Northland Region Today

Northland is a long, narrow peninsula with a subtropical climate. It has a land area of 1.25 million hectares and a population of 148,470 (Statistics NZ 2006). Local government in the region includes the Northland Regional Council and the Far North, Kaipara and Whāngārei District Councils.

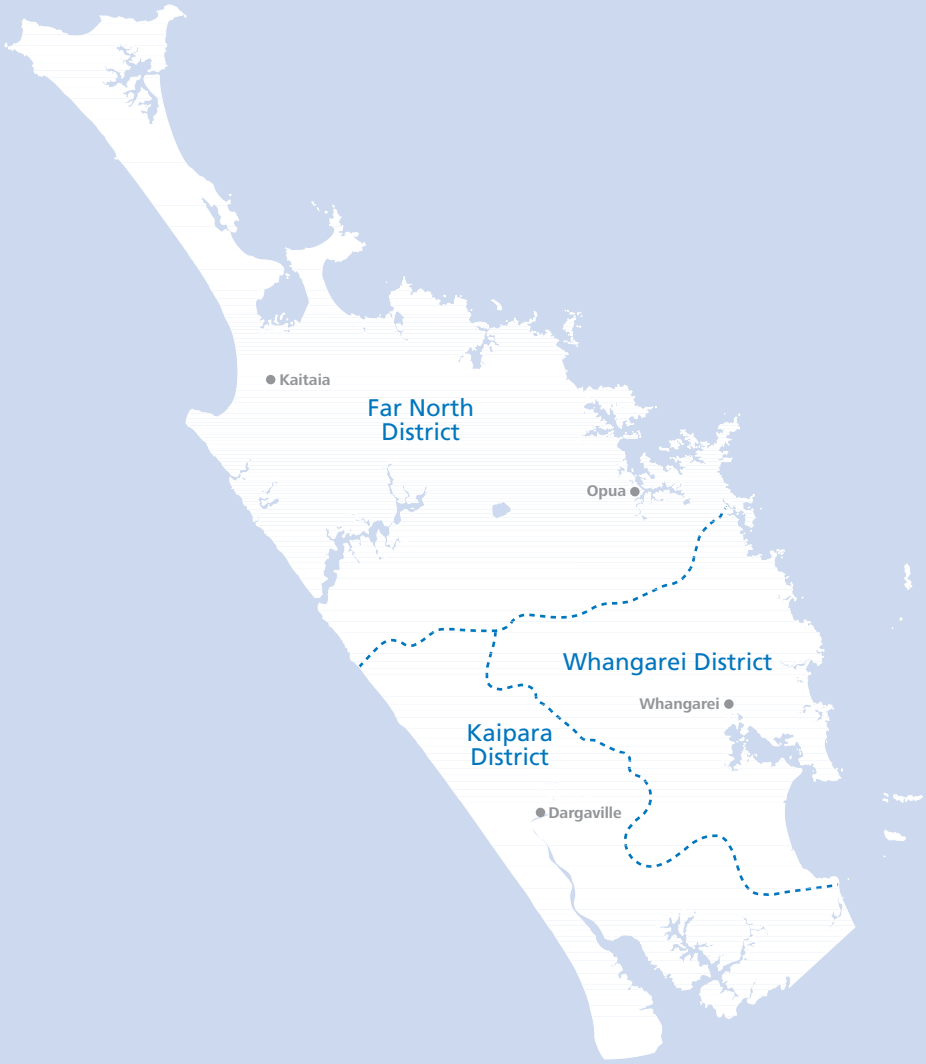
Northland has become a vibrant and dynamic region surrounded by a picturesque environment with a spectacular coastline. The region is growing in popularity as a holiday destination due to its outstanding natural environment, warm climate, low population density and proximity to Auckland. Northland has experienced strong population growth that has been driven by an increase in the number of births in the region and numbers of people coming to live in the region from other parts of New Zealand and overseas.

It is a diverse region in both socio-economic patterns and environmental characteristics. Northland is renowned for its scenic and accessible coastline, sheltered harbours, many offshore islands and ecosystems of important conservation value.

Northland has recently out performed other regions in some areas. Household incomes have increased more rapidly than the national average, educational attainment has improved at a higher rate than throughout New Zealand and employment and house prices have grown more rapidly than nationally up to 2007.

The following section provides an overview of Northland's:

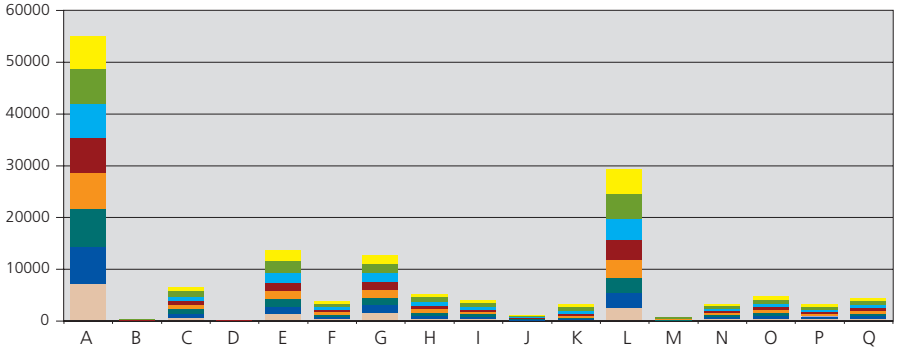
- Economy
- Infrastructure
- People and Culture
- Environment



Northland's economy

Northland's economy has grown slower (2.9% pa) than the national economy over the past ten years (3.3%). However, over the past five years Northland's economic growth has matched the national economy. If economic growth is adjusted for the difference in population growth then Northland's GDP growth matches that of the national economy over the ten year period and exceeds national growth over the past five years.

