



Index of Multiple Deprivation for Ngāi Tahu

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Toitū te
Rangatiratanga
Toitū te Ao Tūroa
Toitū te Kaikōkiri
Toitū te Iwi.

Neighborhood Deprivation and the Index of Multiple Deprivation

“A state of observable and demonstrable disadvantage relative to local community or wider society or a nation to which an individual, family or group belongs” (Townsend, 1987)

- Historically measures of development have always been one dimensional.
- First attempt in 1985 by Reinken using Census Area Units
- First multidimensional index - Index of Multiple Deprivation, England (2000)
- Scottish Index of Multiple Deprivation (2016)
 - Standard for Multidomain deprivation index
 - 7 domains, 38 indicators
- Base for New Zealand’s Index of Multiple Deprivation
- Data from various private and government agencies

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Problem Statement

“To create an Index of Multiple Deprivation
for the Iwi of Ngāi Tahu and an area level
analysis of the indices”

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Ngāi Tahu- the Iwi

- Principal Māori iwi (tribe) of the southern region of New Zealand
- Iwi with largest tribal area in New Zealand
- Population distribution –

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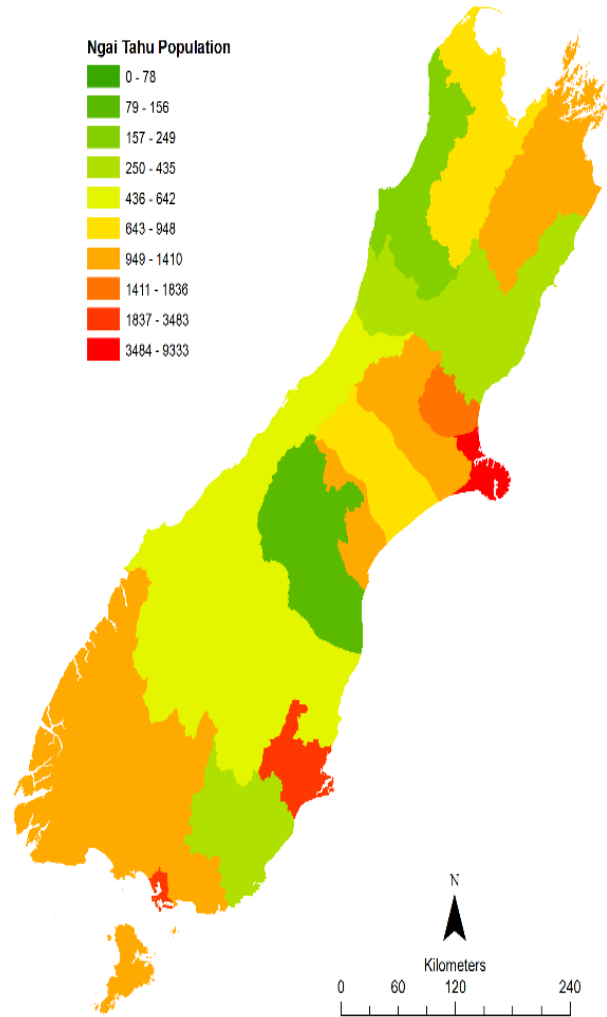
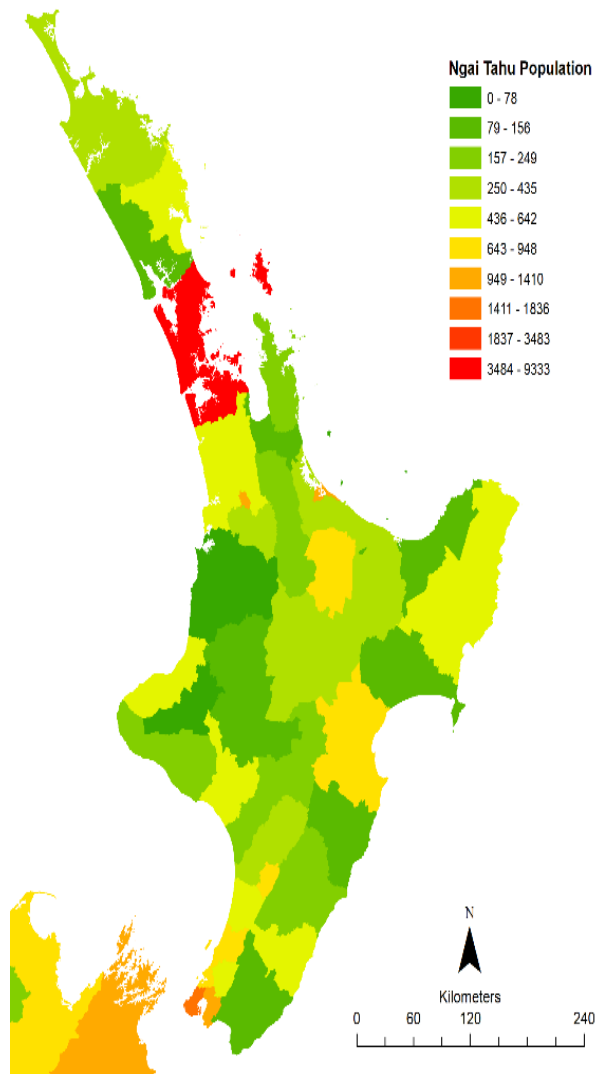
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Ngāi Tahu Iwi population distribution

