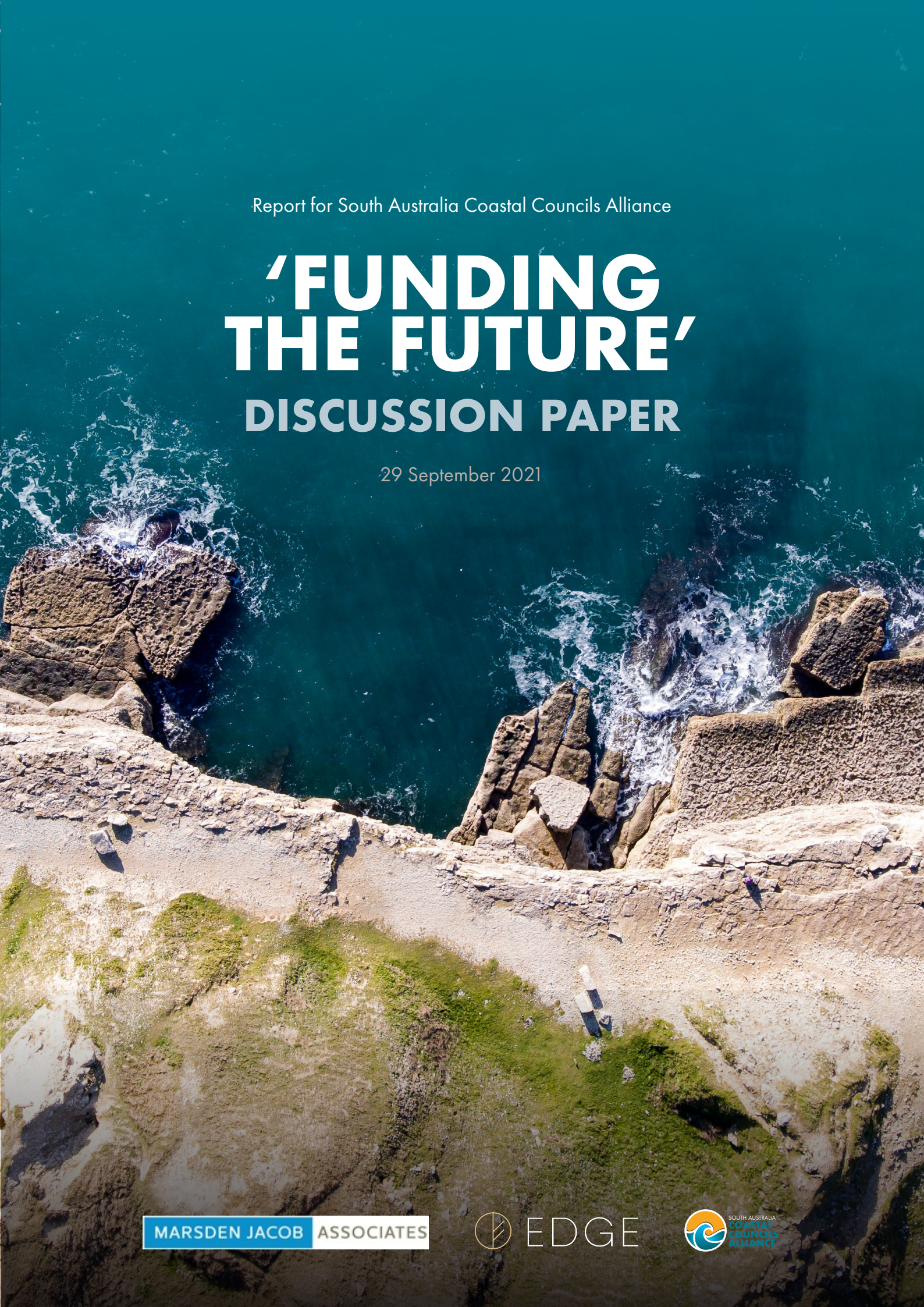
Report for South Australia Coastal Councils Alliance

'FUNDING THE FUTURE'

DISCUSSION PAPER

29 September 2021



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EXECUTIVE SUMMARY

Project purpose and objectives

The South Australian Coastline, which stretches over 5,000km, is experiencing increasingly severe impacts of inundation and erosion due to a combination of natural coastal processes and the impacts of climate change. Historically, councils have been the authority responsible for addressing and mitigating the impacts of these events on their local coastal ecosystems, communities and economies. However, as these events intensify and available funding remains stagnant, South Australian councils have identified the need to adopt a more strategic, long-term approach to realising coastal management outcomes, including new funding and investment strategies, better coordination between levels of government, development of local expertise in coastal planning and decision making, and capacity building within local government.

South Australian coastal councils have conservatively estimated capital works and operating expenses required to manage the coast will cost in excess of $200 million+ over the next 10 years. Despite an increase in funding from the Coast Protection Board in 2019 from $350,000 to $1 million per year for the next four years, this is still insufficient to address the growing funding gaps for coastal management and protection works. Not only is the quantum of funding insufficient, the focus on funding projects over annual timeframes is limiting long term, strategic investment required to underpin region wide economic outcomes.

In response to this, the South Australia Coastal Councils Alliance (SACCA) has commissioned research to:

- Summarise the scale of the coastal inundation and erosion issues in South Australia to effectively demonstrate the broader impact on the regional and state economy.
- Review the current funding landscape, both domestically and internationally, to better understand the available funding mechanisms and their appropriate application to the South Australian context.
- Identify the most appropriate mechanism or funding model that would be suited to the current funding landscape and the associated actions to develop the business case for that funding.

What is the extent of the coastal inundation problem?

A review of existing studies on the impact of coastal erosion and inundation demonstrates that the social, economic, and environmental impacts extend well beyond the geographical boundaries of the coastal councils.

To date coastal Councils have been struggling with the significant expenditure associated with managing coastal assets. For example, between 2005 and 2015 councils collectively spent more than $6.6 million on both state and council owned jetties in response to damage from storm surge events.

In the absence of adequate protection measures, it is estimated that 60,000 or more built assets along the coast are likely to be at risk. This could cause damage to up to 30% of some council's housing stock. The total replacement cost of assets when the South Australian coast is exposed to a 1.1m sea level rise (by 2100) is estimated to be around $46 billion, which is many orders of magnitude higher than current investment in protection works. This does not include the long term social and economic impacts that will result from inadequate investment on the coast.

The physical damage to public and private assets has resulted in flow-on effects on property values and the risk of materially impeding regional development and investor confidence in the regions. Restricted access to beaches, jetties, boat ramps, caravan parks, tourist accommodation and other infrastructure on the coast due to coastal erosion and inundation are adversely affecting the tourism and recreation sector and people's health and well-being not only in the regions but across the State. Disruption to public infrastructure including road and rail networks can disrupt transport of goods for local and export markets.

What is the current funding and policy landscape for coastal zone management?

To date, funding mechanisms for coastal management and protection strategies delivered by a number of state and federal authorities, including South Australian, have focused on short-term and ad-hoc responses rather than long-term sustainability. This creates a funding landscape that is unsustainable.

A detailed review of the funding landscape across the various tiers of government highlights the following key findings.

- Currently there is no dedicated consistent funding mechanism available for coastal management at the Federal level. One reason for this is the framing of coastal management issues as being of only local or state level significance, whereas the Federal Government looks to fund projects of national significance or where there is significant regional need as is seen in roads funding.
- This funding paradigm has started to change in the past year. For example, Infrastructure Australia has recently included coastal zone management on the infrastructure priority list, but a lack of projects receiving funding reveals that Infrastructure Australia is grappling to understand the opportunity and basis for justifying national funding because the approaches have been framed at a local scale.
- Longer term, the recently established National Recovery and Resilience Agency (NRRA) will likely become the key coordinator for Federal funding of coastal management. South Australian coastal councils need to prepare now for this potential future funding source, including how to shape the funding criteria.

This highlights that, while there is no obvious 'out of the box' funding opportunity at the federal level, progress in thinking around this issue demonstrates that there is an opportunity for organisations such as SACCA to guide the design of future funding mechanisms that will likely be implemented over the coming years.

South Australian coastal councils need to continue to increase engagement with the NRRA and Infrastructure Australia, where possible working through Infrastructure SA who can advocate on behalf of councils for larger, high value projects. Presenting the case for Federal investment will require more regional collaboration because smaller local scale projects (within 1-2 councils) are unlikely to require enough investment or be viewed as significant enough to warrant Federal funding, especially in regional areas.

Key findings

To help establish a more sustainable source of funding to improve the resilience of the South Australian coast and better position councils to secure funding, the key design principles for future funding should include:

- Articulation of how a project contributes to coastal and therefore regional resilience instead of just coastal protection. This will help better align with emerging policy and funding drivers at a state and national level.
- Funding for projects over multiple years, preferably bundling multiple resilience measures for a given location. This is needed to move funding arrangements from one off ad hoc approaches toward a more strategic approach that addresses resilience at a regional scale.
- Quantitative assessment of the balance of private versus public contributions for projects over a threshold level, such as $5 million[1], because of the significant cost associated with undertaking these studies. For projects of this size, distributional analysis is recommended to determine the balance of public versus private funding. The use of quantitative analysis for determining the balance of investment between public and private beneficiaries (including cost benefit analysis[2]) is contested and hence $5 million is considered indicative and should be tested and refined through the development of actual project submissions.
- Federal funding should not be sought according to an externally communicated, strict ratio because some Federal programs will provide more than matching funds as grants. As such, adopting a strict ratio could limit the funds available, or require state and local government to provide more funds than is possible or needed. Where feasible, up to 100% funding should be sought.
- Clearer communication as to whether projects are focused on building resilience through reducing physical impact risks versus projects that seek to deliver multiple social and economic outcomes at a regional scale, or a combination of both. These two streams of funding are needed to enable targeting of resilience versus regional development funding opportunities.

To build a case for government to commit funding it is important to change the narrative in relation to funding of coastal management works from one of physical coastal protection to a broader message about building regional social, economic and environmental resilience.
While this project has explored alternate funding options, the review has found that this will only be feasible if the funding narrative is shifted. Examples of how the narrative can be changed are illustrated in Table 2. The narrative can be further tested and matured through development of either actual funding applications, or through sharing example case studies such as those developed for this project (Appendix B).

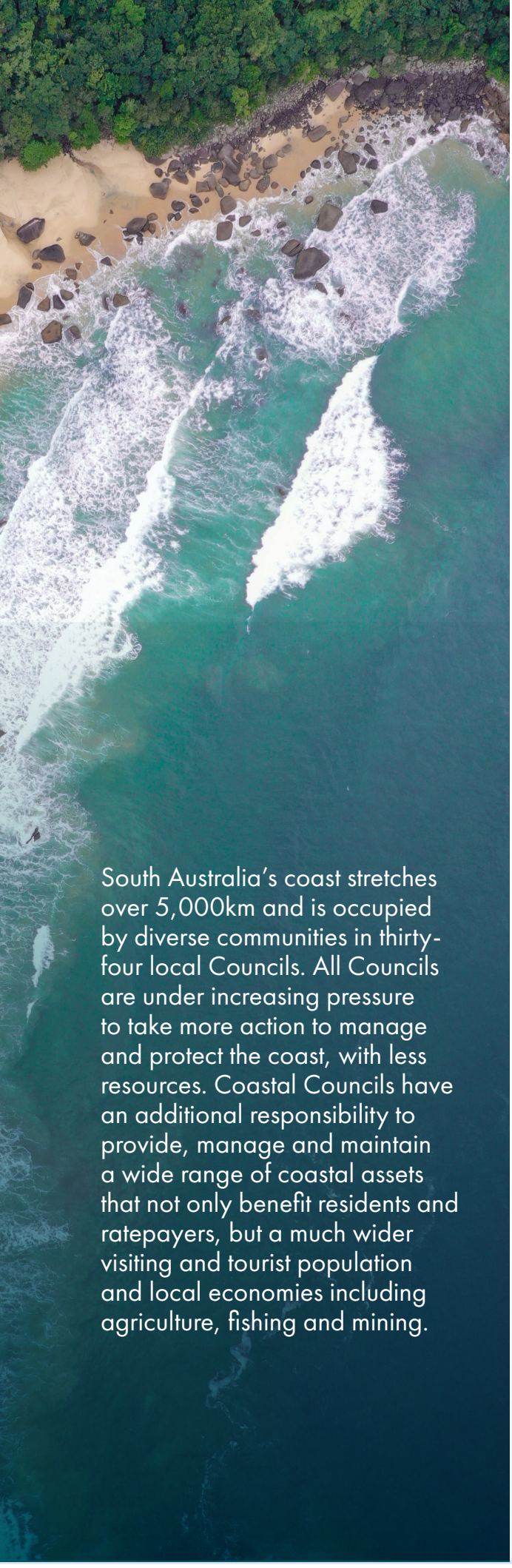
A consolidated model for co-investment that describes the context for coastal resilience, funding objectives, key stakeholders and key design principles is summarised in Appendix C.