Industry by number of geographic units



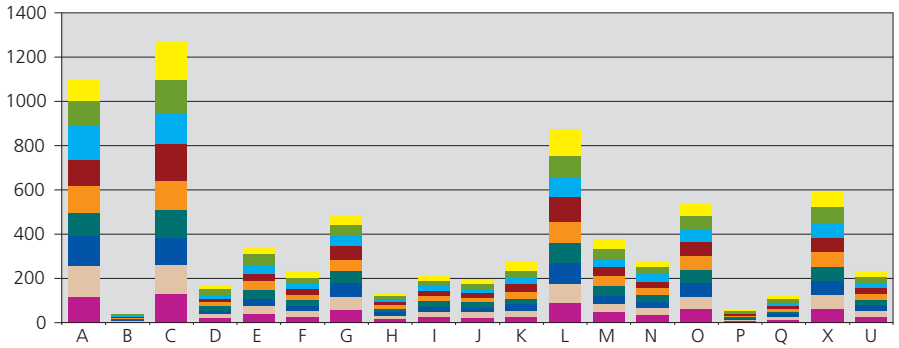
A - Agriculture, Forestry and Fishing; B - Mining; C - Manufacturing; D - Electricity, Gas and Water Supply;
E - Construction; F - Wholesale Trade; G - Retail Trade; H - Accommodation, Cafes and Restaurants;
I - Transport and Storage; J - Communication Services; K - Finance and Insurance;
L - Property and Business Services; M - Government Administration and Defence; N - Education;
O - Health and Community Services; P - Cultural and Recreational Services; Q - Personal and Other Services.

Source: Infometrics, Business Demography Data.

The graph of industry by number of geographic units demonstrates the number of businesses in each sector from 2000-2007 in the Northland economy. Agriculture, forestry and fishing had the highest number of businesses in the region although these have decreased from 7,256 in 2000 to 6,303 in 2007. Other industries that substantially contribute by way of business numbers are manufacturing, construction, retail trade and property and business.

By contrast, the graph of industry by contribution to Gross Domestic Product illustrates those industries that contribute the most in financial terms to the Northland economy ($m). Manufacturing and agriculture contribute the most to the economy followed by property and business, health and community services and retail trade. Considering the number of business units in manufacturing compared to other industry groups, manufacturing contributes very effectively to the Northland economy. There has been a steady increase in the contribution of regional GDP from the manufacturing sector which contributed $525m in 2006 and $555m in 2007. Agriculture, forestry and fishing contributed $515m to regional GDP in 2006 and $477m in 2007. The property and business sector grew substantially in business unit numbers from 2,675 in 2000 to 4,877 in 2007 and in contribution to regional GDP from $340m in 2006 to $392m in 2007. Total GDP for the Northland region in 2007 was $3.327 billion, or 2.4% of national GDP.

Industry by contribution to Gross Domestic Product (GDP)



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X - Ownership of Owner-occupied Dwelling; U - Unallocated.

Source: Infometrics Regional GDP Data

***Please note:** This analysis uses the Australia and New Zealand Standard Industrial Classification (ANZSIC) for industry categories.*

Key industry sectors

Primary sector

The Northland region has a relatively large primary sector employing 9,116 full-time workers in 2006. This sector contributed $675 million to regional GDP in 2006. The primary sector includes agriculture, services to agriculture, logging, forestry, commercial fishing, mining and oil and gas exploration. Within the primary sector, agriculture employed the largest number of people followed by forestry and logging.

Agriculture

In 2006 agriculture and services to agriculture employed 7,860 fulltime workers. Pastoral farming dominates Northland agriculture but there are a large number of beef cattle and sheep in the region. Based on gross sales data from Meat and Wool New Zealand, pastoral farming brings directly $760m per annum into the regional economy.

Forestry

Northland has extensive areas of indigenous and exotic forest. Due to the warm climate, the region produces some of New Zealand's highest density and fast growing radiata pine. The estimated total area of planted production forest in Northland in 2005 was 206,123 hectares. Nearly half of this (95,497 hectares) is in the Far North District.

There is a standing volume of wood of around 61,300,000 cubic metres and the average age of the trees is around 15 years.

Manufacturing and building sector

In 2006, 11,852 full-time workers were employed in manufacturing and building sector in the Northland region. This sector includes manufacturing, general construction and construction and trade services. Most full time workers were employed in manufacturing, with 6,716 full-time workers in 2006, while general construction and construction trade services employed 5,135 full-time workers.

Manufacturing

Many of the primary products grown in the region are also processed there and this is reflected in employment opportunities. Food and beverage manufacturing is the largest manufacturing group in the region, employing 1,559 full-workers in 2006. Within this subgroup, large occupations include dairy product manufacturing which employed 697 full-time workers, meat processing, which employed 480 full-time workers and seafood with 104 full-time workers.

Wood and paper product manufacturing is the second largest manufacturing group in the region, employing 1,415 full-time workers in 2006. Most full-time workers in this subgroup are employed in plywood and veneer manufacturing, wooden structural component manufacturing, wood product manufacturing or fabricated wood manufacturing.

Building

The increasing population of the region and growth in the tourism industry is influencing the building sector in Northland. Construction trade services employed 2,763 full-time workers in 2006 while general construction employed 2,372 full-time workers in 2006. Housing construction employed 1,065 full-time workers in 2006 while 358 full-time workers were employed in non-residential building construction. The number of people employed in site preparation services has grown over the last year with 517 full-time workers in 2006.

