



# Northland Region and its Territorial Authorities

## Demographic Profile 1986 - 2031

Report prepared for the Northland Regional Council by  
Natalie Jackson

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## **Northland Region and its Territorial Authorities: Demographic Profile 1986-2031**

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### ***Key Population Trends***

1. The population of the Northland Region has grown slowly but steadily over the past 27 years, from around 127,656 in 1986 to 158,700 in 2013 (+23.4 per cent). Under the medium case assumptions, the population is projected to grow slowly to approximately 173,490 by 2031 (+9.6 per cent).
2. Whangarei has consistently comprised the largest proportion of the Northland Region's population, accounting for just over half in 2013, and for 60 per cent of the region's growth since 1986. The Far North District grew by 22 per cent over the period, contributing one-third of the region's growth, and the Kaipara District by 11 per cent, accounting for the remaining 6 per cent. Both the Far North and Kaipara Districts declined slightly between 2011 and 2013.
3. The major cause of the Region's growth and that of each TA has been natural increase (the difference between births and deaths), and this is expected to continue. However at regional level natural increase is projected to diminish to about one-third of its 2011 level by 2031, and to much lower proportions for the Far North and Kaipara Districts. Net migration, which contributed significant numbers between 2001 and 2007, especially for Whangarei, is likely to be modestly negative until around 2016, but positive thereafter, at around 1,000 per five year period. Increasingly, 'natural increase' will be driven by growth at 65+ years, as the baby boomer cohorts (born 1946-65) move into these age groups and numbers rise due to increasing longevity. Eventually however, the same cohorts will drive the end of natural growth, as deaths will increase and will not be replaced by births.
4. As elsewhere outside the Auckland Region and a few major cities, the Northland Region and its TAs experience an ongoing problem in terms of net migration loss at 15-19 and 20-24 years of age, albeit the loss between 2008 and 2013 was lower than between 1996 and 2001. Net migration gains at most younger and older ages, particularly between 2001 and 2006, partially offset that loss, but they are not perfect substitutes because the sustained loss at young adult ages compounds over time to reduce the primary reproductive age group (20-39 years). Despite being augmented by net migration gains at 25-39 years, the proportion at reproductive age in all TAs is substantially lower than is the case nationally; and despite the Region's higher than average birth rate, results in a reducing number of births, and depresses natural increase.
5. As a result of these trends the Northland Region has the second oldest age structure of the 16 Regional Council areas. At the same time, the Region's TAs are not the nation's oldest. Of New Zealand's 67 TAs, Kaipara District currently has the 20<sup>th</sup> oldest age structure, Whangarei District the 24<sup>th</sup> oldest, and the Far North District, 28<sup>th</sup> oldest. As elsewhere all are ageing numerically, as more people survive to older ages, and structurally, as the net loss at 15-24



years, the diminishing proportions at reproductive age, and lower birth rates deliver relatively fewer babies and children into the base of the age structure.

6. At TA level the projections to 2031 imply a continuation of steady modest growth for the Whangarei District (15.2 per cent) against a resumption of relatively low growth for both the Far North District (3.5 per cent) and Kaipara District (4.4 per cent). In all cases growth at 65+ years will account for virtually all growth, but less so for Whangarei. Growth at 65+ years is projected to offset overall decline at 0-64 years in the Far North and Kaipara Districts. Overall, the Northland Region will have more elderly than children by 2021, five years earlier than Total New Zealand. These shifts, along with the ending of population growth they foreshadow, have important implications for rate revenue gathering, service and resource allocation.
7. With the general exception of Greater Auckland and the major cities, the trends for Northland and its TAs are consistent with those throughout 'rural' New Zealand, where the majority of growth will be at 65+ years and overall growth will slow and in several cases end. For New Zealand in total, two-thirds of growth between 2011 and 2031 is projected to be at 65+ years. At TA level, 84 per cent will see all growth at 65+ years, with overall decline at most other ages. Around one-third of New Zealand's TAs have declined in size since 1996 and this proportion is projected to increase slightly. While the main cause of current decline is predominantly net migration loss, the future cause is projected to be a combination of net migration loss and natural decline, the result of (and in some cases, partial cause of) structural population ageing.

### ***Ethnic Composition, Size and Growth***

8. The Northland Region is somewhat less multi-ethnic than is the case nationally, and has a significantly greater proportion Māori, double the national average.
9. Over the period 2001-2013 the Northland Region's European-origin population grew in number but fell slightly as a proportion, from 63.5 to 61.7 per cent. The region's Māori population also grew numerically (+10.3 per cent), while its share remained stable at around 26.0 per cent. The three remaining ethnic groups, all numerically smaller, increased in both number and share of the region's population.
10. Despite its reducing population share, the dominant size of the European population means that it still accounted for 45.5 per cent of the region's growth 2001-2013, compared with 25.9 per cent nationally. The region's Māori population also accounted for a substantially greater share of growth than nationally: 23.9 per cent compared to 11.3 per cent. The remaining 31 per cent of the region's growth was accounted for by Pacific Peoples (8.6 per cent, compared to 10.1 per cent nationally), those of Asian origin (11.0 per cent compared with 36.5 per cent nationally) MELAA (1.6 compared with 3.6 per cent nationally), and 'not elsewhere included' (9.4 per cent).
11. As elsewhere, by comparison with the European-origin population, the region's Māori and Pacific Island populations are extremely youthful, while the region's Asian and MELAA



populations fall between these extremes. The relative youth of the Region's large Māori population has the potential to generate an economic advantage, as the older European population disproportionately enters retirement, and labour force entrants reduce.

12. Between 2011 and 2021 the European/Other population of the Northland Region is projected to increase by approximately 4.6 per cent, Māori by 10.0 per cent, the Pacific Island population by 46.3 per cent, and those of Asian-origin by 28.9 per cent. This results in the European-origin population accounting for 40 per cent of overall growth, Māori 35 per cent, Pacific Island 17 per cent, and Asian, 8 per cent. However the trends indicate relatively little change in the overall ethnic composition. The European/Other share will fall by around two percentage points, while the Māori, Pacific Island and Asian population shares will increase slightly (by 0.6, 1.1 and 0.4 percentage points respectively).
13. Of note is that natural increase for Māori is already greater than for European in absolute terms, despite its smaller population share, and the gap grows over time, to see natural increase for Māori outnumbering that for European by around 2,200 in 2021 (up from 1,600 in 2011).

### ***Implications and emerging issues***

14. As indicated above, structural ageing is now seriously reducing the ratio of those at labour market entry age to those entering the 'retirement zone'. The Northland Region's labour market 'entry/exit ratio' has fallen since 1996 from 14 people at labour market entry age for every 10 in the retirement age zone, to just 9 per 10 in 2013. Ratios have been below parity (one entrant per exit) in the Far North and Kaipara Districts since around 2006, while Whangarei has only just reached this level. All ratios are projected to fall further. The trends are identical to, but significantly lower than for, Total New Zealand, and imply forthcoming labour market shortages. This is especially so in the Region's Health Care Industry, detailed below.
15. Despite the significant net migration loss at 15-19 and 20-24 years, there has thus far been very little change at those specific ages in terms of population share, because of the arrival at those ages of relatively large cohorts born in the late 1980s and early 1990s (the so-called '1991 baby blip', essentially an echo of the Baby Boom). However both regionally and nationally, the cohorts now reaching 15-19 and 20-24 years of age are declining, due to declines in the birth rate across the 1990s and early 2000s. Nationally the number of school leavers will decline by around 20,000 over the current five-year period (2011-2016) and by a further 8,000 the following five years. When combined with increasing retirement of Baby Boomer cohorts, the trends will almost certainly see increasing competition for youthful labour force participants, implying the need for the Northland Region to proactively safeguard its workforce supply.
16. Between 2003 and 2009 another 'baby blip' was born nationally, setting in motion a wave that will pass through each successive age group as it ages, followed by a trough. Between 2011 and 2031 the trend will generate significant oscillations by age. At 0-14 years, numbers for





Northland will decline, then grow, then decline again. At 15-24 years numbers will decline between both 2011 and 2016, and 2016 and 2021, then growth will resume, but only temporarily, and for the Northland Region, modestly. These age structural transitions have important planning implications for schools and labour markets.

### ***Industrial Change***

17. The Northland Region's employed workforce is older and ageing faster than is the case nationally. In 2013 the average age of the Northland Region employed workforce was 46.2 years, compared with 43.1 years nationally.
18. In 2013 the Northland Region's six largest industries were School Education; Dairy Cattle Farming; Grain, Sheep and Beef Farming; Community Care; Hospitals and Nursing Homes; and Other Health Services. Together they accounted for 21 per cent of the employed workforce.
19. With the sole exception of Dairy Cattle Farmers, who in 2013 had a younger average age (44.3 years) than the total Northland workforce, the remaining five largest industries have older than average age structures (School Education, 48.3 years; Grain, Sheep and Beef Farmers, 54.0 years; Community Care Services, 49.8 years; Hospitals and Nursing Homes, 47.8 years; Other Health Services, 49.2 years).
20. In 2013 the Community Care Services, Hospitals and Nursing Homes, and Other Health Services industries accounted for 9.4 per cent of the region's employed workforce. The data indicate that over the next ten years around one-third of those currently employed will retire. Adding to the picture of a significantly ageing health workforce for the region is also a very low entry: exit ratio for Medical and Dental Services, whose workforce has an average age of 49.8 years.
21. In all, the employed workforces of 17 of Northland's industries have median ages above the regional average, and in 2013 they collectively accounted for 36 per cent of the region's employed workforce. Their entry: exit ratios ranged between 1 and 5 entrants per 10 exits.
22. The extent and speed of ageing of the Northland's employed workforce is commensurate with the region's older age structure more generally. However the rate of ageing is clearly pronounced in many. Taken together the trends indicate an urgent need for the Northland Region's employers, producers and service providers to actively engage with the issue of an ageing workforce—in which the region is by no means alone, and to consider the implications of forthcoming competition for workers, both inside and outside the Region.

### ***Movers and Stayers***

23. The past four censuses indicate that just on two-thirds of people enumerated as living in the Northland Region at each census had been living in the Region five years previously.
24. The single largest source of the Region's Arrivals for the periods 2006-2013 and 1996-2001 was those who at the previous census had been living elsewhere in New Zealand but not further



defined. For the 2001-2006 period it was those who had been overseas at the previous census, while for the 1991-1996 period it was those who had not been born five years ago.

25. Those overseas at the previous census ranged narrowly between 3 and 4 per cent at each of the 1996, 2001 and 2013 censuses, while the proportion was exceptionally large at the 2006 census (8.5 per cent).
26. The origins (for Arrivals) and destinations (for Leavers) for the Region's internal migrants have remained almost unswerving over time, with Auckland consistently the main Region of both origin and destination, Waikato second and Bay of Plenty third, with the sole exception of the period 1991-1996 when Wellington fractionally out-performed the Bay of Plenty as the main Region of origin for internal Arrivals.



## What you need to know about these data

**Data sources:** All data used in this report have been sourced from Statistics New Zealand. Most have been accessed via Infoshare or Table Builder (NZ.Stat), while some have come from purchased, customised databases specially prepared for NIDEA by Statistics New Zealand. Because the data come from different collections and/or are aggregated in different ways, for example by ethnicity or workforce status, and small cell sizes have been rounded by Statistics New Zealand to protect individuals, they often generate different and seemingly disparate totals. While considerable care has been taken to ensure that such inter- and intra-collection discontinuities are acknowledged and accounted for, for example via footnotes to tables or in the text, the disparities are not usually large, and typically do not affect the story being told. The matter is drawn to the attention of readers who are often concerned when numbers which ‘should’ be the same, are not. The time-series data in Figures 1.1.1 and 1.1.2, collected under different methods of aggregation, are a particular case in point. The issue is especially noted in Section 3 which draws on data from the ‘Usually Resident Population Count’ series. See Appendix A for details on the different levels of population data released by Statistics New Zealand.

**Ethnicity:** The ‘multiple count’ method of enumerating the population by ethnic group is another case worthy of special note. The ethnic concept underlying data used in in this report is:

*‘the ethnic group or groups that people identify with or feel they belong to. Ethnicity is self-perceived and people can belong to more than one ethnic group. For example, people can identify with Māori ethnicity even though they may not be descended from a Māori ancestor. Conversely, people may choose to not identify with Māori ethnicity even though they are descended from a Māori ancestor’* (Statistics New Zealand 2010a).

Counting people more than once makes analysis of the data and its interpretation particularly difficult. Some analysts prefer to calculate proportions based on the summed numbers in each ethnic group, which is the approach taken here, while others prefer to use the total population count as the denominator (e.g., for a region). The problem with the latter method is that proportions sum to well over 100 per cent, making it difficult to interpret the resulting graphs. The approach in this paper has been to identify the extent of the ‘over count’.

**Residual method for estimating total net migration:** This paper uses a residual method for estimating net migration. First, deaths for a given observation (e.g., one single year) are subtracted from births to give an estimate of natural increase. Second, the Estimated Resident Population (ERP) at one observation is subtracted from the ERP at the previous observation, to give an estimate of



net change between the two observations. Third, natural increase for that observation is subtracted from net change, to give the component due to Estimated Net Migration.

**Residual method for estimating inter-censal migration by age and sex:** A similar method is used for estimating net migration by age between two observations for which there are appropriate data (e.g., five year census periods). First, ERP numbers by age and sex for one observation are 'survived' based on the probability of surviving to the next age group (at national level). Second, births for each Territorial Authority (TA) or region are apportioned male/female according to the sex ratio (105 males/100 females), and entered at age 0-4. Third, the survived numbers for each age/sex group are 'aged' by five years, to become the expected population for the next observation. Fourth, expected numbers for each age/sex group are subtracted from actual numbers at the next census, to derive an estimate of net migration for each age/sex.

**Projections:** The population projections used in this paper are in most cases based on Statistics New Zealand's (2012) medium set of assumptions, but comparison with the high and low variants have been included where useful. At national level the medium assumptions are that the total fertility rate (TFR) will decline from its present 2.1 births per woman to 1.9 births per woman by 2026; that life expectancy will continue to increase but at a decelerating rate, and that annual net international migration will be 12,000 per year. International and internal migration at the subnational level is also accounted for, the assumptions reflecting observed net migration during each five-year period 1981-2006. The assumptions for Northland are included at Appendix B. When interpreting these data it is important to remember that demographic projections of future demand are not forecasts in the sense that they incorporate interventions that may change the demographic future. Rather, they simply indicate what future demand will be if the underlying assumptions regarding births, deaths, migration prevail.

**Industry:** The industry data used in the Special Topic (Section 7) are drawn from a time-series database developed by Statistics New Zealand to NIDEA specifications. They pertain to the 'Usually Resident' employed population only. Data are given for four Census observations (1996, 2001, 2006 and 2013) and have been customised so that the industrial classification and geographic region is internally consistent across the period. The industrial classification is based on ANZSIC96 V4.1 at the three-digit level.

**Movers and Stayers:** Data on where people lived five years prior to each Census are based on the Usually Resident Population Count (URPC). As explained in Appendix A, this means that they are missing an adjustment for people temporarily overseas on census night, and census night undercount, and thus numbers differ slightly from Estimated Resident Population Counts (ERP).



There are also differences between numbers in this dataset, and ostensibly similar numbers in other datasets, such as 'Not Born Five Years Ago' in the Mover and Stayer dataset, and 'Births' in the section on components of change. Those 'Not Born Five Years Ago' are based on Census questions, whilst 'Births' come from the Births Registration database and are continually updated. Similarly 'Overseas Arrivals' in the Movers and Stayers dataset are also based on Census questions whereas the international migration flows in the section on components of change are estimated from arrival/departure cards.



## Feature Article – Population Ageing in a Nutshell

As elsewhere, population ageing is unfolding at markedly different rates across New Zealand. This diversity is caused by different mixes in the drivers of population ageing: birth rates, longevity (survivorship) and migration:

- Declining birth rates decrease the proportion of the population that is young and concomitantly increase the proportion at older ages.
- More people living longer adds to the numbers at older ages, and in the process further swells the proportion at those ages.
- When an area experiences net migration loss, which occurs mainly at 20-39 years, it removes both the young people themselves and their reproductive potential, further pushing up the median age.
- Where an area experiences net migration gains at retiree ages, both the numbers and proportions at those ages are further augmented, further accelerating structural ageing.

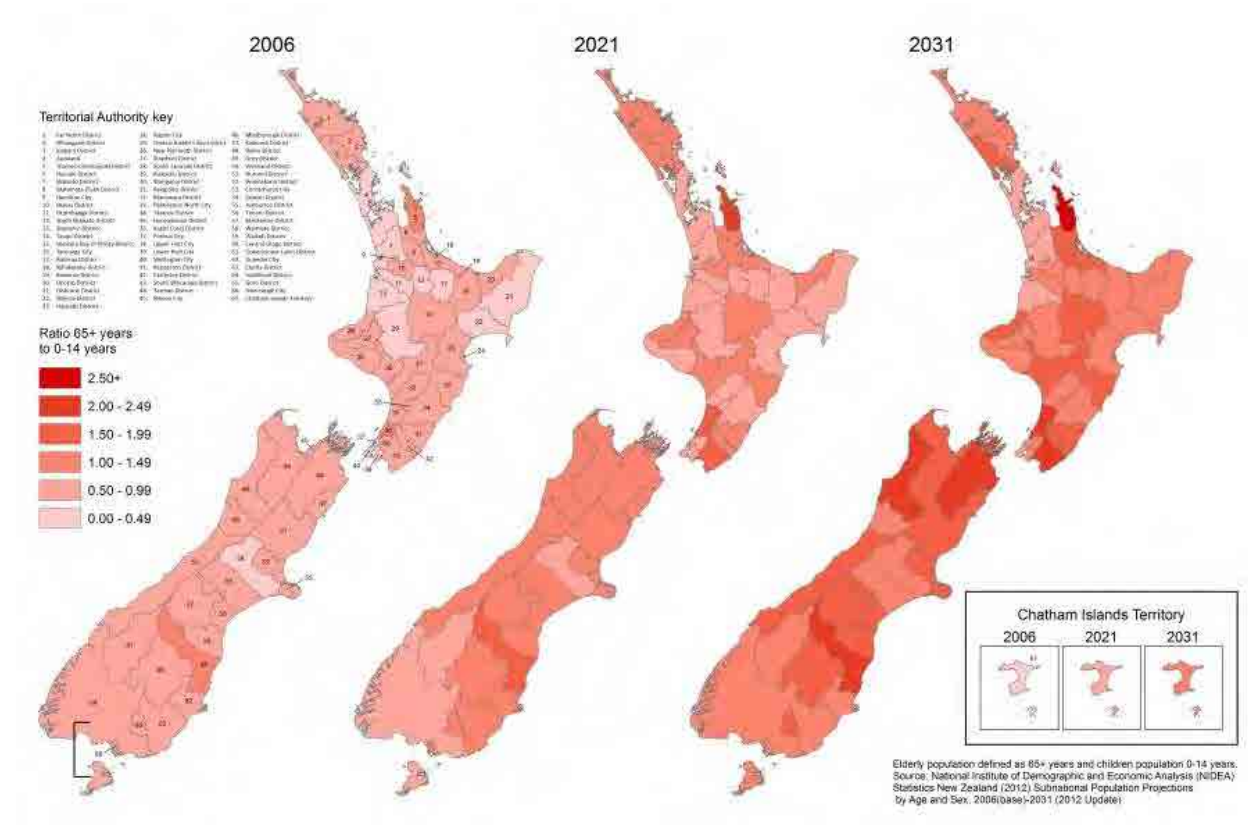
The overall outcome of these processes is an incremental—and in some cases rapid—shift to more elderly than children, more deaths than births, and to the end of growth and onset of what is expected to be permanent population decline, something not seen in modern populations until its recent onset in Japan and much of Europe.

Figure 1 provides an overview of the first of these trends (more elderly than children) at Territorial Authority level (TA). In 1996, no TA had more elderly than children. By 2006 that had become 3 TAs (4.5 per cent); by 2021 it is projected to be the case for 41 TAs (61.2 per cent); and by 2031, for 61 TAs (91.0) per cent.

As indicated, the process of population ageing generates two even more profound shifts: from natural increase, where births exceed deaths—as they have for all of New Zealand’s modern history—to natural decline, where deaths exceed births; and from absolute growth to absolute decline, once there are insufficient migrants to offset the ‘lost’ births and increased deaths. In New Zealand, the shift to natural decline is not expected to occur nationally until the second half of the Century. However, the crossover is already occurring in three TAs (Waitaki, Thames Coromandel, and Horowhenua) and is projected to be the case in 22 TAs (30 per cent) by 2031.



**Figure 1: Ratio of elderly (65+ years) to children (0-14 years), 2006, 2021 and 2031**



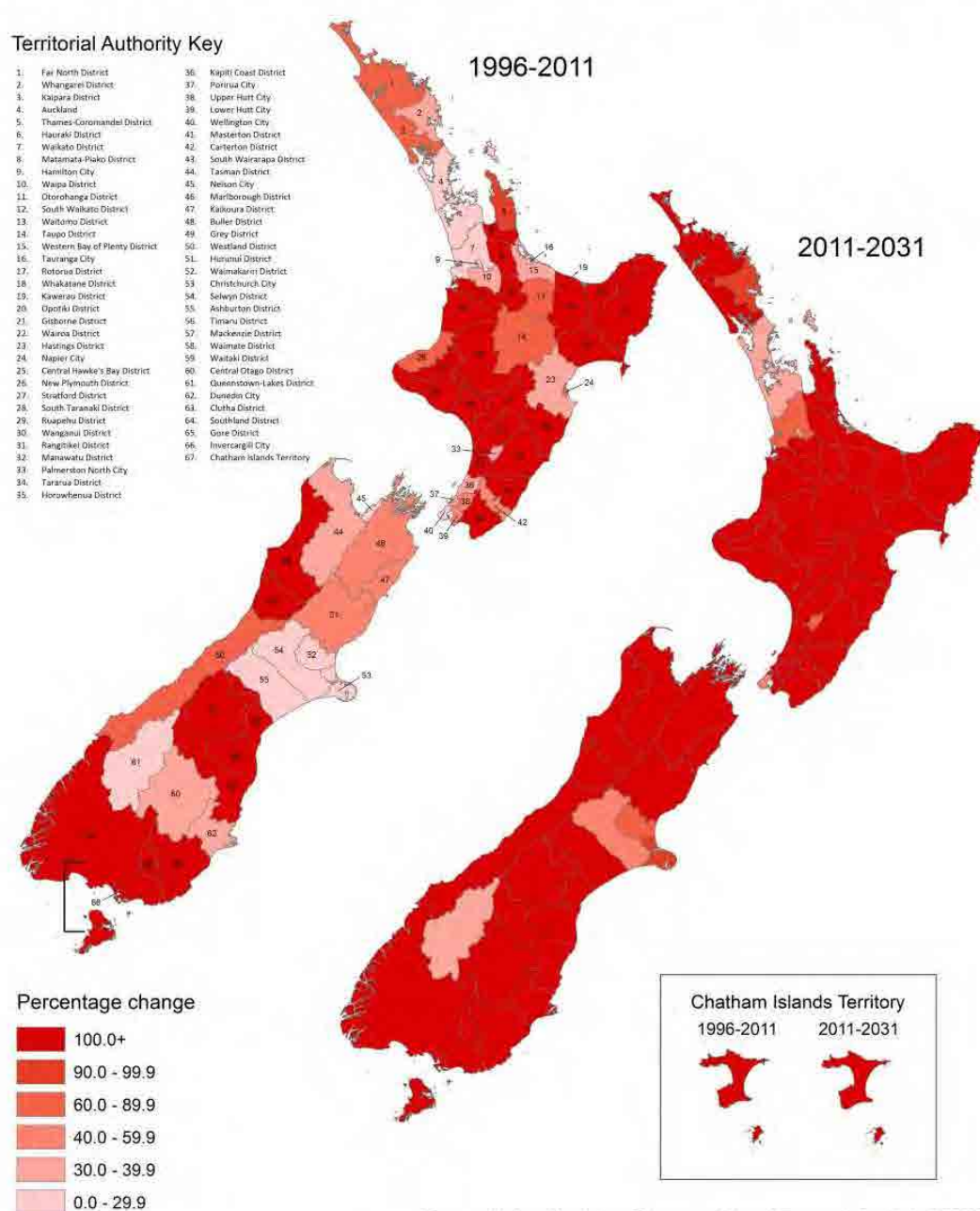
The final piece of jigsaw is a slow but equally inexorable shift from the ‘old’ form of population decline, which was caused by net migration loss that was greater than natural increase, to the ‘new’ form, where net migration loss is both accompanied by – and further contributes to – natural decline. Currently 24 (36 per cent) of New Zealand’s TAs are declining in absolute terms, but only one TA (Waitaki) has yet experienced the new (dual) form of decline. By 2031, the dual form is projected to be the case for seven TAs (10 per cent), alongside a further 15 TAs (22 per cent) experiencing decline from net migration loss only, and one experiencing decline from natural decline only. While it is still some way off for most TAs, the new form of population decline will be especially challenging because it will be self-reinforcing: ever-fewer young adults to bear the children, and ever-more elderly who have completed their childbearing years.

In the interim, it is critical to understand that for 56 TAs (84 per cent), all future ‘growth’ to 2031 will be at 65+ years (Figure 2)—and that in 23 of these TAs, that growth will be insufficient to offset overall decline at other ages. While the number declining will actually be one fewer than between 1996 and 2011 (due to a higher net migration assumption going forward), there will also be some shift share effects, with six TAs coming marginally out of decline, and five entering it—meaning that in reality 29 TAs (43 per cent) are at the end of their growth stage.



Between 2011 and 2031, only eleven TAs are projected to see less than 100 per cent of their growth at 65+ years: Christchurch and Whangarei (each 95+ per cent at 65+ years), Waikato, Palmerston North City, and Waimakiriri (60-63 per cent), Wellington City, Selwyn and Tauranga City (44-46 per cent), and Auckland City, Hamilton City, and Queenstown (36-37 per cent). The trends are thus both pervasive and inexorable. At national level, they mean that two-thirds of growth will be at 65+ years, the underlying trends at subnational level concealed largely by Auckland.

**Figure 2: Contribution to change by 65+ year old population by Territorial Authority, 1996-2011 and 2011-2031**



Source: National Institute of Demographic and Economic Analysis (NIDEA) Statistics New Zealand (2012) Subnational Population Projections by Age and Sex, 2006(base)-2031 (2012 Update)



To place New Zealand's situation in a global context, we can look at trends across the 58 More Developed Countries (MDCs)<sup>1</sup> – of which New Zealand is one of the most youthful. Over the next 20 years, the population of the MDCs aged 65+ years will grow by around 98 million, *while all other age groups combined will decline by 41 million*. In anyone's language, those numbers will cause the scales to tip. Currently across the MDCs there is exactly one person aged 65+ years per child aged 0-14; by 2031 there will be 1.5. The shift is also unavoidable, because the 65+ population of 2031 is already 45+ years old. We know how many there are, and the rate at which they will die (and international migration at older ages is minimal). At the younger ages, only those aged less than 20 years are not yet born – but again we know approximately how many there will be in 2031 because we know how many people there will be at the key parenting ages (they are already teenagers) and we can be fairly certain that they are not going to return to having three or four children per woman as was the case during the baby boom (when their grandparents were born).

The global trends provide New Zealand with a salutary warning. The diminishing pool of youth in the other 57 MDC countries is the pool within which New Zealand competes for many of its skilled migrants. Increasing competition for these migrants will increasingly make it difficult for New Zealand to achieve the migration assumptions in the population projections drawn on above. Attention is increasingly being turned to the developing countries where there is still a significant excess supply of young people. However, attracting them to, and retaining them in New Zealand will require more attention to settlement issues and equity than is presently the case. As one of the youngest of the developed countries, those migrant whom New Zealand attracts *and trains* will be of ever-greater interest to our structurally older counterparts.

The following demographic profile for the Northland Region should be read with this broad context in mind. While the region is still growing overall, there are marked differences at TA level. They show that shift to the end of growth is a sequentially-unfolding phenomenon, with plenty of early warning signals. We can plot its course and plan ahead. However the clock is ticking and has been doing so for many years, as the retrospective elements of this profile will clearly identify. The crossing of any one of a handful of thresholds (see Box 1) by a TA means that it has entered the end of its growth phase. As indicated above, some regions may temporarily revert, but it is unlikely that they will resume significant or sustained growth.

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<sup>1</sup> The United Nations classification 'More Developed Countries' (MDC) is all countries listed in Europe, Northern America, Australia, New Zealand and Japan. This category is utilised by the International Data Base which provides demographic indicators for countries and areas of the world with a population of 5,000 or more <http://www.census.gov/population/international/data/idb/informationGateway.php>.



### Box 1: Key thresholds indicating end of growth phase

- Onset of youth deficit (proportion of population aged 15-24 years declines below 15 per cent)
- Fewer people at labour market 'entry' than 'exit' age (15-24: 55-64 years; 20-29: 60-69 years)
- More elderly than children (65+ : 0-14 years)
- Key reproductive age population (20-39 years) declines below 15 per cent of the population
- More deaths than births (natural decline)
- Absolute decline

These issues are being investigated more deeply by researchers at the National Institute of Demographic and Economic Analysis (NIDEA) and their colleagues at Massey University:

- ***Nga Tangata Oho Mairangi: Regional Impacts of Demographic and Economic Change*** – 2013-2014: MBIE-funded project led by Professor Paul Spoonley (Massey University) and Professor Jacques Poot (NIDEA). Key Researchers: Associate Professor Robin Peace and Dr Trudi Cain (Massey University), Professor Natalie Jackson, Dr Dave Maré and Dr Michael Cameron (NIDEA).
- ***The sub-national mechanisms of the ending of population growth. Towards a theory of depopulation***: Marsden-funded project led by Professor Natalie Jackson. The research team consists of Dr Dave Maré, Dr Michael Cameron, Dr Bill Cochrane, Dr Lars Brabyn, and Emeritus Professor Ian Pool (all of NIDEA).

*Natalie Jackson*

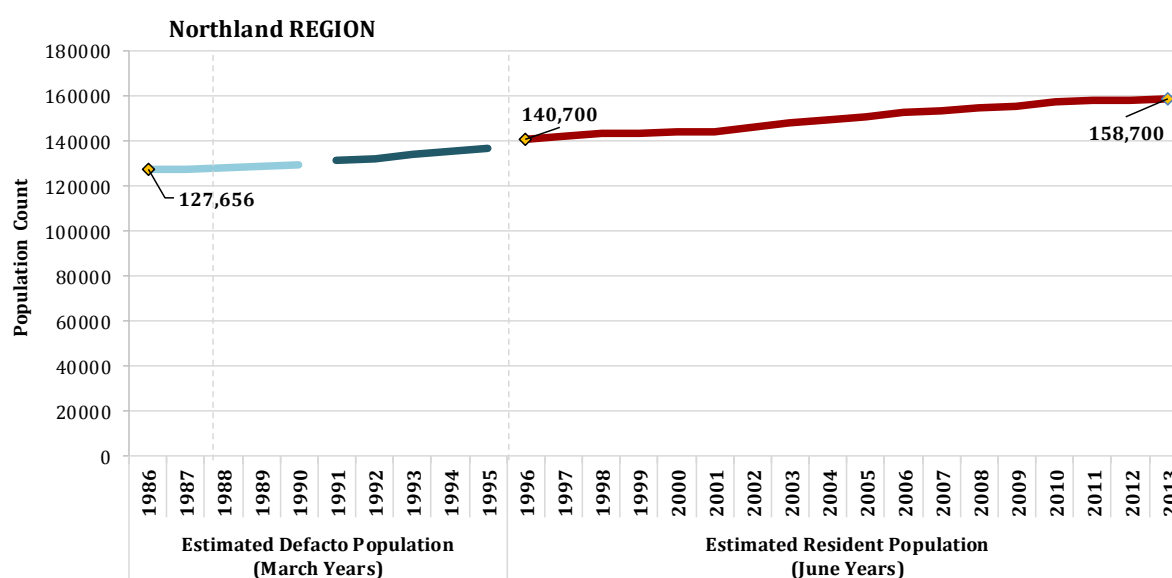


## 1.0 Population Trends

### 1.1 Population Size and Growth

The population of the Northland Region has grown slowly but steadily over the past twenty-seven years, from 127,656 in 1986 to approximately 158,700 in 2013, an increase of 24.3 per cent (Figure 1.1.1; see Appendix B1.1 for underlying data). Differences in the timing and methods of estimating population size across the period mean that the trends cannot be accepted as rigorously continuous; however there is sufficient correspondence to indicate that growth has been approximately as depicted<sup>2</sup>.

**Figure 1.1.1: Population of Northland Region, 1986-2013**



Source: Statistics New Zealand, Infoshare, Tables DPE052AA and DPE051AA

1986-1990: Census Night Resident Population (Census-Adjusted) Intercensal Estimates (March Years)

1991-1995: Census Night Resident Population (unadjusted for Census 1996) (March Years)

1996 - 2013: Estimated Resident Population for Territorial Authority and Regional Council Areas, at 30 June (1996+) (Annual-Jun)

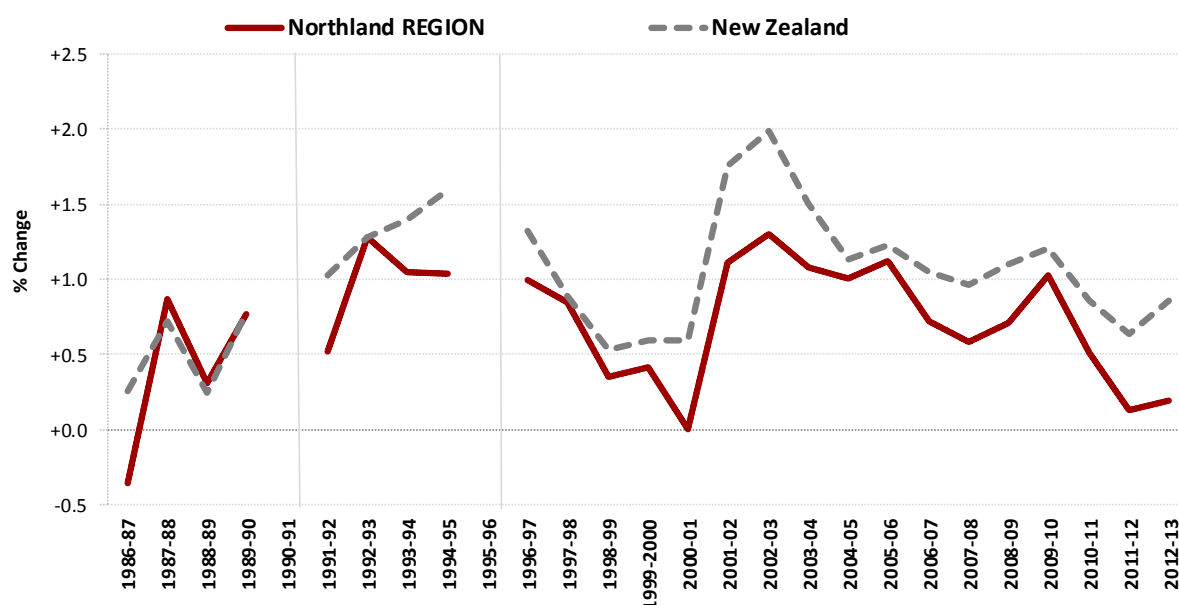
Notes: \*Changes in the timing and method of estimating Resident Population between 1990-1991 and 1995-1996 mean that the three sets of trends should be understood as discontinuous

<sup>2</sup> Until 1996 official estimates of the population were for the de facto population. The estimated de facto population includes all people present in New Zealand and counted at the census (census night population count). This estimate includes temporary visitors from overseas. By contrast the estimated resident population is an estimate of all people who usually live in New Zealand at the given date. It includes all residents present in New Zealand and counted by the census (census usually resident population count), residents who are temporarily overseas (who are not included in the census), and an adjustment for residents missed or counted more than once by the census (net census undercount). Visitors from overseas are excluded, and people in an area where they don't usually reside on census night are reassigned to their correct Census Area Unit. Changes in the methodology from 1991-1992 affected the calculations of the 1991 census, thus the trend is not continuous across 1990- 1991.



Figure 1.1.2 shows the trends in terms of annual growth rates, with the data collection discontinuities identified by gaps. Data are also compared with total New Zealand. Growth for the Northland Region has largely mirrored the national trend, rising and falling in unison, but at a lower level.

**Figure 1.1.2: Annual Population Growth Rate, Northland Region and Total New Zealand, 1986-2013**



Source: Statistics New Zealand, Infoshare, Tables DPE052AA and DPE051AA

1986-1990: Census Night Resident Population (Census-Adjusted) Intercensal Estimates (March Years)

1991-1995: Census Night Resident Population (unadjusted for Census 1996) (March Years)

1996 - 2013: Estimated Resident Population for Territorial Authority and Regional Council Areas, at 30 June (1996+) (Annual-Jun)

Notes: \*Changes in the timing and method of estimating Resident Population between 1990-1991 and 1995-1996 mean that the three sets of trends should be understood as discontinuous

Table 1.1.1 compares the annual growth rates of the three TA areas which comprise the Northland Region, and Table 1.1.2, the contribution of each TA to the region's population.

Whangarei has consistently comprised the largest proportion of the region's population (in 2013 accounting for 51.2 per cent, up from 49.0 per cent in 1986 - Table 1.1.2). Whangarei's population increased by 30.0 per cent over the period 1986-2013 (Table 1.1.1), accounting for the majority of the region's growth (60.4 per cent) (Table 1.1.2). The Far North District (second-largest TA) experienced growth of 21.7 per cent (contributing 33.5 per cent to the region's growth), while Kaipara District grew by 10.8 per cent (contributing 6.0 per cent to the region's growth). Both the Far North and Kaipara Districts lost population share, but only fractionally; Far North falling from 37.5 to 36.7 per cent share, and Kaipara from 13.5 to 12.0 per cent share.



**Table 1.1.1: Annual and Total Population Change (%), Northland Region, its TAs, and Total New Zealand 1986-2013**

|  |      | Far North      |              | Whangarei      |              | Kaipara       |              | Northland REGION |              | New Zealand       |              |
|--|------|----------------|--------------|----------------|--------------|---------------|--------------|------------------|--------------|-------------------|--------------|
| Estimated Defacto Population (Adjusted for 1991 Census) <sup>(1)</sup> (March Years)   | 1986 | 47,912         | ...          | 62,542         | ...          | 17,200        | ...          | 127,656          | ...          | 3,307,084         | ...          |
|  | 1987 | 48,200         | +0.6         | 61,800         | -1.2         | 17,250        | +0.3         | 127,200          | -0.4         | 3,315,410         | +0.3         |
|  | 1988 | 48,900         | +1.5         | 62,100         | +0.5         | 17,250        | +0.0         | 128,300          | +0.9         | 3,339,160         | +0.7         |
|  | 1989 | 49,300         | +0.8         | 62,100         | +0.0         | 17,200        | -0.3         | 128,700          | +0.3         | 3,347,140         | +0.2         |
|  | 1990 | 50,000         | +1.4         | 62,400         | +0.5         | 17,250        | +0.3         | 129,700          | +0.8         | 3,373,400         | +0.8         |
| Estimated Defacto Population (unadjusted for Census 1996) <sup>(1)</sup> (March Years) | 1991 | 51,568         | ...          | 62,644         | ...          | 17,325        | ...          | 131,620          | ...          | 3,515,980         | ...          |
|  | 1992 | 52,000         | +0.8         | 62,800         | +0.2         | 17,350        | +0.1         | 132,300          | +0.5         | 3,552,240         | +1.0         |
|  | 1993 | 52,900         | +1.7         | 63,600         | +1.3         | 17,400        | +0.3         | 134,000          | +1.3         | 3,597,850         | +1.3         |
|  | 1994 | 53,700         | +1.5         | 64,200         | +0.9         | 17,400        | +0.0         | 135,400          | +1.0         | 3,648,260         | +1.4         |
|  | 1995 | 54,400         | +1.3         | 64,900         | +1.1         | 17,450        | +0.3         | 136,800          | +1.0         | 3,706,710         | +1.6         |
| Estimated Usual Resident Population (June Years) <sup>(2)</sup>                        | 1996 | 54,500         | ....         | 68,400         | ....         | 17,800        | ....         | 140,700          | ....         | 3,732,000         | ....         |
|  | 1997 | 55,200         | +1.3         | 69,000         | +0.9         | 17,850        | +0.3         | 142,100          | +1.0         | 3,781,300         | +1.3         |
|  | 1998 | 55,800         | +1.1         | 69,700         | +1.0         | 17,850        | +0.0         | 143,300          | +0.8         | 3,815,000         | +0.9         |
|  | 1999 | 56,100         | +0.5         | 69,800         | +0.1         | 17,900        | +0.3         | 143,800          | +0.3         | 3,835,100         | +0.5         |
|  | 2000 | 56,400         | +0.5         | 70,000         | +0.3         | 17,950        | +0.3         | 144,400          | +0.4         | 3,857,700         | +0.6         |
|  | 2001 | 56,400         | +0.0         | 70,000         | +0.0         | 17,950        | +0.0         | 144,400          | +0.0         | 3,880,500         | +0.6         |
|  | 2002 | 56,600         | +0.4         | 71,300         | +1.9         | 18,100        | +0.8         | 146,000          | +1.1         | 3,948,500         | +1.8         |
|  | 2003 | 56,900         | +0.5         | 72,700         | +2.0         | 18,250        | +0.8         | 147,900          | +1.3         | 4,027,200         | +2.0         |
|  | 2004 | 57,000         | +0.2         | 74,100         | +1.9         | 18,350        | +0.5         | 149,500          | +1.1         | 4,087,500         | +1.5         |
|  | 2005 | 57,200         | +0.4         | 75,300         | +1.6         | 18,450        | +0.5         | 151,000          | +1.0         | 4,133,900         | +1.1         |
|  | 2006 | 57,500         | +0.5         | 76,500         | +1.6         | 18,550        | +0.5         | 152,700          | +1.1         | 4,184,600         | +1.2         |
|  | 2007 | 57,800         | +0.5         | 77,500         | +1.3         | 18,600        | +0.3         | 153,800          | +0.7         | 4,228,300         | +1.0         |
|  | 2008 | 57,900         | +0.2         | 78,200         | +0.9         | 18,600        | +0.0         | 154,700          | +0.6         | 4,268,900         | +1.0         |
|  | 2009 | 58,000         | +0.2         | 79,000         | +1.0         | 18,750        | +0.8         | 155,800          | +0.7         | 4,315,800         | +1.1         |
|  | 2010 | 58,400         | +0.7         | 80,000         | +1.3         | 18,950        | +1.1         | 157,400          | +1.0         | 4,367,800         | +1.2         |
|  | 2011 | 58,500         | +0.2         | 80,500         | +0.6         | 19,150        | +1.1         | 158,200          | +0.5         | 4,405,200         | +0.9         |
|  | 2012 | 58,400         | -0.2         | 80,800         | +0.4         | 19,100        | -0.3         | 158,400          | +0.1         | 4,433,000         | +0.6         |
|  | 2013 | 58,300         | -0.2         | 81,300         | +0.6         | 19,050        | -0.3         | 158,700          | +0.2         | 4,470,800         | +0.9         |
| <b>Total Contribution 1986-2013*</b>   |      | <b>+10,388</b> | <b>+21.7</b> | <b>+18,758</b> | <b>+30.0</b> | <b>+1,850</b> | <b>+10.8</b> | <b>+31,044</b>   | <b>+24.3</b> | <b>+1,163,716</b> | <b>+35.2</b> |

Source: (1) Statistics New Zealand, Yearbook collection 1893-2012

(2) Estimated Resident Population for Regional Council and Territorial Authority Areas, at 30 June(1996+) (Annual-Jun)

Table reference: DPE051AA and DPE052AA, Boundaries at 1 January 2013. Last updated: 22 October 2013 10:45am

Notes: \*Changes in the timing and method of estimating Resident Population between 1990-1991 and 1995-1996 mean that the three sets of trends should be understood as discontinuous



**Table 1.1.2: Contribution (%) to the Northland Region's population by TA, 1986-2013**

|                                      | Far North | Whangarei | Kaipara | Northland<br>REGION | Residual~ |
|--------------------------------------|-----------|-----------|---------|---------------------|-----------|
| 1986                                 | 37.5      | 49.0      | 13.5    | 100.0               | 0.0       |
| 1987                                 | 37.9      | 48.6      | 13.6    | 100.0               | 0.0       |
| 1988                                 | 38.1      | 48.4      | 13.4    | 100.0               | 0.0       |
| 1989                                 | 38.3      | 48.3      | 13.4    | 99.9                | 0.1       |
| 1990                                 | 38.6      | 48.1      | 13.3    | 100.0               | 0.0       |
| 1991                                 | 39.2      | 47.6      | 13.2    | 99.9                | 0.1       |
| 1992                                 | 39.3      | 47.5      | 13.1    | 99.9                | 0.1       |
| 1993                                 | 39.5      | 47.5      | 13.0    | 99.9                | 0.1       |
| 1994                                 | 39.7      | 47.4      | 12.9    | 99.9                | 0.1       |
| 1995                                 | 39.8      | 47.4      | 12.8    | 100.0               | 0.0       |
| 1996                                 | 38.7      | 48.6      | 12.7    | 100.0               | 0.0       |
| 1997                                 | 38.8      | 48.6      | 12.6    | 100.0               | 0.0       |
| 1998                                 | 38.9      | 48.6      | 12.5    | 100.0               | 0.0       |
| 1999                                 | 39.0      | 48.5      | 12.4    | 100.0               | 0.0       |
| 2000                                 | 39.1      | 48.5      | 12.4    | 100.0               | 0.0       |
| 2001                                 | 39.1      | 48.5      | 12.4    | 100.0               | 0.0       |
| 2002                                 | 38.8      | 48.8      | 12.4    | 100.0               | 0.0       |
| 2003                                 | 38.5      | 49.2      | 12.3    | 100.0               | 0.0       |
| 2004                                 | 38.1      | 49.6      | 12.3    | 100.0               | 0.0       |
| 2005                                 | 37.9      | 49.9      | 12.2    | 100.0               | 0.0       |
| 2006                                 | 37.7      | 50.1      | 12.1    | 99.9                | 0.1       |
| 2007                                 | 37.6      | 50.4      | 12.1    | 100.1               | -0.1      |
| 2008                                 | 37.4      | 50.5      | 12.0    | 100.0               | 0.0       |
| 2009                                 | 37.2      | 50.7      | 12.0    | 100.0               | 0.0       |
| 2010                                 | 37.1      | 50.8      | 12.0    | 100.0               | 0.0       |
| 2011                                 | 37.0      | 50.9      | 12.1    | 100.0               | 0.0       |
| 2012                                 | 36.9      | 51.0      | 12.1    | 99.9                | 0.1       |
| 2013                                 | 36.7      | 51.2      | 12.0    | 100.0               | 0.0       |
| <b>Total contribution 1986-2013*</b> | 33.5      | 60.4      | 6.0     | 99.8                | 0.2       |

Source: (1) Statistics New Zealand, Yearbook collection 1893-2012

(2) Estimated Resident Population for Regional Council and Territorial Authority Areas, at 30 June(1996+) (Annual-Jun), Table reference: DPE051AA and DPE052AA, Boundaries at 1 January 2013. Last updated: 22 October 2013 10:45am. Notes: \*Changes in the timing and method of estimating Resident Population between 1990-1991 and 1995-1996 mean that the three sets of trends should be understood as discontinuous

Notes:~Meshblocks, the base unit of census data, occasionally overlap TA and RC boundaries, affecting the total when TAs are summed. 'Residual' may also include the population of the region which lies outside of the TAs of Far North, Wangarei and Kaipara.



## 1.2 Census 2013 – Early Insights

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The first data release from the 2013 Census has made it possible to include in this report a snapshot of the changes in the usually resident population for the two periods, 2001-2006 and 2006-2013. Figures 1.2.1 and 1.2.2 show the percentage change in the 'usual resident' population at the Census Area Unit (CAU) level for Total New Zealand and the Northland Region respectively<sup>3</sup> (see Appendix B1.2 for underlying data).

The usually resident population of New Zealand increased by 5.3 percent over the seven year period, 2006-2013. The pattern of change was not distributed evenly. Almost one-third of CAUs with a population of over 10 residents declined in number across the period (affecting 613 of the total 1,869 CAUs). This is a notable increase from the 475 CAUs (25.4 per cent) which recorded a decline in population over the previous inter-censal period (2001-2006). Perhaps the most notable new change is the growing spread of decline in the North Island, with 32 per cent of CAUs declining between 2006 and 2013, up from 25 per cent 2001-2006. The number of CAUs declining in the South Island was even greater (36 per cent, up from 27 per cent), but at least some of the increase can be attributed to the Christchurch earthquakes.

In keeping with the national picture, the Census Usually Resident Population of the Northland Region grew by 2.2 per cent between 2006 and 2013 (Table 1.2.1), lower than the ERP growth (3.9 per cent indicated in Table 1.1.1)—the discrepancy likely to reduce when the 2013 Census-based ERP data are released. At the same time, 49 per cent (42 CAUs) of the region's 89 CAUs declined in size (Table 1.2.2), and, as also occurred nationally, the decline was more widespread than between 2001 and 2006, when 25 of the region's CAUs declined (29.0 per cent) (Figure 1.2.3). These trends resulted in the Far North experiencing minor decline between 2006 and 2013 (-0.2 per cent), while both Whangarei and Kaipara grew (3.4 and 4.5 per cent respectively).

This increase in the number/proportion of Northland CAUs recording a decline in population numbers between 2006 and 2013 compared to the previous period was most significant for Whangarei, where the number increased from 3 to 16 CAUs (from 7.0 to 39.0 per cent). However the trends affected a greater proportion of CAUs in the Far North, where 22 CAUs (65 per cent) declined in size between 2006 and 2013, compared to 18 (53 per cent) between 2001 and 2006. For Kaipara the situation was essentially a continuation of the previous trend (4 CAUs declining in both periods). The underlying data are at Appendix B1.2.

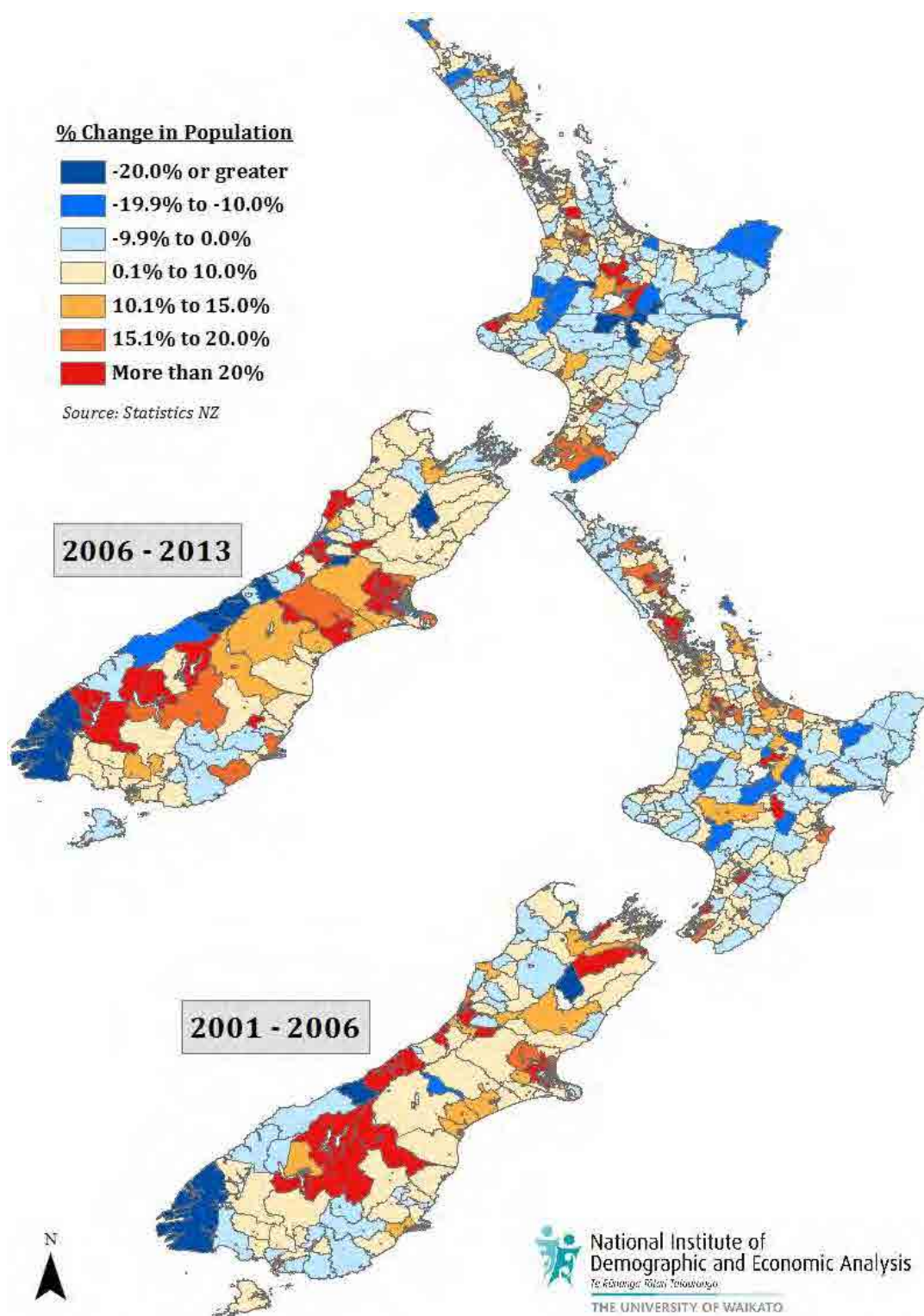
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<sup>3</sup> CAUs are aggregations of meshblocks which are non-administrative areas. CAUs may be aggregated at various levels to define common administrative areas such as urban communities, territorial authorities or regional council areas.



