The climate is typical of coastal wet tropical areas, with average temperatures ranging between <22°C in July to >31°C in December, and annual rainfall is in the range 1.5 to 1.8 metres. Being in the tropics, regional wind patterns are highly seasonal. Between November and April, north-westerly monsoonal winds less than 17 knots are interspersed with squalls of over 35 knots. Between May and October strong south-easterly trade winds can often last for extended periods of time and hamper safe small boat travel. Although cyclones have been known to track across the Northern Peninsula Area (NPA), only two cyclones have actually passed through the Torres Strait in 23 years, and the area is generally considered to lie just outside the cyclone "belt".

2.3 Communities

Although over 100 islands lie within the Torres Strait, with a land area of around 1,100 square kilometres, there are only significant populations on seventeen of these. Around half of the population is resident on Thursday Island or the nearby islands, which together form the regional hub and service centre for the smaller Outer Torres Strait Island (OTSI) communities. **Figure 2.3** and **Figure 2.4** depict Thursday Island at the passenger ferry wharf, welcoming visitors and residents to Torres Strait, and an overview of the centre from the hilltop. These OTSI communities range in size from about 50 people on Ugar, to over 850 at the biggest community of Badu. Most communities have around 300 to 400 people.

Figure 2.3 "Welcome to Torres Strait" Art at Passenger Ferry Wharf

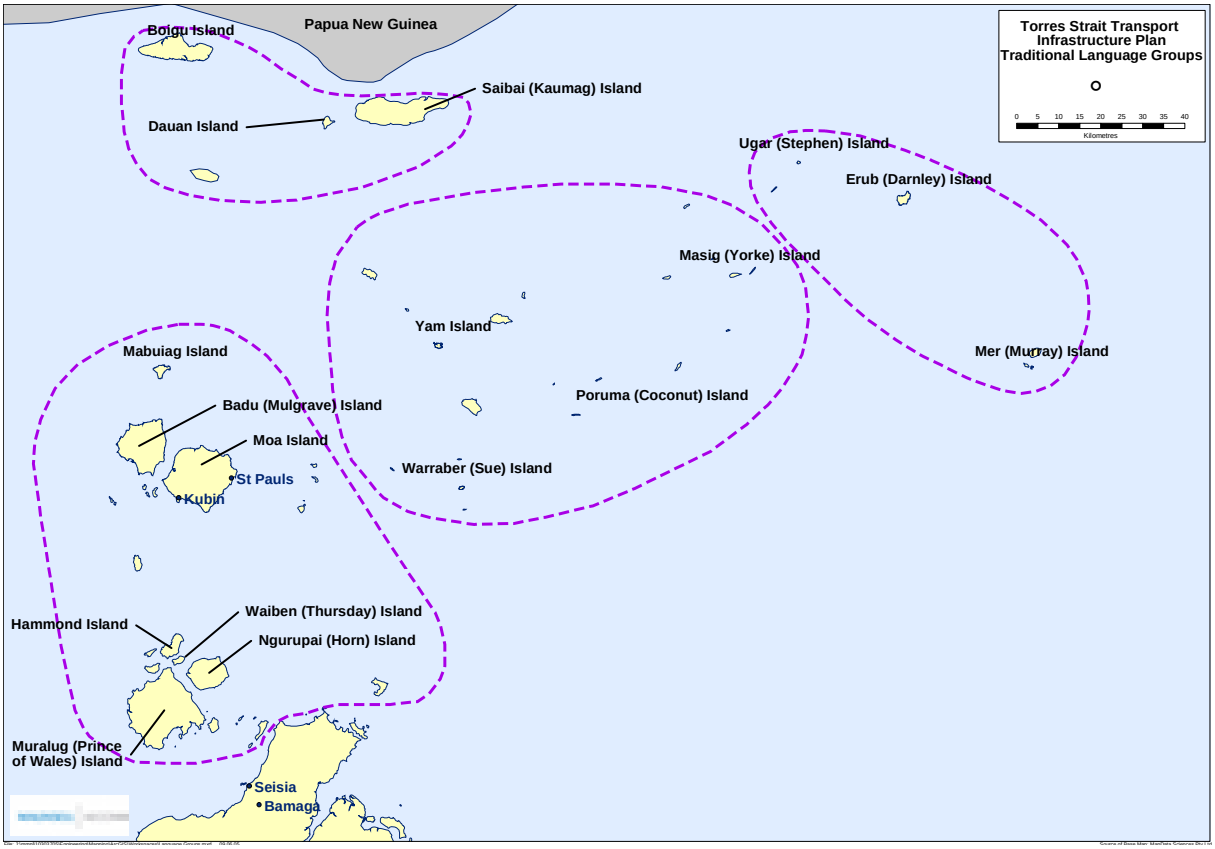
Figure 2.4 Overview of Thursday Island Community Centre