Northland's economy

Retail and distribution sector

In 2006, retail and distribution was the largest sector in the Northland region and it employed 25.2% of the workforce. At this time the sector employed a large number of people due to the increase in visitor numbers to the region and population growth.

In the 2006 year there were 14,029 full-time workers employed in the retail and distribution sector in the Northland region. This sector includes wholesaling, retailing, transport and accommodation, cafes and restaurants. Most full-time workers were employed in retail with 6,041 full time workers in 2006. Accommodation, cafes and restaurants employed 2,542 full-time workers.

Tourism and hospitality

In 2005, international and domestic travellers spent $626.7m while holidaying in the Northland region and are expected to spend $826.9m in 2012. Most visitors spend their money on eating out and accommodation. Any growth or decline in visitor numbers is reflected in employment in hospitality.

In 2006, 1,140 full-time workers were employed in accommodation in the Northland region. In addition, 1,390 full-time workers were employed in cafes and restaurants, while 397 full-time workers were employed in takeaway food retailing. Another area of major employment is pubs, taverns and bars which employed 348 full-time workers in 2006.

To cope with an increase in visitor numbers, more than $40m has been spent in the last two years on new and expanded facilities in the Northland region.

Tourism makes a larger contribution (5.8%) to GDP in Northland than it does at the national level (5.0%). When compared against the 19 major industry categories, tourism is in the middle in terms of contribution to GDP. Among the three territorial authorities tourism makes the largest contribution to Far North's GDP (6.4%) and the smallest to Kaipara (4.9%).

Marine industry

Conservatively the Whāngārei marine construction and refit industry, clustered mostly in the Whāngārei and Ōpua Harbours, contributes $75m to the regional economy and employs approximately 450 people. This is based on actual revenue data collected from 10 major boatbuilding and repair/refit companies in Northland between May and July 2008.

The sector includes a core group of boat builders that build, repair and refit vessels, workboats, pleasure craft and super yachts. Advantages the sector enjoys include low labour and land costs, established facilities and a solid support industry of trades and professional services.

The marine engineering sector in Northland is now being recognised by way of a $2m support package from New Zealand Trade and Enterprises for a marine engineering related MRI (Major Regional Initiative). This confirms the potential and positioning of the sector to evolve into a centre of excellence in a niche engineering market, in turn building on a strong collaborative approach to target projects of scale for the region.

Overall

Whāngārei's role as a regional service centre means a large number of people are employed in education and health, supermarkets and grocery stores. The recent population growth in Northland has impacted favourably on these industries. The importance of agriculture to the Northland region cannot be underestimated and is indicated by the large number of people employed in agriculture and road freight transport.

Northland's infrastructure

Supporting a growing population, developing a diverse economic base, and sustainably managing the natural environment requires well-planned infrastructure. Physical infrastructure includes transport networks, water and sewerage systems, energy distribution systems and telecommunications networks. These all need to be efficient and effective without undue adverse impact on the environment.

Roading and transport

The present transportation network includes 6,530 kilometres of road, a rail link from Auckland via Whāngārei to Otiria, a deepwater port at Marsden Point and commercial airports at Whāngārei, Kerikeri and Kaitāia. There is a project underway to designate land for a rail link to Marsden Point Deep Water Port in an attempt to eventually reduce the amount of heavy freight trucks on Northland's roads.

From July 2008, Whāngārei City has a brand new 'Euro4' bus service that provides the most environmentally friendly buses available. Bus services have been increased over peak times to encourage more people to use public transport instead of their own vehicles.

Other than the Whāngārei bus service there are minimal public passenger transport services due to a limited rating base, relatively small dispersed communities and a high rate of both private vehicle use and ownership in Northland.

There are safety risks posed by Northland's narrow windy roads, narrow bridges, roadside hazards and lack of adequate cycle and walking facilities. There is also an increasing amount of development/urban growth in rural and coastal environments placing pressure on the existing roading infrastructure.

Human health and environmental effects from unsealed roads, vehicle emissions, stormwater run-off and the spread of roadside pests, weeds and litter need to be minimised.

A recent study estimated that vehicle emissions contain 104 kilograms of particulate matter and 8.6 tonnes of carbon monoxide per day in the Whāngārei Air Shed (includes city centre and urban area). Earlier results estimated daily carbon monoxide emissions for the entire Northland region of 41.6 tonnes/day.

Traffic volumes in the region are increasing with annual increases of two to five percent being recorded on State Highways and with an estimated annual daily traffic growth of up to 5.7% on SH1 south of Whāngārei.

Significant progress has been made to manage conflict between heavy vehicles and other road users, particularly through regional development funding. Overall the funding available for transport related projects has increased. The use of public transport including the Total Mobility Scheme has increased.

Northland's infrastructure

Electricity

In order for modern communities to thrive, a secure and cost effective electricity supply is required. In Northland, there is a very small hydro-electric power station on the Wairua River and a geothermal power plant at Ngāwhā. The Ngāwhā plant is currently being expanded and there are discussions on a possible expansion of the Wairua River plant. The vast majority of Northland's power needs are generated from outside the region and transmitted via the national grid through Auckland. Potential exists for expansion of other electricity generation options to meet the region's foreseeable needs. These alternatives are being investigated further and include an application for a gas turbine power station in Rodney District by Genesis Energy and an application by Crest Energy Kaipara Ltd to install and operate marine turbines in the mouth of the Kaipara Harbour. There are also investigations into wind power generation at Poutō Peninsula, Ahipara, Glinks Gully and Baylys Beach. Northland Regional Council is taking a proactive interest in these investigations and the long term security of the national grid link through Auckland.

