

June 2025



MAPPING THE DIGITAL GAP

Measuring Digital Inclusion and Media Use in Remote Aboriginal and Torres Strait Islander Communities



Erub (Darnley Island)

Zenadth Kes (Torres Strait), Queensland

2024 Community Update Report



Acknowledgement of Country

We respectfully acknowledge the Erub Mer people, the traditional owners for Erub, and all Torres Strait Islands peoples, and pay our respect to their Ancestors and Elders, past and present. We also acknowledge the Traditional Custodians and their Ancestors of the lands and waters across Australia where we work, live and undertake our research.

About the Mapping the Digital Gap Research Project

Mapping the Digital Gap is a 4-year research project working in partnership with local organisations in 12 remote First Nations communities, to generate a detailed account of digital inclusion and uses of digital services including news and media, track changes over time, and inform appropriate local strategies and services enabling informed decision making by remote Aboriginal and Torres Strait Islander people. It is a supplementary project to the Australian Digital Inclusion Index, coordinated within the RMIT University node of the Centre of Excellence for Automated Decision Making and Society in partnership with Telstra.

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TSIMA broadcaster/ Research Support: Gilmore Johnston

Community Co-researchers 2022-24

Lala Gutchen and Nixon Mye

Research participants and stakeholders:

Thank you to all the community residents and local agency staff who generously participated in the surveys and interviews, providing the personal experience to make this research meaningful. We conducted 70 surveys with First Nations community residents in 2024 (56 in 2023, 44 in 2022). During 2022-24 research visits, we undertook 38 interviews with community leaders, residents and the following stakeholder agencies:

- + Torres Strait Islands Regional Council
- + Prescribed Body Corporate (Native Title)
- + Torres Strait Islanders Media Association
- + Tagai State School – Erub campus
- + Erub Primary Health Care Centre
- + My Pathways (CDP provider)
- + IBIS Supermarket
- + Erub Arts
- + TSIRC Engineering
- + Erub Erwer Meta TSI Corporation
- + Torres Strait Islands Police Support

Erub research trips dates:

18–22 March 2024; 20–24 March 2023; 4–8 April 2022

RMIT University researchers (2023):

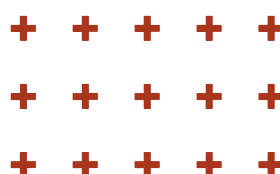
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Cover photo: Erub and fish traps at low tide



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Figure 1: Research team in Erub (L-R): Daniel Featherstone, Leah Hawkins, co-researchers Lala Gutchen and Nixon Mye, TSIMA broadcaster Gilmore Johnston, and Lyndon Ormond-Parker

01. EXECUTIVE SUMMARY

This report outlines updated findings from our third research visit to Erub (Darnley Island), which is located in the eastern island group of Zenadth Kes (Torres Strait), near the Great Barrier Reef. It is approximately 200 km northeast of Horn Island, where the regional airport is located.

The traditional owners are the Erub Mer people who, like all Torres Strait Islanders, have close connections to land, sea and sky and consider themselves as part of *Gogobithiay* (land, sea and sky).

Erub is approximately 3 km long by 2 km wide. The Erub community comprises 19 villages, with nine villages on the southern side of the island (Isem, Tor, Iwau, Banidog /Banidun, Greenhill, Mogor, Dadamud, Seim and Badog), three villages on the south-westerly side (Medige the Central Business District, Babineur and Wau), three westerly villages (Kedarwasi, Egruie, and Sadi) and four on the north-east side (Saager, Zaum, Zaum Paur and Ewi) (see Erub map in Appendix 4).

Our research visits in April 2022 and March 2023 found access challenges for Erub residents and service providers in terms of mobile and broadband access, particularly outside of the central villages, as well as reliability of services. Despite the access and affordability challenges, Erub residents surveyed had high levels of digital ability compared with other sites visited.

Our third and final research visit, from 18-22 March 2024, was another productive week. A big *eso* (thanks) to community research partner Torres Strait Islander Media Association (TSIMA), co-researchers Lala Gutchen and Nixon Mye and TSIMA Broadcaster Gilmore Johnston, for their contribution and guidance. *Eso* also to Torres Strait Islands Regional Council for hosting us and to all research participants, including 70 residents who undertook surveys and 12 community leaders and stakeholders who did interviews. This report seeks to reflect the lived experience and views of Erub residents.

Building on the [2022 Community Outcomes Report](#) and [2023 Update Report](#), this 2024 Update Report is intended to assist local Erub agencies, leaders and residents to better understand the barriers to digital inclusion, develop local strategies to address these barriers, and support planning and partnerships with government and industry stakeholders.

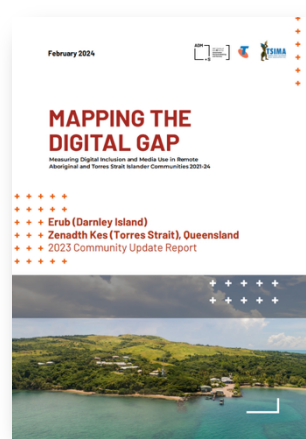
This report presents research findings from 2022 to 2024, outlining changes in First Nations digital inclusion over three years, updating the state and usage of communications and media services on Erub, and renewing the interview and data analysis based (chapter 5) on our 2024 research. The full survey results from 2022-24 are included in Appendix 1.

The Digital Inclusion Plan (chapter 6) has been updated based on community input and progress to date, as well as planned activities. This is part of our commitment to Indigenous data sovereignty, providing research data to support place-based and community-led planning and solutions.



- 338 km**
Nearest major regional centre by road (Cairns)
- 326**
Population (ABS 2021)
- 90%**
Torres Strait Islanders

- 70**
surveys conducted 2024 (58 in 2023; 44 in 2022)
- 12**
interviews conducted 2024 (12 in 2023; 14 in 2022)



Erub at a glance

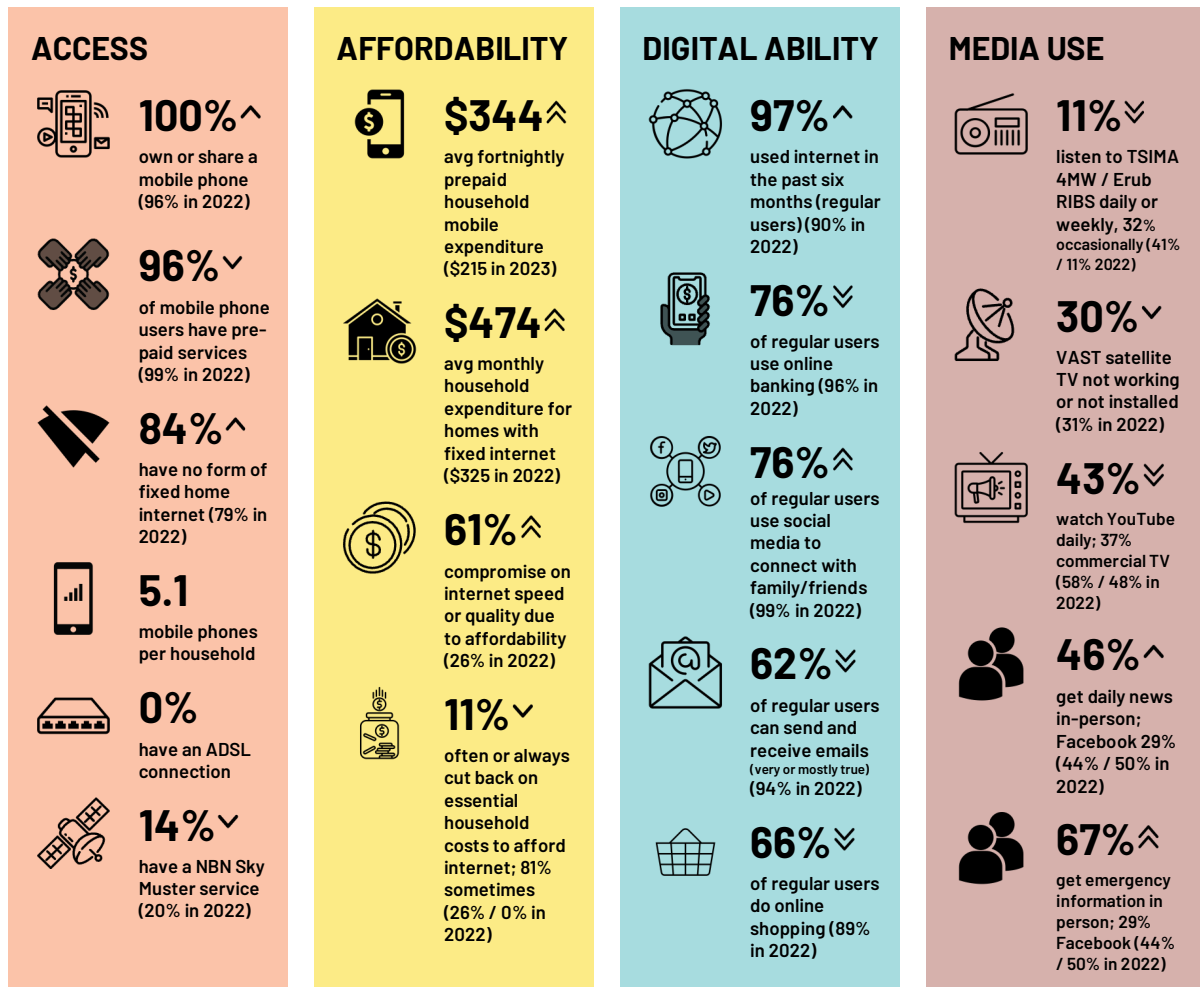
Distance	993 km	to nearest regional centre (Cairns), via two flights
Dwellings	80	occupied dwellings
	3.5	people per ATSI household
Language	92%	ATSI people who speak an Aboriginal language
Income	\$387	median ATSI personal income



Figure 2: Houses are clustered in 19 villages on Erub

Key survey findings

Below is a summary of unweighted 2024 survey results, in comparison to 2022 results.



Full 2024 survey results are available in Appendix 1, with comparison to 2022-3 results. An updated audit of demographics and communications and media services available in Erub is provided in Appendix 2.

What is digital inclusion? How is it measured?

Digital inclusion refers to equitable and reliable access to and use of information and communication technologies for participation in social and economic life.

The Australian Digital Inclusion Index (ADII) is a biennial national survey that measures three dimensions of digital inclusion: Access, Affordability and Digital Ability. ADII scores range from 0 to 100. The higher the score, the greater level of digital inclusion. ADII scores are relative, enabling comparisons across demographic groups and geographic areas over time.

The Mapping the Digital Gap project uses an amended version of the ADII survey to collect digital inclusion data. This enables us to compare results for the participating remote communities, towns and homelands with the national results collected by the ADII, and track changes in digital inclusion between and within these sites.

In 2021, Closing the Gap Outcome 17 was introduced to ensure First Nations people in Australia have “access to information and services enabling participation in informed decision making regarding their own lives.” Target 17 includes a target of equal levels of digital inclusion for Aboriginal and Torres Strait Islander people by 2026.

Combined with ADII data collection, the Mapping the Digital Gap project is helping, for the first time, to track progress towards Target 17 for remote, regional and urban First Nations people.

DIGITAL INCLUSION

ACCESS

- > Reliable access to phone and internet
- > Access to IT devices and/or facilities
- > Access to trusted media, news and information

AFFORDABILITY

- > Affordable phone and internet services
- > Affordable devices

DIGITAL ABILITY

- > Ability to use digital devices, software and online services
- > Awareness of cybersafety, scams, and viruses

ADII First Nations data dashboard

The [First Nations dashboard](#) on the ADII website provides interactive charts and community-specific results from the ten research sites in 2022. The dashboard will be updated in 2025 based on 2024 data. The Mapping the Digital Gap [2024 Outcomes Report](#) provides summary findings across all sites. This will also be updated in 2025 with 2024 survey results.

View dashboard using the QR code below:

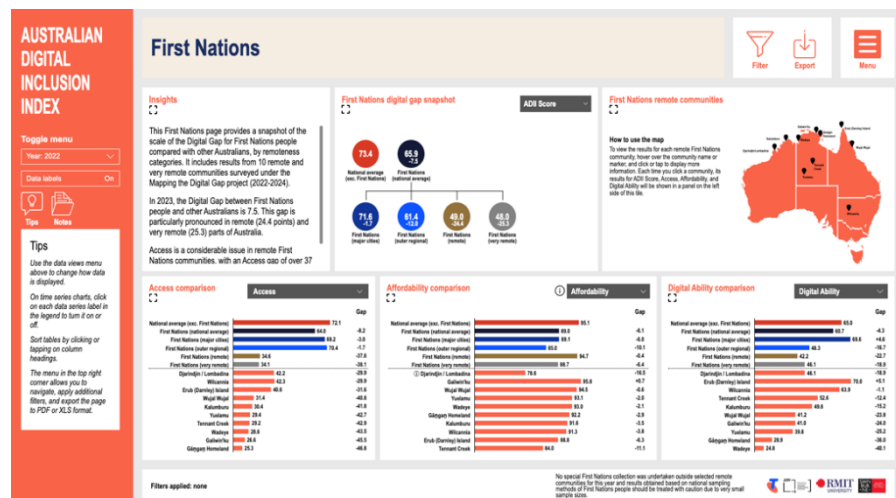


Figure 3: First Nations dashboard on ADII website. digitalinclusionindex.org.au/dashboard/firstnations.aspx

ADII 2023 report findings

The 2023 ADII found a digital gap of 7.5 points for First Nations people compared with other Australians. This gap widened substantially for people living in remote (24.4) and very remote Australia (25.3), where contributing factors include limited access to digital infrastructure and services, high internet costs relative to income, climate, geography and cultural context.

Based on our 2022 survey results, the average ADII score for Erub was 60.2. While higher than most other remote communities, this was 13.2 points below the national average for non-First Nations Australians (Figure 3).

The key element of this gap was in the Access dimension score of 40.6, which was 31.6 points below the non-First Nations average, primarily due to low levels of household internet access, limited mobile coverage across the island, and high reliance on mobile devices. Figure 4 shows a gap of 6.2 for Affordability but and an impressive Digital Ability score of 70.0, which is 5.2 above the national average. However these scores vary widely for different demographic groups as outlined below.

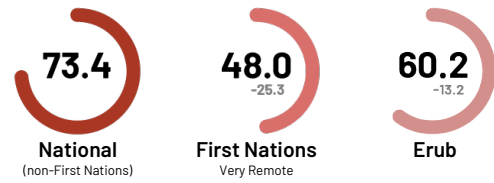


Figure 4: Erub ADII scores compared to national average (non-First Nations) and very remote First Nations scores, based on 2022 surveys

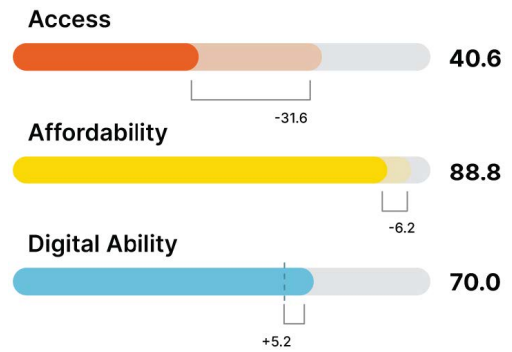


Figure 5: 2023 ADII scores for Erub, with gap against national non-First Nations averages

Demographic gaps in Erub:

The 2022 survey results found significant variations in digital inclusion (DI) scores between various demographic groups. These results demonstrate that targeted digital support activities would benefit these demographic groups in Erub.

Gender gap Women had higher average DI scores than men (64.6 compared with 55.4). The gap was particularly high in the area of Digital Ability (79.3 compared with 59.3) with Access also higher (42.7 compared with 39.0).



Disability gap People with disability had average DI scores of 59.4 compared to 69.3 for those without disability. The gap was largest in terms of Digital Ability (68.3 compared with 88.6), with Affordability also a factor (88.4 compared with 92.6).



Employment gap The average DI score for unemployed people was 55.1 compared to 61.9 for those employed (full-time or part-time). The greatest gap was in Affordability (68.1 compared with 93.2). Inversely, unemployed people had higher Digital Ability scores (84.3 vs 64.3).



Education gap Those who completed secondary school (Year 12 or equivalent) had an average DI score of 61.6 compared to those who completed up to Year 10, who averaged 49.2 (12.4 gap). The gap was largest in Digital Ability (64.8 compared with 49.0) but also in Access (43.8 / 35.6) and Affordability (94.3 / 87.7).



Age gap Those aged 65–74 had an average DI score of 34.6, compared with a score of 65.2 for those aged 18–34 years (30.6 gap). There was wide variation in Digital Ability scores (0.0 for 65–74 compared to 84.6 for 18–34's), but Affordability was lower for the 18–34's (89.8 compared with 98.6 for 65–74 group).



A demographic gap also exists for those living in group or shared households compared with couple with no children (62.7 compared to 78.8).

02. INTRODUCTION

The Mapping the Digital Gap project seeks to track changes in digital inclusion and media and communications use in 12 remote First Nations communities over three years. This report provides a final update following our third visit to Erub in March 2024, building upon the research findings from our 2022 and 2023 visits. It also seeks to track any progress on the suggested strategies for a local Digital Inclusion Plan and update the plan with any newly identified strategies or activities.

2022 findings

During our first visit in 2022, we heard significant frustration by Erub residents at the limited and unreliable mobile coverage to many households outside the central Medige village, with calls for expanded coverage on the island and out to sea. Being located in the eastern cluster of the Torres Strait Islands, Erub has unique communications challenges. Telstra mobile and fixed line services are delivered via a regional microwave repeater network, with NBN Sky Muster satellite internet also used by most agencies and some First Nations households. Erub's hilly terrain and dense vegetation, dispersed population across 19 villages, and extensive use of boats for fishing and inter-island travel also make for challenging communications access, with 4G mobile coverage limited to only three central villages.

In the 2022 Erub Community Outcomes Report, we outlined the following key findings:

- Pre-paid mobile is the primary means of phone and internet access
- There is limited use of fixed internet by agencies or households
- 4G mobile coverage in Erub has limited range and is congested and unreliable
- Mobile communications are critical for health and safety, including while out at sea
- There is a high level of digital ability in Erub
- About a quarter of residents surveyed have a home internet connection
- Affordability is a key concern constraining internet access and use of digital services

Erub faces similar digital inclusion barriers to many other remote First Nations communities, with limited fixed home phone or internet access and low household incomes limiting affordability of media and online services. Following weighting, our survey found 96% of First Nations residents primarily use a mobile phone for making phone calls, with 99% of these using pre-paid services. 79% of households surveyed did not have any form of fixed home internet, with 20% having NBN Sky Muster. 63% of regular internet users surveyed gave lack of access as the main reason for not using the internet more often. Respondents described issues of little or no 4G coverage on many parts of the island, regular outages and dropouts, slow services during peak periods and low penetration inside houses.



"[We want] improvement of the technology for the region, speed up a bit, so we [in Torres Strait] come in line with the mainland communities. We must not be neglected ... we're Australian, we're equal to them down there."

- Kapua Gutchen, My Pathways Supervisor and Cultural Leader, 2022

Limited access to reliable communications was also described as a health and safety concern, particularly for elderly and vulnerable people living in villages without phone or internet connectivity. Erub Islanders travel significant distances out to sea in dinghies for fishing or inter-island travel and often rely on 3G coverage from nearby islands to alert family or local authorities if in trouble. There was significant concern about the potential

impact on coverage with the planned 3G network switch-off in 2024. Electronic beacons such as EPIRBs were seen to be ineffective due to the time delay from activation to search and rescue.



“The 15 islands are divided by water. If I want to go to Murray [Island, I don’t] jump in a car, [I] have to go [26 miles] by boat ... When you get out of mobile range, you’re on your own.”

- Lesley Pitt, TSIRC Division, 2022

Service providers also reported issues with speed and reliability of ADSL and 4G services, which were the main broadband services being used. Sky Muster satellite services were also described as having limited speed, latency issues affecting cloud-based applications, and unreliable access in wet season. Telstra services were impacted by rainfall within the microwave repeater pathway, local power outages and damage to the fibre optic backhaul on the mainland. Recent outages had lasted up to two weeks.

