



THE UNIVERSITY OF
WAIKATO
Te Whare Wānanga o Waikato



MASSEY
UNIVERSITY

Towards a Social Atlas for New Zealand

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CaDDANZ

Capturing the Diversity Dividend
of Aotearoa/New Zealand

Nga Tangata
Oho Mairangi



Tai Timu
Tangata



- ❑ ***New Zealand one of few countries without an online ‘Social Atlas’ (cf. Stats NZ’s StatsMaps)***
- ❑ ***Desire to develop one in collaboration with Statistics New Zealand***
- ❑ ***An enduring Social Atlas more than ‘just’ interactive maps, graphs and tables – includes links to (geo-coded) themed reports (accessed from the academic community)***
 - ❑ ***Intention is for all data to (eventually) automatically update with SNZ data releases***
 - ❑ ***Similar principles to Te Ara***
- ❑ ***Will involve liaison with government/councils /agencies to determine their reporting needs >>> A ‘Decision Support Tool’***

Integration of projects

- Follows on from *Nga Tangata Oho Mairangi* (MBIE 2013-2014)
 - The Impact of Population Change on New Zealand's Communities
 - Spoonley, Poot, Peace, Cain, Maré, Cameron, Jackson
- Links with *Tai Timu Tangata. Taihoa e?* (Marsden 2014-2016)
 - The subnational mechanisms of the ending of population growth. Towards a theory of depopulation (*The ebbing of the human tide – what will it mean for the people?*)
 - Jackson, Maré, Cameron, Cochrane, Brabyn, Pool

