

COMMUNITY ENGAGEMENT, TRAINING and EDUCATION STRATEGY





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ACKNOWLEDGEMENT OF COUNTRY

The Department of Planning, Lands and Heritage, and Heritage and the Department of Transport acknowledge the traditional owners and custodians of land and waterways across Western Australia. The Department is committed to reconciliation to improve outcomes for Aboriginal and Torres Strait Islander peoples and to work together to provide a culturally-safe and inclusive environment.

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INTRODUCTION

CoastWA addresses the findings and recommendations of the Assessment of Coastal Erosion Hotspots in Western Australia (the Report). It aims to implement a strategic response to the growing impacts of coastal hazards in order to plan for, manage and protect the State's coast from the impacts of coastal hazards to ensure sustainable land use and development on the coast for the long-term.

This community engagement, training and education strategy responds to the need for raising community awareness on coastal processes and coastal hazard risk management and adaptation planning identified in the Report. Delivery of an education and training program will help to ensure that the Western Australian community is better informed on and engaged with coastal planning and management issues.

This strategy is aligned with and supports *State Planning Policy 2.6 State Coastal Planning Policy* (SPP2.6), which provides the policy guidance for decision-making within the coastal zone, including managing development and land use, establishing public coastal foreshore reserves and management of coastal hazards. SPP2.6 requires that adequate opportunity is provided to the community to participate in coastal planning and management. It also states that community consultation and engagement strategies should be developed to encourage informed community input into decision-making processes. Communities should have sufficient information to understand the risks to their communities arising from likely influence on coastal processes and coastal hazards.

In addition, the WA Coastal Zone Strategy provides an integrated framework for coastal planning and management. It focuses on ensuring sound planning, management and use of the coast for the benefit of current and future communities. It also highlights that stewardship of the coast is a shared responsibility with State and Local Government, public and private organisations, community groups and individuals all playing an important role.



AIM

Prepare and deliver an education and training program to increase understanding of coastal processes and coastal hazard risk management and adaptation planning (CHRMAP).

OBJECTIVES

- 1. increase awareness of coastal hazards, future impacts and coastal adaptation measures
- 2. build the capacity of coastal decision-makers by increasing their understanding of coastal processes and CHRMAP
- 3. build community education and resilience to facilitate informed discussions on the difficult decisions that some communities will need to make in the future
- 4. improve community and stakeholder engagement when developing CHRMAP including understanding of all risk management pathways
- 5. increase awareness of CoastWA and its grants programs and projects.



TARGET AUDIENCES

- coastal land managers (e.g. Local government officers and Elected Members)
- coastal community groups and their members
- broader community (those who live at and visit the coast)
- other stakeholders (e.g. other State Government agencies).

PROGRAM BUDGET

An annual budget covers CoastWA elements relating to community engagement, training and education, including:

- strategy and development and roll out of training modules for coastal land managers and the community (until 2025/26)
- sponsorship funds for State Coastal Conference (biennial event)
- support the WA Coastal Awards for Excellence (biennial event).

Potential sources from elsewhere in CoastWA Program may be used to fund other activities relating to this strategy.



