

Metadata – Social Vulnerability Indicators 2018 (SVI2018)

This document provides information and details about the social vulnerability indicators natural hazards for 2018.

Information topic	Details
Indicator name	Social vulnerability indicators for natural hazards (SVI2018)
Description	This dataset contains social vulnerability indicators for natural hazards for 2018 (SVI2018). These indicators help identify population groups and geographic areas with people who are more vulnerable to negative impacts from natural hazards. The indicators relate to different aspects of exposure, susceptibility, and lack of resilience to natural hazards.
Data sources	<ul style="list-style-type: none"> • 2018 New Zealand Census of Population and Dwellings, StatsNZ • NZDep2018 deciles, University of Otago, Wellington • 2019 Local Authority Election Statistics, Department of Internal Affairs • Ministry of Business, Innovation & Employment, Monthly Regional Tourism Estimates
Methodology	<p>These indicators have been developed through a robust indicator development process. For more details, see Mason et al (2021).</p> <p>Details of each indicator are provided in Tables 1 and 2 below. Each indicator has the following variables (where applicable): count, percentage, denominator.</p> <p>For some indicators where there is missing data (due to a lower-than-expected response rate for the 2018 Census), additional variables about the data quality have been provided. For these indicators, the counts are likely to be an undercount, and should be interpreted with caution. Percentages are calculated among the total stated (ie, excluding unknowns) and are more reliable for these indicators than counts. Lower and upper logical bounds for the percentages have also been provided, which take into account the missing data, and provide lower and upper limits for what the true value of the percentage could be.</p> <ul style="list-style-type: none"> • $\text{Percent} = \text{count} / \text{total_stated}$ • $\text{Lower bound} = \text{count} / \text{total}$

	<ul style="list-style-type: none"> • Upper bound = (count + unknown) / total • Total = total_stated + unknown
Time period and time scale	2018 (or later)
Population coverage	National
Spatial Coverage	Indicators are provided by SA2, territorial authority (TA), district health board (DHB), and Auckland local board area. Some indicators are only available at certain geographic levels.
Limitations of indicators	These indicators are an indicator at one point in time, and may not necessarily reflect current reality. Additional local information would be useful for end-users to include in any vulnerability assessment, to further understand vulnerable populations in their local area.
Limitations of data sources	The 2018 Census of Populations and Dwellings had a lower-than-expected response rate, resulting in StatsNZ introducing new methods to produce the dataset, including using data from alternative sources. Stats NZ and the 2018 Census External Data Quality Panel (EDQP) have produced a rating system to help users understand the quality-related issues and impacts of the 2018 Census dataset. EHINZ have decided to include the indicators in this dataset based on ratings of moderate data quality or better, according to the EDQP and StatsNZ. For indicators with missing data, additional information about data quality have been included. Further information about the Stats NZ and EDQP documentation can be at: https://www.stats.govt.nz/2018-census/data-quality-for-2018-census
For more information	<p>For more information, see the EHINZ website: https://www.ehinz.ac.nz/indicators/population-vulnerability/social-vulnerability-to-natural-hazards/</p> <p>For information about the EHINZ research project that developed social vulnerability indicators for flooding, which informed these current 2018 social vulnerability indicators, see: https://www.ehinz.ac.nz/projects/social-vulnerability-indicators/</p>

Table 1 presents information about each specific social vulnerability indicator.

