

Framework for implementing complex coastal adaptation responses

Purpose

This framework provides guidance to Western Australia's local government authorities on how to progress from completing their Coastal Hazard Risk Management and Adaptation Plan (CHRMAP) to implementing a response to an identified hazard.

How should the Framework be used?

The Framework can help with:

- forward planning to understand what steps or actions might need to be undertaken as part of implementing a coastal adaptation response; and
- guidance on how CoastWA grants can be maximised throughout the response.

The Framework is to be used as a guide only and is not a requirement. It is:

- designed to be broad and relevant to as many responses and situations as possible, noting that every response/project will be different
- most suitable for complex adaptation responses
- not prescriptive, therefore not all responses will need all phases, phases may not be sequential and projects may crossover multiple phases etc.

What are the different components of the Framework?

Response phase – the phase or stage of your adaptation response in a particular area/location. There are five response phases:

- Identification – identification of a problem/hazard/risk that requires a response
- Planning/Analysis – planning and investigative work to determine an appropriate response
- Design – design work needed to implement identified response
- Implementation – implementing the response
- Review – review, monitoring and other ongoing requirements of your response.

Community, stakeholder and Aboriginal engagement should occur during all phases.

Project type – the different types of projects that could be implemented across the different phases.

Grants – CoastWA grant programs that may fund projects within that response phase.

The *Potential Grant Eligibility Table* provides more detail (as a general guide) on which CoastWA grants may be relevant. Eligibility for specific projects should be checked against the actual grant guidelines.

Internal considerations – guidance on how to integrate an adaptation response into local government corporate planning to facilitate a smooth progression through the phases and have the necessary internal support to ensure a successful response.