5-YEAR EDUCATION AND TRAINING PROGRAM SUMMARY

Stream	2021/22	2022/23	2023/24	2024/25	2025/26
Community awareness	WA Coastal and Marine Community Network		Support to attend national Coast to Coast or State Coastal Conference		
	Support and provide input into WA C	coastal News (quarterly e-newsletter)			
	Community consultation involved in	coastal strategies e.g. CHRMAP			
Conferences and awards	Planning and preparation for 2022 State NRM and Coastal Conference	2022 State NRM and Coastal Conference	Coast to Coast Conference (NSW) Oct 2023	2024 State NRM and Coastal Conference	Coast to Coast Conference (TBA) second half of 2025
	Planning and preparation for 2022 Coastal Awards for Excellence	2022 Coastal Awards for Excellence		2024 Coastal Awards for Excellence	
		Planning and preparation for 2024 State Coastal Conference Pla		Planning and preparation for 2026 State Coastal Conference	
		Planning and preparation for 2024 Coastal Awards for Excellence Planning and preparation for 2026 Coastal Awards for Excellence			oastal Awards for Excellence
Coastal land manager and community training	Initial planning and development of the Community Engagement, Training and Education Strategy	WALGA survey on local government training needs Training rollout; Commission additional training modules			
training	WALGA CoastWA survey for Local government	Develop training program; Commission 3 training modules	CoastAdapt (infographics for WA)	Special topic briefings via WALGA forums	Funding officer courses
		Special topic briefings via WALGA forums			
CoastWA grants - Expert advice and	Promotion of CoastWA grants				
technical assistance	DPLH/DoT advice and technical assi	stance for funded projects			



EDUCATION AND TRAINING PROGRAM ACTIVITIES

This section provides further information on some of the activities highlighted in the table above, and how the different streams link with the objectives of this strategy.

COMMUNITY AWARENESS

This stream links to objectives 1, 3 and 4 of this strategy. Raising community awareness and increasing understanding of coastal processes and CHRMAP are key aims of this strategy. The following are specific examples of community awareness raising projects.

WA COASTAL AND MARINE COMMUNITY NETWORK (WA CMCN)

This 2021/22 project has developed a community listing as a stakeholder directory on a new section of the WA CMCN's website called the Whirlpool. The Whirlpool acts as a hub and offers opportunities for the community to connect, collaborate and access resources. It supports CMCN's overall goals to increase information access and networking amongst WA's coastal and marine community to influence greater decision making and on-ground action across the sector. This project was supported by CoastWA funding and was completed in July 2022.

In 2022/23, WA CMCN was awarded a Coastwest grant to develop and implement an effective Communication Strategy to raise awareness of coastal values, coastal hazards adaptation planning and management. This will be achieved through campaigns for agreed WA coastal priorities, networking events, knowledge sharing through innovative improvements to the CMCN website and the quarterly e-newsletter 'WA Coastal News', including collaborative resource libraries and coastal contacts directory.



COMMUNITY CONSULTATION INVOLVED IN CHRMAP PROJECTS

It is important to engage the community and stakeholders effectively throughout the entire CHRMAP process, to ensure a successful outcome for the risk management process. Since 2021/22, eight CHRMAPs have been awarded CoastWA funds, all of which have and are including community engagement activities ranging from coastal values workshops to public consultation on draft CHRMAPs:

- Princess Royal Harbour CHRMAP
- Exmouth Townsite CHRMAP
- Hopetoun CHRMAP
- Town of Cottesloe CHRMAP
- Town of East Fremantle CHRMAP
- Windy Harbour CHRMAP
- Carnarvon and Coral Bay Townsites CHRMAP
- Shire of Augusta-Margaret River CHRMAP (Review).





CONFERENCES AND AWARDS

This stream links to objectives 1, 2, 3 and 5 of this strategy. The conference and awards provide an opportunity to raise awareness of coastal issues, and to recognise the achievements and efforts of coastal land managers and the community in managing the State's coastline.

STATE NRM AND COASTAL CONFERENCE

The 2022 WA State NRM and Coastal Conference – *Building Resilience Through Innovation* was held at the Mandurah Performing Arts Centre, 19 – 21 September 2022. The Conference was co-hosted by the City of Mandurah, the Shire of Murray and the Shire of Waroona. The Conference included presentation of the Western Australian Planning Commission's (WAPC) WA Coastal Awards for Excellence.

The Conference is a biennial event and provides a forum for land and coastal managers, community members, researchers, planners and a range of professionals with interests in planning, land, biodiversity, soils, water, coasts and seas. It allows the exchange of knowledge, experiences and new thinking about restoration, management, science, policy, governance, and advocacy.

