WARRABER ISLAND
CLIMATE ADAPTATION GUIDE

Warraberalgal People · Wakay Weyan · Ailan Kastom

Understanding what is changing on our island — and what we are doing about it

Our foundation

Warraberalgal people have lived on and cared for this island since *bepor taim*. We have deep knowledge of our traditional land and sea estates, strong *Ailan Kastom*, and a proven ability to adapt. That is our greatest strength as we face the changes ahead.

WHAT IS THIS GUIDE?

This guide belongs to Warraberalgal people. It is for everyone on Warraber — Elders, Traditional Owners, families, rangers, *kazil* (children/young people), and anyone who cares about the future of our island.

It has been put together by GBK — the Gur A Baradharaw Kod Torres Strait Sea and Land Council — working together with Warraber Traditional Owners and community members. It is a living document. It will grow and change as we learn more and as our community decides what actions to take.

This guide will help us:

- Understand what is happening on our island right now
- Understand what might happen in the future
- Think about the places and things we care about most on Warraber
- Consider what actions we can take to protect our homelands and our way of life
- Celebrate what we are already doing — and build on that strong foundation
- Make sure Warraberalgal people are driving these decisions



GBK
GUR A BARADHARAW KOD

WHAT IS HAPPENING RIGHT NOW?

Our island, our seas, and our way of life are changing. Many Traditional Owners, community members and families — are already seeing and feeling these changes every day.

What our community is seeing

What is changing	What people on Warraber are seeing and feeling
Coastal erosion and migration of sand	Our beaches are shifting and losing sand because big storms and infrastructure have changed how the sand naturally moves.
Sea level and tides	Tides are higher than any living person can remember. Roads and homes flood during king tides. Our beaches are getting narrower every year.
Coastal flooding	The cemetery floods. Roads are cut off. Water reaches places it never used to reach. King tides happen more often than they used to.
Fresh water	The groundwater tastes saltier. Our desalinators are working harder. Old freshwater sources our Elders knew are gone or too salty to use.
Reef and ocean	We can see coral bleaching on the reef. Fish are not where they used to be. We are seeing less fish, or they don't come in the right season anymore. The water feels warmer when we swim or fish.
Changing seasons and weather patterns	The calm *muthuru* season is arriving late, and the cold weather that used to come in June or July now arrives in September. Shifting weather patterns and changing rainfall mean that the *mudu* plant doesn't grow anymore.
Heat	Nights don't cool down the way they used to. Days are harder to work through. Our Elders and *kazil* are struggling in the heat.
Gardens and food	Fewer native animals, especially birds. Changing weather patterns affect our *kaikai* and harvest of traditional foods. Salt in the soil is killing traditional gardens. Taro, yam, and *wongai* are harder to grow. The seasonal signs our Elders used to read are no longer reliable.

Map feature	Key / Icon
Areas exposed to tidal inundation	
Coastal erosion prone areas	
Fresh water systems and traditional wells	
Vulnerable cultural heritage sites such as cemeteries, stone fish traps, story places	
Community gardening, subsistence and harvesting areas	
Turtle nesting sites	
Shade trees and community gathering places	
Earlier erosion control areas	

WHAT COULD HAPPEN IN THE FUTURE?

If the world keeps warming, conditions on Warraber will become more challenging. Scientists and Traditional Owners together have identified the changes most likely to affect our island. These are warnings that help us prepare.

higher temperatures

variable rainfall

less frequent but more intense tropical cyclones

more frequent sea level extremes

hotter and more frequent hot days

increased evapo-transpiration

rising sea level

warmer and more acidic ocean

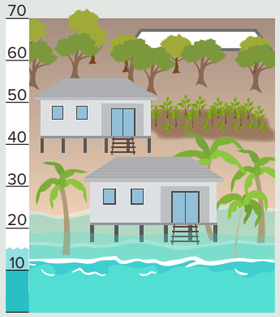
(Source: Climate change in the Torres Strait region)

The main risks to and our island and sea estates

By 2030

10–15 cm higher seas than today

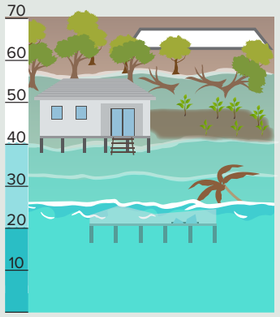
King tides we see now could happen more often and reach further. Flooding that happens a few times a year could happen every wet season.



By 2050

20–40 cm higher seas than today

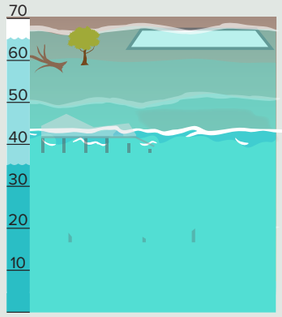
Today's worst king tides could become normal events. Large parts of low-lying Warraber could flood regularly. Our freshwater supply faces serious threat.



