

# Documenting and Sharing the Seasonal Calendar for Erub Island, Torres Strait

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Objective (d) Develop calendars showing seasonal patterns and patterns in animal and plant life  
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## Executive Summary

Reading landscapes, seasons and environments has long been a tradition for Torres Strait Islanders through their close relationships with their islands and seas. Researchers funded by MTSRF Project 1.3.1 'Traditional knowledge systems and climate change in Torres Strait' worked with community Elders on Erub Island in the eastern group of islands in the Torres Strait to document the Elders' knowledge of seasonal patterns, including winds, wet and dry seasons, and also patterns in plant, animal and bird life. This report examines and synthesises this knowledge. The information varies from details on the migration and nesting patterns of key totem birds, to the movement of the Tagai star constellation, to the onset of wind patterns indicating certain planting or fishing cycles. The importance of documenting and transferring such knowledge is that it begins the task of generating interest among the younger generation to identify seasonal and environmental indicators in their landscape. This ability of Islanders to identify indicators and 'read' their land and sea country becomes important in maintaining culture, livelihoods and their surrounding environment. To this end, the seasonal calendar, which was assembled from the knowledge of four Erub Island Elders, was also developed into a large wooden mural at the local primary school. The school's students were involved in the creation and installation of the mural, and its contents will now form part of their teaching curriculum. It is hoped that by documenting, safeguarding and transferring this knowledge, it will remain alive and valuable.

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## Acronyms Used In This Report

<b>ABC</b> .....	Australian Broadcasting Commission
<b>ABS</b> .....	Australian Bureau of Statistics
<b>CRS</b> .....	Catholic Relief Services
<b>JCU</b> .....	James Cook University
<b>MTSRF</b> .....	Marine and Tropical Sciences Research Facility
<b>NE</b> .....	Northeast
<b>NW</b> .....	Northwest
<b>SE</b> .....	Southeast
<b>SW</b> .....	Southwest
<b>TSRA</b> .....	Torres Strait Regional Authority
<b>UNEP</b> .....	United Nations Environment Programme

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# 1. Introduction

This report is one of a series presented by James Cook University on communities living in the Torres Strait. The series is part of a research project conducted under the Australian Government's Marine and Tropical Sciences Research Facility (MTSRF) program. The research described here fits within the MTSRF objective to 'develop calendars showing seasonal patterns and patterns in animal and plant life' – Objective (d) of Project 1.3.1 'Traditional knowledge systems and climate change in Torres Strait'.

Under the MTSRF program, the project outputs presented in this report is considered 'public good' research that is end-user and stakeholder driven. Stakeholders in this research project include, (i) the Torres Strait Regional Authority (TSRA); (ii) Island Councillors and Island Managers; (iii) Prescribed Body Corporate; (iv) Elders in these communities; and (v) Locals of these communities.

The Torres Strait consists of a group of over one hundred islands that spread beyond 48,000 square kilometres (see <http://www.tsra.gov.au>). Situated between the southern coastline of Papua New Guinea and the tip of Cape York on mainland Australia, the region is home to a unique set of histories, traditions, laws and customs. Approximately 7,105 Torres Strait Islanders reside in 19 communities across 16 inhabited islands (Human Rights and Equal Opportunity Commission, 2009). By comparison, it is estimated that there are over 47,000 Torres Strait Islanders living throughout Australia (ABS, 2006).

The focus of this report is a documentation and analysis of seasons on Erub Island in the Torres Strait, as detailed by local Elders. As put powerfully by a UNEP (1999) report on cultural and spiritual values of biodiversity, using local knowledge is at the core of this project in that it:

'... embraces information about location, movements and other factors explaining spatial patterns and timing in the ecosystem, including sequence of events, cycles and trends. Direct links with the land are fundamental, and obligations to maintain those connections form the core of individual and group identity.'  
(UNEP, 1999: 5)

This quote resonates with the local knowledge that is present in communities throughout the Torres Strait. Drawing on a case study of Erub Island, this report documents and explores Elders' knowledge of:

- Wet and dry seasons, including 'the doldrums';
- Wind patterns;
- Bird nesting and migrations patterns;
- Planting and cropping times;
- Other plant life;
- Sea life and fishing movements; and
- Tagai star constellation movements.