Broadband

Significant parts of rural Northland do not have access to advanced telecommunications systems such as broadband. Northland Regional Council is currently working towards a solution to Northland's broadband needs. Together with the telecommunications provider Kordia™, Northpower and Top Energy, the Council is investigating the possibility of developing, building and operating a fibre-optic based telecommunications infrastructure in Northland. This project will most likely be dependent on other sources of funding particularly from central government.

Northland's future growth

It is widely recognised that developing a growth programme for Northland is a top priority for the region as managing changing population trends, developing a diverse economic base and sustainably managing the natural environment requires well planned infrastructure and regionally co-ordinated economic development plans.

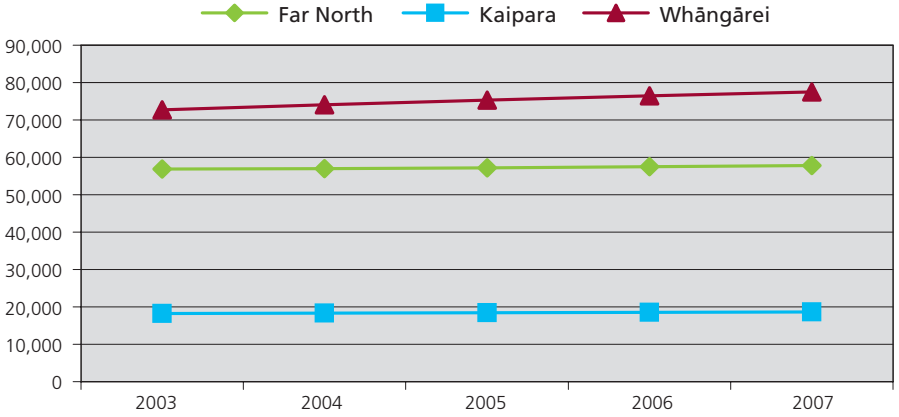
Creation of a proactive growth programme for Northland will provide an integrated framework for developing the region to its full potential using a sustainable development approach that considers social, cultural and environmental factors alongside economic and growth opportunities.

Northland's people

The 2006 Census indicated that there were 148,470 people living in the Northland Region at the time. This is an increase of 8,337 people or 5.9% since the 2001 Census. Population growth is driven mostly by births within the region and Māori are a key driver of this growth. Growth is also due to people moving into the region from other parts of New Zealand, particularly Auckland. While 7,080 people moved into the region between 2001-2006 from overseas destinations, there were 8,476 permanent and long term migrants from the Northland Region who left for overseas between 2003-2007.

Population

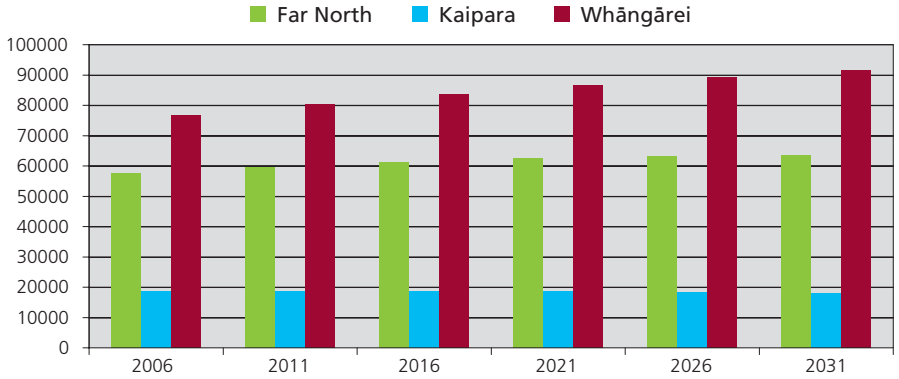
Population growth in the Northland Region



Source: Ministry of Social Development Report 2008

All districts within the Northland Region showed population growth between 2003 and 2007. There was an increase of 900 people in the Far North District, 4,800 people in the Whāngārei District and 350 people in the Kaipara District.

Projected population of Northland Region

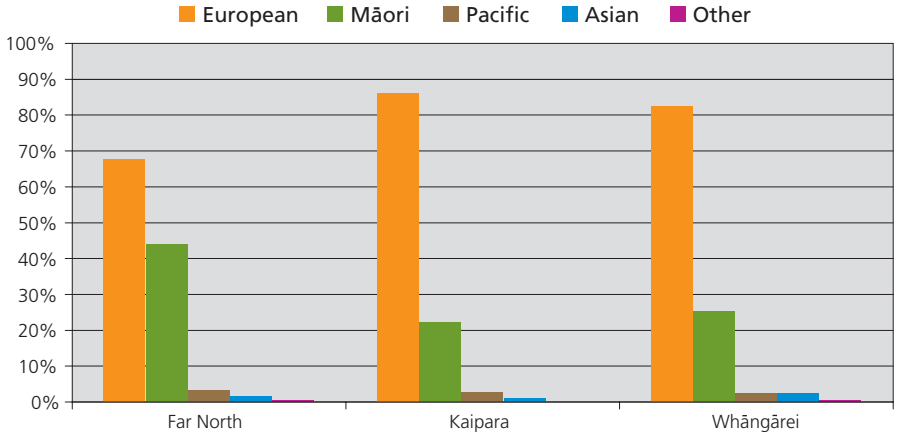


Source: Projected population data 2006-2031, Statistics NZ.