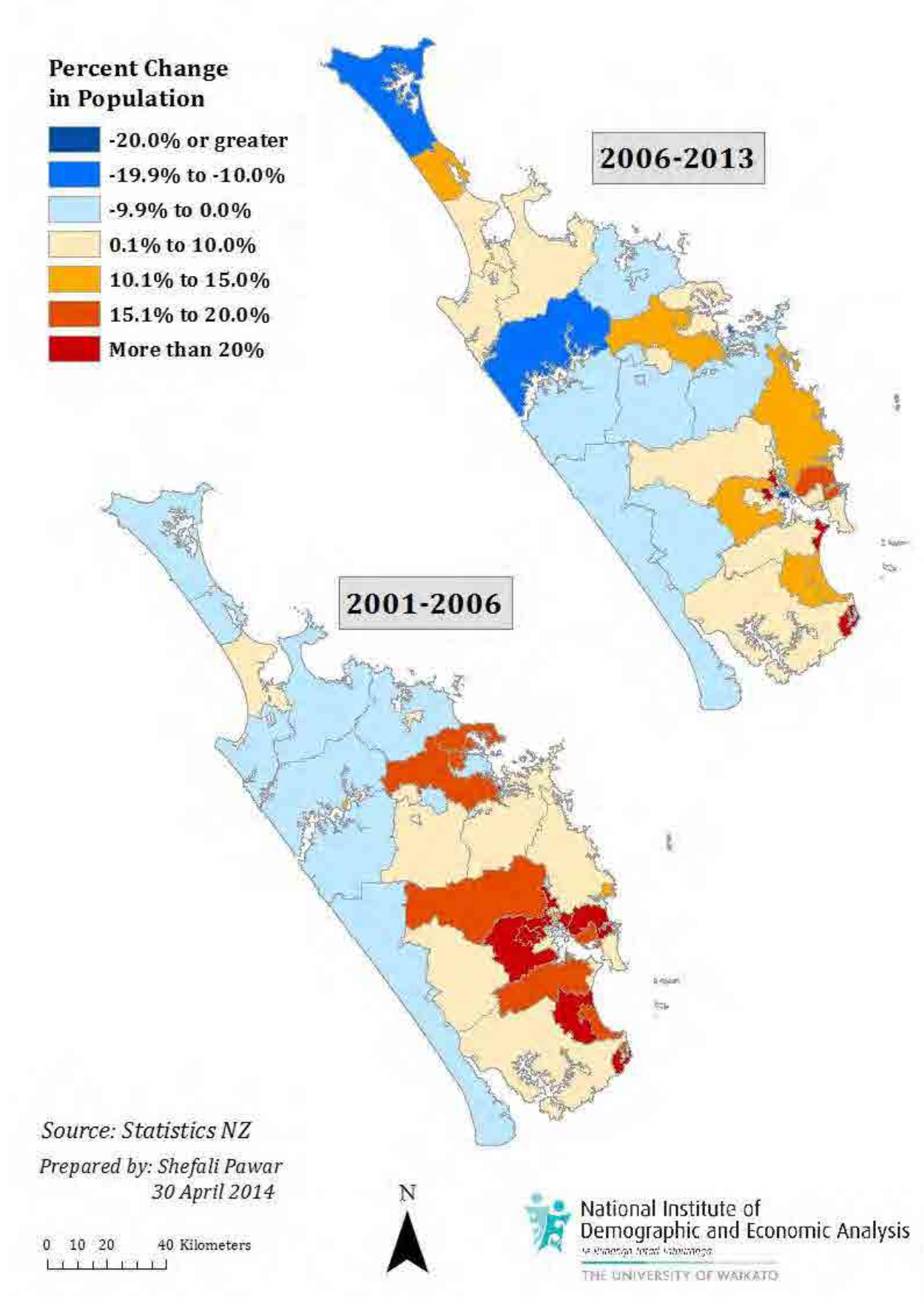


**Figure 1.2.1: Percentage Change in the Usually Resident Population of Census Area Units (CAU), 2001-2006 and 2006-2013: Total New Zealand**





**Figure 1.2.2: Percentage Change in the Usually Resident Population of Census Area Units (CAU) within each Territorial Authority (TA) boundary, 2001-2006 and 2006-2013: Northland Region**



**Table 1.2.1: Census Usually Resident Population of the Northland Region living in each TA in 2001, 2006, 2013; and population change over the inter-censal periods**

| Territorial Authority (TA) | Census Usually Resident Population |                |                | Change 2001-2006 |             |             | Change 2006-2013 |             |             |
|----------------------------|------------------------------------|----------------|----------------|------------------|-------------|-------------|------------------|-------------|-------------|
|                            | 2001                               | 2006           | 2013           | Number           | Percent     | Average     | Number           | Percent     | Average     |
| Far North District         | 54,576                             | 55,845         | 55,734         | +1,269           | +2.3        | +0.5        | -111             | -0.2        | -0.0        |
| Kaipara District           | 17,457                             | 18,135         | 18,960         | +678             | +3.9        | +0.8        | +825             | +4.5        | +0.6        |
| Whangarei District         | 68,094                             | 74,463         | 76,995         | +6,369           | +9.4        | +1.9        | +2,532           | +3.4        | +0.5        |
| <b>Northland Region</b>    | <b>140,127</b>                     | <b>148,443</b> | <b>151,689</b> | <b>+8,316</b>    | <b>+5.9</b> | <b>+1.2</b> | <b>+3,246</b>    | <b>+2.2</b> | <b>+0.3</b> |

\* Only CAUs with usually resident population of more than 10 in either of the three Census years, 2001, 2006 and 2013 are included.

Source: NIDEA/Statistics New Zealand (2013) URPC tables

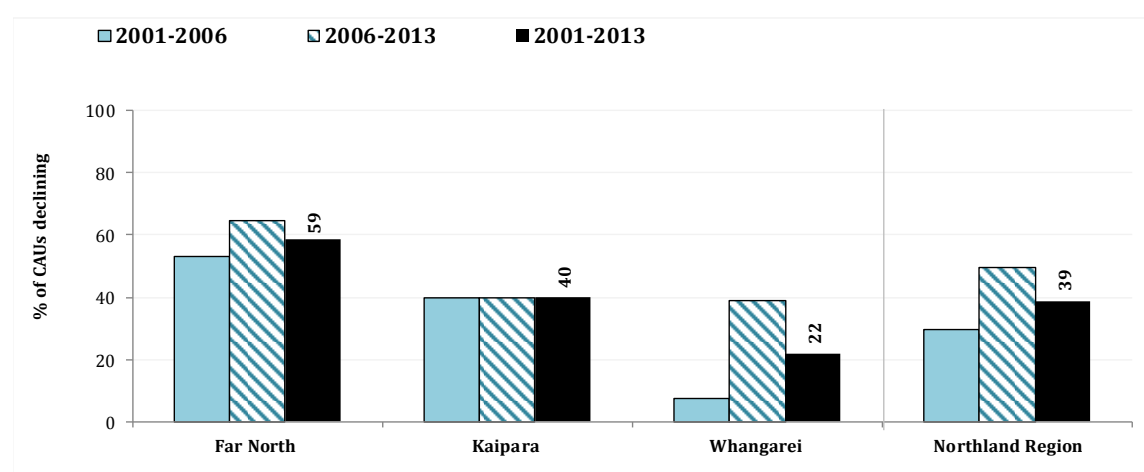
**Table 1.2.2: Number of Census Area Unit (CAU) populations growing/declining between 2001-2006 and 2006-2013 by TA for the Census Usually Resident Population of the Northland Region**

| Territorial Authority (TA) | Number of CAUs* | Population Change 2001-2006 |                 | Population Change 2006-2013 |                 |
|----------------------------|-----------------|-----------------------------|-----------------|-----------------------------|-----------------|
|                            |                 | Growth                      | Decline         | Growth                      | Decline         |
| Far North District         | 34              | 16 (47%)                    | 18 (53%)        | 12 (35%)                    | 22 (65%)        |
| Kaipara District           | 10              | 6 (60%)                     | 4 (40%)         | 6 (60%)                     | 4 (40%)         |
| Whangarei District         | 41              | 38 (93%)                    | 3 (7%)          | 25 (61%)                    | 16 (39%)        |
| <b>Northland Region</b>    | <b>85</b>       | <b>60 (71%)</b>             | <b>25 (29%)</b> | <b>43 (51%)</b>             | <b>42 (49%)</b> |

\* Only CAUs with usually resident population of more than 10 in either of the three Census years, 2001, 2006 and 2013 are included.

Source: NIDEA/Statistics New Zealand (2013) URPC tables

**Figure 1.2.3: Percentage of CAUs declining in population size within each TA in the Northland Region, 2001-2006, 2006-2013, and 2001-2013, Census Usually Resident Population**



\* Only CAUs with usually resident population of more than 10 in either of the three Census years, 2001, 2006 and 2013 are included.

Source: NIDEA/Statistics New Zealand (2013) URPC tables



### ***Population trends – key findings***

- Estimated Resident Population (ERP) counts indicate that the population of the Northland Region has grown slowly but steadily over the past 27 years, from around 127,656 in 1986 to 158,700 in 2013 (+23.4 per cent). Under the medium series assumptions, it is projected to grow slowly to around 173,490 by 2031 (+9.6 per cent)—detailed further below.
- Whangarei has consistently comprised the largest proportion of the Region's population (in 2013 accounting for 51.2 per cent, up from 49.0 per cent in 1986). Whangarei's population increased by 30.0 per cent over the period 1986-2013, accounting for the majority of the region's growth (60.4 per cent). The Far North District experienced growth of 21.7 per cent, contributing 33.5 per cent to the region's growth, while Kaipara District grew by 10.8 per cent, contributing 6.0 per cent to the region's growth. Both the Far North and Kaipara Districts lost population share, but only fractionally; Far North falling from 37.5 to 36.7 per cent share, and Kaipara from 13.5 to 12.0 per cent share.
- Data from the 2013 Census indicate that the 'Usually Resident Population' (URP) of the Northland Region grew by 2.2 per cent over the period 2006-2013, the growth largely confined to Whangarei and Kaipara (3.4 and 4.5 per cent respectively), the Far North declining slightly (-0.2 per cent). **NB.** It should be noted that these data are not directly comparable with the Estimated Resident Population data referred to above, as they are still awaiting adjustments for those temporarily overseas on census night, and census night undercount. They are included here to provide an early insight into the census findings.
- Reflecting trends at national level, the change was not evenly distributed at Census Area Unit level (CAU), with 42 of Northland's 89 CAUs recording a decline in population 2006-2013. The decline is more widespread than between 2001-2006 when 25 of the region's CAUs declined. For the Northland Region, the Far North District saw the greatest number of CAUs decline 2001-2006 (53 percent). This increased to 65 per cent between 2006 and 2013. However Whangarei saw the most significant change across the two periods, with only 3 CAUs declining between 2001 and 2006, increasing to 16 CAUs (39 per cent) 2006-2013. For Kaipara the situation was a continuation of the previous trend (4 CAUs declining in both periods).

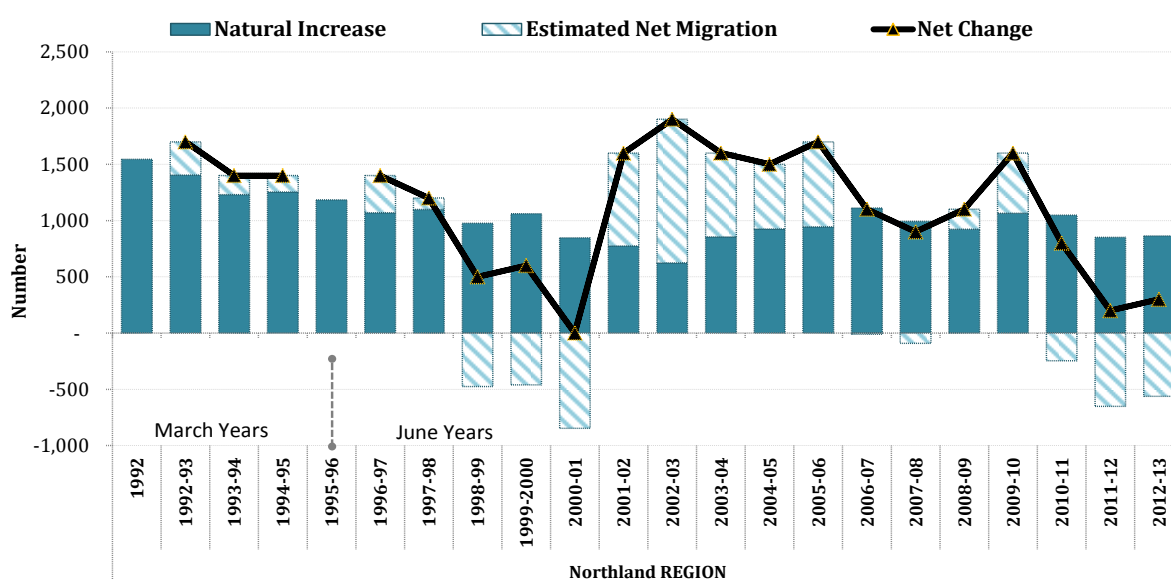


## 2.0 Components of Change

### 2.1 Natural Increase and Net Migration

Figure 2.1.1 shows the estimated components of change contributing to growth for the Northland Region across the period 1991-2013 (see Table 2.1.1 for underlying data, and note the lack of an estimate for residual migration for 1991 and the 1995-1996 period due to methodological changes in the underlying data collection). Clearly, natural increase (the difference between births and deaths) has been the major component of the region's growth across the period, while net migration gain contributed significantly around the period 2001-2006 and again 2009-2010, explaining the swings in net change. However, net migration loss reduced overall growth between 1998 and 2001, almost completely offsetting natural growth in 2000-2001, and this situation again at risk in the past two years.

**Figure 2.1.1: Natural Increase, Net Migration and Net Change 1991-2013, Northland Region**



Source: Compiled from Statistics New Zealand, Infoshare

(1) 1992-1995 Estimated Defacto Population (March Years); Statistics New Zealand, Yearbook collection 1893-2012

(2) Estimated Resident Population for Regional Council and Territorial Authority Areas, at 30 June (1996+) (Annual-Jun)

Table reference: DPED51AA and DPED52AA, Boundaries at 1 January 2013. Last updated: 22 October 2013 10:45am

(3) Live births and Deaths by area, city/district councils and regional councils (Total population) (Annual-Jun)

Table reference: VSB011AA, VSB016AA, VSD008AA, VSD018AA Last updated: 16 August 2013 10:45am

\*Estimated Net Migration not available for 1992. Changes in timing and method of estimating Resident Population between 1995 and 1996 mean that only natural increase can be shown for that year.

Data for Total New Zealand (Figure 2.1.2) indicate similar trends, with the exception of 2012-2013. Negative net migration was experienced nationally between 1998 and 2001 and also 2011-2012, and strongly positively 2001-2006. At the same time, the data indicate proportionately greater net migration loss for the Northland Region than for Total New Zealand.



**Table 2.1.1: Components of Change, 1991-2013, Northland Region and Total New Zealand**

|            |      | Northland REGION     |                 |                                      |  |   |                                      |                                |                         |                | New Zealand                    |                         |                |
|------------|------|----------------------|-----------------|--------------------------------------|--|---|--------------------------------------|--------------------------------|-------------------------|----------------|--------------------------------|-------------------------|----------------|
|            |      | Components of Change |                 |                                      |  |   |                                      | Contribution to Net Change^    |                         |                | Contribution to Net Change^    |                         |                |
|            |      | Birthsa              | Deaths <b>b</b> | Natural Increase <b>c</b> =<br>(a-b) | Estimated Resident Population (ERP) <b>d</b> | Net Change <b>e</b> =( <b>dt</b> +1)- <b>dt</b> | Estimated Migration <b>f</b> = (e-c) | Estimated Natural Increase (%) | Estimated Migration (%) | Net Change (%) | Estimated Natural Increase (%) | Estimated Migration (%) | Net Change (%) |
| March Year | 1992 | 2,533                | 989             | 1,544                                | 132,300                                      | ...   | ...                                  | ...                            | ...                     | ...            | ...                            | ...                     | ...            |
|            | 1993 | 2,446                | 1,042           | 1,404                                | 134,000                                      | 1,700   | 296                                  | 1.06                           | 0.22                    | 1.28           | 0.89                           | 0.40                    | 1.28           |
|            | 1994 | 2,321                | 1,090           | 1,231                                | 135,400                                      | 1,400   | 169                                  | 0.92                           | 0.13                    | 1.04           | 0.87                           | 0.53                    | 1.40           |
|            | 1995 | 2,360                | 1,107           | 1,253                                | 136,800                                      | 1,400   | 147                                  | 0.93                           | 0.11                    | 1.03           | 0.84                           | 0.76                    | 1.60           |
| June Year  | 1996 | 2,359                | 1,175           | 1,184                                | 140,700                                      | ...   | ...                                  | ...                            | ...                     | ...            | ...                            | ...                     | ...            |
|            | 1997 | 2,164                | 1,095           | 1,069                                | 142,100                                      | 1,400   | 331                                  | 0.76                           | 0.24                    | 1.00           | 0.79                           | 0.53                    | 1.32           |
|            | 1998 | 2,244                | 1,145           | 1,099                                | 143,300                                      | 1,200   | 101                                  | 0.77                           | 0.07                    | 0.84           | 0.78                           | 0.11                    | 0.89           |
|            | 1999 | 2,129                | 1,154           | 975                                  | 143,800                                      | 500   | -475                                 | 0.68                           | -0.33                   | 0.35           | 0.75                           | -0.22                   | 0.53           |
|            | 2000 | 2,204                | 1,144           | 1,060                                | 144,400                                      | 600   | -460                                 | 0.74                           | -0.32                   | 0.42           | 0.79                           | -0.20                   | 0.59           |
|            | 2001 | 2,008                | 1,161           | 847                                  | 144,400                                      | 0   | -847                                 | 0.59                           | -0.59                   | 0.00           | 0.76                           | -0.17                   | 0.59           |
|            | 2002 | 1,990                | 1,215           | 775                                  | 146,000                                      | 1,600   | 825                                  | 0.54                           | 0.57                    | 1.11           | 0.67                           | 1.08                    | 1.75           |
|            | 2003 | 1,915                | 1,292           | 623                                  | 147,900                                      | 1,900   | 1,277                                | 0.43                           | 0.87                    | 1.30           | 0.69                           | 1.30                    | 1.99           |
|            | 2004 | 2,099                | 1,244           | 855                                  | 149,500                                      | 1,600   | 745                                  | 0.58                           | 0.50                    | 1.08           | 0.74                           | 0.76                    | 1.50           |
|            | 2005 | 2,101                | 1,176           | 925                                  | 151,000                                      | 1,500   | 575                                  | 0.62                           | 0.38                    | 1.00           | 0.72                           | 0.41                    | 1.14           |
|            | 2006 | 2,115                | 1,170           | 945                                  | 152,700                                      | 1,700   | 755                                  | 0.63                           | 0.50                    | 1.13           | 0.75                           | 0.48                    | 1.23           |
|            | 2007 | 2,277                | 1,166           | 1,111                                | 153,800                                      | 1,100   | -11                                  | 0.73                           | -0.01                   | 0.72           | 0.79                           | 0.25                    | 1.04           |
|            | 2008 | 2,269                | 1,277           | 992                                  | 154,700                                      | 900   | -92                                  | 0.64                           | -0.06                   | 0.59           | 0.84                           | 0.12                    | 0.96           |
|            | 2009 | 2,255                | 1,333           | 922                                  | 155,800                                      | 1,100   | 178                                  | 0.60                           | 0.12                    | 0.71           | 0.80                           | 0.30                    | 1.10           |
|            | 2010 | 2,324                | 1,259           | 1,065                                | 157,400                                      | 1,600   | 535                                  | 0.68                           | 0.34                    | 1.03           | 0.82                           | 0.39                    | 1.20           |
|            | 2011 | 2,313                | 1,266           | 1,047                                | 158,200                                      | 800   | -247                                 | 0.67                           | -0.16                   | 0.51           | 0.76                           | 0.09                    | 0.86           |
|            | 2012 | 2,252                | 1,401           | 851                                  | 158,400                                      | 200   | -651                                 | 0.54                           | -0.41                   | 0.13           | 0.71                           | -0.08                   | 0.63           |
|            | 2013 | 2,227                | 1,364           | 863                                  | 158,700                                      | 300   | -563                                 | 0.54                           | -0.36                   | 0.19           | 0.67                           | 0.18                    | 0.85           |

Source: Compiled from Statistics New Zealand, Infoshare

(1) 1992-1995 Estimated Defacto Population (March Years); Statistics New Zealand, Yearbook collection 1893-2012

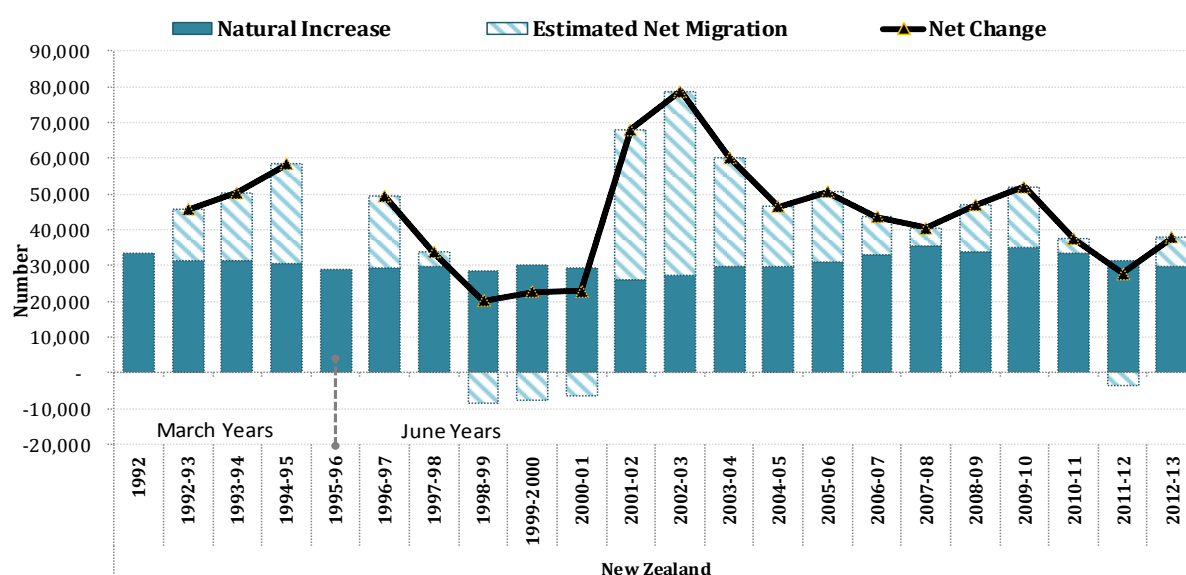
(2) Estimated Resident Population for Regions and TAs, at 30 June(1996+) (Annual-Jun), Table reference: DPED51AA and DPED52AA, Boundaries at 1 January 2013. Last updated: 22 October 2013

(3) Live births and Deaths by area, city/district councils and regional councils (Total population) (Annual-Jun). Table reference: VSB011AA, VSB016AA, VSD008AA, VSD018AA Last updated: 16 August 2013

^ Natural Increase, Net Migration and Net Change as a percentage of previous year's ERP



**Figure 2.1.2: Natural Increase, Net Migration and Net Change 1991-2013, Total New Zealand**



Source: Compiled from Statistics New Zealand, Infoshare

(1) 1992-1995 Estimated Defacto Population (March Years); Statistics New Zealand, Yearbook collection 1893-2012

(2) Estimated Resident Population for Regional Council and Territorial Authority Areas, at 30 June(1996+) (Annual-Jun)

Table reference: DPE051AA and DPE052AA, Boundaries at 1 January 2013. Last updated: 22 October 2013 10:45am

(3) Live births and Deaths by area, city/district councils and regional councils (Total population) (Annual-Jun)

Table reference: VSB011AA, VSB016AA, VSD008AA, VSD018AA Last updated: 16 August 2013 10:45am

\*Estimated Net Migration not available for 1992. Changes in timing and method of estimating Resident Population between 1995 and 1996 mean that only natural increase can be shown for that year.

Comparative data for the TAs comprising the Northland Region are given in Figure 2.1.3 (see Appendices B2.1-2.3 for underlying data). The greater than average estimated growth over the 1986-2013 period seen earlier for Whangarei (+30 per cent) is primarily due to its substantial contribution from net migration across the 2001-2010 period. Natural increase for Whangarei has always been positive, and overall (1986-2013) has made the largest contribution to the District's growth, notably offsetting net migration loss between 1998 and 2001 and again between 2010 and 2012. As elsewhere, natural increase is now reducing and is somewhat below its 1986 level.

The situation is somewhat different for the Far North District (which grew by 21.7 per cent overall), and again for the Kaipara District (+10.8 per cent). Each has experienced regular net migration loss, but for the Kaipara District there have also been significant gains in some years (particularly 2001-2003 and 2008-2011). Like Whangarei, both populations have seen the majority of their growth from natural increase, and in both cases this component is trending down, partly because of net migration loss, which is typically of young adults and thereby depletes each District of some of its reproductive capacity, and partly because deaths are increasing alongside structural ageing. For both the Far North and Kaipara Districts, natural increase was insufficient to offset net migration loss between 2011 and 2013, resulting in absolute decline.





**Figure 2.1.3: Net change and Components of Change, TAs of the Northland Region, 1992-2013**



Source: Compiled from Statistics New Zealand, Infoshare

(1) 1992-1995 Estimated Defacto Population (March Years): Statistics New Zealand, Yearbook collection 1893-2012

(2) Estimated Resident Population for Regional Council and Territorial Authority Areas, at 30 June (1996+) (Annual-Jun)

Table reference: DPED51AA and DPED52AA, Boundaries at 1 January 2013. Last updated: 22 October 2013 10:45am

(3) Live births and Deaths by area, city/district councils and regional councils (Total population) (Annual-Jun)

Table reference: VSB011AA, VSB016AA, VSD008AA, VSD018AA Last updated: 16 August 2013 10:45am

\*Estimated Net Migration not available for 1992. Changes in timing and method of estimating Resident Population between 1995 and 1996 mean that only natural increase can be shown for that year.



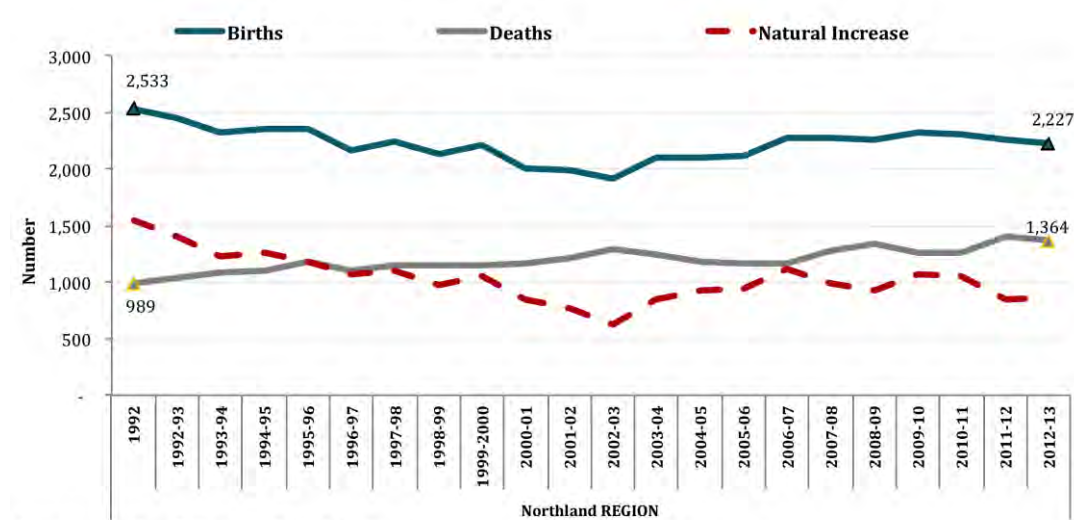
## 2.2 Births, Deaths and Natural Increase

Underlying the trends in natural increase shown above are those for births and deaths, depicted in Figure 2.2.1. Here as would be expected we see that the main driver of natural increase has been births which—as elsewhere in most of New Zealand—have increased since 2003, peaking for the Northland Region around 2009 at 2,324 and setting in motion a ‘baby blip’ that will see a small wave (followed by a trough) pass through each successive age group as it ages. For a number of reasons outlined below (most particularly the reducing size of the reproductive age cohort outlined in the section on age structures), birth numbers are unlikely to see a major increase in the future. Overall birth numbers have declined by 12 per cent since 1992, from 2,533 to 2,227.

There has been a steady increase in the number of deaths across the period, from 989 in 1991 to 1,364 in 2013 (38 per cent increase), reflecting both underlying population growth and the older age structure of the region (outlined further below). The small decline in deaths since 2011 should not be taken as indicating any change in this overall trend; the increase will soon accelerate as the Baby Boomer wave moves through the older age groups.

As the projections further below will show, the overall outcome of these opposing trends will be a continuing steady reduction in natural increase, a trend that will have a negative impact on the region’s longer-term potential for growth.

**Figure 2.2.1: Births, Deaths and Natural Increase, Northland Region 1991-2013**



Source: Compiled from Statistics New Zealand, Infoshare

Live births and Deaths by area, city/district councils and regional councils (Total population) (Annual-Jun)

Table reference: VSB011AA, VSB016AA, VSD008AA, VSD018AA Last updated: 16 August 2013 10:45am





### ***Components of change – key findings***

- Natural increase (the difference between births and deaths) has been the major component of the Northland Region's growth, combined with two periods of significant net migration gain 2001-2006 and 2009-2010. Net migration loss almost completely offset natural growth in 2000-2001 and this situation has threatened again over the last two years.
- The regional level trends are largely driven by those for Whangarei, which saw significant net migration gain 2001-2010, adding to the District's growth from natural increase. Both the Far North and Kaipara Districts have experienced regular net migration loss, with growth predominantly from natural increase but augmented in the case of Kaipara by occasional bursts of net migration gain. All three TAs are seeing a trending down of natural increase, as the number of births reduce and the number of deaths increase alongside structural ageing.
- The overall outcome of these opposing trends will be a continuing steady reduction in natural increase, a trend that will have a negative impact on the region's longer-term potential for growth.



## 3.0 Components of Change by Age

### 3.1 Expected versus Actual Population

Using the residual method for estimating net migration described earlier<sup>4</sup>, the components of change can be plotted by age. Figure 3.1.1 shows that the region experienced notable net migration loss at 15-19 and 20-24 years of age at all three observations 1996-2001, 2001-2006, and 2008-2013 (the latter periodicity reflecting the impact of delayed 2011 census on the use of 5-year age groups). The loss diminished between 2001 and 2006 for both age groups, and again between 2008 and 2013 at 20-24 years of age<sup>5</sup>. At other ages, net gains were evident across both periods, particularly at 0-14 and 30-69 years between 2001 and 2006, indicating the net arrival of parents and children and those of early retirement age (see also Table 3.1.1 and Figure 3.1.2). Notable also is the impact of structural ageing which shows at 50-54 years across the 1996-2001 period, 55-59 years for 2001-2006, and between 60-64 and 65-69 years for the 2008-2013 period (reflecting the fact that for that observation the leading edge Baby Boomer cohort spans two age groups). That is, the gap between numbers at the previous Census (columns) and Expected/Actual numbers at each subsequent Census reflects the movement of the Baby Boomer wave through the age structure

Trends at TA level are markedly similar (see Appendices B3.1 – B3.3), and are summarised in Figure 3.1.2. There is consistent net loss at 15-19 and 20-24 years, but gains at several other ages, notably at the main parental and childhood ages between 2001 and 2006, and increasingly at 50-69 years for the Kaipara District. However for the Far North and Kaipara Districts there was a surprising increase in the loss at 20-24 years between 2001 and 2006, and at 15-19 years for Kaipara. This is a surprising finding in that overall net migration was generally more positive across that period (both regionally and nationally), albeit mildly negative for Kaipara.

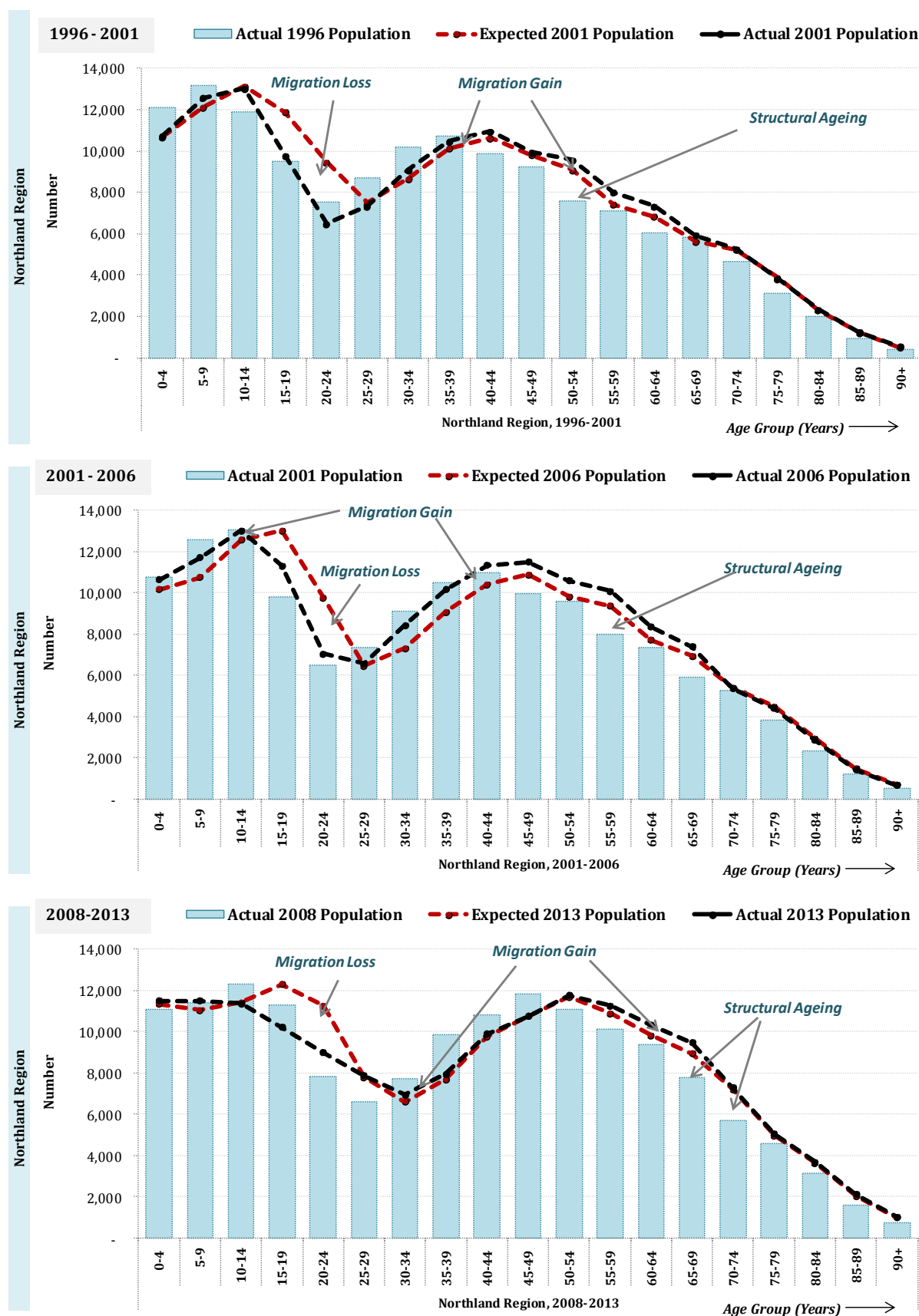
With the exception of minor net loss at 40-49 years between 2008 and 2013, the Far North District experienced net gains at 0-9 and 25 to 69 years across all three periods. Similarly, with the exception of minor net loss at 45-54 years between 2008 and 2013, Whangarei District experienced net gains at all ages 30 to 89 years across all three periods. The situation for the Kaipara District was mixed, with minor net loss at 25-39 years of age across the 1996-2001 period, but substantial gain at those ages between 2001 and 2006 and slightly lower gains between 2008 and 2013.

<sup>4</sup> Using life expectancy/survival rates, the population in each age group is survived to the next age group to give the 'expected' population, and then compared with the actual observed population. The difference generates a residual measure of estimated net migration.

<sup>5</sup> The data in Figures 3.1.1 and 3.1.2 show change in numerical terms, while Table 3.1.1 shows the number as a percentage of the baseline age group, ie the number at the start of the period. In some cases the numerical change looks somewhat larger (or smaller) than the percentage change.



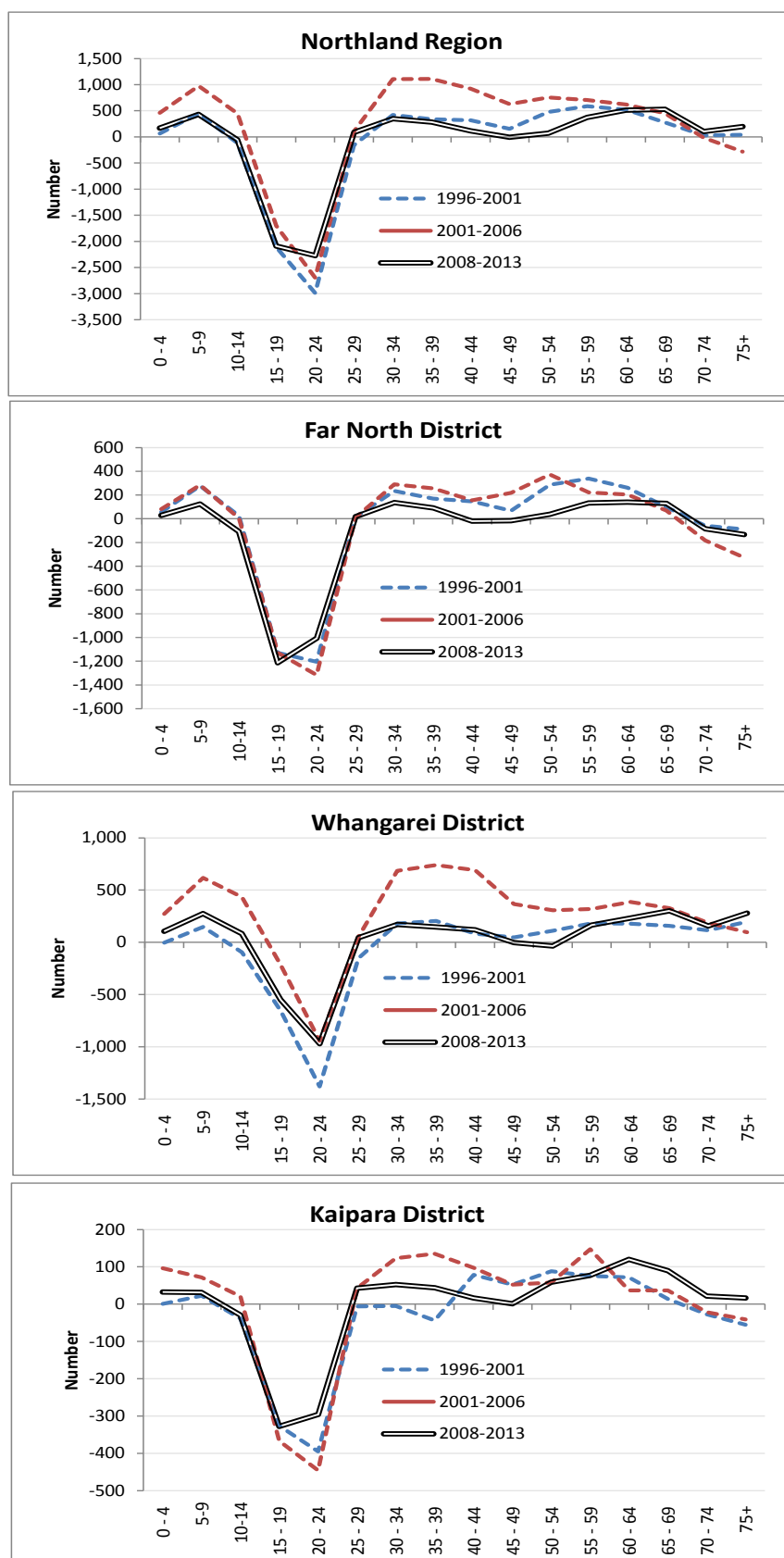
**Figure 3.1.1: Expected and Actual Population by Age, 1996-2001, 2001-2006, and 2008-2013, Northland Region**



Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2010



**Figure 3.1.2: Estimated Net Migration by Age, Northland Region and TAs, 1996-2001, 2001-2006 and 2008-2013**



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources

Note different scales on Y axis



**Table 3.1.1: Estimated Net Migration as a Percentage of Age Group, Northland Region and TAs, 1996-2001, 2001-2006 and 2008-2013**

| Northland Region |           |           |           | Far North District |           |           |           | Whangarei District |           |           |           | Kaipara District |           |           |           |
|------------------|-----------|-----------|-----------|--------------------|-----------|-----------|-----------|--------------------|-----------|-----------|-----------|------------------|-----------|-----------|-----------|
|                  | 1996-2001 | 2001-2006 | 2008-2013 |                    | 1996-2001 | 2001-2006 | 2008-2013 |                    | 1996-2001 | 2001-2006 | 2008-2013 |                  | 1996-2001 | 2001-2006 | 2008-2013 |
| 0-4              | 0.5       | 4.3       | 1.5       | 0-4                | 1.2       | 1.9       | 0.7       | 0-4                | -0.1      | 5.4       | 1.9       | 0-4              | 0.1       | 7.3       | 2.5       |
| 5-9              | 3.4       | 7.8       | 3.8       | 5-9                | 5.2       | 5.5       | 2.8       | 5-9                | 2.4       | 10.5      | 4.9       | 5-9              | 1.3       | 4.7       | 2.3       |
| 10-14            | -1.0      | 3.4       | -0.4      | 10-14              | 0.5       | 0.1       | -2.2      | 10-14              | -1.7      | 7.2       | 1.4       | 10-14            | -2.5      | 1.3       | -2.0      |
| 15-19            | -22.2     | -17.4     | -18.5     | 15-19              | -31.4     | -30.0     | -28.9     | 15-19              | -13.7     | -4.5      | -9.4      | 15-19            | -28.9     | -30.3     | -26.6     |
| 20-24            | -39.7     | -41.6     | -29.1     | 20-24              | -43.6     | -55.5     | -36.7     | 20-24              | -35.5     | -27.8     | -23.0     | 20-24            | -44.9     | -61.0     | -36.1     |
| 25-29            | -1.8      | 1.4       | 1.3       | 25-29              | 0.4       | 0.3       | 0.8       | 25-29              | -3.5      | 1.4       | 1.2       | 25-29            | -0.6      | 4.9       | 5.7       |
| 30-34            | 4.1       | 12.2      | 4.6       | 30-34              | 6.0       | 8.4       | 4.9       | 30-34              | 3.6       | 15.0      | 4.3       | 30-34            | -0.4      | 11.6      | 5.8       |
| 35-39            | 3.2       | 10.6      | 2.9       | 35-39              | 4.1       | 6.3       | 2.6       | 35-39              | 3.9       | 14.4      | 2.8       | 35-39            | -3.3      | 10.8      | 3.9       |
| 40-44            | 3.2       | 8.4       | 1.1       | 40-44              | 3.9       | 3.6       | -0.5      | 40-44              | 1.7       | 13.1      | 2.2       | 40-44            | 6.2       | 7.0       | 1.3       |
| 45-49            | 1.7       | 6.3       | -0.1      | 45-49              | 1.9       | 5.7       | -0.4      | 45-49              | 1.0       | 7.6       | -0.0      | 45-49            | 4.5       | 4.0       | 0.1       |
| 50-54            | 6.3       | 7.9       | 0.6       | 50-54              | 9.5       | 9.9       | 0.9       | 50-54              | 3.1       | 6.7       | -0.7      | 50-54            | 8.8       | 4.7       | 4.2       |
| 55-59            | 8.2       | 8.9       | 3.7       | 55-59              | 11.8      | 6.8       | 3.3       | 55-59              | 5.5       | 8.7       | 3.4       | 55-59            | 7.7       | 14.0      | 5.8       |
| 60-64            | 8.6       | 8.4       | 5.5       | 60-64              | 10.6      | 6.8       | 3.8       | 60-64              | 6.4       | 11.6      | 5.3       | 60-64            | 9.0       | 3.6       | 9.7       |
| 65-69            | 4.8       | 7.7       | 6.8       | 65-69              | 4.4       | 2.9       | 4.3       | 65-69              | 5.5       | 11.8      | 8.1       | 65-69            | 1.8       | 4.9       | 8.5       |
| 70-74            | 0.6       | -0.3      | 1.8       | 70-74              | -3.4      | -9.5      | -3.9      | 70-74              | 4.8       | 7.0       | 5.4       | 70-74            | -4.6      | -3.3      | 3.2       |
| 75-79            | -1.6      | -2.2      | 1.7       | 75-79              | -9.6      | -10.5     | -4.3      | 75-79              | 4.8       | 3.1       | 4.5       | 75-79            | -9.4      | -3.1      | 1.4       |
| 80-84            | 1.1       | -3.3      | 1.5       | 80-84              | 0.3       | -14.5     | -6.8      | 80-84              | 4.3       | 3.5       | 6.0       | 80-84            | -3.2      | 1.8       | 1.8       |
| 85-89            | 12.9      | 6.5       | 17.2      | 85-89              | 5.0       | -3.0      | 14.5      | 85-89              | 21.3      | 14.3      | 19.6      | 85-89            | -0.5      | -5.9      | 8.6       |
| 90+              | -18.1     | -45.9     | -39.4     | 90+                | 0.4       | -42.0     | -43.1     | 90+                | -25.7     | -47.5     | -40.2     | 90+              | -15.1     | -44.1     | -23.7     |
| Total            | -1.2      | 2.5       | -0.8      | Total              | -0.9      | -1.4      | -3.0      | Total              | -1.0      | 6.2       | 0.7       | Total            | -2.8      | 0.2       | -0.3      |



## 3.2 Migration Flows – Demographic Accounting Model

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The data in the previous section can be further disaggregated using a demographic accounting methodology (Jackson and Pawar 2013) to show the approximate composition of migration flows—or ‘churn’. This is done first in Figures 3.2.1-3.2.3 to show all components of change (1996-2001, 2001-2006, and 2008-13), and then in Figures 3.2.4-3.2.6 to show the flows by age.<sup>6</sup>

Figure 3.2.1 shows that between 1996 and 2001, the Estimated Resident Population (ERP) of the Northland Region grew by approximately 3,700. Natural Increase (births minus deaths) accounted for 5,050 persons, and Estimated Net Migration, for -1,350 (Estimated Net Migration being the difference between Estimated Resident Population Change, and Natural Increase). From Estimated Net Migration we then account for ‘known’ Net Migration (-3,463), which is comprised of known Net Internal Migration (-576) and known Net International Permanent/Long Term (PLT) Migration (-2,887). This leaves an *unaccounted for* component of migration, which we call here the ‘residual component of migration’ (+2,113). Residual migration is a complex combination of (a) potential error in the initial estimation of the ERP by Statistics New Zealand, (b) international immigrants moving to a different locality than stated on their Arrival form, (c) international emigrants leaving from a different locality than stated on their Departure form, and (d) internal migrants incorrectly stating where they live now or lived five years ago.

The model then further disaggregates each *known* net migration component into its respective inflows and outflows (for the 1996-2001 period, 17,529 internal immigrants and 18,105 internal emigrants; 5,651 PLT international immigrants and 8,538 PLT international emigrants).

Figure 3.2.2 for the period 2001-2006 can be similarly read. Across that period, Estimated Net Migration turned positive (4,177), as did both known Net Migration (+1,340) resulting from a Net Internal Migration gain (1,560) offset by a Net PLT International loss (-220), and the residual (unknown) component (+2,837).

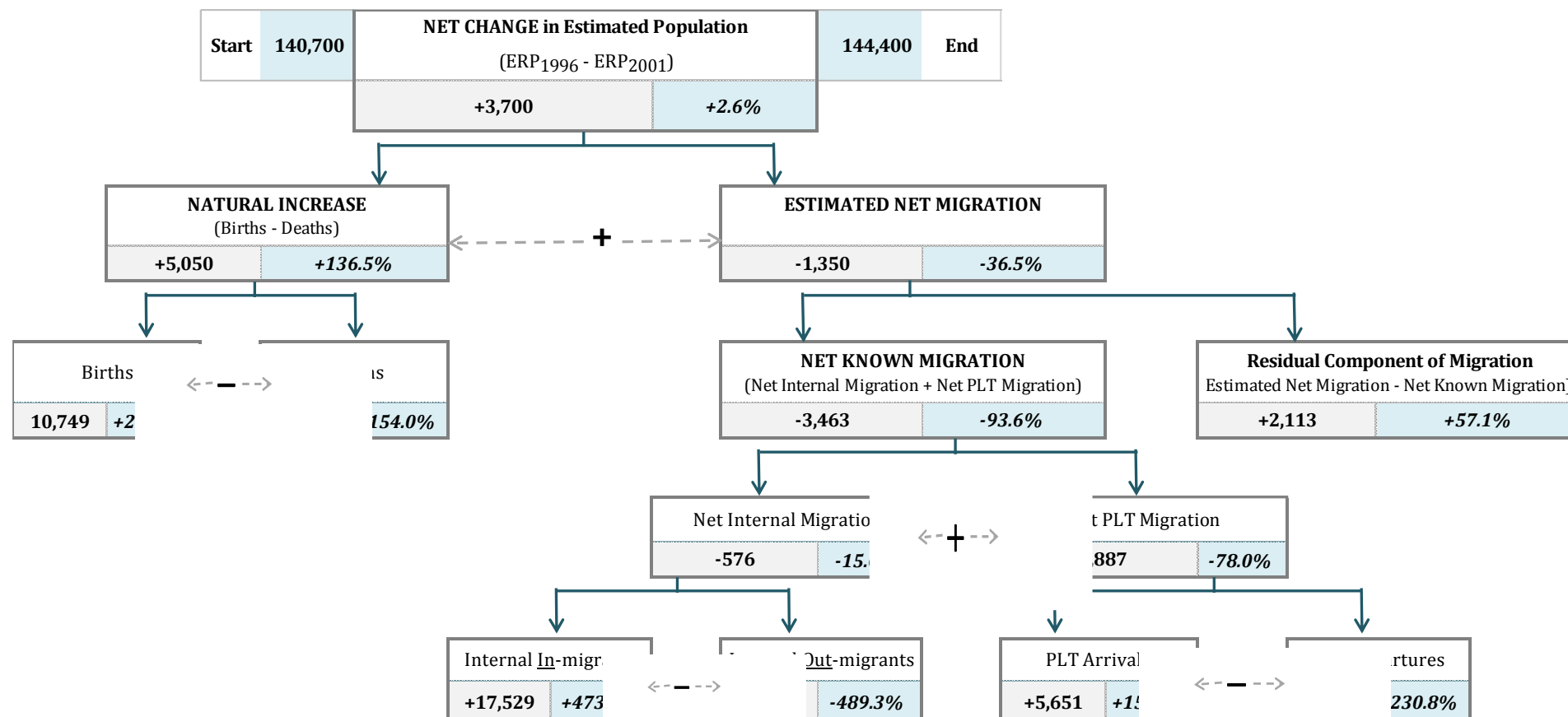
Figure 3.2.3 for the period 2008-2013 indicates a return to the overall situation of 1996-2001, with Natural Increase of 4,748 slightly reduced by negative Estimated Net Migration (-748), albeit the latter concealing a net internal migration gain, whereas in 1996-2001 both internal and international migration were negative. Table 3.2.1 summarises the trends in terms of churn, and includes data at TA level, and Appendix B3.4-3.12 provides the components data for each TA.

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<sup>6</sup> Minor differences will be noted between these data and elsewhere in this Report. For more detail refer to the introductory section ‘What you need to know about these data’ (pages 6-8) and Appendix A.