By 2070

35–65 cm higher seas than today

Without strong adaptation, much of Warraber could face repeated or permanent inundation. This is why we are planning and acting now.



As well as rising seas, we are likely to see:

warmer and more acidic water damaging the reef

less reliable rainfall and more intense storms

fish moving to cooler waters away from our traditional grounds

seagrass beds — the feeding ground for *Dhangal* (dugong) — coming under increasing stress.

hotter days that are harder for our Elders and children.

This is why we act

None of this is inevitable. How bad things get depends on what the whole world does — and on what we do here on Warraber. Communities that plan ahead, protect their shores, look after their reefs, and maintain their knowledge and culture are far better placed to survive and stay strong.

WHAT DO WE CARE ABOUT MOST?

Before we talk about problems and solutions, we need to be clear about what matters most to Warraberalgal people. Our community has spoken clearly about this through many conversations, planning processes, and the work of our Elders and RNTBC. We have identified the following 'values' – the things that are special to us as Warraberalgal people – that we wish to protect for the future.

WHAT ARE WE MOST WORRIED ABOUT?

Climate change is affecting everything we value across our islands, seas and for our culture. The table below shows the main threats and how serious they are. The community's view on priorities will be added as we work through the engagement process.

Ngalpun Mabaygal (Our People)	What we value and how climate change threatens it	How serious?
Ailan Kastom: Our island culture, traditions, and ceremonies. We want to see our *kazil* grow up knowing and following *Ailan Kastom* and *Wakay Weyan*, and maintaining respectful relationships with our island and seas and the species they sustain.	• Cultural and sacred sites damaged. People moving away from the island. Harder to access and care for cultural places.	!! High
Cultural heritage: Warraberalgal people maintain our rich cultural heritage, including sacred sites, and ancestral burial places that are irreplaceable.	• Seasonal signs and species behaviour are no longer reliable. Less opportunity to pass TEK between generations.	!! High
Traditional Ecological Knowledge (TEK): The deep knowledge our Elders carry about the reef, the seasons, the species, and how to read changes in our islands and seascapes. This knowledge must be passed on.	• Heat impacts on Elders and children. Anxiety and grief about the island's future. Food and water security at risk.	!! High
	• Climate impacts outpacing available community capacity and resources. Increased recovery demands after each event.	!! High

Ngalpun Malu (Our Sea)	What we value and wow climate change threatens it	How serious?
***Waru* (green turtle)**: Turtles are central to our culture, our diet, and our connection to our sea estates. Their nesting beaches and feeding grounds must be protected.	• Nesting beaches eroding. Warmer sand changing turtle hatchling survival. Reduced food availability.	!! High
***Dhangal* (dugong)**: Dugong depend on healthy seagrass. They are a culturally important and totemic species and their presence tells us our seas are healthy.	• Heat stress and flooding damaging seagrass beds. Without seagrass, dugong have nowhere to feed.	!! High
***Wapil* (fish)**: Fishing is vitally important for our people, both culturally and in terms of our subsistence. The whole process and knowledge system connected to fishing is central to our identity and cultural practices – such as cutting bamboo, making spears, understanding fish life cycles, knowing what fish are around in different seasons, and knowing what type of spear is made and used for each season.	• Fish moving to cooler waters. Reef productivity declining. Traditional fishing grounds harder to access and less reliable.	!! High
***Ngalpun maza* (coral reefs)**: The coral gardens around Warraber protect our island from waves and are home to the fish our families have always depended on.	• Marine heatwaves causing bleaching. More acidic water slowing reef recovery. Less reef means less wave protection for our island.	!! High
	• More intense rain events causing runoff and turbidity that clouds the reef and harms seagrass.	! Medium

Ngalpun Lag (Our Land)	What we value and how climate change threatens it	How serious?
Coasts and beaches: The coastline is where our community gathers, families fish, children play, and cultural life happens.	• King tides already flooding the cemetery. Sacred sites at risk from erosion and inundation.	!!! Critical
Traditional gardens: Taro, yam, *wongai*, coconut. Our food security depends on being able to grow food on our own island.	• Beaches narrowing. Shoreline retreating. Storm surge and inundation more frequent and severe.	!! High
Freshwater: The groundwater lens under the island is under threat from saltwater intrusion. Clean water is the foundation of everything.	• Flooding of houses and roads. Infrastructure damage. Freshwater and food security under threat.	!! High
Sustainable communities: The health of our community, Elders and families, is vital to sustaining our culture. The future viability of our communities, our infrastructure, spaces and the resources we need to sustain our people on our homelands is of critical importance.	• Salt in the soil destroying taro, yam, and other food plants. Gardens harder to maintain after flooding.	!! High
	• Sea level rise and storm damage stressing mangroves. Loss of natural shoreline protection.	! Medium

HOW WILL WE RESPOND?