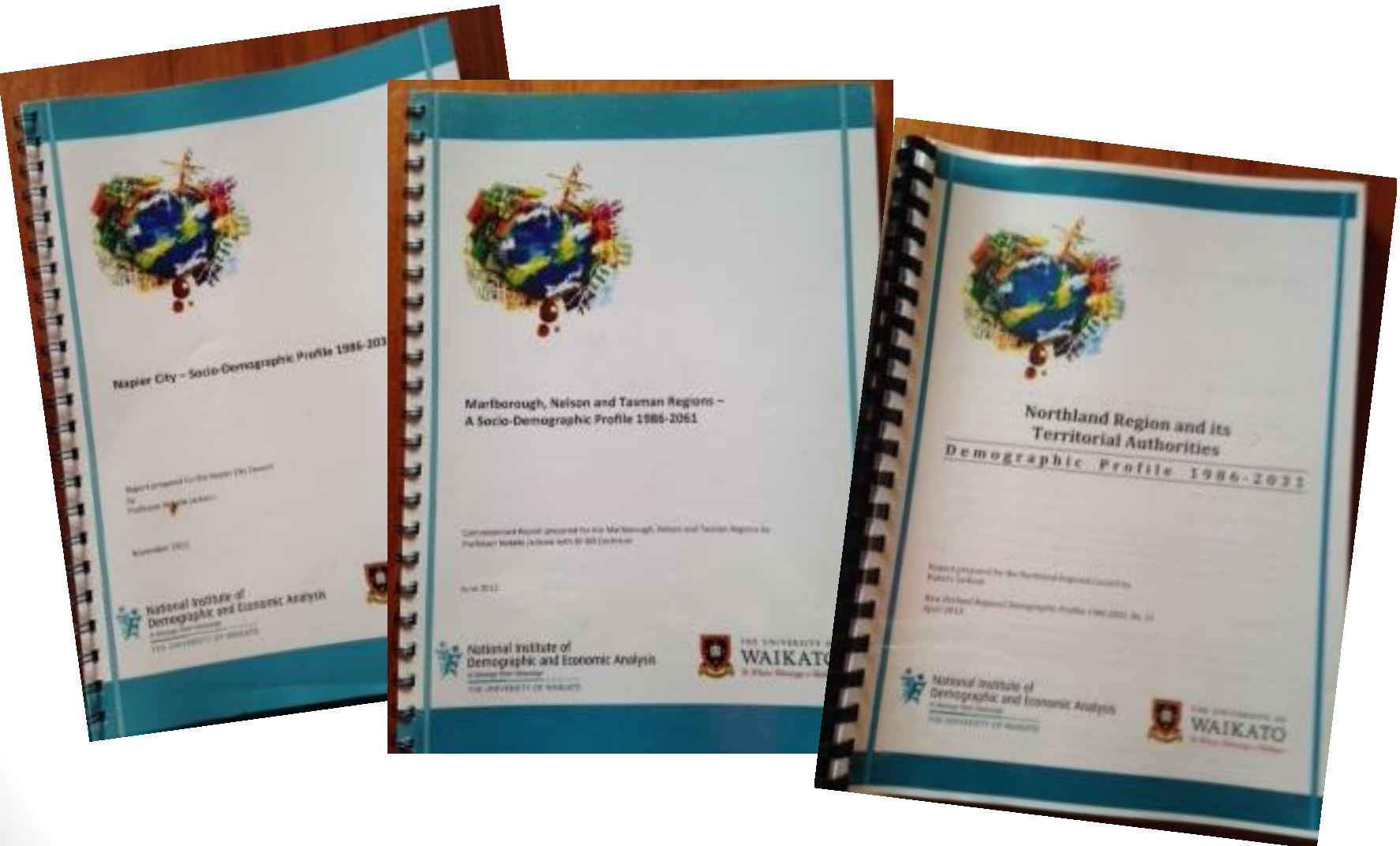


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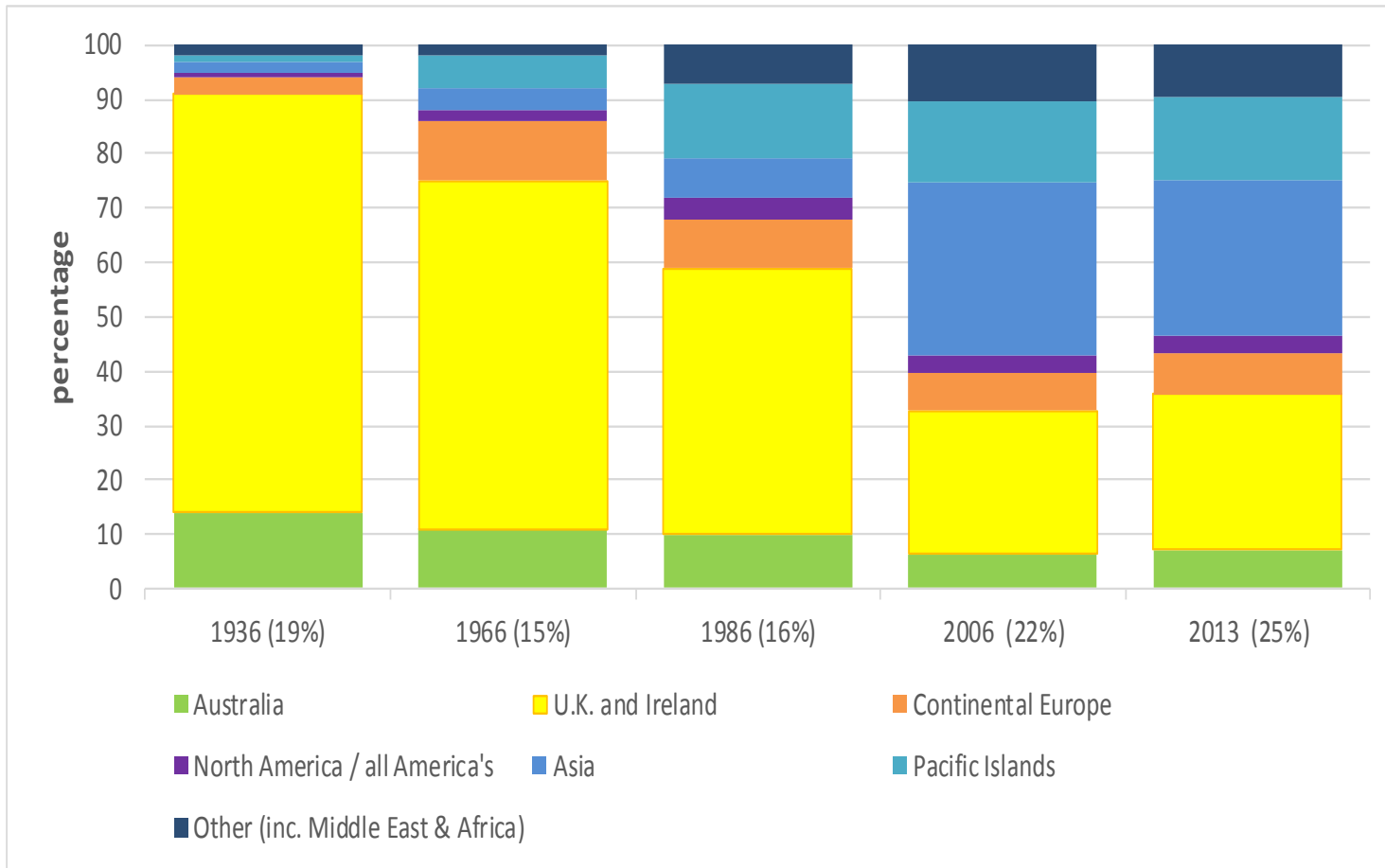


