QCoast2100
COUNCILS LEADING COASTAL ADAPTATION

Council Showcase 2

Protecting Our Islands *From Strategy to Action TSIRC's Coastal Resilience Journey*

Torres Strait Island Regional Council
Presented by Cassandra Bande,
Environmental Engineer



Torres Strait Island Regional Council
LGAQ
Queensland Government

Our Region


A Note About This Video
This video is an earlier production featuring former TSIRC staff members. It is included to introduce the Torres Strait region and its communities and does not necessarily reflect current staffing or organisational arrangements.
Torres Strait Island Regional Council


Papua New Guinea
MM
Miriam Mir/Mer
Language Group
TOP WESTERN - Gudaw Maluligal Nation
KLY
Kalaw Kawaw Ya dialect
BOIGU
(Talbot Is.)
DAUAN
(Mt. Cornwallis Is.)
SAIBAI
MM
Erub/Ugar dialect
EASTERN - Kemer Kemer Meriam Nation
UGAR
(Stephen Is.)
ERUB
(Darnley Is.)
KLY
Kala Lagaw Ya
Language Group
CENTRAL - Kulkalgal Nation
MASIG
(Yorke Is.)
MER
(Murray Is.)
Dauar I.
MM
Mer dialect
IAMA
(Yam Is.)
PORUMA
(Coconut Is.)
WESTERN - Maluligal Nation
MABUYAG
(Jervis Is.)
BADU
(Mulgrave Is.)
MUA Island
WUG
(St Pauls Community)
ARKAI
(Kubin Community)
KLY
Mabuyag dialect
KLY
Kulkalgau Ya dialect
WARRABER
(Sue Is.)
INNER - Kaiwalagal Kaurareg Aboriginal Nation
KIRIRRI
(Hammond Is.)
Waibene
(Thursday Is.)
KLY
Kaurareg dialect
PNG
QLD
Cape York Peninsula

The Beginning: “Establishment of the CHAS”

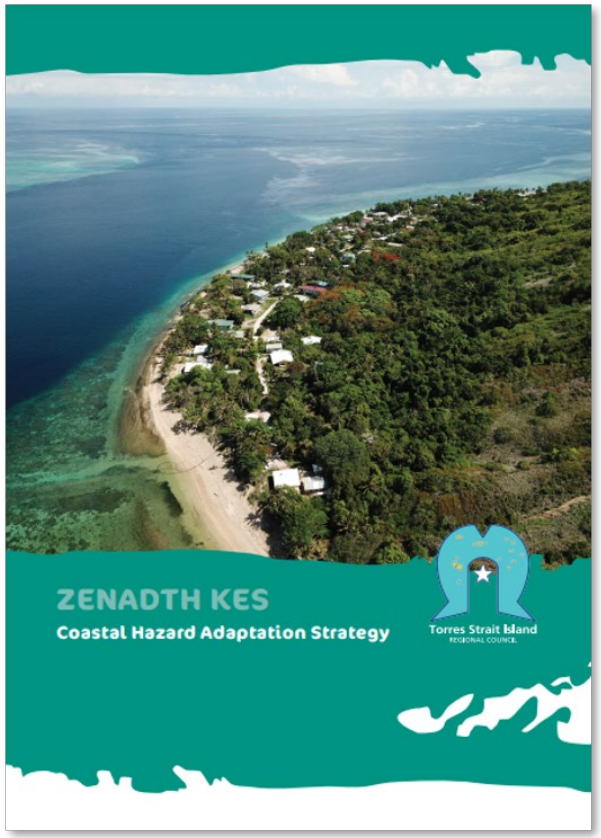


Figure 1. *Zenadth Kes Coastal Hazard Adaptation Strategy (CHAS)*

Zenadth Kes CHAS Journey:

Began in 2020 with QCoast2100 Funding

TSIRC Council endorsed and approved the Zenadth Kes CHAS in late 2024.