Warraberalgal people have always adapted. When the big cyclone came, we rebuilt. When the fishing changed, we moved to new grounds. That strength — passed down through generations — is exactly what we need now.

Climate resilience involves three key capabilities — our community already has these skills:

Bouncing back

Absorbing the shock

Coconut palm trees bend in the wind and lose fronds without breaking. Their fronds grow back after the storm. Their fruit floats and has layers of protection that helps them survive long journeys.

When a king tide floods the road, we clean up and carry on. When a cyclone damages a roof, we fix it together. Building on this — stronger seawalls, better drainage, more resilient homes — means we bounce back faster.



Adjusting

Changing how we do things

The crab teaches us that we can be resourceful and outgrow outdated "shells". We can navigate challenges through flexible (sideways) movement in response to our changing environment.

Fish moving to new areas? We learn those new grounds. Gardens failing in salty soil? We try salt-tolerant crops and raised beds. Reef bleaching? We protect the patches that are healthy and help them recover.



Transforming

Changing the system

Like the butterfly, communities and individuals can make deep changes – including discarding ways that are no longer working, going back to traditional ways, changing locations, social structures, protocols, livelihoods or ways of life.

Some changes need bigger responses. Solar power instead of diesel. New approaches to water security. Advocating to government for what our community needs. The UN case was transformation in action.



WHAT CAN WE DO?

Warraberalgal people are leading the way. Based on what our community has told us, what scientists recommend, and what has worked in other island communities, here are some of the adaptation actions Warraberalgal people might consider.

Determining which of these actions are priorities, the timing, and who leads each action, will be confirmed through our community engagement process.

What we can do	What this means on the ground
Community shade tree plantings and structures	Plant culturally valued trees, install cyclone-rated shade shelters, and provide weather monitoring and chilled drinking water at key community sites to reduce heat risks and improve community wellbeing.
Renewable energy systems	Install solar and other renewable energy systems to reduce emissions, lower energy costs and improve reliability of power supply during extreme weather and emergencies.
Plant native vegetation along vulnerable shorelines	Plant coastal plants that hold sand and reduce erosion. Establish a community nursery. Use coconut fibre matting to protect new plantings. Create vegetation buffers around turtle nesting areas.
Monitor our shoreline	Rangers and community members GPS-map the shoreline regularly. Take photo records from the same spots each season. Keep logs of king tides and flooding. Record Elders' memories of how the coastline has changed.
Grow food that can survive salt and drought	Re-establish food gardens with salt-tolerant varieties — swamp taro, pandanus, breadfruit, coastal yam, leafy greens. Use traditional composting to improve thin soils. Plant windbreaks using native shrubs.
Protect our freshwater	Upgrade household rainwater tanks. Create community infiltration areas to capture rain. Monitor the freshwater lens for salt levels. Test traditional water conservation methods alongside modern systems.
Coral gardening on the reef	Establish small coral nurseries in sheltered parts of the lagoon. Grow heat-tolerant coral and transplant it to damaged reef areas. Set up reef stewardship zones managed by family and clan groups.
Protect fishing grounds and sea estates	Establish seasonal fishing closures to let stocks recover. Use rotational harvest areas. Monitor where *Wapil* (fish) are moving as the ocean warms. Keep records of *Dhangal* and *Waru* sightings and nesting.
Restore seagrass and lagoon habitats	Map seagrass beds. Establish small seagrass replanting areas in degraded parts of the lagoon. Create anchor exclusion zones to protect seagrass from damage.
Nature-based shoreline protection	Use local materials — coconut logs, brushwood — as wave barriers. Enhance mangroves where conditions allow. Rebuild sand dunes using sand-trapping fencing. Work alongside hard infrastructure like seawalls.
Protect our cultural sites and create safe places	Identify the highest-ground community buildings as cyclone refuges. Protect sacred sites and the cemetery from erosion. Map all culturally significant places at climate risk. Plan protective works around the cemetery as a priority.

Learning from others

In Tuvalu — another low-lying Pacific island — communities have used exactly these kinds of approaches: replanting native pandanus, coastal shrubs, and mangroves along vulnerable shorelines, guided by traditional knowledge, with youth monitoring results. It has stabilised beaches, protected homes and cultural sites, and strengthened knowledge between generations — using local materials and skills, at a cost that communities can sustain themselves.