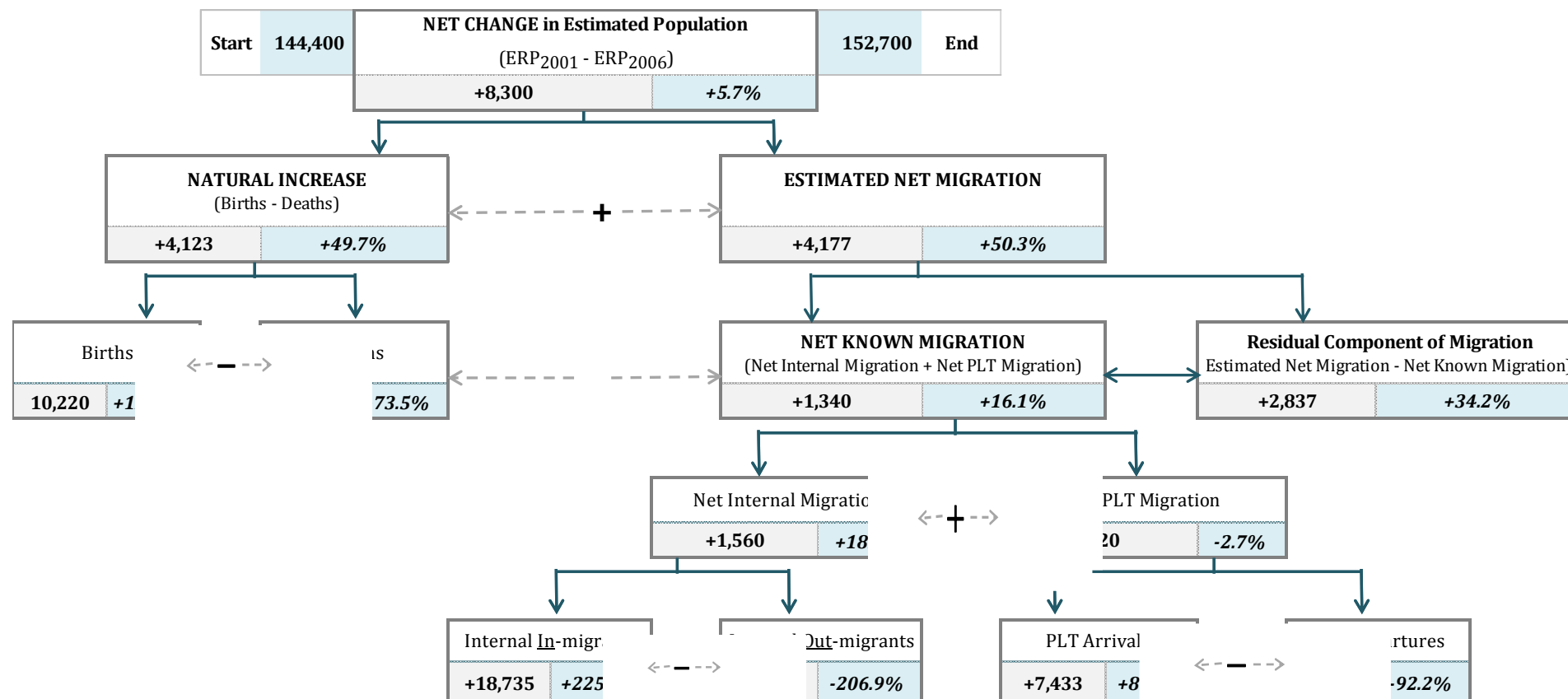
**Figure 3.2.1: Components contributing to Estimated Resident Population, Northland Region 1996-2001**



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



**Figure 3.2.2: Components contributing to Estimated Resident Population, Northland Region 2001-2006**

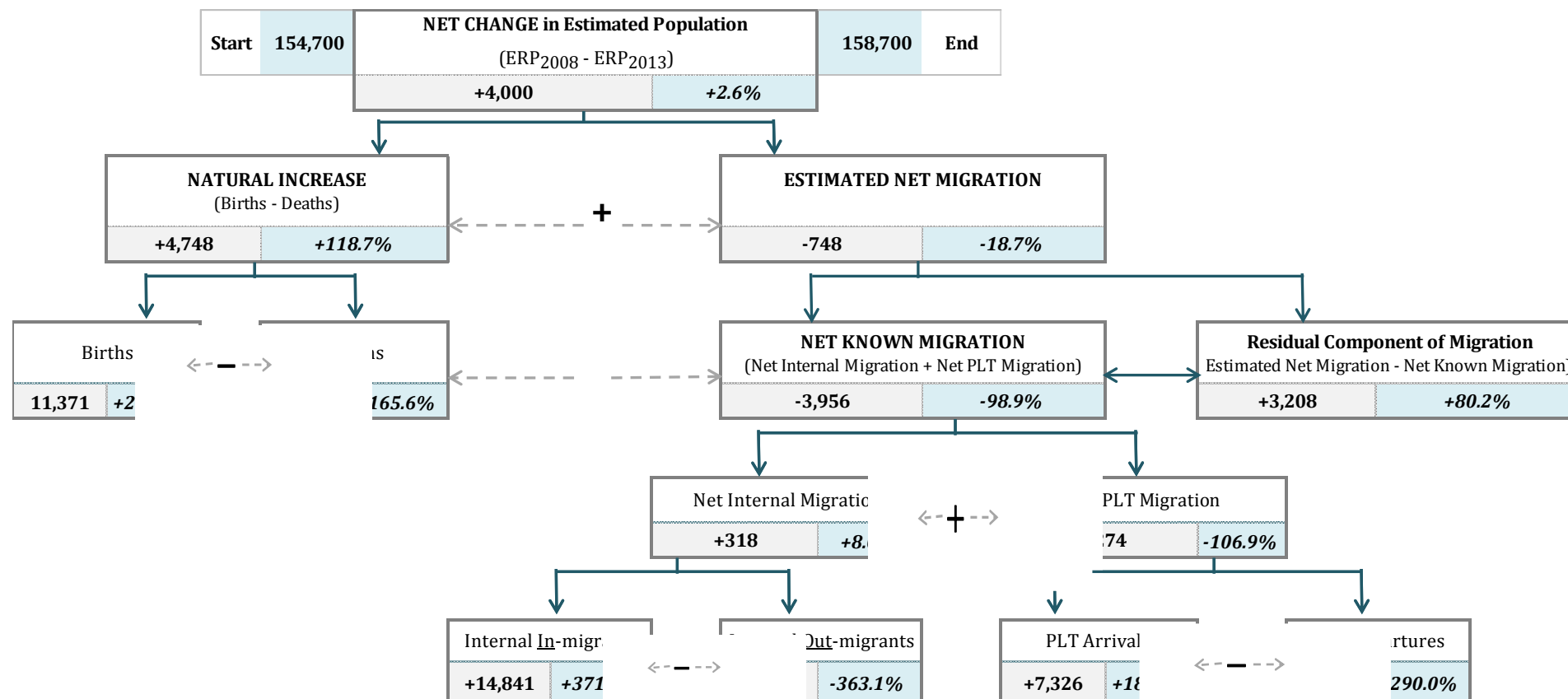


Source: Jackson & Pawar (2013)/Statistics New Zealand various sources





**Figure 3.2.3: Components contributing to Estimated Resident Population, Northland Region 2008-2013**



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



**Table 3.2.1: Migration Flows (Churn) for the Northland Region and its TLAs 1996-2001, 2001-06 and 2008-2013**

|                           | Internal<br>In<br>Migrants | Internal<br>Out<br>Migrants | Net<br>Internal<br>Migration | PLT<br>Arrivals | PLT<br>Departures | Net PLT<br>Migration | Net<br>Known<br>Migration<br>(1) | Residual<br>Component<br>of Migration<br>(2) | Total Estimated<br>Net Migration<br>(3) |
|---------------------------|----------------------------|-----------------------------|------------------------------|-----------------|-------------------|----------------------|----------------------------------|--|---|
| <b>Far North District</b> |                            |                             |                              |                 |                   |                      |                                  |  |   |
| <i>1996 - 2001</i>        | +9,003                     | -9,066                      | -63                          | +1,951          | -2,803            | -852                 | -915                             | +722   | -193                                    |
| <i>2001 - 2006</i>        | +8,700                     | -9,060                      | -360                         | +2,487          | -2,739            | -252                 | -612                             | +50  | -562                                    |
| <i>2008 -2013</i>         | +6,906                     | -7,065                      | -159                         | +2,587          | -4,309            | -1,722               | -1,881                           | +542   | -1,339                                  |
| <b>Whangarei District</b> |                            |                             |                              |                 |                   |                      |                                  |  |   |
| <i>1996 - 2001</i>        | +9,606                     | -9,750                      | -144                         | +3,137          | -5,039            | -1,902               | -2,046                           | +1,301                                       | -745                                    |
| <i>2001 - 2006</i>        | +11,340                    | -9,309                      | +2,031                       | +4,316          | -4,233            | +83                  | +2,114                           | +2,416                                       | +4,530                                  |
| <i>2008 -2013</i>         | +8,589                     | -8,322                      | +267                         | +4,072          | -6,297            | -2,225               | -1,958                           | +2,558                                       | +600                                    |
| <b>Kaipara District</b>   |                            |                             |                              |                 |                   |                      |                                  |  |   |
| <i>1996 - 2001</i>        | +3,237                     | -3,366                      | -129                         | +563            | -696              | -133                 | -262                             | -200   | -462                                    |
| <i>2001 - 2006</i>        | +3,585                     | -3,606                      | -21                          | +630            | -681              | -51                  | -72                              | +181   | +109                                    |
| <i>2008 -2013</i>         | +3,207                     | -2,946                      | +261                         | +667            | -994              | -327                 | -66                              | +07  | -59                                     |
| <b>NORTHLAND REGION</b>   |                            |                             |                              |                 |                   |                      |                                  |  |   |
| <i>1996 - 2001</i>        | +17,529                    | -18,105                     | -576                         | +5,651          | -8,538            | -2,887               | -3,463                           | +2,113                                       | -1,350                                  |
| <i>2001 - 2006</i>        | +18,735                    | -17,175                     | +1,560                       | +7,433          | -7,653            | -220                 | +1,340                           | +2,837                                       | +4,177                                  |
| <i>2008 -2013</i>         | +14,841                    | -14,523                     | +318                         | +7,326          | -11,600           | -4,274               | -3,956                           | +3,208                                       | -748                                    |

Source: Jackson & Pawar (2013)/Statistics New Zealand various sources

Notes: (1) Net Internal Migration + Net PLT Migration; (2) Estimated Net Migration - Net Known Migration; (3) Net Change - Natural Increase

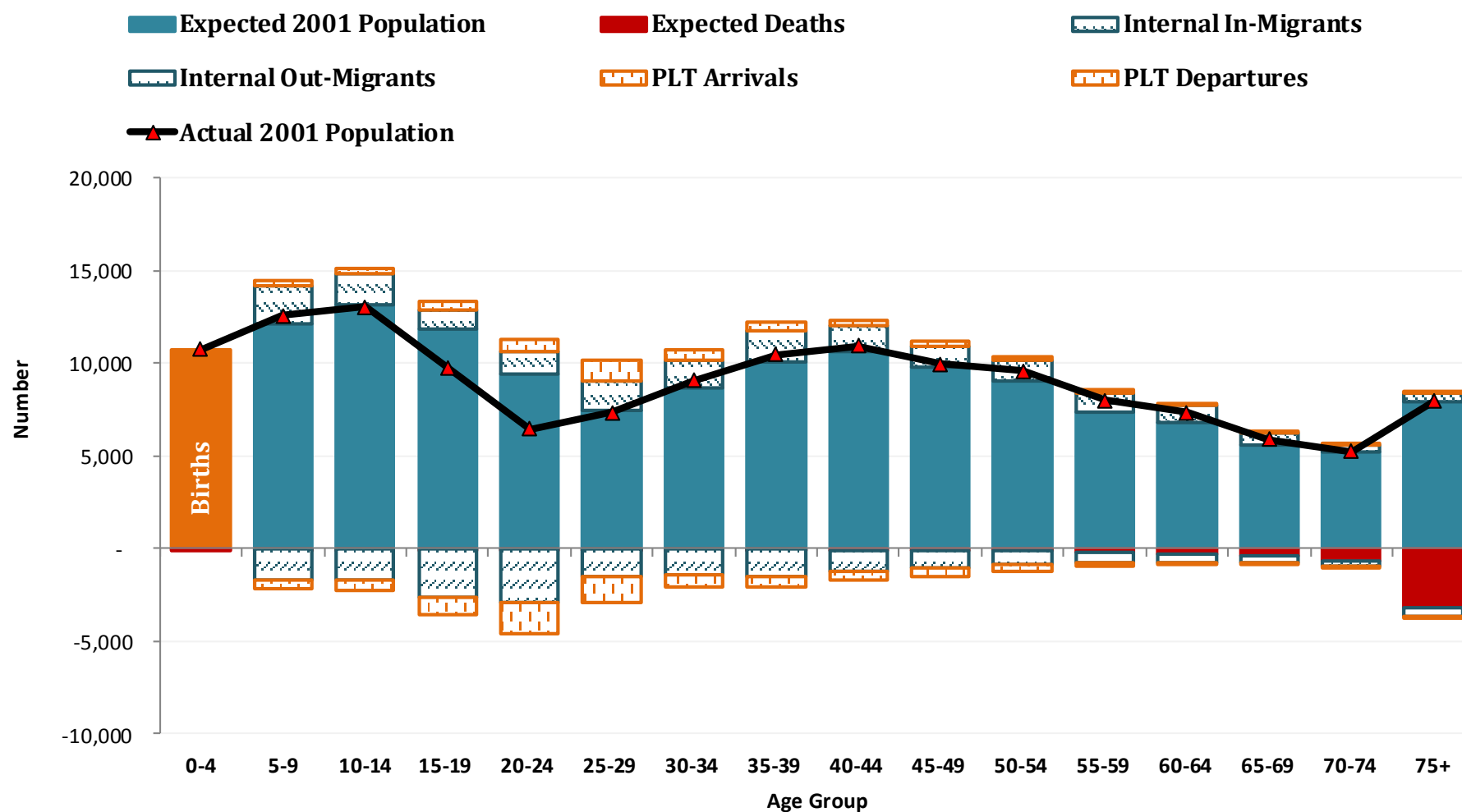


Figures 3.2.4, 3.2.5 and 3.2.6 illustrate the same dataset by age group for each period, although it should be noted that the migration flows here are shown for Known Migration only. The data—based on the residual migration methodology—show that all Northland Region age groups experienced both inflows and outflows of both internal and international migrants, with the number of movements greatest for the characteristically high migration age groups: 15-19 and 20-24 years.

An important point about these data and their underlying methodology is that each age group at each start observation (e.g. 1996) has been survived to the next age group using survivorship rates (drawn from the New Zealand Life Tables) and thus incorporate change in cohort size. The resulting numbers are then compared with the actual number observed at the next census (e.g. 2001). The difference between the 'expected' population and the 'actual' population is the effect of net migration (shown in these particular graphs by their internal and international flows). Accordingly, each age group—or more correctly, each birth cohort—can be traced as it 'ages' through the age structure. From the first two graphs it can be readily seen how the 20-24 year old age group for the period 1996-2001 (the cohort born 1972-76) resulted in a smaller age group at 25-29 years in the 2001-2006 graph. The delayed 2013 census means that this cohort currently spans the 30-34 and 35-39 year age groups, rather than being precisely 30-34 years. The 2008-2013 graph is thus indicative only, but it indicates that the 1972-76 birth cohort is smaller again and usefully illustrates the compounding effect of net migration loss on the eventual reproductive age cohorts. Each other birth cohort can be similarly traced, the data providing a useful illustration of the compounding effects of net migration loss on the eventual reproductive age cohorts.



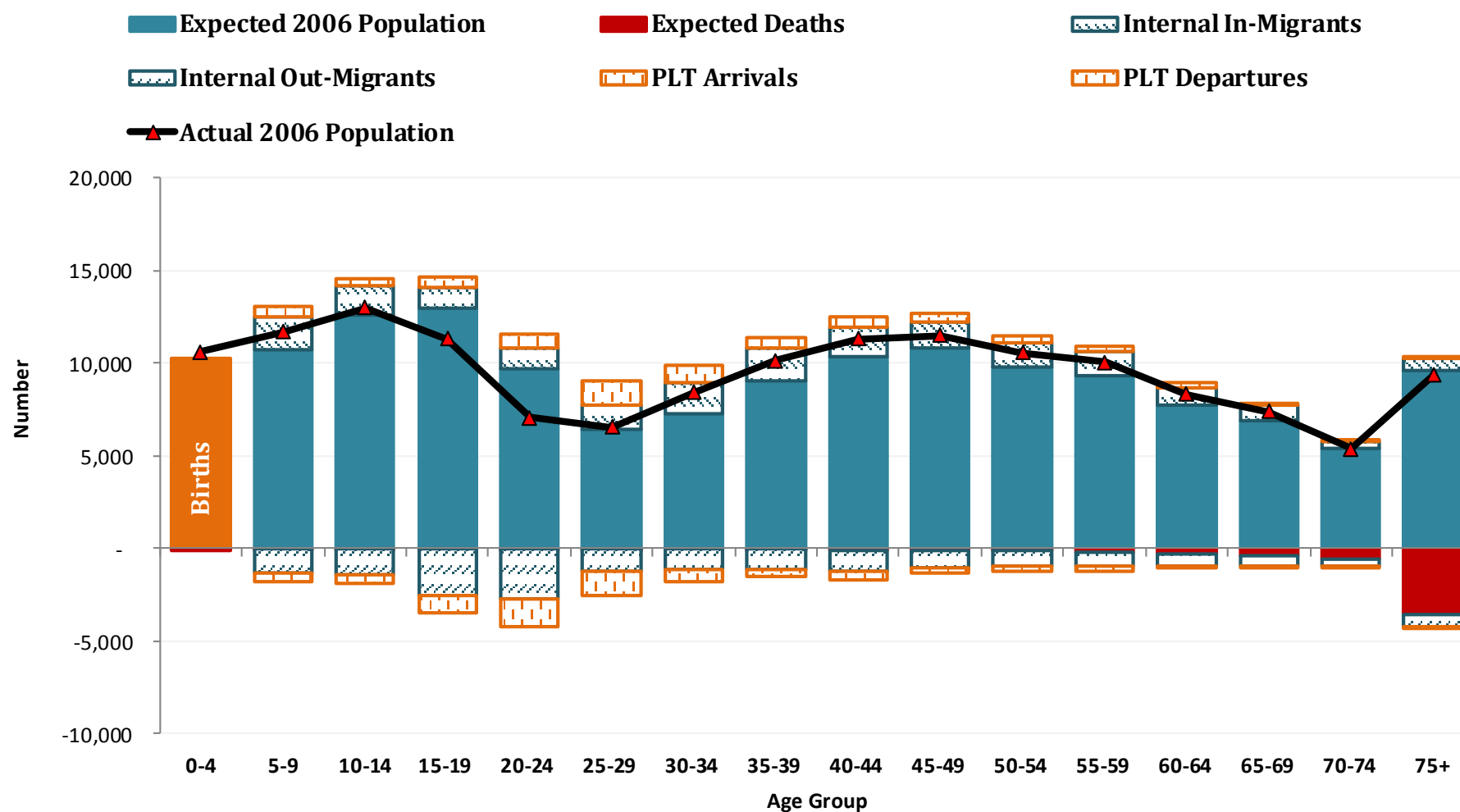
Figure 3.2.4: Components Contributing to Estimated Resident Population by Age, Northland Region, 1996-2001



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



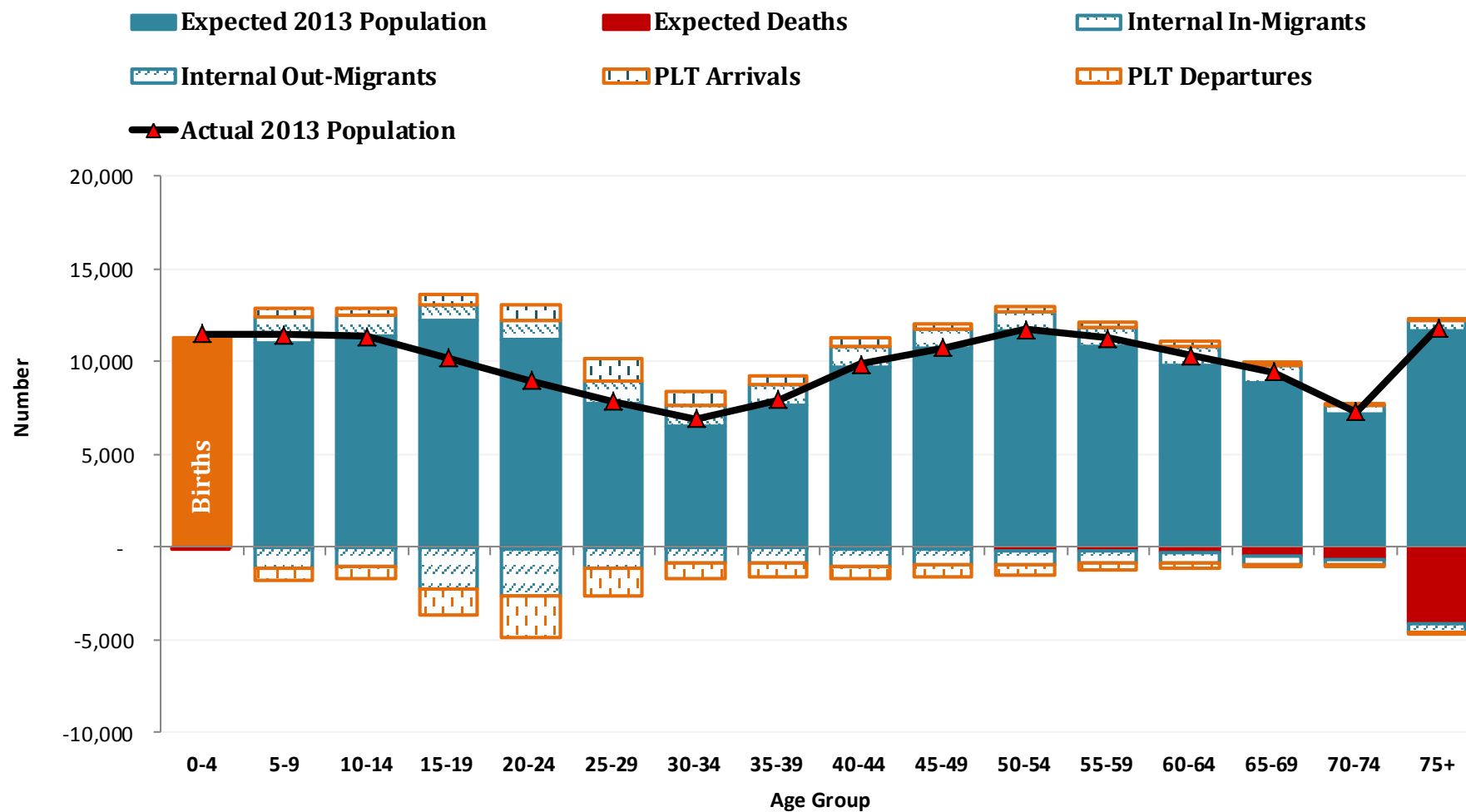
Figure 3.2.5: Components Contributing to Estimated Resident Population by Age, Northland Region, 2001-2006



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



Figure 3.2.6: Components Contributing to Estimated Resident Population by Age, Northland Region, 2008-2013



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



### ***Components of change by age***

- Between 1996 and 2001, 2001 and 2006, and 2008-2013 the Northland Region experienced notable net migration loss at 15-19 and 20-24 years of age. The losses were lower between 2008 and 2013 than between 1996 and 2001, with those for the period 2001-2006 lower at 15-19 years but higher at 20-24 years—a somewhat anomalous situation given overall net migration gain for the 2001-2006 period. With the exception of a minor net loss at 45-49 years between 2008 and 2013, net gains were evident at 0-9 and 30-69 years across all three periods, and at 70-89 years between 2008-2013, indicating overall the net arrival of parents, children and increasingly those of retirement age.
- The situation was similar for all TAs, but with gains and losses at slightly different ages. With the exception of minor net loss at 40-49 years between 2008 and 2013, the Far North District experienced net gains at 0-9 and 25 to 69 years across all three periods. Similarly, with the exception of minor net loss at 45-54 years between 2008 and 2013, Whangarei District experienced net gains at all ages 30 to 89 years across all three periods. The situation for the Kaipara District was more mixed, with minor net loss at 25-39 years of age across the 1996-2001 period, but substantial gain at those ages between 2001 and 2006 and slightly lower gains between 2008 and 2013. Despite overall minor net migration loss between 2008 and 2013, Kaipara saw a generally improving situation as regards migration by age, particularly at 70-89 years.
- The period 2001-2006 is worthy of special note. While net migration was generally positive (the exception being the Far North District), net loss at 20-24 years was higher than for both the 1996-2001 and 2008-2013 periods, for the Region as a whole, and the Far North and Kaipara Districts. By contrast, the same period saw relatively strong net migration gains over the key parental age groups (30-44 years) and relatedly at 0-14 years, particularly for Whangarei and Kaipara.
- The underlying cohort component methodology used in this section also permits the data to be read for each birth cohort as it ‘ages’ through the age structure. The data clearly depict how the 20-24 year old age group in the 1996-2001 graph (being the cohort born 1972-76) resulted in a smaller age group at 25-29 years in the 2001-2006 graph. The delayed 2013 census means that this cohort currently spans the 30-34 and 35-39 year age groups, rather than being precisely 30-34 years. The 2008-2013 graph is thus indicative only, but indicates that the cohort is smaller again and usefully illustrates the compounding effect of net migration loss on the eventual reproductive age cohorts.





## 4.0 Age Structure and Population Ageing

### 4.1 Numerical and Structural Ageing

In 2013 the Northland Region had the second oldest age structure of the 16 Regional Council areas, and, as elsewhere, is ageing. It is ageing numerically, as more people survive to older ages, and structurally, as lower birth rates deliver relatively fewer babies and children into the base of the age structure *vis-à-vis* the size of the parental generation. It is also ageing structurally as the net migration losses at young adult ages and net migration gains at early retiree ages increase the median age. Together these dynamics cause the proportions at younger ages to decrease, and the elevated numbers at older ages to also become increased proportions.

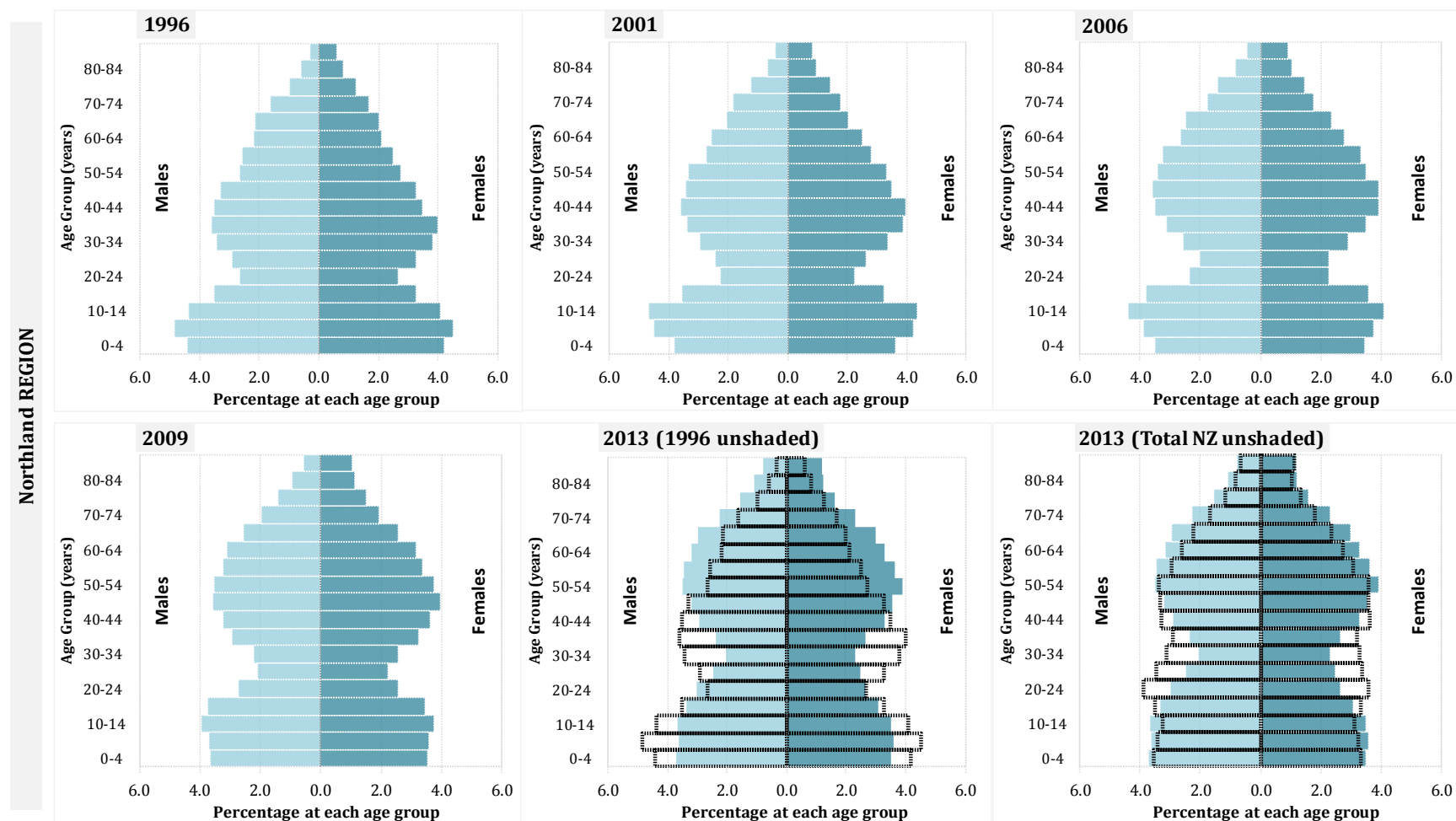
The structural shifts can be detected in Figure 4.1.1 (see especially the lower middle panel which directly compares the region's age structure in 1996 and 2013). Particularly noticeable is the compounding impact of sustained net migration loss at 15-19 and 20-24 years of age, which has hollowed out the age structure at each successively older age band.

Table 4.1.1 shows that the proportion of the Northland Region's population aged 0-14 years has declined quite steadily, from 26.4 per cent in 1996 to 21.6 per cent in 2013 (-18.3 per cent), with the underlying numbers also declining slightly (-7.8 per cent). Proportions at 15-24 years have remained relatively stable, beginning and ending the period 1996-2013 at 12.1 per cent, while underlying numbers have increased (12.6 per cent) as larger cohorts born in the late 1980s and early 1990s arrived at those ages. Proportions at 25-54 years have declined, from 40.0 per cent in 1996 to 34.7 per cent in 2013 (-13.3 per cent). In contrast, the proportion aged 55-64 years has increased from 9.4 to 13.6 per cent (+45.3 per cent), and that at 65+ years, from 12.0 to 18.0 per cent (+49.5 per cent). For Total New Zealand the proportion aged 65+ years in 2013 is 14.2 per cent, up from 11.5 per cent in 1996 (23.3 per cent increase), making the Northland Region both somewhat older than the national average, and ageing faster.

The structural ageing of the Northland population can also be seen in the two ageing indicators in Table 4.1.1: the ratio of people at labour market entry age (15-29 years) to those in the 'retirement zone' (55-69 years), and the ratio of elderly (65+ years) to children (0-14 years). These two indices have moved in opposite directions, the 'entry: exit' ratio falling from 1.4 (14 entrants per 10 exits) in 1996 to 0.9 (9 per 10) in 2013, and the elderly to child ratio increasing from 0.5 to 0.8 (5 per 10 to 8 per 10).



**Figure 4.1.1: Age-Sex Structure of the Estimated Resident Population of the Northland Region, Selected Years 1996-2013, and compared with Total New Zealand 2013**



Source: Jackson/Subnational Age Structure Resource, National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato

Notes: Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TA,AU) by Age and Sex at 30 June 1996, 2001 and 2006-2013 (2006 Boundaries)



**Table 4.1.1: Summary Indicators of Change by Broad Age Group, 1996-2013, Northland Region and Total New Zealand (Estimated Resident Population)**

| Distribution of population over broad age groups                              |                         |           |           |           |           |                           |           |                           |
|---|-------------------------|-----------|-----------|-----------|-----------|---------------------------|-----------|---------------------------|
| Broad Age Group (Yrs)   | Population              |           |           |           |           | Average Annual Change (%) |           | Annual Change (%) 2011-13 |
|   | 1996                    | 2001      | 2006      | 2011      | 2013      | 1996-2006                 | 2006-2013 |                           |
| 0-14  | 37,200                  | 36,320    | 35,320    | 34,510    | 34,300    | -0.5                      | -0.4      | -0.3                      |
| 15-24   | 17,040                  | 16,260    | 18,340    | 19,660    | 19,180    | +0.8                      | +0.7      | -1.2                      |
| 25-54   | 56,320                  | 57,370    | 58,520    | 56,810    | 55,110    | +0.4                      | -0.8      | -1.5                      |
| 55-64   | 13,160                  | 15,330    | 18,400    | 21,060    | 21,570    | +4.0                      | +2.5      | +1.2                      |
| 65+   | 16,950                  | 19,120    | 22,110    | 26,210    | 28,600    | +3.0                      | +4.2      | +4.6                      |
| Northland REGION  | 140,670                 | 144,400   | 152,690   | 158,250   | 158,760   | +0.9                      | +0.6      | +0.2                      |
| New Zealand   | 3,732,000               | 3,880,500 | 4,184,500 | 4,405,200 | 4,471,000 | +1.2                      | +1.0      | +0.7                      |
| Broad Age Group (Yrs)   | Percentage Distribution |           |           |           |           | Average Annual Change (%) |           | Annual Change (%) 2011-13 |
|   | 1996                    | 2001      | 2006      | 2011      | 2013      | 1996-2006                 | 2006-2013 |                           |
| 0-14  | 26.4                    | 25.2      | 23.1      | 21.8      | 21.6      | -1.3                      | -1.3      | -0.5                      |
| 15-24   | 12.1                    | 11.3      | 12.0      | 12.4      | 12.1      | -0.1                      | +0.1      | -1.4                      |
| 25-54   | 40.0                    | 39.7      | 38.3      | 35.9      | 34.7      | -0.4                      | -1.9      | -1.7                      |
| 55-64   | 9.4                     | 10.6      | 12.1      | 13.3      | 13.6      | +2.9                      | +2.5      | +1.0                      |
| 65+   | 12.0                    | 13.2      | 14.5      | 16.6      | 18.0      | +2.0                      | +4.9      | +4.4                      |
| Northland REGION  | 100.0                   | 100.0     | 100.0     | 100.0     | 100.0     | -0.0                      | +0.0      | +0.0                      |
| Total NZ 65+ yrs  | 11.5                    | 11.9      | 12.2      | 13.3      | 14.2      | +0.6                      | +3.2      | +3.3                      |
| Ratio Labour Market Entrants to Exits (Number aged 15-29 : Number aged 55-69) |                         |           |           |           |           |                           |           |                           |
|   | Ratio                   |           |           |           |           | Average Annual Change (%) |           | Annual Change (%) 2011-13 |
|   | 1996                    | 2001      | 2006      | 2011      | 2013      | 1996-2006                 | 2006-2013 |                           |
| Northland REGION  | 1.4                     | 1.1       | 1.0       | 0.9       | 0.9       | -2.9                      | -2.0      | -2.4                      |
| New Zealand   | 1.9                     | 1.6       | 1.5       | 1.4       | 1.3       | -2.3                      | -2.1      | -2.3                      |
| Ratio Elderly to Children (Number 65+ per Child 0-14)                         |                         |           |           |           |           |                           |           |                           |
|   | Ratio                   |           |           |           |           | Average Annual Change (%) |           | Annual Change (%) 2011-13 |
|   | 1996                    | 2001      | 2006      | 2011      | 2013      | 1996-2006                 | 2006-2013 |                           |
| Northland REGION  | 0.5                     | 0.5       | 0.6       | 0.8       | 0.8       | +3.7                      | +6.6      | +4.9                      |
| New Zealand   | 0.5                     | 0.5       | 0.6       | 0.7       | 0.7       | +1.5                      | +4.8      | +4.3                      |

Source: Jackson/Subnational Age Structure Resource, National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato

Notes: Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TA, AU) by Age and Sex at 30 June 1996, 2001 and 2006-2013 (2006



The age-sex structures of the TAs which comprise the Northland Region are markedly similar to each other and therefore to the region as a whole (Figure 4.1.2). All have deeply-waisted hour-glass age structures, and have experienced declines at most younger ages, and increases at older ages (see Table 4.1.2 for change by 5-year age group).

As indicated above, underlying these differences are various mixes in the components of population change. In all cases the bite at 25-44 years is primarily the result of past net migration loss at 15-19 and 20-24 years, but is also partly due to net migration gains at the younger and older age groups either side, which act to accentuate the bite (refer to Appendices B.3.1-3.3). This is especially the case for Whangarei and Kaipara Districts, a trend which became more obvious between 2001 and 2006, and also for the Far North District between 2001 and 2006.

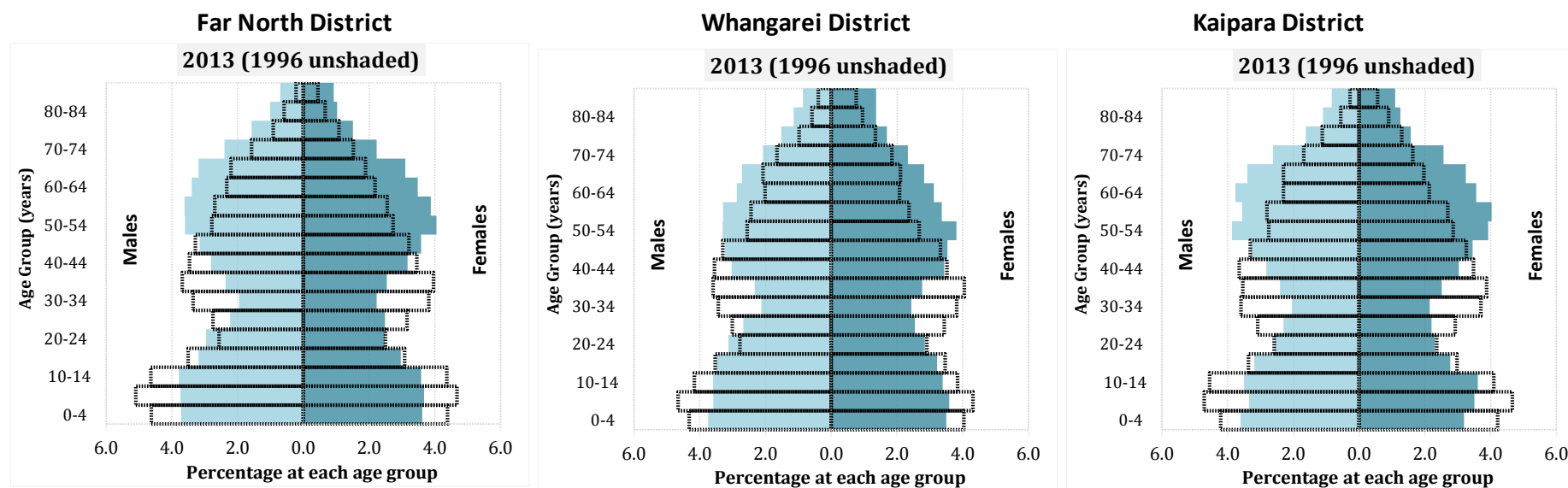
Ironically, despite the significant net migration loss at 15-19 and 20-24 years, there has been very little change at those specific ages in terms of population share, in large part because of the arrival at those ages of relatively large cohorts born in the late 1980s and early 1990s. Like the recent 'baby blip' born 2002-2008 (2003-2009 in Northland), the cohorts born around 1990 also comprised a baby blip, both to some extent echoes of the baby boom<sup>7</sup>. What is significant about the trend is that the cohorts now reaching 15-19 and 20-24 years of age are declining, due to the decline in birth rates and numbers across the 1990s and early 2000s. This issue is returned to further below.

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<sup>7</sup> The cohort born nationally in 1991 included among its members the first grandchildren of the 'leading edge' Baby Boomers (those born 1946-55). By comparison with age at childbearing today, many of the leading edge Boomers *and their children* had their children relatively young. The more recent baby blip, occurring between 2002 and 2008, includes both the grandchildren of the even larger 'lagging edge' Boomer cohorts (born 1956-65), and the 'delayed' partnering and births of an increasing percentage of the remaining Boomers' children.



**Figure 4.1.2: Age-Sex Structures of the TAs of the Northland Region in 2013 compared with 1996 (unshaded) (Estimated Resident Population)**



Source: Jackson/Subnational Age Structure Resource, National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato

Notes: Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TA, AU) by Age and Sex at 30 June 1996, 2001 and 2006-2013 (2006 Boundaries)



**Table 4.1.2: Change in Numbers by Age (%), Northland Region and its TAs compared with Total New Zealand, 1996-2013 (Estimated Resident Population)**

|              | Far North district   |          | Whangarei district   |          | Kaipara district     |          | Northland REGION     |          | New Zealand          |          |
|--------------|----------------------|----------|----------------------|----------|----------------------|----------|----------------------|----------|----------------------|----------|
|              | Change in Population | % Change | Change in Population | % Change | Change in Population | % Change | Change in Population | % Change | Change in Population | % Change |
| <b>0-4</b>   | (630)                | -12.8    | 180                  | +3.1     | (200)                | -13.3    | (650)                | -5.4     | 12,920               | +4.4     |
| <b>5-9</b>   | (1,010)              | -18.9    | (300)                | -4.9     | (360)                | -21.6    | (1,680)              | -12.8    | 2,150                | +0.7     |
| <b>10-14</b> | (610)                | -12.4    | 210                  | +3.8     | (180)                | -11.7    | (570)                | -4.8     | 16,460               | +6.1     |
| <b>15-19</b> | -                    | +0.0     | 680                  | +14.2    | 10                   | +0.9     | 690                  | +7.3     | 35,120               | +13.0    |
| <b>20-24</b> | 410                  | +14.9    | 980                  | +25.2    | 50                   | +5.7     | 1,450                | +19.3    | 53,510               | +19.1    |
| <b>25-29</b> | (470)                | -14.6    | (160)                | -3.6     | (210)                | -19.6    | (850)                | -9.8     | 20,460               | +7.2     |
| <b>30-34</b> | (1,470)              | -37.6    | (1,250)              | -25.2    | (500)                | -38.5    | (3,230)              | -31.8    | (15,740)             | -5.2     |
| <b>35-39</b> | (1,310)              | -31.4    | (1,080)              | -20.7    | (380)                | -28.8    | (2,760)              | -25.8    | (22,270)             | -7.5     |
| <b>40-44</b> | (280)                | -7.4     | 430                  | +8.9     | (150)                | -11.8    | (10)                 | -0.1     | 46,370               | +17.6    |
| <b>45-49</b> | 390                  | +11.0    | 980                  | +21.6    | 120                  | +10.3    | 1,490                | +16.1    | 59,180               | +23.7    |
| <b>50-54</b> | 1,450                | +48.2    | 2,210                | +61.7    | 490                  | +49.0    | 4,150                | +54.6    | 118,790              | +61.6    |
| <b>55-59</b> | 1,510                | +52.8    | 2,130                | +64.7    | 470                  | +48.0    | 4,130                | +58.0    | 105,580              | +64.2    |
| <b>60-64</b> | 1,550                | +63.0    | 2,080                | +74.3    | 610                  | +77.2    | 4,280                | +70.9    | 101,270              | +73.7    |
| <b>65-69</b> | 1,440                | +64.6    | 1,650                | +57.7    | 510                  | +67.1    | 3,610                | +61.7    | 69,990               | +51.8    |
| <b>70-74</b> | 1,010                | +59.8    | 1,200                | +50.2    | 400                  | +67.8    | 2,630                | +56.4    | 39,760               | +34.4    |
| <b>75-79</b> | 710                  | +65.1    | 1,030                | +64.8    | 180                  | +41.9    | 1,920                | +61.5    | 28,010               | +33.4    |
| <b>80-84</b> | 510                  | +75.0    | 990                  | +94.3    | 190                  | +73.1    | 1,670                | +83.1    | 27,990               | +49.6    |
| <b>85+</b>   | 590                  | +163.9   | 1,020                | +129.1   | 220                  | +146.7   | 1,820                | +138.9   | 39,510               | +100.8   |
| <b>Total</b> | 3,790                | +7.0     | 12,980               | +19.0    | 1,270                | +7.3     | 18,090               | +12.9    | 739,060              | +19.8    |

Source: Jackson/Subnational Age Structure Resource, National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato

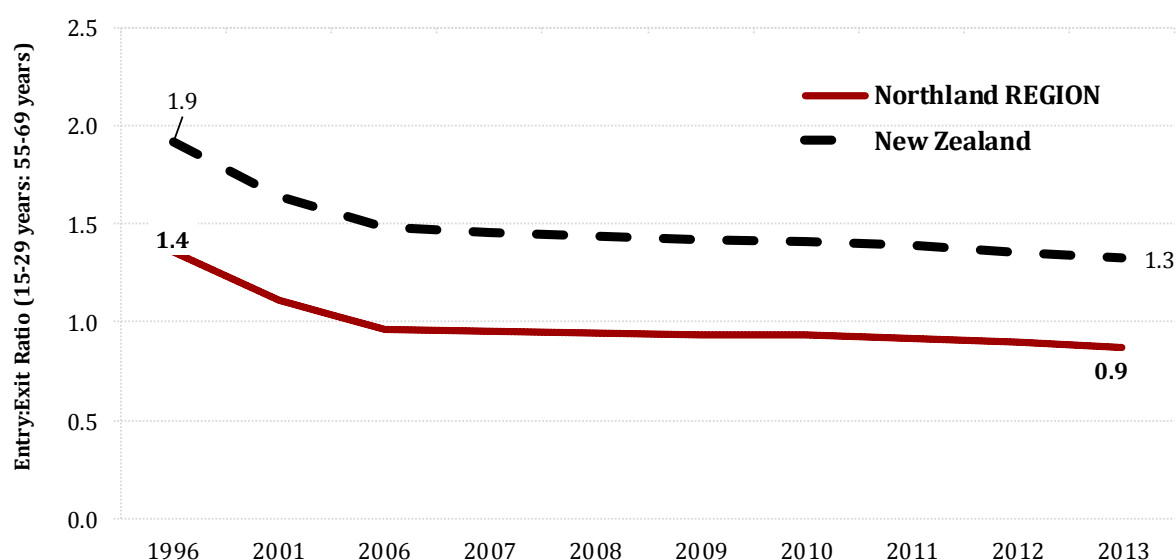
Notes: Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TA,AU) by Age and Sex at 30 June 1996, 2001 and 2006-2013 (2006 Boundaries)



## 4.2 Labour Market Implications

Reflecting structural population ageing, Table 4.1.1 (above) showed that the Northland Region's labour market 'entry: exit ratio' has fallen since 1996, from 1.4 (14 people at labour market entry age 15-29 years for every 10 in the 'retirement zone' 55-69 years, to 0.9 (9 per 10) in 2013 (illustrated in Figure 4.2.1 – note differences in periodicity, the seemingly sharp decline at the beginning of the period reflecting five year observations which shift to annual from 2006). As Figure 4.2.1 shows, the trend for the Northland Region is almost identical to, but significantly lower than for, Total New Zealand.

**Figure 4.2.1: Labour Market Entry/Exit Ratio at 15-29 and 55-69 Years, Northland Region and Total New Zealand, 1996-2013**



Source: Jackson/Subnational Age Structure Resource, National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato; Notes: Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TA,AU) by Age and Sex at 30 June 1996, 2001 and 2006-2013 (2006 Boundaries)

Table 4.2.1 gives the data for the TAs which comprise the Northland Region along with that for Total New Zealand. All entry: exit ratios declined significantly over the period 1996-2013, the greatest declines in the Northland Region occurring for Kaipara (41.6 per cent), followed by the Far North District (37.7 per cent). For both the Far North and Kaipara Districts the ratio has been below parity (one entrant per exit) since 2006, while for Whangarei District the ratio fell below parity only in 2013. In all three TAs, as at the regional level, the decline was also greater than occurred nationally (30.8 per cent), where the ratio is still positive at 1.3.





**Table 4.2.1: Labour Market Entry: Exit Ratio (15-29:55-69 years), Northland Region and its TAs compared with Total New Zealand, 1996-2013**

|            | Far North District | Whangarei district | Kaipara district | Northland REGION | New Zealand |
|------------|--------------------|--------------------|------------------|------------------|-------------|
| 1996       | 1.27               | 1.46               | 1.22             | 1.35             | 1.91        |
| 2001       | 1.03               | 1.22               | 1.00             | 1.11             | 1.64        |
| 2006       | 0.89               | 1.07               | 0.82             | 0.97             | 1.48        |
| 2007       | 0.87               | 1.06               | 0.80             | 0.95             | 1.46        |
| 2008       | 0.86               | 1.05               | 0.78             | 0.94             | 1.44        |
| 2009       | 0.85               | 1.05               | 0.77             | 0.93             | 1.42        |
| 2010       | 0.85               | 1.04               | 0.77             | 0.93             | 1.41        |
| 2011       | 0.84               | 1.02               | 0.75             | 0.91             | 1.39        |
| 2012       | 0.81               | 1.01               | 0.73             | 0.89             | 1.36        |
| 2013       | 0.79               | 0.99               | 0.71             | 0.87             | 1.32        |
| Change (%) | -37.7              | -32.6              | -41.6            | -35.7            | -30.8       |

Source: Jackson/Subnational Age Structure Resource, National Institute of Demographic and Economic Analysis (NIDEA), University of Waikato

Notes: Source data from Stats NZ Infoshare Estimated Subnational Population (RC, TA,AU) by Age and Sex at 30 June 1996,

### Age structure and population ageing – key findings

- The Northland Region has the second oldest age structure of the 16 Regional Council areas. As elsewhere it is ageing numerically, as more people survive to older ages, and structurally, as lower birth rates deliver relatively fewer babies and children into the base of the age structure. The Northland Region is also ageing structurally as net migration losses at young adult ages and net migration gains at early retiree ages cause a 'bite' in the age structure at 25-44 years.
- All three TA population structures are also 'deeply-waisted' at 25-44 years, for similar reasons. This is especially the case for the Whangarei and Kaipara Districts.
- Ironically, despite significant net migration loss at 15-19 and 20-24 years, there has been very little change at those ages in terms of population share, because of the arrival at those ages of relatively large cohorts born in the late 1980s and early 1990s. What is significant about that trend is that the cohorts now reaching 15-19 and 20-24 years of age are declining (both regionally and nationally), due to declines in the birth rate across the 1990s and into the early 2000s.
- Structural ageing can also be monitored in terms of changes in the ratio of those entering labour market entry age to those entering the 'retirement zone'. The Northland Region's labour market 'entry/exit ratio' has fallen since 1996 from 14 people at labour market entry age for every 10 in the retirement age zone, to just 9 per 10 in 2013. Ratios have also been below parity (one entrant per exit) in the Far North and Kaipara Districts since around 2006, while Whangarei has only just reached this stage. The trends are identical to, but significantly lower than for, Total New Zealand.

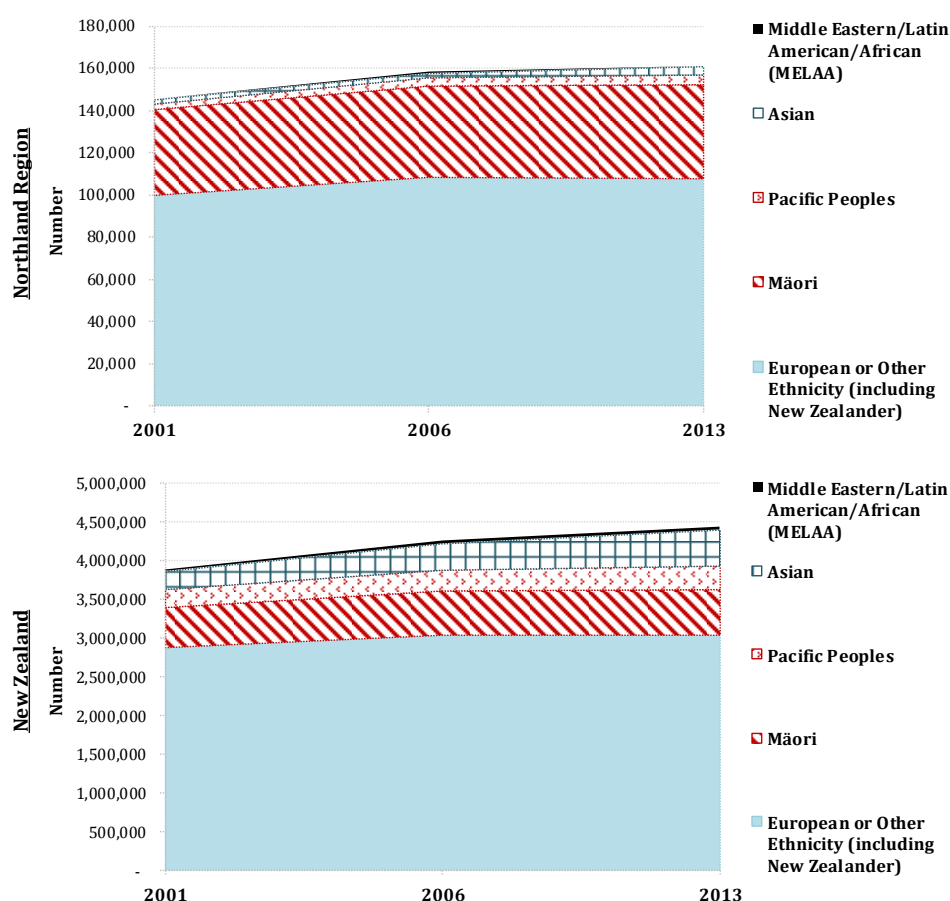


## 5.0 Ethnic Composition and Growth

### 5.1 Ethnic Composition and Growth 2001-2013

Figure 5.1.1 indicates the extent to which the major ethnic groups comprise and have contributed to the Northland Region's growth over the period 2001-2013, the region being notably less multi-ethnic than is the case nationally (see also Table 5.1.1). These 'multiple ethnic group' data<sup>8</sup> show that those identifying as European/New Zealander/Other – hereafter European—in the region grew in number (8.0 per cent) over the period, but fell slightly as a proportion, from 63.5 to 61.7 per cent. This is a lower proportion but also somewhat less of a decline in population share than at national level, where the proportion European reduced from 71.0 to 64.9 per cent (-8.7 per cent).

**Figure 5.1.1: Usually Resident Population by Major Ethnic Group (Multiple Count), Northland Region and Total New Zealand 2001, 2006, 2013**



Statistics New Zealand, Area of Usual Residence (2001, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the census usually resident population count

Notes: \*People may be counted in more than one ethnic group

<sup>8</sup> The multiple ethnic group method of enumeration means that a proportion of people are counted more than once. Of the 565,329 people identifying with Māori ethnicity at the 2006 Census, 47 per cent (266,934) also identified with non-Māori ethnicities (Statistics New Zealand 2010a). Table 5.1.1 gives an approximation of the extent to which the method results in an over-count for the Northland Region.



The region's Māori population also grew numerically (+10.3 per cent), while its share remained stable at around 26.0 per cent—notably a larger proportion than is the case nationally. The three remaining ethnic groups each increased both numbers and share of the region's population. People of Pacific Island origin increased their share from 1.9 to 2.6 per cent (+36 per cent), those of Asian origin, from 1.3 to 2.3 per cent (+77 per cent), and those identifying as Middle Eastern/Latin American/African (MELAA), from 0.2 to 0.3 per cent (+83 per cent).

Despite reducing its population share, the dominant size of the European population and smaller proportions of overseas-born in the Northland Region means that it still accounted for 45.5 per cent of the region's growth 2001-2013, compared with 25.9 per cent nationally (Table 5.1.1). The region's Māori population also accounted for a substantially greater share of growth than nationally: 23.9 per cent compared to 11.3 per cent. By contrast, Pacific Peoples accounted for 8.6 per cent of growth compared to 10.1 per cent nationally, and the Asian-origin population, for 11.0 per cent compared with 36.5 per cent nationally. The numerically smaller MELAA population accounted for 1.6 and 3.6 per cent of growth respectively.

It is important to note that these 'Usually Resident Population' (URP) data are still missing adjustments for people temporarily overseas on Census night, and Census Night Undercount, so may change once the Estimated Resident Population (ERP) counts are available. The 'Not Elsewhere Included' population is notably large. However the URP dataset is internally consistent over time, thus the relative trends and distributions discussed above are unlikely to differ greatly.

The issue of ethnic 'over-count' should also be kept in mind when interpreting these data; as high as 15.9 per cent for the Far North District in 2013. That is, the aggregate population for each area is inflated by the given proportion as the result of multiple counting by ethnicity, and is generally (but not definitively) higher where the proportion Māori is higher. The Pearson's correlation coefficient ( $r$ ) measures the strength of association between two arrays of data on a scale ranging from -1.0 to +1.0. An  $r$  of 1.0 would indicate that both indices moved in the same direction at the same rate; an  $r$  of -1.0, that each moved in the opposite direction at the same rate. In the present case, an  $r$  of 0.9999 confirms that the higher the proportion Māori, the higher the level of multiple counting.

Table 5.1.2 gives these data for the region's TAs. All major ethnic groups increased numerically across the period, contributing to growth in all three TAs. However the trends resulted in a decline in population share for the European population in both Whangarei and Kaipara, and zero increase in the Far North. For Māori, population share declined in the Far North but grew elsewhere. All other major ethnic groups saw a generally sizeable increase in population share, although those shares remain relatively small. Again the 'Not Elsewhere Included' populations are relatively large.