The Torres Strait Islanders, an indigenous people within Australia who identify with the *Ailan Kastom* (Island Custom) and share both ethnic and kinship ties to many other Melanesian people of the South West Pacific, have communities across the central, northern and eastern Torres Strait. Additionally, two Torres Strait Islander communities are also situated on the mainland NPA at Bamaga and Seisia, established mid-last century by several families as a result of deteriorating conditions on the low lying Saibai Island. They are now thriving mainland townships but maintain strong historical and personal ties to the OTSI communities. This relationship and the strong kinship ties continue to have implications for Torres Strait regional transport planning.

The Kaurareg people, residents of the communities on the larger islands to the south and west, also have strong ethnic and historical links with mainland aboriginal people.

The residents of the Torres Strait present a homogeneous face to the larger world and have worked cooperatively in achieving progress unmatched in most other indigenous communities. Although most Torres Strait Islanders speak at least three languages, adjacent island communities have preserved their own languages and customs despite centuries of contact with Asian and European immigrants, much inter-island marriage and recent rapid development. Identification with one of the four language groupings, as indicated in **Figure 2.5**, is still very pronounced, although *Torres Strait Creole* is also commonly used for communicating between groups. Due to its similarities to *Tok Pisin*, it can also be effective in communicating with Papua New Guineans across their shared border. These complexities of custom, language and group identification have important implications for transport planning.

Figure 2.5 Language Groups in the Torres Strait



Source for Base Map: MapData Sciences Pty Ltd

There are three major transport needs for the people of the Torres Strait. These are:

- Goods flowing through the major regional ports at Horn/Thursday Island and to a lesser extent, Seisia;
- Passenger travel to and from the regional centre and onwards to southern ports; and
- Travel within the region for family, recreational and administrative reasons.

For the majority of OTSI community residents, travel to access basic services and supplies is perceived to be difficult, costly (mainly for government and businesses who bear most of the costs of travel), and not particularly safe for those who utilise small boats and small planes. The entire region, without exception, is totally dependent on marine transport to obtain almost all the requirements of daily life, and as such, improving freight carriage is a major goal. Other transport is, however, very important and transport planning must take into account social and historical linkages, and not overemphasise just the cost benefits that transport improvements may make to commercial or administrative capacities.

2.4 Demographics

2.4.1 Population Statistics

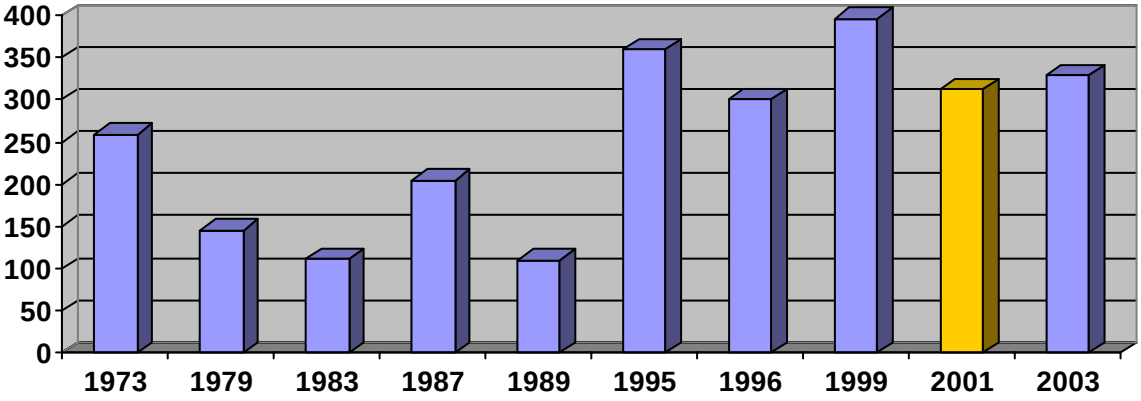
A number of population statistics are available for the Torres Strait over the past few decades, none of which can be relied on to be an accurate reflection of the actual number of people on the OTSI communities at any one point in time. A major reason for this is a degree of fluidity caused by many people moving to and from each community during the year: some for health reasons, others for education or to stay with extended family members within Torres Strait, or on the mainland. Due the relative small base of most communities, such movements can raise or lower a community's

population by plus or minus 20%, making it very difficult to rely solely on a single count of population, even for well planned census exercises.