This knowledge was collected from four Erub Island Elders in November 2009 and May 2010. Three Elders were formally interviewed in November 2009, and the fourth Elder reviewed the seasonal calendar in May 2010, along with one of the original interviewees (the two of them making up the 'cultural advisors', further explained in Chapter 2).

Seasonal knowledge was collated, analysed and assembled into a seasonal calendar specifically for Erub Island. Other secondary materials were employed to cross-check some of the knowledge from the Elders including 'The Stars of Tagai' (Sharp, 1993), Queensland Government (2009) and 'The Native Title Revolution' (2009). The information from the calendar was also transposed into a large-scale mural for the local primary school, described in further detail later in this report. The project draws on other seasonal calendar work, particularly in Indigenous communities where the link between culture and environment is so strong. This is particularly pertinent in the Northern Territory, for instance the 'Six seasons of Kakadu' (Australian Government, 2009) and 'The Lost Seasons' (ABC, 2003).

A participatory action research approach was adopted throughout this project, and in particular for this objective. The methods employed, guided by participatory action research, are documented in Chapter 2 and build on the solid contribution that development researchers have made in utilising seasonal calendars as learning tools for both researchers and the community at large (Chambers, 1994). Seasonal calendars are particularly important in documenting food security issues, agricultural and horticulture issues, and health issues (CRS, 2004).

The seasonal calendar contained within this report is based on the familiar twelve-month Western calendar. It was designed in this way at the request of Elders working with the research team as the calendar will primarily be used as a teaching tool in the local school and as such the twelve-month structure is required in order to teach the students. However, in developing the calendar, the researchers also made particular effort to work with time intervals that Elders recognise. The final seasonal calendar indicates the twelve months of the year as the dominant time intervals, but all other information such as seasons, winds, and so on, are specific to Erub Island. The final visual representation of the calendar illustrates the fluid nature of seasons, and supports and embraces the knowledge shared.

This report seeks to provide an avenue for documenting knowledge about seasons and land and sea country that can be transferred to the younger generation on Erub Island. For Torres Strait Islanders, the connections between land, sea, the environment and culture are paramount to their identity and livelihoods and sustainability. This project thus goes some way to ensure that knowledge about seasons and indicators is both transferred and preserved.

## 2. Methodology

This section outlines the research methodology adopted for this project and in particular the objective of developing seasonal calendars. The report documents the development of the seasonal calendar for Erub Island, including the final product itself.

A number of methods and phases were employed for the seasonal calendar project. The methods adopted included in-depth interviews, panel review (by two 'cultural advisors') and a visual design mural. Qualitative methods were deemed most appropriate and effective for this project, especially in that qualitative methods are flexible in giving voice and leverage to those who may otherwise be silenced (Winchester, 2005). Interviewing is also an important primary methodology for capturing multiple meanings, and interpretations of a range of opinions, memories and experiences (Winchester, 2005; Pile, 1992). The in-depth interviews conducted for this project were predominately open-ended in character and more conversation-like, and so they were unstructured in delivery (Rice and Ezzy, 1999; May, 1993). While the interviews were conversation-like, they remained controlled and geared towards the interviewees' research interests and research process (Minichiello *et al.* 1995).

The over-riding objective of this project was to safeguard and synthesise environmental knowledge in relation to climate change. The specific aims of this project component are three-fold:

1. To collect knowledge on seasons, wind patterns, bird migration, plant and sea life and Tagai;
2. To compile knowledge of seasons and landscape indicators; and
3. To synthesise the collected knowledge and assemble a seasonal calendar specifically for Erub Island, including the installation of a mural of the calendar at the local primary school.

The methods, as mentioned above, were used over the course of the four phases of the project, outlined in detail below.

### *Phase 1*

Phase 1 was conducted on the first trip to Erub Island on 7-11 September 2009. This reconnaissance trip was useful in developing initial relationships with Elders and local community members. The anticipated life of the project was twelve months and thus developing trust and rapport with community members needed to happen quite early on in the project. One of the community liaison officers in the Land and Sea Management Unit of the Torres Strait Regional Authority (TSRA) accompanied the James Cook University (JCU) research team on this trip and provided initial introductions with the Council Manager, community forum committee members and community Elders. Initial discussions were held with Elders about the project, including knowledge of seasons, plant life, animal life and landscape indicators. These discussions were primarily conducted with two prominent community Elders who were interviewed in Phase 2.