**Table 5.1.1: Usually Resident Population by Major Ethnic Group\* (Multiple Count), Northland Region and Total New Zealand 2001-2013**

| Usually Resident Population Count |   | Population       |                  |                  | Change: 2001-2013 |              |                            | Distribution (%)* |              |              |
|-----------------------------------|---|------------------|------------------|------------------|-------------------|--------------|----------------------------|-------------------|--------------|--------------|
|                                   |   | 2001             | 2006             | 2013             | Number            | % Change     | Contribution to Change (%) | 2001              | 2006         | 2013         |
| Northland Region                  | European or Other Ethnicity (including New Zealander) | 99,618           | 108,093          | 107,625          | +8,007            | +8.0         | +45.5                      | 63.5              | 63.8         | 61.7         |
|                                   | Māori   | 40,737           | 43,527           | 44,931           | +4,194            | +10.3        | +23.9                      | 26.0              | 25.7         | 25.8         |
|                                   | Pacific Peoples                                       | 2,943            | 3,702            | 4,461            | +1,518            | +51.6        | +8.6                       | 1.9               | 2.2          | 2.6          |
|                                   | Asian   | 1,998            | 2,580            | 3,927            | +1,929            | +96.5        | +11.0                      | 1.3               | 1.5          | 2.3          |
|                                   | Middle Eastern/Latin American/ African (MELAA)        | 273              | 348              | 555              | +282              | +103.3       | +1.6                       | 0.2               | 0.2          | 0.3          |
|                                   | Not Elsewhere Included (NEI)                          | 11,202           | 11,166           | 12,852           | +1,650            | +14.7        | +9.4                       | 7.1               | 6.6          | 7.4          |
|                                   | <b>Total</b>  | <b>156,771</b>   | <b>169,416</b>   | <b>174,351</b>   | <b>+17,580</b>    | <b>+11.2</b> | <b>100.0</b>               | <b>100.0</b>      | <b>100.0</b> | <b>100.0</b> |
|                                   | Total People (without multiple count)                 | 140,133          | 148,470          | 151,689          | ...               | +8.2         | ...                        | ...               | ...          | ...          |
|                                   | Ethnic 'overcount' (%)                                | 11.9             | 14.1             | 14.9             | ...               | ...          | ...                        | ...               | ...          | ...          |
| New Zealand                       | European or Other Ethnicity (including New Zealander) | 2,872,233        | 3,040,512        | 3,037,152        | +164,919          | +5.7         | +25.9                      | 71.0              | 68.7         | 64.9         |
|                                   | Māori   | 526,281          | 565,329          | 598,602          | +72,321           | +13.7        | +11.3                      | 13.0              | 12.8         | 12.8         |
|                                   | Pacific Peoples                                       | 231,798          | 265,974          | 295,944          | +64,146           | +27.7        | +10.1                      | 5.7               | 6.0          | 6.3          |
|                                   | Asian   | 238,179          | 354,552          | 471,708          | +233,529          | +98.0        | +36.6                      | 5.9               | 8.0          | 10.1         |
|                                   | Middle Eastern/Latin American/ African (MELAA)        | 24,084           | 34,746           | 46,956           | +22,872           | +95.0        | +3.6                       | 0.6               | 0.8          | 1.0          |
|                                   | Not Elsewhere Included (NEI)                          | 150,636          | 167,784          | 230,646          | +80,010           | +53.1        | +12.5                      | 3.7               | 3.8          | 4.9          |
|                                   | <b>Total</b>  | <b>4,043,211</b> | <b>4,428,897</b> | <b>4,681,008</b> | <b>+637,797</b>   | <b>+15.8</b> | <b>100.0</b>               | <b>100.0</b>      | <b>100.0</b> | <b>100.0</b> |
|                                   | Total People (without multiple count)                 | 3,737,277        | 4,027,947        | 4,242,048        | ...               | +13.5        | ...                        | ...               | ...          | ...          |
|                                   | Ethnic 'overcount' (%)                                | 8.2              | 10.0             | 10.3             | ...               | ...          | ...                        | ...               | ...          | ...          |

Source: Statistics New Zealand, Area of Usual Residence (2001, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the census usually resident population count

Notes: \*Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' rows



**Table 5.1.2: Usually Resident Population by Major Ethnic Group\* (Multiple Count), TAs of Northland Region 2001-2013**

| Usually Resident Population Count |   | Population    |               |               | Change: 2001-2013 |              |                            | Distribution (%)* |              |              |
|-----------------------------------|---|---------------|---------------|---------------|-------------------|--------------|----------------------------|-------------------|--------------|--------------|
|                                   |   | 2001          | 2006          | 2013          | Number            | % Change     | Contribution to Change (%) | 2001              | 2006         | 2013         |
| Far North District                | European or Other Ethnicity (including New Zealander) | 32,220        | 34,650        | 33,882        | +1,662            | +5.2         | +52.2                      | 52.0              | 53.5         | 52.0         |
|                                   | Māori   | 21,729        | 22,113        | 22,110        | +381              | +1.8         | +12.0                      | 35.1              | 34.1         | 33.9         |
|                                   | Pacific Peoples                                       | 1,302         | 1,575         | 1,884         | +582              | +44.7        | +18.3                      | 2.1               | 2.4          | 2.9          |
|                                   | Asian   | 636           | 783           | 1,089         | +453              | +71.2        | +14.2                      | 1.0               | 1.2          | 1.7          |
|                                   | Middle Eastern/Latin American/ African (MELAA)        | 111           | 135           | 201           | +90               | +81.1        | +2.8                       | 0.2               | 0.2          | 0.3          |
|                                   | Not Elsewhere Included (NEI)                          | 5,988         | 5,529         | 6,006         | +18               | +0.3         | +0.6                       | 9.7               | 8.5          | 9.2          |
|                                   | <b>Total</b>  | <b>61,986</b> | <b>64,785</b> | <b>65,172</b> | <b>+3,186</b>     | <b>+5.1</b>  | <b>100.0</b>               | <b>100.0</b>      | <b>100.0</b> | <b>100.0</b> |
|                                   | Total People (without multiple count)                 | 54,576        | 55,842        | 55,731        | ...               | +2.1         | ..                         | ...               | ...          | ..           |
|                                   | Ethnic 'overcount' (%)                                | 13.6          | 16.0          | 16.9          | ...               | ...          | ..                         | ...               | ...          | ..           |
| Whangarei District                | European or Other Ethnicity (including New Zealander) | 53,244        | 58,521        | 58,494        | +5,250            | +9.9         | +42.9                      | 70.5              | 69.5         | 66.7         |
|                                   | Māori   | 15,369        | 17,604        | 18,720        | +3,351            | +21.8        | +27.4                      | 20.4              | 20.9         | 21.3         |
|                                   | Pacific Peoples                                       | 1,314         | 1,680         | 2,058         | +744              | +56.6        | +6.1                       | 1.7               | 2.0          | 2.3          |
|                                   | Asian   | 1,218         | 1,623         | 2,484         | +1,266            | +103.9       | +10.4                      | 1.6               | 1.9          | 2.8          |
|                                   | Middle Eastern/Latin American/ African (MELAA)        | 126           | 186           | 306           | +180              | +142.9       | +1.5                       | 0.2               | 0.2          | 0.3          |
|                                   | Not Elsewhere Included (NEI)                          | 4,206         | 4,623         | 5,640         | +1,434            | +34.1        | +11.7                      | 5.6               | 5.5          | 6.4          |
|                                   | <b>Total</b>  | <b>75,477</b> | <b>84,237</b> | <b>87,702</b> | <b>+12,225</b>    | <b>+16.2</b> | <b>100.0</b>               | <b>100.0</b>      | <b>100.0</b> | <b>100.0</b> |
|                                   | Total People (without multiple count)                 | 68,094        | 74,460        | 76,995        | ...               | +13.1        | ..                         | ...               | ...          | ..           |
|                                   | Ethnic 'overcount' (%)                                | 10.8          | 13.1          | 13.9          | ...               | ...          | ..                         | ...               | ...          | ..           |
| Kaipara District                  | European or Other Ethnicity (including New Zealander) | 14,151        | 14,895        | 15,246        | +1,095            | +7.7         | +50.1                      | 73.3              | 73.2         | 71.0         |
|                                   | Māori   | 3,636         | 3,810         | 4,101         | +465              | +12.8        | +21.3                      | 18.8              | 18.7         | 19.1         |
|                                   | Pacific Peoples                                       | 327           | 450           | 519           | +192              | +58.7        | +8.8                       | 1.7               | 2.2          | 2.4          |
|                                   | Asian   | 141           | 174           | 354           | +213              | +151.1       | +9.8                       | 0.7               | 0.9          | 1.6          |
|                                   | Middle Eastern/Latin American/ African (MELAA)        | 36            | 24            | 48            | +12               | +33.3        | +0.5                       | 0.2               | 0.1          | 0.2          |
|                                   | Not Elsewhere Included (NEI)                          | 1,005         | 1,008         | 1,212         | +207              | +20.6        | +9.5                       | 5.2               | 5.0          | 5.6          |
|                                   | <b>Total</b>  | <b>19,296</b> | <b>20,361</b> | <b>21,480</b> | <b>+2,184</b>     | <b>+11.3</b> | <b>100.0</b>               | <b>100.0</b>      | <b>100.0</b> | <b>100.0</b> |
|                                   | Total People (without multiple count)                 | 17,457        | 18,135        | 18,963        | ...               | +8.6         | ..                         | ...               | ...          | ..           |
|                                   | Ethnic 'overcount' (%)                                | 10.5          | 12.3          | 13.3          | ...               | ...          | ..                         | ...               | ...          | ..           |

Source: Statistics New Zealand, Area of Usual Residence (2001, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the census usually resident population count

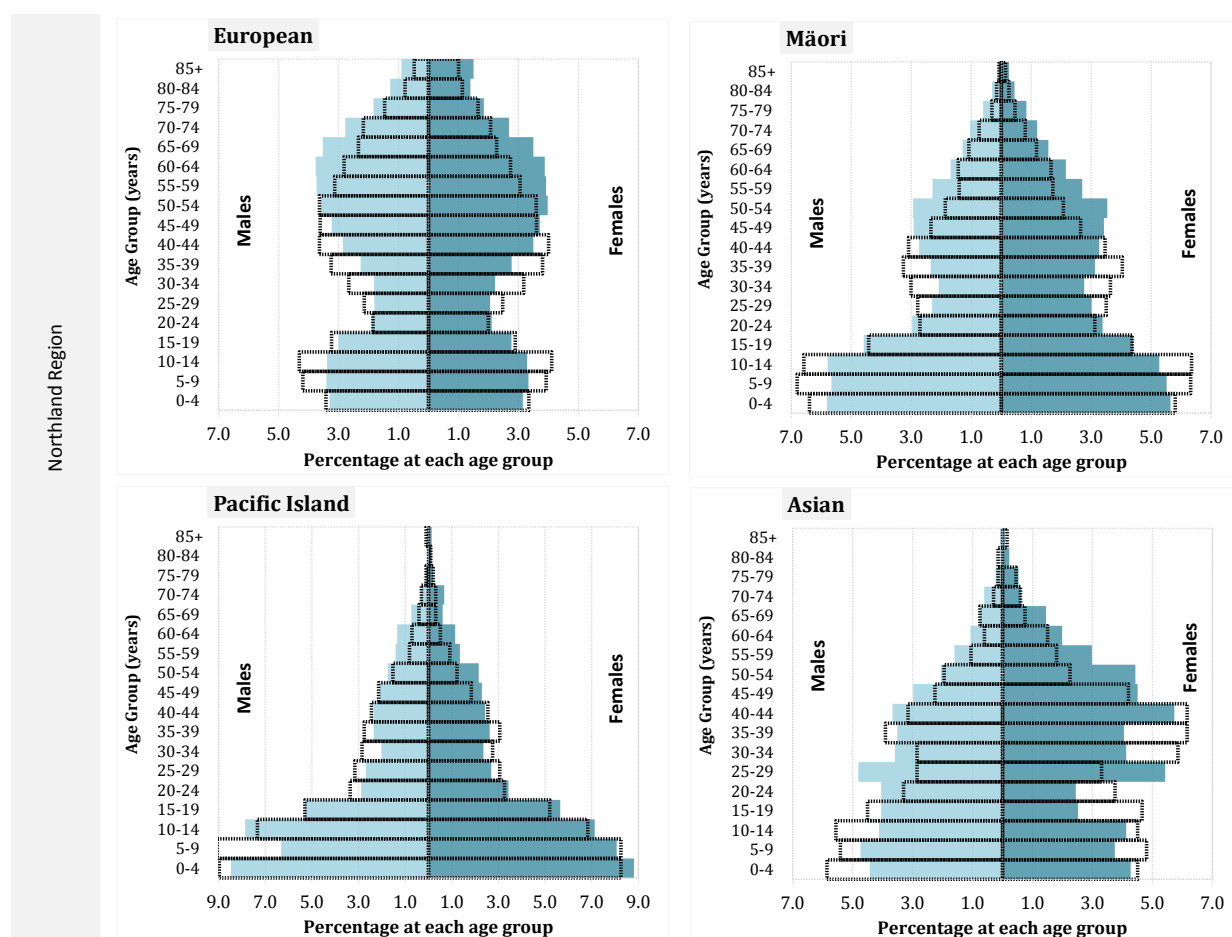
Notes: \*Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' rows



## 5.2 Ethnic Age Composition

Figure 5.2.1 provides a comparison of the Northland Region's major ethnic groups in 2013 by age (shaded bars), also comparing each with their age structure in 2001 (unshaded bars) to show the extent of population ageing. The above caveats regarding multiple ethnic count and usually resident population count should be kept in mind. However, as can be seen by the markedly different age structures of each group in Figure 5.2.1, and summarised in Table 5.2.1 in terms of median age, these methodological complexities would have very little impact on the story by age composition. By comparison with the region's European population, the Māori and Pacific Island populations are extremely youthful, with the Asian and MELAA populations falling in between.

**Figure 5.2.1: Age-Sex Structure by Major Ethnic Group\*, Northland Region, 2013 (shaded bars) and 2001 (unshaded bars), Usually Resident Population Count**



Source: Statistics New Zealand, Area of Usual Residence (201, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the Census Usually Resident Population Count

Notes: \*Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' rows Table 5.1.1

Different Y-axis scale for the Pacific Island population



**Table 5.2.1: Usually Resident Population Count, Northland Region and Total New Zealand Major Ethnic Groups by Median Age (Years), 2013**

|                  | European | Māori | Pacific Island | Asian | MELAA | TOTAL |
|------------------|----------|-------|----------------|-------|-------|-------|
| Northland Region | 45.8     | 25.9  | 16.5           | 30.8  | 29.0  | 42.7  |
| New Zealand      | 40.1     | 24.0  | 22.2           | 30.7  | 28.6  | 37.9  |

Source: Statistics New Zealand, Area of Usual Residence (2001, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the Census Usually Resident Population Count

Notes: \*Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' rows Table 5.1.1

Of note from Table 5.2.1 is that all Northland Region ethnic groups with the exception of the extremely youthful Pacific Island group (median age 16.5 years) are older than their national counterparts, particularly so in the case of European (see also Figure 5.2.2 which gives comparative age structures for total New Zealand).

The underlying data (Table 5.2.2) identify that the region's Māori and Pacific Island populations aged 0-14 and 15-24 years greatly exceed their total population shares. At age 0-14, for example, Māori account for 35.6 per cent of the population of that age, compared to 25.8 per cent for all age groups combined, while above age 55 they account for much smaller shares. Accounting for much small numbers, the situation is similar for the Asian and MELAA populations, while the opposite is the case for European.

**Table 5.2.2: Usually Resident Population Ethnic Group\* Percentage Share by Broad Age Group and Region, 2013**

|                   |       | Percentage Distribution |       |                |       |       |                        | TOTAL REGION |           | Total without Multiple Ethnic Count* | Overcount* by Age |
|-------------------|-------|-------------------------|-------|----------------|-------|-------|------------------------|--------------|-----------|--------------------------------------|-------------------|
|                   |       | European                | Māori | Pacific Island | Asian | MELAA | Not Elsewhere Included | (%)          | Number*   | Number                               | (%)               |
|                   |       | Percentage Distribution |       |                |       |       |                        | (%)          | Number*   | Number                               | (%)               |
| Northland Region  | 0-14  | 50.3                    | 35.6  | 4.9            | 2.4   | 0.4   | 6.4                    | 100.0        | 42,501    | 32,751                               | 29.8              |
|                   | 15-24 | 51.2                    | 33.6  | 3.8            | 2.5   | 0.3   | 8.6                    | 100.0        | 20,514    | 16,683                               | 23.0              |
|                   | 25-54 | 60.7                    | 25.8  | 2.1            | 3.2   | 0.4   | 7.8                    | 100.0        | 59,967    | 53,118                               | 12.9              |
|                   | 55-64 | 72.6                    | 17.5  | 1.0            | 1.3   | 0.1   | 7.4                    | 100.0        | 22,689    | 21,378                               | 6.1               |
|                   | 65+   | 79.7                    | 12.0  | 0.5            | 0.7   | 0.1   | 7.0                    | 100.0        | 28,674    | 27,765                               | 3.3               |
|                   | TOTAL | 61.7                    | 25.8  | 2.6            | 2.3   | 0.3   | 7.4                    | 100.0        | 174,351   | 151,689                              | 14.9              |
|                   | 85+   | 86.8                    | 5.8   | 0.2            | 0.2   | 0.1   | 7.0                    | 100.0        | 2,973     | 2,925                                | 1.6               |
| Total New Zealand | 0-14  | 56.4                    | 19.1  | 10.0           | 9.2   | 1.1   | 4.1                    | 100.0        | 1,056,621 | 865,632                              | 22.1              |
|                   | 15-24 | 56.4                    | 15.9  | 8.5            | 12.4  | 1.2   | 5.7                    | 100.0        | 672,189   | 586,446                              | 14.6              |
|                   | 25-54 | 63.8                    | 11.7  | 5.6            | 12.4  | 1.2   | 5.3                    | 100.0        | 1,821,405 | 1,689,591                            | 7.8               |
|                   | 55-64 | 74.9                    | 8.7   | 3.5            | 7.6   | 0.5   | 4.9                    | 100.0        | 511,806   | 493,350                              | 3.7               |
|                   | 65+   | 83.4                    | 5.2   | 2.3            | 4.4   | 0.3   | 4.5                    | 100.0        | 618,993   | 607,029                              | 2.0               |
|                   | TOTAL | 64.9                    | 12.8  | 6.3            | 10.1  | 1.0   | 4.9                    | 100.0        | 4,681,008 | 4,242,048                            | 10.3              |
|                   | 85+   | 90.5                    | 2.0   | 1.1            | 1.9   | 0.2   | 4.3                    | 100.0        | 74,058    | 73,314                               | 1.0               |

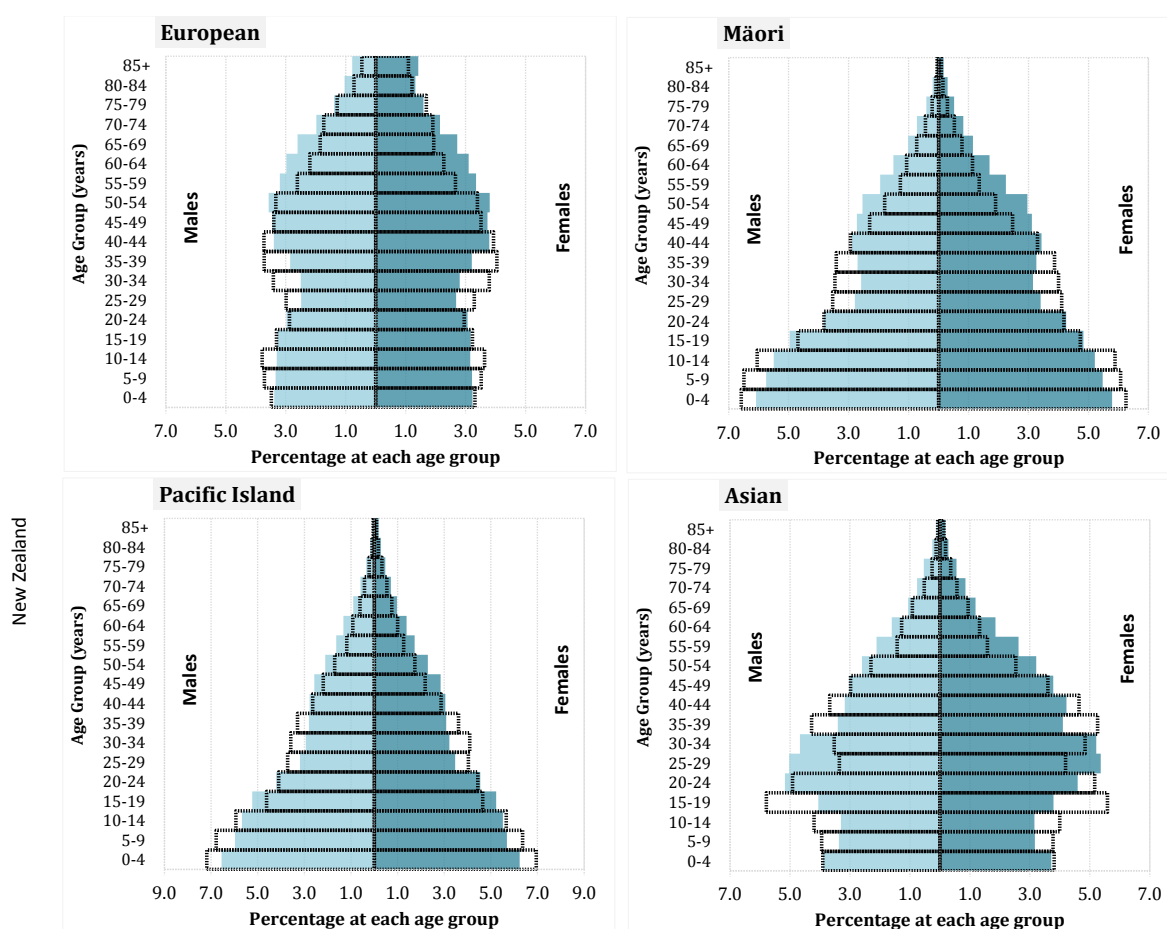
Source: Statistics New Zealand, Area of Usual Residence (2001, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the Census Usually Resident Population Count

Notes: \*Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' column





**Figure 5.2.2: Age-Sex Structure by Major Ethnic Group\*, Total New Zealand, 2013 (shaded bars) and 2001 (unshaded bars), Usually Resident Population Count**



Source: Statistics New Zealand, Area of Usual Residence (2001, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex For the Census Usually Resident Population Count

Notes: \*Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' rows Table 5.1.1

Different Y-axis scale for the Pacific Island population

Table 5.2.3 provides summary data for the Northland Region's major ethnic groups by broad age group across the period 2001-2013. Both the European and Māori populations experienced decline at 0-14 years, primarily accounting for the region's overall decline at these ages (NB. The numbers for each ethnic group do not sum to the total because the total here is *not* the multiple ethnic count; it also includes people who were not elsewhere included, and who did not state their ethnicity). The European population also experienced decline at 25-54 years, again accounting for the majority of decline at those ages for the total region. All ethnic groups experienced growth at all other ages. In all cases, however, there was a reduction in population share at 0-14 years. This occurred also for the European, Māori and Pacific Island populations at 25-54 years, for the Asian and MELAA populations at 15-24 years, and for the MELAA population at 45-54 years.



**Table 5.2.3: Usually Resident Population of the Northland Region, Number and Age Distribution (%) by Major Ethnic Group\* and Broad Age Group 2001, 2006, 2013**

|   |       | 2001    | 2006    | 2013    | 2001                 | 2006  | 2013  | Change 2001-2013<br>in<br>Percentage |       |
|---|-------|---------|---------|---------|----------------------|-------|-------|--------------------------------------|-------|
| Northland Region                              |       | Number  |         |         | Age Distribution (%) |       |       | in Number                            | Point |
| European                                      | 0-14  | 23,223  | 22,989  | 21,372  | 23.3                 | 21.3  | 19.9  | -1,851                               | -3.45 |
|   | 15-24 | 9,936   | 11,238  | 10,512  | 10.0                 | 10.4  | 9.8   | 576                                  | -0.21 |
|   | 25-54 | 39,462  | 41,175  | 36,402  | 39.6                 | 38.1  | 33.8  | -3,060                               | -5.79 |
|   | 45-54 | 11,700  | 14,619  | 16,467  | 11.7                 | 13.5  | 15.3  | 4,767                                | 3.56  |
|   | 65+   | 15,294  | 18,078  | 22,866  | 15.4                 | 16.7  | 21.2  | 7,572                                | 5.89  |
|   | Total | 99,615  | 108,099 | 107,619 | 100.0                | 100.0 | 100.0 | 8,004                                | ...   |
|   | 85+   | 1,473   | 1,815   | 2,580   | 1.5                  | 1.7   | 2.4   | 1,107                                | 0.92  |
| Māori   | 0-14  | 15,582  | 15,582  | 15,141  | 38.3                 | 35.8  | 33.7  | -441                                 | -4.56 |
|   | 15-24 | 5,949   | 6,876   | 6,885   | 14.6                 | 15.8  | 15.3  | 936                                  | 0.72  |
|   | 25-54 | 14,550  | 15,582  | 15,483  | 35.7                 | 35.8  | 34.5  | 933                                  | -1.26 |
|   | 45-54 | 2,535   | 2,823   | 3,978   | 6.2                  | 6.5   | 8.9   | 1,443                                | 2.63  |
|   | 65+   | 2,118   | 2,670   | 3,450   | 5.2                  | 6.1   | 7.7   | 1,332                                | 2.48  |
|   | Total | 40,734  | 43,533  | 44,937  | 100.0                | 100.0 | 100.0 | 4,203                                | ...   |
|   | 85+   | 90      | 105     | 171     | 0.2                  | 0.2   | 0.4   | 81                                   | 0.16  |
| Pacific Island                                | 0-14  | 1,434   | 1,818   | 2,082   | 48.8                 | 49.1  | 46.7  | 648                                  | -2.09 |
|   | 15-24 | 504     | 600     | 771     | 17.2                 | 16.2  | 17.3  | 267                                  | 0.15  |
|   | 25-54 | 861     | 1,059   | 1,236   | 29.3                 | 28.6  | 27.7  | 375                                  | -1.57 |
|   | 45-54 | 90      | 150     | 231     | 3.1                  | 4.1   | 5.2   | 141                                  | 2.12  |
|   | 65+   | 48      | 75      | 135     | 1.6                  | 2.0   | 3.0   | 87                                   | 1.40  |
|   | Total | 2,937   | 3,702   | 4,455   | 100.0                | 100.0 | 100.0 | 1,518                                | ...   |
|   | 85+   | 3       | 3       | 6       | 0.1                  | 0.1   | 0.1   | 3                                    | 0.03  |
| Asian   | 0-14  | 615     | 744     | 999     | 30.8                 | 28.8  | 25.5  | 384                                  | -5.30 |
|   | 15-24 | 321     | 375     | 513     | 16.1                 | 14.5  | 13.1  | 192                                  | -2.98 |
|   | 25-54 | 897     | 1,200   | 1,917   | 44.9                 | 46.5  | 48.9  | 1,020                                | 4.00  |
|   | 45-54 | 102     | 165     | 303     | 5.1                  | 6.4   | 7.7   | 201                                  | 2.62  |
|   | 65+   | 63      | 96      | 189     | 3.2                  | 3.7   | 4.8   | 126                                  | 1.67  |
|   | Total | 1,998   | 2,580   | 3,921   | 100.0                | 100.0 | 100.0 | 1,923                                | ...   |
|   | 85+   | 3       | 6       | 6       | 0.2                  | 0.2   | 0.2   | 3                                    | 0.00  |
| MELAA   | 0-14  | 93      | 114     | 186     | 34.1                 | 32.5  | 33.2  | 93                                   | -0.91 |
|   | 15-24 | 33      | 48      | 66      | 12.1                 | 13.7  | 11.8  | 33                                   | -0.32 |
|   | 25-54 | 117     | 156     | 252     | 42.9                 | 44.4  | 44.9  | 135                                  | 2.06  |
|   | 45-54 | 21      | 18      | 30      | 7.7                  | 5.1   | 5.3   | 9                                    | -2.34 |
|   | 65+   | 9       | 15      | 27      | 3.3                  | 4.3   | 4.8   | 18                                   | 1.52  |
|   | Total | 273     | 351     | 561     | 100.0                | 100.0 | 100.0 | 288                                  | ...   |
|   | 85+   | -       | -       | 3       | 0.0                  | 0.0   | 0.5   | 3                                    | 0.53  |
| Total<br>Northland Region<br>without Multiple | 0-14  | 35,175  | 34,782  | 32,751  | 25.1                 | 23.4  | 21.6  | -2,424                               | -3.51 |
|   | 15-24 | 15,414  | 17,157  | 16,683  | 11.0                 | 11.6  | 11.0  | 1,269                                | 0.00  |
|   | 25-54 | 55,896  | 57,150  | 53,118  | 39.9                 | 38.5  | 35.0  | -2,778                               | -4.87 |
|   | 45-54 | 14,940  | 17,925  | 21,378  | 10.7                 | 12.1  | 14.1  | 6,438                                | 3.43  |
|   | 65+   | 18,702  | 21,453  | 27,765  | 13.3                 | 14.4  | 18.3  | 9,063                                | 4.96  |
|   | Total | 140,127 | 148,467 | 151,695 | 100.0                | 100.0 | 100.0 | 11,568                               | ...   |
|   | 85+   | 1,740   | 2,037   | 2,925   | 1.2                  | 1.4   | 1.9   | 1,185                                | 0.69  |

Source: Statistics New Zealand, Area of Usual Residence (2001, 2006 and 2013) and Ethnic Group (Total Responses) by Age (Five Year Groups) and Sex for the Census Usually Resident Population Count

Notes: \*Multiple Count means that people may be counted in more than one ethnic group - see Ethnic 'overcount' rows Table 5.1.1

People who did not state their ethnicity are included in the total count



## Ethnic composition and growth – key findings

- The Northland Region is somewhat less multi-ethnic than is the case nationally, and has a significantly greater proportion Māori, double the national average.
- Over the period 2001-2013 the Northland Region's European-origin population grew in number but fell slightly as a proportion, from 63.5 to 61.7 per cent. The Region's Māori population also grew numerically (+10.3 per cent), while its share remained stable at around 26.0 per cent. The three remaining ethnic groups each increased both numbers and share of the Region's population. People of Pacific Island origin increased their share from 1.9 to 2.6 per cent (+36 per cent), those of Asian origin, from 1.3 to 2.3 per cent (+77 per cent), and those identifying as Middle Eastern/Latin American/African (MELAA), from 0.2 to 0.3 per cent (+83 per cent).
- Despite reducing its population share, the dominant size of the European population and smaller proportions of overseas born in the Northland Region means that it still accounted for 45.5 per cent of the Region's growth 2001-2013, compared with 25.9 per cent nationally. The Region's Māori population also accounted for a substantially greater share of growth than nationally: 23.9 per cent compared to 11.3 per cent. By contrast, Pacific Peoples accounted for 8.6 per cent of growth compared to 10.1 per cent nationally, and the Asian-origin population, for 11.0 per cent compared with 36.5 per cent nationally. The numerically smaller MELAA population accounted for 1.6 and 3.6 per cent of growth respectively.
- By comparison with the European-origin population, which in 2013 had a median age of 45.8 years, the Region's Māori and Pacific Island populations are extremely youthful (median ages of 25.9 and 16.5 years respectively). The Region's Asian and MELAA populations fall in between these extremes (median ages 30.8 and 29.0 years respectively).
- The Region's Māori and Pacific Island populations aged 0-14 and 15-24 years greatly exceed their total shares, while above age 55 they account for much smaller shares. The situation is similar for the Asian and MELAA populations. By comparison, the European-origin population has smaller shares than total share at younger ages, and greater shares above age 55.
- Across the period 2001-2013 both the European and Māori populations experienced decline at 0-14 years, primarily accounting for the Region's overall decline at these ages. The European population also experienced decline at 25-54 years, again accounting for the majority of decline at those ages for the Region. All ethnic groups experienced growth at all other ages. In all cases, however, there was a reduction in population share at 0-14 years. This occurred also for the European, Māori and Pacific Island populations at 25-54 years, for the Asian and MELAA populations at 15-24 years, and for the MELAA population at 45-54 years.

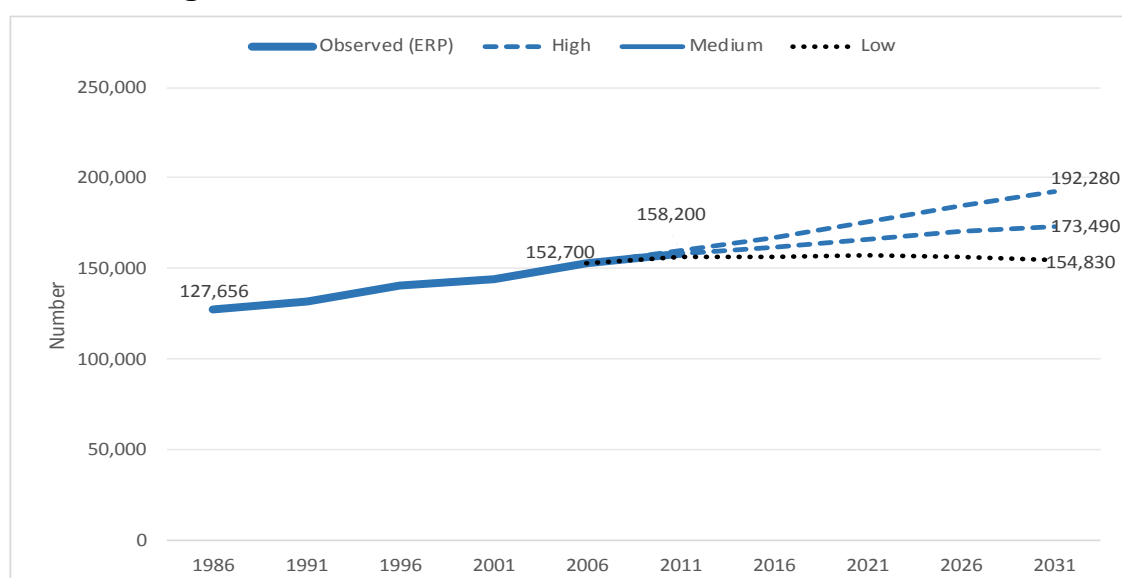


## 6.0 Population Projections

### 6.1 Size, Growth and Population Ageing

Under the medium series assumptions, the population of the Northland Region is projected to grow slowly, reaching approximately 173,490 by 2031, an increase of 9.6 per cent over 2011 (Figure 6.1.1 and Table 6.1.1). The high variant projections produce a 2031 population of 192,280 (+ 20.3 per cent), and the low projections, 154,830 (a small decline of 1.2 per cent). The majority of growth is anticipated to come from natural increase, which diminishes to just above one-third its 2011 level by 2031; migration is modestly negative between 2011 and 2016 but positive (+1,000 per five year period) at all other observations (see Appendices B4.1 and B4.2 for projection assumptions).

**Figure 6.1.1: Observed (1986-2013) and Projected Population Change by Projection Series, Northland Region**



Source: Statistics New Zealand, *Subnational Population Projections by Age and Sex, 2006(base)-2031* (October 2012 update)

The gains are not shared evenly across the age distribution (Table 6.1.1 and Figure 6.1.2). Numbers at 0-14, 15-24 and 40-54 years are projected to decline overall (-2.9, -13.4, and -18.7 per cent respectively), while the population aged 65+ years is anticipated to grow both numerically (by 85.4 per cent between 2011 and 2031) and structurally (from 16.4 per cent in 2011 to 27.7 per cent by 2031), with the changes even more marked at 75+ and 85+ years (see Appendix B4.3 for Total New Zealand). Between 2011 and 2031, some important inter-censal changes are also projected to occur. For example, at 0-14 years, numbers decline, then grow, then decline again. At 15-24 years numbers decline between 2011 and 2016 (-1,360) and between 2016 and 2021 (-1,850), then modest growth resumes. These age structural transitions, which reflect the movement of the recently born baby blip through the age structure, have important planning implications, especially at school and labour market entry ages.



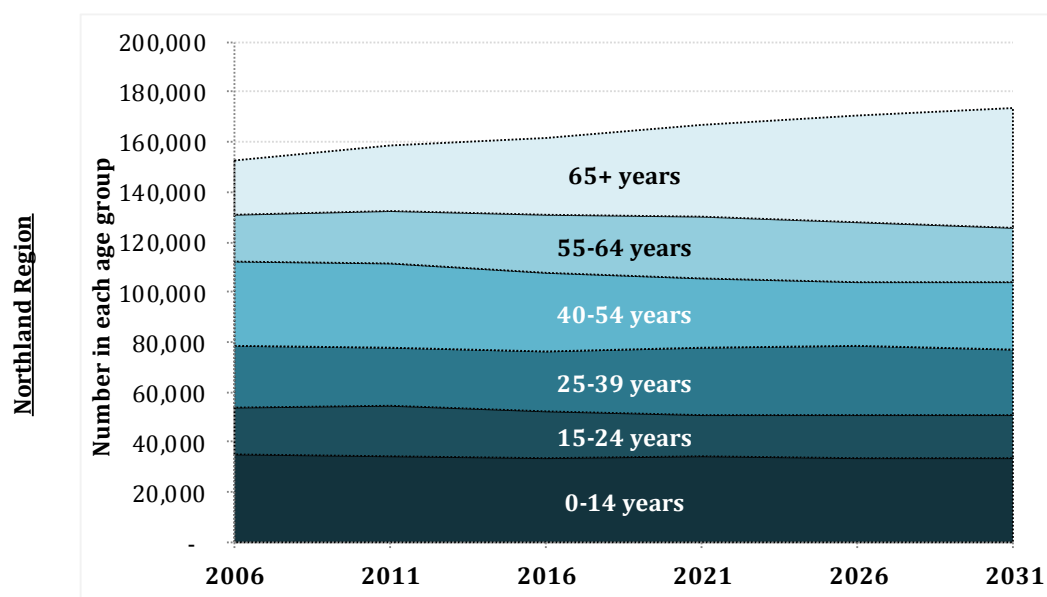
**Table 6.1.1: Projected Population, Northland Region, 2006-2031 (Medium Series)**

|                                  | Numbers by age                         |                |           |           |           |         | Change (%) |
|----------------------------------|--|----------------|-----------|-----------|-----------|---------|------------|
|                                  | 2006                                   | 2011           | 2016      | 2021      | 2026      | 2031    | 2011-2031  |
| 0-14 years                       | 35,320                                 | <b>34,630</b>  | 33,910    | 34,290    | 33,690    | 33,640  | -2.9       |
| 15-24 years                      | 18,340                                 | <b>19,680</b>  | 18,320    | 16,470    | 16,780    | 17,040  | -13.4      |
| 25-39 years                      | 25,140                                 | <b>23,290</b>  | 24,390    | 27,160    | 28,010    | 26,080  | +12.0      |
| 40-54 years                      | 33,380                                 | <b>33,650</b>  | 31,090    | 27,540    | 25,800    | 27,370  | -18.7      |
| 55-64 years                      | 18,400                                 | <b>21,140</b>  | 23,170    | 24,440    | 23,530    | 21,340  | +0.9       |
| 65-74 years                      | 12,740                                 | <b>15,180</b>  | 18,060    | 20,960    | 23,320    | 24,740  | +63.0      |
| 75-84 years                      | 7,270                                  | <b>8,100</b>   | 9,740     | 11,910    | 14,580    | 17,250  | +113.0     |
| 85+ years                        | 2,100                                  | <b>2,620</b>   | 3,230     | 3,710     | 4,800     | 6,030   | +130.2     |
| <b>Total</b>                     | <b>152,690</b>                         | <b>158,290</b> | 161,910   | 166,480   | 170,510   | 173,490 | +9.6       |
| 65+ years                        | 22,110                                 | <b>25,900</b>  | 31,030    | 36,580    | 42,700    | 48,020  | +85.4      |
|                                  | Intercensal Change by Age (Numbers)    |                |           |           |           |         | Change (N) |
|                                  | 2006-2011                              | 2011-2016      | 2016-2021 | 2021-2026 | 2026-2031 |         | 2011-2031  |
| 0-14 years                       | ...                                    | <b>(690)</b>   | (720)     | 380       | (600)     | (50)    | (990)      |
| 15-24 years                      | ...                                    | <b>1,340</b>   | (1,360)   | (1,850)   | 310       | 260     | (2,640)    |
| 25-39 years                      | ...                                    | <b>(1,850)</b> | 1,100     | 2,770     | 850       | (1,930) | 2,790      |
| 40-54 years                      | ...                                    | <b>270</b>     | (2,560)   | (3,550)   | (1,740)   | 1,570   | (6,280)    |
| 55-64 years                      | ...                                    | <b>2,740</b>   | 2,030     | 1,270     | (910)     | (2,190) | 200        |
| 65-74 years                      | ...                                    | <b>2,440</b>   | 2,880     | 2,900     | 2,360     | 1,420   | 9,560      |
| 75-84 years                      | ...                                    | <b>830</b>     | 1,640     | 2,170     | 2,670     | 2,670   | 9,150      |
| 85+ years                        | ...                                    | <b>520</b>     | 610       | 480       | 1,090     | 1,230   | 3,410      |
| <b>Total</b>                     | ...                                    | <b>5,600</b>   | 3,620     | 4,570     | 4,030     | 2,980   | 15,200     |
| 65+ years                        | ...                                    | <b>3,790</b>   | 5,130     | 5,550     | 6,120     | 5,320   | 22,120     |
|                                  | Age Distribution (% at each age group) |                |           |           |           |         | Change (%) |
|                                  | 2006                                   | 2011           | 2016      | 2021      | 2026      | 2031    | 2011-2031  |
| 0-14 years                       | 23.1                                   | <b>21.9</b>    | 20.9      | 20.6      | 19.8      | 19.4    | -11.4      |
| 15-24 years                      | 12.0                                   | <b>12.4</b>    | 11.3      | 9.9       | 9.8       | 9.8     | -21.0      |
| 25-39 years                      | 16.5                                   | <b>14.7</b>    | 15.1      | 16.3      | 16.4      | 15.0    | +2.2       |
| 40-54 years                      | 21.9                                   | <b>21.3</b>    | 19.2      | 16.5      | 15.1      | 15.8    | -25.8      |
| 55-64 years                      | 12.1                                   | <b>13.4</b>    | 14.3      | 14.7      | 13.8      | 12.3    | -7.9       |
| 65-74 years                      | 8.3                                    | <b>9.6</b>     | 11.2      | 12.6      | 13.7      | 14.3    | +48.7      |
| 75-84 years                      | 4.8                                    | <b>5.1</b>     | 6.0       | 7.2       | 8.6       | 9.9     | +94.3      |
| 85+ years                        | 1.4                                    | <b>1.7</b>     | 2.0       | 2.2       | 2.8       | 3.5     | +110.0     |
| <b>Total</b>                     | <b>100.0</b>                           | <b>100.0</b>   | 100.0     | 100.0     | 100.0     | 100.0   | -0.0       |
| 65+ years                        | 14.5                                   | <b>16.4</b>    | 19.2      | 22.0      | 25.0      | 27.7    | +69.2      |
|                                  | Summary Measures                       |                |           |           |           |         | Change (%) |
|                                  | 2006                                   | 2011           | 2016      | 2021      | 2026      | 2031    | 2011-2031  |
| <b>LM Entrants/Exits</b>         |  |                |           |           |           |         |            |
| (15-24/55-64 years)              | 1.0                                    | <b>0.9</b>     | 0.8       | 0.7       | 0.7       | 0.8     | -14.2      |
| (20-29/60-69 years)              | 0.9                                    | <b>0.9</b>     | 0.8       | 0.7       | 0.6       | 0.6     | -28.0      |
| <b>Elderly/Children</b>          | 0.6                                    | <b>0.7</b>     | 0.9       | 1.1       | 1.3       | 1.4     | +90.9      |
| <b>Reproductive (20-39 yrs)</b>  | 21.1                                   | <b>20.3</b>    | 20.4      | 20.8      | 20.4      | 19.6    | -3.4       |
| <b>Proportion 65+ years</b>      | 14.5                                   | <b>16.4</b>    | 19.2      | 22.0      | 25.0      | 27.7    | +69.2      |
| <b>Proportion 75+ years</b>      | 6.1                                    | <b>6.8</b>     | 8.0       | 9.4       | 11.4      | 13.4    | +98.1      |
| <b>Growth (%) in 5 years</b>     | ...                                    | <b>+3.7</b>    | +2.3      | +2.8      | +2.4      | +1.7    | +9.6       |
| <b>Annual average growth (%)</b> | ...                                    | <b>+0.7</b>    | +0.5      | +0.6      | +0.5      | +0.3    | +0.5       |

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



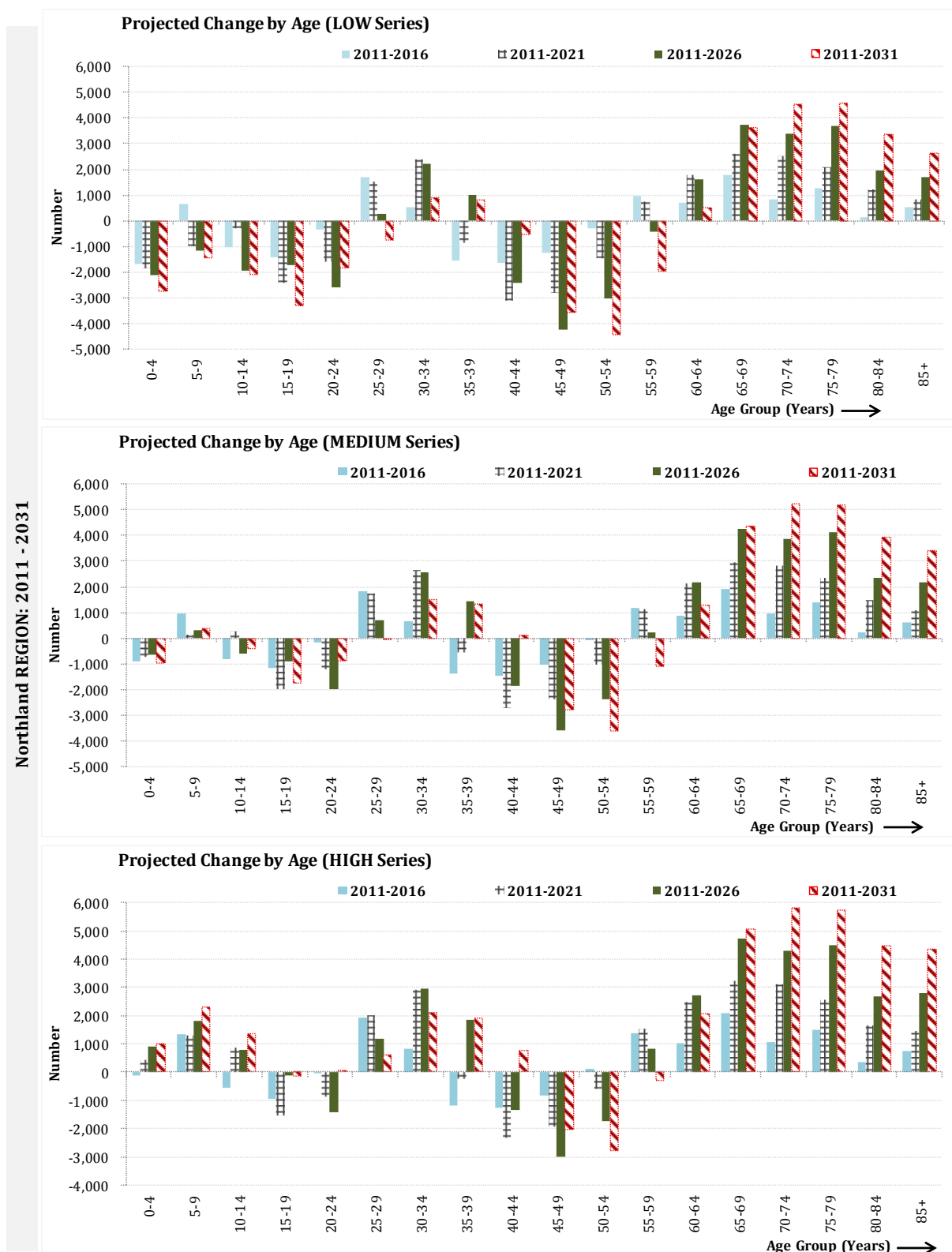
**Figure 6.1.2: Projected Change in Numbers by Broad Age Group, Northland Region, 2006-2031, Medium Series**



Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)

Figure 6.1.3 compares these changes under the low, medium and high variant assumptions. Under the low variant projections, very few gains are projected below 55 years of age, and only a few more under the medium variant, while growth is overwhelmingly at 65+ years irrespective of the projection assumptions. Only under the high assumptions is growth spread more evenly across the younger, middle, and older age groups—although caution should be exercised in using this variant as the data assume not only higher net migration gains but also higher birth rates and life expectancy. Also of note is the inter-censal ebbing and flowing among the age groups as noted above; this is also the case nationally and reflects the passage of the different size cohorts through the age structure.

**Figure 6.1.3: Projected Population Change by Age and Projection Series, Northland Region**



Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)





Table 6.1.2 summarises the projected changes at TA level and by age under the medium variant assumptions (see Appendix B4.4 for projection assumptions and B4.5 for underlying numbers).

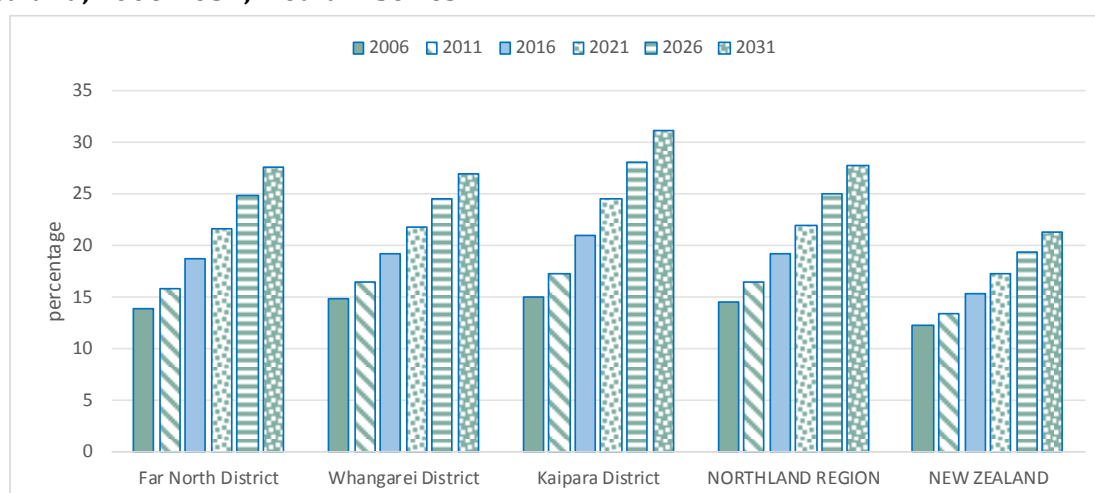
**Table 6.1.2: Projected Change (%) in Numbers by Broad Age Group, Northland Region, its TAs and Total New Zealand, 2011-2031, Medium Series**

|             | Far North District | Whangarei district | Kaipara district | Northland REGION | Total New Zealand |
|-------------|--------------------|--------------------|------------------|------------------|-------------------|
| 0-14 years  | -7.1               | +2.0               | -10.4            | -2.9             | +4.5              |
| 15-24 years | -20.9              | -7.5               | -16.7            | -13.4            | -1.1              |
| 25-39 years | +3.8               | +19.9              | +0.4             | +12.0            | +20.7             |
| 40-54 years | -23.5              | -13.5              | -25.9            | -18.7            | -1.2              |
| 55-64 years | -4.5               | +7.8               | -8.8             | +0.9             | +14.2             |
| 65-74 years | +56.7              | +70.0              | +56.6            | +63.0            | +74.8             |
| 75-84 years | +114.7             | +107.6             | +128.4           | +113.0           | +107.2            |
| 85+ years   | +140.8             | +121.5             | +156.3           | +130.2           | +101.5            |
| Total       | +3.5               | +15.2              | +4.4             | +9.6             | +17.9             |
| 0-64 years  | -11.0              | 0.77               | -13.13           | -5.23            | +7.1              |
| 65+ years   | +80.2              | +88.4              | +88.5            | +85.4            | +88.5             |

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)

The trends imply a continuation of steady modest growth for Whangarei District (15.2 per cent) and relatively low growth for both the Far North District (3.5 per cent) and Kaipara District (4.4 per cent). No individual TA is projected to experience gains in every age group, while all are projected to grow at 65+ years, consistent with population ageing (see also Figure 6.1.4 and Table 6.1.3). Growth at 65+ years accounts for virtually all growth in Whangarei District and offsets overall decline at 0-64 years in the Far North and Kaipara Districts.

**Figure 6.1.4: Projected Percentage Aged 65+ Years, Northland Region, its TAs and Total New Zealand, 2006-2031, Medium Series**



Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



**Table 6.1.3: Projected Percentage Aged 65+ Years, Northland Region, its TAs and Total New Zealand, 2006-2031 (and % Change 2011-2031), Medium Series**

|                    | 2006 | 2011        | 2016 | 2021 | 2026 | 2031 | Change 2011-2031 (%) |
|--------------------|------|-------------|------|------|------|------|----------------------|
| Far North District | 13.8 | <b>15.9</b> | 18.7 | 21.5 | 24.9 | 27.6 | 74.2                 |
| Whangarei District | 14.8 | <b>16.5</b> | 19.1 | 21.7 | 24.5 | 27.0 | 63.5                 |
| Kaipara District   | 15.0 | <b>17.2</b> | 21.0 | 24.6 | 28.1 | 31.1 | 80.6                 |
| NORTHLAND REGION   | 14.5 | <b>16.4</b> | 19.2 | 22.0 | 25.0 | 27.7 | 69.2                 |
| NEW ZEALAND        | 12.2 | <b>13.3</b> | 15.3 | 17.2 | 19.3 | 21.3 | 59.9                 |

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)

The data in Figure 6.1.4 and Table 6.1.3 show that Kaipara District is projected to remain the Region's oldest TA. The relatively rapid rate of ageing of the Far North and Whangarei Districts should also be noted, in all cases being somewhat faster than for Total New Zealand. The slightly slower rate of ageing for Whangarei has the largest impact on the overall ageing of the Region.

### Population projections – key findings

- Under the medium series assumptions, the population of the Northland Region is projected to grow slowly to approximately 173,490 by 2031 (+9.6 per cent over 2011). The high variant projections produce a 2031 population of 192,280 (+ 20.3 per cent), and the low projections, 154,830 (-1.2 per cent). The majority of growth is anticipated to come from natural increase, which diminishes to just above one-third its 2011 level; migration is modestly negative between 2011 and 2016 but positive (+1,000 per five year period) at all other observations.
- The gains are not shared evenly across the age distribution. Numbers at 0-14, 15-24 and 40-54 years are projected to decline overall, while the population aged 65+ years is anticipated to grow both numerically and structurally, with the changes particularly marked at 75+ and 85+ years.
- Between 2011 and 2031, some important inter-censal changes also occur. At 0-14 years, numbers decline, then grow, then decline again. At 15-24 years numbers decline between 2011 and 2016 (-1,360) and between 2016 and 2021 (-1,850), then modest growth resumes. These age structural transitions reflect the movement of a recently born baby blip through the age structure, and have important planning implications at school and labour market entry ages.
- At TA level the trends imply a continuation of steady modest growth for Whangarei District (15.2 per cent) and relatively low growth for both the Far North District (3.5 per cent) and Kaipara District (4.4 per cent). No individual TA is projected to experience gains in every age group, while all are projected to grow at 65+ years, consistent with population ageing. Growth at 65+ years accounts for virtually all growth in Whangarei District and at regional level offsets overall decline at 0-64 years in the Far North and Kaipara Districts.



## 6.2 Projections by Ethnicity

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While counting population by ethnicity is difficult, projecting populations based on ethnicity is even more so. The following projections developed by Statistics New Zealand have many caveats attached to them and should be read as indicative only. Among them is their multiple count base, the high degree of rounding of numbers, and, for some groups, low reliability of data by age because of small cell sizes. It should especially be noted that equivalent data are not available for the MELAA population and thus the population share distributions are indicative only.

Table 6.2.1 shows the European/Other population of the Northland Region growing only slightly (4.6 per cent) between 2011 and 2021 against a 10.0 per cent increase for Māori. The projected increases for the Pacific Island and Asian populations (46.3 and 28.9 per cent respectively) are somewhat larger, reflecting their smaller bases.

Natural Increase (the difference between births and deaths) is expected to be the main driver of growth for the European/Other, Māori and Pacific Island populations. Notably, natural increase for Māori is already greater than for European in absolute terms, despite its smaller population share, and the gap grows over time, to see natural increase for Māori outnumbering that for European by around 2,200 in 2021 (up from 1,600 in 2011). For both populations, however, natural increase declines over time, and for Māori, accompanies net migration loss, the latter offsetting the former and slowing growth. For people of Pacific Island origin, natural increase grows slightly while net migration gain remains constant, both contributing to relatively significant growth. For those of Asian origin, natural increase grows slightly, while net migration declines slightly (the data rounded by Statistics New Zealand and not given for some variables).

There are marked differences by age. The 65+ year European/Other population is projected to increase by 36.1 per cent, compared with 52.8 per cent for Māori and 150 per cent for both the Pacific Island and Asian populations. For the European/Other population the increase in the elderly population accounts for the majority of that population's overall growth of 4.6 per cent, with decline projected at 15-64 years. Growth is projected at all ages for all other ethnic groups, but less so for Māori.

By 2021 the median age of the European/Other population will be approximately 46.4 years, 19.4 years greater than for Māori (whose median age will then be 27 years), 27.3 years greater than for Pacific Islanders (19.1 years), and 15.3 years greater than for the Region's Asian population (31.1 years). The gap *vis-à-vis* European is projected to increase over time for the Pacific Island and Asian populations, but to remain constant for Māori.



**Table 6.2.1: Population Projections for the Northland Region by Ethnic Group\* and Broad Age Group**

| Northland REGION     | Population <sup>(2,3)</sup> by age group (years) at 30 June |        |        |        |          | Projected components of population change, five years ended 30 June |        |                  |               |                                      | Median age <sup>(5)</sup> (years) at 30 June |
|----------------------|---|--------|--------|--------|----------|---|--------|------------------|---------------|--------------------------------------|--|
|                      | 0-14  | 15-39  | 40-64  | 65+    | All ages | Births  | Deaths | Natural increase | Net migration | Inter-ethnic mobility <sup>(4)</sup> |  |
| European/Other       |   |        |        |        |          |   |        |                  |               |                                      |  |
| 1996                 | 26,800  | 34,700 | 33,200 | 15,300 | 110,000  | 0   | 0      | 0                | 0             | 0                                    | 36.1   |
| 2001                 | 25,400  | 30,700 | 37,300 | 17,000 | 110,400  | 0   | 0      | 0                | 0             | 0                                    | 39.4   |
| 2006 (base)          | 24,800  | 31,500 | 42,200 | 19,700 | 118,200  | 0   | 0      | 0                | 0             | 0                                    | 41.6   |
| 2011                 | 25,100  | 31,000 | 44,100 | 23,000 | 123,200  | 8,000   | 4,900  | 3,200            | 1,800         | 0                                    | 43.4   |
| 2016                 | 25,500  | 30,100 | 43,500 | 27,200 | 126,300  | 7,700   | 5,300  | 2,400            | 800           | 0                                    | 45.1   |
| 2021                 | 25,900  | 30,100 | 41,700 | 31,300 | 128,900  | 7,600   | 5,700  | 1,800            | 800           | 0                                    | 46.4   |
| Change 2011-2021 (%) | +3.2  | -2.9   | -5.4   | +36.1  | +4.6     | ...   | ...    | ...              | ...           | ...                                  | ...  |
| Māori                |   |        |        |        |          |   |        |                  |               |                                      |  |
| 1996                 | 17,900  | 17,600 | 8,800  | 2,100  | 46,400   | 0   | 0      | 0                | 0             | 0                                    | 21.8   |
| 2001                 | 17,600  | 16,700 | 10,200 | 2,500  | 47,100   | 0   | 0      | 0                | 0             | 0                                    | 22.8   |
| 2006 (base)          | 16,900  | 16,600 | 11,700 | 2,900  | 48,000   | 0   | 0      | 0                | 0             | 0                                    | 23.5   |
| 2011                 | 17,000  | 17,300 | 12,900 | 3,600  | 50,800   | 6,400   | 1,700  | 4,800            | -1,300        | -700                                 | 24.0   |
| 2016                 | 17,400  | 18,000 | 13,700 | 4,500  | 53,600   | 6,300   | 1,900  | 4,400            | -900          | -700                                 | 25.4   |
| 2021                 | 18,300  | 18,500 | 13,600 | 5,500  | 55,900   | 6,200   | 2,100  | 4,000            | -900          | -700                                 | 27.0   |
| Change 2011-2021 (%) | +7.6  | +6.9   | +5.4   | +52.8  | +10.0    | ...   | ...    | ...              | ...           | ...                                  | ...  |
| Pacific Peoples      |   |        |        |        |          |   |        |                  |               |                                      |  |
| 1996                 | 1,500   | 1,200  | 400    | 100    | 3,300    | 0   | 0      | 0                | 0             | 0                                    | 16.2   |
| 2001                 | 1,600   | 1,200  | 500    | 100    | 3,400    | 0   | 0      | 0                | 0             | 0                                    | 16.0   |
| 2006 (base)          | 2,000   | 1,500  | 700    | 100    | 4,300    | 0   | 0      | 0                | 0             | 0                                    | 16.3   |
| 2011                 | 2,300   | 1,900  | 900    | 200    | 5,400    | 900   | 100    | 900              | 300           | 0                                    | 17.8   |
| 2016                 | 2,800   | 2,300  | 1,100  | 400    | 6,600    | 1,100   | 100    | 1,000            | 300           | -100                                 | 18.9   |
| 2021                 | 3,400   | 2,800  | 1,200  | 500    | 7,900    | 1,300   | 100    | 1,100            | 300           | -100                                 | 19.1   |
| Change 2011-2021 (%) | +47.8   | +47.4  | +33.3  | +150.0 | +46.3    | ...   | ...    | ...              | ...           | ...                                  | ...  |
| Asian                |   |        |        |        |          |   |        |                  |               |                                      |  |
| 1996                 | 700   | 800    | 400    | 100    | 1,900    | 0   | 0      | 0                | 0             | 0                                    | 22.7   |
| 2001                 | 700   | 1,000  | 600    | 100    | 2,300    | 0   | 0      | 0                | 0             | 0                                    | 27.9   |
| 2006 (base)          | 900   | 1,200  | 900    | 100    | 3,100    | 0   | 0      | 0                | 0             | 0                                    | 30.0   |
| 2011                 | 1,000   | 1,400  | 1,100  | 200    | 3,800    | 400   | 0      | 300              | 400           | 0                                    | 29.2   |
| 2016                 | 1,200   | 1,600  | 1,200  | 300    | 4,300    | 400   | 0      | 300              | 300           | 0                                    | 30.1   |
| 2021                 | 1,400   | 1,800  | 1,200  | 500    | 4,900    | 400   | 100    | 400              | 300           | 0                                    | 31.1   |
| Change 2011-2021 (%) | +40.0   | +28.6  | +9.1   | +150.0 | +28.9    | ...   | ...    | ...              | ...           | ...                                  | ...  |

Source: Statistics New Zealand, Subnational Ethnic Population Projections (2006 Base - 2009 Update)

(1) Boundaries at 30 June 2009.