With high levels of education among Erub residents, we found a relatively high level of digital literacy and cyber-safety awareness in Erub. Most people were confident using online services for banking, Centrelink, MyGov and licensing, as well as online shopping, social media, and entertainment services. However, there was demand for more digital skills training and support, particularly by elders and others with low digital ability, those concerned about scams and other cyber-safety issues, and people wanting to develop workplace skills. There was also demand for community access Wi-Fi and a facility to undertake creative and cultural projects including language recording, archiving and music production.

2023 findings

Most Erub residents and service providers told us that there had been no improvement in the quality and reliability of mobile, ADSL and satellite services, with some services having worsened since our 2022 visit. The ongoing lack of mobile coverage to 16 of the 19 villages had led to increased household uptake of Sky Muster services, however affordability was a key factor in preventing further uptake. Calls were repeated for mobile coverage to be expanded across the island.



“We’re still having issues like it’s slow internet ... we’re still far away from being up there with [having quality services] like the mainland.”

- John Armitage, TSIRC Divisional Manager for Erub, 2023

The only improvement in communications access since 2022 has been the introduction of an NBN Wi-Fi hotspot at the TSIRC office in the central village of Medige. This is well used, particularly by young people, with calls for more public Wi-Fi in villages without mobile access. The Indigenous Knowledge Centre was also re-opening during our visit after a long period of closure, enabling community access to computers, library facilities and basic IT support.

We heard that mobile and ADSL services had become less reliable, with regular dropouts and outages, including a nine-day outage in February 2023 shortly before our visit. Being toward the end of the line of the Telstra microwave repeater network means that mobile and fixed line services can be impacted by a range of factors – heavy rainfall in the microwave repeater path, damage to fibre optic cable between Cairns and the top of Cape York, failure of any of the five microwave links leading to Erub, local exchange or transmission equipment faults, and power outages on Erub. Communications on the two neighbouring islands of Mer and Ugar are linked from Erub and are consequently impacted by any network failure at or prior to Erub (see map in Section 3).

The closure of the island's short airstrip to commercial flights by Civil Aviation Safety Authority (CASA) from October 2022 increased the importance of reliable communications on Erub. With no regional passenger transport flights available for nine months, and the high cost of charters, this restricted residents' travel for meetings, education, medical appointments or social events and limited access by external service providers, medical specialists and technicians. There was increased reliance on online services as well as videoconferencing for telehealth, meetings and remote technical support. With the nearest airstrip at Masig (Yorke Island), residents regularly made the 22 nautical mile trip by dinghy to catch flights, with significant safety concerns due to lack of mobile coverage for much of the trip.

There has been increased residential and agency use of NBN Sky Muster satellite services since 2022, largely as a response to the lack of mobile services and reliability concerns. With increased use of digital services for telehealth, and online meetings and training by agencies, we heard many stories of frustration from several agencies and staff regarding the speed and reliability of Sky Muster services, especially during wet season. There was also increased use of 4G modems and mobile boosters to access signals from neighbouring islands. We did not hear of any uptake of Starlink low earth orbit (LEO) satellite services at the time of our visit.

Some agencies described ongoing challenges in using cloud-based database systems for financial and client records management, remote servers, and online administrative systems, due to congestion on 4G and ADSL services and intermittent dropouts. Agencies with access to both fixed line and satellite services described alternating between the two depending on which worked at any time. Most agencies reported technical issues and high costs for technical and IT support, impacting service delivery.

Despite the connectivity challenges, there is increasing demand for broadband data by residents to access online news and information, social media, and online entertainment, especially by young people. With increased costs of food, fuel and other essential items, communications costs are increasing affordability issues for many households. Cost and unreliable incomes were major factors in service and device choices and usage.

Our 2023 surveys again found a high level of Digital Ability among Erub residents. However, the high level of digital skills tends to be concentrated in the younger population, with ongoing demand for digital skills training and support for elders, people with disability and those with lower education or English literacy levels. There is also demand for awareness-raising around issues such as scams, misinformation, and other cyber-safety issues.

There is a growing cohort of young people involved in multi-media production, including music, video, digital artwork, and language and cultural content, with many sharing their work via social media platforms. These include award-winning multi-media artist Jimmy J Thaiday, digital artist and drone videographer Jimmy K Thaiday, musician and digital creator Nixon Mye, and co-researcher Lala Gutchen, who won a 2023 NAIDOC award for Caring for Country and Culture for her work in documenting the Erub Meuram language and climate change advocacy. There were calls for more support for media producers, including a facility to undertake this ground-breaking work.

While there are no current plans for upgrading existing communications services in the region, there was a Regional Connectivity Program funding announcement in December 2023 of NBN establishing fixed wireless services across the Torres Strait. Details of the delivery model and timeframe are not yet public.

2024 findings

When we returned in 2024, there had been minor improvements to the mobile service since 2023, with slightly faster speeds and slightly increased 4G coverage to inner villages. However, residents and agencies reported little change with many of the same concerns about patchy and unreliable mobile services, growing affordability issues and wet season impacts on mobile and satellite services. Community frustration at the lack of change remains strong.



“Sometimes I question it, are we part of Australia? Because there’s a lot of things that we missed out, and [communications on] the island is still the same as it were. There’s only [small things that have] changed, but one [thing that needs to change is] getting the tower in place.”

- Lala Gutchen, Language Facilitator / fisherwoman / Co-researcher, 2024

The most significant development in Erub’s communications infrastructure was the rapid adoption of Starlink, mostly replacing NBN Sky Muster services as a redundancy service. There had been recent uptake of Starlink by most service providers (school, store, clinic and staff quarters), with agency staff reporting significant improvement in speed, reliability during wet season and improved use of cloud-based applications. This has led to reduced issues with store sales and improved healthcare and education outcomes.

There was also initial household adoption of Starlink by several staff and three First Nations households, with interest expressed by several others. The high up-front cost of equipment and monthly costs (\$139) is a key barrier for First Nations households, with even Sky Muster usage decreasing since our previous visits (down from 20% to 14%).

We heard there had been upgrades to the Telstra microwave repeater network to improve resilience, including a tower upgrade at Masig (Yorke Island), which provides the link to Erub. While there had not been extensive outages as in recent years, there had been a 3-day outage in February 2024 as well as reports of regular short outages and dropouts especially during wet season. The issues were described as worse at Ugar (Stephen Island) and Mer, which connect from Erub. Since our visit, we have had reports of more outages including a 5-day regional outage in May 2025.

With 3G to be switched off later in the year, we again heard concerns about safety issues when out fishing or traveling between islands as well as for villages that could only access a limited 3G signal from neighbouring islands. There were still no plans to improve mobile coverage on Erub, with renewed calls for mobile boosters in un-serviced villages and a mobile tower near the airport to enable communication when planes land and to address health and safety concerns.



“The community needs to have access to reliable communication for all sorts of reasons. And they haven’t got it, unless you live right near the tower or... you’ve got good sight [of the tower]. So, that’s, I think is one of the highest community issues.”

- Jon Gallagher, Clinical Nurse Consultant, Erub Primary Health Care Centre, 2024

Affordability issues had increased significantly for low-income Erub households, with increased mobile and home internet costs adding to cost of living pressures as rising freight costs increased the price of food, fuel and other essentials. We found a dramatic increase in average household expenditure on mobile and internet, up from \$250 in 2022 to \$376 in 2024, the highest of all sites visited. Our 2024 survey found that 63% of respondents had cut back on essential household costs to afford internet in the

past six months, up from 50% in 2022. 61% had compromised on internet speed and/or quality to prioritise affordability, up from 26% in 2022. The free NBN Wi-Fi hotspot in the central village was getting well used but more Wi-Fi in other villages and other affordability measures are urgently needed.

Digital ability levels remain high for younger generations on Erub, however our 2024 survey reached a wider demographic mix and indicated lower average levels of digital ability on Erub that previous surveys. This indicates the ongoing need for digital training and support, particularly for elders, people with disability and those with lower levels of education. The Indigenous Knowledge Centre is a useful resource but could be playing a greater role in delivering computer access, targeted training workshops and archiving of language and cultural records. There is ongoing demand for a digital hub to be by the cohort of digital media producers and entrepreneurs to support their ambitions.

Media services remain limited on Erub, with the RIBS radio station having been largely inactive for two years and the limited broadcast range making it difficult to receive the important regional radio service 4MW. Radio listenership has declined on Erub as a result, however the Torres News and local Facebook pages are well used to access local news. There have been replacement of a number of VAST satellite TV dishes across the community, however about 30% of households are still without a working TV service. This leads to increased household costs to access entertainment online and via subscription services.

Updates to proposed Digital Inclusion Plan

The 2022 and 2023 reports included a proposed digital inclusion plan, outlining a list of potential strategies to improve digital inclusion based on input from research participants. An updated Digital Inclusion Plan is provided in Section 6, which includes new suggestions and a summary of progress or planned activities for each item listed.

While there has been limited improvement in strategies relating to mobile coverage and reliability on Erub, there has been progress on a number of the strategies: Improved agency broadband, Power security, Wi-Fi access, community access computer and IT support. This has helped to improve service delivery as well as affordability and digital ability for Erub residents.

We recognise the challenges in implementing a local digital inclusion plan, with multiple agencies involved in delivering media, communications and digital support programs. However, TSIRC, TSRA and TSIMA have been successful in advocating for improved services in the region over several years. We hope that this draft plan may assist in seeking improved services and leveraging external funding and support.

While the Mapping the Digital Gap team have now completed research visits to Erub, we are happy to continue to assist with development of this plan and options for implementation of strategies.



Figure 6: Medige village, Erub

03. MEDIA & COMMUNICATIONS IN ERUB

Existing telecommunications services

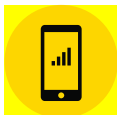


Backhaul to community

There is Telstra fibre optic running from Cairns to Bamaga in the Northern Peninsula Area at the top of Cape York. There is then a Telstra microwave repeater network that provides backhaul to the islands in the Torres Strait region via Thursday Island. The map below shows the layout of the microwave repeater network, with 4 repeaters between Bamaga and Erub.



Figure 7: Map showing path of Telstra microwave repeater network (Source: <https://tsirc.qld.gov.au/deputations/connected-islands>)



Mobile coverage

The 3G / 4G mobile tower is located in Medige Village with coverage of Sadi, Egure and some of Saim and Dadamud Villages. Due to Erub's hilly terrain, there is little or no 4G coverage to villages in the west, east and northeast of the island, nor out to sea. There were upgrades in 2018 and 2021, with 3G planned for shutdown in mid 2024. Weak 3G signals from neighbouring islands Mer, Ugar and Masig can be accessed in some villages.



Landlines

Landlines are available in most service agencies and some staff residences. However the majority of residents surveyed do not have landlines. As a result, Erub residents are predominantly reliant on mobile for primary phone use.



NBN Sky Muster services

Erub is designated as a satellite delivery zone under NBN planning, with no fixed line or fixed wireless. Some agencies use NBN Sky Muster for primary access, including Erub Arts and the police post, however most having moved to Starlink. An estimated 10 residential dwellings (of 72) have Sky Muster services. These are primarily in agency staff quarters or houses outside the 4G coverage area.



ADSL access

The TSIRC building, store and other central agencies have ADSL services (Note: the school, store and clinic have since transferred to Starlink for primary access). Telstra has advised TSIRC that it will cease using the copper network, but has not yet provided a timeframe.



Starlink LEO satellite services

There has been uptake of Starlink by several agencies on Erub since 2023, including the IBIS supermarket, Tagai school and clinic, as well as staff quarters and an estimated three First Nations households.



Public Wi-Fi

An NBN public Wi-Fi hotspot was installed at the TSIRC office in May 2022 under the Communities in Isolation program, using Sky Muster Plus Premium backhaul. Free Wi-Fi is also available from the Centrelink agency (also at TSIRC office) to access government and banking services.



Public phones

There are no public phones available on Erub.



HF / UHF radio

An HF radio tower atop the island is used by Borderforce for search and rescue and border security. Local agencies reported using mobile or satellite phones for emergency communications, not HF or UHF radio.

Media services



Radio services

TSIMA 4MW broadcasts regionally on 1260 AM and on VAST channel 922. Erub's RIBS service 4DI FM re-transmits 4MW on 106.1 FM. There has been limited RIBS broadcast since 2022. ABC Far North Queensland broadcasts from Thursday Island on 1062 AM, with low signal at Erub.



Newspaper

The local IBIS store sells the weekly Torres News newspaper, published by TSIMA.



TV services

Free to air TV is only available via VAST satellite direct-to-home, however about 30% of houses do not have the VAST service working. Some houses have subscription satellite TV services (Foxtel), especially to access sports and movies.



Local news

Regional news is shared via 4MW radio, Torres News, TSRA and TSIRC websites and Facebook pages. Local Erub news is shared via community noticeboards (TSIRC, IBIS store), distribution of flyers and a Facebook page called 'Erub Notices'.

Access and support facilities



Community access facilities

The Indigenous Knowledge Centre (IKC), situated at the rear of the TSIRC office, provides access computers, library facilities, language and cultural records, and occasional training through State Library of Queensland programs. The Centrelink agency operates from 9am-12pm weekdays within the IKC and has one computer available for accessing Centrelink, banking and government services.



IT support

Support in accessing and using online services is available at the IKC, Centrelink office and TSIRC office.



Mobile phones and recharge sales

A limited range of Android smartphones and flip phones are available from the IBIS supermarket as well as Telstra pre-paid vouchers.

04. REGIONAL PLANNING AND PROGRESS

Communications services have improved across the Torres Strait region in the last decade



“It’s come a long way from Bu shell and smoke signal. There’s already [big changes]. There was only one VHF here [to communicate with] the outside world. [Then, in the 1980s] there was one public phone [and] you queue up for talk or you’re expecting a call. [Then landlines came] to the houses. [Now with mobile phones] we can be anywhere ... well, almost.”

- Kapua Gutchen, My Pathways Supervisor and Cultural Leader, 2022

Communications services in the Torres Strait have historically lagged behind other parts of regional Australia, largely due to remoteness and widely distributed islands.

- + “Currently, many islands across the Torres Strait have patchy outdoor coverage, if they do have it at all, while some only have 3G services.” (Telstra representative cited in a Queensland Government press release, 2019).¹

Torres Strait Regional Authority’s *Torres Strait Development Plan 2019–2022* listed the lack of communications infrastructure as a limiting factor for the Torres Strait region’s economic development.² Communications was prioritised in TSRA’s Regional Economic Investment Strategy³: “support safe and accessible community infrastructure and land and sea communication systems.”⁴

Mobile access has improved markedly since 2016 due to advocacy from TSIRC⁵ and co-investment from TSRA, Queensland and Australian Governments, and Telstra. Upgrade projects resulted in 4G coverage on 14 islands and increased capacity of the regional microwave backhaul network connecting to the Cape York fibre optic backhaul. In June 2018 TSRA, Queensland Government and Telstra finalised the \$8.26 million Torres Strait Digital Foundation Project Stage One. Begun in January 2017, this project delivered improved 3G performance across all sites with existing mobile services, new 4G coverage on two central islands (Badu Island and Kubin Village on Moa Island), increased ADSL ports on Horn Island, and new 4G infrastructure at Mabuag Island, Ugar and Mer Islands. A 4G base station at Erub Island was funded under the Australian Government’s Mobile Black Spot Program (\$410,000), completed in 2019.

TSRA and TSIRC successfully advocated for Stage Two co-investment from Telstra, Queensland, and Australian governments to provide “the technology and innovation needed to protect our borders and deliver multiple socioeconomic, educational, health and community safety outcomes for ... the Torres Strait region.”⁶ The \$7.32 million Torres Strait Digital Expansion Project was successfully completed in 2021, building upon Stage One to upgrade the telecommunication infrastructure needed to deliver 4G coverage to all remaining islands of the Torres Strait.⁷

¹ Queensland government 30/10/2019. Source: <https://statements.qld.gov.au/statements/88754>

² Page 22, *Torres Strait Development Plan* 2019-2022.

³ TSRA 2019:23

⁴ TSRA 2019:97

⁵ TSIRC listed Digital Connectivity as Priority Area 7 and sought \$25.44 million funding for a multi-stage Torres Strait Mobile Network Expansion Project (*TSMNEP*).

⁶ TSRA Annual report 2017-18:24

⁷ Telstra contributed \$3.66 million, with Queensland Government contributing \$2.26 million and TSRA \$1.4 million. This project involved 12 separate projects across 10 islands, with a key focus on upgrading 4G Base stations in the Top Western islands of the Torres Strait to address biosecurity risks due to the proximity to Papua New Guinea and Indonesia.

Ongoing calls for infrastructure upgrade and planning and investment in digital services

However, TSIRC continued to advocate for further investment, with a 2019 deputation to Queensland Government listing 'Support Digital Transformation & Connected Islands' as Priority Area 3.⁸ TSIRC cited regular communication blackouts, sometimes lasting several days, impacting on essential services and business continuity. It argued that "inadequate or band-aid style investment approaches in connectivity will drive an even greater digital divide for our communities in economic participation, social inclusion and access to essential services like allied health and tertiary studies."⁹ The deputation sought investment in four areas: upgraded telephony and data access to all TSIRC communities, equivalent to mainland infrastructure; expanded Smart Cities and Suburbs Program to include regional and remote areas; new programs that foster renewable energy, digital adaption and automation opportunities for remote communities; and a Digital Local Government and Rural / Regional Telecommunications Program to increase benefits of connectedness and innovation.¹⁰

Many of these issues and requests remain current today. The ongoing need for telecommunications improvements in the Torres Strait and Cape York regions was raised in the *TCICA Region Telecommunications and Digital Connectivity Final Report 2021*,¹¹ commissioned by Torres and Cape Indigenous Councils Alliance, which outlined six strategic focus areas for a Telecommunications and Digital Connectivity Strategy. A 2021 discussion paper by the Rural Economies Centre of Excellence¹² called for "a more holistic and bold approach" to invest in "both the hard infrastructure and the social infrastructure needed to achieve overall digital inclusion, social equality, and economic development."¹³ It recommended that the Queensland Government lead digital development efforts in regional Queensland, with a call to address "the urban-rural digital divide with appropriate place-based analysis, planning, and solution building."¹⁴

Funding for NBN fixed wireless infrastructure in some Torres Strait islands

The Regional Connectivity Program Round 3, announced in December 2023, included \$10,527,846 for a major NBN project to "provide fixed wireless broadband to islands in the Torres Strait."¹⁵ Fixed wireless will provide faster and more reliable NBN broadband access for the central group of Torres Strait islands and the Northern Peninsula Area, which currently have Sky Muster satellite as the only NBN service option. This project is yet to be rolled out, with no public detail of the sites included, the project timeframe or the means of backhaul. However, the project will not include Erub and is not expected to improve mobile services.

It is anticipated that Telstra will seek funding for upgraded mobile services under RCP Round 4 when that round opens in 2025.

⁸ <http://tsirc.qld.gov.au/sites/default/files/TSIRC%20QLD%20Government%20Deputations%202019.pdf>

⁹ TSIRC 2019:10

¹⁰ TSIRC 2019:10

¹¹ Babacan, H., McHugh, J., Marshall, A., Gopalkrishnan, N. and Dale, A. (2021). *TCICA Region Telecommunications and Digital Connectivity Review Final Report 2021*.

¹² Marshall, A., Babacan, H., & Dale, A. (2021). *Leveraging digital development in regional and rural Queensland: Policy Discussion Paper*. Rural Economies Centre of Excellence: QUT Digital Media Research Centre and James Cook University. Brisbane.

¹³ Marshall, Babacan & Dale 2021: Executive Summary p.ii

¹⁴ Marshall, Babacan & Dale 2021, p. iii

¹⁵ <https://www.infrastructure.gov.au/media-communications-arts/internet/regional-connectivity-program>

05. KEY FINDINGS FROM DATA ANALYSIS

This section provides key findings from the 12 interviews undertaken with community members and stakeholders in 2024, as well as 12 in 2023 and 14 in 2022. It also includes weighted survey results and observational data. The new topics added since the 2023 Community Outcomes Report are labelled with 2024 after the heading.