Projected population estimates indicate the Whāngārei District population rising from 76,500 in 2006 to 91,600 in 2031. The Far North District population is projected to rise from 57,500 in 2006 to 63,500 in 2031 and the Kaipara District decreasing from 18,600 in 2006 to 17,900 in 2031.

Northland's people

Ethnic groups in the Northland Region

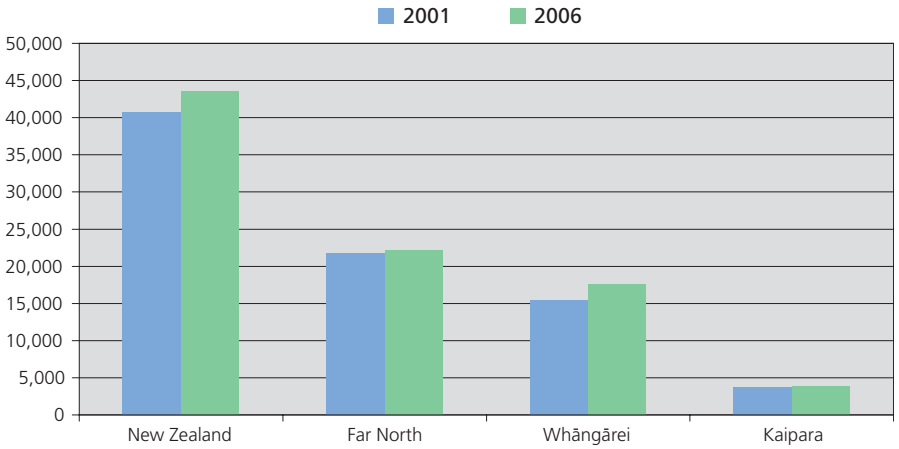


Source: Ministry of Social Development Report 2008

The ethnic groups that make up the population of the region are represented in the graph above. While the Northland Region's largest ethnic group is European with 93,351 residents, Māori represent a higher than New Zealand average for the region with 43,527 residents. The Far North District has a higher percentage of Māori (44%) than Kaipara District (22.2%) and Whāngārei District (25.2%).

Māori in Northland

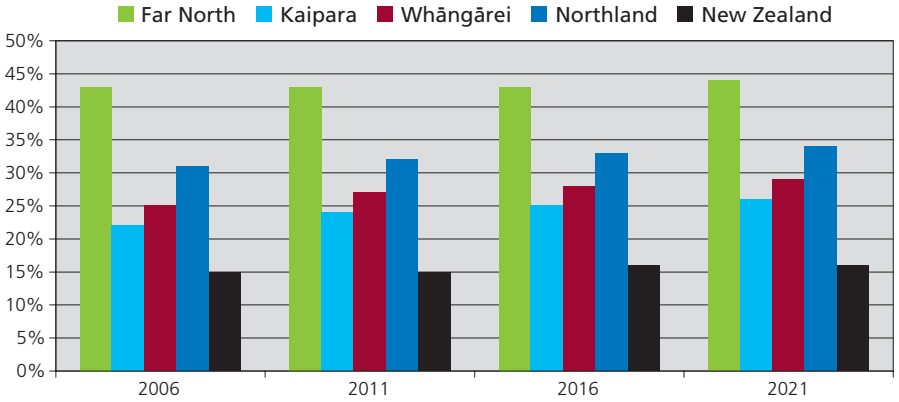
Distribution of Māori in Northland



Source: New Zealand Statistics, Census Data 2006

The total population of Māori living in Northland was 43,527 in 2006, a rise of 6.9% since 2001. Of the 43,527 Māori residents in Northland, the Far North District has the highest number (22,113 residents). The rise in the Māori population in the Far North between 2001 and 2006 was 384 people or 1.8%. The Māori population in Whāngārei was 17,604 in 2006 and has risen by 2,235 people or 14.5% since 2001. The number of Māori in Kaipara has also increased by 171 people or 4.7% to reach 3,639 in 2006.

Projected population of Māori in Northland



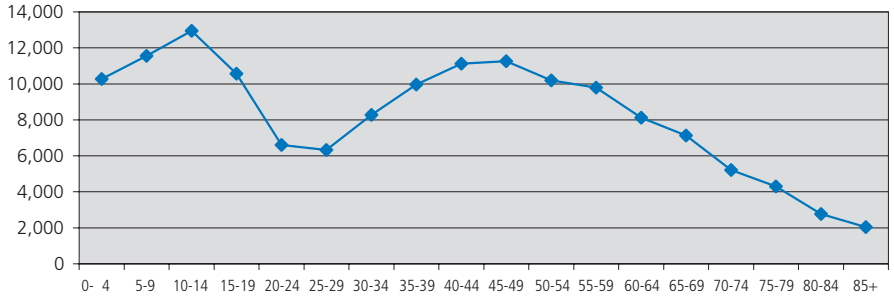
Source: Subnational Ethnic Population Projections 2006-2021, Statistics NZ

The graph above illustrates the percentage of each area's population who are Māori, projected out to the year 2021. The area with the highest population of Māori is the Far North District. It is projected to have 44% of the population as Māori in 2021 compared to 43% in 2006. The Whāngārei and Kaipara districts also have projected rises in Māori population to 29% in 2021 and to 26% in 2021 respectively. All three districts have higher proportions of Māori than the New Zealand average, projected to be 16% in 2021.