Table 1: Information about specific social vulnerability indicators

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
Population indicators							
UR	Census usually resident population	2018 Census - Individual part 1 table	SA1, SA2, TA, ALB, DHB	Census usually resident population count	Census usually resident population	n/a	
households	Number of households	2018 Census - Households table	SA1, SA2, TA, ALB, DHB	Total households in occupied private dwellings	Number of households	n/a	
popdensity	Population density (people per sq km)	2018 Census - Individual part 1 table, and Stats NZ geographic information	SA2, TA, ALB, DHB	Number of people per square kilometre	Census usually resident population	Land area (in square kilometres)	
urbanrural	Urban-rural classification	2018 geographic files	SA1, SA2	Urban rural classification (major urban areas, large urban areas, medium urban areas, small urban areas, rural, water)			
rural	Rural population (including inlets and inland water)	2018 geographic files and Census usually resident population	TA, ALB, DHB	Census usually resident population living in rural or water areas (ie outside of urban areas)	Usually resident population living in rural or water areas (summed over SA2s)	Usually resident population	
european	European ethnic group (total response) (among total population)	2018 Census - Individual part 1 table	SA1, SA2, TA, ALB, DHB	Ethnic group (grouped total responses), for the census usually resident population count	European	Total people stated	
maori	Māori ethnic group (total response) (among total population)	2018 Census - Individual part 1 table	SA1, SA2, TA, ALB, DHB	Ethnic group (grouped total responses), for the census usually resident population count	Māori	Total people stated	
pacificpeoples	Pacific peoples ethnic group (total response) (among total population)	2018 Census - Individual part 1 table	SA1, SA2, TA, ALB, DHB	Ethnic group (grouped total responses), for the census usually resident population count	Pacific Peoples	Total people stated	

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
asian	Asian ethnic group (total response) (among total population)	2018 Census - Individual part 1 table	SA1, SA2, TA, ALB, DHB	Ethnic group (grouped total responses), for the census usually resident population count	Asian	Total people stated	
melaa	Middle Eastern, Latin American and African (MELAA) ethnic group (total response) (among total population)	2018 Census - Individual part 1 table	SA1, SA2, TA, ALB, DHB	Ethnic group (grouped total responses), for the census usually resident population count	MELAA	Total people stated	
Indicators about children							
u5y	Children aged 0-4 years (among total population)	2018 Census - Individual part 1 table	SA1, SA2, TA, ALB, DHB	Age in five-year groups, for the census usually resident population count	0-4 years	Total people	
u15y	Children aged 0-14 years (among total population)	2018 Census - Individual part 1 table	SA1, SA2, TA, ALB, DHB	Age in broad groups, for the census usually resident population count	Under 15 years	Total people	
schoolage	Children aged 5-14 years (among total population)	2018 Census - Individual part 1 table	SA2, TA, ALB, DHB	Age in five-year groups, for the census usually resident population count	(5-9 years + 10-14 years)	Total people	
HHchild0-4y	Households with at least one child aged 0-4 years (among total households stated)	2018 Census, requested data	SA2, TA, ALB, DHB	Households with at least one child aged 0-4 years, among all households stated	Households with at least one child 0-4 years	Total households stated	Some missing data; information on data quality is provided.
HHchild0-14y	Households with at least one child aged 0-14 years (among total households stated)	2018 Census, requested data	SA2, TA, ALB, DHB	Households with at least one child aged 0-14 years, among all households stated	Households with at least one child 0-14 years	Total households stated	Some missing data; information on data quality is provided.
Indicators about older adults							
o65y	Older adults aged 65+ years (among total population)	2018 Census - Individual part 1 table	SA1, SA2, TA, ALB, DHB	Usually resident population, by age group	65 years and over	Total people	

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
o75y	Older adults aged 75+ years (among total population)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group	75 years and over	Total people	
o85y	Older adults aged 85+ years (among total population)	2018 Census - Individual part 1 table	SA1, SA2, TA, ALB, DHB	Usually resident population, by age group	85 years and over	Total people	
single65overHH	Households with older adult (65+ years) living alone (among total households stated)	2018 Census, requested data	SA2, TA, ALB, DHB	One-person households with person aged 65+ years, among all households stated	Households with one person aged 65+ years	Total households stated	Some missing data; information on data quality is provided. Indicator added Oct 2021.
o60y	Older adults aged 60+ years (among total population)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group	60 years and over	Total people	
o70y	Older adults aged 70+ years (among total population)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group	70 years and over	Total people	
Maori60y	Māori adults aged 60+ years (among total population)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group	Māori aged 60 years and over (Total stated - Non-Māori)	Total people	
NonMaori60y	Non-Māori adults aged 60+ years (among total population)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group	Non-Māori aged 60 years and over	Total people	
Maori70y	Māori adults aged 70+ years (among total population)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group	Māori 70 years and over (Total stated - Non-Māori)	Total people	
NonMaori70y	Non-Māori adults aged 70+ years (among total population)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group	Non-Māori 70 years and over	Total people	
olderadults	Older adults aged 70+ years, and Māori aged 60+ years (among total population)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group	Non-Māori 70+ years and Māori 60+ years	Total people	