Start with NIDEA socio-demographic profiles

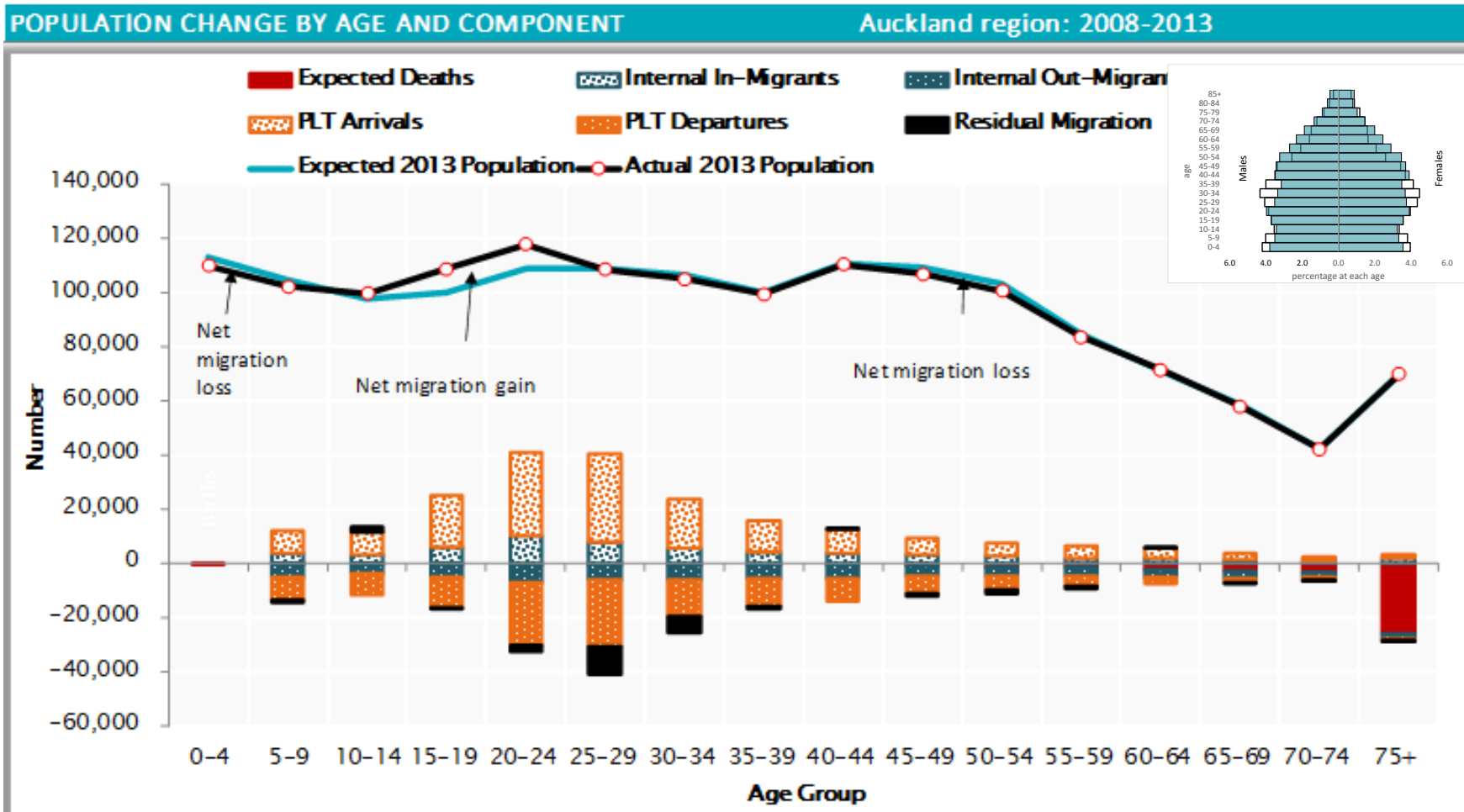


Ethnic diversity

New Zealand population by major region of birth, 1936-2013



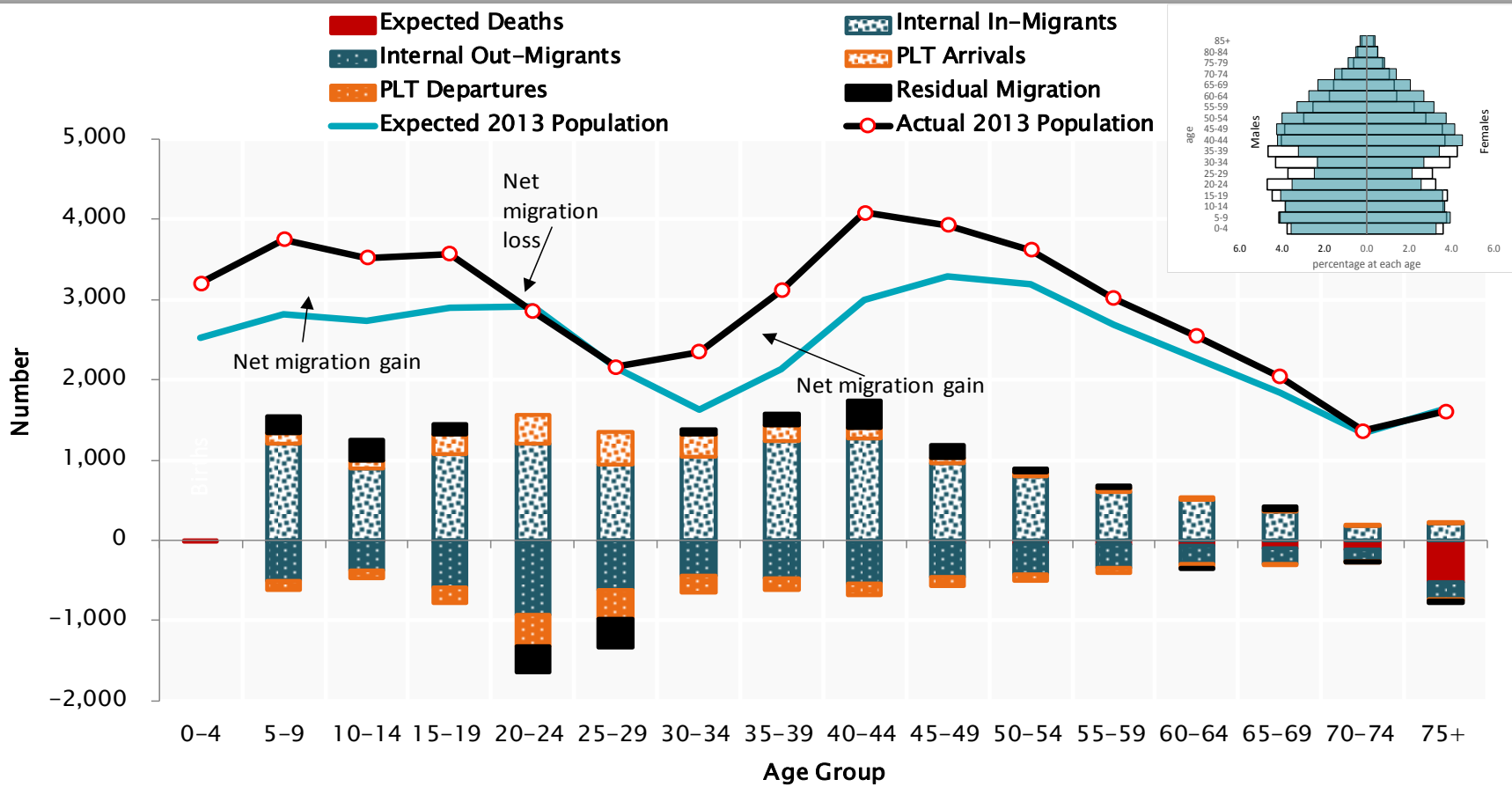
Add NTOM demographic accounting model - Auckland