With respect to priority actions, the following are recommended:

- Raise awareness through targeted advocacy and lobbying - Increased public funding will only become available through increased awareness at all levels of government, which will require targeted and purposeful lobbying. SACCA and other regional councils can play an important role in starting this conversation both locally and within the targeted agencies through the development of the advocacy paper, which is a further output of this project. This should combine, regional, state and Federal advocacy tactics.
- Identify target region and establish formal consortium to progress a regional development approach – This paper outlines how business cases can be developed focused on delivering multiple social and economic outcomes at a regional scale, combining multiple individual projects that would otherwise be seen as one off physical risk reduction actions. Supporting the co-investment model should be regional groupings of projects that align to the key design principles. Ideally these would be presented as a backlog of projects with multiple year funding requirements. The backlog could be separated out into projects above and below a threshold value (such as the $5 million mentioned above), and include the results of distributional analysis for larger projects. The case studies in Appendix B provide further illustration of how such projects can be structured and communicated.

1 This threshold value is being used in the NSW Government Coastal and Estuary Grants program.
2 CBA is widely recognised as the most appropriate tool for considering and comparing the costs and benefits of a wide variety of policies and projects, including infrastructure projects. (Infrastructure Australia Assessment Framework)

CONTENTS



South Australia's coast stretches over 5,000km and is occupied by diverse communities in thirty-four local Councils. All Councils are under increasing pressure to take more action to manage and protect the coast, with less resources. Coastal Councils have an additional responsibility to provide, manage and maintain a wide range of coastal assets that not only benefit residents and ratepayers, but a much wider visiting and tourist population and local economies including agriculture, fishing and mining.

1. INTRODUCTION

To address coastal issues including inundation and erosion, Councils have identified the need to adopt a more strategic, long-term approach to realising coastal management outcomes, including new funding and investment strategies, better coordination between levels of government, development of local expertise in coastal planning and decision making, and capacity building within local government.

The South Australian Coastal Councils Alliance (SACCA) engaged Edge Environment (Edge) and Marsden Jacob Associates (Marsden Jacob) to identify opportunities that would lead to a new co-investment model(s) leveraging funds from all levels of Government and outlining key design principles. Noting this context, the objectives of the project were to:

- Summarise the scale and regional impact of the coastal inundation and erosion issue in South Australia to provide key data and content that can contribute to a broader advocacy campaign.
- Undertake a review of the current funding landscape to better understand the available funding mechanisms and their appropriate application to the South Australian context.
- Identify the most appropriate mechanism or funding model that would be suited to the current funding landscape.
- Develop key supporting material that would best support this approach.
- Develop a list of actions to be taken by SACCA to progress the recommended approach.

The deliverables for the project were:

- Needs Assessment and Literature Review (completed): This report outlined the findings of desk-top based research, outlining the scale of the issue and the current funding landscape. The primary purpose of this document was to house the key data and statistics to build the business case and inform the direction of the future interviews and research which followed.
- A Discussion Document (this report): An internal facing report summarising the findings of stakeholder interviews and identification of co-investment model(s).
- Advocacy Paper (to be developed): A brief external facing summary of this issue, the position of SACCA and associated groups with a clear request for future support used to lobby State and Federal Government.

This document is the Discussion Paper and draws on the evidence base from the Needs Assessment and Literature Review to present recommendations, especially in relation to key design principles for a future co-investment model. This Paper also summarises the outcomes of interviews with key stakeholders (listed in Appendix A) that informed the recommendations.

2. UNDERSTANDING THE FUNDING LANDSCAPE

The Needs Assessment was used to define the scale of the coastal hazard issue as well as the challenges and opportunities in addressing it. The Literature Review includes a detailed review of all existing funding mechanisms and opportunities across the three levels of government, as well as public/private co-funding models across coastal management and other similar infrastructure projects. The analysis assessed the viability of applying the funding models to the South Australian context.

Key findings from the Needs Assessment and Literature Review are summarised below.

2.1 Coastal governance

2.1. Local governments

Half of South Australia's 68 councils are located on the coast. Councils have responsibilities associated with providing, managing, and maintaining a wide range of coastal assets and delivering services across the State's coastline. For example, maintaining public use of beaches, jetties and boat ramps; conserving and protecting natural assets such as dunes and cliff; constructing coastal protection structures like breakwaters, rock walls; and ensuring appropriate planning for existing and future coastal development.

As described in the Local Government Act 1999, Councils have responsibilities for adapting to and addressing climate risks. Councils may be liable if damage to the coasts occur as a result of their negligence, misinformation or overstating of risks.

Nationally, coastal management issues are also advocated for by the Australian Coastal Councils Association (ACCA). Known previously as the National Sea Change Taskforce (until July 2015), the association is a national body representing the interests of coastal councils and their communities. It commissions research on a range of coastal issues and advocates for the interests of coastal councils to various levels of government.

2.1.2 State government agencies

The Coast Protection Board was formed in 1972 with the proclamation of the Coast Protection Act 1972 (the Act). The Act is almost 50 years old and was drafted before the Landscape South Australia Act 2019 (SA), and before the now superseded Natural Resources Management Act 2004 (SA). At the time, the Board was the sole body responsible for the protection, restoration, development, management, research and other key functions relating to South Australia's coast.

Now regional landscape boards are also responsible for sustainably managing their region's landscapes, including coastal landscapes. Other State Government agencies relevant to coastal development and protection include Department for Infrastructure and Transport (DIT), Department of Primary Industries and Regions (PIRSA), SA Environment Protection Authority, and Department for State Development.

2.1.3 Federal government and agencies

Australia currently has no Federal coastal management legislation or current strategy and no on-going coastal management funding arrangements. 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.

The Federal Government has periodically taken a stronger interest in coastal management and adaptation, for instance through the development of a national coastal adaptation agenda in 2010[3]; the National Climate Resilience and Adaptation Strategy in 2015[4]; and the National Climate Change Adaptation Research Facility (NCCARF) and CoastAdapt (a web-based decision support tool) between 2008-2019.

3 https://www.environment.gov.au/climate-change/adaptation/publications/developing-coastal-adaptation-agenda
4 https://www.environment.gov.au/climate-change/adaptation/publications/national-climate-resilience-and-adaptation-strategy

Despite the lack of a clear current policy position on coastal management, the Australian Parliament has previously explored this issue, as was outlined in October 2009 in the House of Representatives Standing Committee on Climate Change, Water, Environment and the Arts' report on the inquiry into climate change and environmental impacts on coastal communities[5]. In relation to governance, recommendations in the report included:

- The Committee recommends that the Australian Government give consideration to establishing a separate funding program for infrastructure enhancement in coastal areas vulnerable to climate change. Such funding should be provided according to a formula requiring contributions, either financial or in-kind, from state governments and relevant local government authorities.
- The Committee recommends that the Australian Government provide funding support for the ongoing activities of the Australian Coastal Alliance in providing a national information and communication interface between research organisations and local government authorities and other coastal stakeholders.
- The Committee recommends that the Australian Government, in cooperation with state, territory and local governments, and in consultation with coastal stakeholders, develop an Intergovernmental Agreement on the Coastal Zone to be endorsed by the Council of Australian Governments.

2.2 Coastal risks and key impacts

More than 90% of South Australians are living within 50km of the 5,000km coastline[6]. Coastal environments have faced the cumulative impacts from development, pollution, resource use, habitat modification, pests and diseases, and climate change.

An increased frequency and intensity of inundation and shoreline erosion as a result of extreme weather events and coastal processes will continue to threaten infrastructure and assets, causing disruption to multiple sectors and requiring management response. The expenditure in planning for and responding to coastal issues are a significant impost on impacted councils, particularly those with a small ratepayer base.

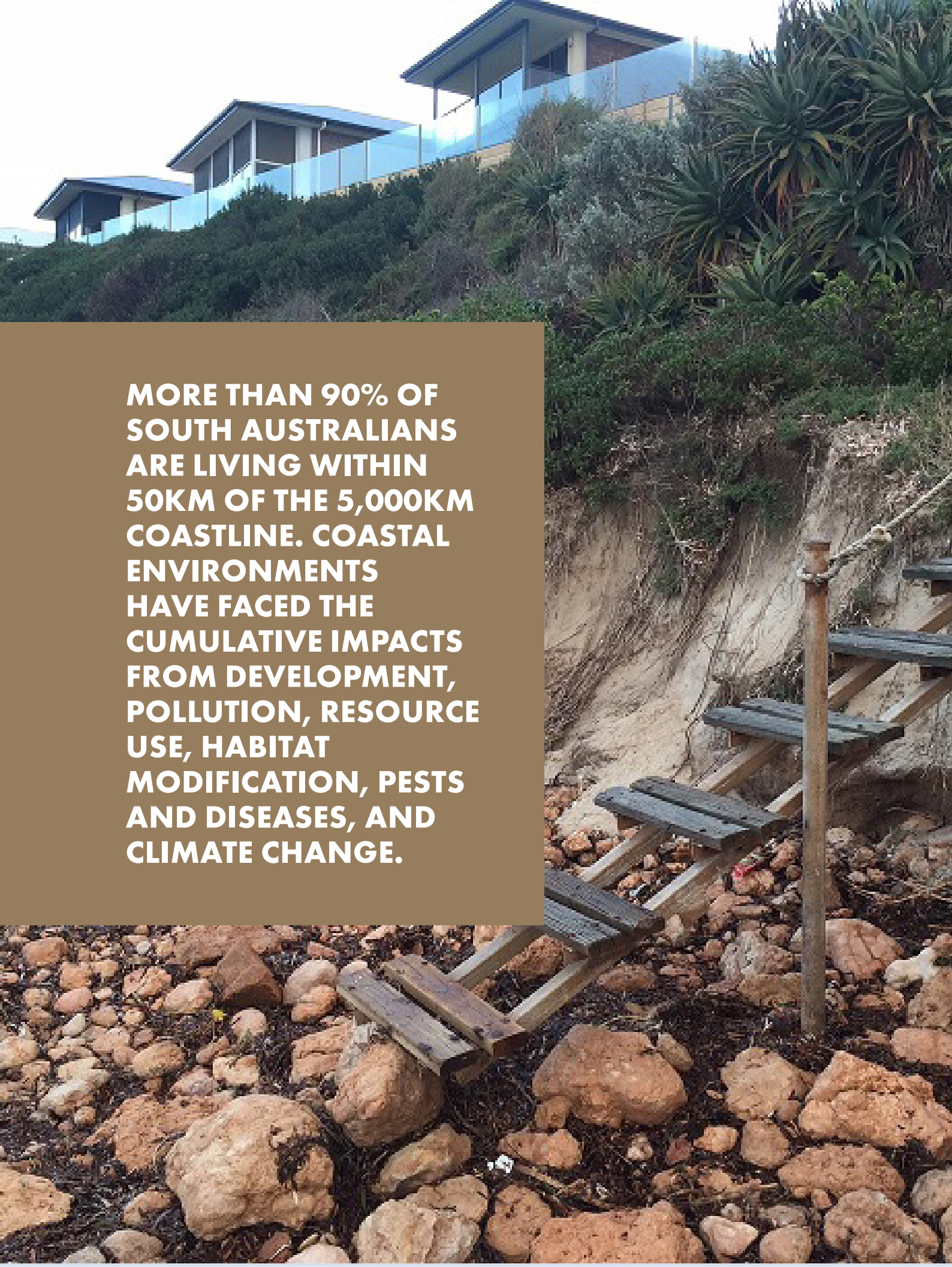
It is estimated that the total replacement cost of assets when the South Australian coast is exposed to a 1.1m sea level rise (by 2100) will be around $46 billion. This does not include the long term social and economic impacts that will result from inadequate investment on the coast. In the absence of adequate protection measures, 60,000 or more built assets along the coast will likely be at risk. This could cause damage to up to 30% of some Council's housing stock. If no measure was taken and a major flood (1 in 100 years) occur, an estimated cost of a clean-up of the City of Port Adelaide Enfield can reach $30 million[7].