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Te Kunanga o Ngai Tahu

Project Significance

- Studies show that deprivation distribution is different in Māori and Non-Māori populations*
- Cultural difference is hard to capture using a combined index for all population thus making this study culturally significant.
- To assist Ngāi Tahu investigate deprivation in their community and help with strategies of response and policy reforms based on various indices.
- First Iwi specific deprivation index in New Zealand

* Reference - (Anderson, et al., 2006; Apparicio, Abdelmajid, Riva, & Shearmur, 2008; Cabrera-Barona, Wei, & Hagenlocher, 2016).

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Data and Domains

- Data was sourced from the Integrated Data Infrastructure (IDI) from Statistics New Zealand
- 100+ datasets from various government department and private sources
- 7 domains and 29 variables were eventually selected for the creation of the Index

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Data and Domains

Domains

1. Health

- 7 variables
- Data source: Ministry of Health

Variables used

- a) Before School Checks
- b) Cancer Registration
- c) Chronic Conditions
- d) Unexpected Mortality
- e) Emergency Hospital Admissions
- f) Mental Health
- g) Respiratory Illness

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Data and Domains

2. Crime

- 6 variables
- Data source: Recorded Crime Victimization Statistics dataset from NZ Police

Variables used

- a) Homicides, Assaults and related crimes
- b) Theft, Unlawful entry and related crimes
- c) Sexual assaults and related crimes
- d) Abduction and kidnapping crimes
- e) Extortion and related crimes
- f) Burglary, Robbery and related crimes.

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Data and Domains

3. Employment

- 2 variables
- Data source: Ministry of Social Development

Variables used

- a) The working age population who have been consistently claiming unemployment benefits and
- b) The working age population who have been consistently claiming sickness benefits.

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Data and Domains

4. Income

- 2 variables
- Data sources: Ministry of Social Development and IRD.

Variables used

- a) First indicator to capture the payments made by Ministry of Social Development in the form of some selected income-tested benefits and working for families (WFF) benefits.
- b) The other indicator was used to measure the payment by Inland Revenue to working class people, child tax benefits and paid parental leave etc.

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Data and Domains

5. Education

- 5 variables
- Data source: Ministry of Education.

Variables used

- a) School leavers who are less than 17 years old
- b) School leavers without NCEA level 2
- c) School leavers not enrolling into other studies
- d) Working age people without any qualifications
- e) Youth not in any education, employment or training (NEET).

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Data and Domains

6. Housing

- 2 variables
- Data source: Census 2018*.

Variables used

- a) The proportion of people living in congested households
- b) The proportion of people living in rented households

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Data and Domains

7. Access

- 4 variables
- Data source: Google Maps & Others.

Variables used

- a. Average distance to 3 nearest GP's or A&Ms
- b. Average distance to 3 nearest service stations / petrol stations / supermarket
- c. Average distance to 3 nearest primary or intermediate schools
- d. Average distance to 3 nearest early childhood education centres