### *Phase 2*

Phase 2 was carried out during the second trip to Erub Island from 25 November to 4 December 2009. During this trip, in-depth interviews were conducted by one co-author with three community Elders, who represented two of the four clan groups on Erub Island – Samsep Serar, Meuram Beuger, Perudu Waumer and Saisarem Karr. The knowledge gathered from the Elders, specific to Erub Island, included trends in plant and sea life,

planting and cropping times, bird nesting and migration patterns, movement of the Tagai star constellation, seasons and winds, and other environmental or landscape indicators.

The interviews conducted were in-depth and semi-structured in format. A series of theme-based questions were assembled prior to, and referred to during the interviews. Questions were asked in whichever order was necessary to maintain the flow of the interview. The length of interviews ranged from thirty minutes to just over an hour and a half. One interview was completed on the topic of sea country to demonstrate changes and indicators on country. Photos of this particular interview are included in Chapter 3. Two of the three interviews were digitally recorded. Referring to Dunn's list of informant rights (Dunn, 2005); the three Elders were asked for consent to use the recorder during the course of the interview. Interviewees were also made aware that if they did consent to its use that it could be paused at any stage and that they could discontinue the interview at any stage.

As with all phases and island visits, an informative poster about the project and team members was compiled and sent to Erub Island Council prior to our visit. The TSRA Land and Management Sea Unit provided feedback and assistance with the poster. The poster provided the local community with information about the project such as intended visit dates, photos of each team member, the project length, outcomes and community benefits. For example, the poster outlined the benefits of the project in the following way:

'The findings of the research will be a useful toolkit that those responsible for planning for future generations of Erub people can use as they learn to better cope with addressing climate change issues in their everyday activities. It is also envisaged that more broad-based discussions about these issues will lead to a better understanding of climate change issues as they affect other places throughout the world. Overall, the project and the team affirms the importance of oral traditions within the community, and values their traditional environmental knowledge. The project team would like to confirm that ownership of this knowledge will remain with the Traditional Owners.'

To further provide information and awareness to the community about this project, the project team was each individually interviewed on the local radio station. In both Phases 2 and 3, members of the team spoke to the local radio station on Erub Island and provided details of the project, including aims, community participation, outcomes and benefits.

### *Phase 3*

Phase 3 involved the review of the knowledge collected during Phase 2. Two cultural advisors for Erub Island's art centre, both Elders and leaders of two of the four clan groups on the island, were asked to review and provide feedback on the material. One of these Elders was also one of the interviewees in November 2009 (Phase 2), and the other Elder represented one of the Island's clan groups. The feedback provided by these two Elders was invaluable and included necessary changes and information to ensure the knowledge on the calendar was both appropriate and accurate.

### *Phase 4*

Phase 4 included the third field trip to Erub Island on 17-21 May 2010. The trip involved further consolidation of the seasonal calendar material and final product. One Elder in particular again worked with the JCU research team to ensure that the knowledge that had been collected on prior trips had been represented on the calendar in an appropriate and correct way. Phase 4 also involved the installation of the mural onto one of the external school walls. The mural consisted of a 2.5-metre circle made from marine ply wood. With the assistance of the local school and art centre on Erub Island, the school children were

involved in the painting of the mural. All of the Island's clan totems were cut out of craft wood to be later fastened to the mural. Every student at the school painted one of these four totem animals – tern, booby, frigate bird or parrot fish – or a green turtle as that is a sub-totem for all of the four clans on the island.

The adoption of these phases has contributed to the success of the final seasonal calendar, including the mural. Following the completion of the mural (Phase 4), Tagai State College (the local primary school on Erub Island) had plans to turn the knowledge into lesson plans to teach the primary school students about seasons, changes and environmental indicators. It will be interesting to monitor this process but it is likely that this too will be successful given the enthusiasm of the students with the mural and participation in its production and hence overall ownership of the mural itself.