(2) These projections have as a base the estimated resident population of each ethnicity, of each area, at 30 June 2006 and incorporate medium fertility, medium migration, medium mortality, and medium inter-ethnic mobility assumptions for each area. Population estimates for 1996-2006 are derived from the respective 1996-2006 census usually resident population counts.

(3) Numbers reflect the multiple count enumeration methodology and their sum is somewhat greater than the total projection for the TA. Projections are not available for all ethnic groups for all TA's.

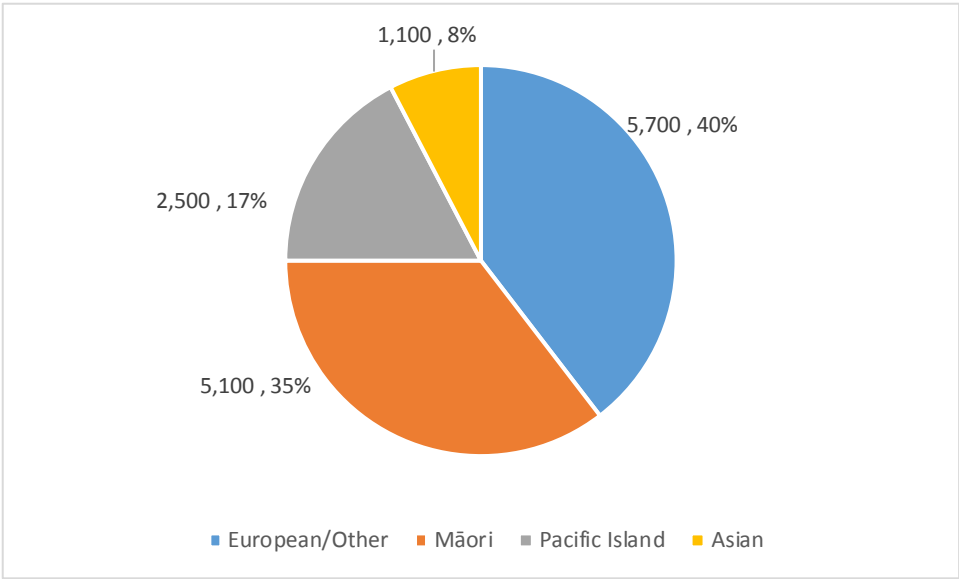
(4) The net effect of people changing their ethnic identity.

(5) Half the population is younger, and half older, than this age.

Between 2011 and 2021, the population of the Northland Region is projected to grow by approximately 14,400 based on the aggregate Multiple Ethnic Count. Figure 6.2.1 provides an indication of the contribution to that growth by the Region's four main ethnic groups. It must be noted that projections are not available for all ethnic groups, thus the contributions depicted here are based on those groups only. The majority of projected growth is shared between European (40 per cent) and Māori (35 per cent), with the Pacific Island population contributing around 17 per cent, and Asian, 8 per cent.



**Figure 6.2.1: Projected Contribution to Population Growth 2011-2021 by Major Ethnic Group\*, Northland Region**



*Source: Statistics New Zealand, Subnational Ethnic Population Projections (2006 Base - 2009 Update)*

*Notes: \*Multiple Count means that people may be counted in more than one ethnic group - however in this Figure only the four main Ethnic Groups are included*

Table 6.2.2 and Figure 6.2.2 provide an overview in terms of resulting population share by age (again the lack of data for the MELAA population should be noted). The data suggest only modest change in the overall ethnic composition of the Region, with the European/Other share falling by two percentage points to 65.2 per cent by 2021, and the Māori, Pacific Island and Asian shares increasing slightly (by 0.6, 1.1 and 0.4 percentage points respectively). There are greater differences by age, although the European/Other population will continue to account for the majority of each age group, overwhelmingly so at 65+ years.



**Table 6.2.2: Projected Population Share (%) by Broad Age Group and Ethnic Group\*, Northland Region, 2011-2021**

| Northland REGION      | 0-14   | 15-39  | 40-64  | 65+    | All ages |
|-----------------------|--------|--------|--------|--------|----------|
| <b>2011</b>           |        |        |        |        |          |
| European              | 55.3   | 60.1   | 74.7   | 85.2   | 67.2     |
| Māori                 | 37.4   | 33.5   | 21.9   | 13.3   | 27.7     |
| Pacific Peoples       | 5.1    | 3.7    | 1.5    | 0.7    | 2.9      |
| Asian                 | 2.2    | 2.7    | 1.9    | 0.7    | 2.1      |
| Total                 | 100.0  | 100.0  | 100.0  | 100.0  | 100.0    |
| Number <sup>(1)</sup> | 45,400 | 51,600 | 59,000 | 27,000 | 183,200  |
| <b>2016</b>           |        |        |        |        |          |
| European              | 54.4   | 57.9   | 73.1   | 84.0   | 66.2     |
| Māori                 | 37.1   | 34.6   | 23.0   | 13.9   | 28.1     |
| Pacific Peoples       | 6.0    | 4.4    | 1.8    | 1.2    | 3.5      |
| Asian                 | 2.6    | 3.1    | 2.0    | 0.9    | 2.3      |
| Total                 | 100.0  | 100.0  | 100.0  | 100.0  | 100.0    |
| Number <sup>(1)</sup> | 46,900 | 52,000 | 59,500 | 32,400 | 190,800  |
| <b>2021</b>           |        |        |        |        |          |
| European              | 52.9   | 56.6   | 72.3   | 82.8   | 65.2     |
| Māori                 | 37.3   | 34.8   | 23.6   | 14.6   | 28.3     |
| Pacific Peoples       | 6.9    | 5.3    | 2.1    | 1.3    | 4.0      |
| Asian                 | 2.9    | 3.4    | 2.1    | 1.3    | 2.5      |
| Total                 | 100.0  | 100.0  | 100.0  | 100.0  | 100.0    |
| Number <sup>(1)</sup> | 49,000 | 53,200 | 57,700 | 37,800 | 197,600  |

Source: Statistics New Zealand, Subnational Ethnic Population Projections (2006 Base - 2009 Update)

(1) Boundaries at 30 June 2009.

(2) These projections have as a base the estimated resident population of each ethnicity, of each area, at 30 June 2006 and incorporate medium fertility, medium migration, medium mortality, and medium inter-ethnic mobility assumptions for each area. Population estimates for 1996-2006 are derived from the respective 1996-2006 census usually resident population counts.

(3) Numbers reflect the multiple count enumeration methodology and their sum is somewhat greater than the total projection for the TA.

Projections are not available for all ethnic groups for all TA's.

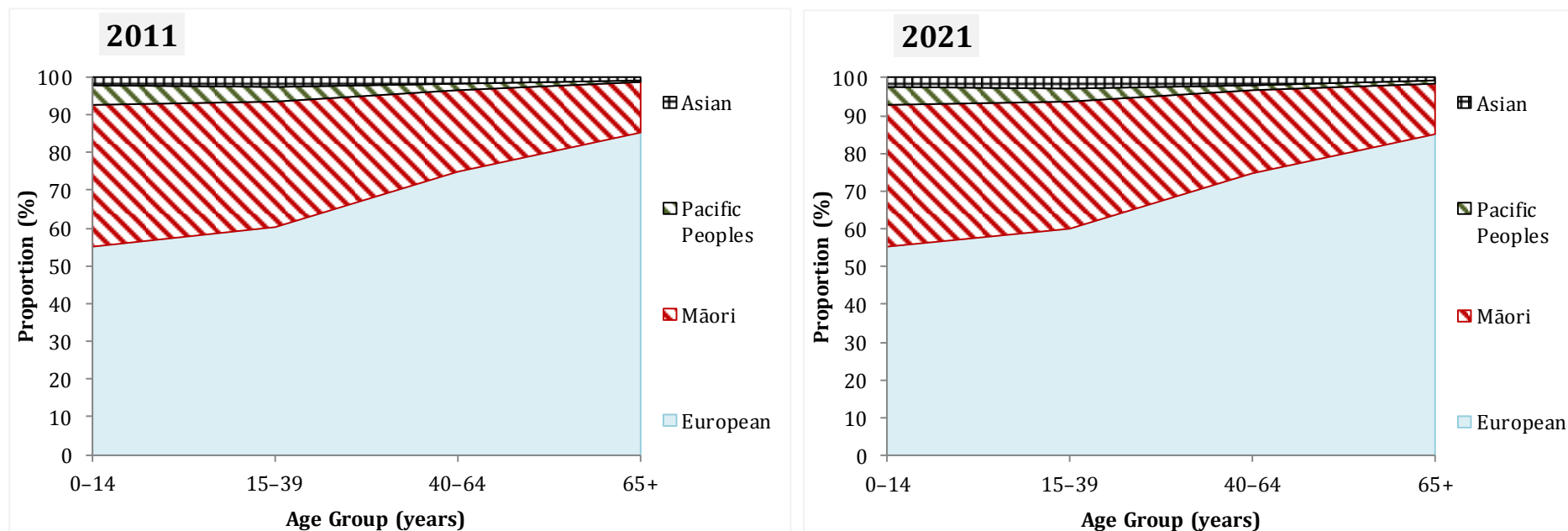
(4) The net effect of people changing their ethnic identity.

(5) Half the population is younger, and half older, than this age.

(1) Underlying numbers reflect the multiple count enumeration methodology and their sum is somewhat greater than the total projection for the region. Projections not available for all ethnic groups for all regions.



**Figure 6.2.2: Projected Population of the Northland Region by Major Ethnic Group\* and Broad Age Group, 2011 and 2021**



Source: Statistics New Zealand, Subnational Ethnic Population Projections (2006 Base - 2009 Update)

(1) Boundaries at 30 June 2009.

(2) These projections have as a base the estimated resident population of each ethnicity, of each area, at 30 June 2006 and incorporate medium fertility, medium migration, medium mortality, and medium inter-ethnic mobility assumptions for each area. Population estimates for 1996–2006 are derived from the respective 1996–2006 census usually resident population counts.

(3) The underlying numbers reflect the multiple count enumeration methodology and their sum is somewhat greater than the total projection for the region.



### Projections by Ethnicity – key findings

- Between 2011 and 2021 the European/Other population of the Northland Region is projected to increase by approximately 4.6 per cent, Māori by 10.0 per cent, Pacific Island by 46.3 per cent, and Asian-origin by 28.9 per cent.
- There are marked differences by age. The 65+ year European/Other population is projected to increase by 36.1 per cent, compared with 52.8 per cent for Māori and 150 per cent for both the Pacific Island and Asian populations. For the European/Other population the increase in the elderly population accounts for the majority of that population's overall growth of 4.6 per cent, with decline projected at 15-64 years. Growth is projected at all ages for all other ethnic groups, but less so for Māori.
- There will be relatively little change in the overall ethnic composition of the Northland Region over the period 2011-2021. The European/Other share will fall by around two percentage points, while the Māori, Pacific Island and Asian population shares will increase slightly (by 0.6, 1.1 and 0.4 percentage points respectively).
- Notably, natural increase for Māori is already greater than for European in absolute terms, despite its smaller population share, and the gap grows over time, to see natural increase for Māori outnumbering that for European by around 2,200 in 2021 (up from 1,600 in 2011).
- Between 2011 and 2021, the population of the Northland Region is projected to grow by approximately 14,400 based on the aggregate Multiple Ethnic Count. Figure 6.2.1 provides an indication of the contribution to that growth by the Region's four main ethnic groups. It must be noted that projections are not available for all ethnic groups, thus the contributions depicted here are based on those groups only. The majority of projected growth is shared between European (40 per cent) and Māori (35 per cent), with the Pacific Island population contributing around 17 per cent, and Asian, 8 per cent.

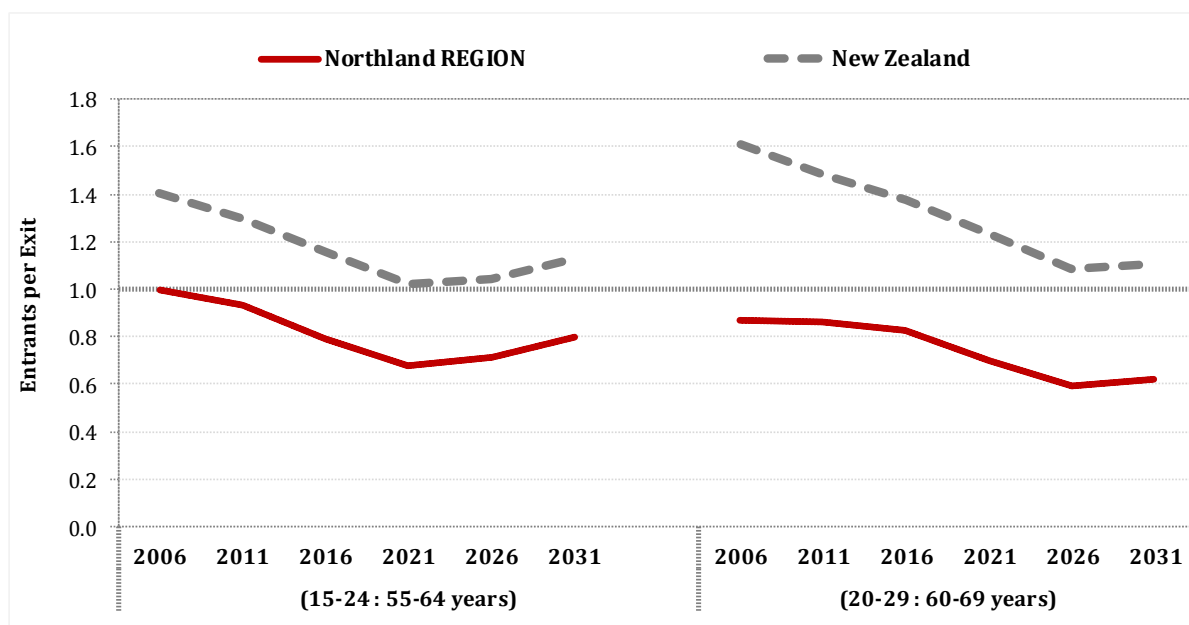




### 6.3 Labour Market Implications of Projected Change Age Structure

As noted earlier, population ageing drives other important demographic changes. One of the most important is change in the ratio of people at labour market entry age to those at 'exit' age. Various age groupings can be employed to calculate this ratio; here we use two: people aged 15-24 to those 55-64 years, and people aged 20-29 to those 60-69 years (Figure 6.3.1). For the Northland Region, both ratios are already below parity (one for one), and are somewhat lower than at national level, with fewer people at 'entry' than 'exit' age projected across the entire projection period. The declining ratios reverse slightly after 2021 (at 15-24: 55-64 years) and 2026 (at 20-29: 60-69 years); this is when the recently born baby blip will have reached the labour market (see also Table 5.1.1 above). However these population-based ratios say little about future labour market availability. All are also linked in a national (and international) labour market that will see increased competition for the participation of the young and greater need to encourage the retention of older workers. This demographically-tight labour market will have significant implications for labour costs as it unfolds. This will be particularly so for industries which have older age structures and are ageing faster than average, as outlined in the following special topic (Section 7.0), and for all non-urban areas in general.

**Figure 6.3.1: Projected Ratio of People at Labour Market Entry Age (15-24 and 20-29 Years) to Those Approaching Exit Age (55-64 and 60-69 Years), Northland Region and Total New Zealand, 2006-2031 (Medium Variant Assumptions)**



Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



Table 6.3.1 provides similar information for the TAs which comprise the Northland Region. Ratios for all Northland TAs would also appear to be already below parity (one for one), denoted by the shaded cells. Ratios in 2011 were lowest for the Kaipara District on both indices (15-24: 55-64 and 20-29: 60-69 years) and second-lowest for the Far North District. All ratios fall steadily until either 2026 or 2031, at which time the recently born baby blip will be swelling numbers in the younger labour market ages—however it should be noted that national projections beyond 2031 indicate that this rise will be temporary, as the largest baby boom cohorts will by then be leaving the labour market.

**Table 6.3.1: Projected Ratio of People at Labour Market Entry Age to Those Approaching Exit Age, Northland Region and its Territorial Authority Areas, 2006-2031 (Medium Variant Assumptions)**

|                              | Far North District | Whangarei District | Kaipara District | Northland Region | Total New Zealand |
|------------------------------|--------------------|--------------------|------------------|------------------|-------------------|
| <b>(15-24 : 55-64 years)</b> |                    |                    |                  |                  |                   |
| 2006                         | 0.9                | 1.1                | 0.8              | 1.0              | 1.4               |
| <b>2011</b>                  | <b>0.9</b>         | <b>1.0</b>         | <b>0.7</b>       | <b>0.9</b>       | <b>1.3</b>        |
| 2016                         | 0.7                | 0.9                | 0.6              | 0.8              | 1.2               |
| 2021                         | 0.6                | 0.8                | 0.6              | 0.7              | 1.0               |
| 2026                         | 0.6                | 0.8                | 0.6              | 0.7              | 1.0               |
| 2031                         | 0.7                | 0.9                | 0.7              | 0.8              | 1.1               |
| Change (%) 2011-2031         | -17.2              | -14.2              | -8.6             | -14.2            | -13.4             |
| <b>(20-29 : 60-69 years)</b> |                    |                    |                  |                  |                   |
| 2006                         | 0.8                | 1.0                | 0.8              | 0.9              | 1.6               |
| <b>2011</b>                  | <b>0.8</b>         | <b>1.0</b>         | <b>0.7</b>       | <b>0.9</b>       | <b>1.5</b>        |
| 2016                         | 0.8                | 0.9                | 0.6              | 0.8              | 1.4               |
| 2021                         | 0.6                | 0.8                | 0.5              | 0.7              | 1.2               |
| 2026                         | 0.5                | 0.7                | 0.5              | 0.6              | 1.1               |
| 2031                         | 0.5                | 0.7                | 0.5              | 0.6              | 1.1               |
| Change (%) 2011-2031         | -32.1              | -27.3              | -22.8            | -28.0            | -25.4             |

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)

#### Labour Market implications of projected changes in age structure – key findings

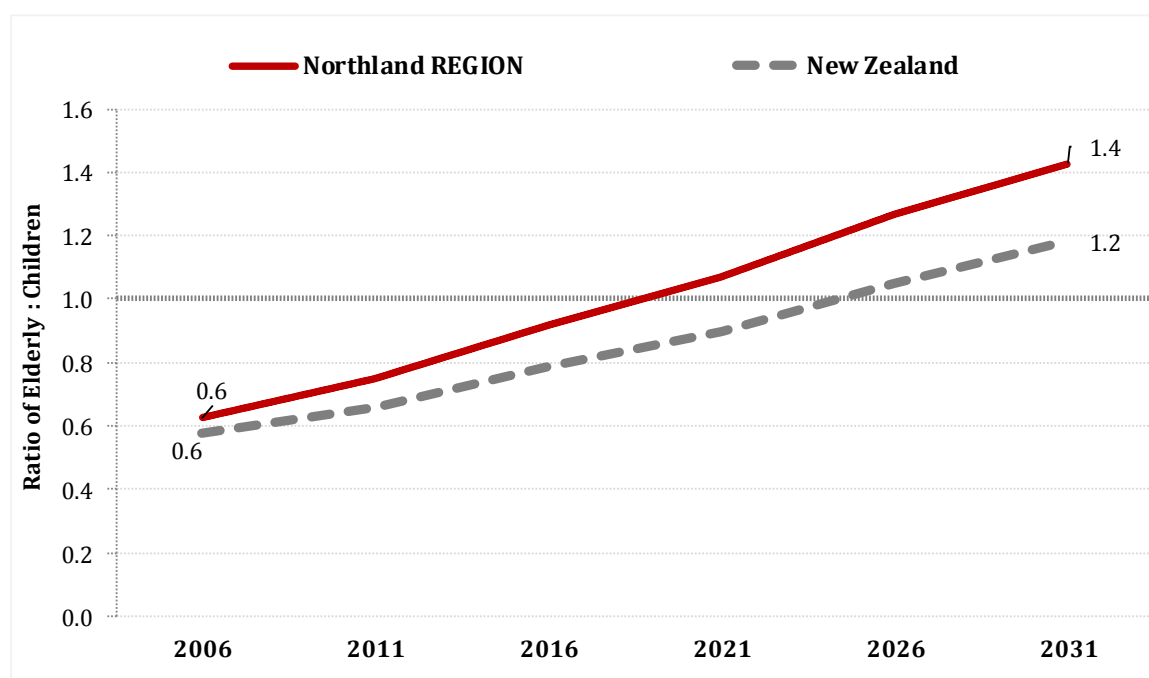
- The Northland Region already has fewer people at labour market 'entry age' than 'exit age', and this is projected to fall further to around 8 at entry age per ten at exit age for the 15-24: 55-64 year age groups, and to 6 at entry age per ten exit at age for the 20-29: 60-69 year age groups.
- The shifts are most pronounced for the Far North and Kaipara Districts, but ratios are also already on the verge of falling below parity (one for one) for Whangarei.



## 6.4 Natural Increase Implications of Projected Change in Age Structure

For the Northland Region, the ratio of elderly (65+ years) to children (0-14 years) is projected to increase rapidly from 0.6 (6 elderly for every 10 children) in 2006 to 1.4 by 2031 (14 for every 10; Figure 6.4.1). This profound shift to more elderly than children (the cross over occurring between 2016 and 2021, about five years earlier than for Total New Zealand) will by then be contributing to diminishing levels of natural increase (Figure 6.4.2), as will the slowly diminishing proportion projected to be at the key reproductive ages (19.6 per cent in 2031 compared with Total New Zealand 26.3 per cent) (Figure 6.4.3).

**Figure 6.4.1: Projected Ratio of Elderly (65+ Years) to Children (0-14 Years), Northland Region and Total New Zealand, 2006-2031 (Medium Variant Assumptions)**

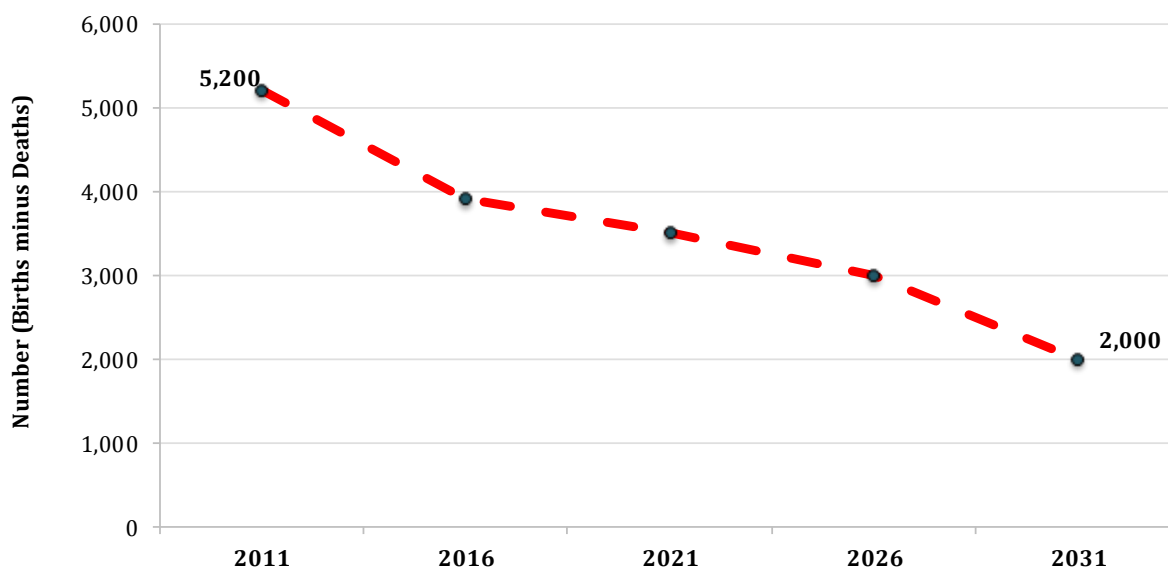


Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)

The proportion at key reproductive age (Figure 6.4.3) appears to be a particularly critical indicator of future growth. As noted in the short article at the beginning of this report, one-third of New Zealand's TAs have either stopped growing or declined in size since 1996. All had proportions aged 20-39 years lower than the national average, and thereby severe 'hour-glass' shaped age structures which are no longer conducive to sustained natural growth. Referring back to Section 2, natural increase is currently the major component of the Northland Region's growth and particularly of some of its TAs. As that component declines, growth – or maintenance of population size - will become ever more dependent on migration.

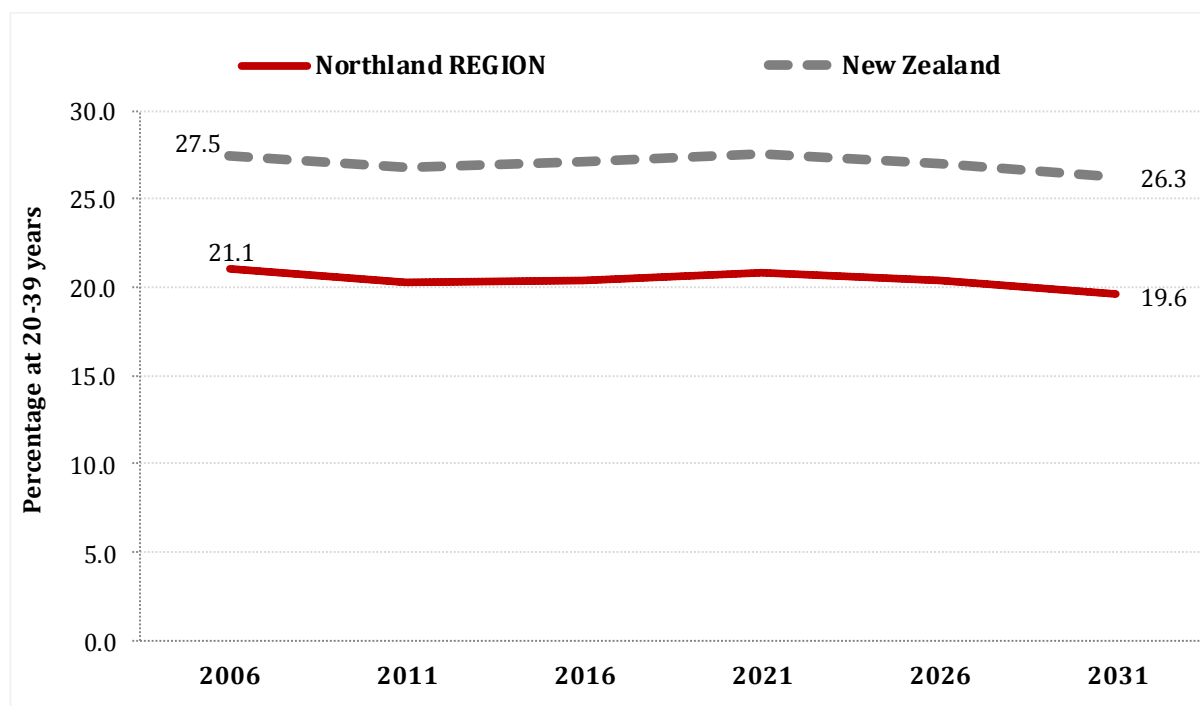


**Figure 6.4.2: Projected Natural Increase, Northland Region, 2011-2031 (Medium Variant Assumptions)**



Source: Subnational Projected Population Characteristics, 2006(base)-2031 (October 2012 update)

**Figure 6.4.3: Projected Proportion at Key Reproductive Ages (20-39 Years), Northland Region and Total New Zealand, 2006-2031 (Medium Variant Assumptions)**



Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



Tables 6.4.1 to 6.4.3 give the data for the TAs which comprise the Northland Region, beginning with the proportion of each TA at the key reproductive age (Table 6.4.1). For all Northland TAs, these proportions decline across the period, most particularly for the Kaipara and Far North Districts (7.1 and 5.6 per cent respectively). For the Far North and Whangarei Districts, as for Northland and Total New Zealand, there is a small increase in the proportions around 2016-2021 as a larger cohort (born nationally around 1991) moves into the main reproductive age group. However the most notable feature of Table 6.4.1 is the extremely low proportions already at these ages in all Northland TAs, substantially lower than is the case nationally. As indicated below, these low proportions have significant implications for natural increase.

**Table 6.4.1: Projected Proportion at Key Reproductive Age (20-39 Years), Northland Region and its Territorial Authority Areas, 2006-2031 (Medium Variant Assumptions)**

|                      | Far North District | Whangarei District | Kaipara District | Northland Region | Total New Zealand |
|----------------------|--------------------|--------------------|------------------|------------------|-------------------|
| 2006                 | 20.0               | 22.2               | 20.0             | 21.1             | 27.5              |
| <b>2011</b>          | <b>19.4</b>        | <b>21.2</b>        | <b>18.9</b>      | <b>20.3</b>      | <b>26.8</b>       |
| 2016                 | 19.6               | 21.3               | 18.4             | 20.4             | 27.1              |
| 2021                 | 20.0               | 22.0               | 18.4             | 20.8             | 27.5              |
| 2026                 | 19.3               | 21.6               | 18.3             | 20.4             | 27.0              |
| 2031                 | 18.3               | 20.8               | 17.5             | 19.6             | 26.3              |
| Change (%) 2011-2031 | -5.6               | -1.7               | -7.1             | -3.4             | -2.0              |

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)

The changing proportions at reproductive age are closely associated with shifts in the ratio of elderly to children (Table 6.4.2). In 2011, no Northland TA's had more people over the age of 65 than children (0-14 years). However, Kaipara District is close to that situation, projected to have more elderly than children by 2016, and all Northland TAs from around 2021.

**Table 6.4.2: Projected Ratio of Elderly (65+ Years) to Children (0-14 Years), Northland Region and its Territorial Authority Areas, 2006-2031 (Medium Variant Assumptions)**

|                      | Far North District | Whangarei District | Kaipara District | Northland Region | Total New Zealand |
|----------------------|--------------------|--------------------|------------------|------------------|-------------------|
| 2006                 | 0.6                | 0.7                | 0.7              | 0.6              | 0.6               |
| <b>2011</b>          | <b>0.7</b>         | <b>0.8</b>         | <b>0.8</b>       | <b>0.7</b>       | <b>0.7</b>        |
| 2016                 | 0.9                | 0.9                | 1.0              | 0.9              | 0.8               |
| 2021                 | 1.0                | 1.1                | 1.3              | 1.1              | 0.9               |
| 2026                 | 1.2                | 1.3                | 1.5              | 1.3              | 1.0               |
| 2031                 | 1.4                | 1.4                | 1.7              | 1.4              | 1.2               |
| Change (%) 2011-2031 | 93.9               | 84.7               | 110.4            | 90.9             | 80.4              |

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



The general reduction in the proportion of the population at the key reproductive ages, alongside the underlying assumptions regarding future birth and life expectancy rates which change the ratio of old to young, result in a projected decline in natural increase for all Northland TAs (Table 6.4.3). By the end of the projection period, natural increase for the Kaipara District is projected to fall as low as 50 (more births than deaths) per five years. However in no case is natural decline projected before 2031.

**Table 6.4.3: Projected Natural Increase (Five Year Period) Northland Region and its Territorial Authority Areas, 2006-2031 (Medium Variant Assumptions)**

|                      | Far North District | Whangarei District | Kaipara District | Northland Region | Total New Zealand |
|----------------------|--------------------|--------------------|------------------|------------------|-------------------|
| 2011                 | 2,000              | 2,600              | 550              | 5,200            | 171,200           |
| 2016                 | 1,500              | 2,000              | 400              | 3,900            | 153,100           |
| 2021                 | 1,400              | 1,900              | 300              | 3,500            | 151,800           |
| 2026                 | 1,100              | 1,700              | 200              | 3,000            | 146,400           |
| 2031                 | 700                | 1,200              | 50               | 2,000            | 130,100           |
| Change (%) 2011-2031 | -65.0              | -53.8              | -90.9            | -61.5            | -24.0             |

*Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)*

As outlined throughout this profile, the trends mean that while the Northland Region is likely to continue to grow throughout the projection period, that growth will almost certainly be at a decreasing rate. As elsewhere in New Zealand, the Region's overall growth will also become increasingly patchy at TA level, as its underlying drivers – births, deaths and migration – interact, and population ageing proceeds.



### **Natural Increase implications of projected changes in age structure – key findings**

- For the Northland Region, the ratio of elderly (65+ years) to children (0-14 years) is projected to increase rapidly from its 2006 ratio of 0.6 (6 elderly for every 10 children), to 1.4 (14 per 10) by 2031. The cross over will occur between 2016 and 2021, about five years earlier than for Total New Zealand.
- Structural ageing will by then be contributing to diminishing levels of natural increase, as will the slowly diminishing proportion projected to be at the key reproductive ages of 20-39 years (for Northland, 19.6 per cent in 2031, down from 20.3 per cent in 2011) compared with Total New Zealand (26.8 per cent in 2011 and 26.3 per cent in 2031).
- For all Northland TAs, proportions at reproductive age are already very low by national standards (ranging from 18.9 to 19.4 per cent for the Kaipara and Far North Districts respectively) and decline further across the projection period, most particularly for the Kaipara and Far North Districts (by 7.1 and 5.6 per cent respectively). For most TAs and Northland, as for Total New Zealand, there is a small increase in the proportions around 2016-2021 as a larger cohort (born nationally around 1991) moves into the main reproductive age group.
- The general reduction in the proportion of the population at the key reproductive ages, alongside the underlying assumptions regarding future birth and life expectancy rates which change the ratio of old to young, result in a projected decline in natural increase for all Northland TAs. By the end of the projection period, natural increase for the Kaipara District is projected to fall as low as 50 (more births than deaths) per five years. However in no case is natural decline projected before 2031.



## 7.0 Industrial Change 1996-2013 – Special Topic

The extent (and speed) of population ageing and its impact on the workforce also differs by industry. Industries which employ large proportions of younger people, such as supermarkets and grocery stores, by definition have youthful age structures; those employing large proportions of older people (especially in senior management positions) have older age structures. However industrial employment patterns by age are not of interest simply because they differ, but rather, in the context of population ageing, they provide important information for issues such as future labour supply and human resource planning.

This section begins with a list of all industries in the Northland Region employing more than 500 people in 2013—36 industries accounting for over two-thirds of the Region's 61,345-strong employed workforce (Table 7.1.1, see also Appendix B5.1). These three-digit level data have been customised by Statistics New Zealand to be consistent in terms of industry across time—158 industries being enumerated at this level. The section then provides an overview of the changing age-sex structure for the Region's overall employed workforce and then its six largest industries in 2013: School Education; Dairy Cattle Farming; Grain, Sheep and Beef Farming; Community Care; Hospitals and Nursing Homes; and Other Health Services. Because of their close relationship both to each other and with population ageing, the latter three are discussed together.

Table 7.1.2 and Figure 7.1.1 provide data for the Northland Region's total employed workforce. Reflecting the demographic trends outlined above, the average age of employed persons at each census was respectively 40.3, 42.3, 43.4 and 46.2 years, an overall increase of 6.0 years (14.8 per cent). This is somewhat higher than the average age for the Total New Zealand employed workforce at each observation: 38.2, 40.0, 41.1 and 43.1 years (an increase of 4.9 years, 12.9 per cent), and the Northland Region's workforce is ageing faster. The speed of this change is similarly evidenced in the increasing proportion aged 55+ years, from just 15.0 per cent in 1996 to 31.7 per cent in 2013 (+111 per cent), and the ratio of those at workforce entry to exit age (here 15-29: 55+ years) falling from 17 per 10 in 1996, to just 5 per 10 in 2013. **NB** these data are for the employed workforce, as opposed to those at labour *market* age in the population, as discussed earlier.

To assist understanding of workforce ageing, the patterned bars on Figure 7.1.1 trace the movement of the largest Baby Boom cohort (born 1956-61) through the age structure. In 1996 this cohort was aged 35-39 years, in 2006, 45-49 years, and in 2013, 52-56 years—however because of the 7 year gap between the last two censuses the cohort is depicted here as if its members were aged 50-54 years in 2013. In reality they were between the 50-54 and 55-59 year age bands. As Figure 7.1.1 indicates, Baby Boomers are very much part of workforce ageing—but so are later entry into the workforce due to extended education, and extended participation at older ages.





**Table 7.1.1: Industries Employing Over 500 Persons in 2013, Northland Region 1996-2013**

| Northland Region                                     | Number Employed |               |               |               | % Change<br>1996-2013 |
|--|-----------------|---------------|---------------|---------------|-----------------------|
|  | 1996            | 2001          | 2006          | 2013          |                       |
| School Education                                     | 2,691           | 3,303         | 3,399         | 3,510         | +30.4                 |
| Dairy Cattle Farming                                 | 3,492           | 3,159         | 2,526         | 2,466         | -29.4                 |
| Grain, Sheep & Beef Cattle Farming                   | 2,511           | 2,286         | 2,577         | 2,124         | -15.4                 |
| Community Care Services                              | 681             | 1,122         | 1,887         | 2,082         | +205.7                |
| Hospitals & Nursing Homes                            | 1,353           | 1,527         | 1,242         | 1,848         | +36.6                 |
| Other Health Services                                | 531             | 1,185         | 1,560         | 1,806         | +240.1                |
| Supermarket & Grocery Stores                         | 1,479           | 1,524         | 1,710         | 1,647         | +11.4                 |
| Government Administration                            | 1,584           | 1,212         | 1,413         | 1,572         | -0.8                  |
| Building Construction                                | 981             | 1,119         | 2,031         | 1,458         | +48.6                 |
| Cafes & Restaurants                                  | 990             | 1,104         | 1,470         | 1,332         | +34.5                 |
| Motor Vehicle Services                               | 1,305           | 1,341         | 1,473         | 1,266         | -3.0                  |
| Accommodation  | 1,014           | 1,278         | 1,461         | 1,263         | +24.6                 |
| Other Business Services                              | 672             | 795           | 1,098         | 1,233         | +83.5                 |
| Horticulture & Fruit Growing                         | 1,623           | 1,566         | 1,272         | 1,176         | -27.5                 |
| Specialised Food Retailing                           | 897             | 960           | 1,017         | 1,038         | +15.7                 |
| Marketing & Business Management Services             | 366             | 555           | 840           | 1,002         | +173.8                |
| Other Personal Services                              | 816             | 864           | 966           | 975           | +19.5                 |
| Other Personal & Household Good Retailing            | 942             | 1,041         | 1,164         | 975           | +3.5                  |
| Public Order & Safety Services                       | 369             | 525           | 675           | 969           | +162.6                |
| Legal & Accounting Services                          | 762             | 789           | 963           | 960           | +26.0                 |
| Installation Trade Services                          | 597             | 762           | 987           | 897           | +50.3                 |
| Road Freight Transport                               | 651             | 759           | 828           | 867           | +33.2                 |
| Non-Building Construction                            | 534             | 588           | 825           | 837           | +56.7                 |
| Medical & Dental Services                            | 495             | 570           | 735           | 774           | +56.4                 |
| Property Operators & Developers                      | 363             | 459           | 873           | 717           | +97.5                 |
| Forestry & Logging                                   | 621             | 717           | 618           | 705           | +13.5                 |
| Services to Agriculture                              | 495             | 663           | 768           | 690           | +39.4                 |
| Technical Services                                   | 357             | 507           | 825           | 654           | +83.2                 |
| Preschool Education                                  | 285             | 315           | 399           | 612           | +114.7                |
| Real Estate Agents                                   | 444             | 483           | 846           | 612           | +37.8                 |
| Furniture, Houseware & Appliance Retailing           | 513             | 546           | 732           | 567           | +10.5                 |
| Builders Supplies Wholesaling                        | 318             | 411           | 573           | 558           | +75.5                 |
| Building Completion Services                         | 501             | 591           | 816           | 549           | +9.6                  |
| Child Care Services                                  | 165             | 294           | 384           | 531           | +221.8                |
| Other Wood Product Manufacturing                     | 378             | 489           | 699           | 531           | +40.5                 |
| Sport  | 240             | 390           | 441           | 519           | +116.3                |
| <b>Industries employing over 500 persons in 2013</b> | <b>32,016</b>   | <b>35,799</b> | <b>42,093</b> | <b>41,322</b> | <b>29.1</b>           |
| <b>Northland Region: Total Employed Labour Force</b> | <b>52,410</b>   | <b>54,957</b> | <b>64,395</b> | <b>61,341</b> | <b>+17.0</b>          |

Source: Jackson/Statistics NZ Customised Database, available from author. Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years. 1996. 2001. 2006. 2013



**Table 7.1.2: Employed Workforce, Summary Statistics 1996-2013, Northland Region, Usually Resident Population**

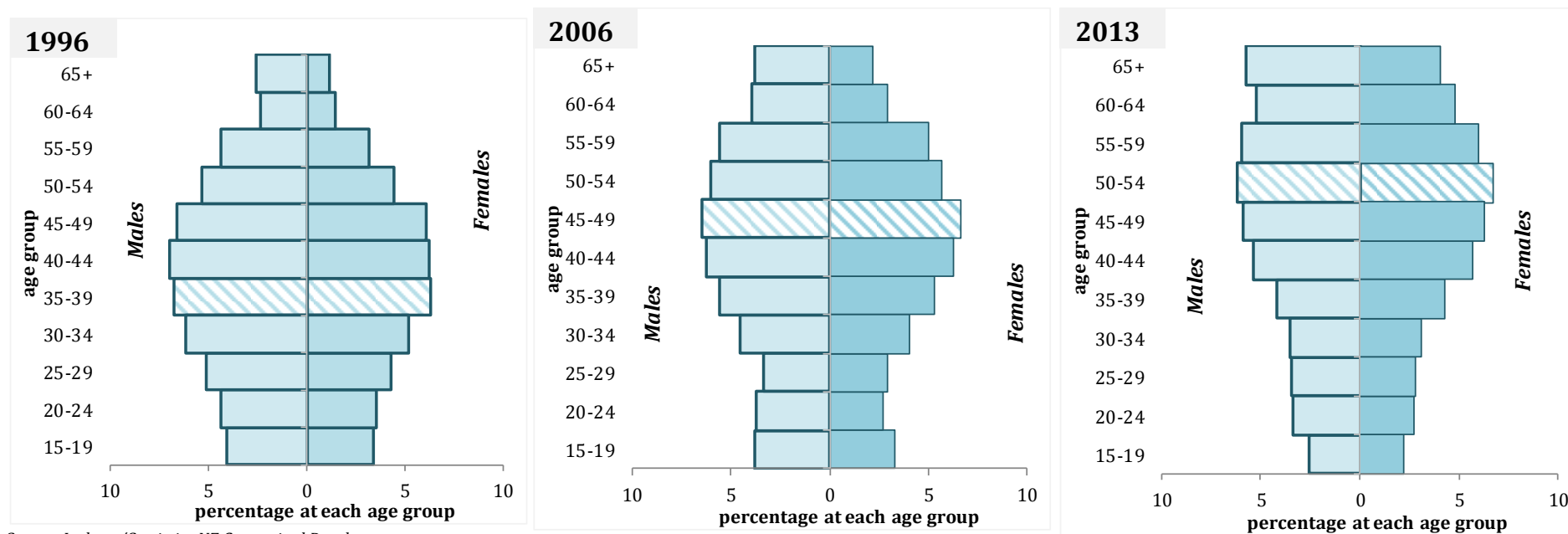
|   | 1996   | 2001   | 2006   | 2013   | Change<br>1996-2013 (%) |
|---|--------|--------|--------|--------|-------------------------|
| <b>Number Employed</b>                  | 52,410 | 54,957 | 64,395 | 61,341 |                         |
| Change between Censuses (%)             |        | 4.9    | 17.2   | -4.7   | 17.0                    |
| <b>Sex Ratio by age (males/females)</b> |        |        |        |        |                         |
| Total All Ages*                         | 1.22   | 1.16   | 1.12   | 1.06   | -7.7                    |
| <b>Average Age</b>                      | 40.3   | 42.3   | 43.4   | 46.2   | +14.8                   |
| <b>Percentage aged 55+ years</b>        | 15.0   | 19.3   | 23.4   | 31.7   | +111.1                  |
| <b>Employment Entry/Exit Ratio</b>      |        |        |        |        |                         |
| (15-29 years : 55+ years)               | 1.7    | 1.1    | 0.8    | 0.5    | -67.4                   |

Source: Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013

\* Age not available for small cell sizes



**Figure 7.1.1: Age-Sex Structure, Employed Workforce 1996, 2006, 2013, Northland Region, Usually Resident Population**



Source: Jackson/Statistics NZ Customised Database,

Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013



Differing somewhat from the total employed workforce is the region's single largest industrial grouping, School Education (ANZSIC96 V4.1 code N842), which is heavily feminised (Table 7.1.3 and Figure 7.1.2)—the sex ratio (males per female) having also decreased slightly over time, from 0.41 males per female in 1996 to 0.33 in 2013. The average age of Northland persons employed in this industry (43.4 years in 1996 and 48.3 years in 2013) is a little greater than the Region's total workforce, and has shifted upwards since 1996 by 4.9 years (11.3 per cent). This is a faster rate of structural ageing than for the Total New Zealand School Education workforce (10.4 per cent). Northland School Education employees are also older on average than their national counterparts (47.0 years in 2013).

The significant increase in percentage aged 55+ years, from 13.5 per cent in 1996 to 32.7 per cent in 2013, is closely correlated with the significant decline in the ratio of people at workforce entry to exit age. In 1996 there were 9 people at entry age for every 10 in the retirement zone; by 2013 that had fallen to just 2 per 10.

**Table 7.1.3: School Education Employed Workforce, Summary Statistics 1996-2013, Northland Region, Usually Resident Population**

| <b>N842 School Education</b>                                    | <b>1996</b> | <b>2001</b> | <b>2006</b> | <b>2013</b> | <b>Change<br/>1996-2013 (%)</b> |
|---|-------------|-------------|-------------|-------------|---------------------------------|
| <b>Number Employed</b>  | 2,691       | 3,303       | 3,399       | 3,510       |                                 |
| Change between Censuses (%)                                     |             | 22.7        | 2.9         | 3.3         | 30.4                            |
| <b>Sex Ratio by age (males/females)</b>                         |             |             |             |             |                                 |
| Total All Ages*   | 0.41        | 0.37        | 0.32        | 0.33        | -22.5                           |
| <b>Average Age</b>  | 43.4        | 44.6        | 45.9        | 48.3        | +11.3                           |
| <b>Percentage aged 55+ years</b>                                | 13.5        | 18.2        | 22.3        | 32.7        | +142.7                          |
| <b>Employment Entry/Exit Ratio</b><br>(15-29 years : 55+ years) | 0.9         | 0.6         | 0.4         | 0.2         | -73.5                           |

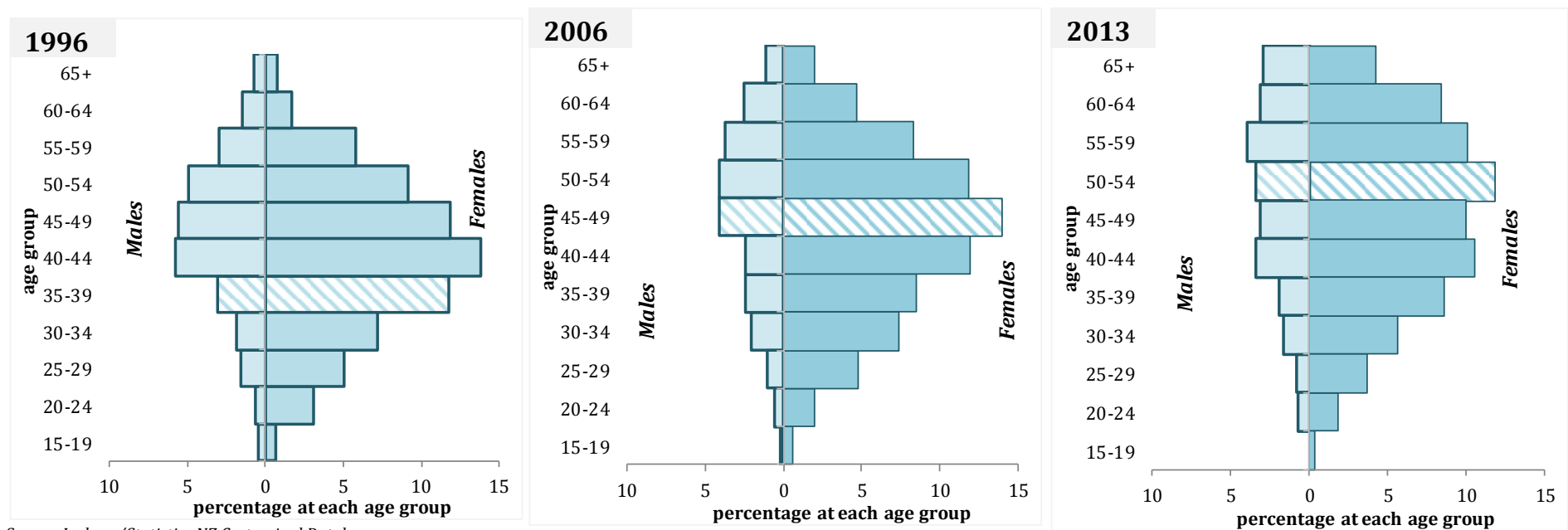
*Source: Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013*

*\* Age not available for small cell sizes*

As Figure 7.1.2 makes clear, the movement of the largest Baby Boomer cohort through the age structure against somewhat lower levels of entry (and/or retention) at younger ages is a stark reminder of the importance for industries (in this case government policy) to ensure future labour supply.



Figure 7.1.2: Age-Sex Structure, School Education Industry [N842] 1996, 2006, 2013 Northland Region, Usually Resident Population



Source: Jackson/Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013



Somewhat younger is the Region's second largest industry (in 2013 employing 2,466 persons, a decline of 29.4 per cent over 1996): Dairy Cattle Farming (Table 7.1.4, Figure 7.1.3). The average age of those employed in this industry increased from 40.3 years in 1996 to 44.3 years in 2013 (+10 per cent), and the industry's entry: exit ratio fell from 15 per 10 (entrants per those in the retirement zone, 55+ years) in 1996, to just 8 per 10 in 2013. For Northland the industry's workforce is a little older than the national Dairy Cattle Farming workforce (41.6 years in 2013) and also slightly older than the national employed workforce (43.1 years in 2013). This is commensurate with the Region's older age structure more generally.

**Table 7.1.4: Dairy Cattle Farming Employed Workforce, Summary Statistics 1996-2013, Northland Region, Usually Resident Population**

| <b>A013 Dairy Cattle Farming</b>                                | <b>1996</b> | <b>2001</b> | <b>2006</b> | <b>2013</b> | <b>Change<br/>1996-2013 (%)</b> |
|---|-------------|-------------|-------------|-------------|---------------------------------|
| <b>Number Employed</b>  | 3,492       | 3,159       | 2,526       | 2,466       |                                 |
| Change between Censuses (%)                                     |             | -9.5        | -20.0       | -2.4        | -29.4                           |
| <b>Sex Ratio by age (males/females)</b>                         |             |             |             |             |                                 |
| Total All Ages*   | 1.89        | 1.94        | 1.91        | 2.04        | +1.0                            |
| <b>Average Age</b>  | 40.3        | 42.4        | 42.8        | 44.3        | +10.1                           |
| <b>Percentage aged 55+ years</b>                                | 16.3        | 21.1        | 23.4        | 26.5        | +62.9                           |
| <b>Employment Entry/Exit Ratio</b><br>(15-29 years : 55+ years) | 1.5         | 1.0         | 0.9         | 0.8         | -49.4                           |

*Source: Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment*

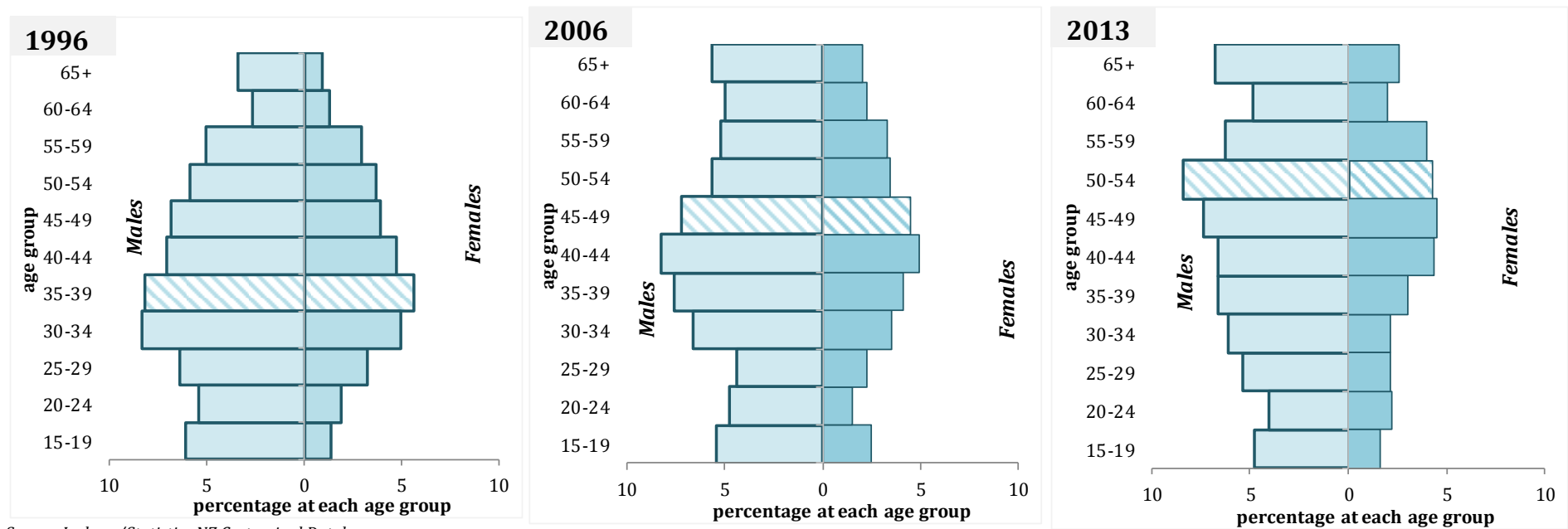
*by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013*

*\* Age not available for small cell sizes*

The Region's third largest industry—and second-oldest of the 158 enumerated at this level for Northland—is Grain, Sheep and Beef Farming (Table 7.1.5, Figure 7.1.4). Structural ageing for this industry is significantly more advanced than for most other industries, both for Northland and nationally, with (for Northland) an average age in 2013 of 54.0 years, up from 48.1 years in 1996 (+12.0 per cent). In 1996, 36.4 per cent of those employed in this industry were aged 55+ years; by 2013 that had increased to 58.3 per cent (+60.2 per cent). The trends resulted in the workforce entry: exit ratio (15-29: 55+ years) falling from 3 entrants per 10 in the retirement zone in 1996, to just 1 per 10 in 2013. These trends make it critical that succession planning is uppermost in the minds of local farmers.



