Climate Vulnerability Comparative Dashboard – User Guide

This document explains how to use the Climate Vulnerability Comparative Dashboard. This dashboard is interactive and online, and can be used to explore a range of climate and social vulnerability indicators for Aotearoa New Zealand.

About the Extreme Climate Index

The Extreme Climate Index (ECI) presents measures of extreme climate events and climate variability. The index helps make the 'signal' of extreme events stand out from the 'noise' of daily weather. The index is based on daily weather data from NIWA's Virtual Climate Station Network (VCSN). VCSN grid data is only available for the main islands (Te Ika-a-Māui/North Island, Te Wai Pounamu/South Island and Rakiura/Stewart Island), but not for Rēkohu/Chatham Islands. The ECI was developed by Heather McLeod as part of her Master's studies at Te Herenga Waka–Victoria University of Wellington, supervised by climate scientist James Renwick.

The ECI covers the following elements of climate and weather:

- Hot days and heatwaves
- Drought and dry spells
- Rainfall
- Cold days and snow
- Windy days
- Fire weather seasonal severity

Years of data available: ECI data is arranged by season and year. For most indicators, data is available from 1972-73 to 2022. Windy days and fire weather severity are only available from Autumn 1997 onwards.

About the Social Vulnerability Indicators

Social Vulnerability Indicators (SVIs) identify populations and geographic areas that are more vulnerable to the negative impacts of natural hazards (like earthquakes and tsunami), climate-related hazards (like floods and heatwaves) and other emergencies (like pandemics). Vulnerability to hazards includes being more sensitive or susceptible to the impacts of hazard events, and/or being less able to prepare for, cope with, recover from or adapt to a hazard.

The SVIs cover the following dimensions of social vulnerability:

- Susceptibility: Children, older adults, health and disability status
- Factors relating to resilience: Having enough money to cope with crises and losses, social connectedness, awareness of hazards, housing,
  having enough food and water to cope with shortage, decision-making and participation
- Population information: Population counts, ethnic groups and ethnicity, lifecycle age groups, occupation, urban/rural.

Years of data available: Data are generally available for the following Census years:

- 2023
- 2018
- 2013

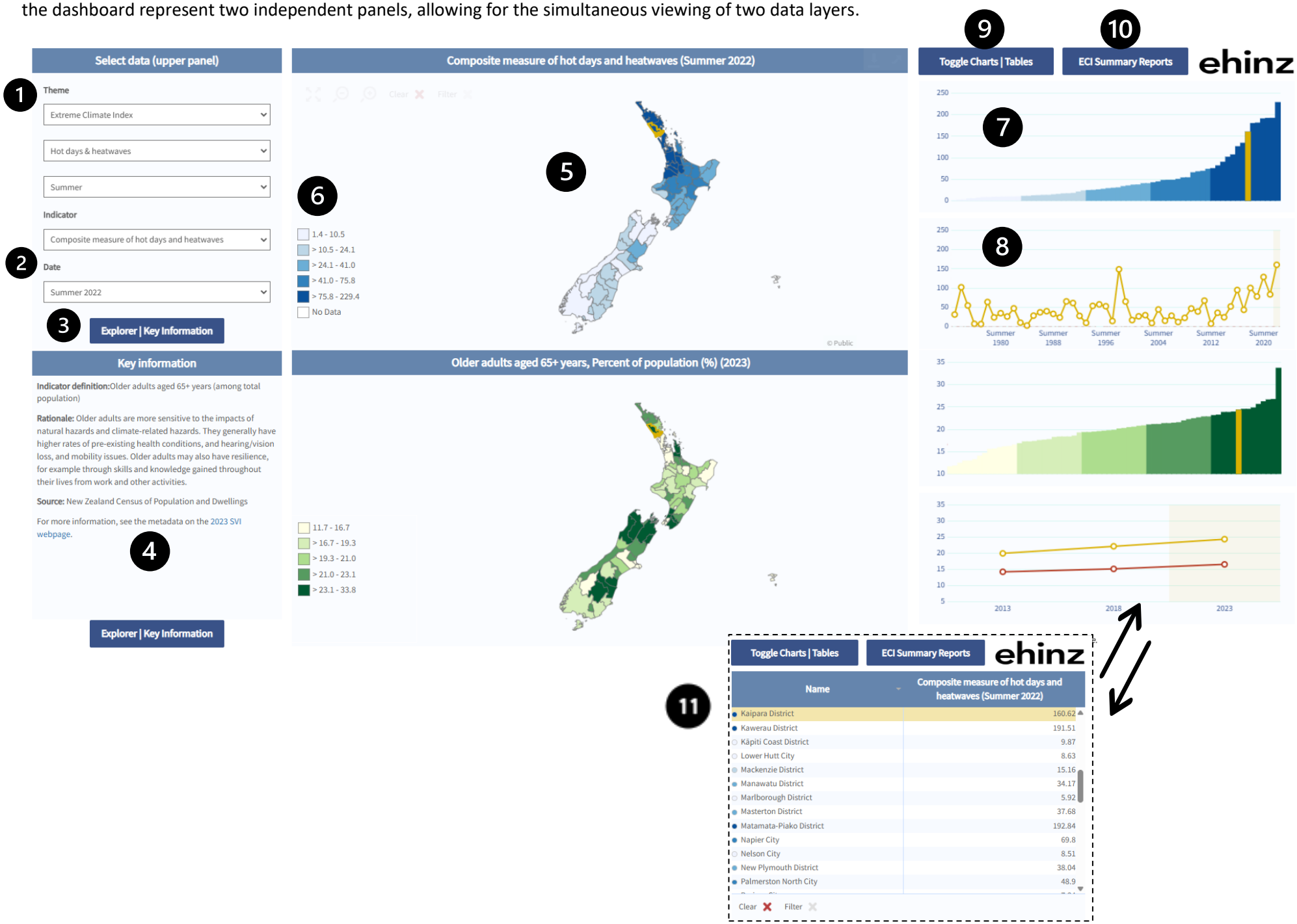
About this dashboard: This dashboard is particularly useful for local councils, civil defence emergency management (CDEM) groups, the health sector, and local communities.