Coastal assets like jetties and boat ramps are attractive features for residents and visitors alike. Their retention, improvement, and management fall under local government's responsibility. Between 2005 and 2015, councils collectively spent more than $6.6 million on both state and council owned jetties[8]. Analysis of Local Government Grants Commission data reveals that in 2018/19 coastal council's expenditure in relation to jetties, boat landings, wharves, boat ramps, marinas and other recreational facilities was $5,411,471.00. The same councils in 2018/19 only received $533,000, or around 9.8% in grants or payments to support these works from the state government.

The 2016 storm event caused damage to coastal environment, assets and infrastructure along much of the South Australian coast. The high tide in the Spencer Gulf coincided with significant storm surges and large, locally generated waves and swell, which caused flooding to coastal settlements on the eastern coast of Eyre Peninsula and the Yorke Peninsula. Several roads and esplanade were flooded. At least eleven councils, rural and metropolitan, suffered substantial damage to their beaches, cliffs and sand dunes, seawalls and jetties. Metropolitan and regional jetties were severely damaged leading to repair costs and financial loss of local businesses relying on the tourist economy. For rural jetties alone, repair costs were estimated at $3.5 million (e.g. $1 million for Port Germein jetty and $400,000 for the sea wall)[9][10].

The cost of managing the coast and coastal assets have been a challenge and this cost is forecast to grow exponentially. To give an example of one small regional Council, Kingston District Council had spent an average of 31% of its total operating revenue on coastal management over the past few years.

5 file:///C:/Users/Mark%20Siebentritt/Downloads/http___www.aphref.aph.gov.au_house_committee_ccwea_coastalzone_report_ch%206.pdf
6 https://www.epa.sa.gov.au/soe-2018/coast/describing-the-coast
7 Department of Cliamte Change and Energy Efficiency, "Climate Change Risks to Coastal Buildings and Infrastructure: A Supplement to the First Pass National Assessment," Commonwealth of Australia, 2011
8 Local Government Association Mutual Liability Scheme, Risk Management Update 2019
9 Independent Review of the Extreme Weather Event South Australia. 2016 and Business SA, 2016
10 http://www.bom.gov.au/climate/current/annual/sa/archive/2016.summary.shtml



MORE THAN 90% OF SOUTH AUSTRALIANS ARE LIVING WITHIN 50KM OF THE 5,000KM COASTLINE. COASTAL ENVIRONMENTS HAVE FACED THE CUMULATIVE IMPACTS FROM DEVELOPMENT, POLLUTION, RESOURCE USE, HABITAT MODIFICATION, PESTS AND DISEASES, AND CLIMATE CHANGE.

Coastal hazard impacts have seen physical damage to public and private assets, and flow-on effects on property values and the risk of materially impeding regional development and investor confidence in the regions. Restricted access to beaches, jetties, boat ramps, caravan parks, tourist accommodation, esplanades, coastal walking/cycling trails and other infrastructure on the coast due to flooding and erosion can cause adverse consequences on the tourism and recreation sector and people's health and well-being not only in the regions but across the State. Disruption to public infrastructure including road and rail networks can disrupt transport of goods for local and export markets.

In addition to the direct need for additional funding to mitigate the long term impact of coastal hazards specifically, agencies such as Regional Development Australia and Department for Infrastructure, Transport, Regional Development and Communications are currently assessing the need for broader economic support packages to assist regional communities recover from the impacts bushfire, drought and COVID 19. These agencies are looking for funding opportunities that will support broader regional economic growth through increased tourism and increased regional industry activity.

2.3 Overview of funding landscape for coastal management

Responsibility for coastal management is generally shared between local land managers, however, the cost of implementing soft and hard infrastructure is often outside the capacity of these organisations. Our review found that many state governments in Australia have a funding program for coastal management to support local land managers.

Despite the presence of nationally or regionally significant projects along the coast, the Federal Government has traditionally not had a consistent funding mechanism in place for coastal management and instead provides ad hoc funding on a project-by-project basis. This is because the framing of coastal management issues has kept focus on Local and State government for funding. However, Infrastructure Australia has recently included coastal zone management on the infrastructure priority list, but appears to still be grappling to understand the opportunity and basis for justifying national funding because the approaches have been framed at a local scale.

Grants and special levies are the most common funding mechanisms local governments rely upon. It should be noted that when referring to funding this paper is considering how infrastructure is paid for, not how it is financed in the long term. Other mechanisms include government borrowing, fee for service, rates and levies, developer contributions, bonds and co-investment. As an example, in 2019 the South Australian Government leveraged funds raised through the solid waste levy to undertake sand carting and other Metropolitan beach works to the value of $48.4 million[11].

A key learning from the Needs Assessment was that to build a case for government to commit funding it is important to change the narrative away from coastal protection because the range of beneficiaries is too narrow and local to be of interest to other levels of government. While this project is about exploring alternate funding options, our review has found that this will only be feasible if the narrative is shifted in a manner that addresses the following points:

- **Opportunities:** that could be realised if the Australian and State Governments invest in to support outcomes such as regional development, diversification and supporting transport and cross-border outcomes
- **Commitments:** initiatives and commitments that are already in place but have not been implemented (drawing on the concept of backlog).
- **Constraints to development:** that investment is being impeded through a lack of both planning and action on coastal zone management.

The need for a new narrative is particularly important because beneficiary pays is a key principle that underpins funding considerations across all reviewed jurisdictions where coastal zone initiatives are concerned because there is no impactor who can be charged. This approach suggests that funding is sourced from stakeholders who directly benefit from a mitigation activity, which can include private and public stakeholders. This funding approach suggests that only when beneficiaries cannot be charged, should taxpayers or ratepayers (i.e. Local, State and Federal Government) contribute or bear the cost. The result of this principle is that significant public benefit (such as through benefits associated with tourism, regional service hub, infrastructure) needs to be demonstrated if a significant public subsidy is to be accessed, beyond minimum threshold levels.

11 https://www.environment.sa.gov.au/topics/coasts

2.4 Future funding opportunities

The funding opportunities identified in the Needs Assessment and Literature Review were further explored with key stakeholders to understand the potential future funding landscape and what is required to access or reallocate funding as part of developing a new co-investment model. Importantly, the need for government funding is likely to increase given that indications are that the financial services sector including banks and insurers will to seek to reduce their exposure to coastal hazard risk in the decades to come, meaning that governments increasingly will become the insurer of last resort. A summary of the insurance industry perspective on this is provided in Box1.

BOX 1.
A perspective from the insurance industry on future. Source: Tom Davies, Climate Change Special Advisor, Insurance Council of Australia.

The Insurance Council of Australia (ICA) indicated that it is investigating the set of natural hazard exposures termed, "Actions of the Sea", that will be exacerbated by climate change and commensurate sea level rise. Insurers do not generally insure for Actions of the Sea, these hazards are typically exclusions. The action of the sea hazard that is getting most attention is coastal erosion. Our investigation defines each of five hazards and starts an assessment about how and whether general insurers might be able to cover each hazard, now and in a climate changed future."

"Generally it is not insurers business to fund or build physical risk mitigation infrastructure. Insurers assess risks, price it, and offer a financial service to cover risks. If physical risk mitigation infrastructure is built, and it reduces natural hazard exposure (such as flood), then insurers would be one of a series of benefactors including community, local, state, federal government, emergency managers, insured customers, banks etc. However, this said, insurers are exploring collaborations with local governments to originate and prove pathways for private finance to enable local governments to build physical risk mitigation infrastructure. This is on the basis that local gov need to mitigate natural hazard exposures, and need to find ways to pay for it. User pays models are being explored. As a benefactor we are motivated to help them with the process, and potentially invest, if there is a business opportunity."

Interviewees included the South Australian Coast Protection Board, South Australian Treasury, Infrastructure South Australia, Infrastructure Australia and local government representatives. The full list of interviewees is provided in Appendix A. Interviews identified current limitations of funding sources and what issues need to be addressed to develop key design principles for a new co-investment model. Insights from the interviews are as follows.

- **Infrastructure and regional development projects have the potential to attract funding from Federal agencies** – Infrastructure Australia has recently shown interest in supporting coastal resilience projects. To be eligible for Infrastructure Australia funding, such projects would need to exceed a value of $50 million and be of national significance. There is an opportunity for clusters of local governments to work together in identifying and designing packages of works that meet the criteria for Infrastructure Australia funding. The need and opportunity to develop new approaches to accessing Federal funding has been highlighted in the CSIRO and Value Advisory Partners Enabling Resilience Investment project, which provides an inclusive, systems based and quantifiable method to fund well adapted and disaster resilient futures which addresses the gaps in the economic assessment of investments in adaptation, disaster risk reduction and resilience. This has recently been used to develop a coastal resilience project proposal with the City of Port Adelaide Enfield for Infrastructure Australia funding.
- **Multiple benefits and diversified funding should be considered** – Coastal programs should seek to highlight the social, economic and environmental benefits of coastal management works, rather than focusing primarily on coastal protection, which instead would be a co-benefit. There is an opportunity to develop a strategy on how to position projects for this type of funding beginning with the early planning stages. In doing this, a single coastal project could be shown to deliver benefits to coastal protection, tourism, health and well-being and regional development.
- **Consideration of resilience to coastal hazard impacts is important in build a new co-investment model** – Building coastal resilience is a key long-term solution to change along the coast and recognises that in addition to coastal protection (risk reduction) other key coastal resilience building actions include planning, preparation, adaptation to unmitigated risks, and response capabilities. A greater focus on resilience importantly ties in with significant work at the national level over the last decade on resilience building activities.

- **Business cases should encompass both financial and qualitative rationale** – It is important that local governments work with relevant agencies to develop a broad business case to justify the need for further funding when submitting a proposal to budget or cabinet processes. At State and Federal levels, relevant ministers will make a decision based on the business case and whether to advance proposed coastal projects into full budgeted proposals. Therefore business cases should consider broader issues of relevance to the political narrative at the time of submission.
- **Federal projects should be developed with buy-in from State ministers** – In building the case for greater Federal investment, the ratio of funding between tiers of government needs to be clear and aligned to whether benefits are local, regional, state or Federal. Any unsolicited proposals to the Federal Government will be directed to State ministers for consideration and hence support from State ministers is essential.

Through the interview process a number of agencies were identified that can help develop a new co-investment model that either currently play an important role in coastal hazard management, are developing a role in this space, or have the potential to provide future support. Importantly, entities were identified that can fund either improved coastal resilience or diversified regional development, as these emerged as the two preferred funding pathways. SACCA and other stakeholders will need to work in partnership with these organisations to raise awareness of the coastal hazard issues facing the region and the potential opportunities available.

Target organisations for resilience funding in the future include the following:

- **National Coastal Hazards Working Group** - This National Coastal Hazards Working Group (CHWG) was established in November 2019. The CHWG was tasked with developing a collaborative approach to coastal erosion for consideration at a future meeting of state and Federal Ministers. In consultation with the ACCA, the National Survey on Coastal Hazards was developed and distributed to all coastal Councils. The findings indicated that access to funding is a priority issue for most coastal councils, with many respondents commenting that increased Federal and State support and investment in coastal management is essential. The results reaffirmed the gap between the funding currently available to councils for responding to coastal hazards compared to the level of funding councils estimate they will need to address future risks[12]. Recently, the CHWG prepared a submission for the Infrastructure Australia Priority List which includes coastal inundation as one of five new high priority national initiatives[13]. This has resulted in Infrastructure Australia's recognition of the significance and urgency of broader coastal hazards (rather than only inundation).
- **National Relief, Resilience and Recovery Agency** - In November 2020 the Federal Government announced major reforms as part of its response to the Royal Commission into National Natural Disaster Arrangements[14]. Measures included a number of interlinked reforms and highlighted the need for strong leadership on all hazards emergency management and natural disaster risk reduction, including coastal hazards. This has led to the establishment of the National Resilience, Relief and Recovery Agency (NRRRA) which aims to drive the reduction of natural disaster risk, enhance natural disaster resilience and ensure effective relief and recovery from all hazards. The Agency is proposed to commence no later than 1 July 2021. The Agency has gathered preliminary case studies of hazards and mitigation options from around Australia and has adopted a case study of Port Adelaide for coastal hazards aspect.
- **Infrastructure Australia** - Although coastal processes have not been a major part of Infrastructure Australia's (IA) research and policy focus, coastal inundation from sea level rise is listed by IA as a high priority (top five Infrastructure Priority List 2020), reflecting the diversity and urgency of Australia's future infrastructure needs. IA recognises adaptation potentials of planning reform and soft infrastructure, in addition to hard engineering solutions. It also recognises the significance of community resilience and connectivity to blue space from economic activity generation e.g. aquaculture, tourism, mental and physical health. This means that IA presents an opportunity for both resilience and regional development funding.

