# **NIDEA Population Projections - Key facts and Messages**

## **TA-level projections**

* The population projections at the TA-level were prepared using the standard cohort component model and using data from Statistics New Zealand. This method takes the starting population, adds births, subtracts deaths (by age and sex), and adds (or subtracts) net migration (by age and sex).
* Our methodology for TA-level population projections differs from that employed by Statistics New Zealand in the way that net migration is modelled. Statistics New Zealand estimates a number of ‘net migrants’ that is added to (or subtracted from) the population in each period. Our method applies age-sex-specific net migration rates. When the population increases, our model automatically increases the size of migration flows, whereas Statistics New Zealand’s model does not.
* Family and household projections are derived from the population projections by applying assumptions about living arrangement type rates (by age and sex).
* Our methodology for TA-level family and household projections differs from that employed by Statistics New Zealand because we explicitly account for the population that is living in non-private dwellings such as student accommodation, prisons, rest homes, etc.
* Labour force projections are derived from the population projections by applying assumptions about labour force participation rates (by age and sex). Labour force projections are projections of the number of people available for work, NOT projections of employment or the number of jobs.
* The overall pattern of population change in the Waikato Region is one of growth followed by decline for the region as a whole, but is not followed uniformly by all territorial authorities. Four territorial authorities (Waikato District, Matamata-Piako District, Hamilton City, and Waipa District) are projected to experience population growth throughout the projection period, while most territorial authorities experience an initial increase in population (which is relatively modest for some) before experiencing later population decline.
* Population ageing is a significant feature of the projections for all territorial authorities.
* Family and household and labour force projections for each TA generally follow similar trajectories to the population projections.

## **Area-unit-level projections**

* Population projections at the area unit level were generated by using a statistically rather than a demographic model. This involved apportioning the population in each TA across all CAUs based on patterns of land use.
* Our methodology for area-unit-level population projections differs from that employed by Statistics New Zealand in that Statistics New Zealand employs the same type of model as they do at the TA level, which takes no account of local-level data such as land use.
* The pattern of population change at the area unit level shows that population growth is especially concentrated in the peri-urban area immediately surrounding Hamilton City, and the area closest to Auckland, while rural and peripheral areas decline in population.
* Family and household and labour force projections for each are unit generally follow similar trajectories to the population projections.

## **Caveats**

* Projections are not forecasts or predictions. No model can predict the future. The projections represent only one possible, albeit plausible, future.
* Projections are an artefact of both method and data. Models are not reality but a representation of it based on input data, available knowledge and expert assumptions.
* Projections are uncertain. The further out in time, and the smaller the spatial scale considered, the higher the level of uncertainty associated with the projections.