

## Population Change and Density

### BACKGROUND

Population change is driven by the birth rate, the mortality rate and immigration. An increase in population can have positive environmental health outcomes through economic development and growth and possible increased funding for programmes, such as those dealing with environmental issues and sustainable development (Kerr 1997). However, negative effects may also arise from population growth. Rapid population growth without the provision of local infrastructure and services, such as sanitation and water supply, can place heavy demands on the environment. Such demands in turn may have negative effects on aspects of environmental health and ecosystems, including air pollution, poor drinking-water quality, an increase in vector-borne disease, and waste management and sanitation issues (Briggs 1999). This potential for negative outcomes highlights the need for appropriate services and urban planning as towns and cities grow, to ensure sustainable growth and adequate provision and management of services.

The data source for the indicator is the Census of Population and Dwellings, carried out every five years by Statistics New Zealand. The first part of the indicator examines the increase in the estimated resident population over time, based on the Census usually resident population, with adjustments for under-reporting, multiple reporting and residents who were temporarily overseas on Census night. The data for 2001 to 2006 were revised by Statistics New Zealand using data from the 2001 and 2006 Censuses. The second part of the indicator examines the change in the usually resident population in each TA from 1996 to 2006. The section presents the data as the percentage change in population over the 10-year period. It should be noted that the estimated resident population (presented in the first part of the indicator) is not directly comparable with the Census usually resident population (in the second part) due to the post-Census adjustments.

Population density is an important driving force for environmental health, as it can affect the environment and ecosystems in both positive and negative ways. High population density can promote sustainable development if planned for appropriately. For example, high density areas often benefit from better provision of services such as public transport systems and reticulated water supplies. However, high population density may also indicate that there is a heavy burden on the surrounding environment. Rapid changes in population density may also place pressures on the local infrastructure and services (Briggs 1999). Furthermore, in some cities, the large number of people in high density areas may lead to more traffic on the roads, which can increase air pollution.

#### References

- Briggs D. 1999. Environmental Health Indicators: Framework and methodologies. Geneva: World Health Organization.
- Kerr R. 1997. Population and immigration. Speech presented to the New Zealand Association for Migration and Investment Annual Conference, Auckland, 25 July.
- Statistics New Zealand 2010. Infoshare online database. URL: <http://www.stats.govt.nz/infoshare>. Accessed 21 May 2010.