  A pathway for local government to connect and coordinate with IA is through Infrastructure SA (ISA). The role of ISA is to ensure better planning and more transparent decision-making for critical public infrastructure projects for the State. ISA provides independent advice to government to enable informed and evidence-based decisions on infrastructure planning, investment, delivery and optimisation. It has a role in preparing project summary and indicative funding programs to State Government and Infrastructure Australia. In the context of coastal management, ISA has been working closely with the Coast Protection Board on managing coastal hazard risks, and has recently been involved in prioritising infrastructure initiatives for SA. Importantly, the Chief Executive of ISA represents SA in the newly formed national Relief, Resilience and Recovery Agency.

12 Australian Coastal Councils Association Newsletter, March 2021
13 https://coastalcouncils.org.au/infrastructure-australia-lists-coastal-inundation-as-high-priority-national-initiative/
14 https://www.pm.gov.au/media/reforms-national-natural-disaster-arrangements

Aside from IA, which is relevant to federal funding for both resilience and regional development initiatives, target groups for regional growth and development funding also include:

- **Department for Infrastructure, Transport, Regional Development and Communications** - The Federal Government routinely provides funding for regional projects. Recently, this has been through the Federal Department for Infrastructure, Transport, Regional Development and Communications. For example, the 2020–21 Regional Budget Package presented over 350 packages and individual measures to respond to the challenges of drought, bushfires, floods and COVID-19. This includes measures designed to strengthen regional communities and assist them to recover and grow their economies. Accessing this type of funding in South Australia would typically need to be done in partnership with regional RDAs.
- **Regional Development Australia** – Regions SA and Regional Development Australia Boards (RDAs) will continue to play an important role in growing and revitalising South Australia's economy. Regional RDAs work with their partners to identify issues that cross regions and provide critical intelligence back to the Federal Government on impacts to their region's businesses and communities. South Australian RDAs have recently released a refreshed Charter which will emphasise greater strategic alignment across all levels of government and regional planning that identifies and advocates important long-term investment priorities. Their new funding agreement and Charter could provide a strong basis for multiple benefit coastal works.

3. KEY FINDINGS

Based on the findings of the Needs Assessment, Literature Review and interviews, a series of key issues have been identified that should be addressed as part of developing a new co-investment model for funding coastal management. Importantly, a single model is not recommended, instead key design principles should be agreed to by coastal councils that relate to multiple project types, noting that to address the current funding gap will likely require combinations of multiple funding sources that have different scales and objectives.

3.1 A resilience based approach

The South Australian coast is experiencing a process of constant change, driven by year to year variations in coastal processes and exacerbated by accelerating sea level rise. Investment driven by one off responses to erosion and flooding impacts may deliver short term fixes for some locations, but does not build long term resilience. Instead, future investment proposals by councils individually or collectively should be based on the principle of building resilience, with a long term horizon, and matched by a funding source and applicant funding pathway that rewards a resilience approach.

Resilience includes accepting that in some places it is not possible to eliminate all coastal change and its impacts, and so communities need to be better at adapting to live with the consequences. This means considering the need to:

- raise awareness of risks;
- reduce risk exposure;
- plan and design so that people and infrastructure can adapt and be resilient to coastal risks that cannot be mitigated;
- respond to emergency events that have not already been addressed through risk reduction and adaption measures.

Funding for coastal management that are framed by the principle of resilience can be seen interstate as well as overseas. The following are some examples:

- NSW Coastal and Estuary Management Grants program[15] – The focus is on building a thriving, adaptive and resilient coast from a social, cultural, economic and environmental perspective.
- NSW Increasing Resilience to Climate Change (IRCC) Grants program[16] – The aims are to increase community resilience and reduce the impacts from climate change through supporting projects that help communities to take action, foster partnerships and manage climate change impacts by being able to better plan, prepare for, and respond to hazard risks.
- Queensland Resilience and Risk Reduction Fund (QRRRF)[17] – The fund supports projects to strengthen the resilience of Queensland communities and help them better prepare for disasters. Projects related to coastal management are, for example, coastal township flood studies, evacuation route planning, flood warning and response infrastructure upgrade, Coastal Hazards Resilience and Risk Reduction Officer;
- North Carolina Resilient Coastal Communities program[18] – The program provides funding to local governments to help overcome barriers in coastal resilience and adaptation planning, boost local government capacity, and support a proactive, sustainable, and equitable approach to coastal resilience planning and project implementation;
- US National Coastal Resilience Fund[19] - this is a national program with a regional focus, and targets specific circumstances, needs and priorities. The fund aims to increase resilience through increasing and strengthening natural infrastructure to protect coastal communities while also enhancing habitats for fish and wildlife;
- UK Flood and Coastal Resilience Innovation program[20] – driven by a National Strategy for Flood and Coastal Erosion Risk Management to 2100, the program seeks to adopt a range of innovative flood and coastal resilience measures: from the construction of flood defences, river channel maintenance and sustainable drainage systems, to nature-based solutions, property level resilience and alternative land management practices.

15 https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Water/Coasts/future-directions-statement-200497.pdf
16 https://climatechange.environment.nsw.gov.au/adapting-to-climate-change/community-grants
17 https://www.qra.qld.gov.au/qrrrf
18 https://deq.nc.gov/about/divisions/coastal-management/coastal-adaptation-and-resiliency/nc-resilient-coastal
19 https://www.nfwf.org/programs/national-coastal-resilience-fund
20 https://environmentagency.blog.gov.uk/2021/03/29/launching-the-flood-and-coastal-resilience-innovation-programme/

Our interviews with stakeholders suggest that funding should be sought to undertake coastal management works within the broader framework of 'resilience'. A long-term resilience focus that links with coastal adaptation will also align with the State Government's coastal adaptation strategy and the direction of the new National Recovery and Resilience Agency. This should be supported by a clear applicant funding pathway, outlining how projects are rewarded for a focus on resilience instead of being reactive. By aligning with a resilience approach, not only will the business case narrative better align with national policy and funding drivers, but there will be a better outcome for coastal communities.

Recommendations

- A key design principle is that all future coastal projects should be presented in the context of resilience rather than protection, explicitly stating what aspects of a resilience-based approach are being addressed.
- A future co-investment model should outline a clear applicant funding pathway for projects that are either building physical resilience by directly addressing coastal erosion and inundation or building social or economic resilience through supporting regional co-benefit.

3.2 Funding time frames

Funding timeframes relate to two issues: the need for initiatives or regions to receive multiple years of funding and the need for funding to have a longer term horizon. For example, global projections of the long term impacts of climate change, as well as the Coast Protection Board's recommended consideration of short, medium and long term climate scenarios out to the year 2100 support the need for long term action planning. The May and September 2016 storm events in South Australia that resulted in more applications for funding repairs to coastal assets than funds that were available highlighted the need for funding initiatives across multiple years.

The Thames Estuary 2100 Plan[21] is a good example of a long term strategy that also integrates resilience. The plan has climate change at its core and includes three phases: 2010-2034, 2035-2049, and 2050-2100. This multi year adaptive approach to planning has an impact on future investment and funding, partner collaboration, and management of protection mechanisms to deliver coastal resilience.

In Australia, multi year funding has been made available for managing coastal hazard risks interstate, restoring degraded habitats, and improving health of coastal environments.

- In New South Wales, $83.6m funding was available from 2016/17 to 2020/21 to support coastal and estuary planning projects and the implementation of works identified in certified coastal zone management plans or coastal management programs[22].
- In Victoria, the Marine and Coastal Policy 2020, sets a 15-year vision for "A healthy, dynamic and biodiverse marine and coastal environment that is valued in its own right, and that benefits the Victorian community, now and in the future." The three 5-year Marine and Coastal Strategies outline priority actions to achieve the intended outcomes of the Policy over the next 15 years, including timeframes and responsibilities for delivery[23].

Precedence already exists for multi year funding with the Adelaide's Living Beaches Strategy 2005-2025 which has received multi year funding for sand pumping to provide long term protection for the Metropolitan coastline. Despite this example, too often coastal protection works elsewhere in the State receive limited and once off funding for annual works.

There is an opportunity for local government to work towards developing a longer term program of works, tied to resilience objectives, that draw on combinations of Federal and State investment. As part of this move, currently unfunded works – or what could be described as a backlog - should be identified and communicated. A backlog is where a council has an infrastructure deficit that is higher in dollar value than the existing recurrent funds received from the Australian and NSW governments (i.e. ratio is less than 1). This approach was illustrated by the NRMA in its "Funding Local Roads" report, which mounted the argument that an infrastructure backlog exists for NSW regional and local roads. Key reform initiatives identified by the NRMA that could also be applied to coastal resilience projects include:

- Recategorising strategic projects (roads) in the regions to State projects. This means reallocating funding responsibility to the State Government.
- Revitalising the Regional and Local roads network through the Regional Growth Fund and Snowy Hydro Legacy Fund – This involves targeting long term government plans with the aim of providing economic stimulus to growth centres and boosting the productivity of the agricultural, resources and tourism sectors; and
- Accelerating reform of Roads to Recovery and Financial Assistance Grants – This involves linking funding directly to the backlog estimates as compiled by councils.

21 Thames Estuary 2100
22 https://www.environment.nsw.gov.au/topics/water/coasts/coastal-management/programs
23 https://www.marineandcoasts.vic.gov.au/coastal-management/marine-and-coastal-strategy

While the concept of a backlog has been explored through the identification of the need for a $200 million+ investment in coastal management in South Australia over 10 years, this needs to be broken into multiple programs of activity with packages of works to be implemented over periods of 2-3 years, each clearly outlining what mix of public and private sector investment is required.

Recommendation:

- A key design principle of the future co-investment model is a preference for projects with multiple year funding needs scoped and articulated. This would result in resilience priorities being presented at a regional scale as packages of works and activities over periods of 3-5 years.
- While the existence of a funding backlog has been implied through past work on coastal funding requirements, this has not been explicitly communicated in this way. A contextual paper is therefore required that outlines the backlog of coastal resilience projects that exist in South Australia and how this could be managed through multiple programs of activity with packages of works. The backlog of works can then be used as a baseline to balance actions on multiple timescales and advocate for (unfunded or unfinanced) coastal works from relevant public and private funding partners.
- The State Government should work with regions to develop regional coastal management plans with actions, timeframes and tied funding based on prioritisation and multi criteria.

3.3 Contribution of the different tiers of government to funding

An effective infrastructure contributions system is going to be important to enable the delivery of vital coastal resilience infrastructure, unlocking economic and social potential and boosting investment in South Australia's coastal zone. Given the magnitude of the risk and cost, all three levels of government – Federal, State and local – will have an important role in the provision of funding support for planning, prioritisation and infrastructure. This is reenforced by the LGA SA Policy Manual which states that "Local government acknowledges that grants from other spheres of government are most beneficial when untied, and available unconditionally for a wide range of purposes. Local government shall continue to welcome grants from federal/ state governments and negotiate terms that will most benefit local communities."

The Federal Government's Productivity Commission's Public Infrastructure Inquiry Report (2014) notes that the "funds to pay for public infrastructure ultimately have to come either from users and other beneficiaries, or from governments." In South Australia, these funding sources are:

- **Public funding mechanisms**
  - > State Government through the budget or other revenue raising (e.g. debt)
  - > Federal through grants
  - > Local government through rates or other special revenue mechanisms
- **Cost recovery mechanisms**
  - > User charges, and
  - > Infrastructure contributions

The Federal Government recognises that coastal erosion and shoreline recession from sea-level rise is a significant risk to coastal Australia. Individuals, businesses and local governments undertake coastal risk assessments to understand how they might be affected now and in the future.[24] Reflecting this the Federal Government has implemented a range of initiatives to support decision making, such as the Coastal Compartments Project which aims to help users undertake or commission best-practice risk and erosion assessments using a consistent approach based on the physical characteristics of the coastal environment.