Geographies available: At the time of publication, only data for the Territorial Authority (TA) level is available.

For more information about the Extreme Climate Index, including TA-level summary reports, see the ECI project page

For more information about the Social Vulnerability Indicators (including indicator metadata), see the SVI2023 webpage.

How to use the dashboard - This section explains the different parts of the dashboard and useful features. The upper and lower halves of the dashboard represent two independent panels, allowing for the simultaneous viewing of two data layers.



❶ **Select domain, topic and season:** Select a domain (ECI or SVI), topic and season of interest to view on the relevant panel

❷ **Year(s):** Select the year you are interested in. The default year is the most recent year of data available

❸ **Explorer / Key info toggle:** Switches between viewing the dropdown selector for indicator & date and the key information and metadata for the selected indicator

❹ **Key information:** Provides the indicator definition, rationale for the selected indicator, data source, and additional notes

❺ **Map:** The map shows values for each area. Darker colours represent higher values, while lighter colours represent lower values. Zoom in or out using the plus and minus buttons, or the mouse. Move around the map by clicking and dragging. Hover over an area to see its values. Click on an area to highlight it in the table and charts. The two maps are synchronised, and moving and zooming one will control both at the same time, so the views will match.

❻ **Legend:** The legend shows the colours used for the five groups (quintiles) that divide the data. Each colour group has about the same number of geographic areas. Click on a coloured box in the legend to highlight all areas on the map, charts, and table that fall in that group.

❼ **Bar chart:** The bar chart shows values (and associated confidence intervals or logical bounds), with New Zealand shown as a red line for easy comparison. Hover over a bar to see the value. Click a bar to highlight that area on the map and in the table.

❽ **Changes over time:** This chart shows changes over time for New Zealand, and any selected geographic area(s). New Zealand appears as a solid red line, while selected geographic areas appear as orange lines. Hover over a data point to show the values.

❾ **Toggle Table / Charts:** This button switches the display between the bar charts and trendline (7/8) for the data table for the selected indicators in both panels.

❿ **ECI Reports:** This button links to TA-level summary reports for all ECI data. These reports present all ECI composite measures for a given TA in one place for your convenience.

⓫ **Data table:** The table shows indicator data for each area on the map. Percentages and counts are both shown where appropriate. The shaded circles next to the names match the colours in the bar chart and the map. Click any column header to sort the table by that variable.