Source: Jackson & Pawar (2013)/Statistics New Zealand various sources

NTOM demographic accounting model for Selwyn District

POPULATION CHANGE BY AGE AND COMPONENT Selwyn district: 2008-2013

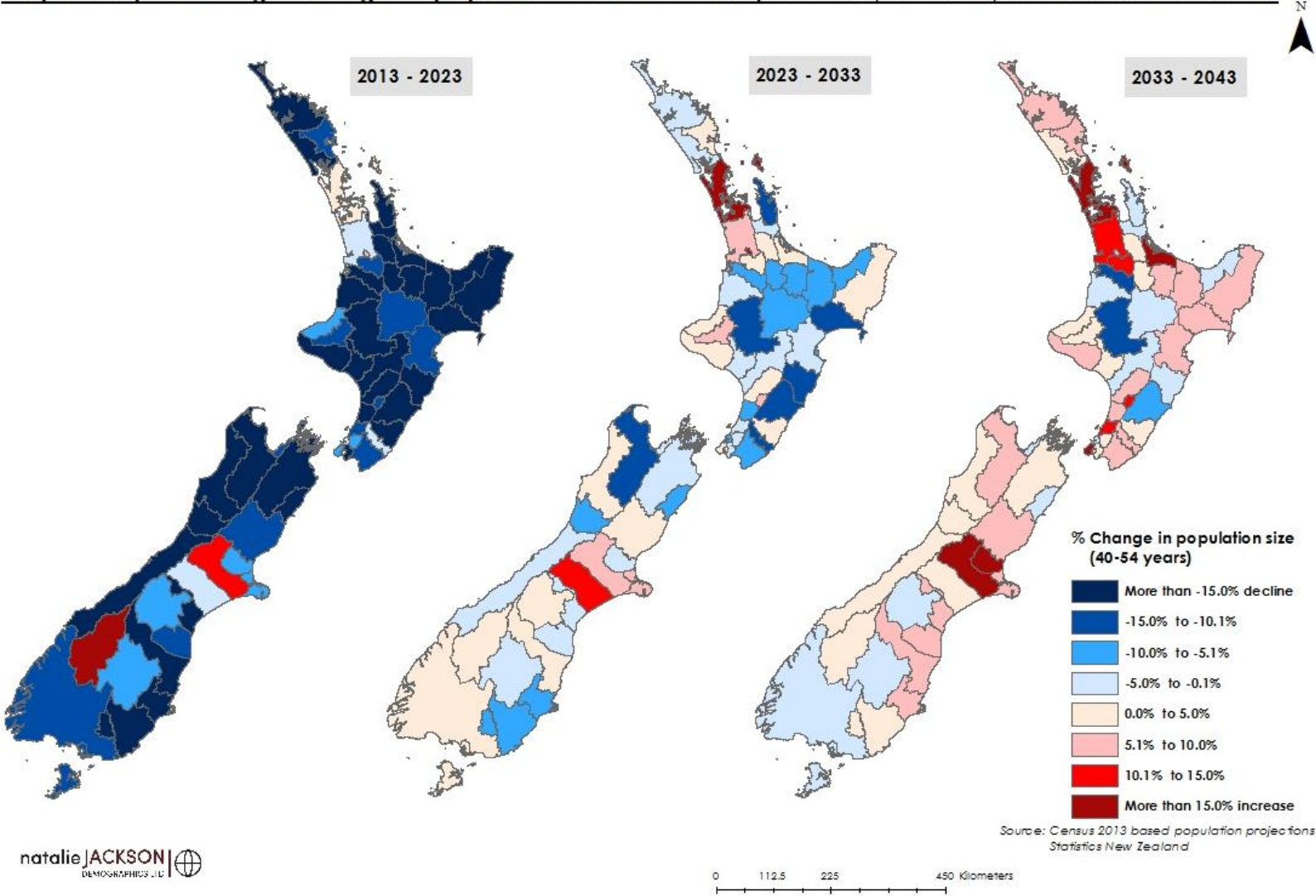


Source: Jackson & Pawar (2013)/Statistics New Zealand various sources

Add a dynamic view of ageing/implications for growth



Projected percentage change in population size of 40-54 year olds; 2013-23, 2023-33 and 2033-43



Representing population diversity through internet map servers

Internet map servers are a powerful information communication technology, which are changing how we access information and represent population diversity.

Research Objectives:

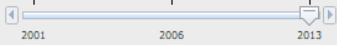
- Learn from existing map sites
- Experiment with developing a population diversity internet mapping site
- Assist Stats NZ develop Internet Map Servers



Search (select a search type)

Refresh map Share map Print map

Select time period



New Zealand

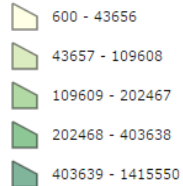
Number of people	4,242,051
Median age	38
Median personal income	28,500
Number of households	1,549,890