Zenadth Kes CHAS Delivery Team

Torres Strait Island REGIONAL COUNCIL · GHD · alluvium consulting · JBP scientists and engineers



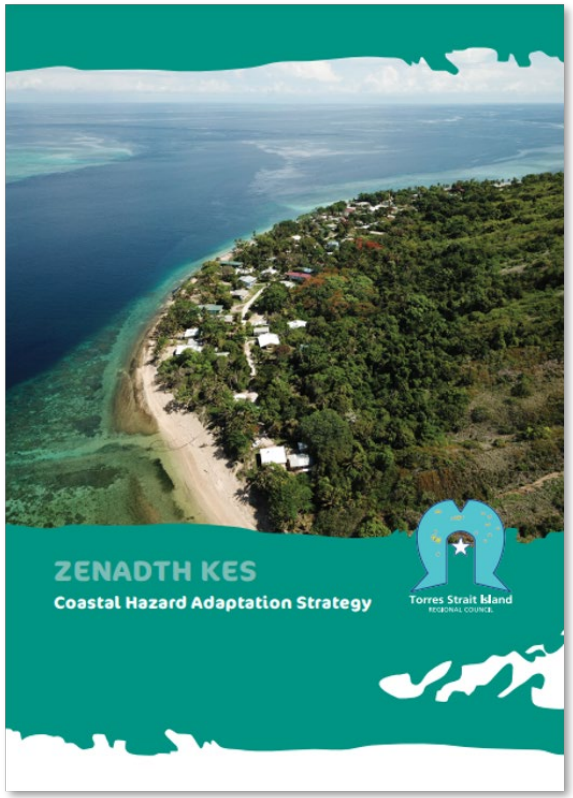
Figure 2. *$QCoast_{2100}$ process for developing a Coastal Hazard Adaptation Strategy*

“What CHAS Set out to Achieve?”

A framework for building long-term coastal resilience

Objectives of CHAS using 5 visual pillars:

- **Understand:** Identify coastal hazards—including erosion, storm tides and sea-level rise—and exposure across all 15 island communities, now and into the future.
- **Assess:** Understand risks to homes, infrastructure, essential services, the environment and culturally important places.
- **Engage:** Bring together science, local knowledge and community priorities to guide decisions and support connection to Country.
- **Adapt:** Identify suitable adaptation options for each island, recognising different coastal conditions and community needs.
- **Plan:** Establish long-term adaptation pathways, with priorities, indicative costs, responsibilities and timeframes to guide investment and implementation.



The Role of QCoast$_{2100}$

- $13 million funding has been provided to Queensland Coastal Councils to develop Coastal Hazard Adaptation Strategies
- Pro-active and strategic long-term approach to managing coastal hazards across Queensland's Coastline
- Funding awarded to the Torres Strait Island Regional Council (TSRIC) in 2020
- Developing the Zenadeth Kes, Coastal Hazard Adaptation Strategy as a critical management tool for the Torres Strait Islands



Torres Strait Island Regional Council

LGAQ

Queensland Government

QCoast2100 Councils leading coastal adaptation

Zendath Kes CHAS program support and technical contributors

The partnership connects local priorities, program support and specialist expertise.

Local priorities
Community relationships
Cultural and place-based knowledge

Administers QCoast2100
CHAS funding program
Local government connection
Knowledge sharing

CHAS phases 1–2
Engagement planning
Scoping

CHAS phases 3–8
Coastal hazard mapping
Technical analysis
Adaptation planning support
CHAS Engagement

The value is in the combination: local leadership + program support + technical capability

The CHAS 8 PHASE PROCESS

Phase 1 – Community Engagement
Phase 2 – Scoping & Planning
Phase 3 – Mapping Coastal Hazards
Phase 4 – Exposure Assessments
Phase 5 – Risk Assessments
Phase 6 & 7 – Adaptation Framework, Adaptation Options, Key Management Area Adaptation Pathways
Phase 8 – Strategy development, implementation and review



From Strategy to Action: TSIRC's Progress

Local projects and the Climate Resilience Officer Program support climate adaptation.



REGIONAL CAPACITY

Climate Resilience Officer (CRO) Program

First Nations CROs implement CHAS strategies through community awareness, working closely with all stakeholders.