## 3. Results and Discussion

### 3.1 Collecting and Synthesising Knowledge

This section details the process for collecting and synthesising knowledge for the seasonal calendar, specific to Erub Island. As described in Chapter 2, Phases 2 to 4 were data-collecting periods for the project. Phase 2 in particular consisted of the major data-collecting period for the seasonal calendar on Erub Island. In-depth, unstructured interviews were conducted by one of the co-authors with three community Elders, who were recommended to the project leader by the community liaison officers at the TSRA and also the Erub Island community forum committee.

To illustrate how the Elders described their seasons and land and sea country, we have provided the following quotes from their in-depth interviews. In this first example, the Elder describes the role of the frigate bird as an indicator of the start of the monsoon season on Erub Island:

‘They [frigate birds] on the monsoon time. Yeah, monsoon, when we see them come low, we know monsoon come close. When they way up in the sky that’s sager time. They always glide and there small one on top. Sager is the south-east. Then they fly way up in the sky, then when north-west time now they come low. We know north-westerly.’ (Elder, pers. comm., 2009)

The Elder made it clear in the interview the pivotal role of the frigate bird in indicating an important seasonal shift for the island. The start of the monsoon brings with it a number of flow-on impacts for the island, including a greater frequency and intensity of rainfall and extreme weather events. The effects of these changes on the environment and community can be devastating if not observed and prepared for.

In another interview, an Elder describes the onset of the ‘nor’west’ or monsoon season (Koki) being heralded by indicators from Papua New Guinea:

‘When you see the Maidu [a type of tree] go sailing passed here non-stop, that’s when the tide is flowing out of the Fly, empties into the Torres Strait because they [PNG] get the Nor-West first.’ (Elder, pers. comm., 2009)

The important role of Papua New Guinea as an indicator of the forthcoming nor-west season is further illustrated by the Elder:

‘You can see the lid lid [small clouds], they sprang out of the horizon, and they disappeared, the lid lid they’re linin’ up [Elder sings in Miriam Mer] a bit of lightning, you can listen the rumbling from Daudai, New Guinea men land. It’s all happening.’ (Elder, pers. comm., 2009)

During the interview, he sang a traditional song in Miriam Mer, which functions as a ‘seasonal map’ of the impending nor-west season:

‘Well [the song] tells you about the beginning of nor-west, you know the things that started to come into play, the clouds, the wind and the thunder, they all usher in the new nor-west. The big tides during the lull, the mango is ripening, the sorbi is ripening, they’re all the signs that the nor-west is coming.’ (Elder, pers. comm., 2009)

He further emphasised the importance of astral and marine activity as indicators of seasonal change:

‘When they start to get the little rollers on the beach, it’s flat calm, and they watch the stars, when the top stars, they twinkle more quickly, when the others more slowly it tells you something. Anyway he read all the signs and said, ‘It’s gonna blow shortly’, and then they start to get the rollers... Biru Biru is the one that flies out. They [booby] are signs of the nor-west.’ (Elder, pers. comm., 2009)

Results of this research also identified that the ‘doldrums’ period was important, and even considered as a season by the Elders who were interviewed. This period runs for approximately three months in length between the wet and dry seasons. Knowledge about the ‘doldrums’ period highlights the move away from the predominately accepted wet and dry seasonal descriptions for the region.

Of further interest are the ways in which knowledge about seasons has transcended into other forms, most notably in song. While on Erub Island in November 2009, the project team came across a book in the local library, ‘Songs from Darnley Island’ (Edwards, 2000), the majority of which are written and sung in traditional language. A number of songs are about changing weather patterns and seasonal shifts. One is called ‘Metalug Nole Wagkak’, meaning ‘Calm weather, then SW winds’. The song lyrics have been translated into English as follows:

‘Fine weather  
Calm weather, no wind  
Smoke rises straight up  
South-westerly wind starts to blow straight  
Smoke bends over the island and covers it.’

The song is referring to the end of the wet season, and indicates that at this time the wind drops and the sea becomes calm. With little rain during this season, the grass becomes dry and fires emerge.