Sponsorship is generally provided by State agencies, NRM bodies, local governments and not-for-profit organisations. For the 2022 conference, the WAPC provided sponsorship funds through CoastWA. In addition, CoastWA provided 24 full registrations to local government elected members and staff to attend the Conference.

Planning and preparation for the 2024 Conference will commence in the second half of 2022/23, including the possibility of funding in the form of sponsorship, with the sum to be negotiated with the host.

NATIONAL COAST TO COAST CONFERENCE

The Coast to Coast biennial conference is Australia's national coastal management conference organised by the Australian Coastal Society. There may be an opportunity to provide funding to support WA coastal leaders – from community groups and/or local government to attend the 2023 and 2025 conferences. This will be subject to funding available within the CoastWA budget.



WA COASTAL AWARDS FOR EXCELLENCE

The WA Coastal Awards for Excellence celebrate the outstanding efforts and achievements of Western Australians in planning, managing and protecting our coast. The Awards nomination process also provides a means to engage professional and community coastal stakeholders to deliberate on what is being done on the coast and by whom. Participation in the Awards event, media and publications around the Awards build community awareness of the importance of the coast, the challenges

faced, and trade-offs made in planning for and managing its use. The awards are coordinated by the Department of Planning, Lands and Heritage (DPLH) on behalf of the Western Australian Planning Commission.

In 2022/23 there were six categories and winners were announced at an Awards Ceremony on 19 September 2022 during the 2022 WA State NRM and Coastal Conference. The awards were supported by CoastWA funds.

Planning and preparation for the 2024 Coastal Awards will commence in the second half of 2022/23. CoastWA funds will be available to provide for the award trophies, certificates and event organisation.





COASTAL LAND MANAGER AND COMMUNITY TRAINING

This stream links to objectives 1, 2, and 3 of this strategy. The training program will help build capacity for coastal decision makers and help educate the community by increasing their understanding of coastal processes and CHRMAP.

SNAPSHOT OF TRAINING COURSES

A desktop review of existing tertiary courses and resources relevant to coastal planning, coastal engineering and coastal hazards has been undertaken (Appendix 1). This has been used to inform development of training content.

KEY TRAINING AND EDUCATION TOPICS

A survey of Local government training needs was conducted in partnership with WALGA in June 2022. The survey was sent out to all 49 coastal and estuarine Local governments, and 29 responses were received from 24 Local governments. The results from the survey have been used to identify topics for training modules which will be developed and rolled out according to Table 1 below.

Table 1: Training program schedule

Topic	Content development	Timing
Coastal processes and how they affect shorelines	Coastal engineering consultant	2022/23
Coastal protection works	Coastal engineering consultant	2022/23
Benefit Distribution Analysis	Economic consultant	2022/23
CHRMAP implementation	Planning consultant	2023/24
Coastal hazard assessments	Coastal engineering consultant	2023/24
Vulnerability analysis linked in with risk evaluation	Coastal engineering consultant	2023/24
Adaptation options analysis	Economic and coastal engineering consultants	2024/25
CoastAdapt – How to get the best out of the online tool	CoastAdapt developer	2024/25
Determining the economic value of 'non-market' or intangible assets or values	University of Western Australia	2025/26



TRAINING PROGRAM DELIVERY

Both online and in-person presentation and workshop sessions are proposed to maximise attendance from regional and metropolitan coastal land managers and community members. Recordings of training sessions will be made publicly available on the CoastWA website (and if possible via the CMCN's website, Whirlpool), along with infographics and FAQ. There is also an opportunity to build upon and contribute to the existing WALGA CHRMAP Forum, which meets regularly to discuss and resolve common challenges in the preparation and implementation of CHRMAPs.

COASTADAPT

CoastAdapt is a national online information delivery and decision support framework. CoastAdapt contains information and guidance to help people understand climate change and the responses available to manage the impacts. In 2022, the Australian Government provided \$667,400 to update CoastAdapt. There may be an opportunity for a joint project to tailor some of the CoastAdapt infographics and other information to the Western Australian coastal planning and management context. A training topic on how to get the best out of CoastAdapt is also proposed as part of the training program.