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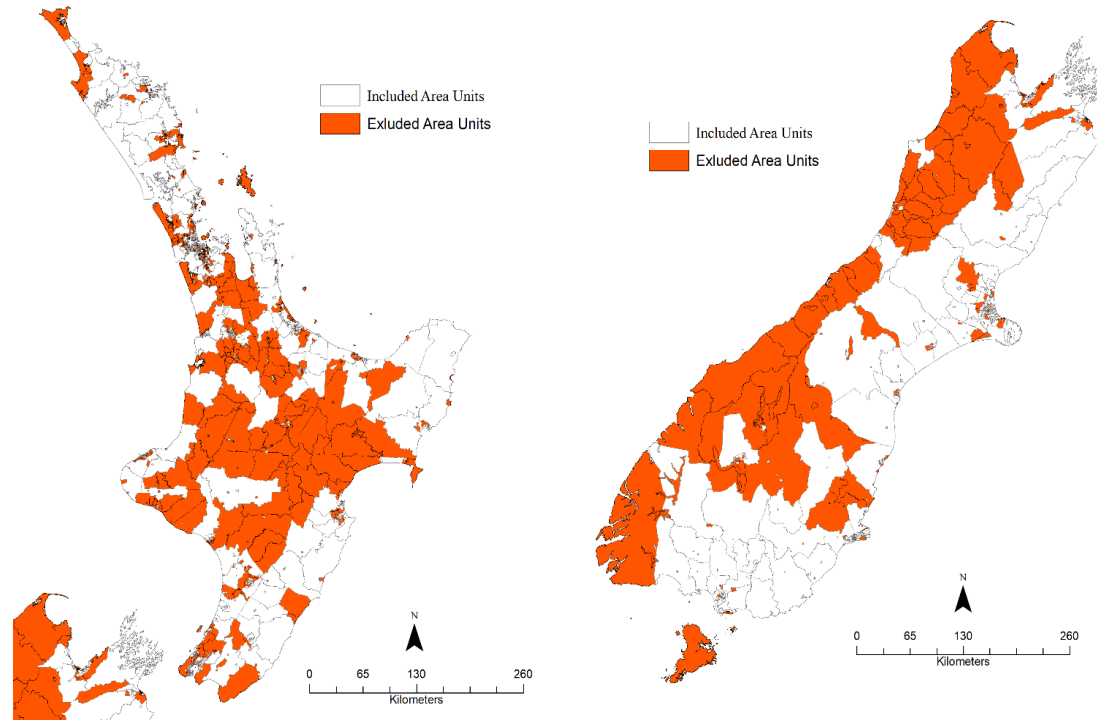
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Methodology