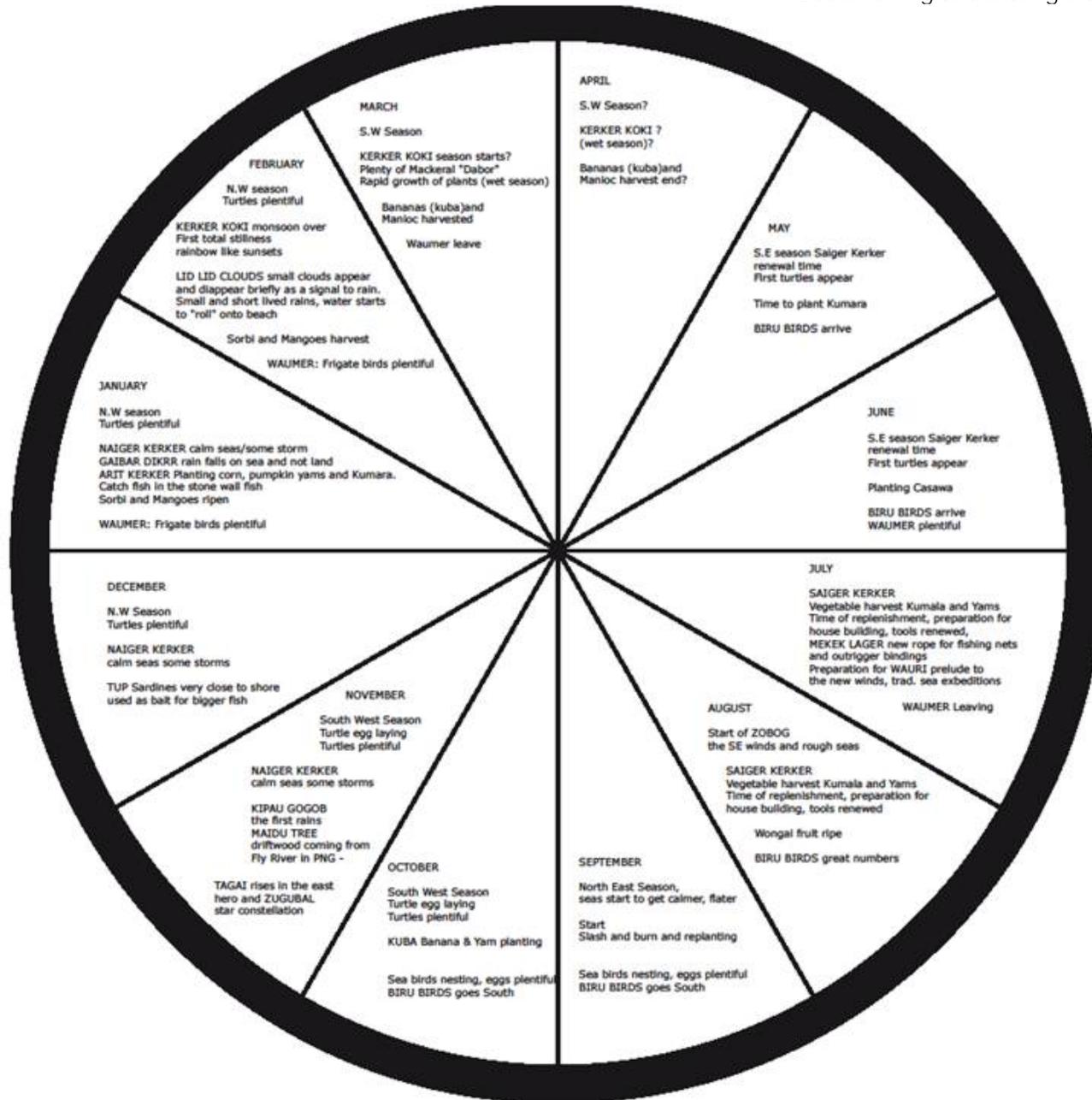
With the rain and wind playing an important part of Islanders’ livelihoods, along with song and dance, it is no surprise there are songs from Erub Island denoting changing seasons. Another song is about the rain and wind, entitled ‘Irmer’, meaning ‘Rain and Koki Wind’. The lyrics, again translated into English are as follows:

‘Rain  
The rain, the rain,  
It keeps falling  
It disturbs our work  
It makes us cold  
The north-west wind  
It keeps blowing.’

This song is concerned with the wet season and northwest wind. Both the wind and rain play a pivotal role in the sustainability and lives of Erub Islanders.