Despite having clearly recognised the risk the Federal Government position is that the management of coastal resources is largely the responsibility of the States and local government, despite the Federal Government having responsibilities for many coastal issues, including defining maritime boundaries, overseeing national conservation goals and maritime safety.[25]

24 https://www.environment.gov.au/climate-change/adaptation/australias-coasts/coastal-compartments
25 https://www.ga.gov.au/scientific-topics/marine/coasts-estuaries#:~:text=The%20management%20of%20coastal%20resources,conservation%20goals%20and%20maritime%20safety

The challenge is that on the expenditure side the role of local government has expanded considerably over the last few decades. Local councils continue to maintain their prime function of providing services to property within its local government area. But, there is a growing range of social functions due to an ever growing set of external pressures, delegation of responsibility and even cost-shifting by other levels of government. However, vertical fiscal imbalance (i.e. revenue raising ability of local government does not coincide with its spending responsibilities) means that additional funding is needed from the State and Federal government to address the failures of the current local government revenue raising capacity and capacity to pay from owners of coastal assets who are being impacted by improved scientific understanding that was not available when development decisions were taken and climate change induced effects were not fully understood.

No matter the source, the analysis undertaken to inform this discussion paper has demonstrated that the pressures being faced by coastal councils in South Australia are not unique and responding to them depends on contributions from across all three levels of government to address the backlog of coastal protection works that need to be undertaken.

Reflecting the funding challenges faced at local and regional scale and to unlock opportunity, the Federal Government makes contributions towards a wide variety of projects:

- Coastal protection: The Federal Government contributed towards the development of coastal protection works, such as the Kingscliffe Revitalisation project (see Box 1).
- Transport and community infrastructure: The Federal Government is currently providing funding (with no co-contribution requirement) for roads and community infrastructure under the Local Roads and Community Infrastructure Program as part of the Covid response strategy.
- Bulk water infrastructure: Funding is being provided to support more efficient irrigation in Tasmania. No specific co-contribution was set, however the agreement states that the financial contribution is capped at a value with all other costs being the responsibility of the Tasmanian Government. Similar funding arrangements have also been struck with other jurisdictions (including South Australia) to support the construction of sustainable irrigation schemes that support economic growth, see National Water Infrastructure Development Fund.

Importantly, Federal contributions to infrastructure projects are not necessarily based on a ratio of Federal: state: local government investment, instead the Federal Government provides funding to states and territories, who in turn can "stretch" this as far as possible through other State and local government funding, and where relevant industry or other private investment. It is understood that options for investing in projects with Federal funding is also explored in the CSIRO and Value Advisory Partners Enabling Resilience Investment approach.

The question of the balance of State to Local Government funding remains important in the broader context of funding coastal resilience projects. Some State Governments are making significant contributions toward coastal protection planning and infrastructure. For instance, the NSW Government is providing funding under the Coastal and Estuary Grants program. The Coastal and Estuary Grants Program provides financial support and technical advice for local government to help them manage the coastal zone[26]. Funding of $83.6 million has been allocated that goes towards coastal and estuary planning projects and the implementation of works, with priority being given to significant open coast hazard locations that are specifically listed in the guidelines for the program.

NSW coastal projects commenced with a 50:50 funding ratio (matched between state and local government), but following feedback around complexity the approach was revised so that:

- Lower cost projects (less than $5 million) have a defined funding ratio of 2:1 and a simplified application process.
- Higher cost projects (over $5 million) have to be informed by cost benefit analysis and distributional analysis to demonstrate the public benefit, with a 2:1 ratio of state to local government funding being available for the public benefits aspects of the project.

In contrast, the state and local government funding ratio is more favourable for councils in South Australia. In accordance with the Coast Protection Act 1972, the Coast Protection Board can provide grants of up to 80% of the total cost of approved coastal projects of which Councils (including any other funding sources) must contribute a minimum of 20% of the total project costs, through cash and in-kind support.

26 Coastal and estuary grants program. https://www.environment.nsw.gov.au/topics/water/coasts/coastal-and-estuary-grants Accessed: 2/10/20

BOX 1.
Kingscliff Revitalisation project

NSW, Kingscliff Foreshore Revitalisation[27]

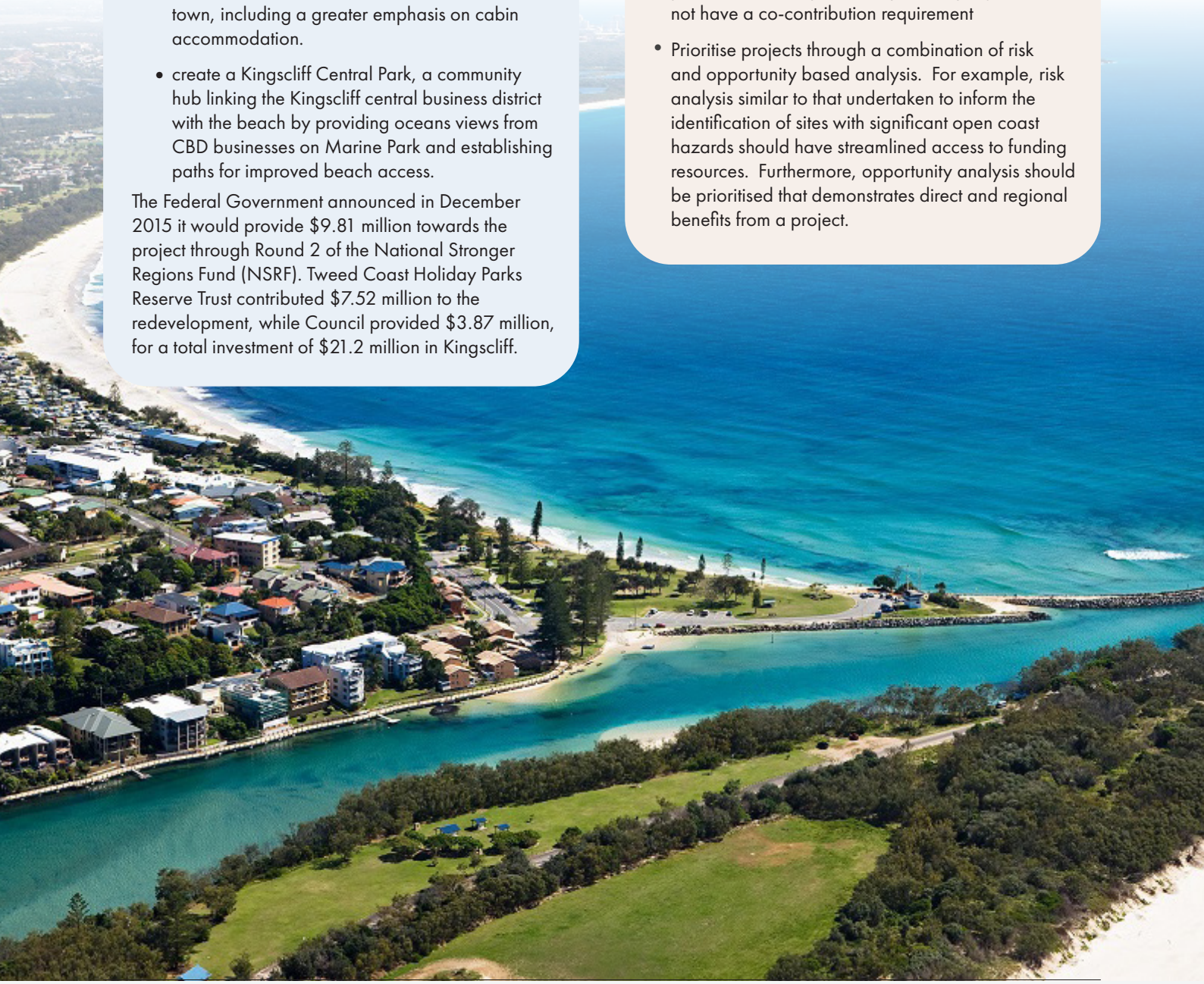
The Kingscliff Foreshore Revitalisation, a three-stage $21.8 million project being undertaken by Tweed Council to protect and enhance facilities along the Kingscliff CBD coastline. The project involved:

- construction of a permanent sea wall to protect the Cudgen Headland Surf Life Saving Club, Kingscliff Beach Holiday Park and Kingscliff Beach Bowls Club from erosion caused by storm events and projected sea level rises
- refurbish and modernise the facilities and services at Kingscliff Beach Holiday Park, to better meet the demands of the visitors to the town, including a greater emphasis on cabin accommodation.
- create a Kingscliff Central Park, a community hub linking the Kingscliff central business district with the beach by providing oceans views from CBD businesses on Marine Park and establishing paths for improved beach access.

The Federal Government announced in December 2015 it would provide $9.81 million towards the project through Round 2 of the National Stronger Regions Fund (NSRF). Tweed Coast Holiday Parks Reserve Trust contributed $7.52 million to the redevelopment, while Council provided $3.87 million, for a total investment of $21.2 million in Kingscliff.

Recommendation:

- A cost sharing and resourcing contribution model of at least matching Federal funding for future coastal resilience projects should be pursued with projects deemed to be of regional significance scoped on this basis. However, seeking to define a fixed ratio of Federal: State: local government funds is not recommended as this could lock in state and local government to making agreed contributions when in practice the Federal Government has shown that it can provide more than matching contributions in some cases.
- Seek an extension of existing Federal programs, such as the Local Roads and Community Infrastructure program to undertake coastal protection works, particularly as this program does not have a co-contribution requirement
- Prioritise projects through a combination of risk and opportunity based analysis. For example, risk analysis similar to that undertaken to inform the identification of sites with significant open coast hazards should have streamlined access to funding resources. Furthermore, opportunity analysis should be prioritised that demonstrates direct and regional benefits from a project.



27 https://www.yoursaytweed.com.au/KingscliffForeshore

3.4 Recognise the multiple outcomes on the coast

There is an opportunity in South Australia for the governance and program resource structures to support the realisation of multiple outcomes from investment into planning and infrastructure along the coast. The benefits from coastal protection, and more broadly resilience building, can be across a range of sectors, including trade, tourism, agriculture, and fishing. To unlock the potential economic and societal benefits, coastal projects should articulate the diverse economic benefits that they underpin and target non-traditional funding sources such as regional development investment from

either State or Federal Government (see the case studies developed for this project). Examples of how to present the business case for funding to target multiple outcomes is explored in further detail in Appendix B.

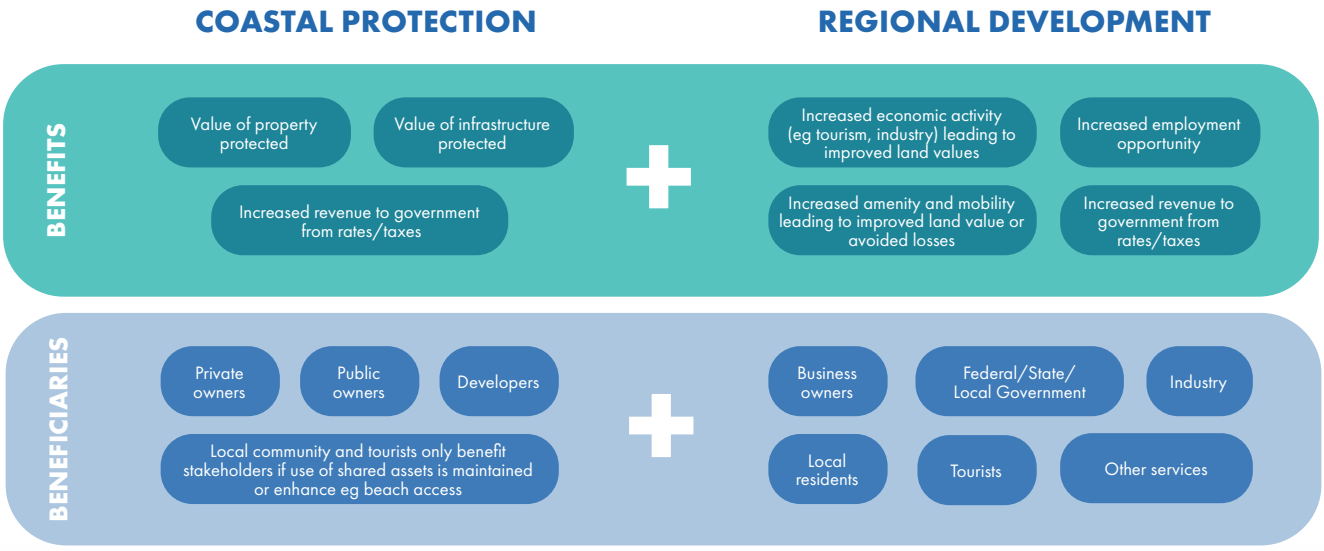
The Coast Protection Board will have an important role in prioritising and financially supporting coastal projects. But the scope of the Coast Protection Board is strongly focused on protection and restoration, and the financial resources at its disposal are inadequate to meet the infrastructure backlog.