Geography used –

1. Area Units (1788 total but only 1082 with population more than 15)
2. Territorial Authority (67 total territories)

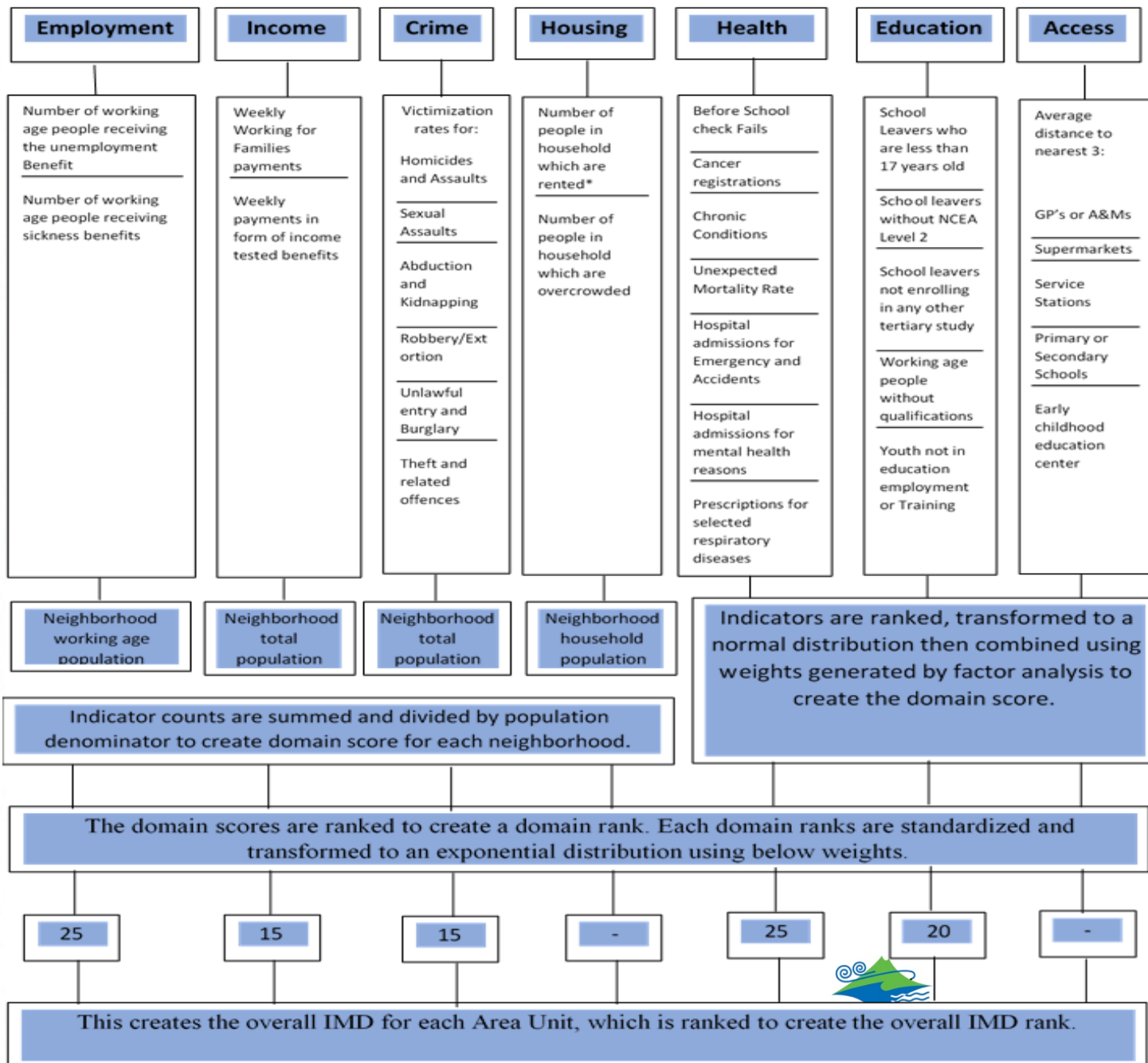
Missing Area Units –



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Index of Multiple Deprivation for Ngāi Tahu Iwi