Funded by DCCEEW

Regional connection: Torres Strait & Northern Peninsula Area Climate Alliance



UGAR

Native Village Living Shoreline Protection

Nature-based shoreline protection concept using oyster-shell reefs and dune revegetation.

Funded by QCoast2100

Status: Preliminary design and seeking development approvals.



MASIG

Coastal adaptation planning

Adaptation planning for priority coastal locations, including nature-based options suited to local conditions.

Funded by QCoast2100

Status: Funding agreement execution in progress.

Ugar Native Village Shoreline Protection Project

Ugar (Stephen) Island is a small island with volcanic origins!

Part of the eastern Torres Strait island cluster, it covers just 0.4 km² and has a population of 69 people at the 2021 Census (ABS).

Most of the island sits 20–30 metres above sea level, and it lies within a larger system covering just over 25 km².



Ugar Native Village Living Shoreline Protection

Two Key Management Areas (KMA) have been identified in the CHAS

- Front Beach
- Back Beach



BACK BEACH

Overview of the assets and values at risk

- 1 Residential House
- Native Village Old Cemetery



Project Information

The location of the proposed work site is on the South-east coast of Ugar, adjacent to the Ugar Native Village and Old Cemetery.



Funding Body: Local Government Association of Queensland (LGAQ)

Funding Type: Implementation of a Coastal Hazard Adaptation Strategy (CHAS)

Grant Program: QCoast2100

Approved Funding Amount: $591,954.00 (excl. GST)

Council Co-contribution: $17,759 (excl. GST)