Following the three interviews, the information and knowledge of seasons and wind patterns, bird migration, plant and sea life and the Tagai star constellation was compiled into a table (based on the twelve-month Western year). This information was then further compiled into the shape of a twelve-month calendar by Emma Davidson, as outlined in Figure 1.

As described in Chapter 2 (Phase 3 of the project), Elders' knowledge was then reviewed by two cultural advisors for Erub Island's art centre. These advisors each provided valuable and helpful feedback on the material, including identification of necessary changes and other important information to ensure the knowledge on the calendar was both appropriate and accurate. As such, Figure 1 illustrates the initial calendar that was given to the cultural advisors to review – it has since, as outlined, been changed and updated.



### Erub Island seasonal/weather calendar

Various elements illustrated within the calendar. Turtles, birds, sardines etc.

Using a colour wheel, appropriate colours are selected for each element or event/season in a way sympathetic to the radiating colour.

There is also a possibility of illustrating constant elements, such as the sky/sea showing the range of behaviour.



Figure 1: Draft compilation of Elders' knowledge into a seasonal calendar for Erub Island (compiled by Emma Davidson).

### 3.2 Sharing Knowledge: Final Calendar and Mural

This section explores the development of the final seasonal calendar, along with the making and installation of the mural on an external wall at the Erub Island primary school, including the involvement of the school students. These items are each examined in detail below.

Each student in the school painted one of the four major island totems (tern, booby, frigate bird or parrot fish), or the green turtle (also a sub-totem for all four clans on Erub Island).

**Figure 2:** Images of the green turtles and frigate birds, painted by the students for the seasonal calendar mural. Photo by Emma Davidson.



Figure 3 below shows the space provided for the installation of the mural, outside classrooms and in the centre of the local school. Figures 4-6 capture the final seasonal calendar mural on the wall at the Erub Island primary school, with full support and participation from teachers and students. Figure 7 illustrates the final seasonal calendar map to be used in the classrooms as a teaching tool.

**Figure 3:** The external wall of the local school where the seasonal calendar mural was installed. Photo by Karen McNamara.