See Appendix 1 for the full set of comparative survey results for 2022, 2023 and 2024, following data cleaning and weighting against ABS data. The survey results in this report differ slightly from the [2022](#) and [2023](#) reports which provided raw survey results prior to weighting.

Communications access

Phone and internet access is primarily via pre-paid mobile

There is high reliance on the 4G mobile service on Erub for both phone and internet access by First Nations residents. Our weighted 2024 survey results found that 100% of Erub residents own or share a mobile phone (96% in 2022), with 95% of these being smartphones (up from 84% in 2022). 96% of mobile users have pre-paid services (99% in 2022), with only 4% using a billed service.

96% of residents used a mobile phone to make and receive phone call, with 3% using a fixed line phone in their home. With no public phones on Erub, the only other means of making phone calls is via a community office or workplace phone, used by 6% of residents in 2024 (down from 28% in 2022).

93% of regular internet users used a smartphone as a primary device for internet access in 2024, down from 97% in 2022. In comparison, only 23% use a laptop computer (down from 33% in 2022) and 15% use a desktop computer (down from 28% in 2022).

Despite mobile coverage and reliability issues outlined below, mobile phones remain the primary means of connectivity due to being pre-paid and portable, enabling access outside the house and when travelling to other islands or regional centres.



“Everybody is on the phone ... That's their staple [means of access]. They don't have computers or anything like that. It's all mobile [so] you've got to have the right access on the island.”

Jon Gallagher, Clinical Nurse Consultant, Erub Primary Health Care Centre, 2024

The Telstra network has been upgraded but there are still reliability issues

Erub is located at the eastern-most end of the Telstra microwave repeater network, with a daisy-chain of microwave links on five islands connecting back to the fibre optic cable at the top of Cape York (see map on page 13). From Erub, there are links to Mer and Ugar (Stephen Island). Another microwave network services the western islands from Thursday Island. These microwave networks are prone to impacts by monsoonal weather, with signal interference by heavy rain or even wind.

- + “If there's bad weather [along the way] it stops the reception coming up this way. [Then] the only access [we have is via] satellite phones. [Rainfall] usually affects the western islands first then comes straight to the centre islands. Sometimes the [western islands are offline but] we're still up and running [on Erub].” (John Armitage, TSIRC Divisional Manager, 2024)

- + *“Sometimes when it’s cloudy, once [the ADSL] drops, people can’t do sales. I can’t serve anybody until the signal gets back on.” (Josephine Kiwat, TSIRC office, 2024)*
- + *“Just the other day, we didn’t have any wet weather, [just] strong wind and [the] signal went down for half an hour.” (Nixon Mye, TSIRC Councillor, Co-researcher, 2024)*



Figure 8: Heavy rainfall can lead to network dropouts across the region

The network can also be impacted by power outages or equipment failure at any point along the chain.

There have been instances of outages throughout the Torres Strait in recent years due to damage to the fibre optic backhaul running up Cape York. Following a 40-hour outage in January 2024 on Cape York and Torres Strait caused by a fault at Coen¹⁶, Telstra introduced technology in 2024 to ‘bunny-hop’ sites where there are issues along the fibre optic network on Cape York¹⁷. However, this technology does not appear to apply to the microwave links on the Torres Strait which continue to have regular dropouts and outages.

In late January 2023, Lala Gutchen reported consecutive Telstra network outages that lasted a total of nine days, with no mobile or fixed line connectivity. Telstra repaired the fault after six days, however services went down for another three days after only seven hours.

Network outages such as this limit access to emergency communications and significantly impact service delivery, including Shire services like rent and bill payments and power card and fuel purchases. Fortunately, the IBIS supermarket had installed NBN Sky Muster satellite backup prior to the January 2023 outage (since upgraded to Starlink) and was able to continue trading, allowing people to purchase food.

Since our 2023 visit, Telstra had undertaken upgrades on the microwave network to improve resilience, including a tower upgrade at Masig (Yorke Island), which links to Erub. This has improved broadband capacity on the 4G on Erub.

- + *“Last year when it was just on that one little bar [you couldn’t get online]. Now even though you’re on the one little bar, you can still read your emails [and] do everything you need to do. So, I guess that’s definitely better.” (Acting Head of Campus, Erub School, 2024)*

Despite these upgrades, we heard reports of recent outages and dropouts at Erub during our 2024 visit, with the issues described as worse at Ugar and Mer. Many residents expressed frustration at the ongoing lack of reliability of the mobile service.



Figure 9: Telstra mobile tower in Medige Village

¹⁶ Cape York News cover story ‘Lives Risked by Telstra Outage’ January 23, 2024, edition #168

¹⁷ Cape York News story ‘Coverage redundancy on way for frustrated Cape York phone users: Telstra’ 12/2/24

- + “We had like ten outages last year, and even on Sunday [the mobile service] just cut off, on and off.” (Lala Gutchen, Language facilitator / fisherwoman / co-researcher, 2024)
- + “Well, at the moment, the signal is not in our favour. There’s a lot of stops and starts [in] the signal.” (Joshua Thaiday, GBK Activity Supervisor, 2024)
- + “It’s nothing unusual to not have the internet or not have mobile data [here]. The worst I’ve had since I’ve been here in the last two years was five days without any mobile.” (Acting Head of Campus, Erub School, 2024)

There was a series of short outages on the weekend prior to our visit and another outage for much of the day just after our visit (27/3/24). Since then, we have heard regular reports of outages and dropouts. In May 2025, co-researcher Lala Gutchen reported a regional outage lasting 6 days.

- + *The Telstra network here on Erub and around Eastern Island has been down (SOS only) since Wednesday, 30th April. We haven’t received any updates so far. The network briefly came back around 4 p.m. on Thursday for about 30 minutes but has been down again since then. We’ve seen on the Telstra website that it’s listed as an unplanned outage, but we were hoping to find out when the service might be restored. It’s been really challenging here people can’t purchase fuel from the 24-hour bowser, Power cards are only available with cash at the Daido tavern after hours when the council office is closed, and the weather has been rough, so fishermen are avoiding going out for safety purposes. The ATM is not functional as well at the Ibis due to network coverage. So families at the moment can’t get any cash out to secure after hours power card for this long weekend. (Email from Lala Gutchen, 4/5/2025)*

Following enquiries, Telstra advised that an initial three-hour fault on the 30th April was followed by a secondary fault at Thursday Island, which was finally rectified on 6th May¹⁸.

While the IBIS supermarket and most agencies on Erub have now installed Sky Muster or Starlink services as backup in case of Telstra outages, there are limited options available for Erub residents during outages, with most fully reliant on mobile connectivity. The introduction of the NBN Wi-Fi hotspot at the TSIRC office has provided a means of maintaining basic communications access during network outages.

However, local agencies and interviewees have consistently urged the need for further upgrades to the Telstra network to improve resilience and address the speed, reliability and congestion issues experienced on Erub. There is clearly a need for a redundancy backhaul solution to reduce the regularity and duration of outages.



Figure 10: IBIS supermarket

There is still limited 4G coverage on Erub, with repeated calls for expanded coverage

The online Telstra coverage map gives the impression that there is 4G coverage across the entire Torres Strait region. However, the experience for Erub residents and residents of other islands in the region is that this is clearly not the case, with a large proportion of the region without adequate coverage.

¹⁸ Email correspondence from Telstra Regional Manager Rachel Cliffe 6/5/25

On Erub, the location of the 4G tower near the school in Medige village only provides a strong signal to the central three villages of the island (Medige, Seim and Dadamud Villages). Due to Erub’s hilly terrain, there is patchy or no coverage to most of the other 16 villages on the 4km long island, including the airport, the south-east and north side of the island. The mobile tower was heightened in 2018, however the coverage footprint has barely changed.

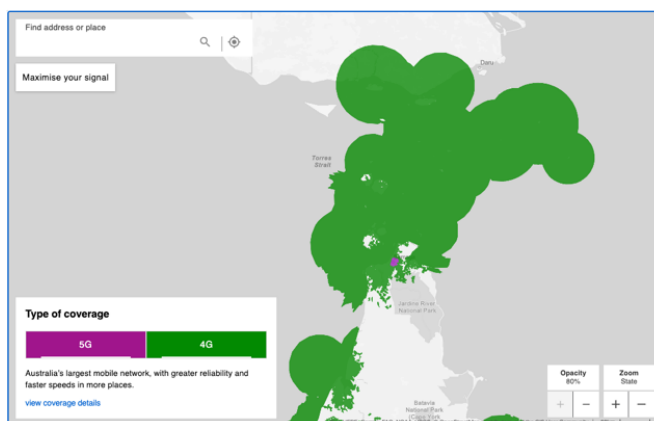


Figure 11: Telstra coverage map for Torres Strait (Source: <https://www.telstra.com.au/coverage-networks/our-coverage>) the

During our 2024 visit, we heard that recent upgrades had slightly improved coverage on south side of the island.

- + *“When you go down in the valleys [the signal used to be] really bad. [Now it’s] a bit better than it used to be, because it used to just shut off completely.” (Nixon Mye, TSIRC Councillor, Co-researcher, 2024)*

There has been long-term advocacy by community leaders for the mobile tower to be positioned at the island’s highest point for the signal to reach all villages, the island’s north side and extend out to sea.

- + *“Once you [go to] the back [of Erub] then you’re cut out from the rest of the community. I think the best one is to have a relay up the top [of the hill so] we’ve got coverage right around [and at sea]. That’s our ultimate goal.” (John Mye, Senior Sargent, Erub Community Police, 2024)*



“The signal for phone, I think we need an upgrade to a better system that’s not going to have the Statue of Liberty thing here where we’ve got to hold our phones up for signal ... if they were to put a [mobile] tower [on the hill, that] should at least cover 30 nautical miles [across] our sea country.”

- Joshua Thaiday, GBK Activity Supervisor, 2024

While views differ about the best tower location, there are calls for improved coverage near the airport.

- + *“I think [a mobile tower near] the airstrip is more better [than the hill]. The higher it is, the signal is low, the lower the tower, the signal is strong.” (Barry Pau, Erubam Rangers, 2024)*
- + *“It’s ridiculous that the airport doesn’t have very good phone reception because that’s where we do all of our retrieval ... in and out of the airport. And then when the helicopter lands, they’re trying to call us to say that they’re waiting, or they want to come down or we’ve got to take the patient up.” (Jon Gallagher, Clinical Nurse Consultant, Erub Primary Health Care Centre, 2024)*

Several interviewees raised concerns about elderly or vulnerable people living in villages without any phone connectivity and therefore unable to notify of a health issue or other emergency situation.

- + *“Elders that live in that area [have] to walk a hundred metres just to look for signal in the hot sun. [They have lived] there for twenty years [without a phone service and] there hasn’t been any change [so] I hope something happen soon.” (Lala Gutchen, Language facilitator / fisherwoman / co-researcher, Erub, 2023)*

Anne David is a resident with a disability. Her house near the airport has no phone or internet access. Previously, to make a call or contact Centrelink, she could walk up the hill for a weak 3G signal from Mer.

- + *“I [walk] to the coconut [tree] for the [3G] signal from Murray Island [because there’s no signal from Erub]. Sometimes signal is better, sometimes not. [It can take] one hour [or more to get 3G] connection, [and] the sun was very hot. [If] I needed something at hospital or come down to the shops [I] have to stop any car [to get a lift]. I feel bad [doing this].” (Annie David, Resident, Erub, 2023)*



“[It’s] an obvious health and safety risk [when people are] just not connected and they sit and wait on the roads for [a] lift to come into town because they have no way of getting in there and they have no way of calling anybody.”

– Jon Gallagher, Clinical Nurse Consultant, Erub Primary Health Care Centre, 2024

Anne described an accident, requiring one of her children to run to the road to call for medical assistance.

- + *“One time I fell down [so] my eight year old daughter run to the [tree] and stand up on a chair to ring up the health centre [and they sent the ambulance. But it] could be problem if no one was around.” (Annie David, as above, 2023)*

An incident occurred at the airport in about 2022 when a small plane ran off the end of the runway into thick bushland. The pilot was unable to call the community for emergency assistance, and once clinic staff arrived, they could not make calls from the site.

- + *“There were all sorts of dramas ... trying to communicate to manage that emergency of the plane going off the end of the run runway. A, to notify what had gone on, and B, to communicate with TI and the rescue chopper ... That’s high risk and ludicrous.” (Jon Gallagher, as above, 2024)*

Lala Gutchen also described how lack of mobile coverage restricts her cultural practices.

- + *“Most of the time, I avoid going [to my traditional country at] the back of the island ... I just stay at the front where there’s internet coverage so I can send messages if there’s safety issues.” (Lala Gutchen, as above, 2024)*



Figure 12: Co-researcher Lala Gutchen searches for mobile reception while out fishing

Emerging mobile technology developments include the ability for direct-to-device messaging and voice calls via LEO satellites in coming years, including for emergency calls. Recent models of Apple iPhone already have emergency messaging via LEO satellites. The Australian Government has proposed a new Universal Outdoor Mobile Obligation in February 2025,¹⁹ to ensure direct-to-device functionality is supported by all mobile network operators and on all devices and plans, with legislation likely to progress in 2025. Once introduced on standard mobile phones and on pre-paid plans, this technology is likely to help to address health and safety concerns raised by Erub residents.

¹⁹ <https://www.infrastructure.gov.au/department/media/news/universal-outdoor-mobile-obligation-improve-outdoor-mobile-coverage-across-australia>

A mobile booster was recently installed on the clinic and by some households (2024)

The Erub clinic is located in Badog village immediately to the east of Medige where the tower is located. However, its location in the foot of the hill restricts mobile reception at the clinic and nurses' accommodation, limiting their ability to receive emergency calls.

- + “[The] mobile service [was] almost non-existent. We used to have to go out onto the road to talk to the doctors and then go back inside and do our treatment, come back outside, talk to them again. I couldn't even receive phone calls on my mobile phone for one of the [nighttime] call outs.” (Jon Gallagher, Clinical Nurse Consultant, Erub Primary Health Care Centre, 2024)

A mobile booster was installed at the health care centre by Queensland Health in 2023, providing a localised service.

- + “They put a mobile telephone booster onto our facility [which] increased our mobile reception, both in the clinic and upstairs where we live. So, we now have reasonable mobile connection.” (Jon Gallagher, as above, 2024)

Some households without mobile coverage had previously purchased mobile boosters to pick up the signal from the Erub tower or amplify 3G from neighbouring islands (Note: 3G-only devices no longer work). However, we heard that household boosters are very costly. During the 2023 visit, Gladys Doolah from Erub Arts said the booster cost \$1200 plus freight from Cairns. Other 4G mobile boosters range in price from around \$4-500²⁰. Telstra also supply Telstra GO stationery repeaters for houses or mobile repeaters for vehicles, either on a plan or direct sale²¹.

- + “We just bought a repeater set, just for signal, for daily communication, whether you use it for work or phone calls and check internet. We bought a repeater box, so that's how we get signal, but when the power is out, we don't get no signal again.” (Joshua Thaiday, GBK Activity Supervisor, 2024)

In 2024 we heard that some boosters no longer worked due to corrosion or maintenance issues.

- + “I had [a] booster [installed] when I was working for Council ... because I had to work from home ... When we had that it was good. But [it's corroded so] that's not working, so we need to go outside [to get a service now].” (Daisy Ketchell, IBIS Supermarket Manager, 2024)

There were concerns about the 2024 3G switch-off (2024)

As part of a national phase out of 3G services to re-allocate spectrum for higher capacity 4G and 5G services, Telstra had planned to switch off 3G services by June 2024.²² Following switch-off, 3G-only devices would no longer work, including mobile phones, modems, mobile boosters, remote monitoring and health warning devices. However, due to national issues with low awareness and devices being upgraded, switch-off was delayed until October 2024.

Prior to 3G switch-off, Telstra committed to boosting 4G coverage to a "materially equivalent size and reach" to the 3G network.²³ Expanded 4G coverage would be beneficial, particularly if it extends beyond the islands to on-sea areas where there is regular boating traffic for inter-island travel, fishing and border security. However, there is no evidence of expanded reach, with anecdotal reports of reduced coverage.

²⁰ <https://reviewsbee.org/mobile-signal-boosters-au/>

²¹ <https://www.telstra.com.au/coverage-networks/network-coverage-extension-devices#stationary>

²² <https://www.zdnet.com/article/telstra-plans-3g-switch-off-planned-for-2024/>

²³ See: <https://www.telstra.com.au/support/mobiles-devices/3g-closure>

While 3G had limited data capacity compared to 4G, it was heavily relied upon for voice communications in many parts of the Torres Strait where there was no 4G service. On Erub, some outlying villages on Erub could previously access a weak 3G signal from neighbouring islands – Ugar (Stephen Island) to the north, Mer (Murray Island) to the south-east and Masig (Yorke Island) to the south-west.

- + “[When working w]e use mobile phone a lot by sending text messages but us rangers we know where the signal spots are [from Mer or] Stephen [Island] so we pull up at the signal spot and ring or text.” (Barry Pau, Erubam Rangers, 2024)

In Erub, there was low awareness of the 3G switch-off when we visited in 2024.



“I don’t think anyone even knows about [3G] being switched off.”

– Nixon Mye, TSIRC Councillor, Co-researcher, 2024

- + “We’ll need to [let people know], especially if the older ones still have the 3G.” (Daisy Ketchell, IBIS, Supermarket Manager, 2024)

3G was often the only service available when fishing at sea or travelling between islands. In 2023 and 2024, we heard concerns about the potential impact of 3G switch-off when at sea.

- + “3G’s stronger than 4G and 5G [when at sea]. They should trial it out first before they switch it off.” (Barry Pau, as above, 2024)

Since the 3G switch-off, co-researcher Lala Gutchen has reported that the mobile signal from Mer is no longer available to south-eastern villages on the island and in the vicinity of the airport where Annie David lives. The health and safety risk has increased yet no alternate measures have been put forward.

Mobile phones are used for communications while at sea

Many Erub Islanders travel significant distances out to sea in dinghies for fishing or travelling to neighbouring islands. In each of our three visits, interviewees called for expanded mobile coverage to improve safety while at sea.



“We need signal for people [when out fishing]. That way we know they’re safe [or they can call for help. If] something goes wrong, they’re lost. New Guinea one side, Australia one side, open ocean on the other side.”

– Barry Pau, Erubam Ranger, 2024

While Telstra warns that “public mobile networks must not be relied upon as a primary method of emergency communication at sea”,²⁴ interviewees described a heavy reliance by seafarers on mobile coverage to alert family or local authorities if in trouble at sea. In the 2023 report, we reported a fatality during inter-island boat travel to access a passenger flight. In 2024, we heard of other recent situations.

- + “One of the things that happened [was some boys] misjudged the fuel and ended up being stranded out there. [They had just enough] signal to tell people that they only had limited fuel and fuel’s going to run out ... So, people got that message, and luckily, they got to them. But, if not, the current could have pushed them way out.” (Joshua Thaiday, GBK Activity Supervisor, 2024)

²⁴ Source: <https://www.telstra.com.au/coverage-networks/our-coverage>

Interviewees told us that rapid response to breakdowns by local police or rangers is critical due to strong currents. While most boats carry emergency beacons such as EPIRBs,²⁵ there can be up to 4–5 hours delay between sending an SOS signal to Canberra and a search and rescue helicopter arriving from Horn Island, in which time the boat may drift into Papua New Guinean waters. Additionally, search and rescue teams often struggle to locate a small dinghy broken down at sea.