The opportunity for many locations has the potential to extend well beyond coast protection, through:

- creation of employment opportunities to help rebuild the regions following the economic impacts associated from COVID;
- creation of tourism market opportunities for domestic and international travellers;
- support for economic growth projects across primary production, service, tourism and other growth sectors in the respective regions;
- increased investment certainty; and
- reduced pressures on the health and welfare systems because of increased economic opportunity.

Figure 1 below illustrates initial benefit mapping comparing the current coastal protection focus with a greater emphasis on regional development.

Figure 1. Benefit mapping - Coastal protection approach versus regional development approach.



Recommendation:

- A key design principle of a co-investment model should be the requirement to demonstrate direct and broader benefits from proposed projects. The benefits from projects will be region specific, so care needs to be taken to understand the range of benefits that arise from projects that support regional resilience and adaptation to climate change (see Case Studies in Appendix B).
- Coast protection works should intentionally be positioned for regional growth funding similar to the Building Better Regions Fund. This approach would highlight the social, economic and environmental benefits of protection works rather than focusing primarily on coastal protection. For example, storm surge levees may protect specific assets but they can also be used to elevate walking and cycling tracks and thoroughfares, connect coastal trails, and even provide connectivity to regional locations.

3.5 Balancing public and private investment

Although building resilience and realising opportunities requires multiple beneficiaries to invest in coastal protection, there is currently no agreed ratio for public versus private investment because of the nature of the current funding issues and because the beneficiaries are location and issue specific. Furthermore, in some instances private beneficiaries may be paying for the cost of earlier planning decisions. In an analysis of coastal and estuary funding in NSW[28] it was noted that "There is significant confusion regarding the application of cost benefit analysis (CBA), distributional analysis and the beneficiary pays principle. To date there has been limited experience with these concepts."

Careful analysis needs to be undertaken to understand both the areas that are most exposed to risk and those with the greatest regional growth potential (as a result of coastal works) through an assessment of the distribution of costs and benefits associated with investment. Ideally, this distributional analysis would be informed by risk (probabilistic) cost benefit analysis that builds on modelling of the various sources of risk (coastal hydrological modelling) and benefits (assets, health, tourism, economic development), to assess the avoidance of costs and potential benefits if a project is to be implemented.

While this approach will provide more defensible distribution of costs between public and private beneficiaries, for some project types consideration will need to be given to the capacity for private landholders to pay for the analysis. But such analysis can be expensive depending on the scale and complexity of the task.

For lower cost projects where a distributional analysis is required, government will need to assess the balance of private and public funding required on a case by case basis. Often because these projects are smaller in value and negotiated in confidence there are few published case studies to refer to that describe the balance of public versus private funding. However, working knowledge from the project team indicates that there are examples of where projects have been funded with 60-80% government funds to 20%-40% private. A major consideration even once a preferred ratio has been identified is the ability and willingness for private landholders to pay.

Principles and thresholds for triggering Government financial intervention are also required but should be informed by a suite of case studies using distributional analysis. These need to clarify what constitutes a nationally or regionally significant project suitable for Federal funding, and should also guide the development of programs. There is an opportunity for the CPB to set policy or guidelines around the principles and thresholds to enable consistent treatment across the state.

Program design could be informed by the following criteria:

- **Efficiency:** Investment in infrastructure should create a signal to encourage development to occur in areas where it is most viable and beneficial. Efficiency involves the allocation of resources to their best use. Supporting an economically efficient outcome helps to ensure that levels of service reflect what future users want and need.
- **Equity:** Service delivery and cost apportionment should be treated consistently across locations, with cost apportioned to impactors or beneficiaries. This builds confidence in the planning systems.
- **Certainty:** Infrastructure funding arrangements should be predictable. This supports planning and enhances overall outcomes.
- **Simplicity:** The funding arrangements should be easy to understand and application processes easy to navigate.
- **Transparency:** A high level of transparency and governance to build public trust that fundings are being spent on their proper purpose and are delivering positive outcomes.

For more information on the proposed principles refer to the NSW Productivity Commission Review of Infrastructure Contributions in NSW, July 2020.

Recommendation:

- State Government should play a leadership role in defining a consistent Statewide approach to funding arrangements (public and private) and how the beneficiary pays model is applied in South Australia, including guidelines on analytical approaches, key thresholds and principles.
- SACCA should work toward a program similar to the NSW program with specific funding ratios, thresholds and clear guidelines on the level of analysis that needs to be undertaken for investment. As a starting point, the threshold for projects that require a cost benefit analysis and distributional analysis to determine the balance of public versus private investment should be $5 million.
- Policy and program development should be guided by five criteria: efficiency, equity, certainty, simplicity and transparency. Reflecting these principles funding programs should be structured so as to be:
  - > efficient (demonstrate that they are delivering benefits to the region),
  - > equitable (structured around beneficiaries),
  - > certain (to enable investor confidence)
  - > simple (to minimise transaction costs), and
  - > transparent (to supporting a rebuilding of trust in the community).

28 https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Water/Coasts/coastal-estuary-funding-project-2019.pdf

4. PRIORITY ACTIONS

This project has sought to identify the key elements, including design principles, for a new co-investment model for funding coastal management. In the process of scoping the key elements of this model, it has become apparent that South Australian coastal councils also need to focus on how projects are scoped, developed and communicated to better align with existing and emerging funding opportunities and the changing narrative of funding coastal management.

Case studies illustrating how projects that deliver multiple outcomes can be structured are presented in Appendix B and the proposed co-investment model is described in detail in Appendix C.

To build a case for government to commit funding it is important to change the narrative in relation to funding of coastal management works. While this project is about exploring alternate funding options, the review has found that this will only be feasible if the narrative of the issue is shifted in a manner that addresses the following points. Examples of how the narrative can be changed are illustrated in Table 1. The narrative can be further tested and matured through development of either actual funding applications, or through sharing example case study business cases.

Table 1 Summary of characteristics that define a change of narrative associated with coastal management works

CURRENT NARRATIVE	REQUIRED FUTURE NARRATIVE
• Short-term addressing immediate physical risks • Localised in scope focussing primarily on immediate impacts of coastal hazards • Funding focused on protection and planning, not adaptation.	• Longer term planning horizon integrating adaptation planning and community resilience • Broad scope that recognises regional costs and benefits of coastal management • Recognition and inclusion of the broader set of beneficiaries that coastal management and regional development supports • Emphasises opportunity over mitigation of negative impacts • Acknowledges the existing backlog of projects • Infrastructure funding is included within broader package of regional development initiatives

A three phased approach to implementing priority actions is recommended in order to secure long term co-funding from the targeted state and federal agencies. These actions are summarised below.

4.1 Raise awareness through targeted advocacy & lobbying

The relative level of awareness and recognition of the magnitude and broader regional impacts of coastal hazards is still low outside of the local government sector and so the risks and opportunities are poorly appreciated across all levels of government. Rather than launching into business case development at this point it is recommended that the advocacy paper and other information sources be used to raise awareness and test conceptual thinking with decision makers to test alignment with key priorities of different funding sources.

Increased public funding will only become available through increased awareness at all levels of government, which will require targeted and purposeful lobbying. SACCA and other regional councils can play an important role in starting this conversation both locally and within the targeted agencies.

4.1.1 Regional advocacy tactics

The first requirement will be to align voices and approaches within the region. The outputs of this Discussion Paper and the accompanying Advocacy Paper will be appropriate initial tools to drive this conversation. Key immediate actions could include:

- Sharing this Discussion Paper and Advocacy Paper within the local government (coastal councils) and LGASA and ensuring they recognise and agree with the key messages here.
- Meet to review discussion points within this document and refine actions based on these recommendations.

4.1.2 State advocacy tactics

Once the local alignment has been achieved, active engagement with targeted state agencies should commence, leveraging the advocacy paper as a starting point for engagement. These stakeholders should include (at a minimum):

- Coast Protection Board
- Infrastructure SA
- Landscape Board and Green Adelaide (managing coastal resources and ecosystems in regional and metro SA)
- Primary Industries and Regions (PIRSA)
- Tourism SA
- Treasury SA
- Regional Development Australia SA (RDASA) (https://www.rda.gov.au/my-rda/sa)

As is likely to be outlined in the Advocacy Paper, the primary purpose of this engagement should be to:

- Highlight the urgency and scale of this issue at a regional level
- Outline the strategic economic benefits that could be realised through proactive action
- Targeted questions regarding the specific requirements of a business case and the associated funding that might be available if an appropriate business case was demonstrated.

4.1.3 Federal advocacy tactics

As highlighted through the interviews, state-based agencies need to be engaged before approaching Federal agencies. However, once appropriate engagement has been undertaken at the state level, lobbying can be undertaken at the Federal level.

- Infrastructure Australia (a pathway for SACCA to get to IA is through Infrastructure SA), for both doubling down on resilience funding and regional development options
- National Relief, Resilience and Recovery Agency, to seek resilience funding
- Regional Development Australia for multiple regional benefits funding
- National Coastal Hazards Working Group, for supporting both funding options, with a focus on local capability and national knowledge and awareness

4.2 Identify target region and establish formal consortium to progress and regional development approach

4.2.1 Undertake a review of appropriate regional hubs for regional development funding

Feedback from interviews with state and Federal stakeholders highlighted the importance of selecting the appropriate region to position for funding support. To inform this, a review is required of the various regions for their ability to meet funding criteria. By grouping based on the scale of benefit, it is possible to identify the range of direct and indirect benefits that can be achieved form coastal management. Where the benefit is larger in economic terms, there will be more funding options available. Where the benefit is smaller, there is likely to be less funding options available.

The following are three local government clusters to be considered for managing the coast:

1. Metropolitan Adelaide – Covering all Metropolitan seaside councils.
2. Regional hub – Sections of coastline with multiple medium to large towns that are exposed to coastal hazards. Coastal management may have benefits to the local economy by protecting transport routes, supporting tourism or enabling other industries.
3. Small community – There will be sections of coastline that are home to very small communities with a small number of rate payers and small number of beneficiaries from coastal management.

4.3 Develop a formal regional business case

Effective and well framed engagement is going to be important to securing future funding. Case studies developed as part of this project are an important tool to engage with the Federal Government. These case studies will help to illustrate the direct and indirect benefits that can emerge by supporting the development of coastal areas. With the range of benefits likely to include:

- Improved investor confidence;
- Increased diversification benefit;
- Supporting regions to develop their industrial, tourism and service markets; and
- Employment in regions (which often suffer for a lack of employment opportunity).

4.3.1 What would be required to build a business case

While business cases generally follow a similar structure and assurance process across different jurisdictions, it will be important to engage with the final funding agency to determine the most appropriate business case for the project. The process typically involves three key steps:

1. Problem definition document to explain the problem faced and the need for investment;
2. Strategic business case which undertakes a high level analysis of a number of options to determine the preferred investment option, and
3. Detailed business case which includes detailed cost estimates and a more thorough analysis of the options. This is likely to include a detailed business plan but will depend on the funding requirements.

The general frame of a business case is detailed below at a high level. The case studies (Appendix B) provide a more detailed example of the type of problem definition and explanation required to justify a funding case.

- Overview of the target region (regional context, coastal threats, broad economic context)
- What is the service need? (mitigate coastal threats, support regional development and job creation, aging population)
- What options to address? (business as usual, protection focused, broader regional opportunity)
- Qualitative and quantitative considerations
- How do you justify the investment? (value uplift, tourism, health benefits, environmental)

APPENDIX A – STAKEHOLDER LIST

The following table presents a list of interviewees, their roles/ organisations and interview dates.

	NAMES	ROLE/TITLE	ORGANISATION
1	Danny Huynh	Director, Account Management, Budget and Performance Branch	SA Treasury
2	Murray Townsend	Manager, Coast and Marine	SA Coast Protection Board
3	Nicole Pelton	Coastal Project Officer	SA Coast Protection Board
4	Talia Radan	New Life for our Coastal Environment	SA Coast Protection Board
5	Peter Colacino	Chief of Policy and Research	Infrastructure Australia
6	Maggie Hine	Team Leader Strategy and Environment	City of Port Adelaide Enfield
7	Nina Keith	Senior Strategic Officer	City of Onkaparinga
8	David Lovell	Deputy Chief Executive	Infrastructure SA
9	Tom Davie	Climate Change, Special Advisor	Insurance Council of Australia

APPENDIX B – CASE STUDIES

Stakeholder consultation highlighted the importance of the infrastructure investment funding process, commonly referred to as project assurance, and the role of a business case at each of the gateway stages when seeking to access State and Federal funding.