**Figure 4:** A close-up of the lower section of the mural. Photo by Emma Davidson.

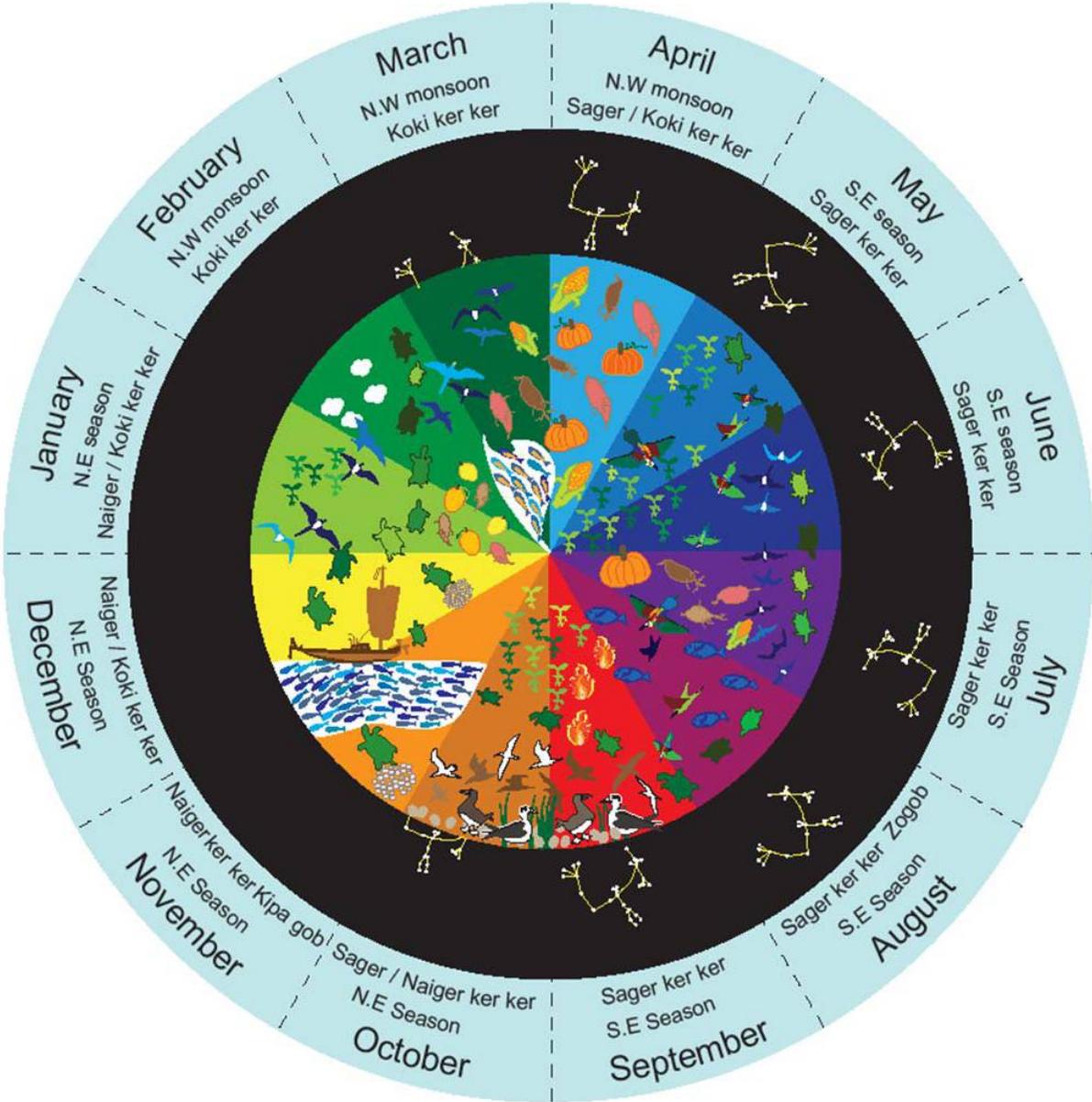


**Figure 5:** A close-up of the upper right-hand side of the mural. Photo by Emma Davidson.



**Figure 6:** The final seasonal calendar mural, installed at the Erub Island primary school. Photo by Emma Davidson.





**Figure 7:** The final seasonal calendar map for Erub Island (compiled by Emma Davidson).

## 4. Conclusion

The purpose of this study was to document and synthesise Elders' knowledge concerning seasons on Erub Island in Torres Strait. This was achieved through the adoption of a participatory action approach and, specifically, through a number of in-depth, unstructured interviews with Elders on Erub Island during November 2009. The knowledge collected ranged from information about wind directions, wet and dry seasons including the 'doldrums' period, patterns in bird migration and nesting, and plant and cropping cycles. Moreover, knowledge about the island's major totems, and other plant and animal species that are seasonal indicators has also been important inclusions in the final seasonal calendar. All of this collected knowledge, as explained in detail throughout the report, was then transcribed, collated and synthesised into tables and a seasonal calendar.

Another key objective of this project, along with documenting and synthesising this knowledge, was to provide an avenue for knowledge transfer to the younger generation on Erub Island. The purpose of this objective was to further generate interest and enthusiasm amongst the younger generation for reading landscapes and identifying indicators for seasonal change. This success of this objective was high. The seasonal calendar was well-received by the local primary school, both teachers and students alike. With both the school principal and teachers in the school supportive of the calendar, it will now be used as a permanent component of the teaching curriculum for the school. Further, the production of the calendar into a large-scale mural on the school wall was also successful. Each student in the school painted a turtle, bird or fish onto craft wood, which was then mounted onto the mural. The benefits of this were two-fold. It provided a way for students to learn about the importance of these animals in the landscape, both as indicators and overall ecosystem functioning. Likewise, it also enhanced the ownership of the seasonal calendar and mural for the students.

This report makes one small contribution towards deepening our understanding of the interconnectedness between Islanders' environment, livelihoods and culture. The long tradition of Islanders to read, understand and listen to landscape changes reflects their close relationship with their island, land and sea country. Moreover, it is hoped that by collating and transferring this knowledge, this project goes some way to ensuring that knowledge about seasons, landscapes and indicators, specific to Erub Island, can remain useful and alive.

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