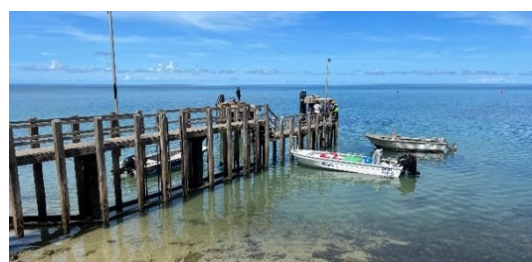


Figure 13: Fishing in dinghies is a part of life in the Torres Strait

- + *“When there is an outboard motor problem in rough weather conditions, search and rescue ... can be difficult. It’s like looking for a needle out on sea ... If we have good mobile coverage, [the] person in the dinghy [could] give precise directions of where they’re located out on sea.” (John Armitage, TSIRC Divisional Manager, 2022)*

As outlined above, direct-to-device messaging and calls on standard mobile devices will help to reduce the need for costly satellite phones and improve safety at sea once introduced.

Power outages also affect communications and services

Our 2023 report described a December 2022 power outage which lasted five days, affecting food supply, household fridges, service delivery and communications on Erub. The supermarket and clinic now have back-up generators, but other facilities remain reliant on generator power, managed by Ergon Energy. Power outages remain quite frequent.

- + *“[We have power outages] probably at least once a month, minimum. It can be for a couple of hours, or it could be for longer. About three weeks ago we lost it all day Saturday and Sunday.” (Acting Head of Campus, Erub School, 2024)*

Power outages also impact on communications, with the mobile tower having only 12 hours of battery back-up. NBN Sky Muster and Wi-Fi services rely on mains power. Outages can affect local area networks, such as this report from the school.

- + *“With the power going out on Saturday it messed up our [network] so when we came in on Monday trying to do work we couldn’t ... Teachers [were unable to] print because we need the intranet ... it makes it quite difficult. [The IT support] in Brisbane [had] to reset [our network remotely].” (Acting Head of Campus, Erub School, 2024)*

Residents have previously reported having to throw out food from refrigerators and freezers after outages, including catches of fish. Some households have purchased generators due to the regularity of power outages.

- + *“And then when the power out, we fill up [the] generator [so] we have food, we [don’t] worry. But now [the] weather is that unpredictable, you don’t know when to stock up.” (Nixon Mye, TSIRC Councillor, Co-researcher, 2024)*

Fixed household internet has decreased since 2022 despite improved satellite options

84% of people surveyed in 2024 reported that their homes do not have any form of fixed internet, up from 79% in 2022. Despite up to 16 of the 19 villages on Erub receiving limited or no 4G coverage, only

²⁵ An Emergency Position Indicating Radio Beacon (EPIRB) is a device to alert search and rescue services in case of an emergency out at sea.

14% of respondents reported that their household had an NBN Sky Muster service (down from 20% in 2022) and 21% used a non-phone mobile broadband device, such as a portable 4G modem. We only heard of one household with a Starlink service.

A primary reason given for Sky Muster uptake is to have a means of internet access for households outside of the mobile coverage area. For others, Sky Muster provides an alternate service to 4G due to regular outages.



“A lot of people got Sky Muster [installed] because of the [mobile] outages over the years. [But] Sky Muster only [works well] on a good day.”

- Lala Gutchen, Language Facilitator / fisherwoman / co-researcher, 2024

Given the driving factors for using satellite broadband still exist, it appears that the 6% reduction of Sky Muster services is mostly due to affordability barriers. Previously, we heard that insufficient data limits were an issue, with some households paying up to \$200 per month for excess data use on legacy Sky Muster plans. Despite the availability of Sky Muster Plus Premium, providing unlimited data, we found low awareness of this option, with lack of migration from existing plans.

Some households were considering Starlink due to its unlimited data and improved performance in rainy conditions, but the up-front cost for equipment and ongoing \$139/month bill were seen as unaffordable by low-income households.

NBN Sky Muster satellite uptake

Our 2024 survey found that 14% of households had Sky Muster services at their homes, down from 20% in 2022. This is still a relatively high level of uptake compared with other First Nations communities, primarily owing to the very limited 4G coverage across the island.

With many Erub residents on low and unreliable incomes, and no pre-paid options available for Sky Muster plans, affordability is a key factor in its uptake.

- + *“I can’t afford [satellite] because myself and my kids [are living] on my pension.” (Annie David, Resident, Erub, 2023)*

There were mixed reviews of the performance of the NBN Sky Muster satellite services. Some users described the benefits of having a broadband service as enabling household internet access and streaming, while others focused on issues such as dropouts during cloud cover (especially in wet season), high costs of plans, and the need for higher data limits.

- + *“Even families with SkyMesh still struggle to get signal. Where I stay has no signal.” (Joshua Thaiday, GBK Activity Supervisor, 2024)*

To mitigate these issues, some residents alternate between 4G and Sky Muster services.

- + *“Sometime the mobile playing up. Then we go to SkyMesh. Then the SkyMesh play up and then we come back to mobile.” (Florence Gutchen, Artsworke / Artist / Elder, 2022)*

The standard Sky Muster service was also described as too slow for some applications such as gaming, compared to the faster Sky Muster Plus Premium used for the Wi-Fi hotspot.

- + “[One guy is] always complaining about SkyMesh when he play game [online. But] when we come down here [to the Wi-Fi hotspot to] play game [it’s not] lagging or slow ... he loves it.”²⁶ (Nixon Mye, co-researcher, 2023)

Service providers and businesses on the island described limitations on their ability to conduct their business. For Erub Arts, the bandwidth of their Sky Muster service is not always sufficient for their needs, particularly when sending large files such as high-resolution images of artworks.

Furthermore, it can take some time to get Sky Muster services installed, with contractors having to wait to have enough installs to justify the cost of the trip.

- + “The person that does the NBN [installs], he only comes if there was at least four instalments [ordered], he won’t fly out if there’s only one. [First] that dish have to get here [on the barge, and then] he comes out with his own plane [and] does the work and flies back. [Recently] he installed a few at Murray Island and flew over here quickly and installed two and went again.” (Lala Gutchen, Language facilitator / fisherwoman / co-researcher, Erub, 2023)

Uptake of Starlink services (2024)

One of the significant advancements in Erub’s communication infrastructure is the increased adoption of Starlink. During our 2023 visit, we did not hear of any agencies or residents that were using Starlink Low Earth Orbit (LEO) satellite services, however some were considering it. By the time of our 2024 visit, several agencies²⁷ and staff households had installed Starlink services, with positive feedback about the speed and reliability of the service. Other agencies, including Erub Arts and the police post, were waiting to transfer to Starlink.



Figure 14: There has been rapid uptake of Starlink on Erub since 2023

We heard of three First Nations household with Starlink and other households considering getting it.

- + “Where we live, we hardly [have any mobile] signal. We [have] to go down to the beach or stand on the road. [Getting Starlink] has made a pretty big difference. [Now] I can have phone call[s] in the house [and] we watch movies from start to finish without interruptions, which is good.” (Josephine Kiwat, TSIRC office, 2024)

Clinic staff described dramatically improved reliability for using cloud-based platforms and telehealth use, as well as to make and receive mobile calls from the clinic and their accommodation.



“[Before] we’d frequently drop out [for] days and couldn’t make any phone calls or access any health records ... So just recently, they installed Starlink into the accommodation house and the clinic. So we now have terrific download speed. [Now] you can go through Starlink if you have any dramas with the mobile reception, which still happens even [with] a booster. The Starlink is making a huge difference.”

– Jon Gallagher, Clinical Nurse Consultant, Erub Primary Health Care Centre, 2024

²⁶ The NBN Wi-Fi hotspot uses a Sky Muster Plus Premium services which is much faster, up to 100Mbps, and has unlimited download. Standard Sky Muster services are either 12/1 Mbps or 25/5 Mbps.

²⁷ The school, IBIS supermarket, health care clinic and ranger station had Starlink in 2024.

Previously ADSL dropouts would regularly interrupt EFTPOS transactions at the IBIS supermarket and customers would have to return items to shelves. The supermarket now reports improvement.

- + *“Since [we installed Starlink] we don’t seem to have any issues [with dropouts] which is really good. Good for our community. So, no frustration like [customers having] to take the shopping [back when the EFTPOS fails]. We haven’t had that in a long time so [it’s] made a difference.” (Daisy Ketchell, IBIS Supermarket Manager, 2024)*

Users reported the Starlink service being reliable even during heavy rain.

- + *“It’s been very reliable. Even last night, when it was really heavy rain and all that sort of stuff, no dramas.” (Jon Gallagher, Clinical Nurse Consultant, Erub Primary Health Care Centre, 2024)*

Several people told us they were considering moving from Sky Muster to Starlink for improved reliability.

- + *“Sky [Muster] is affected by the weather. [When it rains] it drops out so it’s always a problem. So, the move to Starlink is what we’re all looking at now.” (Diat Alferink, TSIMA CEO, 2024)*

However, the up-front cost of equipment and monthly bill of \$139 was seen as unaffordable.

- + *“I wanted to try the Starlink, but it’s too expensive ... and getting up here, the freight [costs a lot].” (Lala Gutchen, Language facilitator / fisherwoman / co-researcher, 2024)*

Another barrier identified was that Starlink require a gazetted street address in their online ordering system, with Erub only having lot numbers on most houses. Some people have had to get the dish sent to an address in Cairns or Thursday Island and then forwarded on.

- + *“They can’t get [Starlink] because of that issue [of no street address]. Hopefully they’ll resolve the issue.” (Nixon Mye, TSIRC Councillor, Co-researcher, 2024)*

Maintenance of IT and satellite equipment

Maintenance of IT and satellite equipment is a critical issue in the Torres Strait. The climatic factors of rainfall, humidity, and coastal winds result in corrosion of steel towers, guy wires and satellite dishes and regular failure of IT equipment.

- + *“[Salt air affects all the equipment and] every vehicle. [Also rusting of] satellite dishes [near] the waterfront, all the way down, it just chew[s] the things away. It’s a continuous issue with maintenance. It won’t stop.” (Lesley Pitt, TSIRC Division Engineering Supervisor, 2022)*

During our 2024 visit, we saw that a number of household VAST satellite dishes had been replaced by Queensland Housing, but others were still very rusty. For other community infrastructure, TSIRC employ electricians to carry out repairs across the region, including to Council, health and school facilities. However, the electricians had left in 2022 and the newly recruited electrician was yet to visit Erub.

With increasing reliance on digital technologies, access to timely and affordable IT support has become a critical issue. In the Torres Strait region there are limited IT technicians available, with support outsourced by many agencies to technicians from regional centres such as Cairns or Brisbane. This results in high costs and delays in getting IT equipment or systems working.

Accessing on-site technical support is a common issue for remote agencies. The school reported having only two technician visits in three years. During our 2024 visit, Erub Arts had been without reliable phone or internet for two weeks and their server had recently failed after ongoing issues.

- + *“Our internet has gone from bad to worse. So, we’ve had our server sent down to Cairns to get replaced. In the meantime, we do have access to the internet for the time being [which] lets us check our emails. We have no access to our server at the moment [with] all of our records, our images, all the paperwork [for] the business side of things ... Luckily, we saved the necessary things to our desktop before the server shut down.” (Gladys Doolah, Manager, Erub Arts, 2024)*

Due to the challenges of getting IT support, locals have had to become relatively self-reliant.

- + *“We teach each other [and] if we don’t know anything we ring our IT crew in TI [Thursday Island]. Now they’re in Cairns [and] they give us the feedback, send us an email, step by step and all that.” (Barry Pau, Erubam Rangers, 2024)*



Figure 15: Erub Arts facility

With increasing demand for technical support, service providers told us that having expertise available on the island would be a useful step. There are calls for technical training to provide local support and jobs.

- + *“Our broadcasting technician [has] worked with us for many years [and] installed most of the gear. But the plan is we need to try and up[skill] our community to be able to do the basic maintenance so we don’t have to outlay so much.” (Diat Alferink, TSIMA CEO, 2024)*

Access to IT devices, Wi-Fi or shared facilities

A new NBN Wi-Fi hotspot is being well used, with calls for more Wi-Fi services (2023)

A public Wi-Fi hotspot was installed at the TSIRC office in Medige Village under NBN’s Communities in Isolation program in March 2022. The short-range Wi-Fi hotspot is located on the TSIRC office next to the IBIS supermarket. It uses a Sky Muster Plus Premium service (up to 100Mbps, unlimited download) for backhaul.

The Wi-Fi is getting well used, especially by young people, with an average of 242GB of data used each month in the year to May 2025 (similar to previous monthly usage), and an average 158 devices connected per month. It was described as providing a much-needed service, helping to address the issue of affordability of pre-paid mobile data.

- + *“The NBN Wi-Fi [has been] a good addition to the community ... It’s free, on all day, all night ... It’s been good for the youth around the island because they come here and they connect to the Wi-Fi and play games and [do what] they want on the internet ... School holiday, you see a lot of boys and girls hanging around.” (Nixon Mye, Co-researcher, 2023)*
- + *“There are community members like teenagers that come to the office, and they sit around the tables outside and they sort of do their stuff here.” (John Armitage, TSIRC Divisional Manager, 2024)*



Figure 16: Log-in screen for NBN Wi-Fi hotspot

The Wi-Fi provides a critical back-up service for residents when there is a Telstra network outage. However, we heard that the Wi-Fi is unreliable when it is raining, a common issue for Sky Muster services, and is prone to congestion issues.

- + *“The community Wi-Fi buggers up all the time, so we’re not too sure what’s happening with that one. But sometimes too much people on,, it drops [out], so a bit inconvenient at times.” (Lala Gutchen, Language facilitator / fisherwoman / co-researcher, 2024)*

NBN provides the option of community input into the setup of the Wi-Fi service, including content filtering options, curfew times and daily data caps for users. However, the Erub Wi-Fi hotspot had been installed according to a standard setup without a switch-off time at night, leading to some issues.

- + *“Our [Wi-Fi] is on 24/7 ... It’s okay [but] it attracts young people around the building at night. We don’t want them around the building [and getting] into mischief ... We’ve had a few break-ins.” (John Armitage, as above, 2023)*



Figure 17: TSIRC building with NBN Sky Muster dish and Wi-Fi access point on roof

TSIRC also raised the issue of accessing technical support if the Wi-Fi service is not working.

- + *“I don’t even know how it works. They just put it up and they left ... When the Wi-Fi ... goes down, I have [to] email them and say there’s an issue with this Wi-Fi [and see if] they can make a quick visit and fix it ... They did once.” (John Armitage, as above, 2023)*

There was a suggestion that more Wi-Fi services could be installed in the villages without mobile coverage and where access to the central village was difficult. This would reduce the need for children to come into town to access Wi-Fi.



“It’s only convenient for the people who live down [in] the main village. There’s villages going that way [east]; they should put another one over there.”

- Lala Gutchen, as above, 2024

- + *“That Wi-Fi [is only available in] the same place that gets the best mobile coverage [and] the rest of the island doesn’t get this Wi-Fi ... We need one on [the east side near] the airstrip [where there’s no mobile coverage], every [village] needs a Wi-Fi set up.” (John Armitage, as above, 2023)*

The Indigenous Knowledge Centre provides computer access, digital support and workshops

The Erub Indigenous Knowledge Centre (IKC) re-opened in April 2023 after a period without a coordinator. During our 2024 visit, the IKC was being run by part-time coordinator Karli and was being well used. State Library of Queensland supplied two new laptops and two iPads for community access.

- + *“The IKC coordinator [provides training and support] for elders and community members, [to] teach them simple things [like] internet banking and Centrelink stuff and [how to use the] laptops or whatever. Older ones [need help with scams and online safety issues such as] phishing and all that.” (John Armitage, TSIRC Divisional Manager, 2023)*

Lala Gutchen was running community language classes in the IKC, in addition to classes for students at the school. The IKC also provides activities for children and is available as a space for study, archival research, and digital media projects.

- + “[The IKC has laptops], books, linguistic [courses], programs like First 5 Forever for little kids, afternoon school homework.” (John Armitage, TSIRC Divisional Manager, 2024)



Figure 18: Erub IKC provides a library, historic records, computer access and learning space

The State Library of Queensland have reinvigorated support for Indigenous Knowledge Centres through their *Digital and You* program²⁸, aimed at building digital inclusion in First Nations communities. The *Digital and You* program includes a range of activities from training for IKC coordinators to offering a catalogue of digital skills workshops for delivery through IKCs, with an app with online resources for self-paced learning. The range of workshops on offer include digital storytelling, family history discovery, mobile video production, digital arts, eSports gaming, courses for elders and much more.

Service delivery and use of online services

Communications services have improved at the health care centre (2024)

Reliable communications are crucial for the Erub Primary Health Care Centre, which provides health services for both Erub and Ugar (Stephen Island).

- + “[For] the health service [we need] reliable, secure access, and faster [communications] because everything’s digital and [we do] lots of video streaming. So, there’s a lot of data [going] backwards and forwards [and] high resolution images.” (Jon Gallagher, Clinical Nurse Consultant, Erub Primary Health Care Centre, 2024)

In previous years, we heard about unreliable communications impacting the clinic operations, with regular dropouts on its primary ADSL service and power outages. This limited reliability of telehealth consultations and resulted in patient records having to be duplicated on paper due to unreliable access to the cloud-based records systems.

- + “[There’ hasn’t been] any great improvements with our access in the clinic [since 2022]. There’s still not a stable reliable network supplying the clinic. [That is] concerning if we have emergencies or [just for] trying to get in contact with some of our external resources that we rely on.” (Karin Neilson, Erub Primary Health Centre, 2023)



Figure 19: Erub Primary Health Care Centre

²⁸ <https://www.slq.qld.gov.au/discover/digital-and-you>

In 2023, the clinic had recently had its back-up generator repaired following a number of power outages and issues with inconsistent power supply. However, we heard that the backup Sky Muster service was slow and unreliable.

- + *“We have a satellite [backup, but] it fluctuates, and [is] really, really slow. I had a family member who passed away about two weeks ago, and I was trying to link in and be part of the funeral with my family and just couldn't ... it's just not good enough.” (Karin Neilson, as above, 2023)*

During our 2024 visit, we heard about improved communications services at the Erub Primary Health Care Centre, including the mobile booster and the recent introduction of a Starlink LEO satellite service (both outlined in the Access section). The clinic network was in the process of being transitioned to using Starlink as the primary service.



“[The Starlink rollout] has been an initiative across the whole of the Torres [Strait clinics]. They're still working through some IT issues [but] that is the plan, to migrate everything over to Starlink. [Already the] Starlink speed [is] improving video health assessments.”

- Jon Gallagher, Clinical Nurse Consultant, Erub Primary Health Care Centre, 2024

In 2024, clinic staff reported increased use of telehealth. Telehealth can save lives and reduce costs due to more immediate diagnosis, reduced flights to the hospital on Thursday Island, and remote support for on-site treatment or procedures.

“The health service is very good on being able to transport patients. But it's very disruptive to have to pack up [family members] to go away for a couple of days, because it's not a fly in, fly out, [it's] a couple of days trip ... So that's the real benefit of [telehealth].” (Jon Gallagher, as above, 2024)

While the clinic was still in the process of changing its network to Starlink backhaul, it was anticipated that this would improve telehealth quality. While Erub patients still prefer face to face consultation, they are now familiar with telehealth.

- + *“[Our patients are] becoming more and more used to [telehealth. I use it] to liaise with the doctors on TI [because] we don't have access face-to-face or we get a doctor's visit once every two weeks [and] there's not enough time to see [everyone].” (Jon Gallagher, as above, 2024)*

Unreliable and poor quality internet access has previously impacted on school outcomes

The Erub campus of Tagai School has 52 children enrolled, four teaching staff and 15 local support staff. Reliable broadband is needed for student learning, external communication and staff development, however the Erub campus has struggled for years with low broadband speeds and outages via ADSL and Sky Muster. During our 2024 visit, the Head of Campus described a six week local network outage in late 2023 which impacted school operations and prevented use of online learning applications and resources.

- + *“At the end of last year, we had no internet or intranet either for the last six weeks of school which was very difficult ... Being a college [with] around 18 different campuses, emails are very important. And even just access to One School to do the marking of the rolls, we found that very hard last year ... Every day was a battle.” (Acting Head of Campus, Erub School, 2024)*

Poor connectivity limited the digital skills training planned by the school.