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
Indicators about health							
u1y	Pregnant women (proxy indicator used, of babies aged 0 years) (among total population)	2018 Census, requested data	SA2, TA, ALB, DHB	Age by sex, for the census usually resident population count (note this indicator is a proxy for pregnant women)	Babies aged less than one year (0 years)	Total people	
Indicators about having enough money to cope with crises and losses							
NZDep2018	NZ Index of Socioeconomic Deprivation (NZDep2018) deciles (1 = least deprived, 10 = most deprived)	Atkinson et al (2019)	SA1, SA2	New Zealand Index of Socioeconomic Deprivation 2018 (NZDep2018), which is based on the following 2018 Census variables: no access to the Internet at home; receiving a means-tested benefit; low-income households; unemployed; no qualifications; not living in their own home; living in a single parent family; crowded households; living in dwellings that are always damp and/or always have mould greater than A4 size	NZDep2018 decile (1 = least deprived 10% of small areas in NZ, 10 = most deprived 10% of small areas in NZ)	n/a	
unemployed	People who were unemployed (among 15+ years)	2018 Census - Individual part 3a table	SA2, TA, ALB, DHB	Work and labour force status, for the census usually resident population count aged 15 years and over	Unemployed	Total people stated (among those aged 15+ years)	
nolabourforce	People who were not in the labour force (among 15+ years)	2018 Census - Individual part 3a table	SA2, TA, ALB, DHB	Work and labour force status, for the census usually resident population count aged 15 years and over	Not in the labour force	Total people stated (among those aged 15+ years)	
singleparentHH	Single parent households (among total households stated)	2018 Census, requested data	SA2, TA, ALB, DHB	Households with one-family households with a single parent family	Households with one parent with child(ren)	Total households stated	Some missing data; information on data quality is provided. Indicator added Oct 2021.

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
nocar	Households with no motor vehicle (among total households stated)	2018 Census - Households table	SA2, TA, ALB, DHB	Number of motor vehicles, for households in occupied private dwellings	No motor vehicle	Total households stated	Some missing data; information on data quality is provided.
Indicators about social connectedness							
rented	Households living in rental housing (among total households)	2018 Census - Households table	SA2, TA, ALB, DHB	Tenure of household, for households in occupied private dwellings	Dwellings not owned and not held in family trust	Total stated (occupied private dwellings)	
onepersonHH	One-person households (among total households stated)	2018 Census, requested data	SA2, TA, ALB, DHB	Households with one person	One-person households	Total households stated	Some missing data; information on data quality is provided. Indicator added Oct 2021.
immigrant	Immigrant arrived in past year (among total population)	2018 Census - Individual part 1 table	SA2, TA, ALB, DHB	Counting the overseas-born usually resident population, years since arrival in New Zealand	Less than one year	Total population, excluding years since arrival not stated	Also useful indicator for 'knowledge, skills and awareness of hazards'
immigrant01	Immigrant arrived in past 0-1 years (among total population)	2018 Census, requested data	SA2, TA, ALB, DHB	Counting the overseas-born usually resident population, years since arrival in New Zealand	(Less than one year) + (1 year)	Total population, excluding those with 'years since arrival' not stated	Also useful indicator for 'knowledge, skills and awareness of hazards'
Indicators about knowledge, skills and awareness of hazards							
noenglish	People who do not speak English (among total population)	2018 Census - Individual part 1 table	SA2, TA, ALB, DHB	Six languages (total responses), for the census usually resident population count	(Total people stated) - (None, eg too young to talk) - (English)	(Total people stated) - (None, eg too young to talk)	
nomobile	Households with no access to a mobile phone	2018 Census - Households table	SA2, TA, ALB, DHB	Access to telecommunications, for households in occupied private dwellings	(Total households stated) - (Access to a	Total households stated	Some missing data; information on