Select a variable to compare across areas

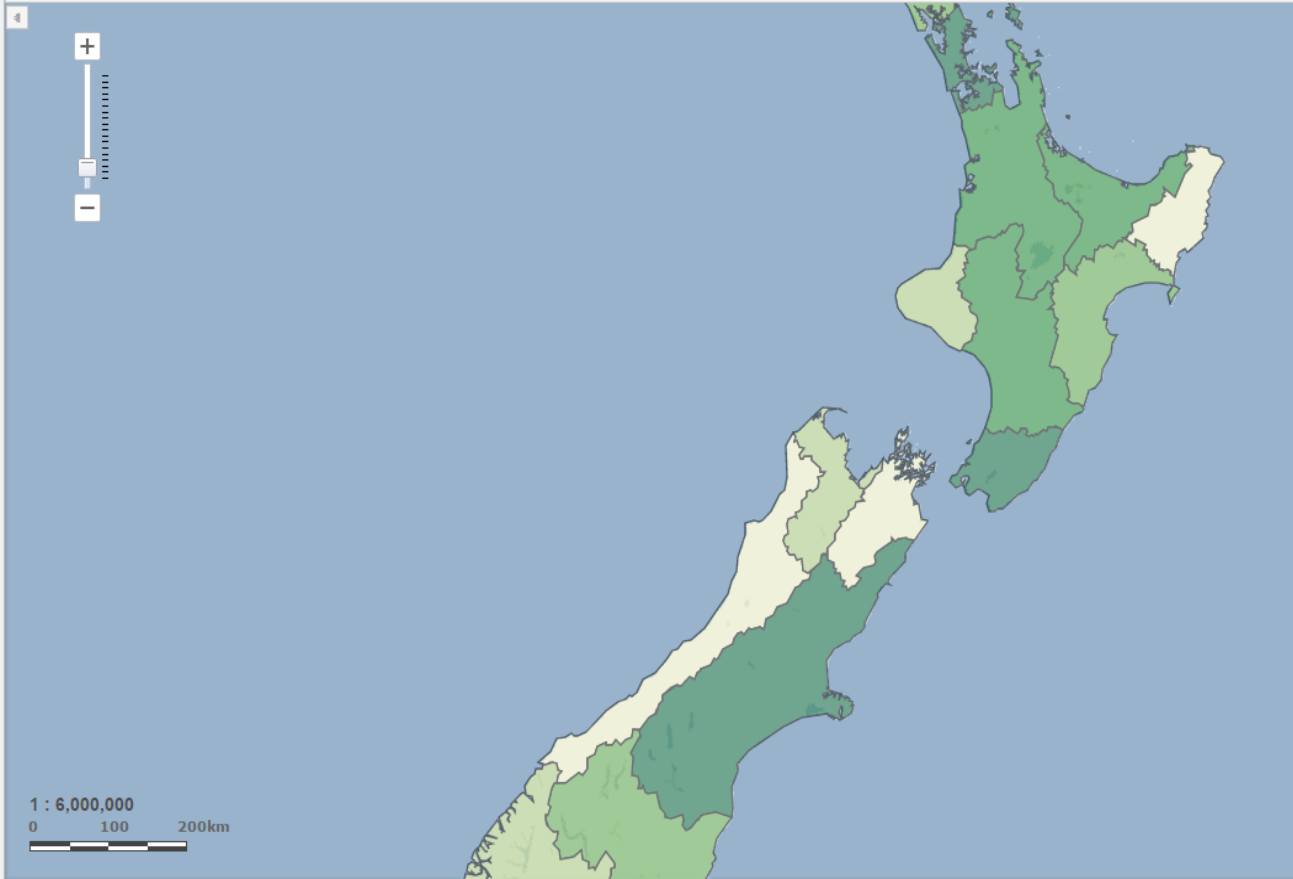
Number of people

Clear

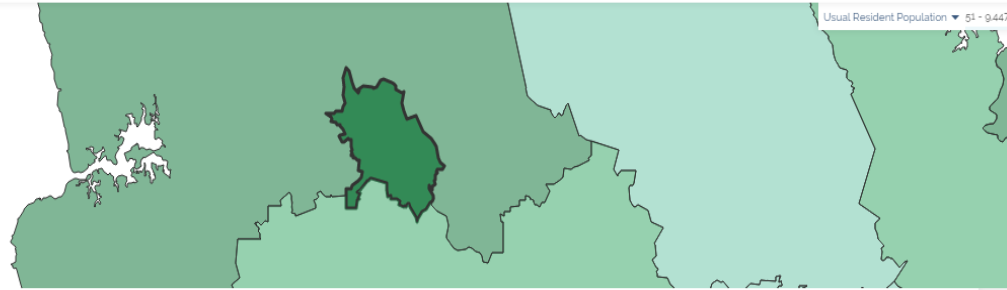
Regions [Number of people]



Boundaries: **Regions** Territories Area units Meshblocks



Automatically maps NZ census data and allows the users to choose the regional boundaries as well as the theme.



Hamilton City

Tweet Share

Stats:

Census Results

Discussion

Nearby Territorial Authorities

♥ Donate to mashblock

\$340.00 raised so far!

Usual Resident Population 2013 ▾

141,612

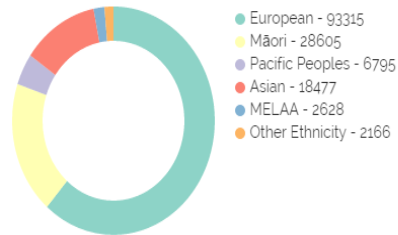
Statistics New Zealand

Gender Ratio 2013 ▾



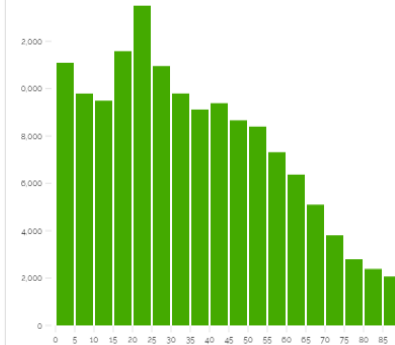
Statistics New Zealand

Ethnic Groups 2013 ▾



Statistics New Zealand

Age Breakdown 2013 ▾



Statistics New Zealand

Lots more graphs coming soon!