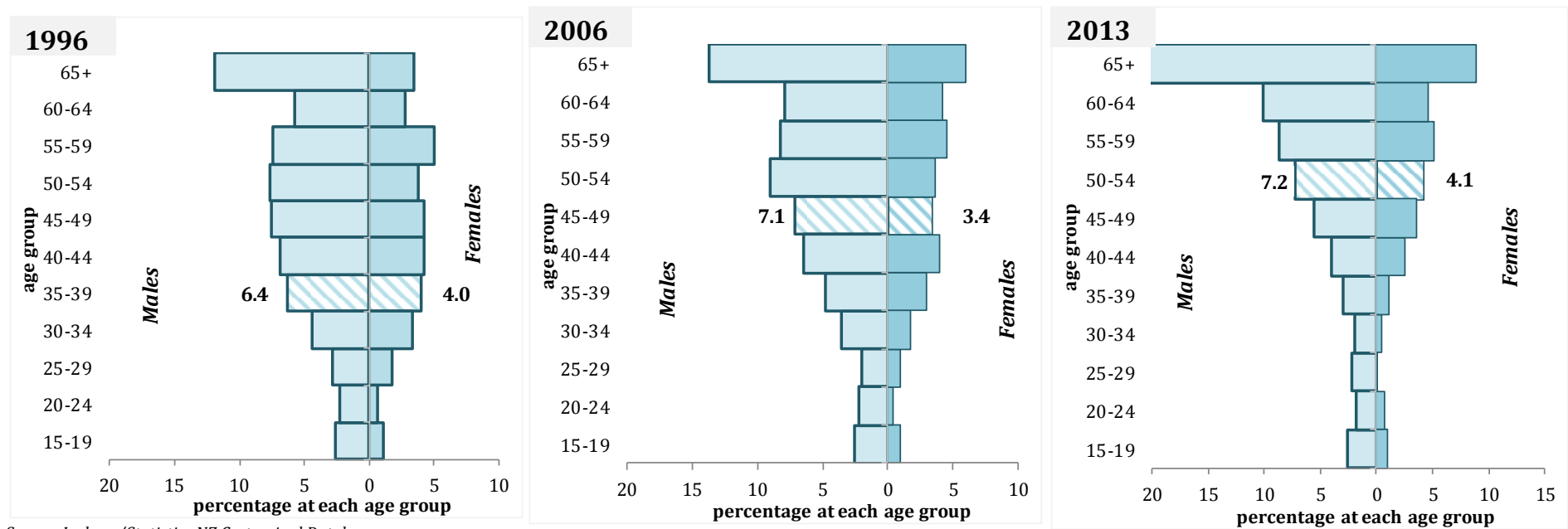
Figure 7.1.3: Age-Sex Structure, Dairy Cattle Farming [A013] 1996, 2006, 2013 Northland Region, Usually Resident Population



Source: Jackson/Statistics NZ Customised Database,  
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013



Figure 7.1.4: Age-Sex Structure, Grain, Sheep and Beef Farming [A012] 1996, 2006, 2013 Northland Region, Usually Resident Population



Source: Jackson/Statistics NZ Customised Database,  
Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013





The Region's next three largest industries (Community Care Services; Hospitals and Nursing Homes; and Other Health Services) are discussed together, given their common relationship to Health and population ageing in general. In 2013 they collectively employed 5,736 people, significantly more than in 1996 (2,565, +124 per cent) and accounting for 9.4 per cent of the employed workforce, up from 4.9 per cent in 1996.

Both individually and collectively these industries' age structures follow similar trends to those for the three single largest industries, and, like school education, are all highly feminised (Tables 7.1.6, 7.1.7, 7.1.8). In 2013 the average age of the Northland Region's Health Care personnel (from these three industries) ranged from 47.8 to 49.8 years (Hospitals and Nursing Homes, and Community Care Services respectively) up from an average of 41.5 years in 1996. In 2013 the three industries had entry: exit ratios of between 2 and 3 (entrants per exit), down from an average 14 per 10 in 1996. Reflecting the general pattern of the Northern Region's older than average age structure, its Health industry is also a little older on average than its Total New Zealand counterpart.

**Table 7.1.6: Community Care Services Employed Workforce, Summary Statistics 1996-2013, Northland Region, Usually Resident Population**

| <b>O872 Community Care Services</b>                             | <b>1996</b> | <b>2001</b> | <b>2006</b> | <b>2013</b> | <b>Change<br/>1996-2013 (%)</b> |
|---|-------------|-------------|-------------|-------------|---------------------------------|
| <b>Number Employed</b>  | 681         | 1,122       | 1,887       | 2,082       |                                 |
| Change between Censuses (%)                                     |             | 64.8        | 68.2        | 10.3        | 205.7                           |
| <b>Sex Ratio by age (males/females)</b>                         |             |             |             |             |                                 |
| Total All Ages*   | 0.14        | 0.12        | 0.15        | 0.20        | +8.4                            |
| <b>Average Age</b>  | 41.7        | 45.6        | 47.6        | 49.8        | +19.3                           |
| <b>Percentage aged 55+ years</b>                                | 15.5        | 21.2        | 31.4        | 41.0        | +165.0                          |
| <b>Employment Entry/Exit Ratio</b><br>(15-29 years : 55+ years) | 1.2         | 0.5         | 0.3         | 0.3         | -78.8                           |

Source: Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment

by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013

\* Age not available for small cell sizes



**Table 7.1.7: Hospitals and Nursing Homes Employed Workforce, Summary Statistics 1996-2013, Northland Region, Usually Resident Population**

| <b>O861 Hospitals &amp; Nursing Homes</b>                       | <b>1996</b> | <b>2001</b> | <b>2006</b> | <b>2013</b> | <b>Change<br/>1996-2013 (%)</b> |
|---|-------------|-------------|-------------|-------------|---------------------------------|
| <b>Number Employed</b>  | 1,353       | 1,527       | 1,242       | 1,848       |                                 |
| Change between Censuses (%)                                     |             | 12.9        | -18.7       | 48.8        | 36.6                            |
| <b>Sex Ratio by age (males/females)</b>                         |             |             |             |             |                                 |
| Total All Ages*   | 0.24        | 0.21        | 0.23        | 0.23        | -4.4                            |
| <b>Average Age</b>  | 41.2        | 43.5        | 45.6        | 47.8        | +16.2                           |
| <b>Percentage aged 55+ years</b>                                | 9.6         | 14.7        | 22.1        | 29.9        | +211.7                          |
| <b>Employment Entry/Exit Ratio</b><br>(15-29 years : 55+ years) | 1.7         | 0.8         | 0.4         | 0.4         | -78.8                           |

Source: Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013

\* Age not available for small cell sizes

**Table 7.1.8: Other Health Services Employed Workforce, Summary Statistics 1996-2013, Northland Region, Usually Resident Population**

| <b>O863 Other Health Services</b>                               | <b>1996</b> | <b>2001</b> | <b>2006</b> | <b>2013</b> | <b>Change<br/>1996-2013 (%)</b> |
|---|-------------|-------------|-------------|-------------|---------------------------------|
| <b>Number Employed</b>  | 531         | 1,185       | 1,560       | 1,806       |                                 |
| Change between Censuses (%)                                     |             | 123.2       | 31.6        | 15.8        | 240.1                           |
| <b>Sex Ratio by age (males/females)</b>                         |             |             |             |             |                                 |
| Total All Ages*   | 0.29        | 0.20        | 0.26        | 0.22        | -10.2                           |
| <b>Average Age</b>  | 41.7        | 45.1        | 45.8        | 49.2        | +17.9                           |
| <b>Percentage aged 55+ years</b>                                | 11.9        | 20.4        | 22.9        | 35.0        | +193.0                          |
| <b>Employment Entry/Exit Ratio</b><br>(15-29 years : 55+ years) | 1.3         | 0.5         | 0.4         | 0.2         | -82.5                           |

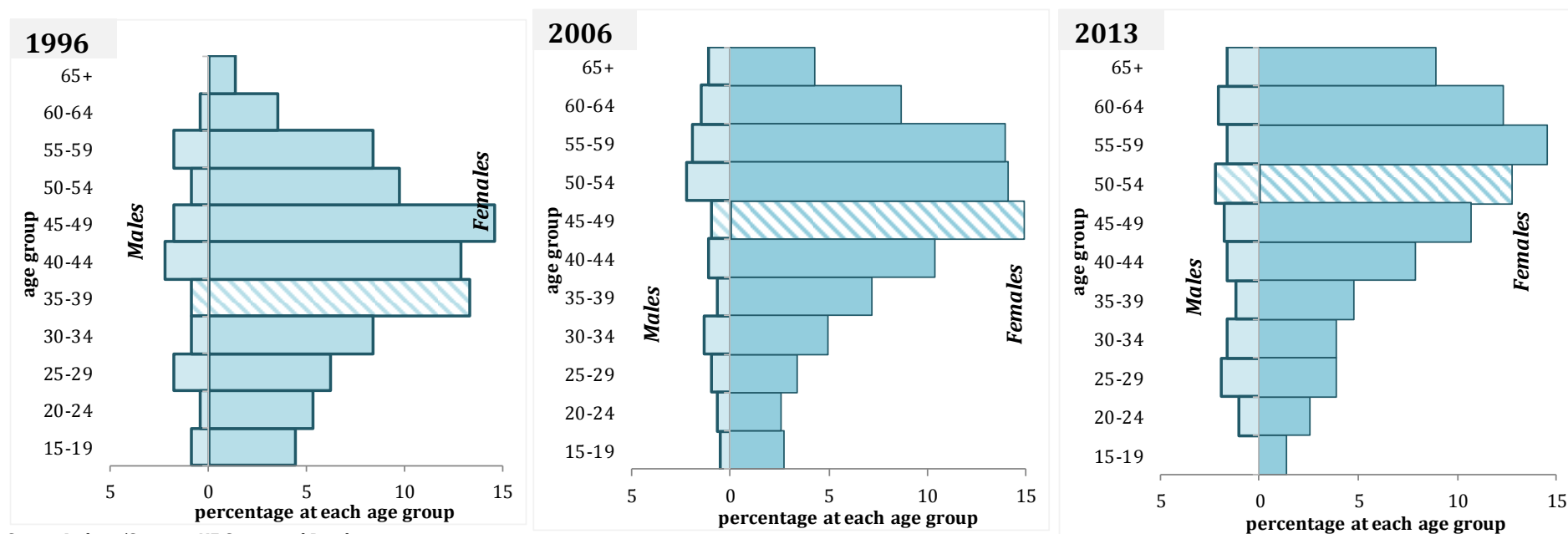
Source: Statistics NZ Customised Database, Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013

\* Age not available for small cell sizes

Figures 7.1.5, 7.1.6 and 7.1.7 show the similarity of the extent of structural ageing across the broader industry, and again point to critical implications for the future provision of services. The data indicate that over the next ten years around one-third of those currently employed in these three industries will retire, a significant message for the Region given that these workers account for over nine per cent of the locally employed workforce.



**Figure 7.1.5: Age-Sex Structure, Community Care Services [0872] 1996, 2006, 2013, Northland Region, Usually Resident Population**

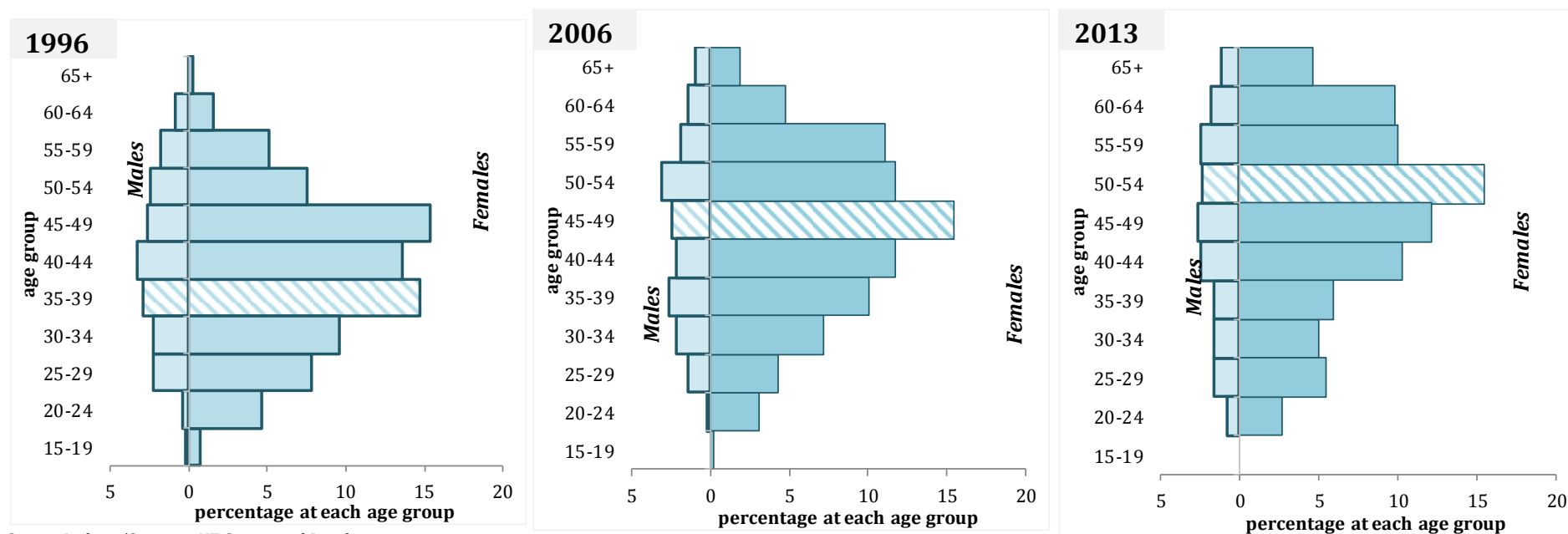


Source: Jackson/Statistics NZ Customised Database,

Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013



**Figure 7.1.6: Age-Sex Structure, Hospitals and Nursing Homes [0861] 1996, 2006, 2013, Northland Region, Usually Resident Population**

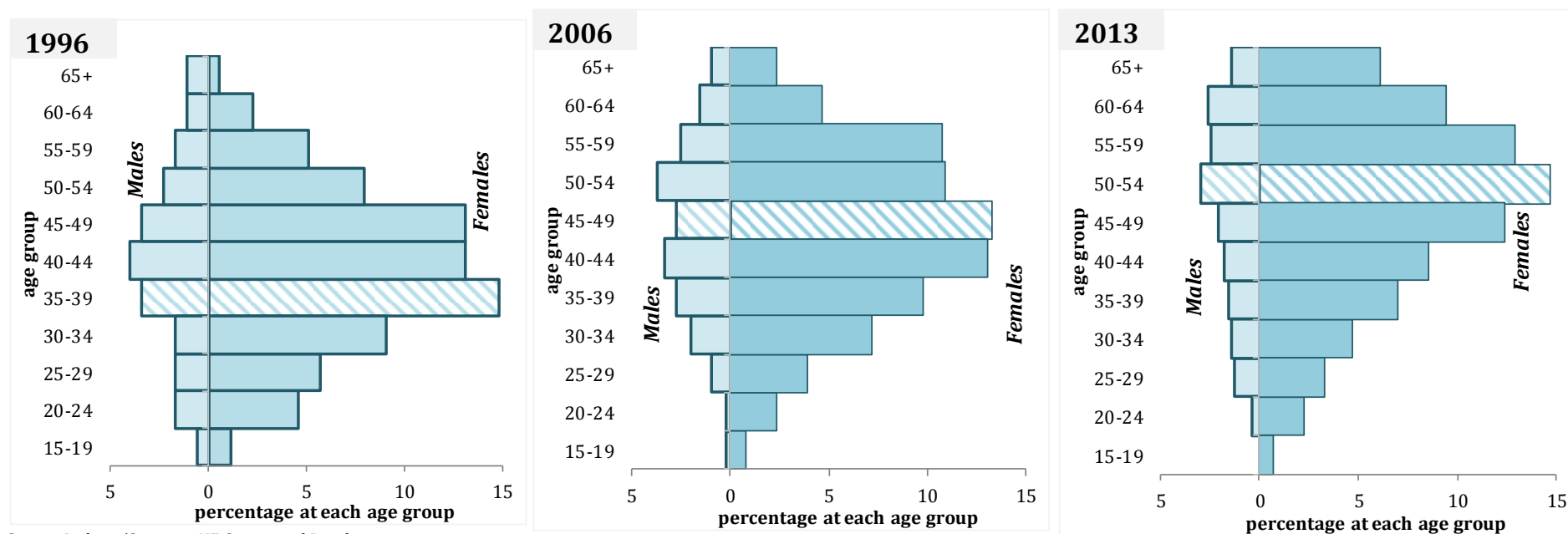


Source: Jackson/Statistics NZ Customised Database,

Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013



**Figure 7.1.7: Age-Sex Structure, Other Health Services [0863] 1996, 2006, 2013, Northland Region, Usually Resident Population**



Source: Jackson/Statistics NZ Customised Database,

Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006 and 2013



Together the Northland Region's six largest industries in 2013 accounted for 21 per cent of the employed workforce.

Of the remaining industries given in Table 7.1.1 above, none saw a decline in average age or an increase in the workforce entry: exit ratio (see Appendix B5.1). Notably older age structures are observed for Northland's Real Estate Agents, Property Operators and Developers, and Horticultural and Fruit Growers, with median ages in 2013 of 52.2, 50.5 and 50.4 years respectively. In all, the employed workforces of 17 of Northland's industries have median ages above the average, and in 2013 they collectively accounted for 36 per cent of the Region's employed workforce (see Appendix 4.1). Their entry: exit ratios ranged between 0.1 and 0.5 (1 and 5 entrants per 10 exits respectively), with the lowest being for Real Estate Agents and the highest for Accommodation Services. Adding to the picture of a significantly ageing health workforce is also a very low entry: exit ratio for Medical and Dental Services (0.2) whose workforce has an average age of 49.8 years.

With only one exception (Clothing and Soft Good Retailing, see Appendix B5.1), none of the Northland Region's industries employing more than 300 persons in 2013 saw a decline in average age over the period 1996-2013, while none at all saw an increase in the workforce entry: exit ratio.

As indicated above, the extent and speed of ageing of the Northland's employed workforce is commensurate with the Region's older age structure more generally. However the rate of ageing is extremely pronounced in many. Taken together these trends indicate an urgent need for the Northland Region's employers, producers and service providers to fully engage with the issue of an ageing workforce—in which the Region is by no means alone, and to consider the implications of forthcoming competition for workers.



## Industrial change – key findings

- The average age of the Northland Region's employed workforce at the 1996, 2001, 2006 and 2013 Censuses was respectively 40.3, 42.3, 43.4 and 46.2 years, an overall increase of 6.0 years (14.8 per cent). This is somewhat older than the average age for the Total New Zealand employed workforce at each observation: 38.2, 40.0, 41.1 and 43.1 years (an increase of 4.9 years, 12.9 per cent), meaning that the Northland Region's workforce is also ageing faster.
- The speed of workforce ageing is similarly evidenced in the increasing proportion of Northland's employed workforce aged 55+ years, from just 15.0 per cent in 1996 to 31.7 per cent in 2013 (+111 per cent), and the ratio of those at workforce entry to exit age (15-29: 55+ years) falling from 17 per 10 in 1996, to just 5 per 10 in 2013.
- In 2013 the Northland Region's six largest industries were School Education; Dairy Cattle Farming; Grain, Sheep and Beef Farming; Community Care; Hospitals and Nursing Homes; and Other Health Services. Together they accounted for 21 per cent of the employed workforce.
- With the sole exception of Dairy Cattle Farmers, who in 2013 had a younger average age (44.3 years) than the total Northland workforce, the remaining five largest industries have older than average age structures (School Education, 48.3 years; Grain, Sheep and Beef Farmers, 54.0 years; Community Care Services, 49.8 years; Hospitals and Nursing Homes, 47.8 years; Other Health Services, 49.2 years).
- In 2013 the Community care Services, Hospitals and Nursing Homes, and Other Health Services industries accounted for 9.4 per cent of the employed workforce. Their data indicate that over the next ten years around one-third of those currently employed will retire. Adding to the picture of a significantly ageing health workforce for the Region is also a very low entry: exit ratio for Medical and Dental Services, whose workforce has an average age of 49.8 years.
- With one exception (Clothing and Soft Good Retailing), none of the Northland Region's industries saw a decline in average age over the period 1996-2013, while none at all saw an increase in the workforce entry: exit ratio. In all, the employed workforces of 17 of Northland's industries have median ages above the average, and in 2013 they collectively accounted for 36 per cent of the Region's employed workforce. Their entry: exit ratios ranged between 1 and 5 entrants per 10 exits.
- The extent and speed of ageing of the Northland's employed workforce is commensurate with the Region's older age structure more generally. However the rate of ageing is clearly pronounced in many. Taken together the trends indicate an urgent need for the Northland Region's employers, producers and service providers to actively engage with the issue of an ageing workforce—in which the Region is by no means alone, and to consider the implications of forthcoming competition for workers.



## 8.0 Movers and Stayers 2008-2013 – Special Topic

This section looks at the ‘usual residence five years ago’ indicator collected at each Census. At Census 2013, this indicator referred to a person’s usual residence in March 2008, linked by where they were living on census night in 2013. We split Movers into Arrivals (in Northland in 2013 by where lived in 2008) and Leavers (in Northland 2008 by where living in 2013). It should be noted that there are no data for people overseas or not born in 2008, as such people are not enumerated by the Census. Their absence means that on the Leavers map (Figure 8.1.1, see also Table 8.1.1), ‘Stayers’ account for a larger proportion (87.5 per cent) than on the Arrivals map (66.8 per cent), although they are exactly the same number (101,391 persons).

The 2013 Census population enumerated approximately 151,689 persons living in the Northland Region. As indicated, Figure 8.1.1 (left hand panel, Arrivals) shows that 66.8 per cent had also been residing there in 2008 (Table 8.1.1)—the Stayer population. Those who had been living elsewhere in New Zealand but not further defined accounted for the single largest component of Arrivals to the Region (7.8 per cent), followed by those who had not been born in 2008 (7.0 per cent). These components can be seen in the box to the left of the map.

The next single-largest proportion of Arrivals to Northland was internal migrants who in 2008 had been residing in the Auckland Region (5.8 per cent). Singularly large proportions came from those who did not state where they had been living in 2008 (4.6 per cent), and those who had been overseas in 2008 (3.9 per cent). Returning to internal migration, the next largest contribution came from the Waikato Region (1.1 per cent), followed by the Bay of Plenty (0.57 per cent), Canterbury (0.53 per cent) and Wellington (0.51 per cent).

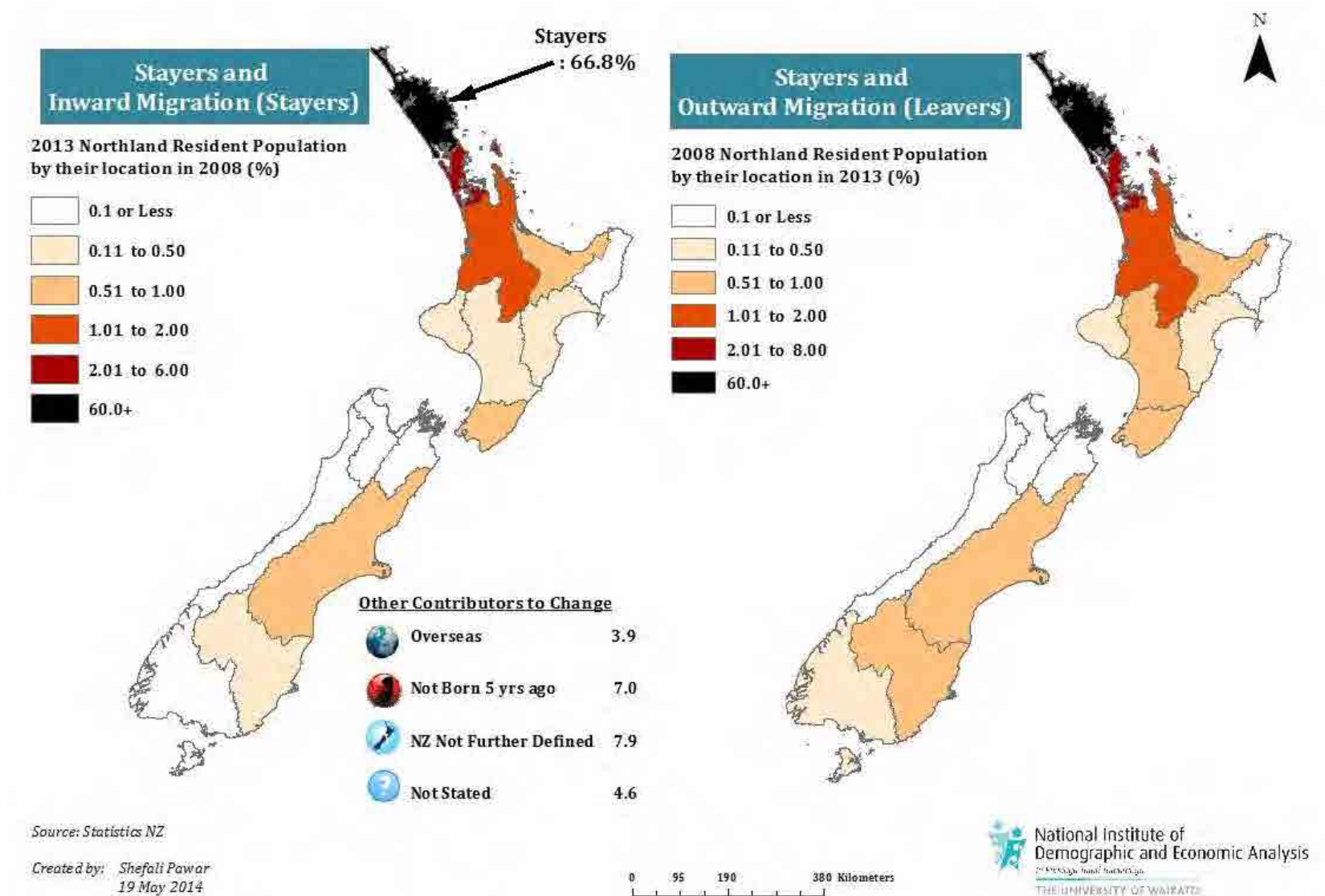
The right hand panel gives the data for those who had lived in Northland in 2008 by where they were living in 2013. The data show marked similarity between the main origin and destination Regions, the single-largest proportion of Leavers having gone to Auckland (6.0 per cent), followed by Waikato (2.0 per cent), Bay of Plenty (0.9 per cent) and Wellington (0.7 per cent).

Data for the period 2001-2006 are strikingly similar, with just on two-thirds of people enumerated at the 2006 census having been living in the Region five years previously (Table 8.1.2). Differing from the 2006-2013 period, the single largest group of Arrivals at the 2006 census had been ‘living overseas 5 years ago’ (8.5 per cent), followed by internal migrant Arrivals from Auckland (7.6 per cent). These were the same Regions that the two largest groups of Leavers went to, reflecting the situation across 2008-2013.





Figure 8.1.1: Movers and Stayers 2008-2013, Northland Region



**Table 8.1.1: Movers and Stayers 2008-2013, Northland Region**

| 2008-2013                              | Stayers and Arrivals |              |                          | Stayers and Leavers |              |
|--|----------------------|--------------|--------------------------|---------------------|--------------|
|  | Number               | (%)          |                          | Number              | (%)          |
| Auckland Region                        | 8,736                | 5.8          | Auckland Region          | 6,894               | 5.9          |
| Bay of Plenty Region                   | 864                  | 0.6          | Bay of Plenty Region     | 1,041               | 0.9          |
| Canterbury Region                      | 801                  | 0.5          | Canterbury Region        | 978                 | 0.8          |
| Gisborne Region                        | 120                  | 0.1          | Gisborne Region          | 99                  | 0.1          |
| Hawke's Bay Region                     | 240                  | 0.2          | Hawke's Bay Region       | 318                 | 0.3          |
| Manawatu-Wanganui Region               | 615                  | 0.4          | Manawatu-Wanganui Region | 624                 | 0.5          |
| Marlborough Region                     | 84                   | 0.1          | Marlborough Region       | 105                 | 0.1          |
| Nelson Region                          | 87                   | 0.1          | Nelson Region            | 108                 | 0.1          |
| <b>Northland Region</b>                | <b>101,391</b>       | <b>66.8</b>  | <b>Northland Region</b>  | <b>101,391</b>      | <b>87.5</b>  |
| Otago Region                           | 300                  | 0.2          | Otago Region             | 594                 | 0.5          |
| Southland Region                       | 135                  | 0.1          | Southland Region         | 174                 | 0.2          |
| Taranaki Region                        | 240                  | 0.2          | Taranaki Region          | 330                 | 0.3          |
| Tasman Region                          | 66                   | 0.0          | Tasman Region            | 93                  | 0.1          |
| Waikato Region                         | 1,710                | 1.1          | Waikato Region           | 2,274               | 2.0          |
| Wellington Region                      | 777                  | 0.5          | Wellington Region        | 840                 | 0.7          |
| West Coast Region                      | 63                   | 0.0          | West Coast Region        | 51                  | 0.0          |
| Area Outside Region                    | -                    | -            | Grand Total              | 115,914             | <b>100.0</b> |
| <i>Not Born 5 Years Ago</i>            | 10,659               | 7.0          |                          |                     |              |
| <i>Overseas</i>                        | 5,904                | 3.9          | Internal Arrivals        | 14,838              |              |
| <i>New Zealand not further defined</i> | 11,913               | 7.9          | Internal Leavers         | 14,523              |              |
| <i>NEI/Not Stated</i>                  | 6,915                | 4.6          | Net Internal Migration   | 315                 |              |
| <i>No Fixed Abode 5 Years AGO</i>      | 69                   | 0.0          |                          |                     |              |
| Grand Total                            | 151,689              | <b>100.0</b> |                          |                     |              |

Statistics New Zealand Customised Database, Area of Usual Residence and Usual Residence 5 Years Ago for the Usually Resident Population Count 1996, 2001, 2006, 2013

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**Table 8.1.2: Movers and Stayers 2001-2006, Northland Region**

| 2001-2006                              | Stayers and Arrivals |              |                          | Stayers and Leavers |              |
|--|----------------------|--------------|--------------------------|---------------------|--------------|
|  | Number               | (%)          |                          | Number              | (%)          |
| Auckland Region                        | 11,211               | 7.6          | Auckland Region          | 7,779               | 6.8          |
| Bay of Plenty Region                   | 1,152                | 0.8          | Bay of Plenty Region     | 1,494               | 1.3          |
| Canterbury Region                      | 693                  | 0.5          | Canterbury Region        | 939                 | 0.8          |
| Gisborne Region                        | 207                  | 0.1          | Gisborne Region          | 135                 | 0.1          |
| Hawke's Bay Region                     | 384                  | 0.3          | Hawke's Bay Region       | 372                 | 0.3          |
| Manawatu-Wanganui Region               | 735                  | 0.5          | Manawatu-Wanganui Region | 843                 | 0.7          |
| Marlborough Region                     | 105                  | 0.1          | Marlborough Region       | 150                 | 0.1          |
| Nelson Region                          | 99                   | 0.1          | Nelson Region            | 132                 | 0.1          |
| <b>Northland Region</b>                | <b>96,603</b>        | <b>65.1</b>  | <b>Northland Region</b>  | <b>96,603</b>       | <b>84.9</b>  |
| Otago Region                           | 330                  | 0.2          | Otago Region             | 678                 | 0.6          |
| Southland Region                       | 153                  | 0.1          | Southland Region         | 267                 | 0.2          |
| Taranaki Region                        | 375                  | 0.3          | Taranaki Region          | 306                 | 0.3          |
| Tasman Region                          | 90                   | 0.1          | Tasman Region            | 105                 | 0.1          |
| Waikato Region                         | 2,253                | 1.5          | Waikato Region           | 2,967               | 2.6          |
| Wellington Region                      | 867                  | 0.6          | Wellington Region        | 936                 | 0.8          |
| West Coast Region                      | 81                   | 0.1          | West Coast Region        | 75                  | 0.1          |
| Area Outside Region                    | 6                    | 0.0          | Grand Total              | 113,781             | <b>100.0</b> |
| <i>Not Born 5 Years Ago</i>            | 10,269               | 6.9          |                          |                     |              |
| <i>Overseas</i>                        | 12,588               | 8.5          | Internal Arrivals        | 18,735              |              |
| <i>New Zealand not further defined</i> | 10,170               | 6.9          | Internal Leavers         | 17,178              |              |
| <i>NEI/Not Stated</i>                  | 75                   | 0.1          | Net Internal Migration   | 1,557               |              |
| <i>No Fixed Abode 5 Years AGO</i>      | 21                   | 0.0          |                          |                     |              |
| Grand Total                            | 148,467              | <b>100.0</b> |                          |                     |              |

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<sup>9</sup> Discrepancies between Table 8.1.1 and Figure 3.2.3 (and other data elsewhere in this Report) reflect how the data are recorded. Those 'Not Born Five Years Ago' are based on Census questions, whilst 'Births' come from the Births Registration database and are continually updated. Similarly 'Overseas Arrivals' are also based on Census questions whereas International (PLT) Migration in Figure 3.2.3 is estimated from arrival/departure cards.



The analysis is repeated below for the 1996-2001 and 1991-1996 periods. The proportion of the Region's population enumerated as Stayers has been remarkably consistent across time—67 per cent across both of those periods, compared with 65-67 per cent for the 2001-2006 and 2008-2013 periods above.

The single largest source of the Region's Arrivals for the 1996-2001 period was those who at the previous census had been living elsewhere in New Zealand but not further defined, while for the 1991-1996 period it was those who had not been born five years ago.

Those overseas at the previous census ranged narrowly between 3.3 and 3.7 per cent at each of the 1996 and 2001 censuses.

The Regions of origin (for Arrivals) and destination (for Leavers) for the Region's internal migrants over both periods were the almost identical to the 2006-2013 and 2001-2006 periods: Auckland was consistently the main Region of both origin and destination, Waikato second and the Bay of Plenty third, with the sole exception of the period 1991-1996 when Wellington fractionally outperformed the Bay of Plenty as the main Region of origin for internal Arrivals.

**Table 8.1.3: Movers and Stayers 1996-2001, Northland Region**

| 1996-2001                              | Stayers and Arrivals |              |  | Stayers and Leavers      |               |              |
|--|----------------------|--------------|--|--------------------------|---------------|--------------|
|  | Number               | (%)          |  | Number                   | (%)           |              |
| Auckland Region                        | 10,542               | 7.52         |  | Auckland Region          | 9,432         | 8.40         |
| Bay of Plenty Region                   | 1,032                | 0.74         |  | Bay of Plenty Region     | 1,431         | 1.27         |
| Canterbury Region                      | 510                  | 0.36         |  | Canterbury Region        | 774           | 0.69         |
| Gisborne Region                        | 156                  | 0.11         |  | Gisborne Region          | 144           | 0.13         |
| Hawke's Bay Region                     | 372                  | 0.27         |  | Hawke's Bay Region       | 408           | 0.36         |
| Manawatu-Wanganui Region               | 819                  | 0.58         |  | Manawatu-Wanganui Region | 747           | 0.67         |
| Marlborough Region                     | 84                   | 0.06         |  | Marlborough Region       | 144           | 0.13         |
| Nelson Region                          | 84                   | 0.06         |  | Nelson Region            | 159           | 0.14         |
| <b>Northland Region</b>                | <b>94,209</b>        | <b>67.23</b> |  | <b>Northland Region</b>  | <b>94,209</b> | <b>83.88</b> |
| Otago Region                           | 291                  | 0.21         |  | Otago Region             | 555           | 0.49         |
| Southland Region                       | 120                  | 0.09         |  | Southland Region         | 180           | 0.16         |
| Taranaki Region                        | 447                  | 0.32         |  | Taranaki Region          | 408           | 0.36         |
| Tasman Region                          | 51                   | 0.04         |  | Tasman Region            | 159           | 0.14         |
| Waikato Region                         | 2,139                | 1.53         |  | Waikato Region           | 2,562         | 2.28         |
| Wellington Region                      | 828                  | 0.59         |  | Wellington Region        | 930           | 0.83         |
| West Coast Region                      | 48                   | 0.03         |  | West Coast Region        | 69            | 0.06         |
| Area Outside Region                    | 39                   | 0.03         |  | Grand Total              | 112,311       | <b>100.0</b> |
| <i>Not Born 5 Years Ago</i>            | 10,446               | 7.45         |  |                          |               |              |
| <i>Overseas</i>                        | 4,668                | 3.33         |  |                          |               |              |
| <i>New Zealand not further defined</i> | 13,068               | 9.33         |  |                          |               |              |
| <i>NEI/Not Stated</i>                  | 96                   | 0.07         |  | Internal Arrivals        | 17,523        |              |
| <i>No Fixed Abode 5 Years AGO</i>      | 78                   | 0.06         |  | Internal Leavers         | 18,102        |              |
| Grand Total                            | 140,127              | <b>100.0</b> |  | Net Internal Migration   | -579          |              |

*Statistics New Zealand Customised Database, Area of Usual Residence and Usual Residence 5 Years Ago for the Usually Resident Population Count 1996, 2001, 2006, 2013*



**Table 8.1.4: Movers and Stayers 1991-1996, Northland Region**

| 1991-1996                              | Stayers and Arrivals |              |
|--|----------------------|--------------|
|  | Number               | (%)          |
| Auckland Region                        | 10,113               | 7.39         |
| Bay of Plenty Region                   | 1,047                | 0.77         |
| Canterbury Region                      | 537                  | 0.39         |
| Gisborne Region                        | 222                  | 0.16         |
| Hawke's Bay Region                     | 441                  | 0.32         |
| Manawatu-Wanganui Region               | 879                  | 0.64         |
| Marlborough Region                     | 48                   | 0.04         |
| Nelson Region                          | 57                   | 0.04         |
| <b>Northland Region</b>                | <b>92,445</b>        | <b>67.56</b> |
| Otago Region                           | 279                  | 0.20         |
| Southland Region                       | 159                  | 0.12         |
| Taranaki Region                        | 495                  | 0.36         |
| Tasman Region                          | 78                   | 0.06         |
| Waikato Region                         | 2,445                | 1.79         |
| Wellington Region                      | 1,062                | 0.78         |
| West Coast Region                      | 60                   | 0.04         |
| Area Outside Region                    | 9                    | 0.01         |
| <i>Not Born 5 Years Ago</i>            | 11,646               | 8.51         |
| <i>Overseas</i>                        | 4,989                | 3.65         |
| <i>New Zealand not further defined</i> | 9,747                | 7.12         |
| <i>No Fixed Abode 5 Years Ago</i>      | 72                   | 0.05         |
| <i>Not Stated</i>                      | -                    | -            |
| <b>Grand Total</b>                     | <b>136,830</b>       | <b>100.0</b> |

| Stayers and Leavers      |                |              |
|--------------------------|----------------|--------------|
|                          | Number         | (%)          |
| Auckland Region          | 9,249          | 8.37         |
| Bay of Plenty Region     | 1,500          | 1.36         |
| Canterbury Region        | 771            | 0.70         |
| Gisborne Region          | 168            | 0.15         |
| Hawke's Bay Region       | 411            | 0.37         |
| Manawatu-Wanganui Region | 861            | 0.78         |
| Marlborough Region       | 120            | 0.11         |
| Nelson Region            | 108            | 0.10         |
| <b>Northland Region</b>  | <b>92,445</b>  | <b>83.66</b> |
| Otago Region             | 531            | 0.48         |
| Southland Region         | 180            | 0.16         |
| Taranaki Region          | 312            | 0.28         |
| Tasman Region            | 126            | 0.11         |
| Waikato Region           | 2,904          | 2.63         |
| Wellington Region        | 738            | 0.67         |
| West Coast Region        | 72             | 0.07         |
| <b>Grand Total</b>       | <b>110,496</b> | <b>100.0</b> |
| Internal Arrivals        | 17,922         |              |
| Internal Leavers         | 18,051         |              |
| Net Internal Migration   | -129           |              |

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### Movers and Stayers – key findings

- The past four censuses indicate that just on two-thirds of people enumerated as living in the Northland Region at each census had been living in the Region five years previously.
- The single largest source of the Region's Arrivals for the periods 2008-2013 and 1996-2001 was those who at the previous census had been living elsewhere in New Zealand but not further defined. For the 2001-2006 period it was those who had been overseas at the previous census, and for the 1991-1996 period it was those who had not been born five years ago.
- Those overseas at the previous census ranged narrowly between 3 and 4 per cent at each of the 1996, 2001 and 2013 censuses, while the proportion was exceptionally large at the 2006 census (8.5 per cent).
- The Regions of origin (for Arrivals) and destination (for Leavers) for the Region's internal migrants have remained almost unswerving over time, with Auckland consistently the main Region of both origin and destination, Waikato second and the Bay of Plenty third, with the sole exception of the period 1991-1996 when Wellington fractionally out-performed the Bay of Plenty as the main Region of origin for internal Arrivals.



## Appendices

### Appendix A: Definitions of population counts

The following diagrams provided by Statistics New Zealand outline the different levels of population data that they release.

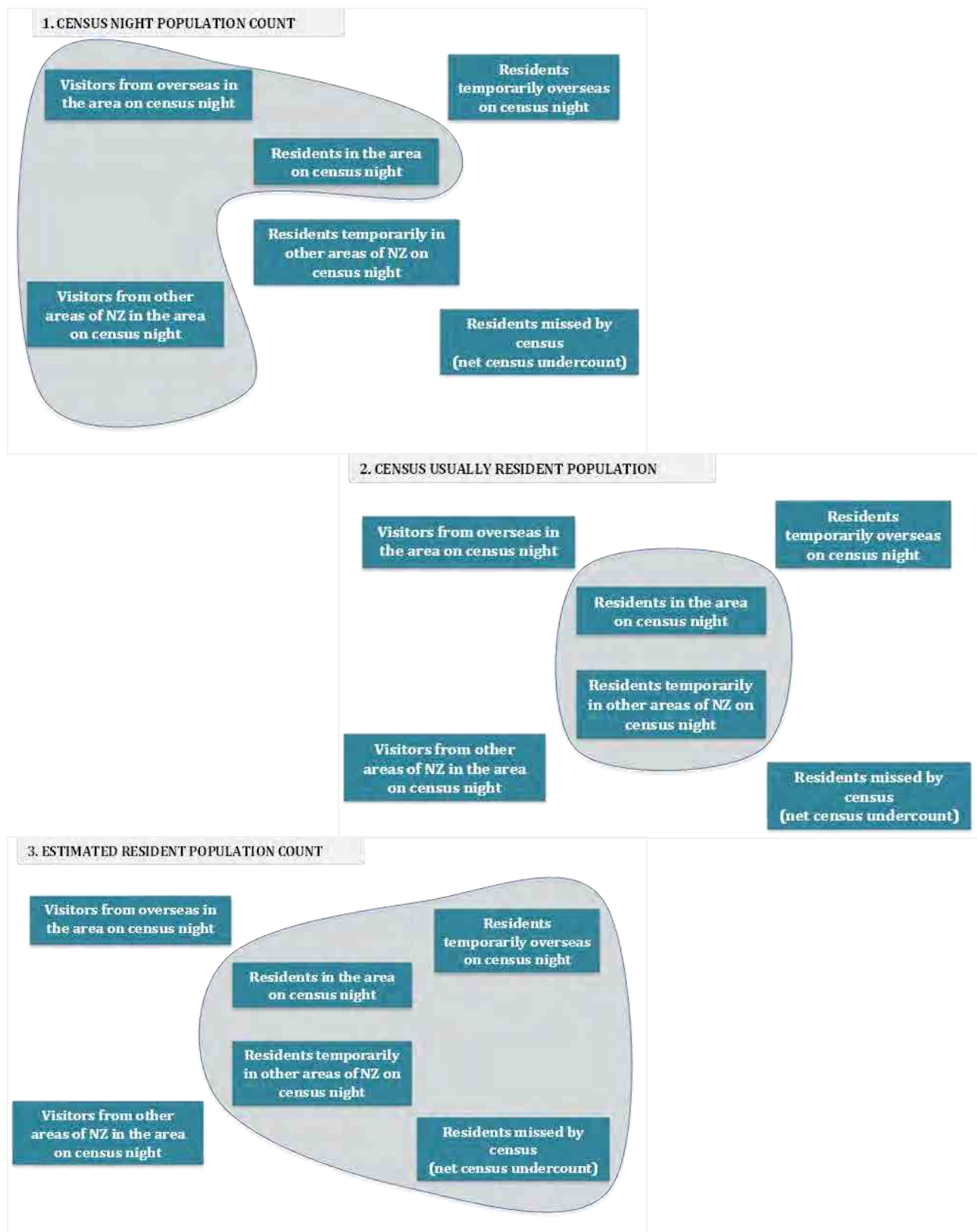
The Census Night population count includes both people who normally reside elsewhere in New Zealand, and visitors from overseas. It is missing those who normally live in the area, but were elsewhere on census night, including temporarily overseas, and people who were missed in the enumeration process (Census Night undercount).

These anomalies are accounted for in the second level of census data output: the 'Usually Resident Population Count' (URPC). For the URP Count, Statistics New Zealand (SNZ) reassigns residents of New Zealand to the meshblock of their normal residence via their postcode, and subtracts visitors from overseas. However even this level of data is problematic for the development of population projections because it is still missing local people who were temporarily overseas on census night, and an adjustment for census night undercount.

These final adjustments are made by SNZ in the 'Estimated Resident Population' (ERP) count, with the data for the year ended in June conventionally used by Local Government Councils as the basis for their population monitoring and reporting. Furthermore, because the Census is held in March, there is a further adjustment in the ERP to account for births, deaths and migration occurring in the period to the end of June. It should be noted that the term 'estimated' thus has a somewhat different meaning to its conventional usage, which implies that the ERP is an 'estimate awaiting refinement'. The ERP is the most refined population count.

Complicating the story is that the 30 June 2013 ERP released by SNZ in December 2013 was not in fact 2013 census-based, but was still based on the 2006 census, with quarterly adjustments having been made throughout the seven years since the 2006 census was taken. The 30 June 2013 based on the 2013 census will not be released until later in 2014.





Source: Statistics NZ





## Appendix B1.1: Population Size and Growth by Enumeration Measure, Northland Region and Total New Zealand 1986-2013

|  |      | Northland REGION  |                             | New Zealand       |                             |
|--|------|-------------------|-----------------------------|-------------------|-----------------------------|
|  |      | Population Number | % Change from previous year | Population Number | % Change from previous year |
| Estimated Defacto Population (Adjusted for 1991 Census) <sup>(1)</sup> (March Years)   | 1986 | 127,656           | ...                         | 3,307,084         | ...                         |
|  | 1987 | 127,200           | -0.4                        | 3,315,410         | +0.3                        |
|  | 1988 | 128,300           | +0.9                        | 3,339,160         | +0.7                        |
|  | 1989 | 128,700           | +0.3                        | 3,347,140         | +0.2                        |
|  | 1990 | 129,700           | +0.8                        | 3,373,400         | +0.8                        |
| Estimated Defacto Population (unadjusted for Census 1996) <sup>(1)</sup> (March Years) | 1991 | 131,620           | ...                         | 3,515,980         | ...                         |
|  | 1992 | 132,300           | +0.5                        | 3,552,240         | +1.0                        |
|  | 1993 | 134,000           | +1.3                        | 3,597,850         | +1.3                        |
|  | 1994 | 135,400           | +1.0                        | 3,648,260         | +1.4                        |
|  | 1995 | 136,800           | +1.0                        | 3,706,710         | +1.6                        |
| Estimated Usual Resident Population (June Years) <sup>(2)</sup>                        | 1996 | 140,700           | ....                        | 3,732,000         | ....                        |
|  | 1997 | 142,100           | +1.0                        | 3,781,300         | +1.3                        |
|  | 1998 | 143,300           | +0.8                        | 3,815,000         | +0.9                        |
|  | 1999 | 143,800           | +0.3                        | 3,835,100         | +0.5                        |
|  | 2000 | 144,400           | +0.4                        | 3,857,700         | +0.6                        |
|  | 2001 | 144,400           | +0.0                        | 3,880,500         | +0.6                        |
|  | 2002 | 146,000           | +1.1                        | 3,948,500         | +1.8                        |
|  | 2003 | 147,900           | +1.3                        | 4,027,200         | +2.0                        |
|  | 2004 | 149,500           | +1.1                        | 4,087,500         | +1.5                        |
|  | 2005 | 151,000           | +1.0                        | 4,133,900         | +1.1                        |
|  | 2006 | 152,700           | +1.1                        | 4,184,600         | +1.2                        |
|  | 2007 | 153,800           | +0.7                        | 4,228,300         | +1.0                        |
|  | 2008 | 154,700           | +0.6                        | 4,268,900         | +1.0                        |
|  | 2009 | 155,800           | +0.7                        | 4,315,800         | +1.1                        |
|  | 2010 | 157,400           | +1.0                        | 4,367,800         | +1.2                        |
|  | 2011 | 158,200           | +0.5                        | 4,405,200         | +0.9                        |
|  | 2012 | 158,400           | +0.1                        | 4,433,000         | +0.6                        |
|  | 2013 | 158,700           | +0.2                        | 4,470,800         | +0.9                        |
| 1986-2013*   |      | +31,044           | +24.3                       | +1,163,716        | +35.2                       |

Source: (1) Statistics New Zealand, Yearbook collection 1893-2012

(2) Estimated Resident Population for Regional Council and Territorial Authority Areas, at 30 June(1996+) (Annual-Jun)  
Table reference: DPE051AA and DPE052AA, Boundaries at 1 January 2013. Last updated: 22 October 2013 10:45am

Notes: \*Changes in the timing and method of estimating Resident Population between 1991-1992 and 1995-1996 mean that the three sets of trends should be understood as discontinuous



**Appendix B1.2: Change in Census Usually Resident Population Count at CAU Level, Northland Region and its Territorial Authorities, 2001, 2006, 2013**

| Territorial Authority (TA) | Census Area Unit (CAU)  | Census Usually Resident Population |       |       | Change 2001-2006 |         |  | Change 2006-2013 |         |  |
|----------------------------|-------------------------|------------------------------------|-------|-------|------------------|---------|--|------------------|---------|--|
|                            |                         | 2001                               | 2006  | 2013  | Number           | Percent | Average annual change (Percent) <sup>(1)</sup> | Number           | Percent | Average annual change (Percent) <sup>(1)</sup> |
| Far North District         | Ahipara                 | 1,038                              | 1,125 | 1,065 | 87               | +8.4    | +1.7   | -60              | -5.3    | -0.8   |
|                            | Awanui                  | 369                                | 348   | 339   | -21              | -5.7    | -1.1   | -9               | -2.6    | -0.4   |
|                            | Bay of Islands          | 36                                 | 18    | 6     | -18              | -50.0   | -10.0  | -12              | -66.7   | -9.5   |
|                            | Haruru Falls            | 675                                | 789   | 867   | 114              | +16.9   | +3.4   | 78               | +9.9    | +1.4   |
|                            | Herekino                | 2,055                              | 1,950 | 2,013 | -105             | -5.1    | -1.0   | 63               | +3.2    | +0.5   |
|                            | Hokianga North          | 2,016                              | 1,962 | 1,689 | -54              | -2.7    | -0.5   | -273             | -13.9   | -2.0   |
|                            | Hokianga South          | 2,874                              | 2,610 | 2,568 | -264             | -9.2    | -1.8   | -42              | -1.6    | -0.2   |
|                            | Houhora                 | 915                                | 837   | 930   | -78              | -8.5    | -1.7   | 93               | +11.1   | +1.6   |
|                            | Kaeo                    | 492                                | 495   | 453   | 3                | +0.6    | +0.1   | -42              | -8.5    | -1.2   |
|                            | Kaikohe                 | 4,023                              | 4,113 | 3,915 | 90               | +2.2    | +0.4   | -198             | -4.8    | -0.7   |
|                            | Kaitaia East            | 1,959                              | 1,953 | 1,794 | -6               | -0.3    | -0.1   | -159             | -8.1    | -1.2   |
|                            | Kaitaia West            | 3,189                              | 3,252 | 3,093 | 63               | +2.0    | +0.4   | -159             | -4.9    | -0.7   |
|                            | Kapiro                  | 2,109                              | 2,445 | 2,685 | 336              | +15.9   | +3.2   | 240              | +9.8    | +1.4   |
|                            | Karikari Peninsula-Maun | 4,275                              | 4,230 | 4,344 | -45              | -1.1    | -0.2   | 114              | +2.7    | +0.4   |
|                            | Kawakawa                | 1,401                              | 1,350 | 1,218 | -51              | -3.6    | -0.7   | -132             | -9.8    | -1.4   |
|                            | Kerikeri                | 4,881                              | 5,856 | 6,507 | 975              | +20.0   | +4.0   | 651              | +11.1   | +1.6   |
|                            | Kohukohu                | 165                                | 186   | 165   | 21               | +12.7   | +2.5   | -21              | -11.3   | -1.6   |
|                            | Mangapa-Matauri Bay     | 2,763                              | 2,646 | 2,517 | -117             | -4.2    | -0.8   | -129             | -4.9    | -0.7   |
|                            | Moerewa                 | 1,659                              | 1,533 | 1,434 | -126             | -7.6    | -1.5   | -99              | -6.5    | -0.9   |
|                            | Motutangi-Kareponia     | 1,701                              | 1,755 | 1,791 | 54               | +3.2    | +0.6   | 36               | +2.1    | +0.3   |
|                            | Ngapuhi-Kaikou          | 2,373                              | 2,514 | 2,394 | 141              | +5.9    | +1.2   | -120             | -4.8    | -0.7   |
|                            | North Cape              | 549                                | 501   | 441   | -48              | -8.7    | -1.7   | -60              | -12.0   | -1.7   |
|                            | Ohaeawai                | 726                                | 711   | 714   | -15              | -2.1    | -0.4   | 3                | +0.4    | +0.1   |
|                            | Okaihau                 | 690                                | 717   | 696   | 27               | +3.9    | +0.8   | -21              | -2.9    | -0.4   |
|                            | Omapere and Opononi     | 597                                | 477   | 414   | -120             | -20.1   | -4.0   | -63              | -13.2   | -1.9   |
|                            | Opua East               | 342                                | 354   | 294   | 12               | +3.5    | +0.7   | -60              | -16.9   | -2.4   |
|                            | Opua West               | 210                                | 258   | 255   | 48               | +22.9   | +4.6   | -3               | -1.2    | -0.2   |
|                            | Paihia                  | 1,839                              | 1,770 | 1,722 | -69              | -3.8    | -0.8   | -48              | -2.7    | -0.4   |
|                            | Pokere-Waihaha          | 2,448                              | 2,493 | 2,424 | 45               | +1.8    | +0.4   | -69              | -2.8    | -0.4   |
|                            | Rawene                  | 462                                | 438   | 471   | -24              | -5.2    | -1.0   | 33               | +7.5    | +1.1   |
|                            | Russell                 | 804                                | 819   | 720   | 15               | +1.9    | +0.4   | -99              | -12.1   | -1.7   |
|                            | Taipa Bay-Mangonui      | 1,587                              | 1,566 | 1,662 | -21              | -1.3    | -0.3   | 96               | +6.1    | +0.9   |
|                            | Waihou Valley-Hupara    | 2,472                              | 2,955 | 3,285 | 483              | +19.5   | +3.9   | 330              | +11.2   | +1.6   |
|                            | Waitangi                | 834                                | 792   | 813   | -42              | -5.0    | -1.0   | 21               | +2.7    | +0.4   |
| Kaipara District           | Dargaville              | 4,530                              | 4,455 | 4,251 | -75              | -1.7    | -0.3   | -204             | -4.6    | -0.7   |
|                            | Kaipara Coastal         | 3,048                              | 2,985 | 2,955 | -63              | -2.1    | -0.4   | -30              | -1.0    | -0.1   |
|                            | Kaiwaka                 | 534                                | 537   | 576   | 3                | +0.6    | +0.1   | 39               | +7.3    | +1.0   |
|                            | Mangawhai               | 681                                | 918   | 1,329 | 237              | +34.8   | +7.0   | 411              | +44.8   | +6.4   |
|                            | Mangawhai Heads         | 720                                | 855   | 1,086 | 135              | +18.8   | +3.8   | 231              | +27.0   | +3.9   |
|                            | Maungaru                | 1,662                              | 1,725 | 1,692 | 63               | +3.8    | +0.8   | -33              | -1.9    | -0.3   |
|                            | Maungaturoto            | 750                                | 837   | 756   | 87               | +11.6   | +2.3   | -81              | -9.7    | -1.4   |
|                            | Rehia-Oneriri           | 4,599                              | 4,947 | 5,415 | 348              | +7.6    | +1.5   | 468              | +9.5    | +1.4   |
|                            | Ruawai                  | 453                                | 426   | 432   | -27              | -6.0    | -1.2   | 6                | +1.4    | +0.2   |
|                            | Te Kopuru               | 480                                | 453   | 465   | -27              | -5.6    | -1.1   | 12               | +2.6    | +0.4   |





**Appendix B1.2 cont.: Change Census Usually Resident Population Count at CAU Level, Northland Region and its Territorial Authorities, 2001, 2006, 2013**

| Territorial Authority (TA) | Census Area Unit (CAU) | Census Usually Resident Population |       |       | Change 2001-2006 |         |  | Change 2006-2013 |         |  |
|----------------------------|------------------------|------------------------------------|-------|-------|------------------|---------|--|------------------|---------|--|
|                            |                        | 2001                               | 2006  | 2013  | Number           | Percent | Average annual change (Percent) <sup>(1)</sup> | Number           | Percent | Average annual change (Percent) <sup>(1)</sup> |
| Whangarei District         | Abbey Caves            | 411                                | 561   | 636   | 150              | +36.5   | +7.3   | 75               | +13.4   | +1.9   |
|                            | Bream Bay              | 615                                | 786   | 885   | 171              | +27.8   | +5.6   | 99               | +12.6   | +1.8   |
|                            | Bream Head             | 1,224                              | 1,245 | 1,299 | 21               | +1.7    | +0.3   | 54               | +4.3    | +0.6   |
|                            | Hikurangi              | 1,422                              | 1,419 | 1,413 | -3               | -0.2    | -0.0   | -6               | -0.4    | -0.1   |
|                            | Horahora               | 978                                | 1,026 | 1,053 | 48               | +4.9    | +1.0   | 27               | +2.6    | +0.4   |
|                            | Kamo East              | 3,036                              | 3,168 | 3,387 | 132              | +4.3    | +0.9   | 219              | +6.9    | +1.0   |
|                            | Kamo West              | 2,979                              | 3,141 | 3,651 | 162              | +5.4    | +1.1   | 510              | +16.2   | +2.3   |
|                            | Kensington             | 1,287                              | 1,341 | 1,224 | 54               | +4.2    | +0.8   | -117             | -8.7    | -1.2   |
|                            | Mairtown               | 2,343                              | 2,358 | 2,367 | 15               | +0.6    | +0.1   | 9                | +0.4    | +0.1   |
|                            | Marsden Point-Ruakaka  | 2,658                              | 2,913 | 3,543 | 255              | +9.6    | +1.9   | 630              | +21.6   | +3.1   |
|                            | Maungatapere           | 1,053                              | 1,278 | 1,326 | 225              | +21.4   | +4.3   | 48               | +3.8    | +0.5   |
|                            | Maunu                  | 1,302                              | 1,350 | 1,359 | 48               | +3.7    | +0.7   | 9                | +0.7    | +0.1   |
|                            | Morningside            | 2,064                              | 2,148 | 2,088 | 84               | +4.1    | +0.8   | -60              | -2.8    | -0.4   |
|                            | Ngunguru               | 1,287                              | 1,425 | 1,527 | 138              | +10.7   | +2.1   | 102              | +7.2    | +1.0   |
|                            | Onerahi                | 2,004                              | 2,103 | 2,046 | 99               | +4.9    | +1.0   | -57              | -2.7    | -0.4   |
|                            | Opouteke-Tanekaha      | 3,822                              | 4,488 | 4,737 | 666              | +17.4   | +3.5   | 249              | +5.5    | +0.8   |
|                            | Otaika-Portland        | 975                                | 990   | 1,050 | 15               | +1.5    | +0.3   | 60               | +6.1    | +0.9   |
|                            | Otangarei              | 2,031                              | 2,256 | 1,758 | 225              | +11.1   | +2.2   | -498             | -22.1   | -3.2   |
|                            | Parahaki               | 1,176                              | 1,158 | 1,128 | -18              | -1.5    | -0.3   | -30              | -2.6    | -0.4   |
|                            | Parua Bay              | 1,686                              | 1,941 | 2,016 | 255              | +15.1   | +3.0   | 75               | +3.9    | +0.6   |
|                            | Pataua-Whareora        | 759                                | 990   | 1,140 | 231              | +30.4   | +6.1   | 150              | +15.2   | +2.2   |
|                            | Port-Limeburners       | 54                                 | 54    | 36    | 0                | +0.0    | +0.0   | -18              | -33.3   | -4.8   |
|                            | Punaruku-Kiripaka      | 3,351                              | 3,660 | 4,047 | 309              | +9.2    | +1.8   | 387              | +10.6   | +1.5   |
|                            | Raumanga East          | 1,647                              | 1,749 | 1,635 | 102              | +6.2    | +1.2   | -114             | -6.5    | -0.9   |
|                            | Raumanga West          | 2,811                              | 2,994 | 2,820 | 183              | +6.5    | +1.3   | -174             | -5.8    | -0.8   |
|                            | Regent                 | 1,725                              | 1,686 | 1,599 | -39              | -2.3    | -0.5   | -87              | -5.2    | -0.7   |
|                            | Riverside              | 759                                | 888   | 717   | 129              | +17.0   | +3.4   | -171             | -19.3   | -2.8   |
|                            | Sherwood Rise          | 3,495                              | 3,639 | 3,741 | 144              | +4.1    | +0.8   | 102              | +2.8    | +0.4   |
|                            | Springs Flat           | 1,131                              | 1,365 | 1,446 | 234              | +20.7   | +4.1   | 81               | +5.9    | +0.8   |
|                            | Te Hihi                | 567                                | 840   | 1,152 | 273              | +48.1   | +9.6   | 312              | +37.1   | +5.3   |
|                            | Three Mile Bush        | 420                                | 636   | 999   | 216              | +51.4   | +10.3  | 363              | +57.1   | +8.2   |
|                            | Tikipunga East         | 2,784                              | 3,090 | 2,934 | 306              | +11.0   | +2.2   | -156             | -5.0    | -0.7   |
|                            | Tikipunga West         | 2,883                              | 3,024 | 2,997 | 141              | +4.9    | +1.0   | -27              | -0.9    | -0.1   |
|                            | Vinetown               | 1,434                              | 1,521 | 1,482 | 87               | +6.1    | +1.2   | -39              | -2.6    | -0.4   |
|                            | Waiotira-Springfield   | 1,551                              | 1,848 | 2,007 | 297              | +19.1   | +3.8   | 159              | +8.6    | +1.2   |
|                            | Waipu                  | 1,272                              | 1,494 | 1,668 | 222              | +17.5   | +3.5   | 174              | +11.6   | +1.7   |
|                            | Western Hills          | 195                                | 231   | 249   | 36               | +18.5   | +3.7   | 18               | +7.8    | +1.1   |
|                            | Whangarei Central      | 162                                | 219   | 174   | 57               | +35.2   | +7.0   | -45              | -20.5   | -2.9   |
|                            | Wharekohe-Oakleigh     | 2,661                              | 3,267 | 3,597 | 606              | +22.8   | +4.6   | 330              | +10.1   | +1.4   |
|                            | Whau Valley            | 2,394                              | 2,475 | 2,364 | 81               | +3.4    | +0.7   | -111             | -4.5    | -0.6   |
|                            | Woodhill               | 1,626                              | 1,644 | 1,677 | 18               | +1.1    | +0.2   | 33               | +2.0    | +0.3   |

1. Calculated as a constant rate of annual population change over the period (five years between 2001 and 2006, and seven years between 2006 and 2013).