COASTWA GRANTS - EXPERT ADVICE AND TECHNICAL ASSISTANCE

This stream links to objectives 2 and 5 of this strategy. Promoting CoastWA and its grant programs is important to ensure coastal land managers are aware of the funding available to plan for, manage and protect the State's coast from the impacts of coastal hazards.

Each year, the DPLH and Department of Transport (DoT) promotes their coastal grants programs that sit under the CoastWA program. In addition to the annual launch, announcement of recipients and associated social media, presentations and forums are provided on request. In recent years, this has been in the form of WALGA organised forum to interested Local governments.

Recipients of CoastWA grants benefit from expert advice and technical assistance throughout the duration of their project. For example, a CHRMAP project funded through CoastWA will have an established steering committee with representatives from DPLH and DoT to help guide the project. Community consultation and participation are a necessary component for all successful CoastWA coastal grants.

Local government CHRMAP's

- 49 coastal local governments in WA. 29 have at least 1 coastal erosion hotspot (identified in the Assessment of Coastal Erosion Hotspots in Western Australia 2019)
- 21 CHRMAP's have been completed and 15 are currently underway and 1 completed CHRMAP is currently under its first review.
- The completed and underway CHRMAP's cover 51 of the 55 coastal erosion hotspots identified in the Assessment of Coastal Erosion Hotspots in Western Australia 2019
- 27 of the 36 CHRMAP's have received CMPAP funding





STRATEGY EVALUATION

This Strategy will be evaluated against the following key performance indicators:

- preparation and finalisation of the Community Engagement, Training and Education Strategy (completed January 2023)
- number of training modules developed
- number of training sessions held
- website and information available (number of page hits and groups reached)
- preparation and delivery of State coastal conferences
- preparation and delivery of WA Coastal Awards for Excellence
- promotion of the CoastWA grants and advice provided to funded projects.



APPENDIX 1: SNAPSHOT OF TRAINING COURSES AND COASTADAPT RESOURCES

University of Wester	University of Western Australia			
Degree	Major / Specialisation	Course		
Bachelor of Science	Marine and Coastal Processes	EART2204 Coastal Processes - Dr Jeff Hansen SCIE2204 Marine Systems (6) - Professor Thomas Wernberg ENVT3306 Coastal Conservation and Management (6) - Associate Professor Matthew Hipsey and Dr Renae Hovey GEOG2201 Geographic Information Systems (6) ENVT3307 Oceanography (6)		
Bachelor of Marine Science	Marine Science	EART2204 Coastal Processes - Dr Jeff Hansen SCIE2204 Marine Systems (6) - Professor Thomas Wernberg ENVT3306 Coastal Conservation and Management (6) - Associate Professor Matthew Hipsey and Dr Renae Hovey GEOG2201 Geographic Information Systems (6) ENVT2221 Global Climate Change and Biodiversity (6) - Dr Pieter Poot & Associate Professor Patrick Finnega		
Bachelor of Science	Marine Biology	ENVT2221 Global Climate Change and Biodiversity (6) - Dr Pieter Poot & Associate Professor Patrick Finnegan ENVT3306 Coastal Conservation and Management (6) - Associate Professor Matthew Hipsey and Dr Renae Hovey SCIE2204 Marine Systems (6) - Professor Thomas Wernberg		
Bachelor of Marine Science and Master of Marine Biology CBM	Marine Science	EART2204 Coastal Processes - Dr Jeff Hansen SCIE2204 Marine Systems (6) - Professor Thomas Wernberg ENVT3306 Coastal Conservation and Management (6) - Associate Professor Matthew Hipsey and Dr Renae Hovey GEOG2201 Geographic Information Systems (6) ENVT2221 Global Climate Change and Biodiversity (6) - Dr Pieter Poot & Associate Professor Patrick Finnegan ENVT3307 Oceanography (6)		