The business case process gives those investing in infrastructure, both public and private, a clear understanding of the project and evidence base to inform decision making, including:

- The challenges and opportunities being addressed by the investment;
- Why the service provided by the infrastructure is needed;
- How the investment aligns with other government or private strategic objectives;
- The economic and financial costs and benefits of the investment; and
- How the project is expected to be funded.

Given that regional projects with diverse economic benefits and multiple outcomes supported by investment in coastal resilience is an untrialled concept in South Australia, two case studies have been developed to illustrate key design features. The case studies seek to demonstrate two broad types of business cases:

1. **Case study 1:** Coastal infrastructure benefiting regional economic diversity
2. **Case study 2:** Coastal infrastructure benefiting tourism

The following section outlines the process undertaken for selecting the case studies, the key findings of the analysis and the primary conclusions that should be considered when presenting the case for co-funding of regional projects with multiple outcomes in the future.

Case study selection

A set of criteria was developed to identify case studies, which was applied to Metropolitan coastal councils (individual and a cluster of councils) and regional councils (individual and a cluster of councils). In consultation with project stakeholders, two case studies were then selected based on the following considerations:

- Geographically spread across the SA's coastline
- Regional representation
- Preference for projects that relate to clusters of councils
- Economies based on mixed land-use types (e.g. settlement, tourism, fishing, shipping, agriculture)

Given that the Metropolitan beaches have been managed in partnership with the Coast Protection Board under the State Government's long-term adaptation funding program, regional coastal Councils were prioritised for the case studies.

The case studies demonstrate two different service needs in the coastal context of SA.

CASE STUDY 1
Port Lincoln

To provide an example of a state and nationally significant regional gateway that has been successful due to its economic diversity and proximity to both natural and built coastal assets. The significance of the coastal assets to the regional economy presents a strong case for co-funding to ensure the range of enabling infrastructure maintains the capacity to support economic output.

CASE STUDY 2
Limestone Coast Region

To provide an example of a region that has both natural and built assets that could be further leveraged generating a stronger agri-tourism output which is intrinsically connected to the coastal community and coastal assets. The opportunity is about connecting the tourism offerings present on the coast with the agricultural outputs, including wine, and using this relationship as a pull effect for coastal management investment.

The following case studies follow the broad format of a business case but at a higher level by outlining the service need (regional opportunities and threats), the options available to address the service need, how the options align with broader strategy, the range of benefits and potential beneficiaries. The evidence provided in the case studies, specifically the range of potential beneficiaries, create the case for co-funding and provide a strong example of the types of projects that would be deemed suitable for the co-funding approach based on their scale and significance.

Case study 1: Coastal infrastructure and regional economic diversity

Port Lincoln has a strong, diversified economy built on strong and profitable agricultural and seafood commodity bases, as well as a natural environment and geographic location that supports attracts domestic and international tourists particularly via cruise ships.

To maintain the status quo, the region needs a strategy that provides certainty to industries in this coastal region from a climate change and investment perspective to maintain Port Lincoln's – and the Eyre Peninsula more broadly – position as a strategically important regional hub with large potential for growth through increased diversification.

However, for the business threats associated with climate change and coastal climate threats to be successfully navigated, funding is required from a broader number of stakeholders which will include local government, industry, the State Government and the Federal Government.

Service need and opportunity

Port Lincoln is a nationally significant port that is strategically important because it is located between Adelaide and Perth and provides a key service point for industry located across the Eyre Peninsula.

The region has a relatively diversified economy underpinned by industries as a result of its location on the coastline and natural environment. The natural assets such as moderate temperatures and consistent rainfall patterns sustain a thriving agriculture sector and the fishing industry benefits from the port being a gateway to both local and southern ocean fisheries.

The port provides a critical service and is a central hub of the Eyre Peninsula for agricultural commodities. Port Lincoln connects high value grain commodities to export markets at the grain export terminal as well as being home to a thriving fishing industry which attracts a high value offering both locally and internationally[29].

These assets, and the location of the port, make the region a strong connection for tourism either from cruise ships or travel from Adelaide. In recent years, before COVID impacts emerged, the port witnessed significant growth in its cruise ship based tourism offering because of its location between Adelaide and Perth and it being a natural stop over opportunity.

However, climate change and associated sea level rise are expected to threaten the Marina and Port which are critical to the region's economic output[30]. If these assets are adversely impacted thereby reducing the level of service that they provide to the customers that rely upon them then this will adversely affect the viability and mean that the region is unable to respond to opportunities. Port Lincoln economic agents ability to leverage the investment required to maintain its regional standing which will in turn limit the ability to undertake other climate adaptation actions such as management of threatened coastal communities in low lying areas. If this occurs, the regional output could stagnate or worse decline having significant flow on effects to all levels of the economy.

Options

There are two options available for a port community:

1. Continue without making any change in investment. Coastal management continues to be ad-hoc and reactive, likely leading to higher cost maintenance and intervention.

2. Develop a strategy for adaptive coastal management to minimise future cost and ensure that strategic infrastructure and key services are maintained and enhanced.

Under Option 1 we would expect Industry to continue responding to a changing climate which could lead to relocation of critical assets (such as the grain export port) to another location. If the investment moves out of the region then there is a smaller pool of stakeholders available to invest in adaption for the community.

Alternatively, Option 2 involves the development of a strategy that considers all stakeholders and generates investment in the region to maximise the use of assets thereby maintaining and supporting the growth of the already strong economy. Illustrating the opportunity this a regional business case that includes a range of sub-projects such as: improving the efficiency of freight routes to the grain export port to minimise amenity impact on the community whilst maintaining use of the port assets; securing assets for high value use, including ensuring the port is adapted to coastal hazard impacts. The outcome being to maintain and attract new investment into the region building on the already diverse economic base that includes agriculture, seafood and tourism sectors.

29 EPLGA, Eyre Peninsula Strategic Plan December 2019, Eyre Peninsula Local Government Association, Editor. 2018
30 Mark Siebentritt, N.H., Mark Stafford Smith, Regional Climate Change Adaptation Plan for the Eyre Peninsula, in Prepared for the Eyre Peninsula Integrated Climate Change Agreement Committee. 2014

Strategic alignment

For an investment to be made of this nature, stakeholders look to see how the project aligns with their existing priorities and strategies. In the case of the Port Lincoln, the SA Department of Planning and Local Government produced the Eyre and West Regional Plan as part of the South Australian Planning Strategy which outlines the principles and policies required to realise the vision for the region[31]. The plan was produced in close collaboration with local councils, regional development and natural resources management boards, local industry and the community, demonstrating the key principles are aligned between these stakeholders.

The project is well aligned with the strategy through its focus on protecting people, property and the environment from exposure to hazards, importance of places of heritage and culture, focus on adaptation and resilience for the region, and the need to strategically plan and design towns.

The project is also well aligned with the Federal Government's strategy for the regions[3233]. We note this strategy makes very little comment on climate change impacts and the impact coastal hazards are going to have on regional communities across the country.

Potential beneficiaries, costs and benefits

The strategic approach is expected to maintain the high economic value generated by the diversity of the local economy, increasing the number of stakeholders benefiting from coastal adaptation. These costs and benefits present what can be expected to occur with Option 2 going ahead. The following table gives a high-level descriptive analysis of the types of beneficiaries, costs and benefits that could arise as a result of this project, assuming a combination of the above opportunities are actioned.

	DESCRIPTION	BENEFICIARIES
Costs	Coastal protection or improvement for port and wharf assets as well as other at risk assets	Residents and businesses protected by the assets, new and future
	Infrastructure upgrades to secure transport links to major industry	State, agriculture, tourism, other road users.
	Operation and maintenance costs for infrastructure	Broad user categories
Benefits	Increased employment opportunity and associated benefits as a result of maintaining industry in the area	State
	Both avoided loss and increased economic value add from agricultural and seafood industry resulting in increased employment, taxation revenue and margin returns	Government, Industry
	Avoided loss of tourism revenue because of maintenance of coastal value	Industry
	Increased investment certainty as a result of industry stability and coastal adaptation work	Government
	Reduced welfare pressure as a result of increased economic opportunity	Government

31 Department of Planning Transport and Infrastructure, Eyre and Western Region Plan, in A volume of the South Australian Planning Strategy. 2012, South Australian Government.
32 DITRDC, Regions 2030 - Unlocking Opportunity, D. of and T. Infrastructure, Regional Development and Communications, Editors., Commonwealth of Australia.
33 Australia, I., Infrastructure Priority List (August 2020). 2020

Case Study 2: Coastal infrastructure and tourism

The Limestone Coast has a strong opportunity for increasing investment to stimulate a stronger tourism economy generating value from the natural, agricultural and built assets of the region.

But to realize this, a strategy is needed that provides certainty this coastal region from a development and climate change perspective that connects the regions to other tourism experiences - such as connectivity to the Coonawarra and more broadly to existing tourism pathways along the coast.

For the opportunity to be realised, funding is required from a broader number of stakeholders which include local government, industry, the State Government and the Federal Government.

Service need and opportunity

The Limestone Coast is an area in the south east of South Australia from the coastline at the Victorian border up to the Ngarkat nature reserve, which includes seven local government areas. The area encompasses major connector roads between Adelaide and Melbourne and coastal roads connecting small regional settlements and agricultural areas to major transport and tourism.

The Limestone Coast has a unique suite of natural characteristics that can underpin a regional strategy. The diverse natural characteristics include coastal, indigenous, cultural, heritage, scenic, biodiverse and unique environment characteristics that provide amenity and lifestyle benefits for residents and nationally significant sites. The region's agricultural outputs include a highly prized wine region and dairy production for international markets. The unique coastline offers a scenic transport route between Adelaide, the Great Ocean Road and Melbourne which connects the region's competitive advantages and provides an existing and steady flow of tourism.

The Limestone Coast Regional Plan (2011) and Limestone Coast Prospectus of Priorities (2019) highlight the need for an economic shift to ensure the region's natural and built assets are maximizing the value they provide, specifically the need to create an attractive opportunity for new entrepreneurship agriculture and greater coordination and output for tourism.

The Limestone Coast Climate Change Adaptation Plan (2015) shows that the coastal threat is going to become increasingly more costly over the next 20 to 50 years. Coastal landscapes in the Limestone Coast, natural and build, are deemed highly vulnerable to sea level rise which will cause damage and erosion to these assets[34].

To date action has focused on the protection of landscapes, which is unlikely to be adequate as sea level rise impacts increase in the decades ahead. The coastal threat requires a combination of defence, retreat and abandonment initiatives depending on the type and nature of assets and extent of current impact of sea level rise. Importantly, identification of areas for future development and education and awareness raising have been identified as immediate priorities for adapting to climate change risks in the coastal zone for the Limestone Coast[14].

Options

There are two options available for the regional community:

1. Continue managing coastal assets as stand-alone components of the regional economy, with benefit narrowly defined as primarily to the local community.

2. Develop a strategy for adaptive coastal management integrated with regional economic development to embed the value of coastal assets into the value generated by other industries by creating greater linkages.

In the case where investment continues as usual, climate change as a risk to regional economic development and coastal assets will continue to be managed separately. The challenge with this approach is that the business case for investment has a narrow framing because protection is focused on managing for coastal hazards at a very localised scale, and they are not seen for their value add for the region as a whole. This will require prevention and mitigation action to be charged to the local community, council and tourists whereby a fee can be generated from services provided. It is anticipated this will result in an increasing and unaddressed large funding gap since there is a high cost associated with soft and hard coastal protection infrastructure.

The alternative option available for the region is to integrate coastal research and adaptation planning into the regional economic development strategy, using the connection of natural and built assets to generate revenue. This could be achieved through the development of a regional development business case that supports benefit and outcomes across a range of opportunity areas, such as:

- Integrating the viticulture experience with the tourism offering in popular tourist destinations with projects such as wine trails, local tastings and food experiences

- Develop transport links along the scenic coastal route that are adapted to future potential climate change risk and create greater access for business, industry and tourism alike

- Bring new entrepreneurs and business into the region by creating climate certainty in town planning, undertaking strategic development of coastal communities that will be prepared for the coastal threat and able to continue generating value into the future.

34 Limestone Coast, Regional Climate Change Adaptation Plan, prepared by URPS and Seed Consluting Services as part of the consultancy led by URPS for the Limestone Coast RDA region.

Strategic alignment

For an investment to be made of this nature, decision making stakeholders look to see how the project aligns with their existing priorities and strategies.