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
	(among total households stated)				cellphone mobile phone)		data quality is provided.
nointernet	Households with no access to the Internet (among total households stated)	2018 Census - Households table	SA2, TA, ALB, DHB	Access to telecommunications, for households in occupied private dwellings	(Total households stated) - (Access to the internet)	Total households stated	Some missing data; information on data quality is provided.
Indicators about safe, secure and healthy housing							
crowdedhh	Crowded households (needing 1+ bedrooms) (among total households stated)	2018 Census - Crowded households table	SA2, TA, ALB, DHB	Households that were crowded (needing 1+ bedroom according to the Canadian National Occupancy Standard), for households in occupied private dwellings	Households that were crowded (needing 1+ bedrooms)	Total households stated	Some missing data; information on data quality is provided.
crowdedhh_people	People living in crowded households (needing 1+ bedrooms) (among total population stated)	2018 Census - People in crowded households table	SA2, TA, ALB, DHB	People living in households that were crowded (needing 1+ bedroom according to the Canadian National Occupancy Standard), among people in households in occupied private dwellings	People living in households that were crowded (needing 1+ bedrooms)	Total people stated	Some missing data; information on data quality is provided.
damp	Dwelling sometimes or always damp (among total dwellings stated)	2018 Census, Dwellings table	SA2, TA, ALB, DHB	Dwellings that are damp (sometimes or all of the time)	Dwellings that are damp (sometimes or all of the time)	Total dwellings stated	Some missing data; information on data quality is provided.
severedamp	Dwelling always damp (among total dwellings stated)	2018 Census, Dwellings table	SA2, TA, ALB, DHB	Dwellings that are damp (all of the time)	Dwellings that are damp (all of the time)	Total dwellings stated	Some missing data; information on data quality is provided.
mouldy	Dwelling sometimes or always mouldy (A4 piece of paper sized mould)	2018 Census, Dwellings table	SA2, TA, ALB, DHB	Dwellings that are mouldy (sometimes or all of the time); mouldy is defined as mould at	Dwellings that are mouldy (sometimes or all of the time)	Total dwellings stated	Some missing data; information on

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
	(among total dwellings stated)			least the size of an A4 piece of paper			data quality is provided.
severemould	Dwelling always mouldy (A4 piece of paper sized mould) (among total dwellings stated)	2018 Census, Dwellings table	SA2, TA, ALB, DHB	Dwellings that are mouldy (all of the time); mouldy is defined as mould at least the size of an A4 piece of paper	Dwellings that are mouldy (all of the time)	Total dwellings stated	Some missing data; information on data quality is provided.
Indicators about having enough food and water to cope with shortage							
NZDep2018	NZ Index of Socioeconomic Deprivation (NZDep2018) deciles (1 = least deprived, 10 = most deprived)	Atkinson et al (2019)	SA1, SA2	New Zealand Index of Socioeconomic Deprivation 2018 (NZDep2018), which is based on the following 2018 Census variables: no access to the Internet at home; receiving a means-tested benefit; low-income households; unemployed; no qualifications; not living in their own home; living in a single parent family; crowded households; living in dwellings that are always damp and/or have mould greater than A4 size	NZDep2018 decile (1 = least deprived 10% of small areas in NZ, 10 = most deprived 10% of small areas in NZ)	n/a	Proxy indicator for not having emergency supplies (Statistics New Zealand 2012) or food security (Ministry of Health 2019)
rented	Households living in rental housing (among total households)	2018 Census - Households table	SA2, TA, ALB, DHB	Tenure of household, for households in occupied private dwellings	Dwellings not owned and not held in family trust	Total households stated	Proxy indicator for not having emergency supplies (Statistics New Zealand 2012) or food security (Ministry of Health 2019)
nosafewater	Dwellings with no access to safe running water (among total dwellings stated)	2018 Census, Dwellings table	SA2, TA, ALB, DHB	Access to basic amenities: dwellings that do not report having access to tap water that is safe to drink	Total stated - 'tap water that is safe to drink'	Total dwellings stated	Some missing data; information on data quality is provided.