University of Western	University of Western Australia			
Degree	Major / Specialisation	Course		
Bachelor of Marine Science and Master of Environmental Science CBM	Marine Science	EART2204 Coastal Processes - Dr Jeff Hansen SCIE2204 Marine Systems (6) - Professor Thomas Wernberg ENVT3306 Coastal Conservation and Management (6) - Associate Professor Matthew Hipsey and Dr Renae Hovey GEOG2201 Geographic Information Systems (6) ENVT2221 Global Climate Change and Biodiversity (6) - Dr Pieter Poot & Associate Professor Patrick Finnegan		
Master of Environmental Science	Marine and Coastal Management specialisation	ENVT3306 Coastal Conservation and Management (6) ENVT4411 Geographic Information Systems Applications (6) EART4415 Coastal Hazards and Adaptation (6) ENVT5562 GIS and Spatial Analysis: Coastal Resilience (6) SCIE5505 Global Change and the Marine Environment (6) ENVT4408 GIS Programming (6) OCEN5001 Ocean Data Analysis (6) ECON5511 Climate, Energy and Water Economics (6) ENVT4402 Analysis for Environmental Management (6) ENVT4406 Catchment and River Processes (6) ENVT5516 Environmental Monitoring and Sensors (6) ENVT5518 The Sustainable Development Goals (6) LAWS4001 Oceans Governance (6) OCEN5002 Ocean Engineering and Technology (6)		
Master of Environmental Planning	N/A	LAWS5590 Water Resources Law (6) ENVT4411 Geographic Information Systems Applications (6) ENVT4421 Fundamentals of Environmental Management (6)		
Bachelor of Engineering	Civil Engineering	GENG5501 Coastal and Offshore Engineering (6)		



Oceans Institute - UWA short courses			
Course	Unit	Contact	
Introduction to Coastal Engineering	Learn how to interpret observed changes along our coast to better assess hazards facing our shores as well as understand methods for coastal engineering	oceans@uwa.edu.au	
Coastal Ocean Observations	Gain an introduction to ocean coastal observations. This course is ideal for practicing engineers, coastal planners and to those who want to develop knowledge on ocean observing.	oceans@uwa.edu.au	

Curtin University			
Degree	Major / Specialisation	Course	
Bachelor of Science	Coastal and Marine Science	MARI3000 - Advanced Marine Science and Technology	
Master of Environment and Climate Emergency	Environment and Climate Emergency		
Master of Urban and Regional Planning	Urban and Regional Planning		

Murdoch University			
Bachelor of Science	Marine Biology	ENV331 Environmental Management ENV344 Liveaboard Oceanography, Systems and Processes	
Master of Environmental Science	Environmental Science	ENV680 Climate Change Adaptation: Ecosystems and Societies SUS611 Resilient Regions: People and Practice	
Graduate Certificate	Environmental Assessment and Management	ENV552 Comparative Environment Policy and Law	
Master of Sustainable Development	Sustainable Development	ENV680 Climate Change Adaptation: Ecosystems and Societies ENV552 Comparative Environment Policy and Law ENV616 Environmental Policy for the 21st Century SUS611 Resilient Regions: People and Practice	
Master of Community Development	Community Development	SUS611 Resilient Regions: People and Practice	



Notre Dame University			
Degree	Major / Specialisation	Course	
Bachelor of Science	Environmental Management	GEOG3110 Coastal Processes and Planning - Leigh Straw, Dylan Korczynskyj, Cate Thill, Linda Davies ENVR3310 Environmental Impact Assessment and Planning	

Edith Cowan University			
Degree	Major / Specialisation	Course	
Bachelor of Engineering (Hons)	Bachelor of Maritime Engineering with University of Tasmania	JEE402 Design of Coastal Engineering Structures JEE306 Applied Ocean Wave Mechanics	

School Curriculum and Standards Authority			
Course	Unit	Contact	
Marine and Maritime Studies	Unit 4 - This unit focuses on the impacts of climate change, the process of coastal erosion and coastal engineering structures. Environmental and resource management is considered, including strategies for managing marine biodiversity	Allan.Knight@scsa.wa.edu.au	
Geography	Unit 1 - This unit focuses on understanding hazards, including the different types of hazards, the spatial distribution (where they occur), the causes (how they occur), the impacts and how to manage the risk of impacts from future hazard events (includes coastal hazards) Unit 4	Carolyn.Fleischer@scsa.wa.edu.au	



COASTADAPT TOPICS

WHAT IS CLIMATE CHANGE?