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Results (for Maori Decent Population)

Territorial Authority Level Deprivation Index

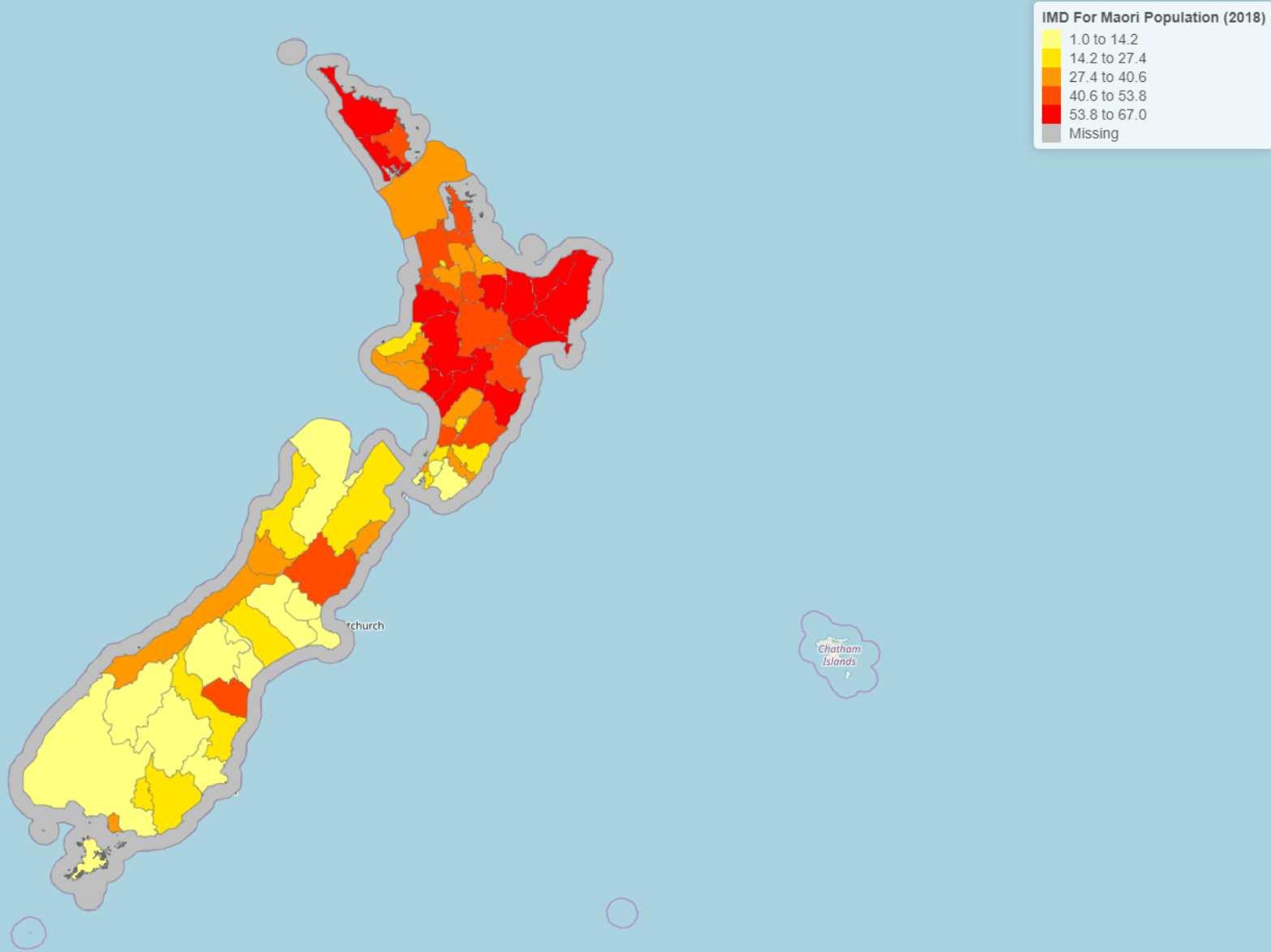
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IMD substitute for Maori Decent Population (2018)



