New Zealand Deprivation Index
Frequently Asked Questions

Updated 17/11/2026

NZDep2023 is an updated version of the NZDep91, NZDep96, NZDep2001, NZDep2006, NZDep2013 and NZDep2018 indexes of socioeconomic deprivation. NZDep2023 combines nine variables from the 2023 census which reflect eight dimensions of socioeconomic deprivation. NZDep2023 provides a socioeconomic deprivation score for each Statistical Area 1 (SA1) and its constituent meshblocks, in New Zealand (NZ).

More information on NZDep, including current and previous iterations for use, the user manual, and the research report can be found on the NZDep webpage:

https://www.otago.ac.nz/wellington/research/groups/research-groups-in-the-department-of-public-health/hirp/socioeconomic-deprivation-indexes

Contents

Non-technical

1) Why is my NZDep score different from my neighbour's?

2) Why are about 10 percent of people still living in the most socioeconomically deprived areas (despite decades of policies to improve people's lives)?

Technical

3) A particular SA1 or meshblock does not have a value for NZDep2023. Why?

4) How are very small SA1s handled in NZDep2023?

5) The distribution of NZDep2023_score does not have mean = 1000 and standard deviation = 100. Why?

6) How are empty SA1s handled in NZDep2023

7) The distribution of NZDep2023 does not have exactly 10 percent in each of its 10 categories. Why?

8) Can I compare NZDep scores between different censuses?

9) I am doing a time series analysis from 199X to 202X. Which version of NZDep should I use for coding the socioeconomic deprivation characteristics of my dataset?

10) How should I report NZDep2023?

11) How should I report NZDep2023 for a large area?

12) Is the difference in between NZDep2023 deciles 3 and 6 the same as the difference between NZDep2023 deciles 7 and 10?

Frequently asked questions – Non-Technical

1) I applied for a subsidy after my friend who lives a few streets away got one. But I was offered a smaller subsidy than my friend, and the organisation said it was because our NZDep scores are different. Why is this? – my friend and I are very similar.

StatsNZ has divided the country into over 30,000 small areas, generally along lines that make some kind of sense for the local community. Every bit of the country is defined as being in one of these small areas which often contain only 100-200 people. As the areas are so small it is easy for people to be in a different small area from their neighbour. We used the 2023 Census (information including whether the households had access to the internet, how crowded dwellings were, household size and income, if people had qualifications, how damp/mouldy dwellings were) to estimate which areas in NZ contained people who were experiencing the most socioeconomic deprivation, and then ranked the areas between 1 and 10. The Census is the best source of information like this for the whole country.

So, although individual households' circumstances vary, on average, people in areas with a higher socioeconomic deprivation score are living in poorer quality housing and have less money to help pay for things. Several government agencies, and some non-government agencies use NZDep to help them decide how to distribute funding. They often give greater funding / higher subsidy to people or households living in areas with a higher socioeconomic deprivation score.

2) Why are about 10 percent of people still living in the most socioeconomically deprived areas (despite all the hard work at implementing policies to improve people's lives)?

NZDep2023 is defined as an index of relative, not absolute, socioeconomic deprivation. The way the index is created means that about 10 percent of people are living in each socioeconomic deprivation decile; this would be true even if the entire population of Aotearoa New Zealand had experienced a great increase in living standards. The primary use of NZDep2023 is to show which areas are more socioeconomically deprived than others, not how socioeconomically deprived each area, or the country as a whole, is in absolute terms.

Frequently asked questions - Technical

3) A particular SA1 or meshblock does not have a value for NZDep2023. Why?

SA1s were the building blocks for creating NZDep2023. NZDep values have not been released for 74 SA1s. Some (23) of the SA1s had no or extremely minimal information and were not included in the development of NZDep2023. The values for the other 51 of these SA1s have been withheld as unreliable (see next FAQ).

4) How are very small SA1s handled in NZDep2023?

SA1s with populations of less than 100 people have been joined with neighbouring SA1s within an SA2 to make NZDep-small-areas with at least 100 people before creating the index. In the file *NZDep2023_SA1.csv* (or *NZDep2023_SA1.xlsx)* the small-area scale value has been assigned to each component SA1. Note that if any SA1, or joined SA1s, forming an NZDep-small-area have more than one proportion (out of nine) based on fewer than 20 people the NZDep2023 value is considered unreliable and has been withheld.