Project: Ugar Native Village Shoreline Protection Project

Location: Ugar Island

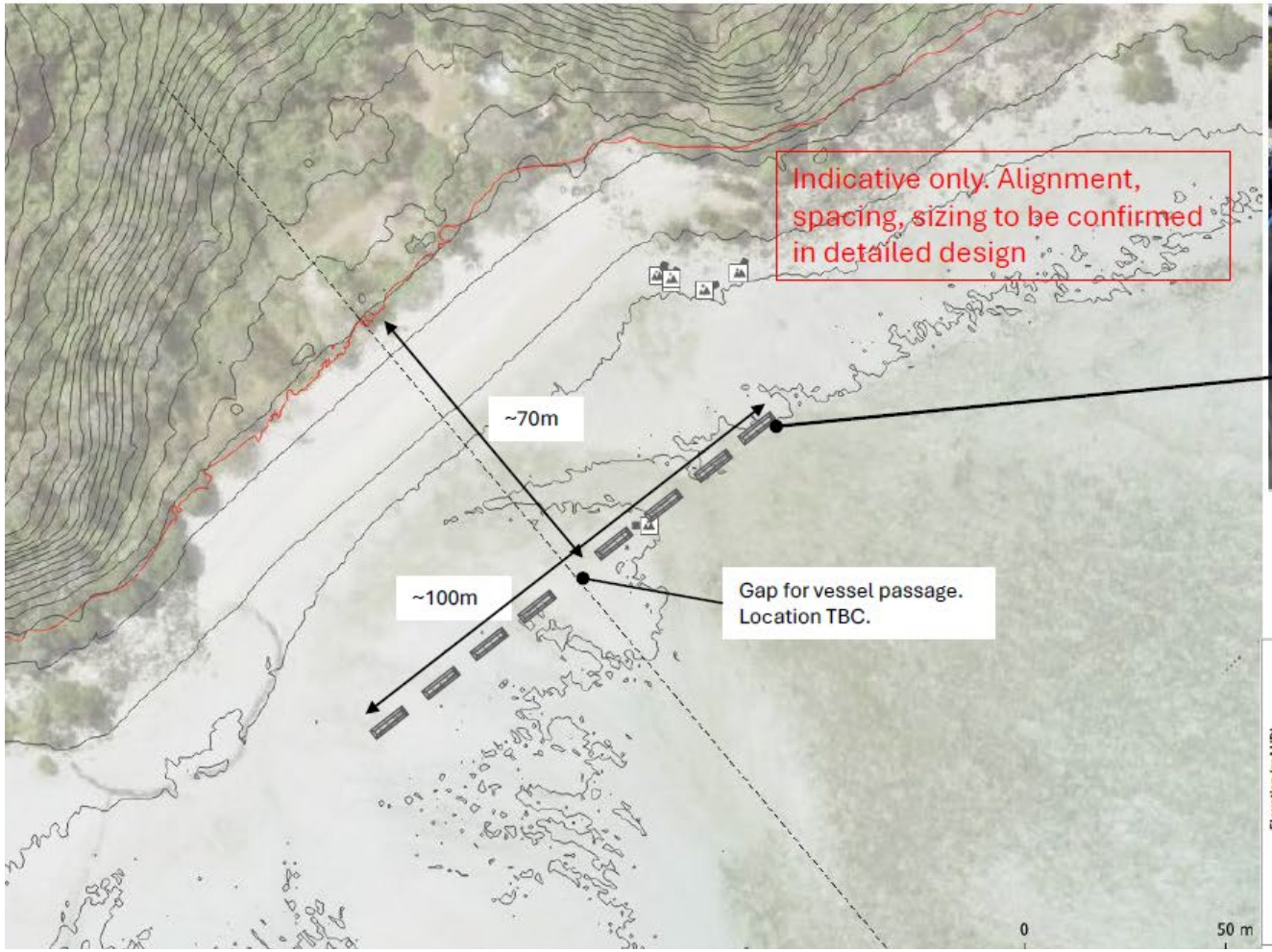
Indicative Project Duration: 1.5 years

Start: February 2026
End: August 2027

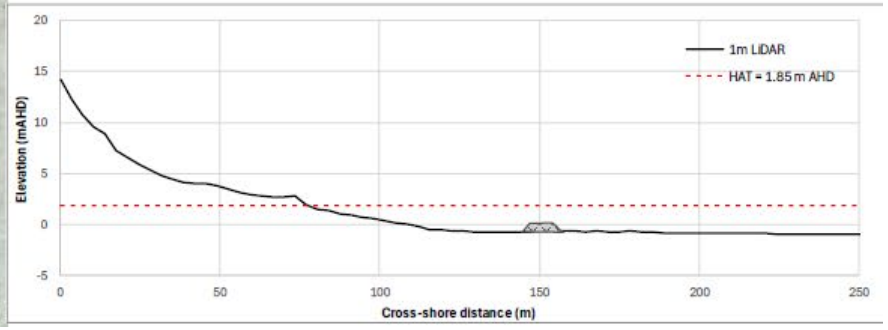
Project Scope & Concept Design

The Project will use two Nature-Based Solutions:

- Artificial Reef using recycled oyster shells in the Robust Oyster Baskets
- Revegetation of the of the beach





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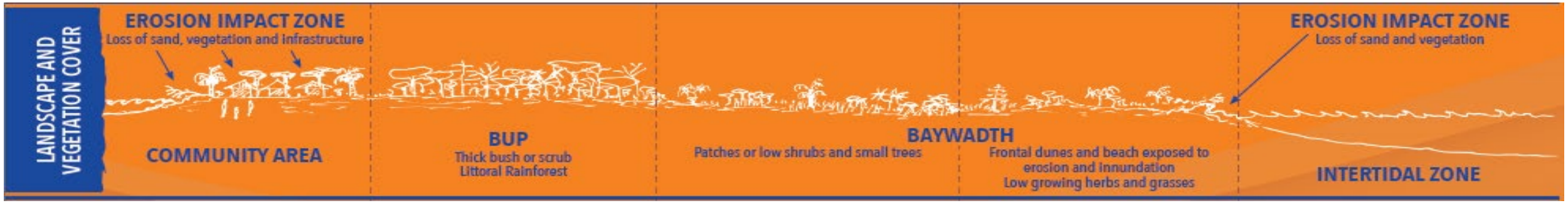
Project Timeline