Further complicating these cyclical variations are the numerous processes used to obtain population figures. Some published data has been obtained from community council estimates of unknown reliability, others are based on actual counting of household residents but do not cover all residences. Many historically quoted figures have been re-quoted in later documents, a common practice in recent infrastructure planning documents, and the earlier figures have consequently assumed a measure of reliability unrelated to the original data. Some funding requirements for development works have been based on population estimates that subsequently were not supported by later data.

The community of Yam is a good example of the variations observable in collected population data figures. **Figure 2.6** below gives the population as published in a number of government and planning reports over a thirty year period. The 1996 census data missed Yam altogether, whereas the 2001 census (yellow bar) gave Yam's population as 239.

Figure 2.6 Yam Population Statistics 1973 – 2003 (DNR Database)



Other community data statistics show similar irregularity in trends. In 1996, the Island Coordinating Council (ICC) used data from household audits carried out by the Queensland Department of Housing in 1995 to arrive at population profiles for every OTSI community. The figures were exhaustively analysed at the time, and used as the basis for housing infrastructure plans for the next decade. The 2003 figures were again analysed by the ICC in 2004, but have been deemed unreliable, probably due to changes to the counting process. They are therefore unable to be used to determine growth rates for communities, or to verify other statistics such as provided by the Australian Bureau of Statistics (ABS).

For instance, the housing data in 1995 indicated a total OTSI population of 5,010 residents, around 1,000 more than the 1995 census figures from the ABS. The 2003 Housing data counted just an additional 195 residents across all communities (a total of 5,205 residents by 2003) whereas the 2001 census figures had a growth of over 1,400 residents by 2001.

Based on a regression analysis of all the available published data over the past thirty years, the Department of Natural Resources and Mines, in 2003, derived a population figure and growth rate which was incorporated into its Water Related Assets Database data and is now used by the ICC in planning for new and current infrastructure.

Using the same data, the Torres Strait and populations for 2005 have been estimated in **Table 2.1** below, together with 2005 growth rates. Port Kennedy populations have also been calculated from ABS data for 2001, adjusted for a 2.1% growth rate (the average of the OTSI communities). All the calculations assume continued growth similar to historical trends, and this assumption may not be valid for every community. Incentives, such as housing, may encourage higher growth, whilst economic pressures or remoteness may inhibit future growth.

Table 2.1 Torres Strait Populations for 2005 and 2026

Community**	Calculated 2005 Populations	Calculated 2005 Growth	Estimated 2026 Populations	% of Torres Strait Population	
				2005	2006
Badu	851	2.4%	1,285	10.0%	9.8%
Boigu	355	0.0%*	362	4.2%	2.8%
Dauan	145	0.7%	155	1.7%	1.2%
Erub	356	1.3%	438	4.2%	3.3%
Hammond	206	0.0%*	206	2.4%	1.6%
Yam	429	6.1%	1,247	5.1%	9.5%
Kubin	244	3.1%	404	2.9%	3.1%
Mabuiag	255	2.2%	379	3.0%	2.9%
Masig	332	2.6%	524	3.9%	4.0%
Mer	491	1.5%	611	5.8%	4.6%
Poruma	202	2.0%	294	2.4%	2.2%
Saibai	388	3.0%	710	4.6%	5.4%
St Pauls	277	2.9%	512	3.3%	3.9%
Ugar	63	1.6%	80	0.7%	0.6%
Warraber	248	1.8%	335	2.9%	2.5%
Total OTSI	**4,842**	**2.3%**	**7,542**	**57.0%**	**57.4%**
Thursday Island	2,757	2.3%	4,231	32.5%	32.2%
Horn Island	614		942	7.2%	7.2%
Other	281		431	3.3%	3.3%
Total Non-OTSI	**3,652**	**2.3%**	**5,604**	**43.0%**	**42.6%**
Total Torres Strait	8,494	**2.3%**	13,146	**100%**	**100%**

* Historical data from Hammond and Boigu indicated current negative population growth (-0.2% and -5%). This is not likely to be the longer term trend and so figures of 0% growth have been used to calculate the 2026 populations for these two communities.

** The Torres Strait Islander communities of Bamaga and Seisia, located in the NPA, have populations of approximately 900 and 190 persons respectively with the overall NPA population estimated at 2150 persons.

2.4.2 Population Growth

The growth rates in **Figure 2.7** are based on historical population counts, none of which can be relied on alone to provide an accurate indication of the actual population. Consequently, growth rates calculated from this data must be used with some discretion, as no-one has been able to accurately predict past growth, and future predictions are also likely to be based on many assumptions which may not actually be valid in the future.

The data supports a growth of 2.3% for the OTSI communities and it may be reasonable to use this figure for the region as a whole, given that immigration in the region is relatively minor, and that birth and death rates within communities are likely to be similar for the whole region.