Age groups

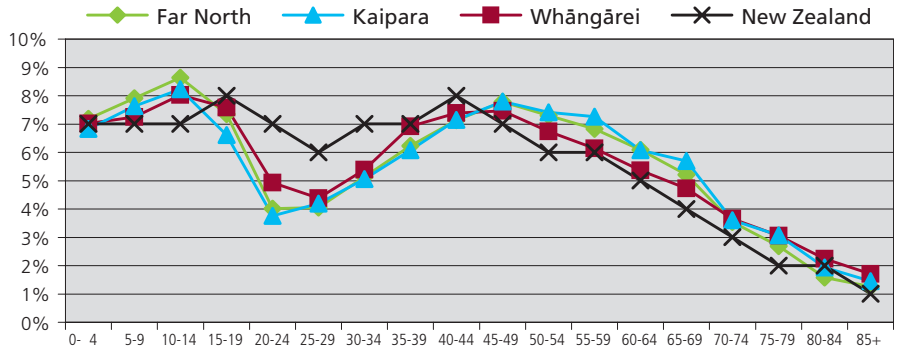
The largest age group in the Northland Region at the 2006 Census was 10-14 year olds (12,951). The graph (above right) illustrates a significant drop from those who are 15 years through to 29 years of age in the region. For the 30 to 49 years age groups the numbers of people trend upwards and then slowly decline through to the 85 years and over group.

Age groups by population numbers



Source: Statistics NZ Census 2006 Data

Percentage of population by age



Source: Estimated subnational and national population data, Statistics NZ 2006

When comparing age group percentages by district, the graph above illustrates that all districts in the region have a lower percentage of 20-39 year olds than does all of New Zealand. All districts also have a higher percentage of 1-14 year olds than does all of New Zealand.

Northland's culture

Northland has a rich history as the first area settled by a large Māori population and the centre of early European exploration and settlement. There is an extensive range of traditional and archaeological sites, historic buildings and structures.

Traditional sites are important because of their historical, cultural and spiritual significance to Māori. This includes everyday sites such as pā sites and traditional food gathering areas and wāhi tapu (sacred sites) such as urupā (burial grounds), war sites or tauranga waka (sites where ancestral canoes landed).

Archaeological sites relate to the more recent European occupation during the timber milling and gum digging eras and include camps, dams and coastal shipwrecks. The heritage of Northland is also reflected in the early colonial buildings and structures such as the missionary houses at Waimate, Kerikeri and Russell and the Waitangi Treaty House and National Reserve.

Birthplace

- There are 14.2% of people living in Northland Region who were born overseas, compared with 22.9% for New Zealand as a whole.
- For people born overseas who are now living in Northland, the most common birthplace was England. This is comparative to all of New Zealand.
- There are 1.5% of Māori in the Northland Region who were born overseas, compared with 1.6% for New Zealand as a whole.

Languages spoken

Total population

- Apart from English, the next most common language spoken in the region is Māori, which is spoken by 10% of Northland people compared to 4.1% for New Zealand as a whole.
- There are 83.7% of people in Northland that speak only one language, compared with 80.5% for all of New Zealand.

Māori ethnic population

- 28.5% of Māori in Northland speak Māori compared to 23.7% for all New Zealand.

Northland's environment

Climate

Northland, with its proximity to the sea, almost subtropical location and low elevation, is characterised by a mild, humid and rather windy climate. Summers tend to be warm and humid. Winters are characteristically mild with many parts of the region having only a few light frosts each year. The prevailing wind for most parts of the region is from the south west. However, in summer tropical cyclones give rise to north-easterly winds and heavy rainfall.

The mean annual rainfall ranges from about 1000-1300mm in low-lying coastal areas to over 2500mm on some of the higher country. Approximately one-third of the yearly rainfall total falls in the winter months of June, July and August. The region experiences high-intensity rains which can cause severe flooding.

Droughts are common in Northland during the summer months. High pressure weather conditions are prevalent during this period, often resulting in several weeks or months of dry and hot or windy weather. Records indicate that parts of the region on average have a drought of economic significance every three years.

Mean annual temperatures range from 15.5°C to 16°C in the far north and eastern areas, to between 14°C and 15.5°C in the south west and coastal districts, giving it the highest mean annual temperatures in New Zealand. Daily and annual temperature variations are low. Whāngārei, the major settlement of the region, has around 1,900 sunshine hours per year, and receives an annual rainfall of approximately 1300mm, about average for New Zealand.

Climate change

In August 2006, the National Institute of Water and Atmospheric Research Ltd (NIWA) carried out a comprehensive assessment on the impact of climate change and climate variability on Northland's water resources based on all available literature. The assessment considered natural climate variability in the Northland region and the potential effects of predicted climate changes over the next 50 to 80 years.

The main findings of the assessment were:

- All predictions suggest an increase in temperature, particularly during the winter;
- Overall annual rainfall may not change but rainfall trends for the next 30 to 80 years are for increased dry periods (drought and low flows) and increased high intensity rainfall events (floods);
- The change in rainfall trends and temperature is likely to result in decreased recharge to groundwater resources, and increased potential for saltwater intrusion in coastal aquifers;
- More frequent and extended periods of low flows and more high-intensity flood events in rivers and streams; and
- Potential effects on the agricultural industry, through harsher conditions for pasture, increased likelihood of erosion and climate variability.

Genetically modified organisms

The Council is actively committed to a policy which supports a precautionary approach to the application of genetically modified organisms in Northland. The Council will support this policy approach by submitting to the Environmental Risk Management Authority (ERMA) on proposals involving Northland, to ensure that the risk potential (including liability) has been adequately identified and evaluated.