Project milestones	Deliverables	Timeline
Commencement	• Executed agreements	1 month (February 2026)
Preliminary Design	• Prepare a Request for Quote, issue Request for Quote, evaluate responses and award contract. • Develop preliminary design drawings for artificial reef and dune revegetation works. • First phase of engagement: on-island consultation session.	5 months (June - November 2026)
Approvals Submission	• Preparation and submission of approvals. *Includes time waiting for receipt of approvals.	9 months* (June 2026 - March 2027)
Procurement for Construction, Revegetation & Community Engagement Works	• Receipt of approvals. • Procurement of materials, equipment and contractor/s to construct artificial reef modules, undertake dune revegetation and engage the community in these activities.	6 months (October 2026 - April 2027)
Construction, Revegetation & Community Engagement	• Mobilisation of materials, equipment and contractor/s to site. • Community education activities. Assembly and installation of reef modules. • Planting of dune vegetation.	2 months (May - July 2027)
Project completion	• Project completion report and acquittal.	1 month (August 2027)

Regional Coastal Planning and Partnership



PLANT SPECIES	LIFE FORM	PROPAGATION			SUITABILITY		SEED
		Seed	Cutting	Layering	Shade	Growth Rate	Availability
Bodho (*Guettarda speciosa*)	Tree	Y	Y	Y	Med	Slow	TBD
Gaybuy (*Casuarina equisetifolia*)	Tree	Y	-	-	Med	Fast	Most of year
Goewa (*Calophyllum inophyllum*)	Tree	Y	-	-	High	Slow	TBD
Mekey (*Terminalia catappa*)	Tree	Y	-	-	High	Slow	Naigai
Mukamay (*Cordia subcordata*)	Tree	Y	Y	Y	High	Slow	Most of year
Ubar (*Manilkara kauki*)	Tree	Y	-	-	High	Slow	Sager-Naigai
Wurakar (*Hibiscus tiliaceus*)	Tree	Y	-	-	Med	Fast	TBD
Wana (*Thespesia populnea*)	Tree	Y	-	-	Low	Fast	TBD
Dell (*Scaevola taccada*)	Shrub	Y	Y	Y	Low	Fast	TBD
Gubaldell (*Argusia argentea*)	Shrub	Y	?	?	Low	?	Sager
Guraygur (*Colubrina asiatica*)	Shrub	Y	-	-	Low	Fast	TBD
Koemak (*Premna serratifolia*)	Shrub	Y	-	-	Med	Fast	Sager
Mur (*Suriana maritima*)	Shrub	Y	-	-	Low	Slow	TBD
Koesar (*Pandanus tectorius*)	Pandanus	Y	-	-	Med	Slow	Naigai
Urab (*Cocos nucifera*)	Palm	Y	-	-	Med	Fast	All year
Pulla (*Ipomoea pes capre subsp. brasiliensis*)	Vine	Y	Y	-	-	Fast	TBD
Du (*Canavalia rosea*)	Vine	Y	Y	-	-	Fast	TBD
Pulla (*Vigna marina*)	Vine	Y	Y	-	-	Fast	TBD







david tell

TSRA
www.tsra.gov.au

For more information please contact the Warraberalgal Rangers on (07) 4090 0519

WARRABERALGAL RANGERS



Challenges to Delivering this Project.

CHALLENGES:

Remote Access, Freight and construction logistics

The need to balance engineering, environmental and cultural considerations







Social factors

Navigating Native Title

- Constructing coastal protection works while respecting cultural values
- Prioritising works in accordance with the wants and needs of the communities while also doing what we can within legal rights

Different unique cultures/risk tolerance levels

- Risk tolerance is greater than a lot of other regions therefor voices not as pronounced
- Need for community upskilling and empowerment to improve understanding of coastal hazard risks









Achievements and Outcomes So Far: What has TSIRC progressed since CHAS?