Other Substitute Results

Employment Deprivation Index (TA Level)

Health Deprivation Index (TA Level)

Crime Deprivation Index (TA Level)

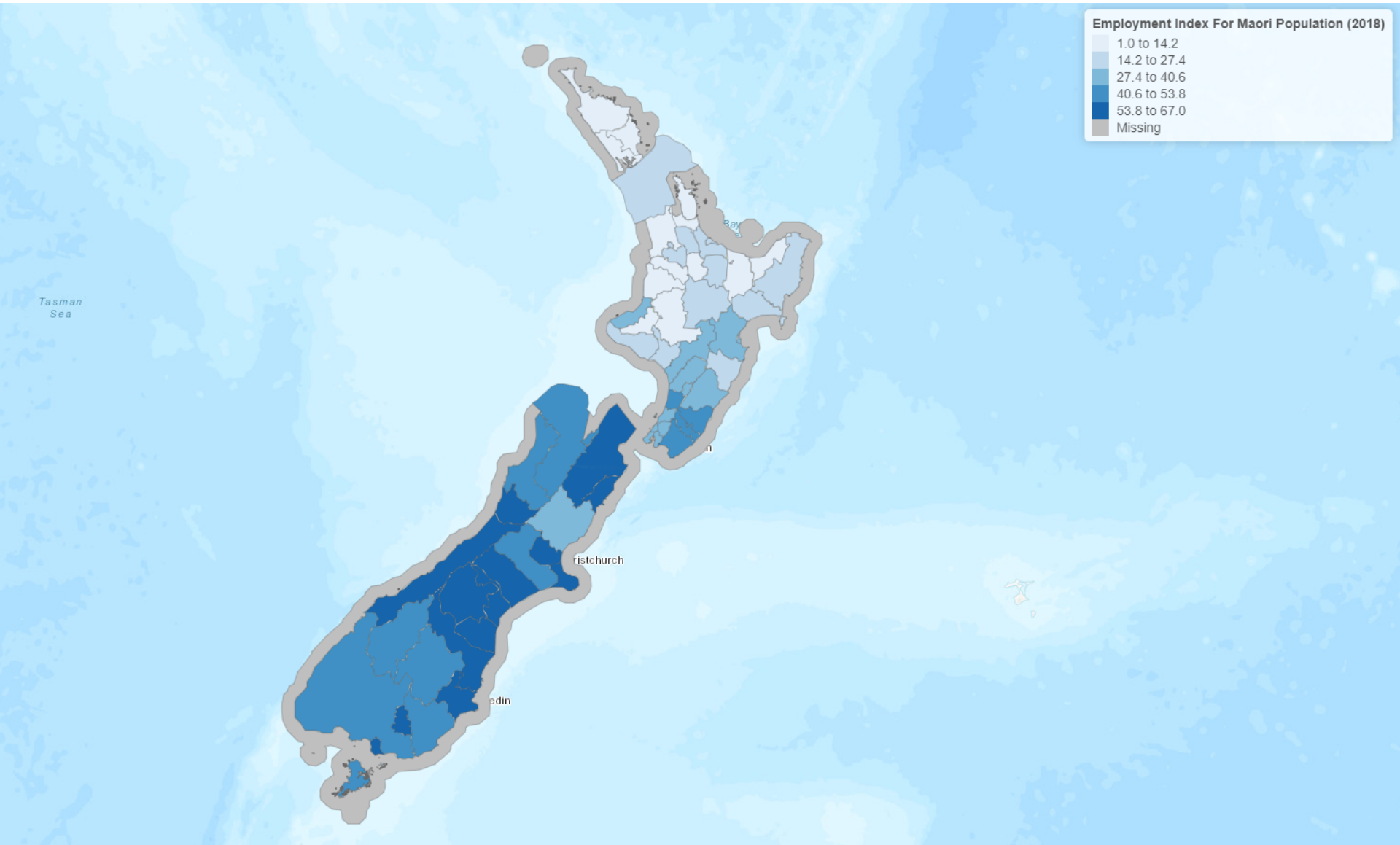
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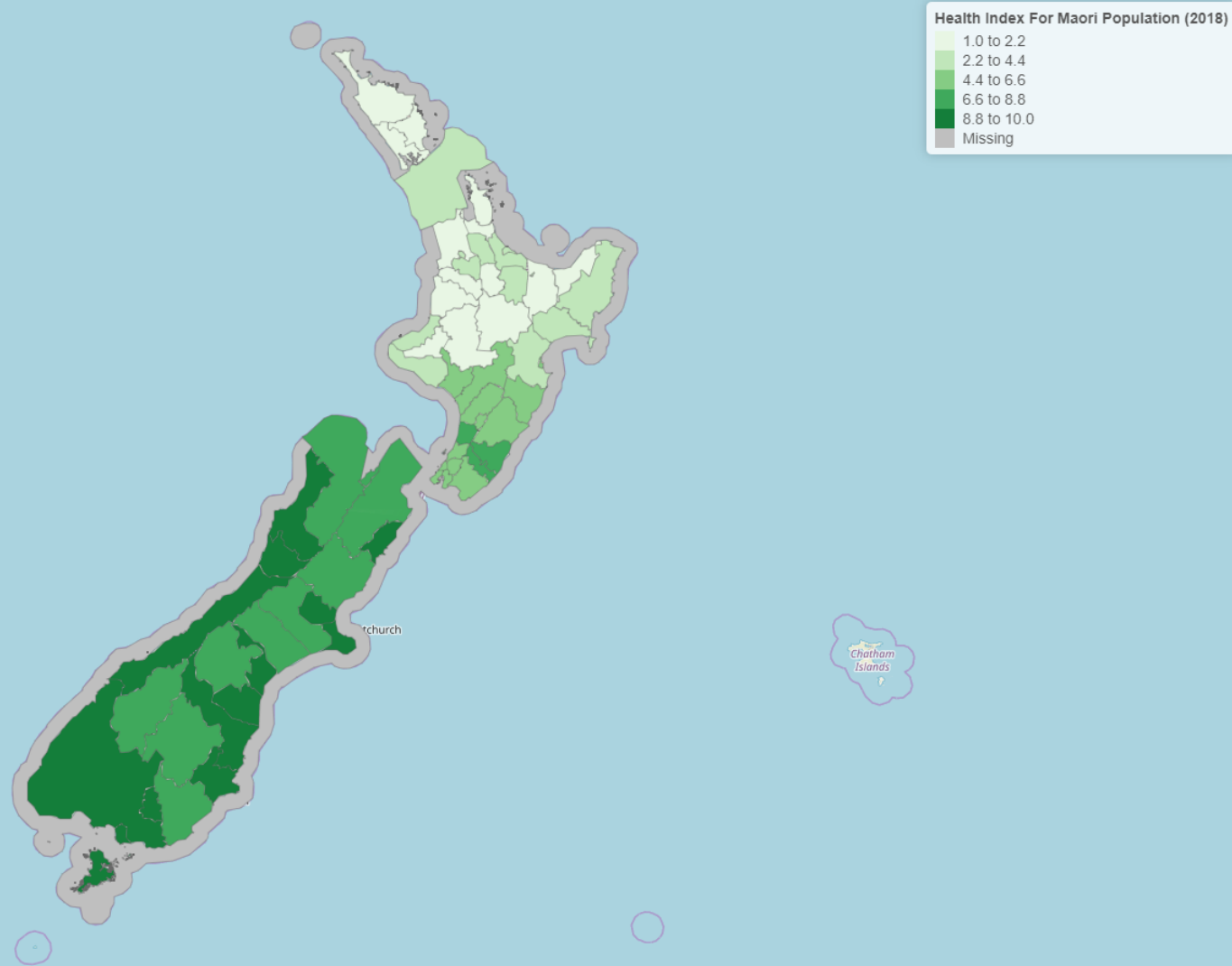