Importance of climate for coastal communities and environments

Australia's climate - drivers, variability and extremes

Climate change and sea-level rise based on observed data

How climate and sea level have changed over the long-term past

Using climate data to understand recent climate trends

Using climate observations to identify local risks

Coast Adapt Data Sets - present day

Causes of climate change and sea-level rise

Global climate change and sea-level rise

Climate change and sea-level rise in the Australian region

Unexpected and abrupt climate change

How to understand climate change scenarios

How to access climate change scenarios

How to use climate change scenarios

How to communicate about global climate change scenarios

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Coast Adapt Data Sets - future

ASSESS RISKS AND IMPACTS

Coast and climate dynamics

Estuaries and Climate Change

Coastal waves, water levels, beach dynamics and climate change

Data and visualisation sources to help understand flood and erosion risk

Use of sediment compartments for regional coastal management

Overview of the impacts on our coast

Ocean acidification and its effects

Coastal Groundwater and Climate Change

Cyclones and East Coast Lows

Climate change impacts on beaches and estuary sediments

Climate change impacts on coastal settlements and infrastructure

Climate change impacts on emergency management in the coastal zone

Climate change impacts on coastal freshwater ecosystems and biodiversity

Climate change impacts on human health in the coastal zone

Climate change impacts on coastal tourism

Climate change impacts on coastal fisheries and aquaculture

Climate change impacts on coastal ecosystems

Climate change impacts on vulnerable communities in the coastal zone

Climate change impacts on contaminated land in the coastal zone

Climate change impacts on coastal agriculture

Climate change impacts on coastal water supply and waste water

<u>management</u>

Climate change impacts on coastal communities



Assessing coastal climate risks at a local scale

How to conduct a climate change risk assessment

Rules of thumb for managing coastal processes

Decision support templates to create risk registers

The use of modelling tools to assess local scale inundation and erosion risk

Risk assessment - links to external data and visualisation sites

How to choose an appropriate spatial scale for coastal hazard mapping

UNDERSTAND ADAPTATION

What is adaptation to climate change?

Why is adaptation important?

The role of coastal decision makers in managing climate adaptation

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Barriers to adapting to climate change

Working with consultants

Reducing the risk of a legal challenge

Different planning approaches across jurisdictions

Planning approaches in New South Wales

Planning approaches in Queensland

Planning approaches in South Australia

Planning approaches in Tasmania

Planning approaches in Victoria

Planning approaches in Western Australia

Planning approaches in the Northern Territory

What is a pathways approach to adaptation?

Applying a pathways approach

Transformation

Adaptation options for coastal environments: planning

Adaptation options for coastal environments: coastal engineering

Adaptation options for coastal environments: Ecosystem management

Adaptation options for coastal environments: social, community and

educational

UNDERTAKE ADAPTATION

Guidance on how to build a business case for climate change adaptation: Lessons from coastal Australia

What is the least I can do for adaptation?

What if I do nothing? The implications of taking no action

Getting buy-in and support in your organisation

Review of national and international adaptation tools/information portals

Monitoring and Evaluation in climate change adaptation

Identifying indicators for monitoring and evaluation

Financial and funding mechanisms for adaptation to climate change

Role of insurance in adaptation

Valuation of adaptation options relative to the avoided impacts

CoastExchange: the CoastAdapt Online Forum

The importance of building community support

How to engage with stakeholders or the community over coastal hazards

Collaboration and partnerships for climate change adaptation