- + *“We were meant to be doing digital technologies [last year with the students] making videos. We have a green screen set up [to] make movies [but] they have to go onto a website to do that. But we couldn’t do that because hot spotting [a mobile phone to get] 18 kids online didn’t really work. So, there’s a lot of things that we couldn’t accomplish for the kids.” (Acting Head of Campus, Tagai School, 2024)*

As a result of ongoing connectivity issues, the school had Starlink installed in early 2024 as part of a regional rollout.

- + *“So, they [installed] Starlink [the] week before school started ... The Starlink is going to all of Tagai [schools. They are] progressively getting them ... Hopefully Starlink makes it a lot easier for us to do our job. [It] seems to be going all right ... We still have connectivity issues [but] not as bad [as before].” (Acting Head of Campus, Tagai School, 2024)*

Students have access to iPads and laptops for digital learning resources. With Starlink, they can now do the NAPLAN tests online.

- + *“Tagai have supplied every kid in our campus in Years 3, 4, 5 and 6 [with] a laptop. We’re pretty good when it comes to the technology that we have ... we have QLearn which is the science [resource] that’s based all on laptops ... We’ve got enough laptops that the kids [in] Year 3 and Year 5 could do the NAPLAN so it all went through really well.” (Acting Head of Campus, Tagai School, 2024)*

The school uses some online learning in upper school, including classes from Thursday Island to help prepare them for boarding school.

- + *“The 4, 5, 6s, they just started a new program which every term basically they have a Teams meeting with a lady from TI. She talks them through [how] to make their own digital portfolio [to get them] ready for when they’re travelling away [to] boarding school.” (Acting Head of Campus, Tagai School, 2024)*

Some students have become very proficient in use of new digital technologies.



“The Year 6 boys have been trying to teach me how to use the drones and how to save that data. We’ve got virtual reality head gear [and] a 3D printer that we had a play with the other week ... We’ve got a tech area with a green screen that we’ve set up so they can make their own videos. [The older boys are] very tech savvy [and] are teaching the rest of the school how to use those things.”

– Acting Head of Campus, Tagai School, 2024

With low household broadband, it is often difficult for students to do homework or research. The Federal Government’s School Student Broadband Initiative (SSBI)²⁹ sought to address this challenge by providing free NBN broadband for 12 months to low-income households with school children, however the program initially excluded the Torres Strait. Following advocacy by TSIMA, the SSBI was expanded to Torres Strait households in 2024. Since then, there has been good uptake in the region, including a couple of households on Erub.

²⁹ <https://www.infrastructure.gov.au/media-communications-arts/internet/national-broadband-network/school-student-broadband-initiative-ssbi>

Increased use of Teams and videoconferencing

Videoconferencing applications (e.g. Teams, Zoom) is increasingly being used by local agencies (including TSIRC office, health care centre, school, Erub Arts) for meetings, professional development, client communications and online support. Some interviewees described this as a positive experience.

TSIRC Councillors and staff used videoconferencing for meetings during the COVID-19 pandemic but had returned to attending most meetings in-person in 2022. However in 2023, with no Skytrans flights and a new videoconference unit set up in the meeting room, the Erub TSIRC reps had returned to attending more meetings via videoconference. This was still used for some meetings in 2024, however face-to-face is still the preferred method for meetings, with most TSIRC meetings held on Thursday Island.



Figure 20: Videoconference facility in TSIRC Boardroom

Erub Arts regularly have meetings, artist workshops and presentations online. However they have had ongoing issues with quality and reliability over their Sky Muster satellite service, especially during wet season, with 4G hotspot used as backup.

- + *“Depending on what agency, sometimes we use [Zoom, Teams or] Google Meets, but Zoom is our go-to. [Online meetings work sometimes], depends on what kind of day we’re having. If it’s overcast, I [often have] to log out and log back into the meeting.” (Gladys Doolah, Manager, Erub Arts, 2023)*

TSIMA uses Teams for delivering training and support to RIBS broadcasters across the region.

- + *“It’s a good thing really because [it’s] less expensive [if] you don’t have to fly [from the islands for meetings]. I think it’s the way of the future.” (Diat Alferink, TSIMA Operations Manager, 2022)*

Lala Gutchen works and studies from home, using a 4G dongle for connectivity.

- + *“I still do all my online studies [and] a lot of climate change work [including] Zoom catchups with climate change ambassadors. [We use] Zoom and Teams meetings [to] share screen [and show] where we at. [But often I] can’t get online on the Zoom [via the mobile dongle] so we have to go through a Whatsapp ... When the signal [is] down, we just got to do a verbal call [but] sometimes the call even drops out.” (Lala Gutchen, Language facilitator / fisherwoman / co-researcher, 2022)*

Use of Cloud-based and automated online systems in the remote context

Cloud-based and automated systems are increasingly being used for record-keeping and data management, especially for regional and state-wide service providers. However, the cloud-based systems used by TSIRC were described as very slow and inefficient over the Sky Muster satellite service on the TSIRC building.

- + *“[Since they] put in that new satellite [I’ve found] everything’s so slow, [especially the TSIRC payments] system that we’re using. [We] have 14 other islands using the same system [so] it slows up. Even when we do the receipting, I will go brrrr [fast typing], then [I have to] wait [before] I can do the next one. I don’t like slow ... We’re one of the busiest divisions in the region for [transactions, so I can’t] keep up with [all the daily tasks.]” (John Armitage, TSIRC Divisional Manager, 2023)*

Erub Arts uses the Story Art Money (SAM) online database for all arts records and sales, with local arts workers training in data entry.

- + *“All our sales, all our artwork stuff, merchandise, it’s all in SAM ... When I first started, I had SAM training for a couple of months. But there was also [a] training mode that was available that I could jump on whenever I felt like it. It’s helped me out heaps.” (Gladys Doolah, Manager, Erub Arts, 2024)*



Figure 21: Erub Arts centre

While this has worked well previously, local network issues at Erub Arts were making use of the Sam database difficult during our 2024 visit. Gladys was looking forward to this being addressed by the Starlink upgrade.

Communications use for border security and biosecurity

Being located only 40 km from Papua New Guinean waters, Erub Island and the Torres Strait more broadly are often at the frontline of illegal immigration, quarantine issues, and other illegal activity.



“We border ... Papua New Guinea, and [there’s] a lot of illegal things we need instantly to report ... There’s nothing outside of us, it’s another nation over there. That’s why the communication [across] the Torres Strait must be improved from the current state.”

- Kapua Gutchen, My Pathways Supervisor / Cultural Leader, 2022

Reliable communications are critical for effective border security. The Erubam Rangers, who monitor for border security and bio-security around Erub and alert police of concerns, carry several forms of communications equipment.

- + *“We are the eyes and ears [for] the police, the customs and everyone. [W]e keep an eye out on illegal stuff happening. We use tracker [AIS] for the vessel so they know where we go and where we’re at. We also use UHF radios, that’s for the [sea] and land ... We also have a sat phone, when the signal is not working on the island, we use that if we have to. At our office, we’ve got our own communication link ... which they’re going to change in the next week or so into Starlink.” (Barry Pau, Erubam Rangers, 2024)*

Borderforce has a HF tower on the top of the uppermost hill in Erub to communicate with the Borderforce boats. While there is space to locate a mobile tower on the top of the island, TSIRC thought it unlikely that Borderforce would share the HF tower with other agencies.

Access to media and news services

30% of households are still without working VAST TV services following equipment upgrades

The VAST direct-to-home satellite TV service was installed on all premises in remote communities by the Australian Government in about 2013, with the ongoing maintenance to be a householder responsibility. Prior to the rollout of VAST, Erub had only two TV channels via local broadcast – ABC and Channel 10.

However, many households are without working TV services. Our 2024 survey found that about 30% of households no longer have VAST satellite TV service working, a similar failure rate to 2022. 66% of those without a VAST service said the set-top box was not working and 50% said it was due to satellite dish or cabling damage (multiple choice question).

The failure of free-to-air television service means that households pay high data costs to access entertainment online.

- + “[So] we’ve just been watching YouTube [and other streaming] apps [on] the TV ... When the TV was working, we weren’t using the Wi-Fi as much. But now that it’s not working, we have every TV using up all the Wi-Fi. It’s keeping everybody busy, but it’s also costing us a lot of money.” (Gladys Doolah, Manager, Erub Arts, 2023)

However, the 30% failure rate is relatively low compared with most other remote communities we have visited. This is due to replacement of rusty or damaged satellite dishes by the Queensland Government Tenancy Services hub, a service not provided in most other states. Remote community residents can lodge requests for housing repairs with the Tenancy Services hub on Thursday Island via a blue phone located at the TSIRC office. We saw roughly 15-20 houses that had replacement VAST satellite dishes installed by Tenancy Services, however some were yet to be replaced.

- + “I do remember a couple of people coming through and fixing TVs ... but I’m not too sure how many people got it fixed. Ours [hasn’t worked since] monsoon season ... It doesn’t help that we live literally by the beach [so the dish is very rusty].” (Gladys Doolah, as above, 2023)



Figure 22: Queensland Government Tenancy Services have replaced rusted VAST satellite dishes

Gladys was still waiting for a replacement dish when we spoke to her in 2024. Others were also waiting.

- + “[At home] we don’t have digital TV, because [the] satellite dish is damaged ... We have put in reports after reports, for builders to have a look at it, so we can have the digital TV, because our old man likes to watch ICTV and NITV. [But we have a] smart TV so he just goes on there now, and watches all them shows [on] YouTube.” (Joshua Thaiday, GBK Activity Supervisor, 2024)

While dishes are upgraded at no cost, replacement of VAST set top boxes is a tenant responsibility. These are the most common point of failure for VAST reception, and cost about \$400 at the IBIS supermarket to replace. Beyond purchase, there are challenges in activating the smart card for the set top box, especially without reliable internet and mobile access. Residents often seek help with this step.

- + “I think they look for the more tech savvy person in the community ... whoever knows a lot about that connection, they get them to help.” (Daisy Ketchell, IBIS Supermarket Manager, 2024)

It is common to hear that VAST TV services drop out regularly during wet season, due to loss of satellite signal. We also heard that TV signal loss can be caused by wind affecting the satellite dish alignment.

- + “[When] you watch a movie [and] the weather comes bad, [the TV drops out. Sometimes] it’ll just have to be wind. Strong wind can knock it.” (Nixon Mye, TSIRC Councillor, Co-researcher, 2024)

The VAST service also relies on the satellite dish being aligned correctly and the LNB and cabling being in good condition. Some Erub residents reported not having all channels working, likely due to one of these issues.

- + “I don’t get all the channels ... When I go on Guidelines, there’s the channel but nothing. I have 7 and 9 [and NITV, so I watch] NRL football [and] Morning Sunrise [and] the news.” (John Armitage, TSIRC Divisional Manager, 2024)

Some households have subscribed to paid services such as Foxtel, often due to VAST not working.

- + *"I don't use normal TV [because] I got the Foxtel. It all come to Foxtel." (John Mye, Senior Sargeant, Erub Community Police, 2024)*

Radio is an important source of local news and information, but listenership is low

The Torres Strait Islander Media Association (TSIMA) 4MW radio service is the primary radio service for the Zenadth Kes (Torres Strait) region, with an AM radio service from Thursday Island and regional distribution via satellite to local FM radio transmitters on 14 islands. 4MW plays a vital role in keeping people in the region informed on regional and national issues.

- + *"[We keep people informed on the] big topics about the Torres Strait [such as climate change, treaty], land issues, health [and] the national narrative around the voice to parliament." (Jenni Enosa, Senior Content Creator, TSIMA, 2023)*



"That's the only service we as a community can listen into. If the internet's down they can still listen to the radio and hear what's going on around, whether [there is] flooding or the harbour's closed or the planes are delayed, all that kind of stuff."

- Diat Alferink, TSIMA CEO, 2024

- + *"I reckon radio [is a priority], if you get that up and running. Because there's still people who like to listen to radio, especially on job sites and that ... You get all the updates through the radio [about] community or neighbouring islands, that you maybe don't listen or read about." (Joshua Thaiday, GBK Activity Supervisor, 2024)*

Our 2024 survey found that radio listenership among Erub residents is relatively low, with 11% of respondents listening to Radio 4MW daily or weekly (down from 40% in 2022) and a further 32% listening occasionally, with 56% saying they never listen to the radio (48% in 2022). Only 5% listen to ABC weekly. Most radio listening happens in the car (79% of listeners), with 23% streaming via phone or tablet and only 14% listening to a radio at home.

Older people tend to listen to radio more than young people, however radio is seen as an important source of news and emergency information. Younger people are more likely to stream online music than listen to radio.

- + *"It's a generational thing ... there's an old couple, they love the radio ... The ladies at the art centre they listen to the radio while they do their work. [But] the newer generations now, they've got the apps and stuff on their phone, so they could download the app on their phone and listen to it." (Nixon Mye, TSIRC Councillor, Co-researcher, 2024)*

While low radio listenership aligns with a national trend towards increased use of online and on-demand music and news content, Torres Strait Islanders still rely on radio as a primary means of accessing local news and information. However, several technical and social factors affect radio listenership on Erub in particular (outlined below).

TSIMA 4MW has a [radio app](#) and so can be listened to online or via the [indigiTUBE app](#), enabling listeners to get a high quality stream of the live program. This also enables Torres Strait Islanders living in other parts of the country to list to 4MW, helping to maintain their connection and cultural identity.

- + “[Many] people [on the mainland] listen to [TSIMA 4MW] radio on their phone ... because there’s a really big Torres Strait diaspora all around Australia [and] it’s vital [that our] media organisations [reach] the rest of our community ... like late Mr Mabo said, “You can take me away from the island, but you can’t take the island away from me.” No matter where you are, you’re still a Torres Strait Islander.” (Jenni Enosa, Senior Content Creator, TSIMA, 2023)

Apart from streaming Radio 4MW online, an Android phone with a headphone or speaker cable can work as an FM radio receiver using an FM radio app. Erub local Joey Saylor is often heard playing the live 4MW broadcast on a speaker from his motorised wheelchair while he travels around the community.³⁰ With few radios in houses, this enables access to the local radio service using an existing device.

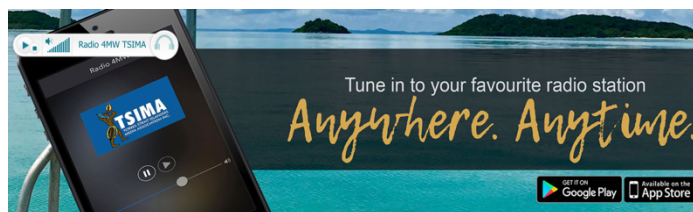


Figure 23: Promo for TSIMA 4MW radio app

Erub radio is impacted by poor connectivity and limited broadcast range

TSIMA uses Sky Muster services to provide internet access to RIBS broadcast facilities at Poruma, Iama, Warraber and St Pauls³¹. TSIMA manager Diat Alferink described how congestion and dropouts during wet weather impact on connectivity, interrupting live radio broadcasts from these sites, with a need for more reliable connectivity to the RIBS.

- + “We’ve got Sky Mesh set up in four of the communities, and [in Erub we] piggyback off the art centre [Sky Muster service. But we’re] getting more dropouts and more kind of ‘due to technical difficulties we’re unable to broadcast today’, especially [at this] the time of the year ... Being a bit more ready for that I think is important.” (Diat Alferink, TSIMA CEO, 2024)

The 4MW service is re-broadcast from the RIBS, with the incoming signal received via VAST satellite. This is also prone to weather impacts, causing interruptions to the local broadcast. TSIMA is working on getting a Starlink service on each of the RIBS to improve the link and enable remote monitoring of the broadcast facility.

While TSIMA has a backup generator to maintain the AM broadcast on Thursday Island, power outages on TI or the islands impact on their ability to transmit their radio service.

- + “[Sometimes] outages go for days. If there’s a power outage [it impacts the] phone connect[ion] and] our internet. So, if the internet’s down for two or three days ... we can’t do anything. [We can’t] broadcast.” (Diat Alferink, TSIMA CEO, 2024)

On Erub, the FM broadcast of Radio 4DI has limited range due to the transmitter being located at the RIBS in the central village of Medige, with most villages unable to pick up the signal. The broadcast tower was previously at the top of the hill but was relocated due to issues with power and need for repairs, with a lack of infrastructure funding to upgrade the facility. The small broadcast tower on the RIBS has very limited coverage as a result.

- + “[The FM signal is] only going two villages away ... People [can’t] hear [it beyond that] because it’s not going anywhere.” (Nixon Mye, Co-researcher, 2022)

³⁰ Android phones that enable FM reception include HTC, LG, Motorola, and Samsung, with the headphone wire acting as an antenna. iPhones cannot receive live radio. FM apps include FM Radio, NextRadio, TuneIn and Simple Radio.

³¹ Live RIBS Radio shows are conveyed to the TSIMA Radio hub on Thursday Island using codecs over an IP link.

TSIMA staff have been seeking funding to upgrade and relocate the transmitter.

- + *“On Erub, we need to fix the local transmitter so that the whole island can get the local program which has been an ongoing kind of infrastructure issue.” (Diat Alferink, TSIMA CEO, 2024)*

TSIMA is trying to re-energise local RIBS broadcasting and journalism (2024)

TSIMA supports five remote Indigenous broadcasting service (RIBS) communities at St Pauls (Moa), Warraber, Yam, Poruma, and Erub, which can broadcast locally or do weekly shows over the regional network. Radio 4DI, the RIBS radio service on Erub, was one of the longest continuously-staffed RIBS services in Australia. Veteran broadcaster Walter Lui, who broadcast local news, information and music requests both locally and over the regional TSIMA network for over 25 years, retired in February 2023.



Figure 24: Former broadcaster Uncle Walter Lui in the Erub RIBS studio, 2022

- + *“When Uncle Walter was on, they can hear [from Erub across the region]. Like when he puts the music on, they hear it over there.” (John Armitage, TSIRC Divisional Manager, 2024)*
- + *“[Uncle Walter had] a regular program on TSIMA Radio 4MW ... He’s seen all those changes in technology from the BRACS³² days [with local broadcasting only] to where we are technically today, able to stream online.” (Jenni Enosa, Senior Content Creator, TSIMA, 2023)*

Since Walter retired, there has not been a full-time Erub broadcaster. The lack of local content is a key contributor to reduced listenership since then. TSIMA have been actively training new broadcasters to help re-activate the RIBS across the region.

- + *“We’ve got our RIBS network [with] five communities broadcasting; three regularly, two voluntary-based. We’ve got some trainees starting soon so we’re going to be able to have all five operating on a daily basis. [With] younger people involved there might be a bit of energy for that so that’s where we’re looking to employ those new people to do that work..” (Diat Alferink, TSIMA CEO, 2024)*

To keep up with changing audience needs, TSIMA have diversified from radio broadcasting to other channels including social media, video production and running the regional weekly Torres News newspaper since 2021.

- + *“We took [the Torres News] on in September 2021 and the main idea is that the newspaper remains locally produced. [It’s] different from what we do here in the broadcasting service, but it’s still communications, it’s still media. We started it under the wing of Torres Strait Islander Media Association and it’s now its’ own entity Torres News Pty Ltd, so it basically operates off the advertising money. [We are aiming for it to be] a national newspaper [to share] stories about Torres Strait Island communities [and people] wherever they are across the nation, as well as stuff from the mainland.” (Diat Alferink, TSIMA CEO, 2024)*

³² Broadcasting for Remote Aboriginal Communities Scheme (BRACS) is now re-named as Remote Indigenous Broadcasting Services (RIBS)

There is also an online version of Torres News with regular updates of stories.

- + “[If people are] interested in that particular story they can get the link and check it out. That [keeps] the newspaper stories alive through the digital social media platforms ... Nowadays, everyone’s on their phone and want to quickly check out a story.” (Diat Alferink, as above, 2024)

With TSIMA now running the Torres News and doing video stories, the RIBS role is being expanded to include community journalism.