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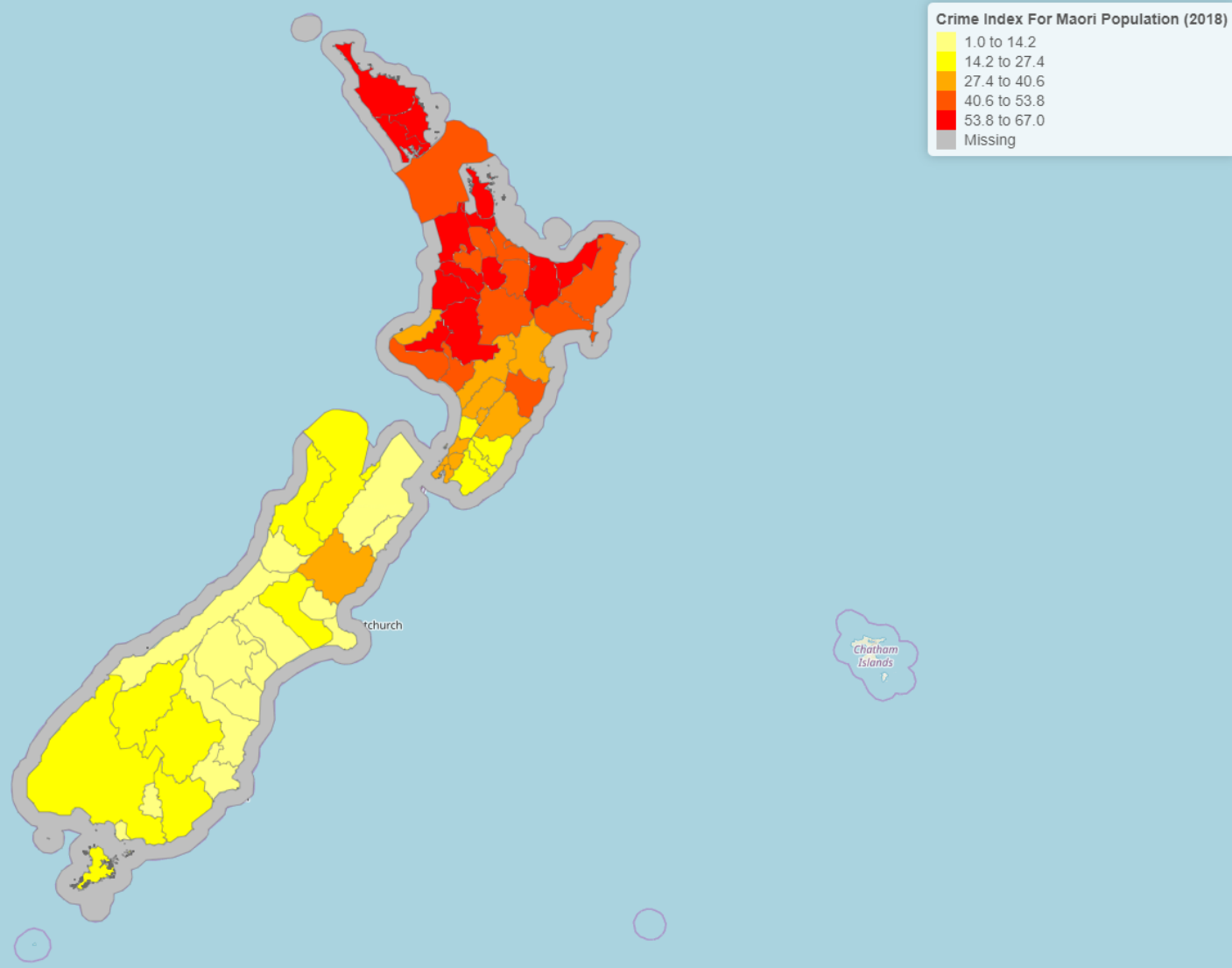
Employment Deprivation Index for Maori Decent Population (2018)