Percentages have been rounded to one decimal place.

\* Only CAUs with usually resident population of more than 10 in either of the three Census years, 2001, 2006 and 2013 are included.



## Appendix B2.1: Components of Change, 1991-2013, Far North District, Northland Region and Total New Zealand, 1991-2013

|            |      | Far North District   |                     |  |   |                                   |                                  |                                |                         |                | Northland REGION               |                         |                | New Zealand                    |                         |                |
|------------|------|----------------------|---------------------|--|---|-----------------------------------|----------------------------------|--------------------------------|-------------------------|----------------|--------------------------------|-------------------------|----------------|--------------------------------|-------------------------|----------------|
|            |      | Components of Change |                     |  |   |                                   |                                  | Contribution to Net Change ^   |                         |                | Contribution to Net Change ^   |                         |                | Contribution to Net Change ^   |                         |                |
|            |      | Births <sup>a</sup>  | Deaths <sup>b</sup> | Natural Increase <sup>c</sup><br>(a-b) | Estimated Resident Population<br>(ERP) <sup>d</sup> | Net Change<br>$e=(d_{t+1}) - d_t$ | Estimated Migration<br>$f=(e-c)$ | Estimated Natural Increase (%) | Estimated Migration (%) | Net Change (%) | Estimated Natural Increase (%) | Estimated Migration (%) | Net Change (%) | Estimated Natural Increase (%) | Estimated Migration (%) | Net Change (%) |
| March Year | 1992 | 1,023                | 362                 | 661                                    | 52,000  | ...                               | ...                              | ...                            | ...                     | ...            | ...                            | ...                     | ...            | ...                            | ...                     | ...            |
|            | 1993 | 977                  | 404                 | 573                                    | 52,900  | 900                               | 327                              | 1.10                           | 0.63                    | 1.73           | 1.06                           | 0.22                    | 1.28           | 0.89                           | 0.40                    | 1.28           |
|            | 1994 | 926                  | 407                 | 519                                    | 53,700  | 800                               | 281                              | 0.98                           | 0.53                    | 1.51           | 0.92                           | 0.13                    | 1.04           | 0.87                           | 0.53                    | 1.40           |
|            | 1995 | 971                  | 409                 | 562                                    | 54,400  | 700                               | 138                              | 1.05                           | 0.26                    | 1.30           | 0.93                           | 0.11                    | 1.03           | 0.84                           | 0.76                    | 1.60           |
| June Year  | 1996 | 957                  | 465                 | 492                                    | 54,500  | ...                               | ...                              | ...                            | ...                     | ...            | ...                            | ...                     | ...            | ...                            | ...                     | ...            |
|            | 1997 | 864                  | 396                 | 468                                    | 55,200  | 700                               | 232                              | 0.86                           | 0.43                    | 1.28           | 0.76                           | 0.24                    | 1.00           | 0.79                           | 0.53                    | 1.32           |
|            | 1998 | 893                  | 475                 | 418                                    | 55,800  | 600                               | 182                              | 0.76                           | 0.33                    | 1.09           | 0.77                           | 0.07                    | 0.84           | 0.78                           | 0.11                    | 0.89           |
|            | 1999 | 880                  | 447                 | 433                                    | 56,100  | 300                               | -133                             | 0.78                           | -0.24                   | 0.54           | 0.68                           | -0.33                   | 0.35           | 0.75                           | -0.22                   | 0.53           |
|            | 2000 | 910                  | 473                 | 437                                    | 56,400  | 300                               | -137                             | 0.78                           | -0.24                   | 0.53           | 0.74                           | -0.32                   | 0.42           | 0.79                           | -0.20                   | 0.59           |
|            | 2001 | 775                  | 438                 | 337                                    | 56,400  | 0                                 | -337                             | 0.60                           | -0.60                   | 0.00           | 0.59                           | -0.59                   | 0.00           | 0.76                           | -0.17                   | 0.59           |
|            | 2002 | 840                  | 426                 | 414                                    | 56,600  | 200                               | -214                             | 0.73                           | -0.38                   | 0.35           | 0.54                           | 0.57                    | 1.11           | 0.67                           | 1.08                    | 1.75           |
|            | 2003 | 714                  | 505                 | 209                                    | 56,900  | 300                               | 91                               | 0.37                           | 0.16                    | 0.53           | 0.43                           | 0.87                    | 1.30           | 0.69                           | 1.30                    | 1.99           |
|            | 2004 | 796                  | 478                 | 318                                    | 57,000  | 100                               | -218                             | 0.56                           | -0.38                   | 0.18           | 0.58                           | 0.50                    | 1.08           | 0.74                           | 0.76                    | 1.50           |
|            | 2005 | 784                  | 458                 | 326                                    | 57,200  | 200                               | -126                             | 0.57                           | -0.22                   | 0.35           | 0.62                           | 0.38                    | 1.00           | 0.72                           | 0.41                    | 1.14           |
|            | 2006 | 828                  | 433                 | 395                                    | 57,500  | 300                               | -95                              | 0.69                           | -0.17                   | 0.52           | 0.63                           | 0.50                    | 1.13           | 0.75                           | 0.48                    | 1.23           |
|            | 2007 | 880                  | 437                 | 443                                    | 57,800  | 300                               | -143                             | 0.77                           | -0.25                   | 0.52           | 0.73                           | -0.01                   | 0.72           | 0.79                           | 0.25                    | 1.04           |
|            | 2008 | 866                  | 476                 | 390                                    | 57,900  | 100                               | -290                             | 0.67                           | -0.50                   | 0.17           | 0.64                           | -0.06                   | 0.59           | 0.84                           | 0.12                    | 0.96           |
|            | 2009 | 859                  | 526                 | 333                                    | 58,000  | 100                               | -233                             | 0.58                           | -0.40                   | 0.17           | 0.60                           | 0.12                    | 0.71           | 0.80                           | 0.30                    | 1.10           |
|            | 2010 | 917                  | 475                 | 442                                    | 58,400  | 400                               | -42                              | 0.76                           | -0.07                   | 0.69           | 0.68                           | 0.34                    | 1.03           | 0.82                           | 0.39                    | 1.20           |
|            | 2011 | 859                  | 501                 | 358                                    | 58,500  | 100                               | -258                             | 0.61                           | -0.44                   | 0.17           | 0.67                           | -0.16                   | 0.51           | 0.76                           | 0.09                    | 0.86           |
|            | 2012 | 799                  | 551                 | 248                                    | 58,400  | -100                              | -348                             | 0.42                           | -0.59                   | -0.17          | 0.54                           | -0.41                   | 0.13           | 0.71                           | -0.08                   | 0.63           |
|            | 2013 | 839                  | 481                 | 358                                    | 58,300  | -100                              | -458                             | 0.61                           | -0.78                   | -0.17          | 0.54                           | -0.36                   | 0.19           | 0.67                           | 0.18                    | 0.85           |

Source: Compiled from Statistics New Zealand, Infoshare

(1) 1992-1995 Estimated Defacto Population (March Years); Statistics New Zealand, Yearbook collection 1893-2012

(2) Estimated Resident Population for Regions and TAs, at 30 June(1996+) (Annual-Jun), Table reference: DPE051AA and DPE052AA, Boundaries at 1 January 2013. Last updated: 22 October 2013

(3) Live births and Deaths by area, city/district councils and regional councils (Total population) (Annual-Jun). Table reference: VSB011AA, VSB016AA, VSD008AA, VSD018AA Last updated: 16 August 2013

^ Natural Increase, Net Migration and Net Change as a percentage of previous year's ERP



## Appendix B2.2: Components of Change, 1991-2013, Whangarei District, Northland Region and Total New Zealand, 1991-2013

|            |      | Whangarei District   |                     |  |   |                                 |                                  |                                |                         |                | Northland REGION               |                         |                | New Zealand                    |                         |                |
|------------|------|----------------------|---------------------|--|---|---------------------------------|----------------------------------|--------------------------------|-------------------------|----------------|--------------------------------|-------------------------|----------------|--------------------------------|-------------------------|----------------|
|            |      | Components of Change |                     |  |   |                                 |                                  | Contribution to Net Change^    |                         |                | Contribution to Net Change^    |                         |                | Contribution to Net Change^    |                         |                |
|            |      | Births <sup>a</sup>  | Deaths <sup>b</sup> | Natural Increase <sup>c</sup><br>(a-b) | Estimated Resident Population<br>(ERP) <sup>d</sup> | Net Change<br>$e=(d_{t+1})-d_t$ | Estimated Migration<br>$f=(e-c)$ | Estimated Natural Increase (%) | Estimated Migration (%) | Net Change (%) | Estimated Natural Increase (%) | Estimated Migration (%) | Net Change (%) | Estimated Natural Increase (%) | Estimated Migration (%) | Net Change (%) |
| March Year | 1992 | 1,196                | 514                 | 682                                    | 62,800  | ...                             | ...                              | ...                            | ...                     | ...            | ...                            | ...                     | ...            | ...                            | ...                     | ...            |
|            | 1993 | 1,163                | 500                 | 663                                    | 63,600  | 800                             | 137                              | 1.06                           | 0.22                    | 1.27           | 1.06                           | 0.22                    | 1.28           | 0.89                           | 0.40                    | 1.28           |
|            | 1994 | 1,142                | 556                 | 586                                    | 64,200  | 600                             | 14                               | 0.92                           | 0.02                    | 0.94           | 0.92                           | 0.13                    | 1.04           | 0.87                           | 0.53                    | 1.40           |
|            | 1995 | 1,103                | 556                 | 547                                    | 64,900  | 700                             | 153                              | 0.85                           | 0.24                    | 1.09           | 0.93                           | 0.11                    | 1.03           | 0.84                           | 0.76                    | 1.60           |
| June Year  | 1996 | 1,117                | 574                 | 543                                    | 68,400  | ...                             | ...                              | ...                            | ...                     | ...            | ...                            | ...                     | ...            | ...                            | ...                     | ...            |
|            | 1997 | 1,029                | 566                 | 463                                    | 69,000  | 600                             | 137                              | 0.68                           | 0.20                    | 0.88           | 0.76                           | 0.24                    | 1.00           | 0.79                           | 0.53                    | 1.32           |
|            | 1998 | 1,079                | 531                 | 548                                    | 69,700  | 700                             | 152                              | 0.79                           | 0.22                    | 1.01           | 0.77                           | 0.07                    | 0.84           | 0.78                           | 0.11                    | 0.89           |
|            | 1999 | 1,005                | 568                 | 437                                    | 69,800  | 100                             | -337                             | 0.63                           | -0.48                   | 0.14           | 0.68                           | -0.33                   | 0.35           | 0.75                           | -0.22                   | 0.53           |
|            | 2000 | 1,006                | 519                 | 487                                    | 70,000  | 200                             | -287                             | 0.70                           | -0.41                   | 0.29           | 0.74                           | -0.32                   | 0.42           | 0.79                           | -0.20                   | 0.59           |
|            | 2001 | 979                  | 569                 | 410                                    | 70,000  | 0                               | -410                             | 0.59                           | -0.59                   | 0.00           | 0.59                           | -0.59                   | 0.00           | 0.76                           | -0.17                   | 0.59           |
|            | 2002 | 891                  | 622                 | 269                                    | 71,300  | 1,300                           | 1,031                            | 0.38                           | 1.47                    | 1.86           | 0.54                           | 0.57                    | 1.11           | 0.67                           | 1.08                    | 1.75           |
|            | 2003 | 960                  | 650                 | 310                                    | 72,700  | 1,400                           | 1,090                            | 0.43                           | 1.53                    | 1.96           | 0.43                           | 0.87                    | 1.30           | 0.69                           | 1.30                    | 1.99           |
|            | 2004 | 1,040                | 611                 | 429                                    | 74,100  | 1,400                           | 971                              | 0.59                           | 1.34                    | 1.93           | 0.58                           | 0.50                    | 1.08           | 0.74                           | 0.76                    | 1.50           |
|            | 2005 | 1,078                | 562                 | 516                                    | 75,300  | 1,200                           | 684                              | 0.70                           | 0.92                    | 1.62           | 0.62                           | 0.38                    | 1.00           | 0.72                           | 0.41                    | 1.14           |
|            | 2006 | 1,047                | 601                 | 446                                    | 76,500  | 1,200                           | 754                              | 0.59                           | 1.00                    | 1.59           | 0.63                           | 0.50                    | 1.13           | 0.75                           | 0.48                    | 1.23           |
|            | 2007 | 1,148                | 589                 | 559                                    | 77,500  | 1,000                           | 441                              | 0.73                           | 0.58                    | 1.31           | 0.73                           | -0.01                   | 0.72           | 0.79                           | 0.25                    | 1.04           |
|            | 2008 | 1,160                | 642                 | 518                                    | 78,200  | 700                             | 182                              | 0.67                           | 0.23                    | 0.90           | 0.64                           | -0.06                   | 0.59           | 0.84                           | 0.12                    | 0.96           |
|            | 2009 | 1,148                | 668                 | 480                                    | 79,000  | 800                             | 320                              | 0.61                           | 0.41                    | 1.02           | 0.60                           | 0.12                    | 0.71           | 0.80                           | 0.30                    | 1.10           |
|            | 2010 | 1,138                | 636                 | 502                                    | 80,000  | 1,000                           | 498                              | 0.64                           | 0.63                    | 1.27           | 0.68                           | 0.34                    | 1.03           | 0.82                           | 0.39                    | 1.20           |
|            | 2011 | 1,197                | 631                 | 566                                    | 80,500  | 500                             | -66                              | 0.71                           | -0.08                   | 0.63           | 0.67                           | -0.16                   | 0.51           | 0.76                           | 0.09                    | 0.86           |
|            | 2012 | 1,197                | 690                 | 507                                    | 80,800  | 300                             | -207                             | 0.63                           | -0.26                   | 0.37           | 0.54                           | -0.41                   | 0.13           | 0.71                           | -0.08                   | 0.63           |
|            | 2013 | 1,144                | 699                 | 445                                    | 81,300  | 500                             | 55                               | 0.55                           | 0.07                    | 0.62           | 0.54                           | -0.36                   | 0.19           | 0.67                           | 0.18                    | 0.85           |

Source: Compiled from Statistics New Zealand, Infoshare

(1) 1992-1995 Estimated Defacto Population (March Years); Statistics New Zealand, Yearbook collection 1893-2012

(2) Estimated Resident Population for Regions and TAs, at 30 June (1996+) (Annual-Jun), Table reference: DPE051AA and DPE052AA, Boundaries at 1 January 2013. Last updated: 22 October 2013

(3) Live births and Deaths by area, city/district councils and regional councils (Total population) (Annual-Jun). Table reference: VSB011AA, VSB016AA, VSD008AA, VSD018AA Last updated: 16 August 2013

^ Natural Increase, Net Migration and Net Change as a percentage of previous year's ERP



## Appendix B2.3: Components of Change, 1991-2013, Kaipara District, Northland Region and Total New Zealand, 1991-2013

|            |      | Kaipara District     |                     |  |   |                                   |                                  |                                |                         |                | Northland REGION               |                         |                | New Zealand                    |                         |                |
|------------|------|----------------------|---------------------|--|---|-----------------------------------|----------------------------------|--------------------------------|-------------------------|----------------|--------------------------------|-------------------------|----------------|--------------------------------|-------------------------|----------------|
|            |      | Components of Change |                     |  |   |                                   |                                  | Contribution to Net Change^    |                         |                | Contribution to Net Change^    |                         |                | Contribution to Net Change^    |                         |                |
|            |      | Births <sup>a</sup>  | Deaths <sup>b</sup> | Natural Increase <sup>c</sup><br>(a-b) | Estimated Resident Population<br>(ERP) <sup>d</sup> | Net Change<br>$e=(d_{t+1}) - d_t$ | Estimated Migration<br>$f=(e-c)$ | Estimated Natural Increase (%) | Estimated Migration (%) | Net Change (%) | Estimated Natural Increase (%) | Estimated Migration (%) | Net Change (%) | Estimated Natural Increase (%) | Estimated Migration (%) | Net Change (%) |
| March Year | 1992 | 314                  | 113                 | 201                                    | 17,350  | ...                               | ...                              | ...                            | ...                     | ...            | ...                            | ...                     | ...            | ...                            | ...                     | ...            |
|            | 1993 | 306                  | 138                 | 168                                    | 17,400  | 50                                | -118                             | 0.97                           | -0.68                   | 0.29           | 1.06                           | 0.22                    | 1.28           | 0.89                           | 0.40                    | 1.28           |
|            | 1994 | 253                  | 127                 | 126                                    | 17,400  | 0                                 | -126                             | 0.72                           | -0.72                   | 0.00           | 0.92                           | 0.13                    | 1.04           | 0.87                           | 0.53                    | 1.40           |
|            | 1995 | 286                  | 142                 | 144                                    | 17,450  | 50                                | -94                              | 0.83                           | -0.54                   | 0.29           | 0.93                           | 0.11                    | 1.03           | 0.84                           | 0.76                    | 1.60           |
| June Year  | 1996 | 285                  | 136                 | 149                                    | 17,800  | ...                               | ...                              | ...                            | ...                     | ...            | ...                            | ...                     | ...            | ...                            | ...                     | ...            |
|            | 1997 | 271                  | 133                 | 138                                    | 17,850  | 50                                | -88                              | 0.78                           | -0.49                   | 0.28           | 0.76                           | 0.24                    | 1.00           | 0.79                           | 0.53                    | 1.32           |
|            | 1998 | 272                  | 139                 | 133                                    | 17,850  | 0                                 | -133                             | 0.75                           | -0.75                   | 0.00           | 0.77                           | 0.07                    | 0.84           | 0.78                           | 0.11                    | 0.89           |
|            | 1999 | 244                  | 139                 | 105                                    | 17,900  | 50                                | -55                              | 0.59                           | -0.31                   | 0.28           | 0.68                           | -0.33                   | 0.35           | 0.75                           | -0.22                   | 0.53           |
|            | 2000 | 287                  | 151                 | 136                                    | 17,950  | 50                                | -86                              | 0.76                           | -0.48                   | 0.28           | 0.74                           | -0.32                   | 0.42           | 0.79                           | -0.20                   | 0.59           |
|            | 2001 | 254                  | 154                 | 100                                    | 17,950  | 0                                 | -100                             | 0.56                           | -0.56                   | 0.00           | 0.59                           | -0.59                   | 0.00           | 0.76                           | -0.17                   | 0.59           |
|            | 2002 | 259                  | 166                 | 93                                     | 18,100  | 150                               | 57                               | 0.52                           | 0.32                    | 0.84           | 0.54                           | 0.57                    | 1.11           | 0.67                           | 1.08                    | 1.75           |
|            | 2003 | 240                  | 137                 | 103                                    | 18,250  | 150                               | 47                               | 0.57                           | 0.26                    | 0.83           | 0.43                           | 0.87                    | 1.30           | 0.69                           | 1.30                    | 1.99           |
|            | 2004 | 263                  | 155                 | 108                                    | 18,350  | 100                               | -8                               | 0.59                           | -0.04                   | 0.55           | 0.58                           | 0.50                    | 1.08           | 0.74                           | 0.76                    | 1.50           |
|            | 2005 | 239                  | 156                 | 83                                     | 18,450  | 100                               | 17                               | 0.45                           | 0.09                    | 0.54           | 0.62                           | 0.38                    | 1.00           | 0.72                           | 0.41                    | 1.14           |
|            | 2006 | 240                  | 136                 | 104                                    | 18,550  | 100                               | -4                               | 0.56                           | -0.02                   | 0.54           | 0.63                           | 0.50                    | 1.13           | 0.75                           | 0.48                    | 1.23           |
|            | 2007 | 249                  | 140                 | 109                                    | 18,600  | 50                                | -59                              | 0.59                           | -0.32                   | 0.27           | 0.73                           | -0.01                   | 0.72           | 0.79                           | 0.25                    | 1.04           |
|            | 2008 | 243                  | 159                 | 84                                     | 18,600  | 0                                 | -84                              | 0.45                           | -0.45                   | 0.00           | 0.64                           | -0.06                   | 0.59           | 0.84                           | 0.12                    | 0.96           |
|            | 2009 | 248                  | 139                 | 109                                    | 18,750  | 150                               | 41                               | 0.59                           | 0.22                    | 0.81           | 0.60                           | 0.12                    | 0.71           | 0.80                           | 0.30                    | 1.10           |
|            | 2010 | 269                  | 148                 | 121                                    | 18,950  | 200                               | 79                               | 0.65                           | 0.42                    | 1.07           | 0.68                           | 0.34                    | 1.03           | 0.82                           | 0.39                    | 1.20           |
|            | 2011 | 257                  | 134                 | 123                                    | 19,150  | 200                               | 77                               | 0.65                           | 0.41                    | 1.06           | 0.67                           | -0.16                   | 0.51           | 0.76                           | 0.09                    | 0.86           |
|            | 2012 | 256                  | 160                 | 96                                     | 19,100  | -50                               | -146                             | 0.50                           | -0.76                   | -0.26          | 0.54                           | -0.41                   | 0.13           | 0.71                           | -0.08                   | 0.63           |
|            | 2013 | 244                  | 184                 | 60                                     | 19,050  | -50                               | -110                             | 0.31                           | -0.58                   | -0.26          | 0.54                           | -0.36                   | 0.19           | 0.67                           | 0.18                    | 0.85           |

Source: Compiled from Statistics New Zealand, Infoshare

(1) 1992-1995 Estimated Defacto Population (March Years); Statistics New Zealand, Yearbook collection 1893-2012

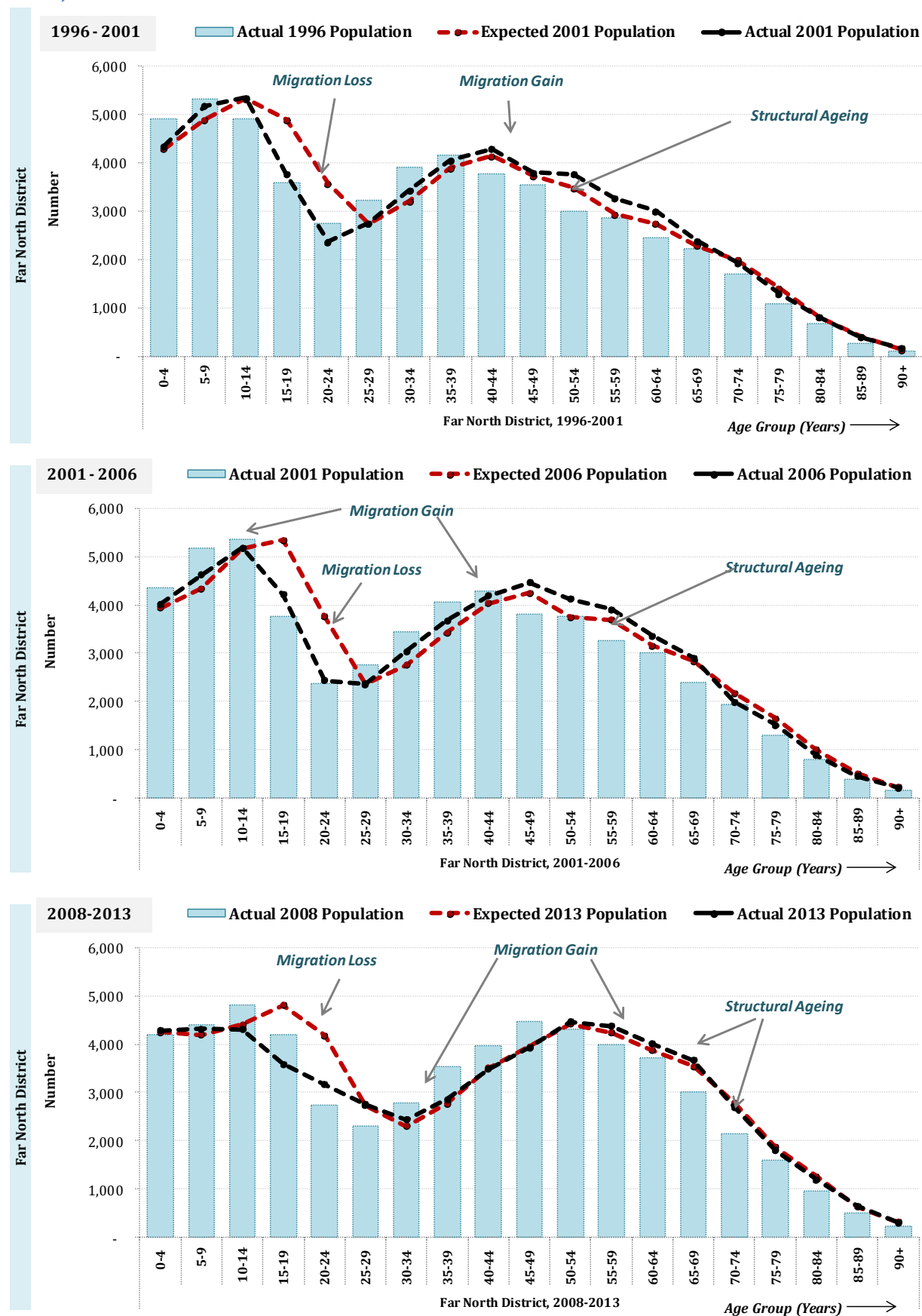
(2) Estimated Resident Population for Regions and TAs, at 30 June (1996+) (Annual-Jun), Table reference: DPE051AA and DPE052AA, Boundaries at 1 January 2013. Last updated: 22 October 2013

(3) Live births and Deaths by area, city/district councils and regional councils (Total population) (Annual-Jun). Table reference: VSB011AA, VSB016AA, VSD008AA, VSD018AA Last updated: 16 August 2013

^ Natural Increase, Net Migration and Net Change as a percentage of previous year's ERP



## Appendix B3.1: Expected and Actual Population by Age, 1996-2001, 2001-2006, and 2008-2013, Far North District

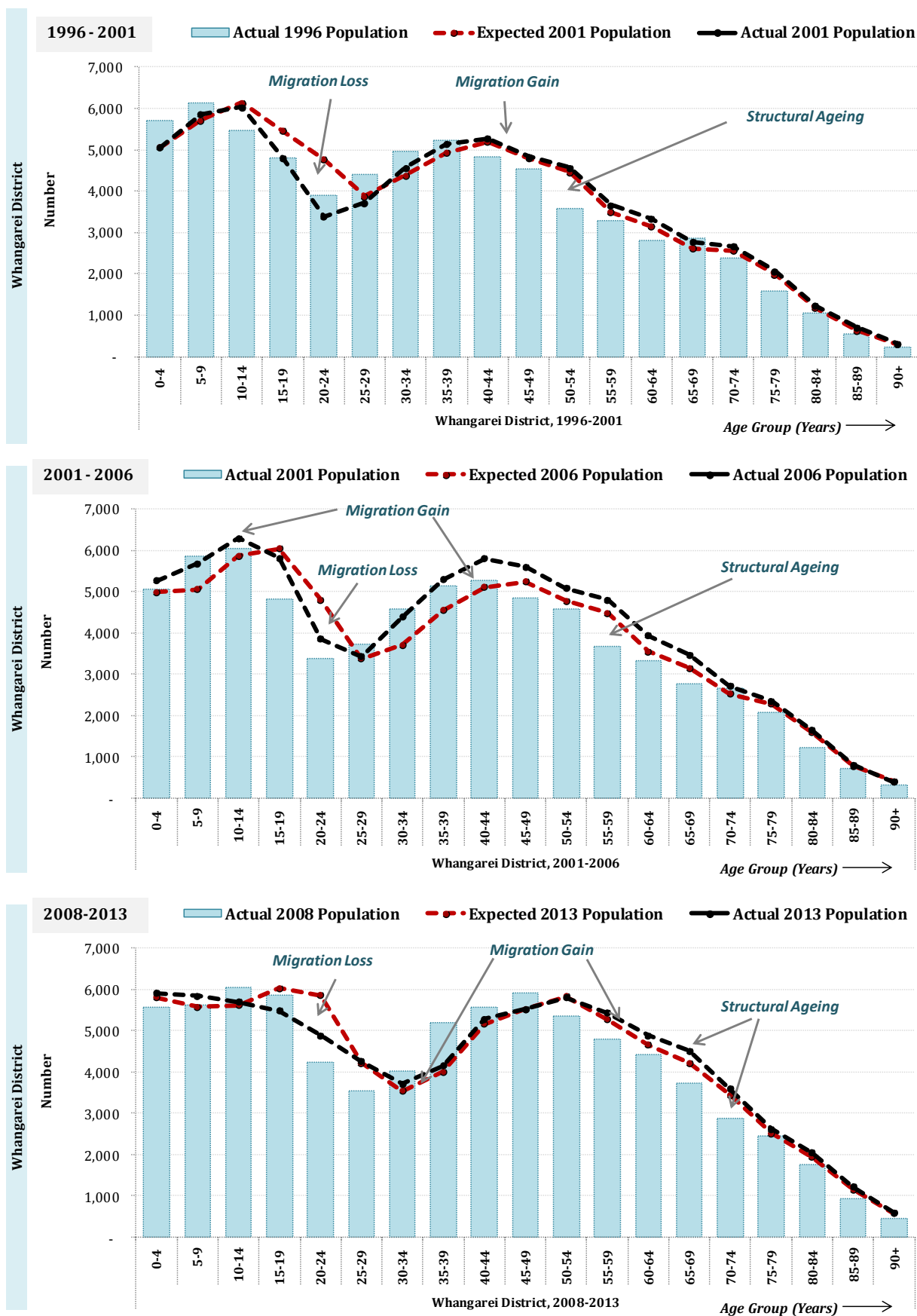


Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2010



**Appendix B3.2: Expected and Actual Population by Age, 1996-2001, 2001-2006, and 2008-2013, Whangarei District**

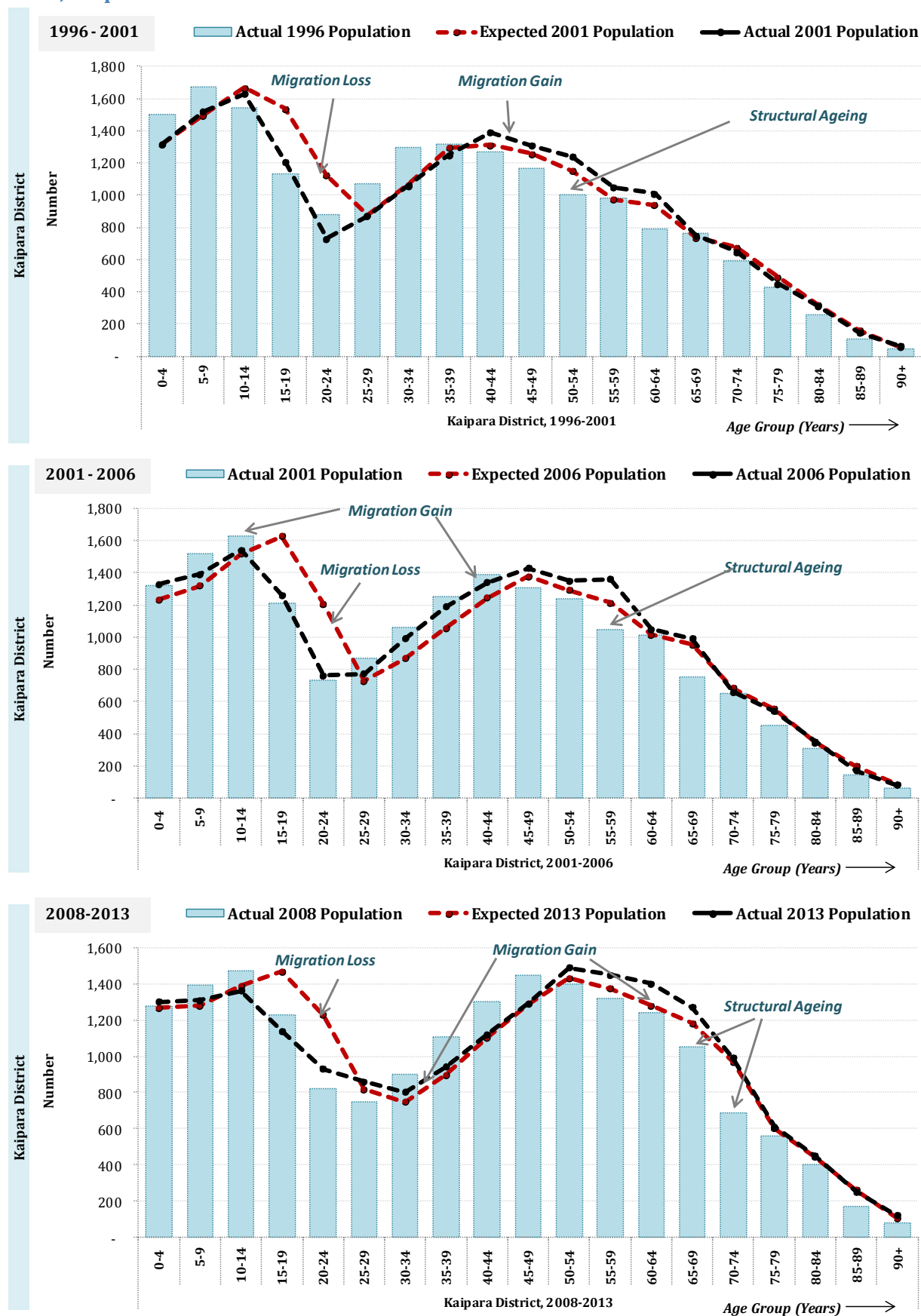




Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2010



### Appendix B3.3: Expected and Actual Population by Age, 1996-2001, 2001-2006, and 2008-2013, Kaipara District

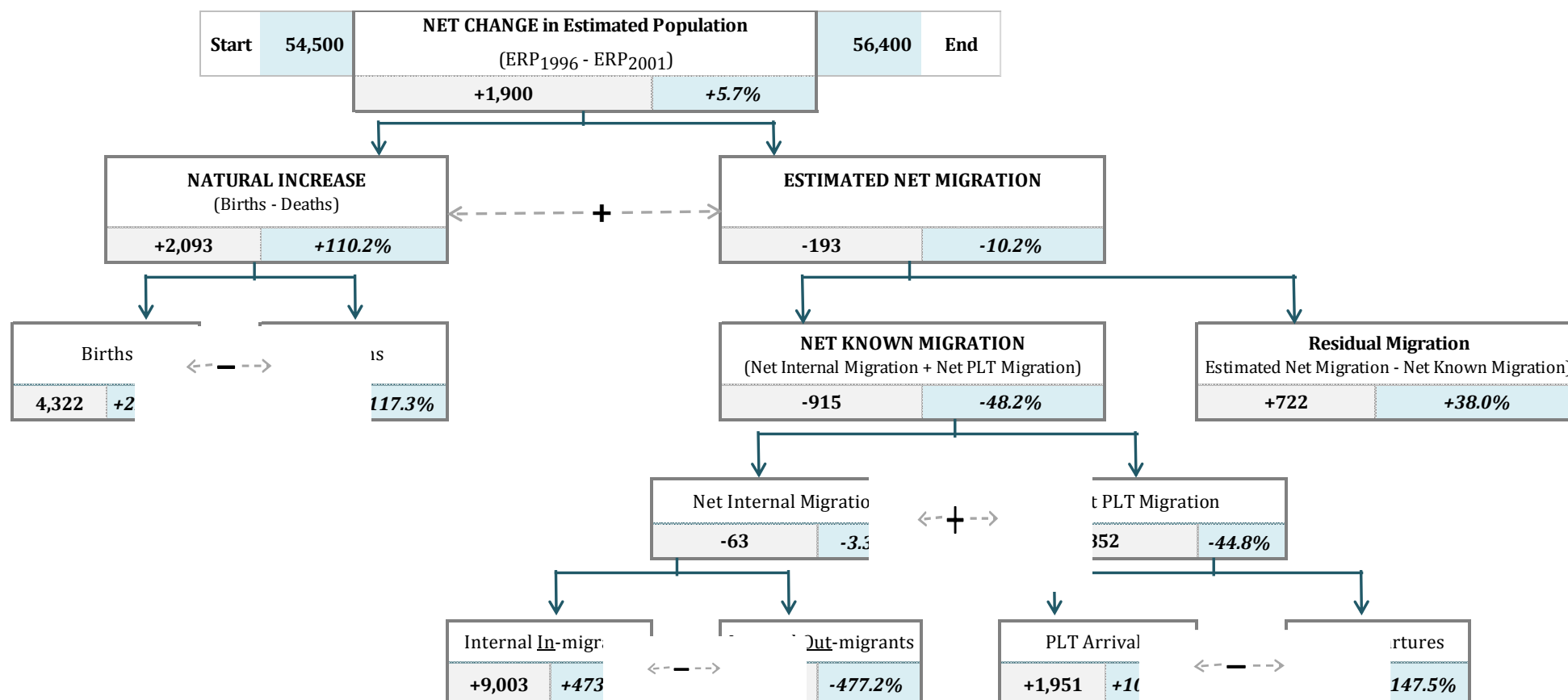


Jackson/from Statistics New Zealand ERP and New Zealand Survivorship 1995-2010





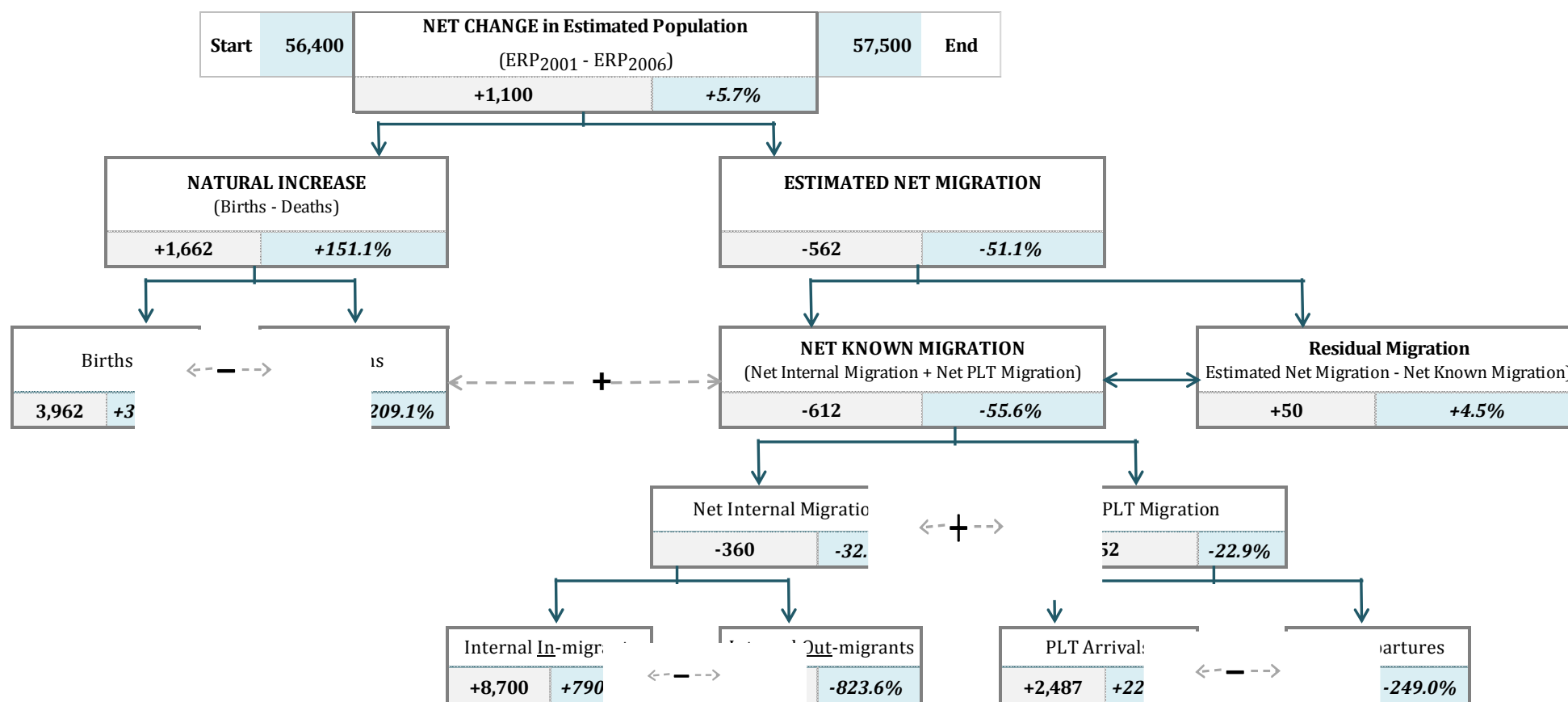
#### Appendix B3.4: Components Contributing to Change in Estimated Resident Population, 1996-2001, Far North District



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



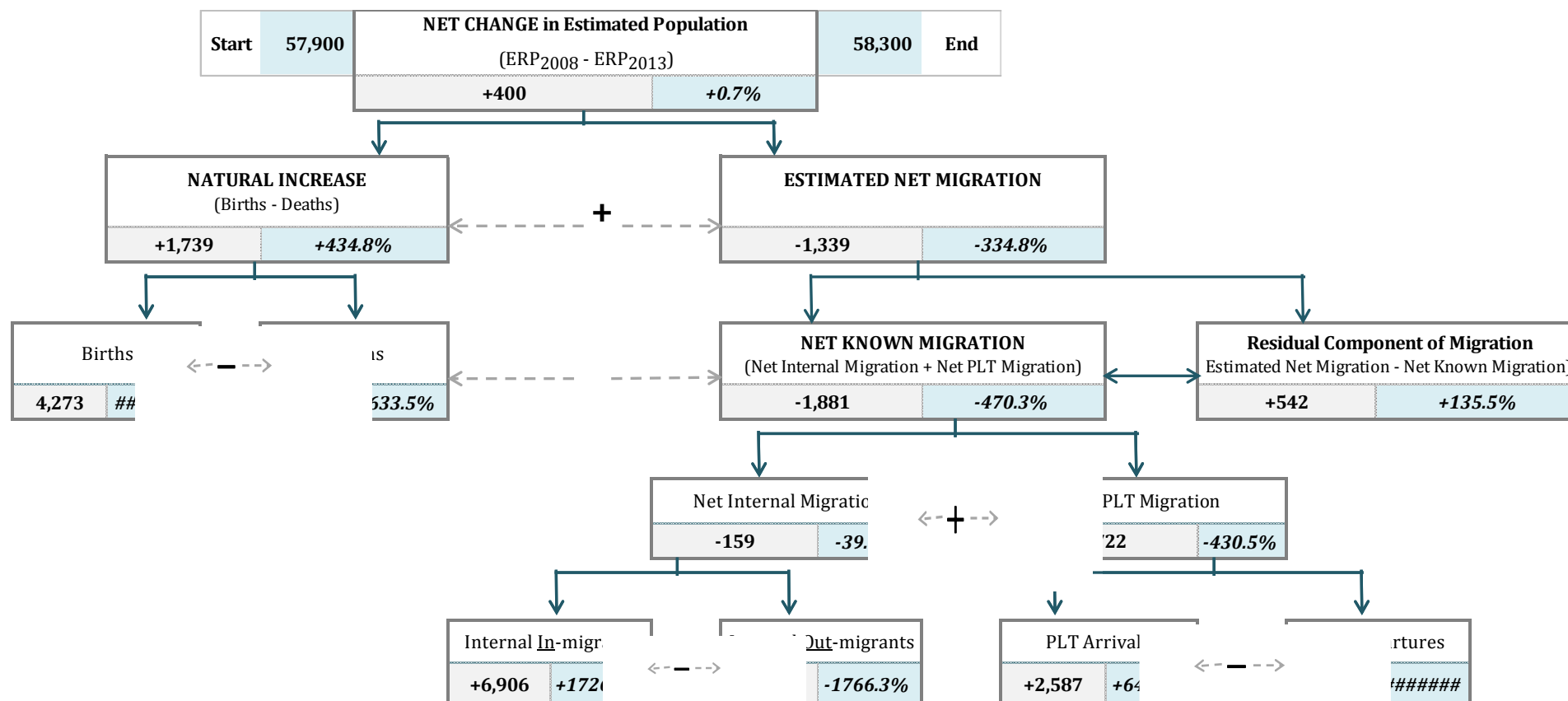
## Appendix B3.5: Components Contributing to Change in Estimated Resident Population, 2001-2006, Far North District



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



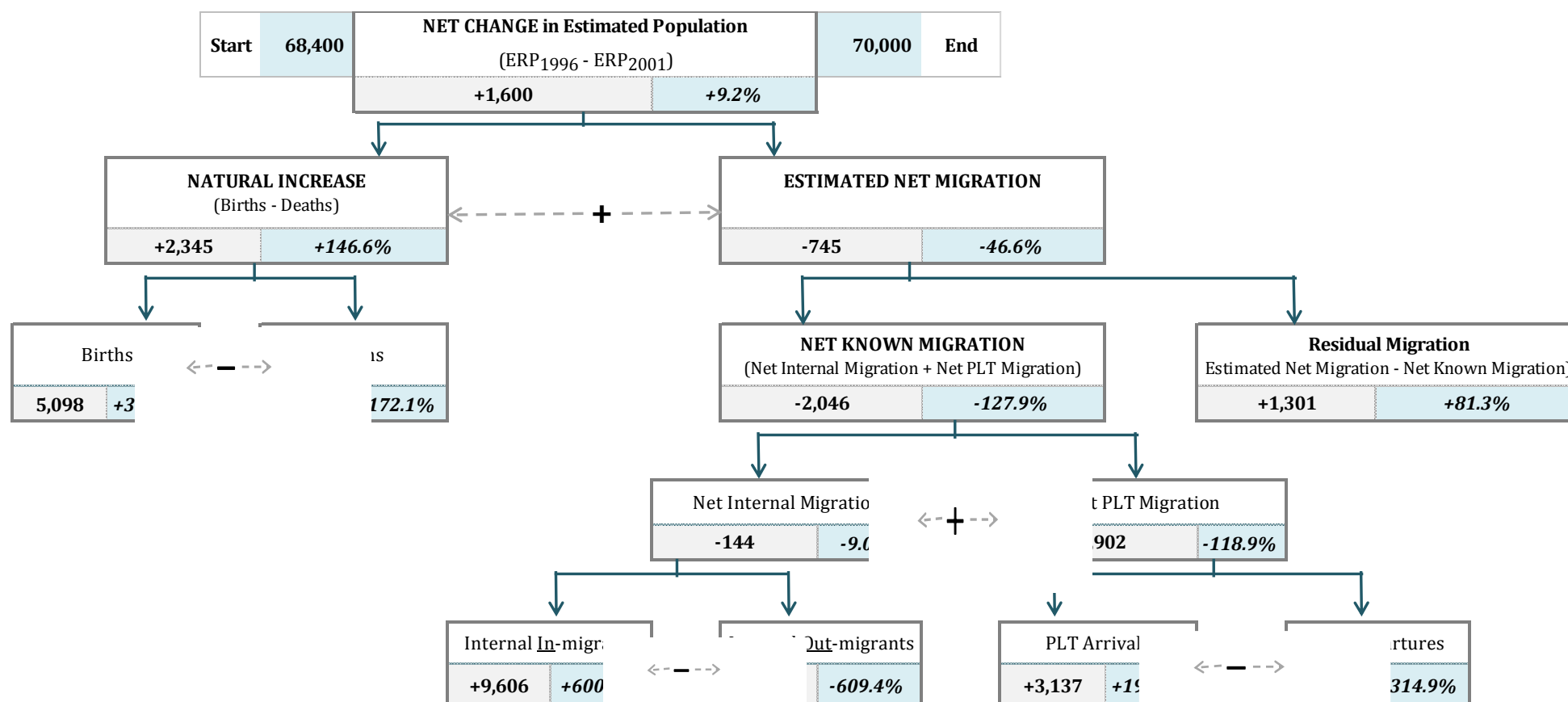
## Appendix B3.6: Components Contributing to Change in Estimated Resident Population, 2008-2013, Far North District