- + “[Our aim is for TSIMA to] become a hub of activity rather than just one platform, [with each RIBS] able to do a Torres news story [digitally]. If there’s a story that we need to cover for NITV [there needs to be] capacity on each RIBS to be able to deliver something.” (Diat Alferink, TSIMA CEO, 2024)



Figure 25: TSIMA publish the weekly Torres News

News and emergency information are mostly shared in person, via Facebook, online and on TV

Our 2024 survey found face to face communication to be the primary means of sharing news and information on Erub (46% daily, up from 44% in 2022). This was followed by Facebook (29% daily, down from 50% in 2022), online news sources (27%, up from 26%), other social media platforms (27%, down from 42%), commercial TV (22% daily, down from 42%) and ABC TV and NITV (both 15%, down from 32%). Torres News was reported as 16% daily or weekly use, with 36% occasional use.

In 2024, emergency information was mostly shared via in-person communications (66%), online emergency services (48%), Facebook (46%), ABC TV (42%), local noticeboards (38%) and commercial TV (34%).



“I think with the different ages, [there are] different use of the sources [of] news ... past a certain age, they read the Torres News or watch the news on television [or] hear word by mouth. [For younger people it’s mostly] social media news, YouTube, [which has] breaking news and stuff like that.”

– Nixon Mye, TSIRC Councillor, Co-researcher, 2024

On Erub, Facebook is a primary means of accessing local news and information. Co-researcher Nixon Mye (since elected as TSIRC Councillor) runs the local Erub Notices Facebook page for residents to share locally relevant news and events.

- + “One of the reasons why we made the notice board [was that] when things happen and people will be like, oh, I didn’t know that was out. [It started small but] now everybody uses it. There used to be only two top contributors in the page, but now there’s six, seven.” (Nixon Mye, TSIRC Councillor, Co-researcher, 2024)

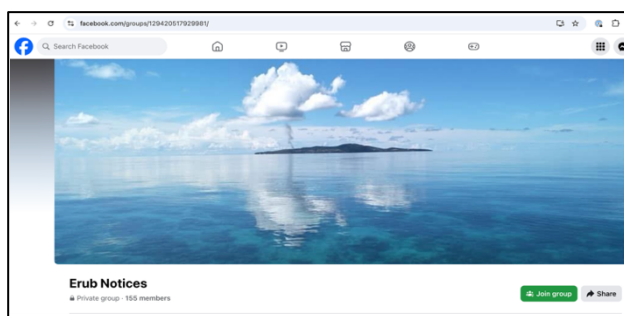


Figure 26: Erub Notices Facebook page

There are other Facebook groups on Erub, which help to cross-post updates.

- + *“We have a range of groups on Facebook from [Erub such as the] social night footy club ... Some group is just with the locals and some group is widened ... So, if we share [a post, we] reach everybody else.” (Nixon Mye, TSIRC Councillor, Co-researcher, 2024)*

Affordability

Expenditure on pre-paid mobile has increased but there is little shift to post-paid services

Affordability of internet access is a key issue for Erub residents, especially those on low incomes and with high pre-paid data costs. This is one of many cost of living pressures for Erub residents as rising freight costs have increased the price of food, fuel and other essentials.

- + *“Stay on this island and you’ll [see how much] we spend in this shop here. Cost of living [is high in] Torres Strait, it’s more expensive than the mainland.” (Barry Pau, Erubam Rangers, 2024)*

Our 2024 survey found that 63% of respondents had cut back on essential household costs to afford personal or household internet within the past six months, up from 50% in 2022. 61% said they compromise on internet speed and/or quality to prioritise affordability, up from 26% in 2022.

Erub residents are primarily using pre-paid mobile services for phone and internet access as it enables people to pay what they can afford, rather than commit to a monthly billed service. However, household expenditure on pre-paid mobile has increased significantly since 2022, up from \$212/month to \$344/month in 2024. This reflects a combination of increased data use as well as increase in cost of the most popular pre-paid voucher from \$30 to \$39.³³

Average combined mobile and household internet costs had also increased, up from \$250/month in 2022 to \$376/month in 2024.

Our 2024 survey found that uptake of fixed household broadband has decreased since 2022 (down from 21% to 16%). We heard that this was in part due to challenges within maintaining monthly bill payments.

- + *“[Some people] have a bit of issues with paying the bill with the SkyMesh, especially if they’re just one person. If they’re in a family, they don’t [often] pitch in and pay for it.” (Nixon Mye, Co-researcher, 2023)*

Data use has increased significantly with uptake of online streaming services such as Netflix and/or online games, particularly by young people, increasing monthly costs. While the NBN Wi-Fi has helped some users reduce their data costs, most usage is primarily reliant on pre-paid mobile or Sky Muster services.

- + *“I spend about \$90 a month because I spend a lot of time on social media ... Thirty dollars will probably last me 1.5 weeks ... my data runs out way before the expiry date comes along.” (Barrunah Pilot, Erub resident, 2023)*

Pre-paid credit is a valued commodity in the community, with increased data usage for media streaming services, gaming, or other data-hungry applications. With children often having their own mobile devices, demand on data is driving up household expenditure.

³³ Telstra pre-paid recharges went up on 1 July 2023 to \$35 (15 GB data), \$45 (25 GB data), \$55 (35 GB), \$65 (45 GB). While these new increments offer a cheaper price per gigabyte, the increase in minimum outlay causes challenges for many. Prices went up again in July 2024 to \$39 / \$49 / \$59 / \$69, with no increase in data provision.

There are some measures available for reducing expenditure on communications (2024)

There is limited information available in the community on mobile or home broadband plan options or ways of reducing data costs. While Erub residents have been resourceful in finding some ways to reduce costs, more support is needed to reduce the increased expenditure.

The free NBN Wi-Fi (on Erub as well as most Torres Strait Islands) has improved affordability, especially for young people and those without mobile credit. However, with free Wi-Fi only available in a single location in the central village, this provides limited savings compared with other remote communities with community-wide Wi-Fi networks.

Some Erub residents have accessed a Telstra natural disaster assistance subsidy which has helped to reduce mobile data affordability issues in the short term. This requires filling out an online form, with Telstra providing a free recharge of up to 70GB.

- + *“You get the online form, you fill out, you put your name, your phone number, your postcode, and then it asks would you like extra data? ... You click yes and then [you] can add as many numbers as you want. [I put] five numbers in there and I submit and the next day everybody's happy.” (Nixon Mye, TSIRC Councillor, Co-researcher, 2024)*

Some young people are using Boost pre-paid data, which uses the Telstra network but is more affordable than Telstra pre-paid data. The recharge is only available online, not through the Ibis store, and the service does not provide the Telstra helpline support.

Since July 2024, Telstra have introduced a Pre-paid Community Mobile plan, which provides 25GB of data for \$25 over a 14-day period³⁴. The Torres Strait postcodes are eligible for selling these plans, however it is not known if these are currently available through the IBIS supermarkets.

Cost of devices is also an affordability issue, increased by high turnover

The cost of smart phones was raised as an issue, particularly due to regular replacement of phones and limited local options. The IBIS supermarket provides a range of smartphones as well as non-smartphones (flip-phones) for different price ranges.

- + *“We hardly sell them [flip-phones], everyone's buying the Smartphones. I think just the Elders [buy flip-phones] because they're easier for them to press the button. [With smartphones] we do get different brands from the ones we used to sell last year ... but we don't get the really expensive ones.” (Daisy Ketchell, IBIS Supermarket Manager, 2024)*

Mobile phone ownership is a high priority for residents, especially young people. Anecdotally, most people buy the Oppo or Samsung 4G phones due to having better cameras (for taking photos and footage, especially when out boating). These cost about \$300-\$370 at the supermarket, which is equivalent to over a week's income for most social security recipients.

Several people we spoke to were without a phone and saving up to get a replacement. However, with regular screen damage, getting wet when boating or during monsoon, and sharing of phones, there is high turnover. No smartphones in the IBIS supermarket came standard with a rugged or waterproof case, and there were no robust cases available.

³⁴ <https://www.telstra.com.au/mobile-phones/prepaid-mobiles/prepaid-community-plan>

- “[Recently so I put] a screen protector on my phone [because I] pay monthly a lot for the phone, so I must look after [it. Some] people order shock-proof cases online through eBay [but] it takes forever to get up here. [Most people go from] device to another device [because] there’s not a phone place up here to fix screen. [You] have to fly [to] Cairns [for repairs], that’s our nearest city.” (Lala Gutchen, Language facilitator / fisherwoman / co-researcher, 2024)

Digital ability

Digital usage has increased, but average digital ability levels are now not as high (2024)

Our 2022 and 2023 surveys found a very high level of digital ability among Erub respondents, with the average 2023 ADII score of 70.0 being 5.2 points above the national average. We were concerned about inflated results due to a skewed sample of young and educated people engaging in the surveys, as well as high levels of self-completion of surveys. In 2024 we sampled a broader cross-section of the community, including more elders, and limited self-completion of the survey to ensure more consistent rating. This resulted in a lower average score across all six elements for digital ability, with an aggregate score of 19.19 out of 30 (see Table 1). While lower than previous years, this is still high compared with the average score of 15.46 across all 12 remote communities visited.

Year	Basic skills (/5)	Advanced skills (/5)	Information navigation skills (/5)	Social skills (/5)	Creative skills (/5)	Smart technology skills (/5)	Total (/30)
2022	4.14	3.89	4.15	4.04	3.60	3.74	23.57
2023	4.03	3.82	3.99	4.15	3.36	4.01	23.37
2024	3.49	3.05	3.59	3.33	2.53	3.20	19.19

Table 1: Average digital ability scores for Erub respondents 2022-24, made up of six skill areas

Our 2024 survey found that 89% of respondents had used the internet in the last week, up from 84% in 2022. In total, 97% had used the internet in the last six months, a big increase from 90% in 2022. While this is a positive shift, the increased proportion of low-level users impacts average digital skills results, reducing the scores across each of the six types of digital skills outlined in Table 1. We also found that the proportion of people using the internet ‘almost constantly’ had reduced from 70% in 2022 to 42% in 2024, suggesting a demographic shift among those surveyed.

Despite these shifts, we again found a high level of digital ability among young and middle-aged people on Erub, particularly those who had completed high school or were in employment. Digital skills enables personal agency and capability in accessing online information and services independently and developing digital skills needed for work, enterprise, or governance. However, there was a clear divide compared to those aged over 55, who typically had less engagement with digital technologies in school or workplaces.



“Not many elderly people can text or send email and things, they’d rather talk. [Our generation] didn’t grow up with [mobile phones and computers but we’re] still part of the island. [If] you change too quick for them, you will leave some people behind.”

– Kapua Gutchen, Elder / My Pathways CDP Supervisor, Erub, 2023

In 2024, 76% of these regular users had kept in touch with friends and family online in the last six months (99% in 2022) and 66% had done online shopping (89% in 2022). While email is used more for workplace communications and setting up online services than personal communications, 62% of regular internet users reported being able to send and receive emails (94% in 2022).

Use of online services

There is high take-up and competence among Erub residents in use of online services for banking, Centrelink, MyGov, licensing and completing forms online. Our 2024 survey found that 82% of respondents who were regular internet users had accessed online government services in the last six months and 76% had used online banking.

- + *"I use the internet [for banking], shopping online, and the government services like ATO [and to] pay my car registration It's a very useful tool to have, especially living out here, when we don't have direct access to stuff like that ... [It's better online than calling because] sometimes we're on hold for so long, our credit finish, or time's up." (Nixon Mye, Co-researcher, 2022)*
- + *"It would be good to have [online government services], but before they start doing that, they [need to] do something with the internet up here." (Lala Gutchen, Language facilitator / fisherwoman / co-researcher, 2024)*

While there is digital support available at the TSIRC and Centrelink offices, demand has reduced.

- + *"We used to have a lot of clients coming in to access our Centrelink computer and phone. Now they can access MyGov and other Centrelink forms using their own private mobile phone." (John Armitage, TSIRC Divisional Manager for Erub, 2022)*
- + *"Some people do need help [at the Centrelink office] but they're usually down here when they don't have good signal or out of credit and they'll come and use the computer and phone here ... I'd say maybe two, three people a week." (Josephine Kiwat, TSIRC office, 2024)*

Some elders prefer using phone-based services rather than online services.

- + *"I can't go in [to MyGov] with internet because [I] don't know how to use computer or anything ... So I ring up Centrelink and talk to them." (Annie David, Resident, Erub, 2023)*

Need for ICT access and support

Among regular internet users on Erub, most internet use is via smartphones (93% in 2024, down from 97% in 2022), with limited use of laptops (23% in 2024, down from 33% in 2022) or home computers (15% in 2024, down from 29% in 2022), primarily due to cost and limited availability.

The lack of household computers limits the development of keyboard skills and applications used in workplaces, including Microsoft Office, retail and design or digital media applications.

While there is clearly a strong culture of peer and family support for developing digital skills, there are limited opportunities for support for the elderly and people with disability.

- + *"We don't have [courses and] information given out for elderly people, [they mostly] target young people. [Elderly people need support] to learn that whereas my generation were born into it ... We're teaching them now [but] they should have [more] elders' days where you teach them how to use a phone. Because once they know how to text and [do online banking] and stuff, they don't need to come down to the village." (Lala Gutchen, Language facilitator / fisherwoman / co-researcher, Erub, 2023)*

Support in using online government services is available at the Centrelink and TSIRC offices during opening hours. The Indigenous Knowledge Centre (IKC) also provides computer access and basic support, and is eligible to apply for computer skills workshops targeted to community interest through the State Library of Queensland's 'Digital and You' program (see digitalandyou.com.au).

There is still demand for more digital literacy training and support, especially for the elderly, people with disability, and those with low English and digital literacy. There was also demand from

community members for the IKC to be better utilised as a space for online learning, research and working on digital projects, including language and culture projects.

Some interviewees identified the need for more advanced capabilities and workplace digital skills. Erub Arts described digital communications as a specialist area needed by businesses for online marketing and promotions now.

TSIMA Operations Manager Diat Alferink said that training and support needs to be done using cultural modes of learning with delivery by local organisations and people. Peer learning is also effective for digital skills development, both in the workplace and within the home environment.

Online learning is starting to be embraced

While online professional development training can save travel time and expense for agencies, there was a mixed experience of its effectiveness due to poor connectivity and cost. Most training is still done face to face, with people flying to Thursday Island or Cairns for study. TSIRC sends its staff to Cairns to learn new systems.

79% of regular internet users surveyed in 2024 said they had used the internet for some form of learning or study in the last six months (89% in 2022). This is a very high result, indicating both confidence in using online platforms as well as the value placed on life-long learning.

Online learning enables students to remain living in the community while studying. However, issues of connectivity and data cost were described as barriers to online learning.

- + *“I wanted to go out to do Uni [but] I would prefer to do my study [online] instead of leaving country ... But the problem was that the signal is very bad ... If they better the Telstra service and then we [could do our studies on] the island.” (Lala Gutchen, Language facilitator / fisherwoman / co-researcher, 2022)*

Erub Arts have previously made use of online learning for artists, including during COVID travel restrictions. However this has been hampered by poor connectivity.

- + *“I would love to see all the artists being upskilled. And if they can’t travel out, [online learning] is the next best thing [with] online meetings and online webinars and all that stuff. But with the signal being the way it is, that’s very limiting. [When] we have our Starlink installed, then that’s definitely something we can pursue.” (Gladys Doolah, Manager, Erub Arts, 2024)*

Use of apps for communications and learning

Erub artists use WhatsApp for group messaging, especially while on overseas trips and during COVID to keep connected. Erub Arts are also keen to move to digital board meeting papers for directors to reduce use of paper, but many older people don’t use email or have iPads to access the documents.

Artworker and artist Florence Gutchen uses ICTs at home for family communications and cultural research as well as using email and Microsoft Teams for her work and training at Erub Arts. Through her artworker training with the Indigenous Art Centre Alliance in Cairns, Florence is learning to use the Story Art Money (SAM) database, and studying art law, governance and photography online. She also does cultural research.

Nixon Mye described using a range of apps including the Stan streaming app, GarageBand (for music production), YouTube and the WillyWeather app. He also takes photos and videos on his phone and posts these on Facebook and Instagram. Nixon is one of several local musicians creating music using digital applications such as GarageBand, and sharing their work on YouTube, Facebook, Soundcloud and iTunes.

- + *“We were doing a lot of music stuff, on the GarageBand, that was the app. So, that was like the whole reason why we got the iPad, so we could do some music ... There’s a lot of people here that are very talented in the music industry ... [and] neighbouring islands as well.” (Nixon Mye, Co-researcher, 2022)*

There is interest in more music production training and a studio facility to enable more professional recording and production work.

Social media is a primary means of communication, but can get misused

Beyond voice and text communications, social media is a primary channel for keeping in touch with family or friends (76% of regular users in 2024, down from 99% in 2022), engaging with community (71%), and meeting new friends or reconnecting with old friends online (72%). Primary platforms used are Facebook, TikTok, Snapchat and Instagram.

- + *“If we want to reach community [I] think Instagram and TikTok for younger ones, but also Facebook’s still pretty relevant.” (Diat Alferink, TSIMA Operations Manager, 2022)*
- + *“Social media nowadays is part of life ... There’s a lot of good contents on [TikTok] and a lot of those contents are very educational. [I also use Facebook and Snapchat and] I make my own content, too. [I] get the ideas from the other influencers on there.” (Barrunah Pilot, Erub resident, 2023)*

As outlined above, Facebook is the main channel used by Erub residents to access news and emergency information. TSIRC and TSRA use Facebook to share information, and the local Erub Notices page was started by Nixon Mye in 2018.

- + *“[Erub Notices is] specifically for people living on island. [I put up] anything really, like meetings or fundraising events, any social events that’s happening in the community by other people ... I have to approve it because I don’t want people to be putting stuff like sly grogging or selling smokes [or] bad stuff ... TSIRC [also uploads] job vacancies [and] council [updates].” (Nixon Mye, Co-researcher, 2023)*
- + *“Erub Notices [is] the best communication ever ... it’s just for us here on Darnley. And that’s where all the message goes through. [Also], if council [has an event, they] call us Rangers to spread the news out to the community.” (Barry Pau, Erubam Rangers, 2024)*

Some local businesses also have Facebook pages for online promotions and marketing, including Erub Arts.

- + *“Most of our promotion is done digitally. We have a Facebook page, we have an Instagram page [and] a website but it’s currently being upgraded.” (Gladys Doolah, Manager, Erub Arts, 2023)*
- + *“As for individuals ... trying to upskill themselves with digital, like getting them digitally upskilled; I think it’s more of, having that awareness that it is available. There isn’t much, awareness for ... especially individual and independent artists.” (Gladys Doolah, Manager, Erub Arts, 2024)*

Some older people are learning to use social media to stay connected with family members dispersed across the region and mainland. Walter Lui described the changes in family communications because of social media.

- + *“[Nowadays with social media] It doesn’t matter you’re on the other side of this region, they know where you are. ... [You can] send a message, send a photo to a family living down south [or] grandchildren send the photo [to] grandpa or grandma ... So happy to see.” (Walter Lui, Erub Radio Broadcaster, 2022)*

- + *“I still share my stories on my Instagram, my Facebook, for my families living afar...” (Lala Gutchen, Language facilitator / fisherwoman / co-researcher, 2024)*

TSIMA broadcaster Jenni Enosa described social media as a powerful tool for maintaining family connections with the potential to educate, inform and empower. However, she also has seen social media used to spread misinformation (especially during COVID), disrespectful or abusive comments, and breach cultural protocols. Others also expressed concern about the erosion of cultural protocols via social media.

- + *“If there’s a death on the Island, and we do have cultural protocol about how we approach getting the news across, but there’s some idiot ... put it on Facebook ... You don’t have that right to, until the elder of the family does give the okay ... [We need] to have a clean line between cultural protocols and your right to go on [social] media.” (John Bourne Mye, Police Officer, Erub, 2022)*
- + *“I’ve even seen a lot of traditional things that aren’t supposed to be put on there [like men’s] initiation stuff I seen on there, where it’s cultural protocol, only for men [but] it’s out there for everybody to witness.” (Barrunah Pilot, Erub resident, 2023)*

There was also a caution about posting images on social media depicting hunting of turtles and dugongs, a cultural food source, as this can attract backlash from animal rights activists.