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
nofridge	Dwellings with no access to a working fridge (among total dwellings stated)	2018 Census, Dwellings table	SA2, TA, ALB, DHB	Access to basic amenities: dwellings that do not report having access to a refrigerator (that is in working order)	Total stated - 'refrigerator'	Total dwellings stated	Some missing data; information on data quality is provided.
nopower	Dwellings with no electricity (among total dwellings stated)	2018 Census, Dwellings table	SA2, TA, ALB, DHB	Access to basic amenities: dwellings that do not report having access to electricity	Total stated - 'electricity'	Total dwellings stated	Some missing data; information on data quality is provided.
Indicators about decision-making and participation							
voter_turnout	Residential voter turnout in the 2019 Local Authority Elections (among residential electors on the roll)	2019 Local Authority Election Statistics, Department of Internal Affairs	TA	Residential voter turnout, defined as the number of residential voters divided by the number of residential electors on the roll in contested areas, in the 2019 local authority elections	Number of residential voters	Number of residential electors on the roll (contested wards only)	
Indicators about occupation							
healthcare15y	People working in the health care and social assistance industry (among 15+ years)	2018 Census, Individual part 3a table	SA2, TA, ALB, DHB	Counting the employed census usually resident population aged 15 years and over, industry (ANZSIC06 V1.0)	Health care and social assistance	Total people stated (among census usually resident population aged 15+ years)	
healthcare15yemp	People working in the health care and social assistance industry (among employed 15+ years)	2018 Census, Individual part 3a table	SA2, TA, ALB, DHB	Counting the employed census usually resident population aged 15 years and over, industry (ANZSIC06 V1.0)	Health care and social assistance	Total people stated (among employed census usually resident population aged 15+ years)	
retail15y	People working in the retail trade industry (among 15+ years)	2018 Census, Individual part 3a table	SA2, TA, ALB, DHB	Counting the employed census usually resident population aged 15 years and over, industry (ANZSIC06 V1.0)	Retail services	Total people stated (among census usually resident population aged 15+ years)	
retail15yemp	People working in the retail trade industry	2018 Census, Individual part 3a table	SA2, TA, ALB, DHB	Counting the employed census usually resident population aged	Retail services	Total people stated (among employed census usually	

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
	(among employed 15+ years)			15 years and over, industry (ANZSIC06 V1.0)		resident population aged 15+ years)	
food15y	People working in the accommodation and food services industry (among 15+ years)	2018 Census, Individual part 3a table	SA2, TA, ALB, DHB	Counting the employed census usually resident population aged 15 years and over, industry (ANZSIC06 V1.0)	Accommodation and food services	Total people stated (among census usually resident population aged 15+ years)	
food15yemp	People working in the accommodation and food services industry (among employed 15+ years)	2018 Census, Individual part 3a table	SA2, TA, ALB, DHB	Counting the employed census usually resident population aged 15 years and over, industry (ANZSIC06 V1.0)	Accommodation and food services	Total people stated (among employed census usually resident population aged 15+ years)	
artsrec15y	People working in the arts and recreation services industry (among 15+ years)	2018 Census, Individual part 3a table	SA2, TA, ALB, DHB	Counting the employed census usually resident population aged 15 years and over, industry (ANZSIC06 V1.0)	Arts and recreation services	Total people stated (among census usually resident population aged 15+ years)	
artsrec15yemp	People working in the arts and recreation services industry (among employed 15+ years)	2018 Census, Individual part 3a table	SA2, TA, ALB, DHB	Counting the employed census usually resident population aged 15 years and over, industry (ANZSIC06 V1.0)	Arts and recreation services	Total people stated (among employed census usually resident population aged 15+ years)	
primaryind15y	People working in the primary industries (among 15+ years)	2018 Census, Individual part 3a table	SA2, TA, ALB, DHB	Counting the employed census usually resident population aged 15 years and over, industry (ANZSIC06 V1.0)	Agriculture, Forestry and Fishing	Total people stated (among census usually resident population aged 15+ years)	
primaryind15yemp	People working in the primary industries (among employed 15+ years)	2018 Census, Individual part 3a table	SA2, TA, ALB, DHB	Counting the employed census usually resident population aged 15 years and over, industry (ANZSIC06 V1.0)	Agriculture, Forestry and Fishing	Total people stated (among employed census usually resident population aged 15+ years)	
Indicators about the older adult population (among those aged 60+ and 70+ years)							
o60yEuropean	European adults aged 60+ years (total response ethnic group) (among 60+ years)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group and total response ethnic group	European adults 60+ years	Older adults 60+ years	