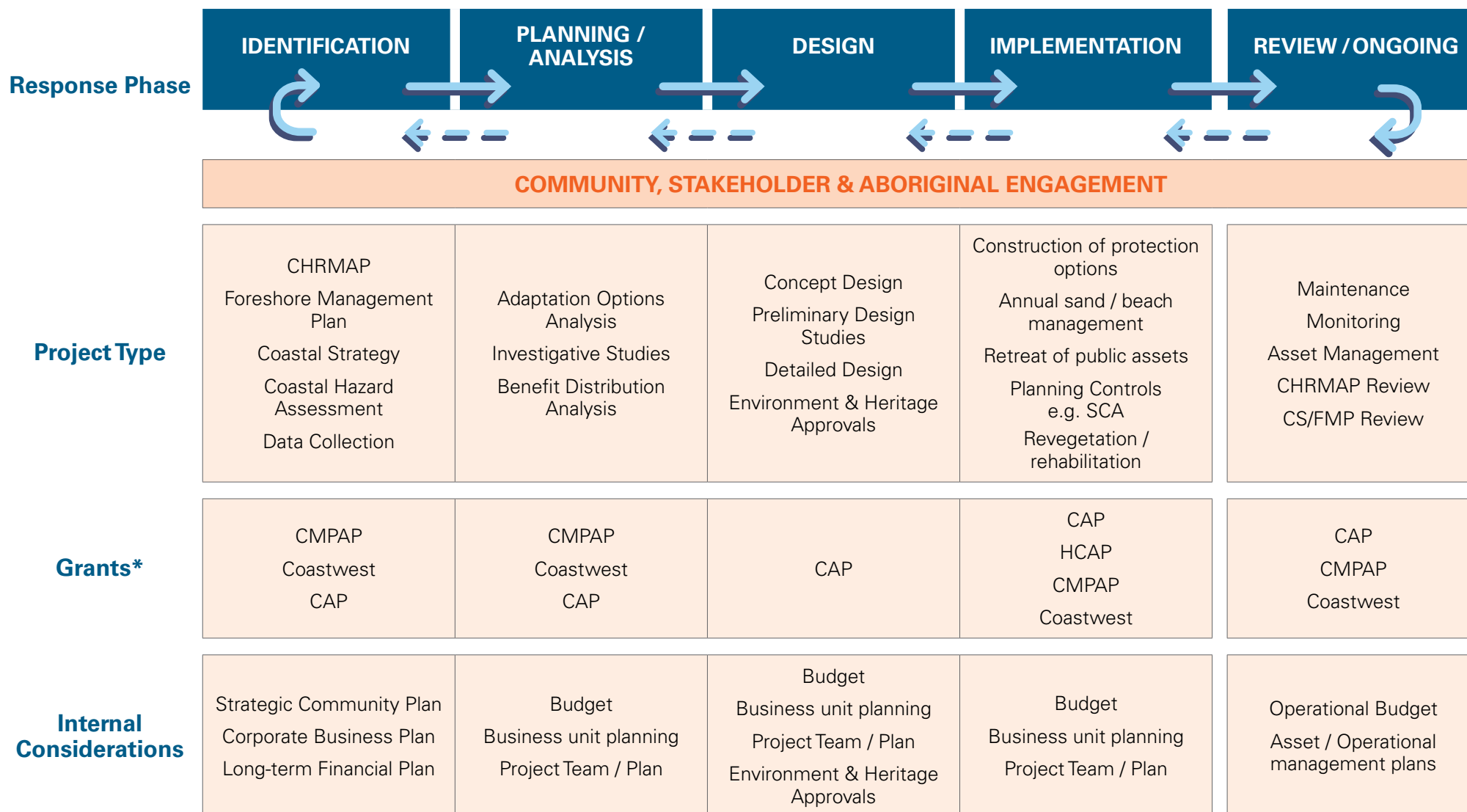
Examples of applying the Framework

Two examples of Local Government adaptation responses have been provided to show how an adaptation response can progress through the phases. The examples demonstrate that progressing from the identification of a problem to implementing a response can be complex, require several steps, may not be linear in progress and can take considerable time.

Where to go for more help

For more help in understanding or applying the Framework, or to discuss eligibility of projects for different grants please contact the CoastWA Local Government Facilitator at lsheehy@walga.asn.au

Implementing Complex Coastal Adaptation Responses - A Framework



* Eligibility for specific projects need to be checked against grant guidelines this is provided only as a general guide. Note only CoastWA grants are listed here. Other grants may be applicable such as Disaster Ready Fund.

Implementing Complex Coastal Adaptation Responses – Grant Eligibility

Potential Grant Eligibility¹

Phase	Project Type	Coastal Management Plan Assistance Program (CMPAP)	Coastwest	Coastal Adaptation and Protection (CAP) Grants	Hotspot Coastal Adaptation and Protection (HCAP) Grants²
		Department of Planning, Lands and Heritage		Department of Transport	
IDENTIFICATION	CHRMAP	✓			
	Foreshore Management Plan	✓	✓		
	Coastal Strategy	✓			
	Coastal Hazard Assessment			✓	
	Data Collection			✓	
PLANNING / ANALYSIS	Adaptation Options Analysis	✓		✓	
	CHRMAP components (not CHA)	✓			
	Risk Assessment	✓			
	Feasibility Studies	✓			
	Benefit Distribution Analysis	✓			
	Coastal Engineering Investigation			✓	
	Site Master Planning/Design		✓		
	Identify, protect and manage natural / cultural heritage values		✓		
DESIGN	Concept Design			✓	
	Preliminary Design and Optimisation Studies			✓	
	Detailed Design			✓	✓
	Environment/ Heritage approvals			✓	

¹ All grant programs have additional eligibility criteria. Check grant program guidelines to ensure your projects eligibility.

² Is for the management of one or more locations of significant erosion and/or inundation concern. For example, it may cover a coastal erosion hotspot, coastal inundation hotspot, or another location with similar issues.

Implementing Complex Coastal Adaptation Responses – Grant Eligibility

Phase	Project Type	CMPAP	Coastwest	CAP	HCAP ²
IMPLEMENTATION	Construction of protection options			✓	✓
	Sand/beach management			✓	✓
	Planning Controls e.g. SCA	✓			
	Retreat/relocation/removal of public assets	✓ ³		✓	✓
	On-ground erosion control e.g. matting and brushing		✓		
	Revegetation/ rehabilitation		✓		
	Public access, amenity and sustainable use of beaches and foreshores		✓		
	Community capacity building and education		✓		
REVIEW / ONGOING	Maintenance			✓	✓
	Monitoring		✓	✓	
	Asset Management			✓	
	Asset Management Plan	✓		✓	
	CHRMAP Review	✓			
	CS/FMP Review	✓	✓		

² Is for the management of one or more locations of significant erosion and/or inundation concern. For example, it may cover a coastal erosion hotspot, coastal inundation hotspot, or another location with similar issues.

³ Can fund the planning associated with this activity but not the implementation.