Select data
Filter to an area
Data notes
PHA list (based on SA2s)

	Name	Per cent	Number
<input checked="" type="checkbox"/>	SA: Coober Pedy/ Out...	3.7	119
<input checked="" type="checkbox"/>	SA: Davoren Park	11.6	980
<input checked="" type="checkbox"/>	SA: Dry Creek - North/ ...	7.3	755
<input checked="" type="checkbox"/>	SA: Dry Creek - South/...	6.4	965
<input checked="" type="checkbox"/>	SA: Edwardstown/ Morp...	6.2	816
<input checked="" type="checkbox"/>	SA: Elizabeth East	6.9	436
<input checked="" type="checkbox"/>	SA: Elizabeth/ Smithfie...	8.9	992
<input checked="" type="checkbox"/>	SA: Enfield - Blair Athol	7.3	864
<input checked="" type="checkbox"/>	SA: Eyre Peninsula/ Le...	6.8	315
<input checked="" type="checkbox"/>	SA: Fleurieu	4.5	656
<input checked="" type="checkbox"/>	SA: Flinders Park/ Seat...	6.1	910
<input checked="" type="checkbox"/>	SA: Flinders Ranges/ P...	6.6	558
<input checked="" type="checkbox"/>	SA: Fulham/ West Beach	5.1	187
<input checked="" type="checkbox"/>	SA: Gawler - North	7.5	345
<input checked="" type="checkbox"/>	SA: Gawler - South	6.0	533
<input checked="" type="checkbox"/>	SA: Glenside - Beaum...	4.2	505
<input checked="" type="checkbox"/>	SA: Golden Grove/ Gre...	5.9	549
<input checked="" type="checkbox"/>	SA: Goodwood - Millsw...	5.9	517
<input checked="" type="checkbox"/>	SA: Goyder	6.1	132
<input checked="" type="checkbox"/>	SA: Grant	6.4	192
<input checked="" type="checkbox"/>	SA: Hackham - Onkap...	7.6	1,020
<input checked="" type="checkbox"/>	SA: Hahndorf - Echung...	6.2	457
<input checked="" type="checkbox"/>	SA: Happy Valley/ Hap...	6.0	752
<input checked="" type="checkbox"/>	SA: Henley Beach	4.9	369
<input checked="" type="checkbox"/>	SA: Highbury - Derman...	6.0	326
<input checked="" type="checkbox"/>	SA: Hope Valley - Mod...	6.0	471
<input checked="" type="checkbox"/>	SA: Ingle Farm	6.4	487
<input checked="" type="checkbox"/>	SA: Jamestown/ Port Pi...	4.9	197
<input checked="" type="checkbox"/>	SA: Kadina/ Moonta	6.8	326
<input checked="" type="checkbox"/>	SA: Kangaroo Island	6.1	143