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
o60yMaori	Māori adults aged 60+ years (total response ethnic group) (among 60+ years)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group and total response ethnic group	Māori adults 60+ years	Older adults 60+ years	
o60yPacific	Pacific adults aged 60+ years (total response ethnic group) (among 60+ years)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group and total response ethnic group	Pacific peoples adults 60+ years	Older adults 60+ years	
o60yAsian	Asian adults aged 60+ years (total response ethnic group) (among 60+ years)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group and total response ethnic group	Asian adults 60+ years	Older adults 60+ years	
o60yMELAA	Middle Eastern/Latin American/African adults aged 60+ years (total response ethnic group) (among 60+ years)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group and total response ethnic group	MELAA adults 60+ years	Older adults 60+ years	
o70yEuropean	European adults aged 70+ years (total response ethnic group) (among 70+ years)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group and total response ethnic group	European adults 70+ years	Older adults 70+ years	
o70yMaori	Māori adults aged 70+ years (total response ethnic group) (among 70+ years)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group and total response ethnic group	Māori adults 70+ years	Older adults 70+ years	
o70yPacific	Pacific adults aged 70+ years (total response ethnic group) (among 70+ years)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group and total response ethnic group	Pacific peoples adults 70+ years	Older adults 70+ years	
o70yAsian	Asian adults aged 70+ years (total response ethnic group) (among 70+ years)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group and total response ethnic group	Asian adults 70+ years	Older adults 70+ years	

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
o70yMELAA	MELAA adults aged 70+ years (total response ethnic group) (among 70+ years)	2018 Census, requested data	SA2, TA, ALB, DHB	Usually resident population, by age group and total response ethnic group	MELAA (Middle Eastern/Latin American/African) adults 70+ years	Older adults 70+ years	
Indicators about languages spoken							
language_English	English language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	English	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_Maori	Māori language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	Māori	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_Samoan	Samoan language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	Samoan	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_NorthernChinese	Northern Chinese language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	Northern Chinese	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_Hindi	Hindi language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	Hindi	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
language_French	French language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	French	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_Yue	Yue language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	Yue	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_Sinitic_nfd	Sinitic (not further defined) language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	Sinitic not further defined	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_Tagalog	Tagalog language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	Tagalog	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_German	German language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	German	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_Spanish	Spanish language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	Spanish	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.

ID	Indicator name	Source	Geography available	Description	Numerator	Denominator	Notes
language_Afrikaans	Arikaans language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	Afrikannas	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_Tongan	Tongan language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	Tongan	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_Panjabi	Panjabi language speakers (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	Panjabi	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_NZSign	NZ Sign language users (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	NZ Sign Language	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.
language_other	Speakers of other languages (among total people stated who speak one or more languages)	NZ.Stat	TA, ALB, DHB	Languages spoken (total response) among total people who speak one or more languages, for the census usually resident population, 2018 Census	Other	Total people stated, excluding 'None (eg too young to talk)'	Indicator added Oct 2021.

Notes about the indicators:

Indicators are listed in their respective dimensions (some indicators may appear in more than one dimension).

Each indicator has a unique ID, which can be annotated by adding different variable types. The following variable types exist in the dataset:

- *IndicatorID_count*: Number of units (people/households/dwellings, depending on the indicator) in the group of interest
- *IndicatorID_percent*: Percentage of units with the indicator, among the total (or among the total stated, if there is missing data)

- *IndicatorID_denom*: Denominator used to calculate the percentage

For some indicators, missing data has affected the data quality. For these indicators, additional information has been given:

- *IndicatorID_totalstated*: The total units that have information about the indicator (ie not missing)
- *IndicatorID_unknown*: The number of units that have missing data
- *IndicatorID_total*: The total number of units (including those with missing data)
- *IndicatorID_responserate*: The response rate for the indicator, for that geographic region (calculated as $\text{total_stated} / \text{total} \times 100\%$)
- *IndicatorID_quality*: The data quality rating for the indicator for that geographic region, based on the EDQP ratings of response rates (98.0%+ = Very high; 95.0-97.9% = High; 90.0-94.9% = Moderate; 75.0-89.9% = Poor; Below 75.0% = Very poor)
- *IndicatorID_lower*: The lower logical bound for the percentage, which gives the lowest possible value for the percentage taking into account the missing data; it is calculated as (count / total)
- *IndicatorID_upper*: The upper logical bound for the percentage, which gives the highest possible value for the percentage taking into account the missing data; it is calculated as (count + unknown / total)

Note: In the tables, ‘..C’ denotes that the cell is suppressed due to small numbers, or is not available.

