding and support arrangements for coastal issues are not well coordinated, often inconsistent and inequitable and, fundamentally, not enough for the rapidly escalating task ahead.
- There has been an array of reforms in coastal management regulation and practice occurring across state-level jurisdictions in recent years. There are strengths and challenges within each system and varying degrees of effectiveness in terms of development control, integrated management, coordination and incorporation of climate change. The South Australian Government shares some similarities and many of the challenges facing the other states in compliance, consistency and integration.
- With a number of legislative and operational reforms around planning and environment currently underway in South Australia; a clear priority by the current South Australian Government on the coast; an unrelenting escalation of coastal risks and hazards; and a clear and growing gap in resourcing to address this, there is a timely opportunity for local and state governments in this state to now work together to improve the legislative, policy and operational support for future coastal management in South Australia.

A clear priority is to review the current arrangements for coastal management in South Australia and develop a new model that provides:

5. Clear roles and resourcing responsibilities by all levels of Government
6. A more strategic, long-term forward program of works to be funded
7. More streamlined funding mechanisms to encourage and facilitate multiple outcomes for our coast, including protection, tourism, health, recreational and environmental benefits and minimise unintended or cumulative impacts
8. Appropriate cost-sharing arrangements between public and private interests



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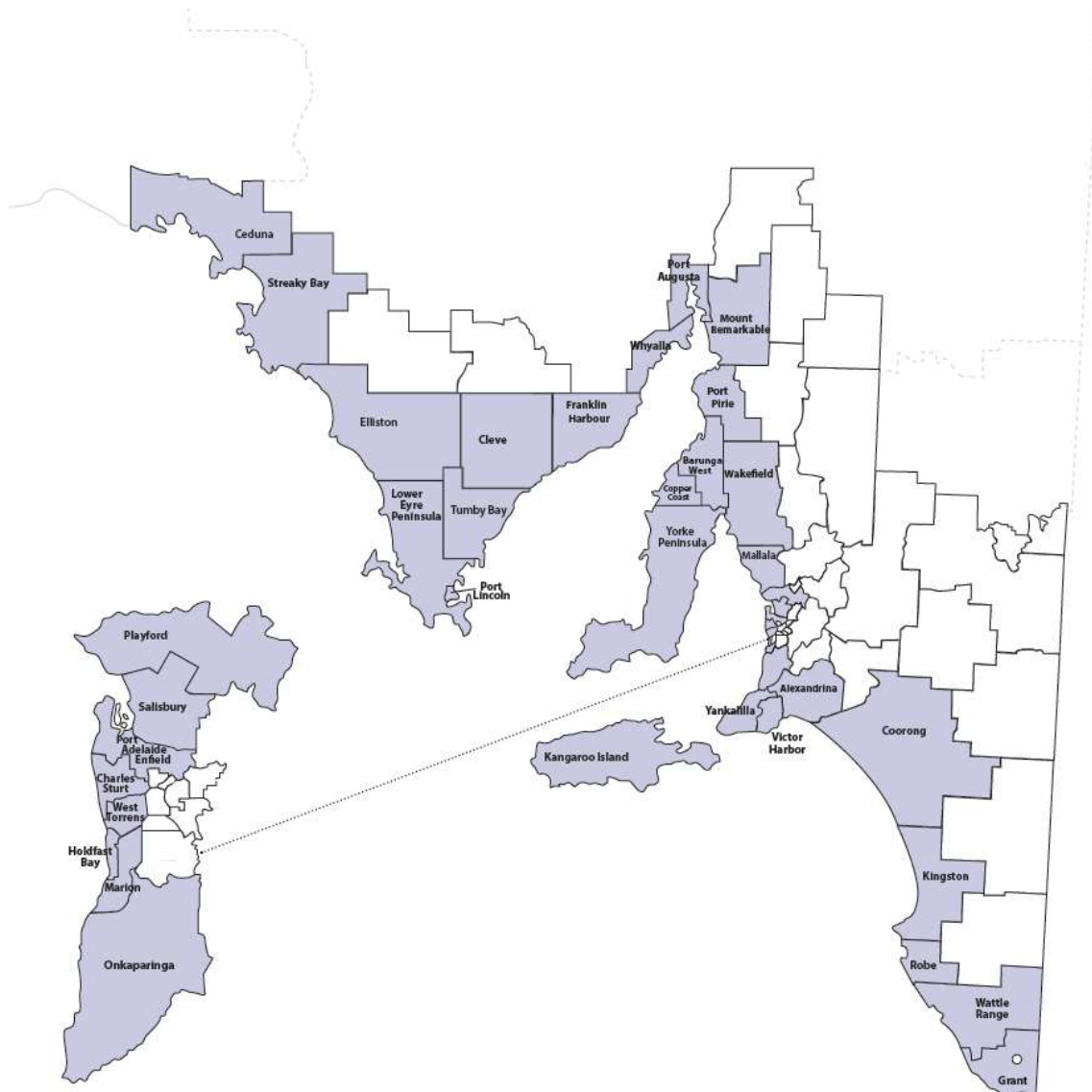
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**ATTACHMENT 1** Map of coastal councils across South Australia



**ATTACHMENT 2** Causal chain analysis of coastal management in South Australia