Cyber safety and scams are a significant concern

Local agencies have identified a range of cyber-safety issues prevalent in the region from scams, access to inappropriate content, online bullying and harassment, and posted comments leading to family disputes.

- + *“Through the workplace, we have phishing and all these scams, things that come through with our computer. [We advise people:] ‘don’t open any unknown email, just delete it’. [But] I have [been scammed] through my [bank] account. Two thousand dollars just like that, taken out. [Fortunately, the bank have a] line that we ring to get help, they’ll help us get the money back, [so by] the same night it was back in my account.” (John Armitage, TSIRC Divisional Manager, 2024)*

With scams increasing and becoming more targeted via calls, text and social media, there is a need for more cyber-safety awareness to inform people how to discern and avoid them.

Local digital media content production, archiving and sharing

Projects are underway to document and revive language and cultural heritage

Erub elders outlined the need for language and cultural resources to teach current and future generations, to reduce the impact of western media and online content. Elder Kapua Gutchen argues that young people need to learn the language to maintain their Erub Meriam identity. He and other elders began language preservation work in the 1990s, leading to a project with the Australian Literacy and Numeracy Foundation.

- + *“Kids were more becoming Torres Strait Creole speakers [so we asked] the Australian Literacy and Numeracy Foundation [to help us to] save the language ... [Now] I can tell that some of the children know more language than their parents that didn’t speak anything.” (Kapua Gutchen, My Pathways Supervisor / Cultural Leader, 2022)*

Kapua’s daughter Lala Gutchen works as a First Language programs facilitator, documenting and teaching the Erub Mir dialect of the Meriam Mir language spoken on Erub and Ugar (Stephen Island). She teaching language classes at the school as well as at the IKC and online.

- + *“I teach [language at the school and] I have workshop[s at the IKC] with our community members, families. [I also] teach language online [so I] need to get good network. I have one-on-one language lesson on my mobile phone where I contact certain family [to discuss] cultural knowledge. So, I’m all over the place but [my focus] is to maintain my language through this technology generation.” (Lala Gutchen, Language facilitator / fisherwoman / co-researcher, 2024)*

Lala has been documenting the Erub Mir dialect using the cloud-based Living First Language Platform, developed by ALNF³⁵. As of our 2024 visit, she had uploaded nearly 4000 words.

Lala also photographs and documents local plants, animals and fish species and uses digital platforms such as Instagram to teach people the names in the Erub Mir dialect, including people living away from country. She teaches the language remotely, face-to-face, and even through online networks.

- + *“I have my Instagram page where I go on there and I put pictures and stuff, videos of the island, and I translate them in language. So I’m basically teaching the language off a platform that requires to use internet.” (Lala Gutchen, as above, 2022)*

In 2023, Lala had recently finished co-designing a literacy gaming app in Erub Mir language with the elders, based on the successful Feed the Monster phonetics game for children.

- + *“I’ve completed a literacy app ... for our children to identify the phonetics in our language ... I’m using every platform as I can to project the language ... We’ve got Erub [people] living all across Australia, around the world, and the only way for we [to] get the message across is have that good network on Country to send it.” (Lala Gutchen, as above, 2024)*

Lala’s significant work in language preservation, teaching, land and sea management and climate change advocacy was recognised in a National NAIDOC Award for Caring for Country and Culture.³⁶

However, Lala lives with her family outside of the central villages and has very limited mobile connectivity. Unfortunately, she was still struggling with the same connectivity issues in 2024, impacting on her ability to upload recordings to the language platform and deliver online training. We documented Lala’s experience in the short film ‘End of the Line’³⁷.

- + *“Nothing has changed ... I’m still [experiencing] the same struggle [with relying] on good internet [for] language documentation work.” (Lala Gutchen, as above, 2024)*

Lala describes the poor mobile coverage as restricting language and cultural knowledge transfer in Erub.



“One of my main concerns is, it could slow down the progress of our children to learn the language, because everything we digitise now. [I have an obligation] to teach the language, and my main [connection] now is the internet, because most of my Elders are living off Country. The only way for me to document language is to have a phone call with them, and I can’t do smoke signal. I have to talk on the phone. So, once the phone [is] cut off for a few days, my cultural knowledge is lost there. That’s why my work here is based around having a good network.”

- Lala Gutchen, Language facilitator / fisherwoman / co-researcher, 2024

³⁵ See: <https://alnf.org/2019/07/12/alnf-technology-helping-save-erub-language/>

³⁶ <https://www.naidoc.org.au/award-finalist/lala%C2%A0gutchen>

³⁷ <https://www.youtube.com/watch?v=kV153RjBxOM>

Lala described doing a language project with the school on a neighbouring island, but struggled to edit and upload the language resources due to poor connectivity.

- + “[I spent] a day and a half trying to edit stuff and upload stuff. The signal drops out, and the principal tells me, “It’s common down here.” It shouldn’t be common. [I need to] create resources for our children to learn [but poor connectivity is] slowing down the progress for our children to learn. [We need] the best connectivity network here on top of Torres Strait, because [nowadays] everything backs up through network.” (Lala Gutchen, as above, 2024)

TSIMA CEO Diat Alferink also identified the need to document the cultural heritage of the Torres Strait region due to the increasing impacts of climate change.

- + “[With] rising sea levels now, six communities are possibly unliveable in the next 70 to 100 years in the Torres Strait ... that’s why this [work in] cultural maintenance, language renewal, myths and legend, animation [is] really important and gives voice to our identity and our culture.” (Diat Alferink, TSIMA Operations Manager, 2022)

TSIMA also produce language content for radio and online channels.

- + “Sometimes in my program I do language interviews as well with cultural content. We also are encouraging more language content to go on air as well. And also podcasts so that we can put them online for the communities.” (Jenni Enosa, Senior Content Creator, TSIMA, 2023)

Currently the rangers use Traditional Ecological Knowledge software to record information about plants and animals, fish and locations and language. They have developed a detailed seasonal calendar with input from Kapua Gutchen and daughter Lala Gutchen.



Figure 27: Lala Gutchen with the Erub Kerker seasonal calendar she and Kapua worked on

Demand for an archiving platform and support for personal collections (2024)

The Indigenous Knowledge Centre had previously had a collection of historic photos from Erub on the walls (removed in 2024), with many more held in open boxes and albums in the public space. In order to maintain this important local heritage collection for future generations, it would be ideal to have these photographs digitised and available on a digital archive platform.

In addition, there are extensive collection of copies of old photographs from SLQ, AIATSIS, TSIRC collection and private collections. This includes an online collection of oral histories and historic materials held by SLQ related to the ‘Coming of the Light’, about the arrival of the first missionaries in the Torres Strait in 1871.³⁸



Figure 28: Photo archive wall in Erub IKC

³⁸ <https://www.slq.qld.gov.au/blog/erub-coming-light>

There is also an emerging issue with a lack of storage of personal photos taken on mobile phones, with many of these lost when phones are broken or replaced. While LaCie Hard drives are available in the store, However, many people do not use backup services or a computer to transfer photos to. Lala Gutchen has had an iCloud account since 2014 to store her photos, which she can access when she changes phones. However, beyond sharing on social media, online storage is not common. This could be a role of the IKC as a place to help people download and store their photos.

Demand for a facility to support digital media production

Since 2022, we have heard ongoing community interest in setting up a digital media unit and programs to support digital content creation by young people. The new generation of artists at Erub Arts are coming from the digital era, with Jimmy John Thaiday winning the multi-media category at both the 2022 and 2023 Telstra awards.³⁹ Other young people are doing video production using online apps.

- + *“When we go out on the reef, we take videos or pictures. [We edit] the video together, and add music and [titles] and post it up. Makes families down the South miss island and they want to come back.” (Nixon Mye, Co-researcher, 2022)*

There are also digital artists, language and cultural content producers, digital designers and local entrepreneurs looking at using digital technology to expand their reach. Jimmy K Thaiday is a sculptural artist, digital artist, drone operator. In 2023, he was studying Certificate 3 in Business with Queensland TAFE with an aim of setting up his own small business. He was selling his artwork online for T-shirts and hats as well as exploring NFT artwork. Nixon Mye was also doing digital art for T-shirt design.

The IKC is likely too small to support a production hub for this type of activity to develop. While no other existing spaces were proposed, TSIMA is keen to set up a media hub on every island for creating and accessing content and archives.

- + *“We need to have more [Torres Strait] content, whether it’s on NITV or indigiTUBE, or even our own platforms ... to raise that awareness [of our history] in our younger generation. Media’s really important and able to do that.” (Diat Alferink, TSIMA Operations Manager, 2022)*

³⁹ https://issuu.com/tsimatorresnews/docs/23-08-17_torres_news_ed094_16p_lo_res/s/29907033

06. CONSIDERATIONS FOR LOCAL DIGITAL INCLUSION PLAN

Developing a local Digital Inclusion Plan would enable a coordinated whole-of-community approach to address some of the challenges outlined in this report. It would also provide a useful tool for advocacy to government, industry, and fundraising efforts. Strategies outlined below are based on input from community stakeholders and are provided as possible options for local planning to improve communications services and digital inclusion in Erub. These are not intended to be prescriptive, nor are they listed in order of priority.

Based on our 2025 interviews and discussions, the proposed Digital Inclusion Plan has been updated with new/revised strategies and a column for progress/ next steps, to track progress on the actions over time.

Legend	
Issue resolved	
Issue partly resolved / underway:	
Yet to be addressed:	

Identified issue	Possible actions	Potential stakeholders	Progress/ next steps
Access			
Expand 4G mobile coverage to unserved villages, airport and north side of island, and out to sea	<p>Advocate to Telstra and Queensland and Australian Governments for expanded Telstra 4G coverage on Erub (especially airport and unserved villages) and out to sea plus improved reliability and redundancy during outages</p> <p>Possible funding through Regional Connectivity Program Round 4 or Queensland Government</p> <p>Explore options of direct-to-device messaging via LEO satellites (see Universal Outdoor Mobile Obligation proposal, February 2025⁴⁰)</p>	<p>TSIRC</p> <p>Telstra</p> <p>TSRA</p> <p>Queensland Government</p> <p>Australian Government (DITRDCA)</p>	<p>Continue to call for expanded mobile coverage on Erub, including at airport, unserved villages and out to sea (limited progress to date); Advocate for improved network resilience and redundancy</p>
Improved agency broadband: Need for fast, low latency broadband services with unlimited data for agency and business use	<p>Trial of Starlink satellite service for agency and/ or business use (Note: Queensland Government are currently undertaking a trial of Starlink)</p>	<p>TSIRC</p> <p>TSRA</p> <p>Queensland Government</p>	<p>Uptake of Starlink since 2023 by supermarket, clinic, school, with other agencies planning upgrades</p>

⁴⁰ <https://www.infrastructure.gov.au/department/media/news/universal-outdoor-mobile-obligation-improve-outdoor-mobile-coverage-across-australia>

Identified issue	Possible actions	Potential stakeholders	Progress/ next steps
Need for mobile boosters: Lack of mobile coverage at many houses, or weak signal from neighbouring islands	IBIS supermarket to consider stocking an affordable 4G stationery mobile booster (existing 3G boosters no longer work)	IBIS supermarket TSIRC	New strategy as yet
Safety communications: Need for improved safety and emergency communications, especially for ocean fishing, sea rescue, border security	Explore options for expanded use of satellite communications systems (satellite phones, Zoleo devices to enabling messaging app, iPhone emergency messaging, Starlink Roam) for safety and emergency communications in areas without mobile coverage and while out to sea Provide EPIRB or Zoleo for loan to improve safety when fishing	TSIRC Borderforce Queensland Police Rangers Erub Primary Health Care Centre	Most agencies have satellite phones currently, with consideration of other options Rangers have some loan EPIRBs
Power security: Impact of power outages on communications and food security	IBIS supermarket and/or TSIRC to consider installation of back-up generator to ensure access to food, ATM, EFTPOS and Starlink during power outages	IBIS supermarket TSIRC	Backup generator at IBIS supermarket, repaired at clinic; Starlink at store, clinic, school reduced impact of outages
Access computers: Need for community access computers and software in Indigenous Knowledge Centre (IKC).	Seek funding through State Library of Queensland (SLQ) for new community access computers and regularly used software ⁴¹ , including learning games.	TSIRC/ Erub IKC SLQ	TSIRC has two new laptop computers and two iPads
VAST direct-to-home satellite: TV services not working in about 30% of homes, satellite dishes needing repair	Advocate for funding to upgrade damaged or rusted satellite dishes, replace VAST set-top boxes in homes where not working	TSIRC Queensland Government housing Australian Government (DITRDC)	TSIRC Housing had replaced VAST satellite dishes on about 20 houses, with more needed
VAST set-top boxes: High cost for households to replace set-top boxes, difficult to activate smart cards	Arrange supply of VAST set-top boxes and surge protectors at subsidised cost in IBIS stores across region Provide support to activate smart cards	IBIS supermarket TSIRC	Yet to do

⁴¹ Refurbished computers and discount software available through Connecting Up: <https://www.connectingup.org/>

Identified issue	Possible actions	Potential stakeholders	Progress/ next steps
Limited radio services: Limited access to Radio 4DI FM radio service across island; TSIMA 4MW and ABC AM radio services poor quality signal	TSIMA to relocate broadcast tower to higher site and install higher powered FM transmitter to reach all of Erub Consider establishing transmission of at least one ABC radio service as FM from Erub RIBS facility	TSIMA/ Erub RIBS TSIRC TSRA	Yet to do
Affordability			
High pre-paid data cost: Primary reliance on pre-paid mobile data, increased expenditure; limited awareness of options	Supply Telstra Pre-Paid Community Mobile Plan in IBIS supermarket Provide easy-to-read materials (posters, brochures) in store & IKC, radio messages on 4MW outlining how to reduce data use and options for affordable mobile and data services	TSIRC / Erub IKC TSIMA IBIS supermarket Telstra Sky Muster retail service providers	Yet to do
Free Public Wi-Fi: Need for public Wi-Fi to provide affordable access to online services	Establish NBN satellite service and free public Wi-Fi with content filtering in town centre Review NBN Wi-Fi use and explore need for Wi-Fi in other villages and public sites without 4G coverage (e.g., airport / visitor's quarters)	TSIRC NBN Australian Government/ Centrelink Queensland Government	NBN installed free Wi-Fi hotspot 28/5/22
			Yet to do
Digital ability			
Need for digital skills in using mobile and computer-based applications, online services and security, particularly for seniors	Provide in-house training and support opportunities at IKC (with support from SLQ) in basic IT skills, mobile and online services (MyGov, banking, shopping, travel bookings etc) and managing security	Erub IKC / TSIRC SLQ My Pathways	Digital support provided at IKC and TSIRC SLQ have done with IKC Coordinator training on 'Digital and You' program
Provide workshops for workforce readiness, trade & administration skills and business development	Run specific workshops on workforce readiness (CV preparation, MS office, keyboard/typing skills, email use, job search etc), trade skills, administration and business skills (email, accounting, HR, project management etc) and IT skills for governance and leadership.	TSIRC/ Erub IKC SLQ Tagai TAFE My Pathways	In-house training in local agencies; No recent workforce readiness digital training

Identified issue	Possible actions	Potential stakeholders	Progress/ next steps
Digital Mentor to provide support in use of government and online services when needed	Explore possible employment of local Digital Mentor to support people to independently use government and online services/ apps (e.g., MyGov, Centrelink, banking services); located either at TSIRC, Centrelink or Erub IKC	TSIRC/ Erub IKC Australian Government/ Centrelink	Support provided by IKC and TSIRC staff
Online safety awareness: Concerns around cyber-safety issues, especially scams and on social media	Arrange cyber-safety awareness workshops (including in schools and workplaces) as well as locally targeted posters and radio promos to build awareness	TSIRC/ Erub IKC TSIMA Erub campus of Tagai School	TSIRC IT distribute scam alerts; Some e-safety info at school, IKC
Media production and archiving			
Digital media facility / support: Demand for digital media and music production for local language and cultural maintenance and skills development, and need for a facility to support production and archiving of existing content	Explore options for a multi-media facility to support existing language and cultural projects and support learning and use of multi-media production (e.g. videos, animation, online content), music recording and archiving (e.g. at IKC, Erub Arts or school) Explore options for skills development in digital photography, audio recording, video, music production, journalism Seek support for language and cultural recording projects	TSIMA Erub Arts IKC TSIRC TSRA (funding) Rangers Australian Literacy and Numeracy Foundation / Living First Language Platform	TSIMA support regional media production; ALNF support Erub Meuram language app; Erub Arts support multi-media projects; Some local media and music production but no dedicated funding or facility
Other Identified Needs			
Timely technical support: Lack of local IT and technical support, long delays and high cost for technicians	Arrange IT technical services company as regular service provider to support multiple agencies' needs (to reduce travel time and costs), and provide remote support Provide technical training for local people to provide first-in support	TSIRC Queensland Government My Pathways	Increased use of remote support but still no coordinated multi-agency support

Appendix 1: Summary of survey results

This section provides the full list of survey results undertaken with First Nations participants in Erub from 2022–24. There may be variation to results published in the previous outcomes reports which used ‘raw’ survey results, prior to cleaning and weighing against ABS statistics.