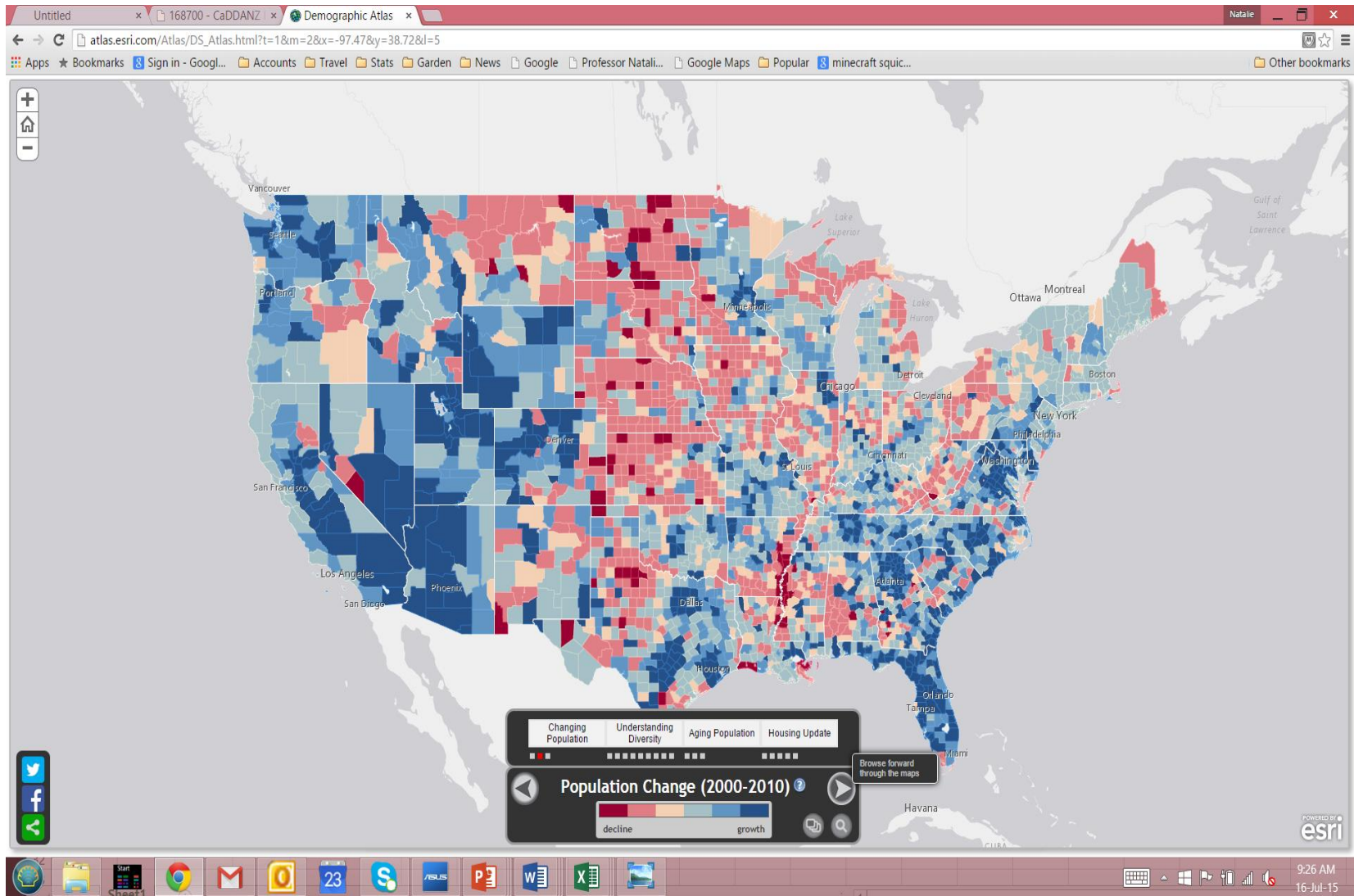
Legend

- 0.0 - 5.5
- 5.6 - 6.3
- 6.4 - 6.9
- 7.0 - 7.7
- 7.8 - 12.8
- States/Territories
- Greater Capital City Statistical Areas
- Medicare Locals
- Statistical Areas Level 3

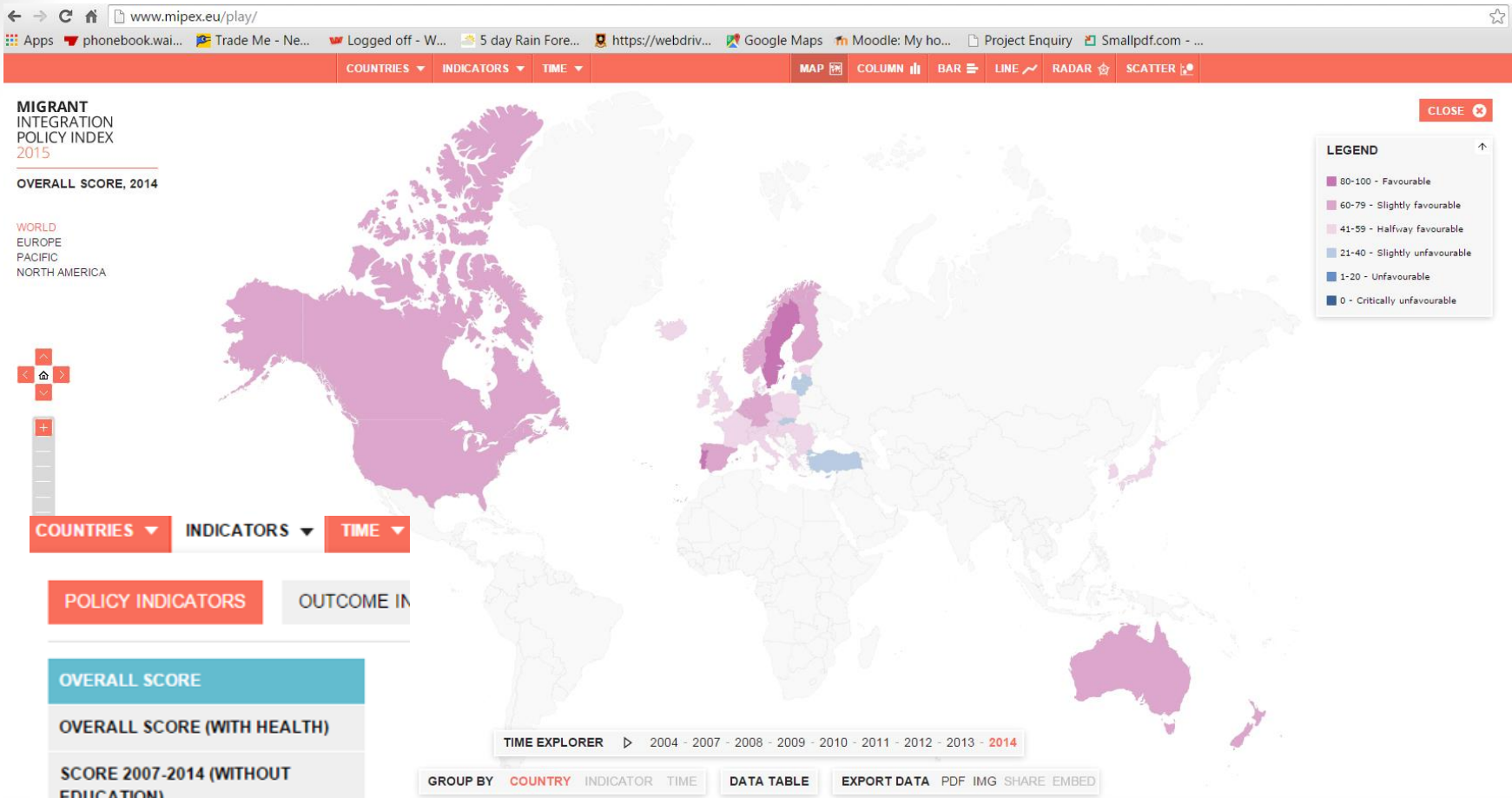
Link to data

Name	Per cent
Australia	6.8
All Greater Capital C...	6.9
All Rest of States/ NT	6.6
New South Wales	6.8
Greater Sydney	7.0
Rest of NSW	6.4
Victoria	6.7
Greater Melbourne	6.8
Rest of Vic.	6.4
Queensland	7.0
Greater Brisbane	7.1
Rest of Qld	6.9
South Australia	6.2
Greater Adelaide	6.3
Rest of SA	6.1
Western Australia	6.8
Greater Perth	6.8
Rest of WA	6.8
Tasmania	6.3
Greater Hobart	6.6

Combines maps, tables and graphs for visualising population data.
 Provides both percent and absolute numbers.



