



Environmental Health Indicators for New Zealand

www.ehi.ac.nz

EHI #14

March 2011

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USE OF COAL AS A SOURCE OF HOME HEATING

Home heating through the use of wood or coal fires is a major source of air pollution in most towns and cities of New Zealand, with emissions considered to be as toxic as other sources of air pollution (Naeher et al 2007). Wood and coal fires emit carbon monoxide (CO), nitrogen dioxide (NO₂), particulate matter and other organic compounds, including polycyclic aromatic hydrocarbons (Fisher et al 2007). Studies have shown that coal fires emit 58–75% more PM₁₀ pollution than wood burners (Ministry for the Environment 2005).

In New Zealand, air pollution from wood-burning domestic fires mostly occurs in winter and in particular locations such as Nelson, Alexandra and Christchurch (Fisher et al 2007). In Christchurch, conditions such as low-level temperature inversions, calm weather, and the burning of wood as the main heat source can result in a number of elevated air pollution days, particularly during winter (Scoggins 2004). The Health and Air Pollution in New Zealand (HAPiNZ) study estimated there was an increase of 4.8% in the national average mortality rate associated with air pollution (Fisher et al 2007). Using wood or coal fires as a source of fuel for heating can also lead to poor air quality within the dwelling.

The following update from the EHI project presents data on the percentage of dwellings using coal as a source of heating, by TA in 2006.

In 2006 fewer New Zealand dwellings used coal as a source of heating (6.7%) than wood (39.0%).

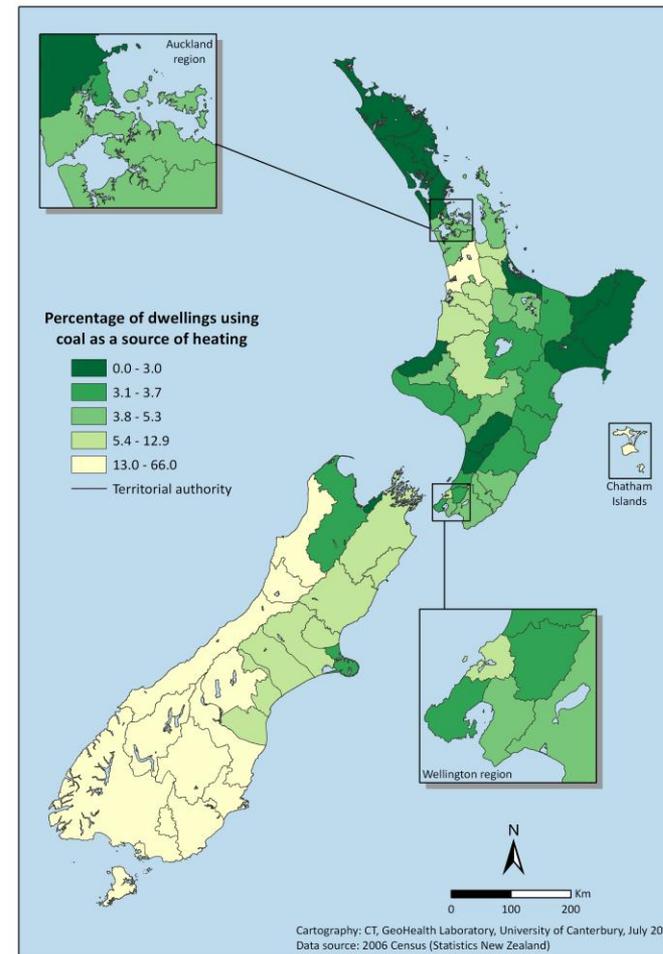
TAs in the South Island generally had a much higher use of coal as a source of fuel for home heating (Figure 1). The following TAs had over 40% of households using coal as a source of heating: Buller, Grey (6.0%), Westland, Clutha, Southland, Gore and Invercargill City.

Overall, 47 TAs had 5% or fewer dwellings using coal as a fuel source for heating the home. The majority in this category were in the North Island.

From 1996 to 2006 the national proportion of households using coal as a source of heating decreased from 12.5% to 6.7%. All TAs recorded a decline with the largest decreases in: Waikato, Christchurch City, Selwyn, Ashburton, Timaru, Waimate, Waitaki, Central Otago, Queenstown-Lakes and Southland.

This indicator will be updated when new data becomes available.

Figure 1: PERCENTAGE OF DWELLINGS USING COAL AS A SOURCE OF HEATING, BY TA, 2006



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