Implementing Complex Coastal Adaptation Responses – Examples

Quinns Beach Coastal Management – City of Wanneroo

Phase	Project Type	Grant Funding	Timeline	Comment	Engagement
IDENTIFICATION	Quinns coastal investigation and review	CAP	2012/13		<ul style="list-style-type: none"> – Coastal values survey – Information sessions
	CHRMAP	CMPAP	2015-2018		
PLANNING / ANALYSIS	Coastal Processes and Preliminary Options Assessment Report	CAP	2014/2015	Understand local coastal processes and sediment transport, consider potential coastal management options and identify a shortlist for concept design and further assessment	<ul style="list-style-type: none"> – Establishment Quinns Community Reference Group
DESIGN	Conceptual Options Assessment		2015/2016	Assess coastal management options and identify a preferred option based on a multi criteria analysis	<ul style="list-style-type: none"> – Community meetings and surveys to determine preferences and seek feedback
	Detailed Design Report	CAP	2016/2017	Provide detailed design drawings and technical specifications (suitable for tendering purposes) for the preferred coastal management option	
IMPLEMENTATION	Stage 1 Works	CAP	2017/2018	Groyne 4, concrete beach access ramp and beach renourishment	<ul style="list-style-type: none"> – Continued engagement – Informing during construction phases
	Stage 2 Works	CAP	2018/2019	Groyne 2 extension and beach renourishment	
	Stage 3 Works		2019/2020	Groyne 3 extension and beach renourishment	
REVIEW / ONGOING	Annual Beach renourishment	CAP	Annual	Note – not funded by CAP every year	<ul style="list-style-type: none"> – Continuation of Quinns Community Reference Group
	Quinns Beach Coastal Monitoring Program	CAP	Ongoing	Established 2013/14. Note – not funded by CAP every year	
	Quinns Beach Wave Buoys	CAP	Ongoing	Established 2023/24	
	Maintenance of groynes		As required	Subject to annual condition assessment outcomes within coastal monitoring program	
	Review effectiveness of coastal management works		2030	Listed in long term financial plan	



Implementing Complex Coastal Adaptation Responses – Examples

Sunset Beach Coastal Resilience – City of Greater Geraldton

Phase	Project Type	Grant Funding	Timeline	Comment	Engagement
IDENTIFICATION	Geraldton CHRMAP	CMPAP	2016-2018		<ul style="list-style-type: none"> – Coastal values survey – Workshop and Forum – Information in rates notice
	Wave and current data collection	CAP	2019/20		
PLANNING / ANALYSIS	Sunset Beach Adaptation Options Advice		2017	Understand local coastal processes and sediment transport, consider potential coastal management options and identify a shortlist for concept design and further assessment	
DESIGN	Geotextile Sand Container (GSC) trial design		2019	Detailed design and technical specification of a low-crest GSC groyne. Funded by the City of Greater Geraldton.	
	Stage 1 GSC groyne design		2022	Detailed design and technical specifications for three additional GSC groynes and sand nourishment. Funded by the City of Greater Geraldton.	
	Stage 2 GSC groyne design		2023	Detailed design and technical specifications for a further three additional GSC groynes and sand nourishment. Funded by the City of Greater Geraldton.	
IMPLEMENTATION	Removal of toilet block – Triton Place		2017	Removal of toilet block due to encroachment of erosion	
	Sunset Beach dune adaptation management	Coastwest	2019	Realignment of fencing and footpaths to allow wider dune system and revegetation to increase resilience	Partner with Friends of Sunset Beach. <ul style="list-style-type: none"> – community service announcements – letter drops – networking by community groups
	Geotextile Sand Container (GSC) trial		2019	Construction of a low-crest GSC groyne as a trial. Funded by the City of Greater Geraldton.	

Sunset Beach Coastal Resilience – City of Greater Geraldton

Phase	Project Type	Grant Funding	Timeline	Comment	Engagement
IMPLEMENTATION	Setback of Bosley St car park		2021	Removal of part of the carpark to provide wider width for dune. Installation of footpath	
	Stage 1 Works – GSC groynes	HCAP	2023	Construction of three additional GSC groynes and sand nourishment	Engagement Stage 1 Works. – Media statements – Project signage – Letter drops
	Dune Stabilisation Project – Stage 1	Coastwest	2023	Brushing, direct seeding and weed control to increase dune stability	
	Stage 2 Works – GSC groynes	HCAP	2024	Construction of a further three additional GSC groynes and sand nourishment	Engagement Stage 2 Works. – Liaison with Yamajti Southern Regional Corporation (ACH) – Media statements – Project signage – Letter drops
	Dune Stabilisation Project – Stage 2	Coastwest	2024	Brushing and direct seeding to increase dune stability	Partner with Batavia Coast Network and Northern Agricultural Catchment Council. – community service announcements – letter drops – networking by community groups
REVIEW / ONGOING	Monitoring coastal hotspots	CAP	Annual	Note – not funded by CAP every year	