Boigu – Seawall repairs

Ugar – Artificial Reef (Design & Planning in Progress)

Iama – Seawall (recently completed) and flood protection works

Masig – TSIRC Civil Crew currently constructing sandbag seawall to stop erosion

Saibai – upgrading roads to improve accessibility and drainage

Poruma – recently completed sandbag seawall

Warraber – seawall (recently completed)

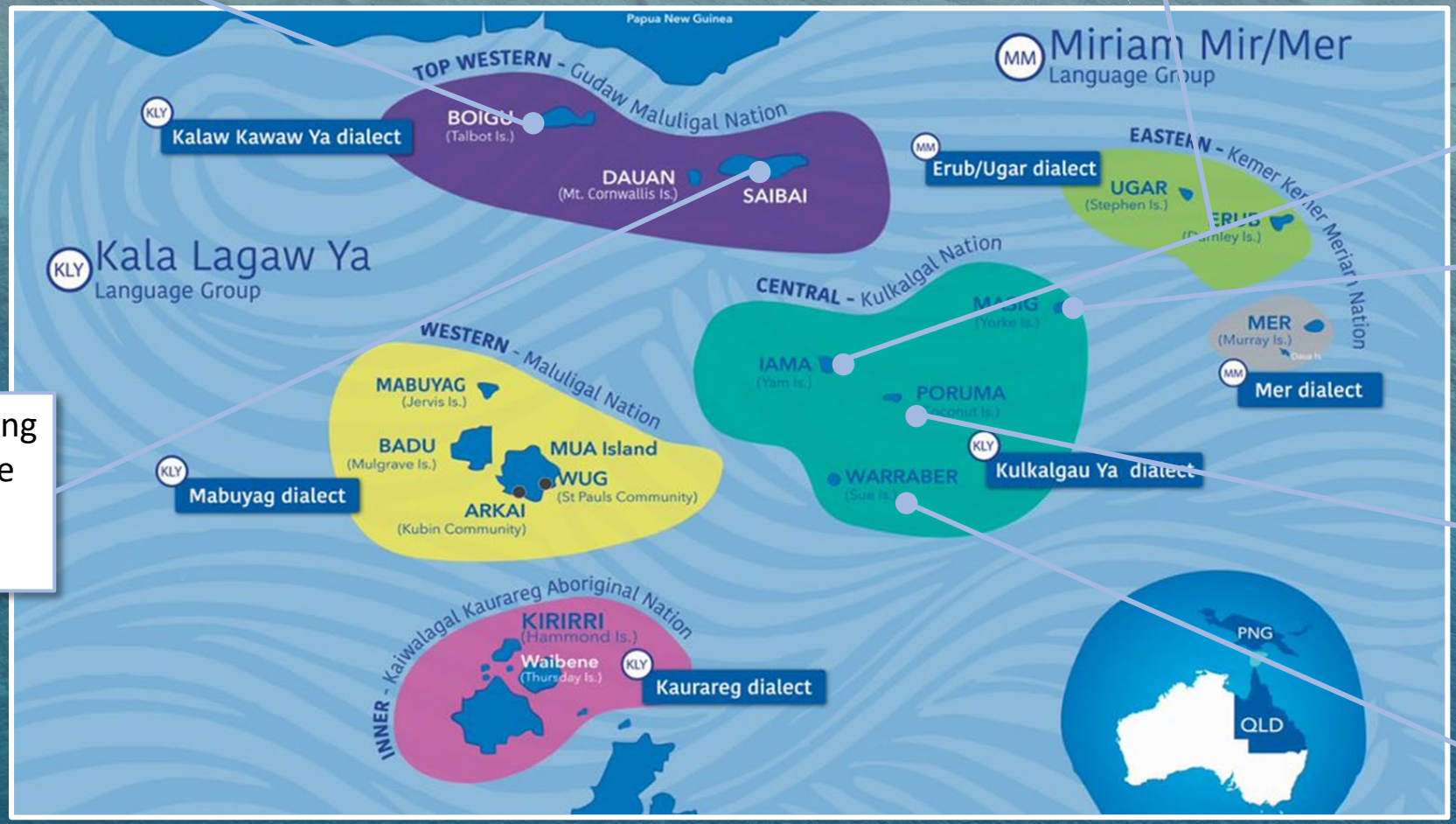


Figure 10. *Distribution of recently completed and current engineering management activities across the Torres Strait Islands*


Questions