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



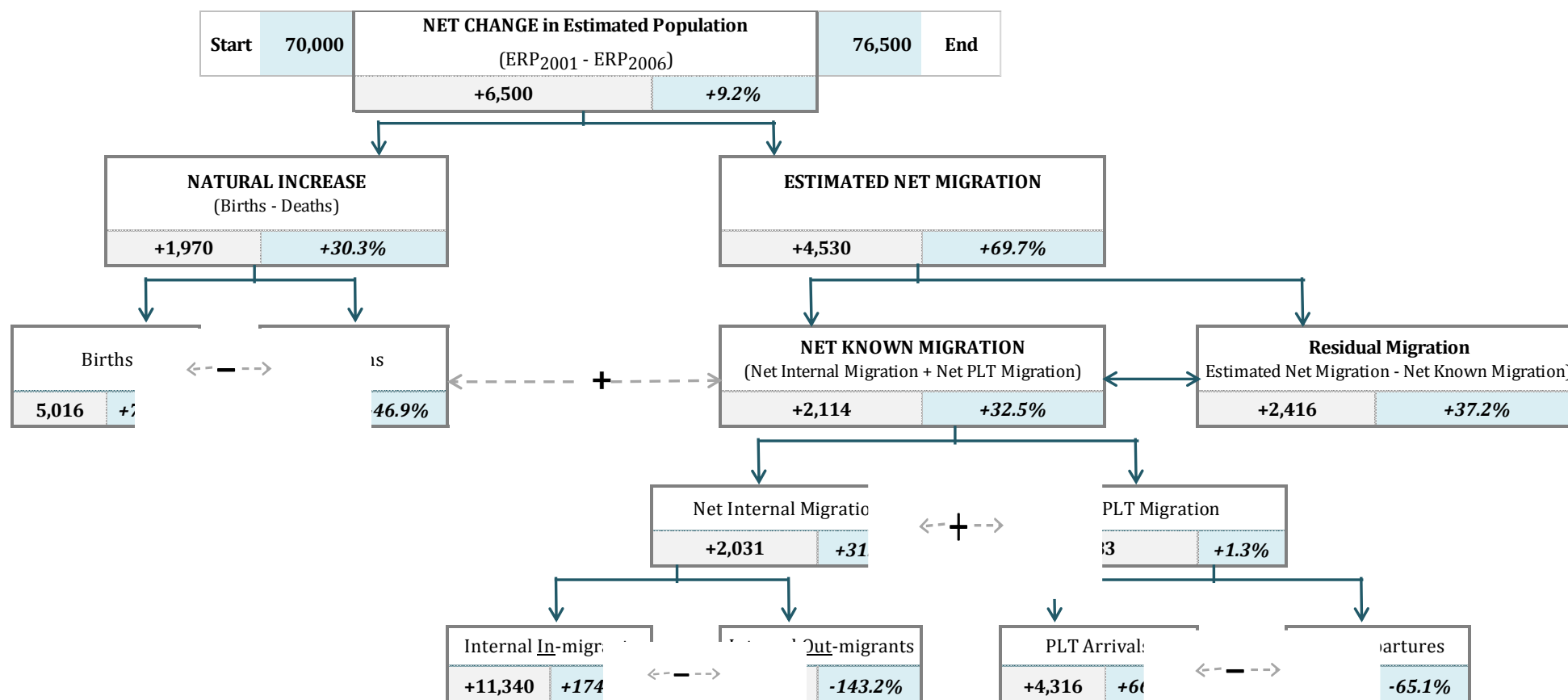
### Appendix B3.7: Components Contributing to Change in Estimated Resident Population, 1996-2001, Whangarei District



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



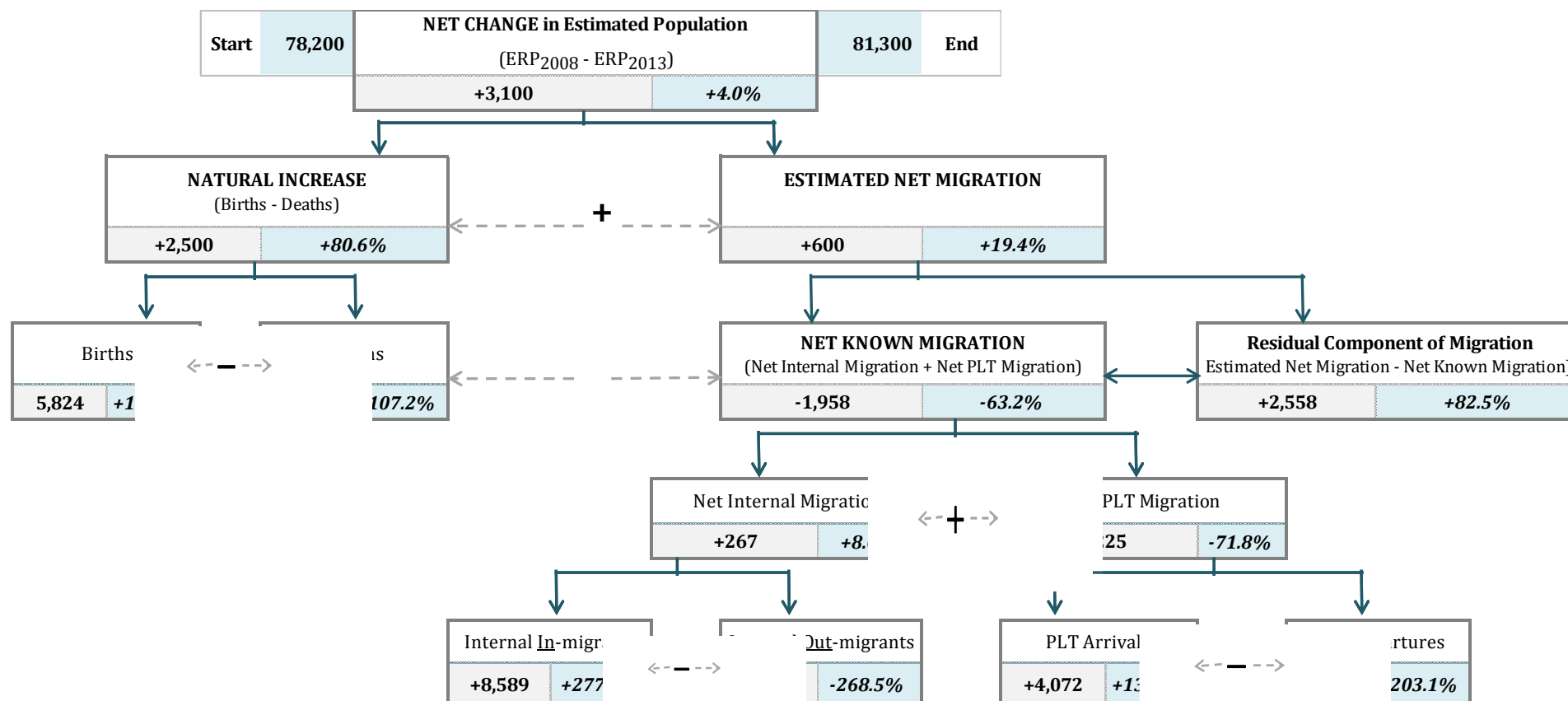
## Appendix B3.8: Components Contributing to Change in Estimated Resident Population, 2001-2006, Whangarei District



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



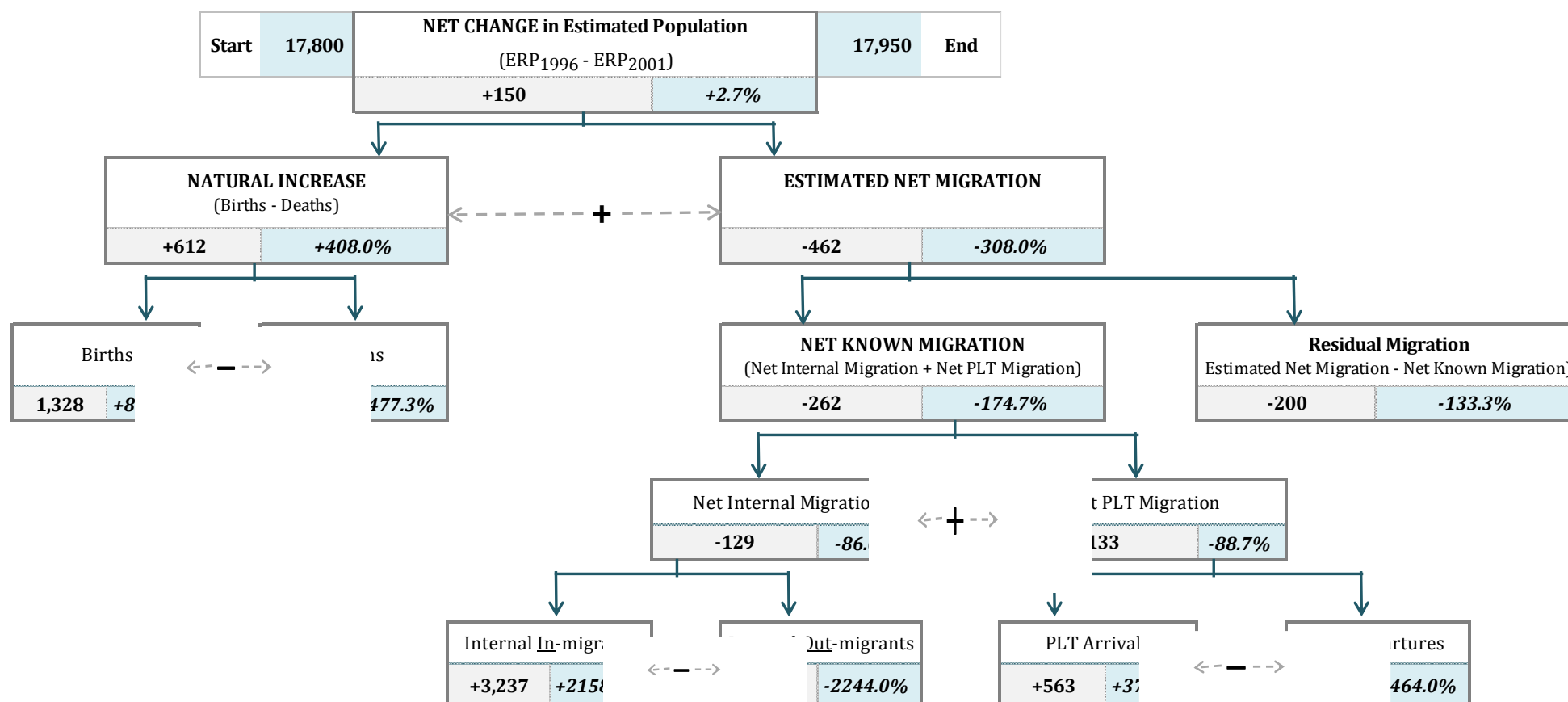
### Appendix B3.9: Components Contributing to Change in Estimated Resident Population, 2008-2013, Whangarei District



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



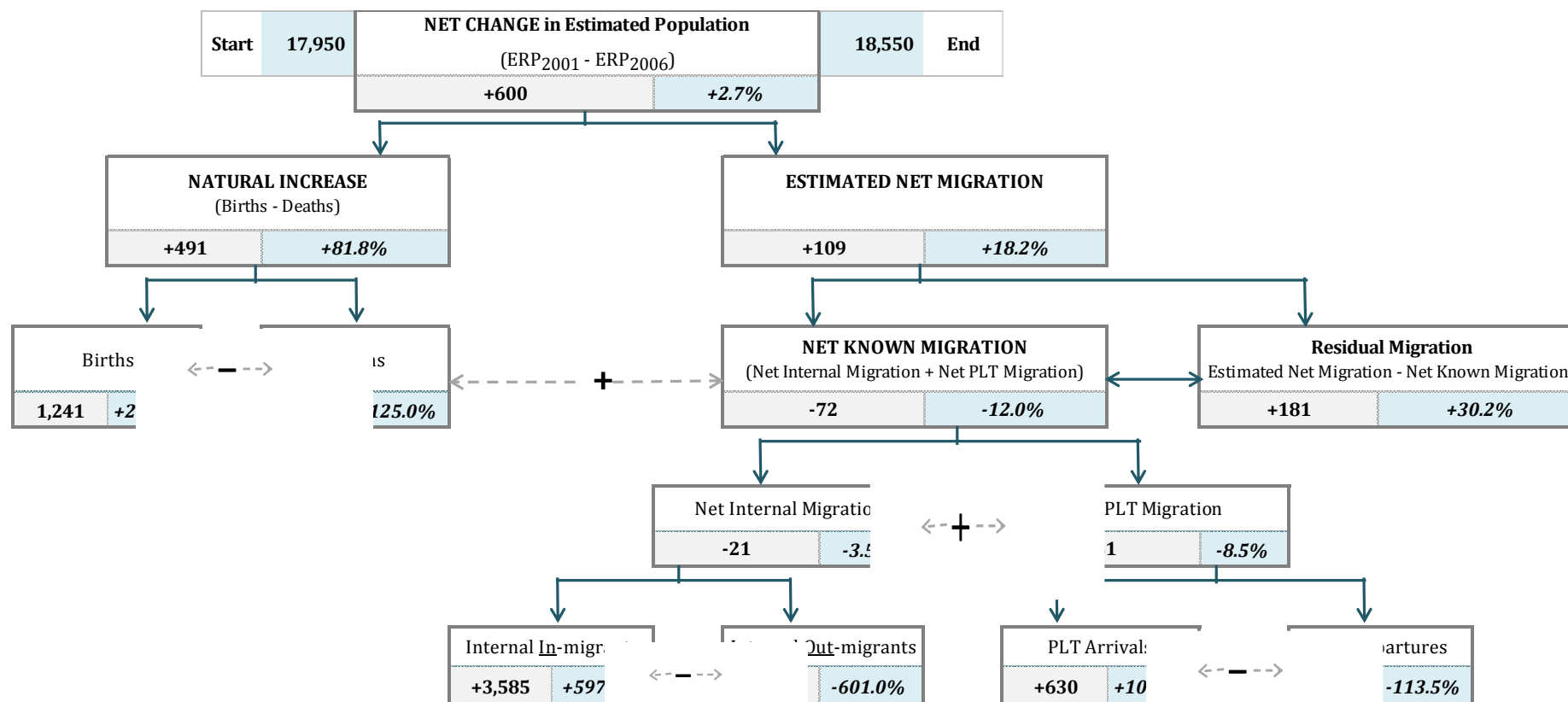
### Appendix B3.10: Components Contributing to Change in Estimated Resident Population, 1996-2001, Kaipara District



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



### Appendix B3.11: Components Contributing to Change in Estimated Resident Population, 2001-2006, Kaipara District

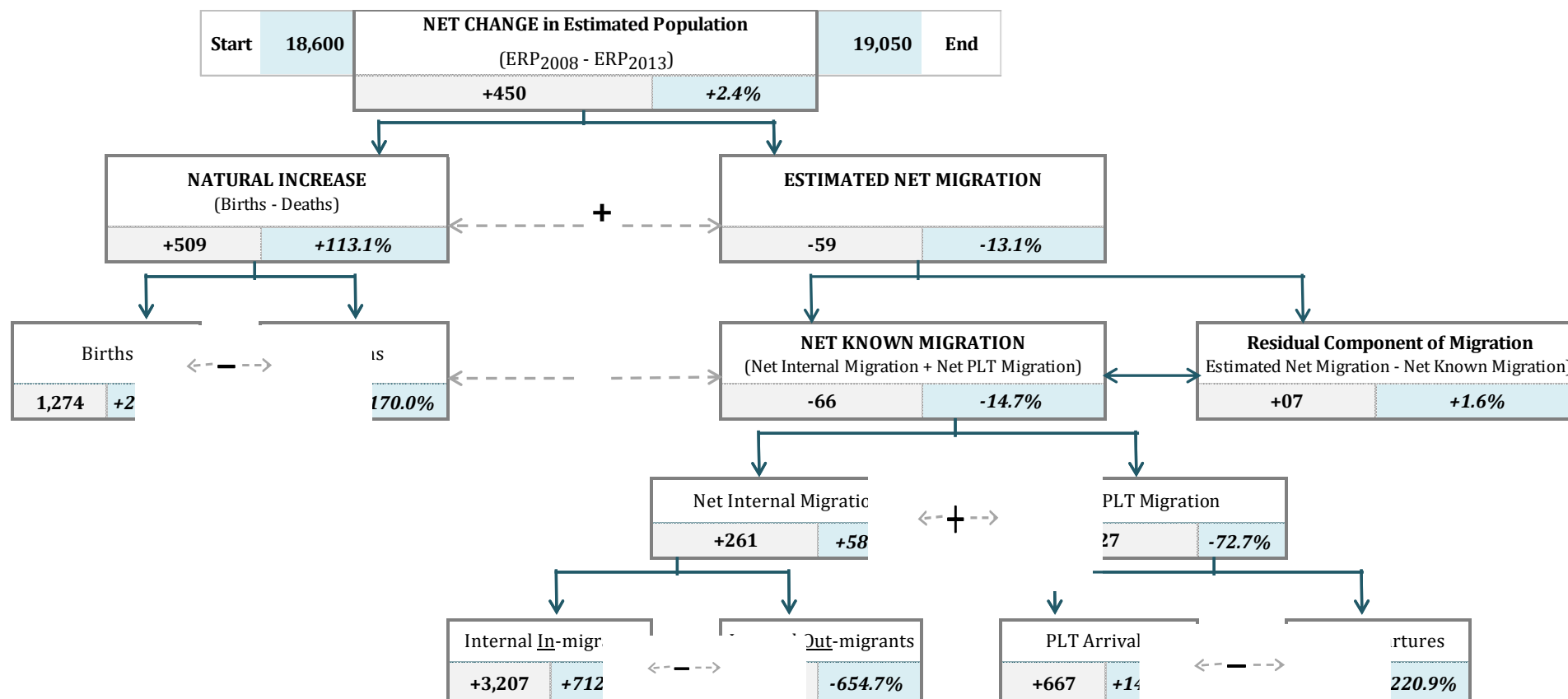


Source: Jackson & Pawar (2013)/Statistics New Zealand various sources





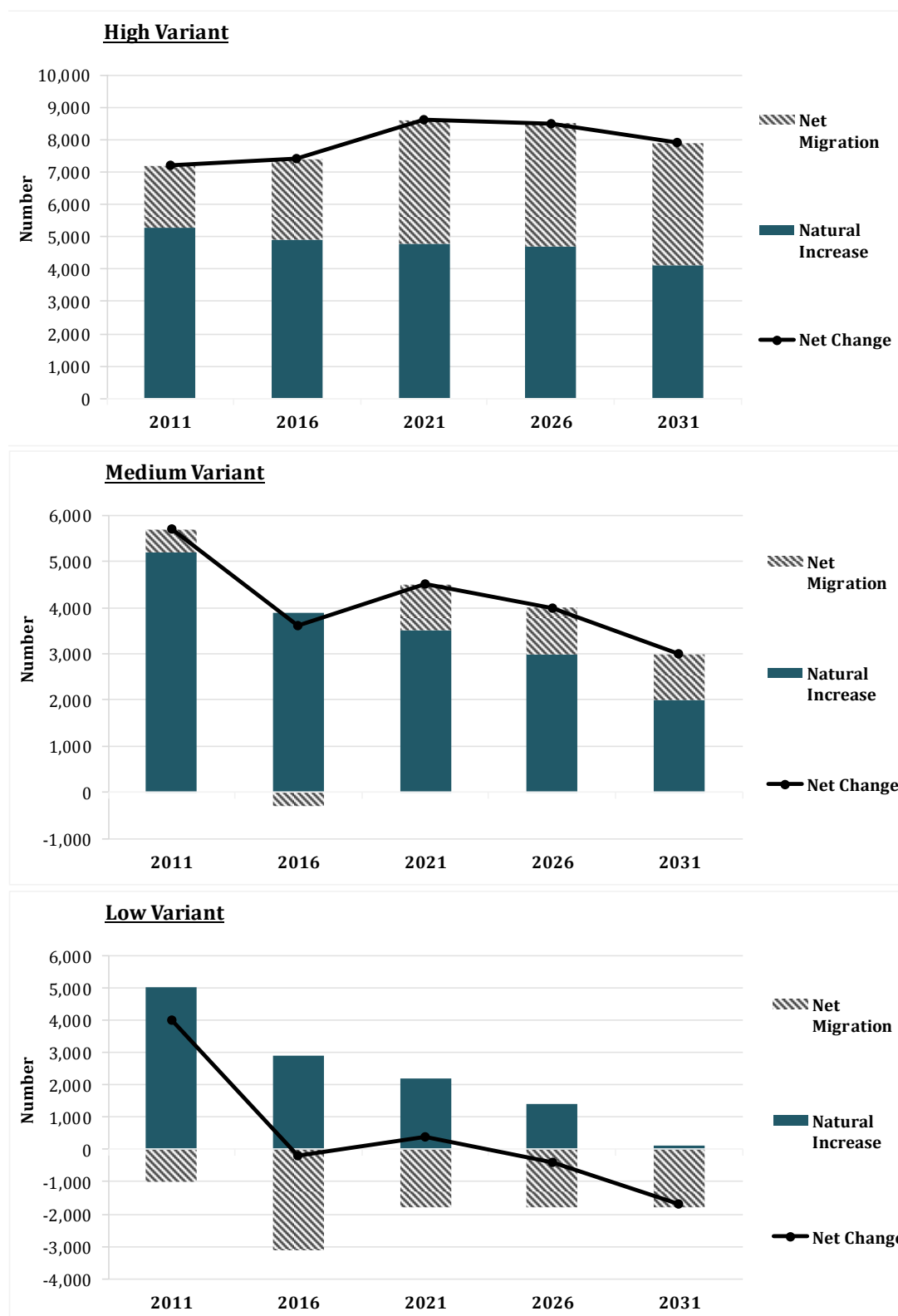
## Appendix B3.12: Components Contributing to Change in Estimated Resident Population, 2008-2013, Kaipara District



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources



## Appendix B4.1: Projected Assumptions by Projection Variant, Northland Region



Source: Subnational Projected Population Characteristics, 2006(base)-2031 (October 2012 update)



## Appendix B4.2: Projection Assumptions by Variant, Northland Region

| Northland Region                         | 2011   | 2016   | 2021   | 2026   | 2031   | Change<br>2011-2031 (%) |
|--|--------|--------|--------|--------|--------|-------------------------|
| <b>HIGH</b>                              |        |        |        |        |        |                         |
| Births (Live) - 5 years ended 30 June    | 11700  | 11600  | 12000  | 12500  | 12600  | 7.7                     |
| Deaths - 5 years ended 30 June           | 6300   | 6700   | 7200   | 7800   | 8500   | 34.9                    |
| Natural Increase - 5 years ended 30 June | 5300   | 4900   | 4800   | 4700   | 4100   | -22.6                   |
| Net Migration - 5 years ended 30 June    | 1900   | 2500   | 3800   | 3800   | 3800   | 100.0                   |
| Population at 30 June                    | 159900 | 167300 | 175900 | 184400 | 192300 | 20.3                    |
| Median Age (Years) at 30 June            | 40.7   | 42.1   | 42.8   | 43.1   | 43.7   | 7.4                     |
| <b>MEDIUM</b>                            |        |        |        |        |        |                         |
| Births (Live) - 5 years ended 30 June    | 11500  | 10700  | 10800  | 10900  | 10600  | -7.8                    |
| Deaths - 5 years ended 30 June           | 6400   | 6800   | 7300   | 7900   | 8600   | 34.4                    |
| Natural Increase - 5 years ended 30 June | 5200   | 3900   | 3500   | 3000   | 2000   | -61.5                   |
| Net Migration - 5 years ended 30 June    | 500    | -300   | 1000   | 1000   | 1000   | 100.0                   |
| Population at 30 June                    | 158300 | 161900 | 166500 | 170500 | 173500 | 9.6                     |
| Median Age (Years) at 30 June            | 40.7   | 42.4   | 43.4   | 44     | 44.7   | 9.8                     |
| <b>LOW</b>                               |        |        |        |        |        |                         |
| Births (Live) - 5 years ended 30 June    | 11400  | 9900   | 9700   | 9400   | 8800   | -22.8                   |
| Deaths - 5 years ended 30 June           | 6400   | 7000   | 7500   | 8000   | 8700   | 35.9                    |
| Natural Increase - 5 years ended 30 June | 5000   | 2900   | 2200   | 1400   | 100    | -98.0                   |
| Net Migration - 5 years ended 30 June    | -1000  | -3100  | -1800  | -1800  | -1800  | 80.0                    |
| Population at 30 June                    | 156700 | 156500 | 157000 | 156600 | 154800 | -1.2                    |
| Median Age (Years) at 30 June            | 40.8   | 42.7   | 44.1   | 44.8   | 45.9   | 12.5                    |

Source: Subnational Projected Population Characteristics, 2006(base)-2031 (October 2012 update)



### Appendix B4.3: Projected Population, Total New Zealand, 2006-2031 (Medium Series)

|                                  | Numbers by age                         |                  |           |           |           |           | Change (%) |
|----------------------------------|--|------------------|-----------|-----------|-----------|-----------|------------|
|                                  | 2006                                   | 2011             | 2016      | 2021      | 2026      | 2031      | 2011-2031  |
| 0-14 years                       | 888,320                                | <b>894,460</b>   | 895,880   | 918,410   | 922,190   | 934,760   | +4.5       |
| 15-24 years                      | 604,740                                | <b>642,420</b>   | 627,810   | 604,110   | 620,770   | 635,360   | -1.1       |
| 25-39 years                      | 858,960                                | <b>856,580</b>   | 912,400   | 1,004,920 | 1,045,250 | 1,033,890 | +20.7      |
| 40-54 years                      | 891,290                                | <b>930,220</b>   | 903,540   | 854,150   | 852,610   | 919,050   | -1.2       |
| 55-64 years                      | 429,670                                | <b>494,440</b>   | 544,290   | 592,840   | 596,600   | 564,790   | +14.2      |
| 65-74 years                      | 275,700                                | <b>325,440</b>   | 400,300   | 465,990   | 518,940   | 568,860   | +74.8      |
| 75-84 years                      | 177,780                                | <b>188,510</b>   | 215,810   | 261,810   | 330,290   | 390,510   | +107.2     |
| 85+ years                        | 58,140                                 | <b>73,110</b>    | 86,190    | 95,790    | 117,780   | 147,350   | +101.5     |
| Total                            | 4,184,600                              | <b>4,405,180</b> | 4,586,220 | 4,798,020 | 5,004,430 | 5,194,570 | +17.9      |
| 65+ years                        | 511,620                                | <b>587,060</b>   | 702,300   | 823,590   | 967,010   | 1,106,720 | +88.5      |
|                                  | Intercensal Change by Age (Numbers)    |                  |           |           |           |           | Change (N) |
|                                  | 2006-2011                              | 2011-2016        | 2016-2021 | 2021-2026 | 2026-2031 |           | 2011-2031  |
| 0-14 years                       | ...                                    | <b>6,140</b>     | 1,420     | 22,530    | 3,780     | 12,570    | 40,300     |
| 15-24 years                      | ...                                    | <b>37,680</b>    | (14,610)  | (23,700)  | 16,660    | 14,590    | (7,060)    |
| 25-39 years                      | ...                                    | <b>(2,380)</b>   | 55,820    | 92,520    | 40,330    | (11,360)  | 177,310    |
| 40-54 years                      | ...                                    | <b>38,930</b>    | (26,680)  | (49,390)  | (1,540)   | 66,440    | (11,170)   |
| 55-64 years                      | ...                                    | <b>64,770</b>    | 49,850    | 48,550    | 3,760     | (31,810)  | 70,350     |
| 65-74 years                      | ...                                    | <b>49,740</b>    | 74,860    | 65,690    | 52,950    | 49,920    | 243,420    |
| 75-84 years                      | ...                                    | <b>10,730</b>    | 27,300    | 46,000    | 68,480    | 60,220    | 202,000    |
| 85+ years                        | ...                                    | <b>14,970</b>    | 13,080    | 9,600     | 21,990    | 29,570    | 74,240     |
| Total                            | ...                                    | <b>220,580</b>   | 181,040   | 211,800   | 206,410   | 190,140   | 789,390    |
| 65+ years                        | ...                                    | <b>75,440</b>    | 115,240   | 121,290   | 143,420   | 139,710   | 519,660    |
|                                  | Age Distribution (% at each age group) |                  |           |           |           |           | Change (%) |
|                                  | 2006                                   | 2011             | 2016      | 2021      | 2026      | 2031      | 2011-2031  |
| 0-14 years                       | 21.2                                   | <b>20.3</b>      | 19.5      | 19.1      | 18.4      | 18.0      | -11.4      |
| 15-24 years                      | 14.5                                   | <b>14.6</b>      | 13.7      | 12.6      | 12.4      | 12.2      | -16.1      |
| 25-39 years                      | 20.5                                   | <b>19.4</b>      | 19.9      | 20.9      | 20.9      | 19.9      | +2.4       |
| 40-54 years                      | 21.3                                   | <b>21.1</b>      | 19.7      | 17.8      | 17.0      | 17.7      | -16.2      |
| 55-64 years                      | 10.3                                   | <b>11.2</b>      | 11.9      | 12.4      | 11.9      | 10.9      | -3.1       |
| 65-74 years                      | 6.6                                    | <b>7.4</b>       | 8.7       | 9.7       | 10.4      | 11.0      | +48.2      |
| 75-84 years                      | 4.2                                    | <b>4.3</b>       | 4.7       | 5.5       | 6.6       | 7.5       | +75.7      |
| 85+ years                        | 1.4                                    | <b>1.7</b>       | 1.9       | 2.0       | 2.4       | 2.8       | +70.9      |
| Total                            | 100.0                                  | <b>100.0</b>     | 100.0     | 100.0     | 100.0     | 100.0     | +0.0       |
| 65+ years                        | 12.2                                   | <b>13.3</b>      | 15.3      | 17.2      | 19.3      | 21.3      | +59.9      |
|                                  | Summary Measures                       |                  |           |           |           |           | Change (%) |
|                                  | 2006                                   | 2011             | 2016      | 2021      | 2026      | 2031      | 2011-2031  |
| <b>LM Entrants/Exits</b>         |  |                  |           |           |           |           |            |
| (15-24/55-64 years)              | 1.4                                    | <b>1.3</b>       | 1.2       | 1.0       | 1.0       | 1.1       | -13.4      |
| (20-29/60-69 years)              | 1.6                                    | <b>1.5</b>       | 1.4       | 1.2       | 1.1       | 1.1       | -25.4      |
| <b>Elderly/Children</b>          | 0.6                                    | <b>0.7</b>       | 0.8       | 0.9       | 1.0       | 1.2       | +80.4      |
| <b>Reproductive (20-39 yrs)</b>  | 27.5                                   | <b>26.8</b>      | 27.1      | 27.5      | 27.0      | 26.3      | -2.0       |
| <b>Proportion 65+ years</b>      | 12.2                                   | <b>13.3</b>      | 15.3      | 17.2      | 19.3      | 21.3      | +59.9      |
| <b>Proportion 75+ years</b>      | 5.6                                    | <b>5.9</b>       | 6.6       | 7.5       | 9.0       | 10.4      | +74.3      |
| <b>Growth (%) in 5 years</b>     | ...                                    | <b>+5.3</b>      | +4.1      | +4.6      | +4.3      | +3.8      | +17.9      |
| <b>Annual average growth (%)</b> | ...                                    | <b>+1.1</b>      | +0.8      | +0.9      | +0.9      | +0.8      | +0.9       |

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



## Appendix B4.4: Projection Assumptions, Northland Region TAs, 2011-2031 (Medium Series)

|  | 2006  | 2011         | 2016  | 2021  | 2026  | 2031  | Change 2011-2031 (%) |
|--|-------|--------------|-------|-------|-------|-------|----------------------|
| <b>Far North District</b>                |       |              |       |       |       |       |                      |
| Births (Live) - 5 years ended 30 June    |       | <b>4400</b>  | 4100  | 4100  | 4000  | 3800  | -13.6                |
| Deaths - 5 years ended 30 June           |       | <b>2500</b>  | 2500  | 2700  | 2900  | 3100  | 24.0                 |
| Natural Increase - 5 years ended 30 June |       | <b>2000</b>  | 1500  | 1400  | 1100  | 700   | -65.0                |
| Net Migration - 5 years ended 30 June    |       | <b>-1000</b> | -1200 | -500  | -500  | -500  | -50.0                |
| Population at 30 June                    | 57500 | <b>58500</b> | 58900 | 59700 | 60400 | 60500 | 3.4                  |
| Median Age (Years) at 30 June            | 38.9  | <b>41.0</b>  | 42.9  | 44.1  | 44.6  | 45.3  | 10.5                 |
| <b>Whangarei District</b>                |       |              |       |       |       |       |                      |
| Births (Live) - 5 years ended 30 June    |       | <b>5800</b>  | 5500  | 5600  | 5700  | 5700  | -1.7                 |
| Deaths - 5 years ended 30 June           |       | <b>3200</b>  | 3500  | 3700  | 4100  | 4400  | 37.5                 |
| Natural Increase - 5 years ended 30 June |       | <b>2600</b>  | 2000  | 1900  | 1700  | 1200  | -53.8                |
| Net Migration - 5 years ended 30 June    |       | <b>1400</b>  | 1000  | 1500  | 1500  | 1500  | 7.1                  |
| Population at 30 June                    | 76500 | <b>80600</b> | 83600 | 87000 | 90200 | 92900 | 15.3                 |
| Median Age (Years) at 30 June            | 38.4  | <b>40.1</b>  | 41.5  | 42.2  | 42.7  | 43.7  | 9.0                  |
| <b>Kaipara District</b>                  |       |              |       |       |       |       |                      |
| Births (Live) - 5 years ended 30 June    |       | <b>1300</b>  | 1150  | 1150  | 1150  | 1100  | -15.4                |
| Deaths - 5 years ended 30 June           |       | <b>750</b>   | 800   | 850   | 950   | 1050  | 40.0                 |
| Natural Increase - 5 years ended 30 June |       | <b>550</b>   | 400   | 300   | 200   | 50    | -90.9                |
| Net Migration - 5 years ended 30 June    |       | <b>50</b>    | -100  | 0     | 0     | 0     | -100.0               |
| Population at 30 June                    | 18550 | <b>19150</b> | 19450 | 19750 | 19950 | 20000 | 4.4                  |
| Median Age (Years) at 30 June            | 40.2  | <b>42.6</b>  | 45.2  | 46.9  | 48.1  | 48.8  | 14.6                 |

Source: Subnational Projected Population Characteristics, 2006(base)-2031 (October 2012 update)



## Appendix B4.5: Projected Change by Broad Age Group (Numbers), Northland Region TAs, 2011-2031 (Medium Series)

| Far North District | Projected Numbers by Age (Medium Case) |               |        |        |        |        | Change (%<br>2011-2031) |
|--------------------|--|---------------|--------|--------|--------|--------|-------------------------|
|                    | 2006                                   | 2011          | 2016   | 2021   | 2026   | 2031   |                         |
| 0-14 years         | 13,830                                 | <b>13,160</b> | 12,630 | 12,780 | 12,430 | 12,230 | -7.1                    |
| 15-24 years        | 6,650                                  | <b>7,080</b>  | 6,360  | 5,400  | 5,450  | 5,600  | -20.9                   |
| 25-39 years        | 9,090                                  | <b>8,260</b>  | 8,610  | 9,460  | 9,640  | 8,570  | +3.8                    |
| 40-54 years        | 12,780                                 | <b>12,560</b> | 11,240 | 9,830  | 9,100  | 9,610  | -23.5                   |
| 55-64 years        | 7,270                                  | <b>8,190</b>  | 9,060  | 9,400  | 8,760  | 7,820  | -4.5                    |
| 65-74 years        | 4,890                                  | <b>5,840</b>  | 6,780  | 7,760  | 8,730  | 9,150  | +56.7                   |
| 75-84 years        | 2,390                                  | <b>2,730</b>  | 3,340  | 4,110  | 4,970  | 5,860  | +114.7                  |
| 85+ years          | 670                                    | <b>710</b>    | 870    | 990    | 1,340  | 1,710  | +140.8                  |
| Total              | 57,570                                 | <b>58,530</b> | 58,890 | 59,730 | 60,420 | 60,550 | +3.5                    |
| 65+ years          | 7,950                                  | <b>9,280</b>  | 10,990 | 12,860 | 15,040 | 16,720 | +80.2                   |

| Whangarei District | Projected Numbers by Age (Medium Case) |               |        |        |        |        | Change (%<br>2011-2031) |
|--------------------|--|---------------|--------|--------|--------|--------|-------------------------|
|                    | 2006                                   | 2011          | 2016   | 2021   | 2026   | 2031   |                         |
| 0-14 years         | 17,220                                 | <b>17,360</b> | 17,300 | 17,630 | 17,530 | 17,710 | +2.0                    |
| 15-24 years        | 9,660                                  | <b>10,490</b> | 10,050 | 9,260  | 9,500  | 9,700  | -7.5                    |
| 25-39 years        | 13,110                                 | <b>12,340</b> | 13,060 | 14,820 | 15,510 | 14,800 | +19.9                   |
| 40-54 years        | 16,480                                 | <b>16,980</b> | 16,110 | 14,420 | 13,690 | 14,690 | -13.5                   |
| 55-64 years        | 8,720                                  | <b>10,110</b> | 11,100 | 11,970 | 11,880 | 10,900 | +7.8                    |
| 65-74 years        | 6,180                                  | <b>7,360</b>  | 8,900  | 10,410 | 11,570 | 12,510 | +70.0                   |
| 75-84 years        | 3,990                                  | <b>4,360</b>  | 5,120  | 6,230  | 7,670  | 9,050  | +107.6                  |
| 85+ years          | 1,190                                  | <b>1,580</b>  | 1,960  | 2,240  | 2,810  | 3,500  | +121.5                  |
| Total              | 76,550                                 | <b>80,580</b> | 83,600 | 86,980 | 90,160 | 92,860 | +15.2                   |
| 65+ years          | 11,360                                 | <b>13,300</b> | 15,980 | 18,880 | 22,050 | 25,060 | +88.4                   |

| Kaipara District | Projected Numbers by Age (Medium Case) |               |        |        |        |        | Change (%<br>2011-2031) |
|------------------|--|---------------|--------|--------|--------|--------|-------------------------|
|                  | 2006                                   | 2011          | 2016   | 2021   | 2026   | 2031   |                         |
| 0-14 years       | 4,260                                  | <b>4,120</b>  | 3,990  | 3,880  | 3,760  | 3,690  | -10.4                   |
| 15-24 years      | 2,020                                  | <b>2,100</b>  | 1,900  | 1,800  | 1,830  | 1,750  | -16.7                   |
| 25-39 years      | 2,950                                  | <b>2,700</b>  | 2,720  | 2,880  | 2,880  | 2,710  | +0.4                    |
| 40-54 years      | 4,120                                  | <b>4,090</b>  | 3,730  | 3,270  | 2,990  | 3,030  | -25.9                   |
| 55-64 years      | 2,410                                  | <b>2,830</b>  | 3,010  | 3,060  | 2,870  | 2,580  | -8.8                    |
| 65-74 years      | 1,650                                  | <b>1,960</b>  | 2,380  | 2,800  | 3,000  | 3,070  | +56.6                   |
| 75-84 years      | 890                                    | <b>1,020</b>  | 1,280  | 1,570  | 1,940  | 2,330  | +128.4                  |
| 85+ years        | 250                                    | <b>320</b>    | 410    | 480    | 660    | 820    | +156.3                  |
| Total            | 18,550                                 | <b>19,140</b> | 19,420 | 19,740 | 19,930 | 19,980 | +4.4                    |
| 65+ years        | 2,790                                  | <b>3,300</b>  | 4,070  | 4,850  | 5,600  | 6,220  | +88.5                   |

Source: Statistics New Zealand, Subnational Population Projections by Age and Sex, 2006(base)-2031 (October 2012 update)



## Appendix B5.1: Industries Employing Over 300 Persons in 2013, Average Age and Entry: Exit Ratio (15-29: 55+ Years), Northland Region 1996-2013

| Rank in 2013 | Northland Region                          | Number Employed |       |       |       | %                | Average Age (in years) |      |      |      | %                | Entry(15-29yrs): Exit(55+ yrs) Ratio |      |      |      | %                |
|--------------|---|-----------------|-------|-------|-------|------------------|------------------------|------|------|------|------------------|--------------------------------------|------|------|------|------------------|
|              |   | 1996            | 2001  | 2006  | 2013  | Change 1996-2013 | 1996                   | 2001 | 2006 | 2013 | Change 1996-2013 | 1996                                 | 2001 | 2006 | 2013 | Change 1996-2013 |
| 1            | School Education                          | 2,691           | 3,303 | 3,399 | 3,510 | <b>+30.4</b>     | 43.4                   | 44.6 | 45.9 | 48.4 | <b>+11.4</b>     | 0.8                                  | 0.7  | 0.4  | 0.2  | <b>-73.0</b>     |
| 2            | Dairy Cattle Farming                      | 3,492           | 3,159 | 2,526 | 2,466 | <b>-29.4</b>     | 40.3                   | 42.5 | 42.8 | 44.3 | <b>+10.1</b>     | 1.5                                  | 1.0  | 0.9  | 0.8  | <b>-48.6</b>     |
| 3            | Grain, Sheep & Beef Cattle Farming        | 2,511           | 2,286 | 2,577 | 2,124 | <b>-15.4</b>     | 48.2                   | 49.7 | 50.9 | 54.0 | <b>+12.1</b>     | 0.3                                  | 0.3  | 0.2  | 0.2  | <b>-50.4</b>     |
| 4            | Community Care Services                   | 681             | 1,122 | 1,887 | 2,082 | <b>+205.7</b>    | 41.8                   | 45.6 | 47.7 | 49.9 | <b>+19.2</b>     | 1.2                                  | 0.5  | 0.3  | 0.3  | <b>-79.0</b>     |
| 5            | Hospitals & Nursing Homes                 | 1,353           | 1,527 | 1,242 | 1,848 | <b>+36.6</b>     | 41.2                   | 43.5 | 45.6 | 48.0 | <b>+16.6</b>     | 1.7                                  | 0.9  | 0.4  | 0.3  | <b>-79.9</b>     |
| 6            | Other Health Services                     | 531             | 1,185 | 1,560 | 1,806 | <b>+240.1</b>    | 42.1                   | 45.1 | 45.8 | 49.1 | <b>+16.7</b>     | 1.1                                  | 0.5  | 0.4  | 0.2  | <b>-79.9</b>     |
| 7            | Supermarket & Grocery Stores              | 1,479           | 1,524 | 1,710 | 1,647 | <b>+11.4</b>     | 31.4                   | 33.7 | 34.8 | 38.5 | <b>+22.5</b>     | 7.8                                  | 5.0  | 3.2  | 1.9  | <b>-76.1</b>     |
| 8            | Government Administration                 | 1,584           | 1,212 | 1,413 | 1,572 | <b>-0.8</b>      | 42.1                   | 44.4 | 45.7 | 48.6 | <b>+15.4</b>     | 1.2                                  | 0.6  | 0.4  | 0.2  | <b>-79.5</b>     |
| 9            | Building Construction                     | 981             | 1,119 | 2,031 | 1,458 | <b>+48.6</b>     | 38.7                   | 40.7 | 40.7 | 44.1 | <b>+13.9</b>     | 2.7                                  | 1.5  | 1.4  | 0.7  | <b>-73.4</b>     |
| 10           | Cafes & Restaurants                       | 990             | 1,104 | 1,470 | 1,332 | <b>+34.5</b>     | 33.4                   | 32.7 | 33.0 | 35.2 | <b>+5.5</b>      | 5.8                                  | 5.8  | 5.3  | 3.4  | <b>-41.0</b>     |
| 11           | Motor Vehicle Services                    | 1,305           | 1,341 | 1,473 | 1,266 | <b>-3.0</b>      | 36.0                   | 38.4 | 40.1 | 44.0 | <b>+22.2</b>     | 4.5                                  | 2.4  | 1.6  | 0.8  | <b>-82.0</b>     |
| 12           | Accommodation                             | 1,014           | 1,278 | 1,461 | 1,263 | <b>+24.6</b>     | 42.2                   | 44.7 | 43.6 | 47.3 | <b>+12.0</b>     | 1.1                                  | 0.7  | 0.8  | 0.5  | <b>-55.2</b>     |
| 13           | Other Business Services                   | 672             | 795   | 1,098 | 1,233 | <b>+83.5</b>     | 39.9                   | 43.6 | 43.4 | 45.5 | <b>+14.0</b>     | 1.9                                  | 0.8  | 0.9  | 0.6  | <b>-67.7</b>     |
| 14           | Horticulture & Fruit Growing              | 1,623           | 1,566 | 1,272 | 1,176 | <b>-27.5</b>     | 42.8                   | 45.1 | 46.9 | 50.4 | <b>+17.6</b>     | 0.9                                  | 0.6  | 0.4  | 0.3  | <b>-71.3</b>     |
| 15           | Specialised Food Retailing                | 897             | 960   | 1,017 | 1,038 | <b>+15.7</b>     | 35.5                   | 37.2 | 36.5 | 38.0 | <b>+7.2</b>      | 4.5                                  | 2.4  | 2.9  | 2.3  | <b>-49.7</b>     |
| 16           | Marketing & Business Management Services  | 366             | 555   | 840   | 1,002 | <b>+173.8</b>    | 41.6                   | 43.1 | 44.6 | 47.0 | <b>+12.9</b>     | 1.4                                  | 0.8  | 0.7  | 0.4  | <b>-70.5</b>     |
| 17           | Other Personal Services                   | 816             | 864   | 966   | 975   | <b>+19.5</b>     | 37.9                   | 40.7 | 41.4 | 45.4 | <b>+19.6</b>     | 3.0                                  | 1.5  | 1.1  | 0.6  | <b>-80.3</b>     |
| 18           | Other Personal & Household Good Retailing | 942             | 1,041 | 1,164 | 975   | <b>+3.5</b>      | 40.6                   | 41.6 | 43.3 | 46.9 | <b>+15.6</b>     | 1.5                                  | 1.2  | 0.8  | 0.5  | <b>-67.3</b>     |
| 19           | Public Order & Safety Services            | 369             | 525   | 675   | 969   | <b>+162.6</b>    | 38.3                   | 40.0 | 42.6 | 45.9 | <b>+19.9</b>     | 3.4                                  | 1.6  | 0.7  | 0.4  | <b>-86.7</b>     |
| 20           | Legal & Accounting Services               | 762             | 789   | 963   | 960   | <b>+26.0</b>     | 39.0                   | 41.6 | 42.9 | 46.0 | <b>+17.8</b>     | 2.5                                  | 1.3  | 0.9  | 0.5  | <b>-80.0</b>     |
| 21           | Installation Trade Services               | 597             | 762   | 987   | 897   | <b>+50.3</b>     | 39.5                   | 42.0 | 41.7 | 44.6 | <b>+13.0</b>     | 2.3                                  | 1.1  | 1.1  | 0.8  | <b>-66.7</b>     |
| 22           | Road Freight Transport                    | 651             | 759   | 828   | 867   | <b>+33.2</b>     | 39.5                   | 41.9 | 44.0 | 47.5 | <b>+20.2</b>     | 2.5                                  | 1.1  | 0.6  | 0.4  | <b>-85.5</b>     |
| 23           | Non-Building Construction                 | 534             | 588   | 825   | 837   | <b>+56.7</b>     | 39.6                   | 42.6 | 44.4 | 45.9 | <b>+16.1</b>     | 2.0                                  | 1.1  | 0.7  | 0.5  | <b>-72.7</b>     |
| 24           | Medical & Dental Services                 | 495             | 570   | 735   | 774   | <b>+56.4</b>     | 42.3                   | 44.5 | 46.8 | 49.8 | <b>+17.7</b>     | 1.0                                  | 0.7  | 0.3  | 0.2  | <b>-80.2</b>     |
| 25           | Property Operators & Developers           | 363             | 459   | 873   | 717   | <b>+97.5</b>     | 44.6                   | 46.7 | 47.5 | 50.5 | <b>+13.2</b>     | 0.7                                  | 0.4  | 0.4  | 0.3  | <b>-58.8</b>     |
| 26           | Forestry & Logging                        | 621             | 717   | 618   | 705   | <b>+13.5</b>     | 36.0                   | 35.1 | 40.0 | 41.4 | <b>+15.1</b>     | 4.6                                  | 6.3  | 2.0  | 1.3  | <b>-72.4</b>     |
| 27           | Services to Agriculture                   | 495             | 663   | 768   | 690   | <b>+39.4</b>     | 39.1                   | 42.3 | 43.2 | 46.8 | <b>+19.6</b>     | 2.6                                  | 1.1  | 0.9  | 0.5  | <b>-80.7</b>     |
| 28           | Technical Services                        | 357             | 507   | 825   | 654   | <b>+83.2</b>     | 41.8                   | 41.8 | 42.3 | 47.0 | <b>+12.4</b>     | 1.3                                  | 1.1  | 1.0  | 0.4  | <b>-70.1</b>     |
| 29           | Preschool Education                       | 285             | 315   | 399   | 612   | <b>+114.7</b>    | 38.9                   | 40.4 | 40.0 | 41.6 | <b>+7.0</b>      | 1.9                                  | 1.4  | 1.7  | 1.3  | <b>-28.2</b>     |
| 30           | Real Estate Agents                        | 444             | 483   | 846   | 612   | <b>+37.8</b>     | 46.5                   | 47.9 | 47.7 | 52.2 | <b>+12.2</b>     | 0.5                                  | 0.3  | 0.3  | 0.1  | <b>-75.0</b>     |

Continued next page



## Appendix B5.1 (cont.): Industries Employing Over 300 Persons in 2013, Average Age and Entry: Exit Ratio (15-29: 55+ Years), Northland Region 1996-2013

| Rank in 2013   | Northland Region                               | Number Employed |               |               |               | % Change 1996-2013 | Average Age (in years) |             |             |             | % Change 1996-2013 | Entry(15-29yrs): Exit(55+ yrs) Ratio |            |            |            | % Change 1996-2013 |
|--|--|-----------------|---------------|---------------|---------------|--------------------|------------------------|-------------|-------------|-------------|--------------------|--------------------------------------|------------|------------|------------|--------------------|
|  |  | 1996            | 2001          | 2006          | 2013          |                    | 1996                   | 2001        | 2006        | 2013        |                    | 1996                                 | 2001       | 2006       | 2013       |                    |
| 31   | Builders Supplies Wholesaling                  | 318             | 411           | 573           | 558           | +75.5              | 38.9                   | 40.5        | 40.9        | 46.6        | +19.9              | 2.4                                  | 1.5        | 1.4        | 0.4        | -81.5              |
| 32   | Building Completion Services                   | 501             | 591           | 816           | 549           | +9.6               | 39.2                   | 41.2        | 41.3        | 46.1        | +17.5              | 2.2                                  | 1.3        | 1.2        | 0.6        | -74.3              |
| 33   | Child Care Services                            | 165             | 294           | 384           | 531           | +221.8             | 36.6                   | 38.0        | 38.7        | 40.5        | +10.6              | 6.0                                  | 3.5        | 2.5        | 1.5        | -75.3              |
| 34   | Other Wood Product Manufacturing               | 378             | 489           | 699           | 531           | +40.5              | 36.7                   | 38.4        | 39.9        | 45.0        | +22.6              | 3.8                                  | 2.8        | 1.8        | 0.7        | -81.5              |
| 35   | Sport  | 240             | 390           | 441           | 519           | +116.3             | 38.9                   | 40.5        | 41.2        | 42.9        | +10.3              | 1.8                                  | 1.5        | 1.3        | 1.0        | -44.0              |
| 36   | Other Education                                | 432             | 546           | 561           | 492           | +13.9              | 40.9                   | 43.6        | 46.8        | 49.4        | +20.8              | 1.3                                  | 0.7        | 0.4        | 0.2        | -82.2              |
| 37   | Other Livestock Farming                        | 501             | 621           | 384           | 486           | -3.0               | 43.2                   | 47.3        | 49.1        | 49.1        | +13.8              | 0.9                                  | 0.4        | 0.3        | 0.3        | -60.1              |
| 38   | Post School Education                          | 270             | 288           | 429           | 468           | +73.3              | 42.7                   | 45.4        | 46.7        | 48.8        | +14.3              | 1.0                                  | 0.6        | 0.3        | 0.2        | -75.4              |
| 39   | Industrial Machinery & Equipment Manufacturing | 330             | 321           | 519           | 459           | +39.1              | 40.1                   | 41.1        | 43.3        | 45.2        | +12.7              | 1.7                                  | 1.2        | 0.8        | 0.7        | -60.4              |
| 40   | Interest Groups                                | 327             | 342           | 459           | 423           | +29.4              | 43.5                   | 43.1        | 45.5        | 47.4        | +9.0               | 0.8                                  | 0.9        | 0.4        | 0.4        | -51.2              |
| 41   | Meat & Meat Product Manufacturing              | 672             | 543           | 480           | 411           | -38.8              | 35.7                   | 36.9        | 38.9        | 40.5        | +13.4              | 7.3                                  | 4.3        | 2.0        | 1.6        | -78.6              |
| 42   | Machinery & Equipment Wholesaling              | 345             | 393           | 489           | 408           | +18.3              | 37.4                   | 41.2        | 43.0        | 46.4        | +23.9              | 3.1                                  | 1.3        | 1.0        | 0.4        | -86.3              |
| 43   | Deposit Taking Financiers                      | 576             | 408           | 471           | 393           | -31.8              | 34.7                   | 38.4        | 39.5        | 41.3        | +18.8              | 13.8                                 | 4.0        | 2.3        | 1.4        | -89.9              |
| 44   | Other Construction Services                    | 159             | 207           | 360           | 378           | +137.7             | 38.6                   | 37.5        | 39.3        | 41.6        | +7.6               | 2.0                                  | 3.2        | 2.3        | 1.3        | -36.0              |
| 45   | Postal & Courier Services                      | 369             | 357           | 381           | 369           | +0.0               | 38.9                   | 42.8        | 43.9        | 47.2        | +21.3              | 2.4                                  | 0.9        | 0.7        | 0.5        | -80.9              |
| 46   | Department Stores                              | 345             | 363           | 411           | 360           | +4.3               | 30.6                   | 31.8        | 35.1        | 39.6        | +29.2              | 13.0                                 | 6.9        | 3.9        | 1.7        | -87.2              |
| 47   | Recreational Good Retailing                    | 390             | 417           | 420           | 360           | -7.7               | 38.7                   | 39.9        | 41.0        | 43.1        | +11.3              | 2.2                                  | 1.7        | 1.4        | 0.9        | -59.0              |
| 48   | Food, Drink & Tobacco Wholesaling              | 444             | 447           | 429           | 345           | -22.3              | 38.1                   | 40.2        | 42.4        | 43.7        | +14.5              | 3.8                                  | 1.6        | 0.9        | 0.8        | -77.8              |
| 49   | Log Sawmilling & Timber Dressing               | 408             | 372           | 462           | 345           | -15.4              | 36.4                   | 36.3        | 36.3        | 40.7        | +11.8              | 4.9                                  | 4.5        | 4.4        | 1.6        | -67.9              |
| 50   | Clothing & Soft Good Retailing                 | 378             | 297           | 402           | 342           | -9.5               | 41.0                   | 42.8        | 41.4        | 40.6        | -1.0               | 1.6                                  | 1.0        | 1.3        | 1.5        | -5.7               |
| 51   | Road Passenger Transport                       | 339             | 342           | 336           | 330           | -2.7               | 48.2                   | 50.1        | 52.2        | 57.8        | +19.8              | 0.2                                  | 0.2        | 0.1        | 0.0        | -100.0             |
| 52   | Site Preparation Services                      | 174             | 183           | 378           | 327           | +87.9              | 40.7                   | 44.1        | 44.0        | 46.8        | +14.9              | 1.4                                  | 0.6        | 0.6        | 0.4        | -69.1              |
| 53   | Electricity Supply                             | 225             | 231           | 282           | 318           | +41.3              | 41.8                   | 44.3        | 42.6        | 45.8        | +9.4               | 1.0                                  | 0.5        | 1.1        | 0.6        | -44.4              |
| 54   | Other Transport Equipment Manufacturing        | 435             | 564           | 492           | 312           | -28.3              | 39.6                   | 41.1        | 42.6        | 46.5        | +17.4              | 1.9                                  | 1.7        | 1.1        | 0.5        | -74.2              |
| 55   | Motor Vehicle Retailing                        | 423             | 414           | 432           | 309           | -27.0              | 38.0                   | 39.4        | 40.5        | 43.2        | +13.9              | 2.9                                  | 2.7        | 1.5        | 0.9        | -69.6              |
| <b>These Industries (employing over 300 persons in 2013)</b> |  | <b>29,901</b>   | <b>33,078</b> | <b>38,448</b> | <b>38,067</b> | <b>+27.3</b>       |                        |             |             |             |                    |                                      |            |            |            |                    |
| <b>Northland Region: Total Employed Labour Force</b>         |  | <b>52,410</b>   | <b>54,957</b> | <b>64,395</b> | <b>61,341</b> | <b>+17.0</b>       | <b>40.3</b>            | <b>42.3</b> | <b>43.4</b> | <b>46.2</b> | <b>+14.8</b>       | <b>1.4</b>                           | <b>0.9</b> | <b>0.8</b> | <b>0.5</b> | <b>-63.8</b>       |

Source: Jackson/Statistics NZ Customised Database, available from author. Area of Usual Residence, Industry (ANZSIC96 V4.1) and Status in Employment by Age Group and Sex for the Employed Census Usually Resident Population Count Aged 15+ Years, 1996, 2001, 2006, 2013





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