Northland's environment

Landform and soils

Northland is only 80km across at its widest point, bounded by the Tasman Sea and Pacific Ocean. As a peninsula, Northland's coastline is its most distinctive physical feature. The coastline of 3,200 kilometres with its many sheltered harbours and offshore islands, sets the Northland coast apart from other areas of New Zealand.

The region is also unlike most of New Zealand in that there are few mountain ranges and the highest point, Te Raupua in the Waimā Range, is only 781 metres above sea level.

Typically, inland areas are dominated by rolling hill country with landforms ranging from the ancient uplifted east coast greywacke rocks to relatively young volcanic lava and active coastal dunes. Many rivers, streams, tidal inlets and harbours dissect and break the pattern of hills. Modest areas of flat low-lying land are restricted to areas adjacent to the Awanui and Northern Wairoa rivers.

More than 100 different soil types have been identified in the Northland region (NZMS 290 map series). This variety is due to differences in underlying rock, the low relief and the influence that the warm, moist climate and original vegetation has had on soil formation.

Northland has significant areas of strongly leached, heavy clays overlying unearthed rock with thin topsoil and low subsoil fertility.

Water resources

Rivers and streams

Many Northland rivers are relatively short with small catchments. The Wairoa River is Northland's largest, draining a catchment area of 3,650 square kilometres (29% of Northland's land area).

Lakes

The Northland region has a large number of small and generally shallow lakes. They were formed either by dune activity, volcanic activity or are artificially made. The dune lakes are in four main groups situated on the Aupōuri, Karikari and Poutō peninsulas and the Kai Iwi lakes. They generally range in size between five and 35 hectares and are usually less than 15 metres deep. Lake Taharoa of the Kai Iwi group is one of the largest and deepest dune lakes in the country, covering an area of 237 hectares and being 37 metres deep.

Groundwater

Groundwater is water beneath the surface of the earth which saturates the pores and fractures of sand, gravel, and rock formations. It is a valuable water resource to Northland, being utilised for numerous town and rural water supplies, irrigation and stock water. Whāngārei, Kaitāia, Mangōnui, Kaikohe, Ōkaihau, Maungakaramea and Ruāwai all take groundwater for municipal water supplies. Groundwater is also an important water source for many coastal communities, such as Russell, Taipā and Matapōuri.

Coastal waters

Northland's most distinctive physical feature is its long and varied coastline, with 3,200 kilometres of rugged cliffs, sandy beaches and sheltered harbours.

The east coast, bounded by the Pacific Ocean, is characterised by enclosed mangrove-lined harbours and estuaries, rocky headlands and sheltered bays. Offshore islands, including those in the Bay of Islands, the Cavalli Islands and the world-renowned Poor Knights Islands, are a distinctive feature. The east coast is sheltered from the prevailing westerly winds, but is occasionally lashed by north-easterly gales and the remnants of tropical cyclones.

By contrast, the west coast has a relatively smooth outline, broken only by the mouths of several extensive shallow harbours. It is more exposed to the elements than the east coast, with long sandy beaches swept by oceanic swells from the Tasman Sea.

Ecosystems and biodiversity

Rivers, lakes and wetlands

The rivers with the highest conservation value are those whose catchments are the least modified, including the Waipapa River in Puketi Forest and Waipoua River.

Dune lakes and associated freshwater wetlands are numerous on the coastal sands of the region. Northland also has many inland wetlands, the most significant being Ngāwhā Springs wetlands, Mōtatau wetlands, Waitangi wetland complex, Maitahi fen, Punakitere wetlands and Mangōnui River wetlands.

These lake and wetland ecosystems are important habitats for a wide variety of plant and animal species, which are regionally or nationally significant because of their rarity. These include birds such as the brown teal, banded rail, NZ dabchick, marsh crake, fern bird and bittern, the aquatic plants *Hydatella inconspicua*, *Myriophyllum robustum* and native freshwater fish such as black mudfish, banded kokopu, short jawed kokopu and dwarf inanga.

Forest and shrublands

Nearly 14% of the land area of Northland remains in native forest and shrubland, and this includes over half of the nation's remaining kauri forest. The region's forest and associated shrublands are notable for their high proportion of native species, species diversity, structural complexity and tropical links.

Northland's forest and shrubland areas support a rich diversity of wildlife. They are home to large populations of nationally rare or declining species such as the North Island Brown Kiwi, North Island Kōkako, native pigeon or kūkupa and Hochstetter's Frog, as well as small residual populations of more threatened species such as the red and yellow crowned parakeets, kākā and long and short-tailed bats. Some forests in the region also support the only naturally breeding populations of species including flax snail, kauri snail and the Northland green gecko.

Climate change

The Local Government Act (2002) requires an LTCCP to identify significant issues that face the district/region and take account of the growing uncertainties and the risk these potentially bring. Climate change comes into this category.

Council can follow adaptation and/or mitigation policies to deal with climate change:

- **Adaptation** to changes in climate that are already happening.
- Take action to **mitigate** future effects to avoid climate change at scales that we cannot adapt to.

Climate change considerations are unlikely to drive or initiate the Council's action on their own, but they may modify an outcome through the application of risk management processes in assessing and prioritising possible responses to effects. All local government business takes place in a framework of uncertainty, but mechanisms and approaches have been developed to deal with uncertainty through all its planning and review processes. 'Best' knowledge of climate change together with the use of risk assessment procedures, can help the Council prepare to help the community to adapt to known climate change, and through a 'no and low regrets approach' can contribute to national and international techniques aimed at reducing the causes and effects of climate change.