Table 2 presents some additional indicators that are available in the social vulnerability indicators dataset, which provide information about tourism in 2019 (pre-COVID-19) in regions around New Zealand. These indicators help show regions that were likely to be more impacted by border closures, lockdowns, and a reduction in tourist numbers.

Table 2: Information on supplementary indicators about tourism, at the territorial authority (TA level), for COVID-19

ID	Indicator name	Source	Geography	Description	Numerator	Denominator
tourismspend_perresident	Total tourism spend per resident (\$) (year ending March 2019)	MBIE Monthly Regional Tourism Estimates	TA	Total tourism spend per resident in TA (\$) (year ending March 2019)	Total tourism spend (\$millions) (year ending March 2019)	2018 Census usually resident population
tourismspend_domestic	Domestic tourism spend (\$millions) (year ending March 2019)	MBIE Monthly Regional Tourism Estimates	TA	Domestic tourism spend within TA (\$millions) (year ending March 2019)	Domestic tourism spend (\$millions) (year ending March 2019)	n/a
tourismspend_international	International tourism spend (\$millions) (year ending March 2019)	MBIE Monthly Regional Tourism Estimates	TA	International tourism spend within TA (\$millions) (year ending March 2019)	International tourism spend (\$millions) (year ending March 2019)	n/a
tourismspend_total	Total tourism spend (\$millions) (year ending March 2019)	MBIE Monthly Regional Tourism Estimates	TA	Total tourism spend within TA (\$millions) (year ending March 2019)	Total tourism spend (\$millions) (year ending March 2019)	n/a

internationalspend_percent	International tourism spend, as a percentage of total tourism spend (year ending March 2019)	MBIE Monthly Regional Tourism Estimates	TA	International tourism spend, as a percentage of total tourism spend, within TA (year ending March 2019)	International tourism spend (\$millions) (year ending March 2019)	Total tourism spend (\$millions) (year ending March 2019)
domesticspend_perresident	Domestic tourism spend per resident (\$) (year ending March 2019)	MBIE Monthly Regional Tourism Estimates	TA	Domestic tourism spend per resident in TA (\$) (year ending March 2019)	Domestic tourism spend (\$millions) (year ending March 2019)	2018 Census usually resident population
internationalspend_perresident	International tourism spend per resident (\$) (year ending March 2019)	MBIE Monthly Regional Tourism Estimates	TA	International tourism spend per resident in TA (\$) (year ending March 2019)	International tourism spend (\$millions) (year ending March 2019)	2018 Census usually resident population

References

Atkinson J, Salmond C, Crampton P. 2019. *NZDep2018 Index of Deprivation. Interim Research Report, December 2019*. Wellington: Department of Public Health, University of Otago, Wellington. URL: <https://www.otago.ac.nz/wellington/otago730394.pdf>

Mason K, Lindberg K, Haenfling C, Schori A, Marsters H, Read D, Borman B. 2021. Social vulnerability indicators for flooding in Aotearoa New Zealand. *International Journal of Environmental Research and Public Health*. 18(8):3952. <https://doi.org/10.3390/ijerph18083952>

Ministry of Health. 2019. *Household Food Insecurity Among Children in New Zealand*. Wellington: Ministry of Health. URL: <https://www.health.govt.nz/system/files/documents/publications/household-food-insecurity-among-children-new-zealand-health-survey-jun19.pdf>

Statistics New Zealand. 2012. *How prepared are New Zealanders for a natural disaster?* Wellington: Statistics New Zealand. URL: <https://www.stats.govt.nz/assets/Uploads/Retirement-of-archive-website-project-files/Reports/How-prepared-are-New-Zealanders-for-a-natural-disaster/how-prepared-nzers-natural-disaster.pdf>