Demographics	2022	2023	2024
Gender	47% female; 53% male	47% female; 53% male	46% female; 53% male; 2% non-binary / genderfluid
% Torres Strait Islander and/or Aboriginal respondents	100%	100%	100%
Education			
Completed year 11 or 12	37%	46%	38%
Completed year 10 or below	34%	38%	34%
Holds tertiary education qualification (certificate, diploma, degree)	33%	23%	32%
Employment			
Employed or on CDP	62% (24% of these full-time)	46% (64% of these full-time)	46% (34% of these full-time)
Unemployed	22%	19%	24%
% looked for work in past month	6%	18%	8%
Welfare			
Receives Centrelink payments	40%	62%	Not reported 2024
Most common payments	Family Tax Benefit (47%), JobSeeker / Youth Allowance (39%)	Family Tax Benefit (49%), JobSeeker / Youth Allowance (35%)	JobSeeker / Youth Allowance (34%), None of the above (26%)
Housing - Live in a multi-generational or shared household	61%	52%	84%
Average number of people per household	6.0	5.9	7.7
% with long-term disability or health condition	15%	25%	7%
% speak language other than English at home	98%	83%	82%
ATSI languages spoken (multi-choice question)			
Torres Strait Creole	45%	47%	59%
Erub Mir / Meriam Mir	58%	53%	37%
Understanding of English (very or quite well)			
Spoken English	94%	87%	99%
Written English	94%	93%	99%
Income	\$1,303.63	\$1,453.27	\$1,555.48

Average weekly household income			
Households with weekly income of \$1-\$399	12%	7%	1%
\$400-\$999	49%	21%	26%
\$1000-\$1999	12%	20%	34%
above \$2000	23%	25%	23%
No household income	0%	0%	0%
Phone use	2022	2023	2024
Primary devices used for phone calls			
Mobile phone	96%	100%	96%
Phone in community office or workplace	28%	15%	6%
Public phone	0%	2%	4%
Fixed line telephone in home	1%	0%	3%
No phone access	4%	0%	0%
Reliability of public phone			
Reliability of public phone	0%	13%	0%
Stated the public phone was reliable	0%	81%	97%
Stated the public phone was not or sometimes reliable	100%	5%	3%
Rate of mobile phone ownership	96% (84% of these smartphones)	100% (79% of these smartphones)	100% (95% of these smartphones)
Pre-paid mobile phone use			
% of phone owners on prepaid services	99%	93%	96%
Average number of prepaid services per household	5.1	3.5	5.1
Expenditure			
Average monthly household expenditure on pre-paid mobile	Not reported 2022	\$215.90	\$344.20
Monthly household expenditure on phone and internet services	\$324.60	\$318.40	\$474.40

Media use	2022	2023	2024
Radio Access (multi-choice question)			
Via car radio	62%	68%	79%
Via phone or tablet	0%	30%	24%
Listen only at places other than home or car	34%	19%	15%
Never listen to radio	34%	34%	40%
Radio programs listenership			
Local First Nations radio service	41% daily or weekly, 11% occasionally	35% daily or weekly, 26% occasionally	11% daily or weekly, 32% occasionally
ABC Radio	12% daily or weekly, 18% occasionally	15% daily or weekly, 31% occasionally	5% daily or weekly, 44% occasionally
Commercial radio	3% daily or weekly, 7% occasionally	16% daily or weekly, 19% occasionally	11% daily or weekly, 14% occasionally
Radio Access (multi-choice question)			
Watch on TV via VAST satellite	84%	88%	60%
Via phone	66%	59%	Not collected 2024
Only via USB/DVDs on TV	8%	23%	Not collected 2024
Use subscription satellite TV service	30%	21%	21%
Never watch TV	1%	4%	9%
VAST TV Access			
% with working VAST service	69%	97%	70%
Without working VAST service	31% (46% due to damaged dish or cabling, 33% not sure why)	3% (100% due to set-top box not working, 83% due to damaged dish or cabling)	30% (66% due to set-top box not working, 50% due to damaged dish or cabling)
Most popular sources of TV and online content (multi-choice question)			
YouTube	58% daily, 15% weekly	50% daily, 5% weekly	43% daily, 19% weekly
Commercial TV	48% daily, 28% weekly	39% daily, 19% weekly	37% daily, 15% weekly
Streaming service	46% daily, 29% weekly	28% daily, 22% weekly	25% daily, 13% weekly

NITV	28% daily, 41% weekly	21% daily, 14% weekly	18% daily, 20% weekly
Primary sources of news and information (multi-choice question)			
Direct / in-person communication	44% daily, 9% weekly, 30% occasionally	48% daily, 3% weekly, 31% occasionally	46% daily, 4% weekly, 20% occasionally
Facebook	50% daily, 19% weekly, 12% occasionally	42% daily, 17% weekly, 7% occasionally	29% daily, 15% weekly, 15% occasionally
Commercial TV	42% daily, 22% weekly, 13% occasionally	37% daily, 23% weekly, 18% occasionally	22% daily, 17% weekly, 30% occasionally
ABC TV	32% daily, 28% weekly, 19% occasionally	32% daily, 10% weekly, 28% occasionally	15% daily, 25% weekly, 32% occasionally
Other social media	41% daily, 17% weekly, 14% occasionally	26% daily, 15% weekly, 15% occasionally	27% daily, 10% weekly, 25% occasionally
Online news service	26% daily, 21% weekly, 6% occasionally	23% daily, 28% weekly, 18% occasionally	27% daily, 4% weekly, 25% occasionally
First Nations radio	31% daily, 12% weekly, 15% occasionally	17% daily, 11% weekly, 21% occasionally	4% daily, 5% weekly, 26% occasionally
Primary sources of emergency information (multi-choice question)			
Direct / in-person communication	0%	60%	67%
Text message from police or emergency services	58%	44%	16%
Commercial TV	0%	39%	33%
Facebook	69%	53%	46%
Online emergency services	0%	39%	48%
Local noticeboards	70%	56%	38%
First Nations radio	44%	32%	16%

Internet use	2022	2023	2024
Latest internet use			
Have used the internet in the past week	84%	93%	89%
In the past month	6%	0%	6%
Never uses the internet	0%	5%	0%
Rate of internet use (of respondents who had used the internet within the last three months)			
Use the internet almost constantly	70%	56%	42%
Several times a day	24%	28%	21%
About once a day or several times a week	6%	13%	28%
Regular internet users (The following indented sections refer to respondents who had used the internet within the last six months)			
	90%	93%	97%
Primary online devices (multi-choice question)			
Smartphone	97%	85%	93%
Portable laptop or notebook computer	33%	28%	23%
Tablet	0%	27%	17%
Desktop computer	29%	23%	15%
Smart TV	34%	38%	14%
Games console	0%	6%	5%
Use of Internet provided by others (multi-choice question)			
Public space with free Wi-Fi	5%	50%	43%
At houses of friends or family	51%	33%	26%
At place of work or education	46%	27%	24%
Government or community office	0%	35%	15%
Concern about amount of time spent online			
Extremely concerned	12%	14%	Not reported 2024
Moderately concerned	11%	18%	Not reported 2024
Slightly concerned	35%	19%	Not reported 2024
Not at all concerned	25%	43%	Not reported 2024

Low internet users	10%	7%	3%
Reasons given for not using the internet more – low internet users (multi-choice)			
My internet connection is too slow/unreliable	0%	0%	100%
Not enough content is available in my language	0%	0%	40%
I do not have access to content in my own language	10%	1%	6%
I am concerned about inappropriate content and causing conflict	4%	0%	0%
The internet is not a priority for me	88%	65%	0%
I am not confident using the internet	88%	65%	0%
Use of fixed internet services			
Does not have fixed home internet	79%	58%	84%
NBN including Sky Muster satellite	20%	34%	14%
Other (ADSL, Starlink etc)	4%	7%	3%
Data allowances of those with fixed broadband			
Have less than 49 GB / month	0%	22%	7%
Between 50-199 GB / month	5%	58%	91%
Above 200 GB / month	66%	0%	0%
Have unlimited internet data	29%	20%	2%
Frequency of exceeding fixed broadband data limits within the last year			
1 - 5 times	5%	14%	30%
6-11 times	29%	9%	0%
Every month	0%	0%	2%
Use of mobile broadband services			
Do not have any mobile broadband device	79%	74%	79%
Use a Wi-Fi dongle / device	18%	20%	13%
Use a laptop/tablet SIM	2%	3%	8%
Use other mobile broadband device	1%	3%	0%
% of services that are on pre-paid plans	97%	92%	90%
Mobile broadband data allowances			

Less than 10 GB / month	51%	8%	29%
Between 11-40 GB / month	36%	43%	55%
Between 41-100 GB / month	12%	33%	15%
Above 100 GB / month	1%	3%	1%
Unlimited mobile data	6%	17%	0%
Frequency of exceeding mobile broadband data limits within the last year			
1 - 5 times	0%	33%	32%
6-11 times	54%	8%	24%
Every month	17%	15%	0%
Affordability			
	2022	2023	2024
Total monthly household expenditure on phone and internet services	\$324.60	\$318.40	\$474.40
% of respondents who cut back on essential household costs to afford personal or household internet			
Sometimes	0%	68%	81%
Often or always	16%	14%	11%
% of respondents who compromise on internet speed and/or quality to prioritise affordability			
	26%	73%	61%
Digital Ability			
	2022	2023	2024
Regular internet users (The following sections refer to respondents who used internet in last three months)	90%	93%	97%
Basic digital ability metrics (very true / mostly true)			
Open a new browser tab	93%	87%	65%
Send and receive emails	94%	91%	62%
Download and then open a file	93%	78%	60%
Find and install apps	93%	83%	62%
Complete online forms	84%	82%	61%
Connect to a Wi-Fi network	94%	92%	81%

Online security and cyber-safety awareness			
(very true / mostly true)			
Add / remove friends or followers on social media	92%	92%	59%
Decide what personal info to share online	89%	92%	65%
Set/manage secure passwords	93%	90%	64%
Identify if apps/software are safe to download	86%	80%	50%
Set/adjust privacy settings	84%	86%	51%
Check if information is trustworthy	88%	77%	67%
Online content creation			
(very true / mostly true)			
Produce online content	74%	58%	35%
Post videos	89%	78%	46%
Create websites	34%	42%	23%
Awareness of online copyright law	83%	59%	40%
Use of smart devices			
(very true / mostly true)			
Connect smart devices (e.g. smart TV) to the internet	79%	88%	63%
Adjust smart device privacy and security settings	89%	87%	46%
Primary online activities			
(activities undertaken in past six months)			
Accessing government services	99%	100%	82%
Online learning / study	89%	69%	79%
Online banking	96%	100%	76%
Comparing prices of products or services	95%	71%	69%
Tracking packages	89%	80%	66%
Online shopping	89%	86%	66%
Accessing health information	92%	72%	52%
Online buying / selling	70%	66%	52%
Looking for work	62%	53%	48%
Looking for housing / accommodation	51%	47%	36%

Social media use (activities undertaken in past six months)			
Keeping in touch with family or friends	99%	79%	76%
Meeting new friends or reconnecting with old friends online	95%	76%	72%
Engaging with community	97%	79%	71%
Online entertainment (activities undertaken in past six months)			
Used online entertainment services	97%	84%	91%
Attended an online music, arts, or cultural event online	52%	59%	39%

Comments

Improved mobile coverage and reliability

- + Hoping to get good connectivity throughout our villages on the island ASAP. Esoau
- + I live right next to the signal tower and I personally still receive poor coverage on my mobile device. And we need more jobs up here because our community is growing. Thanks
- + I think that the location of current Telstra tower is not convenient for our island and range of no reception around the back.



We need to improve the signal and reception to be more than it is now because now we have trouble, it's playing up. We want it to improve so that we can get a signal around the island and on the reef for safety when people go out. I want it to be good because it could change our lives.

- + Like to put more reception around the island
- + Poor signal at home
- + Reception is not good
- + Signal range @ the back of the Island
- + Signal tower needs to be put in a different location to be able to give wider coverage
- + Very poor mobile reception and don't get much signal downstairs in a two storey house. Poor signal inside but have to go outside for signal to use the internet
- + We need coverage on the back of the island. Most people go around the island and spend time out there. It's not safe. It would be good to put a tower up the back there.
- + Where I live the reception is not very good
- + I would like to see a faster upgrade in our connectivity system. Au esoau
- + Only parts of our community get good reception
- + We need Telstra to supply end villages
- + Reception is not good in our community, it tends to drop out even without strong winds or bad weather

Affordability issues

- + The costs are too much. Telstra could find a better deal. People are struggling. I'm on prepaid and it's really hard. If we get thirty dollars credit you can watch two movies and that's it. Telstra is ripping me off
- + I live in the CBD and I lend my SkyMuster password out all the time to help people that are in the CBD with no credit to access banking etc.
- + When signal is down our credit is finished

Security

- + I'm not much of a technology person but I'd like to see the internet and things on the island improved to the level down south like on the mainland. So we're equal. Across Australia it needs to be the same. We need communications. Because we live on the border of another country. We can see PNG over there. It'd only 48 miles away. Illegal activity we need to have good communications so we can report them. Especially now with international movements into the Solomon Islands. It's a real safety thing. We need good communication. With COVID. We don't know what that's developing into. There could be stronger strains. All these things mean we need good communication. If there's a conflict, who will win the fight? The country that comes out on top will be the country with the best communication.



I'd like to see the internet and things on the island improved to the level on the mainland. So we're equal. Across Australia it needs to be the same. We need communications. Because we live on the border of another country. We can see PNG over there. It'd only 48 miles away. Illegal activity, we need to have good communications so we can report them. Especially now with international movements into the Solomon Islands. It's a real safety thing. All these things mean we need good communication.

General

- + I hope this project will work out to benefit my community in better connectivity
- + We need better connectivity around the Torres Strait from Murray island to Boigu Island



Figure 29: Houses in the vicinity of the airstrip have no mobile connectivity

Appendix 2: Community communications audit

About the Community	
Community Name:	Erub
Traditional owners/ Language group	Darnley Island
Location (Coords)	Erubam Buaigiz / Erub Mer
Region	9.5975° S, 143.7614° E
LGA/Shire/ Regional Council	Zenadth Kes (Torres Strait), Queensland
Land Council	Torres Strait Islands Regional Council
Regional Service Centre, distance	Torres Strait Islands Regional Council
Remoteness (ABS)	Horn Island 200 km; Horn Island to Cairns 793 km; 993 km in two flights to regional centre Cairns
Population Data - ABS 2021	
ABS link	https://abs.gov.au/census/find-census-data/quickstats/2021/SAL30983
ABS link – Aboriginal and Torres Strait Islander (ATSI) Quickstats	https://abs.gov.au/census/find-census-data/quickstats/2021/ILOC30700501
Total population	326
ATSI population	292 – 89.6%; (19 / 5.8% not stated)
ATSI gender breakdown	49.1% male / 50.9% female
Median age and breakdown	Median age 30; 103 (31.6%) 0–19 years; 56 (17.2%) 20–29 years; 44 (13.5%) 30–39 years; 39 (12.0%) 40–49 years; 22 (6.7%) 50–59 years; 38 (11.7%) 60–69 years; 18 (5.5%) 70+ years
Number of families and number of children per family	84 families; Average 1.9 children for families with children / 1.0 for all households (including without children)
Language groups, number of speakers	267 (90.1%) speak Yumplatok (Torres Strait Creole) or other Indigenous languages
% ATSI people who speak language at home	91.8% speak a Torres Strait Islander language at home
% ATSI people who speak English at home	2.4% speak only English at home
Employment levels (15+)	40.9% in the labour force. Of these, 41.2% worked full-time, 32.9% part-time; 16.5% away from work. 56.7% not in the labour force
Education levels (15+)	13.5% completed year 9 or below; 11.1% completed Year 10; 7.7% completed Year 11; 21.2% completed Year 12; 27.4% completed Certificate 3 or 4; 7.2% completed Diploma or Bachelor degree
Number of occupied dwellings	72 occupied dwellings (community housing)
Average people per household and bedroom	Avg 3.6 people per ATSI household; 0.8 people per bedroom
Median weekly ATSI household income	\$974 (\$900 for ATSI households)
Median weekly ATSI personal income (15+)	\$401 (\$387 for Aboriginal and / or Torres Strait Islander people)
Average weekly rent	\$150

Community Services and Plans	
Community Layout Plan	See: TSIRC – Zenadth Kes Planning Scheme 2018 (Erub Local Plan p. 291-316)
Agencies in community	Torres Strait Island Regional Council; Tagai State School; Biosecurity office; Erub Primary Health Care; IBIS Supermarket (CEQ); Erub Arts; Erubam Rangers; Indigenous Knowledge Centre (run by TSIRC, supported by State Library of Queensland); Torres Strait Police; Prescribed Body Corporate
Visiting agencies	Ergon Energy; Telstra; Police; NBN; State Emergency Service (SES); Indigenous Consumer Advice Network (ICAN); contractors
Existing Community Development Plans	See: TSIRC – Zenadth Kes Planning Scheme 2018 (Erub Local Plan p. 291-316); TSRA Torres Strait and Northern Peninsula Regional Plan 2009–2029 (Erub Community Booklet 2012)
Power supply/type/backup in community; relevance to telecommunications	Local diesel generator managed by Ergon Energy; backup generator at health centre and store. Telstra services run off mains power with battery backup
Use of power cards in households	Yes, Ergon Energy; can buy from TSIRC office or IBIS store
Communications modes available	
Public phones	No public phones in Erub
Home phones	Phones in agencies only, number unknown
Mobile services, provider, location of base station	Telstra 4G only (3G switched off October 2024); backhaul via five microwave repeater links from top of Cape York via Thursday Island; main tower near school (tower height raised and upgraded in 2018)
Coverage description	Covers south-west side of island, but several villages have little or no reception due to hilly terrain. Telstra coverage map not accurate.
ADSL, number of connections	Several agencies still on ADSL in 2024 (TSIRC, police post, clinic)
Fibre to community	No, backhaul via microwave links from NPA
Satellite services, number, locations, provider	Sky Muster on TSIRC office and up to 10 households; Starlink services now on several agencies (school, clinic, IBIS supermarket; Erub Arts and police post waiting), staff houses and one First Nations households
UHF or VHF radio	Use of UHF and VHF radio by rangers; HF radio set up on hill by Australian Border Force with Immigration (Dept Agriculture and Forestry); UHF use unknown
Status of services	Despite upgrades, there are ongoing reports of regular 4G network outages and dropouts due to microwave links failing, weather impacts and power outages, as well as congestion in peak use periods; Reports of NBN Sky Muster dropouts in heavy cloud or rain

Communications programs history	TSIRC and TSRA have co-invested in 4G network and microwave backhaul upgrade to 6 communities across TSI (including Erub) since 2014-15, with another agreement signed in 2020-21 (see section 4). Erub had its 4G tower extended in 2018 and upgrades prior to 3G switch-off in October 2024.
Any planned upgrades?	TSIRC have requested 4G tower on top of hill and four small cells or boosters to cover villages with poor or no 4G coverage, but no upgrades currently planned. Telstra unsuccessfully applied for RCP3 funding for Torres Strait upgrades. RCP3 funding for NBN fixed wireless upgrades targeting inner islands, not Erub.
Emergency information system	Emergency communications by Erub agencies (police, clinic, rangers, TSIRC) limited to satellite phone and UHF radio. HF radio managed by Australian Border Force with Immigration
Telemetry network	Unknown
Media services available	
Radio services broadcast	TSIMA 4MW 1260 AM (922 VAST); 4DI- 106.1FM (re-transmits 4MW); ABC Regional (Far North Queensland) 1062 AM (weak signal)
TV services	TV delivery via VAST direct-to-home; 20% of houses don't have VAST working - see survey
RIBS radio station	Erub RIBS studio not currently operating (re-transmission only), with no full-time broadcaster since Walter Lui retired Feb 2023
RIMO	TSIMA (based on Waiben / Thursday Island)
Other media services	Torres News published weekly by TSIMA (available in IBIS store)
Community access facilities	
Internet / computer access facilities	Erub IKC (managed by TSIRC, supported by State Library of Queensland) provides access to two laptop computers, two iPads plus printer, laminator, binder etc; One Centrelink computer for Centrelink / banking purposes only
Public Wi-Fi availability and mode	NBN public Wi-Fi near TSIRC office (installed 28/5/22 under Communities in Isolation program); Centrelink Wi-Fi available 24/7 for limited online service use
Training / Skills Data	
Digital training options / needs	A range of training workshops can be arranged by IKC through State Library of Queensland 'Digital and You' offerings; demand for more digital skills and cyber-safety training, including for seniors
Any workplace digital skills training	My Pathways offer some courses but not in digital skills; Some agencies do online professional development by Zoom (School, health, Shire etc) but most training face to face; Artswokers do training in Stories Art Money (SAM) database
Staff / resources to support digital skills	IKC coordinator / TSIRC / Centrelink office
Use of online services / applications	

<p>Apps or digital tools in use</p>	<p>Lala Gutchen using Living First Language Platform for language recording/documentation, supported by Australian Literacy and Numeracy Foundation; SAM database used by Erub Arts; State Library of Queensland provides access to online historical records; Numerous media and design apps used by local digital media producers, musicians, designers and entrepreneurs</p>
<p>Telehealth usage</p>	<p>Being used at Erub Primary Health Care Centre, although limited by connectivity</p>
<p>Online education or training</p>	<p>In-house staff training by most agencies (school, clinic, police, TSIRC etc); Tagai School using online learning for high school students</p>
<p>Online court hearings or prison visits</p>	<p>No, all court hearings done in person</p>
<p>Cyber-safety or scam support</p>	<p>Cyber-safety training at school, with limited resources available at IKC; ICAN can assist people who have been scammed</p>

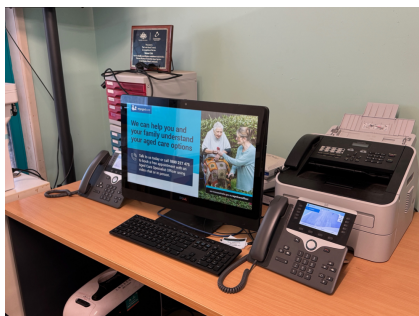
Appendix 3: Photos of research activities



Figures 30 and 31: John Bourne Mye and Joshua Thaiday with Lyndon and Nixon; The research team at work



Figures 32 and 33: Leah doing a survey with artist Nancy Naawi; Nixon, Daniel, Lyndon, Gilmore and Leah at the Erub airstrip



Figures 34 and 35: Centrelink office access computer and phone; TSIRC CEO Diat Alferink



Figures 36 and 37: Lyndon, Diat and Daniel on radio doing radio interview with Gilmore on 4MW; Erub Primary health Care Centre

Appendix 4: Map of Erub

(Source: TSIRC Planning Scheme p.269)