Climate change considerations are one of the factors woven into council decision making processes

The extent to which climate change is important will depend very much on:

- The duration of the issue being addressed;
- Whether there is a current 'driver' (such as a major investment decision);
- The location of the issue being addressed (some locations are more vulnerable than others e.g. coasts should be assessed in terms of sea level rise);
- The extent of the issue being addressed (large areas are likely to be more affected than a single building);
- The nature of the issue being addressed (Is the issue affected by a single climate parameter or a complex issue with multiple effects and implications over time?).

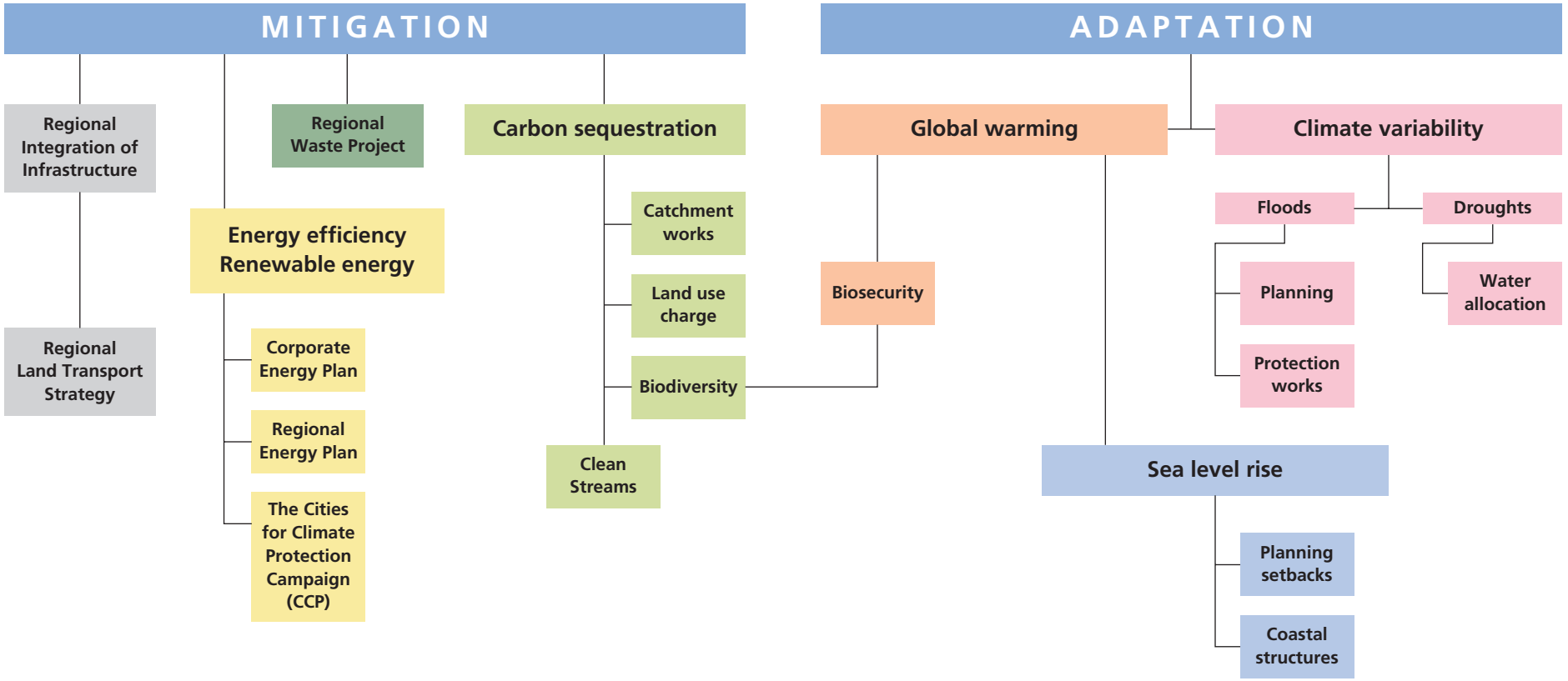
Risk management fits comfortably into plan preparation and review processes at the stages where issues are being identified and a range of possible options evaluated. With the advance knowledge of climate change effects, rarely should there be the need for an unplanned response to climate change. The iterative process of plan administration, monitoring and review allows for modification of plans over time to take account of improved understanding of risks and effects associated with climate change. Although it is important for the Council to acknowledge climate change, and to include it in policy across a range of council functions, climate change considerations are particularly important when specific decisions are required. For example, it is recommended that any significant investment in infrastructure is preceded by a risk assessment which builds in climate change implications and a cost analysis.

Central government's direction on climate change and the community

Central government's directions on climate change will require community based strategies. Climate change is perhaps better suited than almost any other issue to be taken forward through strategies with the community for the following reasons:

- Climate change is a controversial, complex and cross-cutting issue requiring an integrated and co-ordinated response. Regional Councils are ideally placed to encourage relationships to address climate change issues;
- While the Council can and should take the lead by working to reduce their own climate change impacts, the greenhouse gas (GHG) emissions of a council represent only a small element of any community's overall emissions. Substantial reductions in GHGs can only be achieved by concerted action across the whole community and the Council, as the democratically elected body charged with community leadership, has a pivotal role to play in this; and
- Climate change represents a new way of looking at issues and of connecting the agendas of different organisations. For example, improvement in the housing stock will result in significant economic and health benefits as well as emissions savings. A partnership and shared agenda between the Council and community provides an excellent mechanism through which business, health authorities and others can address climatic change, delivering outcomes that meet the aims of all organisations and add value to the work that each could achieve on their own.

Where climate change fits into Regional Council Activities



Source: Environment Waikato