Photo: Shuuichi Endou, www.bluedotliving.com/rising-hope-on-tuvalu/

Our island, our authority

Warraberalgal people, through our RNTBC and Council of Elders, hold the cultural authority to make decisions about our island and sea estates. This guide supports that authority — it does not replace it. All adaptation actions will be led and approved by traditional cultural governance structures on behalf of Warraberalgal people.

WHAT ARE WE ALREADY DOING?

Warraberalgal people are not waiting. Our community has been fighting and acting for years. Here is what we have already achieved:

Native vegetation restoration — our rangers and community are actively planting native coastal species to hold the shoreline, reverse the damage from historical clearing, and protect critical habitats.





Beach shade tree projects — native trees planted along the coastline are creating shade, improving the beach for families, and helping stabilise the sand — including protecting turtle nesting areas.

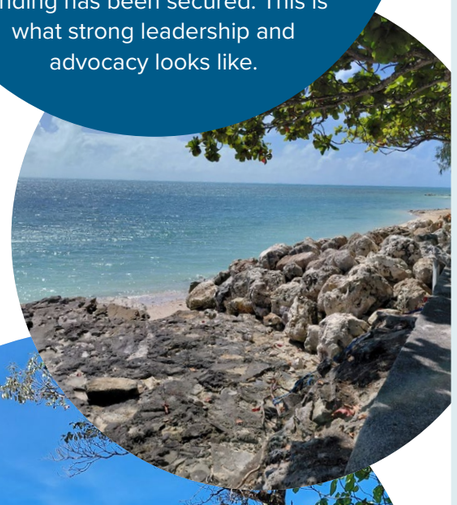
Invasive weed control — Warraber Rangers have removed Sisal (*Agave sisalana*), a destructive environmental weed, allowing native vegetation to recover and the land to heal.

Biodiversity restoration — projects are protecting and enhancing five key vegetation communities on the island — from vine forests to coastal habitats — building the island's ecological resilience.

Warraberalgal Porumalgal IPA — our Indigenous Protected Area is managed under the cultural authority of our Traditional Owners. Its goals include building the resilience of our island's biocultural values to climate change. This is our traditional estate, managed by us.

Seawalls — funding secured

Through the involvement of local Warraberalgal leaders in the 'Our Islands Our Home' campaign and a landmark UN Human Rights Committee case — the first of its kind in the world — our people urged the Australian Government to act. Stage 3 seawall funding has been secured. This is what strong leadership and advocacy looks like.





Our leadership is recognised

The UN Human Rights Committee ruling in 2022 confirmed what our community has always known: climate change is a human rights issue, and Australia has failed in its obligations to our people. This ruling is a legal foundation for everything we do next.





HOW CAN YOU GET INVOLVED?

This is your plan. It only works if community is involved — not just at the top levels, but at every level. Everyone on Warraber has a role to play.

The GBK Climate Resilience Project

GBK — the Gur A Baradharaw Kod Torres Strait Sea and Land Council — is running a community-led climate resilience project across five Torres Strait pilot communities including Warraber. The project runs until June 2028 and supports communities to develop and implement their own Local Climate Adaptation Plans.

To find out more about the GBK Climate Resilience Project, speak to your local Climate Resilience Officer (CRO) or contact GBK directly.

Ways you can be involved

- Come to community meetings and workshops about climate adaptation — your voice matters
- Talk to our Elders about what they remember about the island and what is changing
- Find out more about the work rangers are doing to help protect our island and seas
- Get involved in planting and restoration activities
- Speak with the CRO and your RNTBC about what matters most to your family and clan
- Share this guide with your family and community

Who is overseeing this work?

Adaptation decisions for Warraber are led by the Warraberalgal RNTBC, guided by the Council of Elders, and supported by GBK. All major decisions about our island's future need to be consistent with proper cultural governance processes.

Further information

Torres Strait State of the Environment Report and Island Snapshots

Torres Strait Regional Adaptation and Resilience Plan 2024

TSIRC Local Disaster Management resources

Bureau of Meteorology — Torres Strait weather and tide information

Adapt Land & Sea platform — adaptation options and resources

Climate Resilient Islands – lessons from the Pacific

Acknowledgement of Country & Traditional Owners

GBK acknowledges all Warraberalgal Traditional Owners and Elders — past, present, and emerging — as the rightful custodians of Warraber Island and surrounding sea estates. This guide was developed with and for Warraberalgal people. It is a living document and will be updated as our engagement and adaptation planning progresses.

GBK
GUR A BARADHARAW KOD

© GBK — Gur A Baradharaw Kod Torres Strait Sea and Land Council Torres Strait Islander and Aboriginal Corporation · 2026 · Working Draft v4

ICIP notice: Cultural knowledge, images, and community information contained in this document are subject to GBK ICIP protocols. This document must not be reproduced or distributed without the permission of the Warraberalgal RNTBC and GBK.