In the case of the Limestone Coast, the SA Department of Planning and Local Government produced the Limestone Coast Regional Plan as part of the South Australian Planning Strategy which outlines the principles and policies required to realise the vision for the Limestone Coast[35].

The plan was produced in close collaboration with local councils, regional development and natural resources management boards, local industry and the community and thus we see the key principles as being aligned between these stakeholders.

The project is well aligned with the strategy through its focus on protecting people property and the environment from exposure to hazards, importance of places of heritage and culture, focus on adaptation and resilience for the region, and the need to strategically plan and design towns.

The project is also well aligned with the Federal Government's strategy for the regions [4, 5]. We note these strategy makes very little comment on climate change impacts and the impact coastal hazards are going to have on regional communities across the country.

Potential beneficiaries, costs and benefits

The coordinated approach is expected to lead to greater economic output as well as a larger number of beneficiaries to bear the cost of the investment required. The following table provides a high-level perspective of the types of beneficiaries, costs and benefits that could arise as a result of this project, assuming a combination of the above opportunities are actioned.

	DESCRIPTION	BENEFICIARIES
Costs	Soft and hard coastal protection infrastructure for significant assets	Residents and businesses protected by the assets, new and future.
	Road upgrades for linking tourism locations with agriculture, Adelaide, Great Ocean Road and Melbourne	State, Agriculture, Tourism, other road users.
	Business precincts for new opportunities related to agri-tourism	Agriculture sector
	Operation and maintenance costs for infrastructure	Broad user categories
Benefits	Employment benefits from construction both during and after project	State
	Employment and value add for agriculture and coastal tourism and agri-tourism	Government, Industry
	Increase margin for the local wine industry	Viticulture
	Increased trip length and stay for tourists increased economic value of tourism	Industry
	Increased revenue via tax	Government
	Reduced welfare pressure as a result of increased economic opportunity	Government

35 Dep. of Planning and Local Government, Limestone Coast Region Plan. 2011, Government of South Australia

APPENDIX C - CO-INVESTMENT MODEL

Context

The South Australian coastline is experiencing increasingly severe impacts of inundation and erosion due to a combination of natural coastal processes and the impacts of climate change. As these events intensify and available funding remains stagnant, South Australian councils have identified the need to adopt a more strategic, long-term approach to realising coastal management outcomes.

South Australian coastal councils have conservatively estimated capital works and operating expenses required to manage the coast will cost in excess of $200 million+ over the next 10 years. Furthermore, in the absence of adequate protection measures, it is estimated that 60,000 or more built assets along the coast are likely to be at risk. This could cause damage to up to 30% of some council's housing stock. The total replacement cost of assets when the South Australian coast is exposed to a 1.1m sea level rise (by 2100) is estimated to be around $46 billion, which is many orders of magnitude higher than current investment in protection works. This does not include the long term social and economic impacts that will result from inadequate investment on the coast.

Not only is the quantum of existing funding insufficient to protect existing assets, the focus on funding projects over annual timeframes is limiting the long term, strategic investment required to underpin region wide economic outcomes.

Objectives

The objective of the funding model is to:

- Ensure funding priorities are aligned with emerging policy and funding drivers from a local through to national scale
- Encourage the development of longer term project funding
- Explore the contribution of different government stakeholders to funding
- Identify how best to apportion funding between private and public beneficiaries
- Encourage delivery of multiple outcomes at a regional scale

Stakeholders

The primary stakeholders who should be involved with future funding of coastal management actions include:

- Federal Government – Federal agencies including those that support regional economic diversity and growth and agencies that support building residence to natural hazard risks, noting that a dedicated Federal agency for investing ion coastal resilience has not traditionally existed.
- State Government - State agencies including those that support regional economic diversity and growth and agencies that support building residence to physical risks, especially through the Coast Protection Board.
- Local Government – Existing coastal councils
- Industry and private beneficiaries – Private landholders who receive personal, private benefit from building coastal resilience.

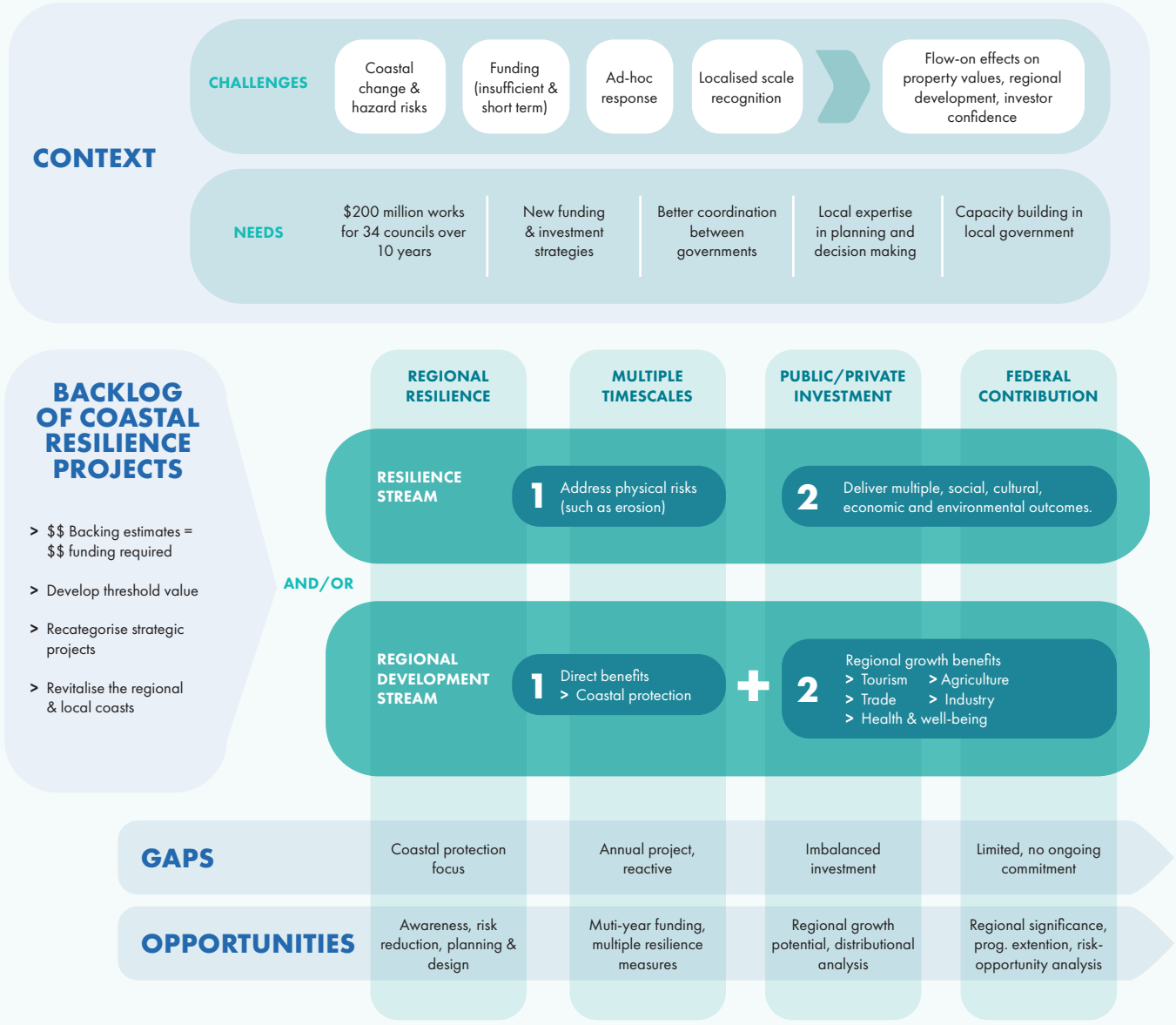
Design principles

The key design principles for future funding should include

- Articulation of how a project contributes to coastal resilience instead of just coastal protection. This will help better align with emerging policy and funding drivers funding;
- Funding for projects over multiple years, preferably bundling multiple resilience measures for a given location. This is needed to move funding arrangements from one off ad hoc approaches toward a more strategic approach that addresses resilience at a regional scale
- Quantitative assessment of the balance of private versus public contributions for projects over a threshold level, such as $5 million. For projects of this size, distributional analysis is recommended to determine the balance of public versus private funding.
- Federal funding should not be sought according to an externally communicated, strict ratio because some Federal programs will provide more than matching funds as grants. As such, adopting a strict ratio could limit the funds available, or require state and local government to provide more funds than is possible or needed. Where feasible, up to 100% funding should be sought.
- Clear delineation between projects focused on building resilience through reducing physical impacts and risks versus projects that seek to deliver multiple social and economic outcomes at a regional scale. These two different streams of funding are needed to enable targeting of resilience versus regional development funding opportunities.

A diagrammatical version of the co-investment model is presented in Figure C.1

Figure C.1. Diagram illustrating the co-investment model for SA coastal resilience



APPENDIX D - SUMMARY OF RECOMMENDATIONS

The following section provides a summary of the recommendations presented throughout the Discussion Paper.

A resilience based approach (Section 3.1)

- A key design principle is that all future coastal projects should be presented in the context of resilience rather than protection, explicitly stating what aspects of a resilience-based approach are being addressed.
- A future co-investment model should outline a clear applicant funding pathway for projects that are either building physical resilience by directly addressing coastal erosion and inundation or building social or economic resilience through supporting regional co-benefit.

Funding time frames (Section 3.2)

- A key design principle of the future co-investment model is a preference for projects with multiple year funding needs scoped and articulated. This would result in resilience priorities being presented at a regional scale as packages of works and activities over periods of 3-5 years.
- While the existence of a funding backlog has been implied through past work on coastal funding requirements, this has not been explicitly communicated in this way. A contextual paper is therefore required that outlines the backlog of coastal resilience projects that exist in South Australia and how this could be managed through multiple programs of activity with packages of works. The backlog of works can then be used as a baseline to balance actions on multiple timescales and advocate for (unfunded or unfinanced) coastal works from relevant public and private funding partners.
- The State Government should work with regions to develop regional coastal management plans with actions, timeframes and tied funding based on prioritisation and multi criteria.

Contribution of the different tiers of government to funding (Section 3.3)

- A cost sharing and resourcing contribution model of at least matching Federal funding for future coastal resilience projects should be pursued with projects deemed to be of regional significance scoped on this basis. However, seeking to define a fixed ratio of Federal: State: local government funds is not recommended as this could lock in state and local government to making agreed contributions when in practice the Federal Government has shown that it can provide more than matching contributions in some cases.
- Seek an extension of existing Federal programs, such as the Local Roads and Community Infrastructure program to undertake coastal protection works, particularly as this program does not have a co-contribution requirement
- Prioritise projects through a combination of risk and opportunity based analysis. For example, risk analysis similar to that undertaken to inform the identification of sites with significant open coast hazards should have streamlined access to funding resources. Furthermore, opportunity analysis should be prioritised that demonstrates direct and regional benefits from a project.

Recognise the multiple outcomes on the coast (Section 3.4)

- A key design principle of a co-investment model should be the requirement to demonstrate direct and broader benefits from proposed projects. The benefits from projects will be region specific, so care needs to be taken to understand the range of benefits that arise from projects that support regional resilience and adaptation to climate change (see Case Studies in Appendix B).
- Coast protection works should intentionally be positioned for regional growth funding similar to the Building Better Regions Fund. This approach would highlight the social, economic and environmental benefits of protection works rather than focusing primarily on coastal protection. For example, storm surge levees may protect specific assets but they can also be used to elevate walking and cycling tracks and thoroughfares, connect coastal trails, and even provide connectivity to regional locations.

Balancing public and private investment (Section 3.5)

- State Government should play a leadership role in defining a consistent Statewide approach to funding arrangements (public and private) and how the beneficiary pays model is applied in South Australia, including guidelines on analytical approaches, key thresholds and principles.
- SACCA should work toward a program similar to the NSW program with specific funding ratios, thresholds and clear guidelines on the level of analysis that needs to be undertaken for investment. As a starting point, the threshold for projects that require a cost benefit analysis and distributional analysis to determine the balance of public versus private investment should be $5 million.
- Policy and program development should be guided by five criteria: efficiency, equity, certainty, simplicity and transparency. Reflecting these principles funding programs should be structured so as to be:
  - efficient (demonstrate that they are delivering benefits to the region),
  - equitable (structured around beneficiaries),
  - certain (to enable investor confidence)
  - simple (to minimise transaction costs), and
  - transparent (to supporting a rebuilding of trust in the community).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EDGE

SOUTH AUSTRALIA
COASTAL
COUNCILS
ALLIANCE