Health Deprivation Index for Maori Decent Population (2018)



Crime Deprivation Index for Maori Decent Population (2018)



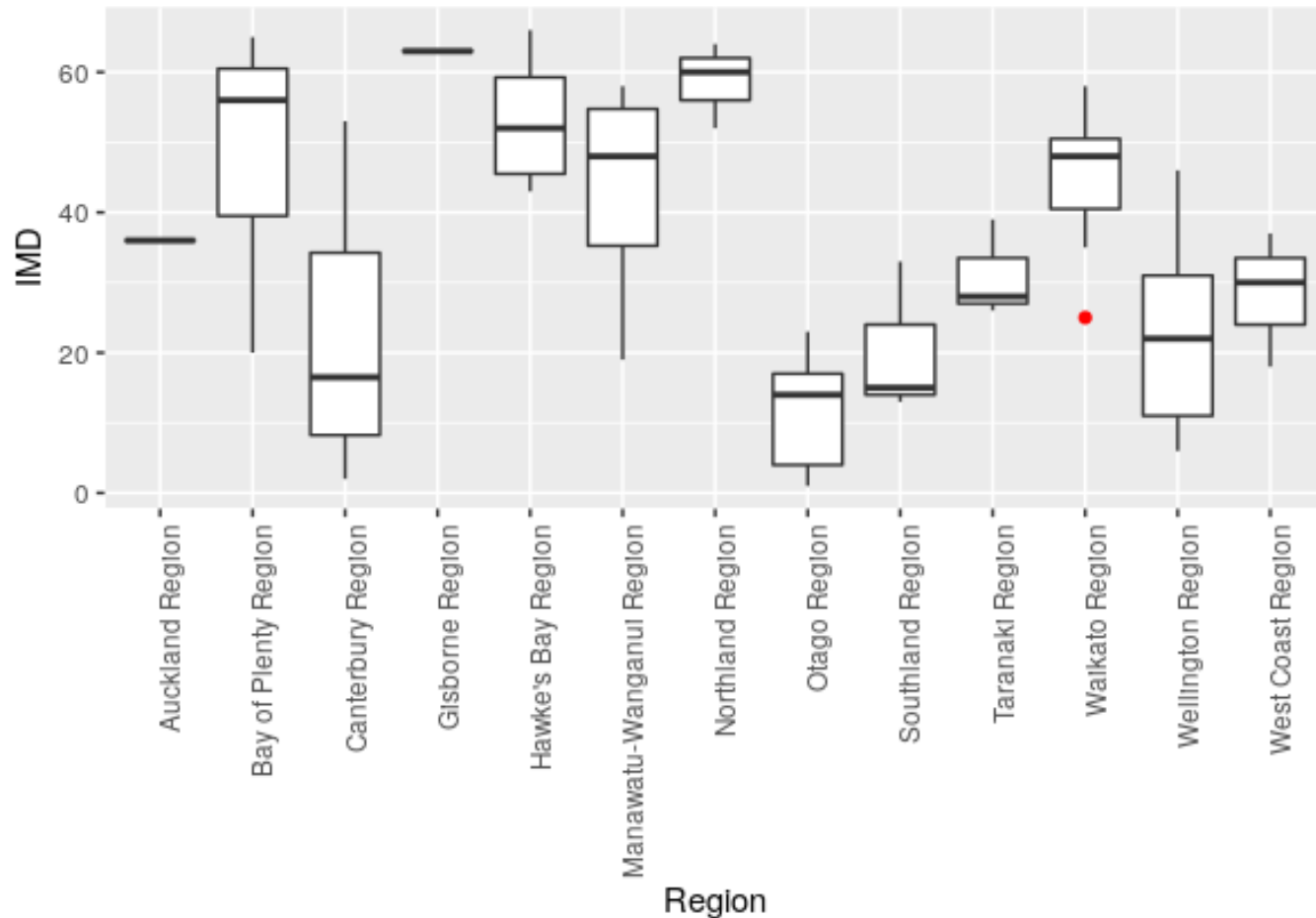


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Results

Geographical Variations in Regions



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Thank you!

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