5) The distribution of NZDep2023_score does not have mean = 1000 and standard deviation = 100. Why?

The first principal component was created from a file of 30,629 NZDep-small-areas with populations (as far as possible) of 100 persons or more. Most (94.5 percent) of our NZDep-small-areas are single SA1s, the remainder being a combination of two or more neighbouring SA1s. In the file of 30,629 NZDep-small-areas the mean is 1000 and the standard deviation is 100. For usage we have provided the file of all 32523 SA1s giving each component SA1 of any agglomerated NZDep-small-area the NZDep2023_score value of the NZDep-small-area of which it is a component.

6) How are empty SA1s handled in NZDep2023

SA1s are areas where people live, but not necessarily all the time (such as holiday homes). SA1s may also have unoccupied houses which would have been occupied in the past, and may be occupied in the future. Empty SA1s were agglomerated with connected non-empty SA1s for the purposes of creating our NZDep-small-areas—for which the index is calculated—on the assumption that future occupation will, to some extent, mirror the localised small neighbourhoods. The alternative was to remove such SA1s from the index. This could give rise to a geo-coded address in the future for which no NZDep value at all was available. In this

situation the observation would be 'missing' in any analysis, whereas, in the procedure adopted, the observation would be available with the best estimate of a socioeconomic deprivation score. When mapping NZDep in colour by SA1s, therefore, it may be advisable to leave any empty SA1s uncoloured.

7) The XXXX distribution of NZDep2023 does not have exactly 10 percent of XXXX in each of its 10 categories. Why?

The NZDep2023 deciles (divisions into tenths) were created based on the 30,629 NZDep-small-area scores, not from SA1s, meshblocks, households, families or individuals. Each NZDep-small-area is unique in its own way, with its own combination of these. Therefore, a slight variation in the number of SA1s, meshblocks, households, families, and individuals in each NZDep2023 decile is to be expected.

8) Can I compare NZDep scores between different censuses?

Comparisons of areas as small as a single meshblock or a single SA1, across time, may not be meaningful. Comparisons of areas at a higher aggregation, such as Territorial Authorities, or SA2s, should be reasonable, although we advise caution in interpreting small changes over time as being practically meaningful.

Comparing relationships between socioeconomic deprivation and another variable, over time, is reasonable.

See the discussion in Appendix 5 of the report *NZDep2023 Index of* Socioeconomic *Deprivation: Research Report* (2024).

9) I am doing a time series analysis from 199X to 202X. Which version of NZDep should I use for coding the socioeconomic deprivation characteristics of my dataset?

We generally recommend using the version of NZDep that was closest in time to the point at which the data being coded were created/collected. So, data from 1994 would be coded with NZDep1996, and data from 2020 with NZDep2018. However, because of the extreme disruptions caused by the 2011 Christchurch earthquakes we recommend that data from 2006-2010 are coded with NZDep2006, and data from 2011-2013 are coded with NZDep2013.

10) How should I report NZDep2023?

This depends on your audience and subject matter. For graphs we recommend deciles or quintiles. For summary reports we suggest: deciles, quintiles, grouping (1-6, 7-8, 9-10), or percentage in (9-10). We do not recommend grouping (1-5, 6-10)

as this is likely to mask the experience of the most socioeconomically deprived portion of the population.

11) How should I report NZDep2023 for a large area?

The procedure outlined in "Calculating an average NZDep_score_2023 value for a user defined region" (see page 14 of *NZDep2023 Index of* Socioeconomic *Deprivation: User's Manual* (2024)) is appropriate when combining only a few SA1s. Large areas (for instance TAs) will usually contain people with a great diversity of socioeconomic circumstances and the weighted average method does not adequately convey the variety of different experiences. Best practice for reporting NZDep2023 for larger areas is either (i) sum the number of people in each decile across all the SA1s of the larger area, and report the distribution of people across the deciles of the larger area, or (ii) report the percentage of people in deciles 9 and 10 of the larger area (quintile).

12) Is the difference in between NZDep2023 deciles 3 and 6 the same as the difference between NZDep2023 deciles 7 and 10?

No. The scores in NZDep2023 form a skewed distribution with a long tail. The average socioeconomic deprivation characteristics of people and households living in the decile 3 and 6 areas are much more similar than the characteristics of people and households living in the decile 7 and 10 areas.