Population atlas of the US developed by ESRI



OVERALL SCORE	
OVERALL SCORE (WITH HEALTH)	
SCORE 2007-2014 (WITHOUT EDUCATION)	
LABOUR MARKET MOBILITY	>
FAMILY REUNION	>
EDUCATION	>
HEALTH	>
POLITICAL PARTICIPATION	>
PERMANENT RESIDENCE	>
ACCESS TO NATIONALITY	>
ANTI-DISCRIMINATION	>

Uses maps and tables to compare migrant integration policies across the world.

Clearly presented comparative information influences behaviour because people want to conform. Psychologists call this **“informational social influence”** and **“normative social influence”**.

Develop criteria for assessing internet map server sites based on:

Human computer interaction:

- design principles
- visual balance, simplicity, feedback to users
- consistency

Cartographic design:

- efficiency of communication
- attribute symbology
- space representation
- representing temporal change through animations.

Operational:

- data server specifications
- open source versus commercial servers
- static versus dynamic mapping

Population diversity indicators:

- conceptualisation of population diversity
- absolute versus relative

**Identify and develop exemplary
demographic internet map servers**

Population change by places (urban areas)

Urban area population change 1976 - 1981

Growth Direction

- ↑ Positive
- ↓ Negative

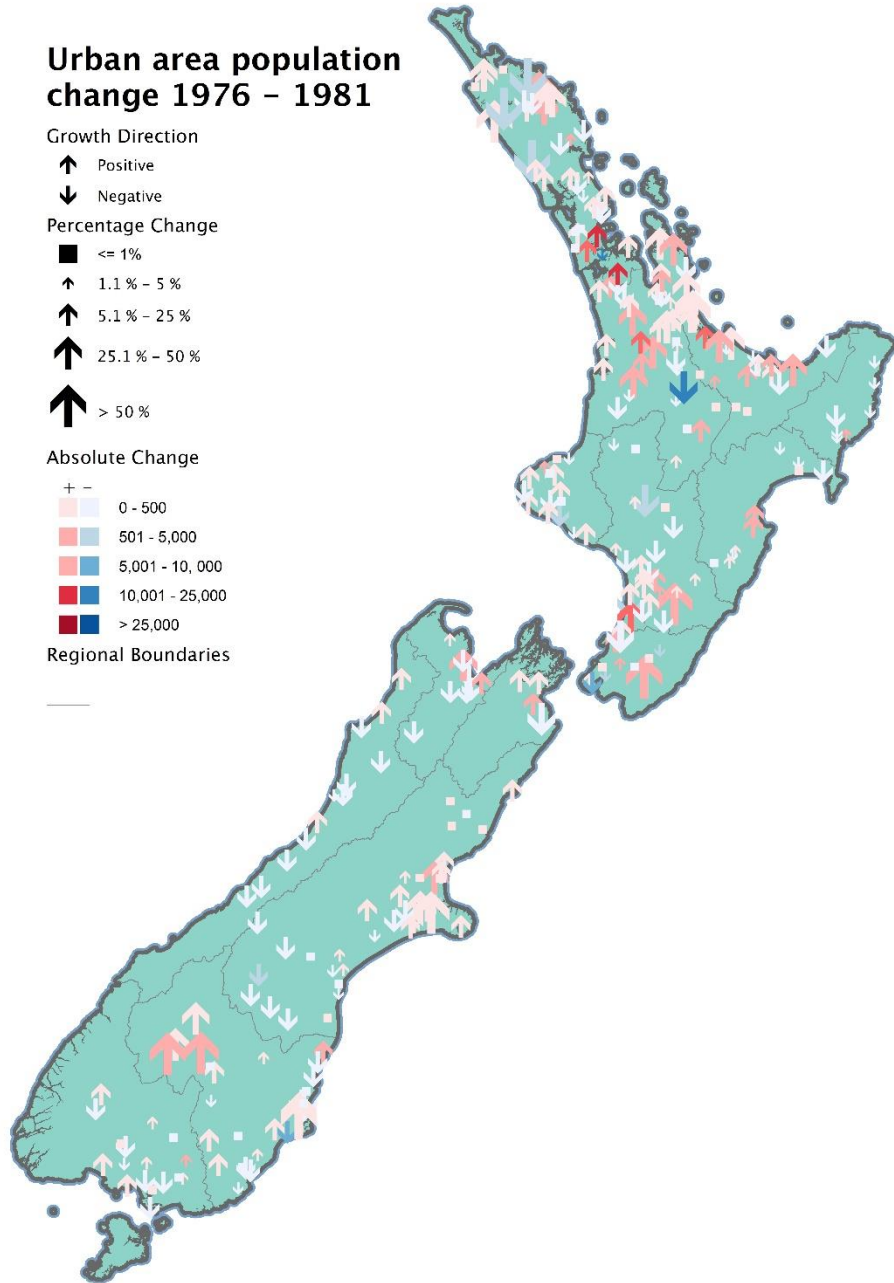
Percentage Change

- ≤ 1%
- ↑ 1.1% - 5%
- ↑↑ 5.1% - 25%
- ↑↑↑ 25.1% - 50%
- ↑↑↑↑ > 50%

Absolute Change

- + - 0 - 500
- + - 501 - 5,000
- + - 5,001 - 10,000
- + - 10,001 - 25,000
- + - > 25,000

Regional Boundaries



Urban area population change 2006 - 2013

Growth Direction

- ↑ Positive
- ↓ Negative

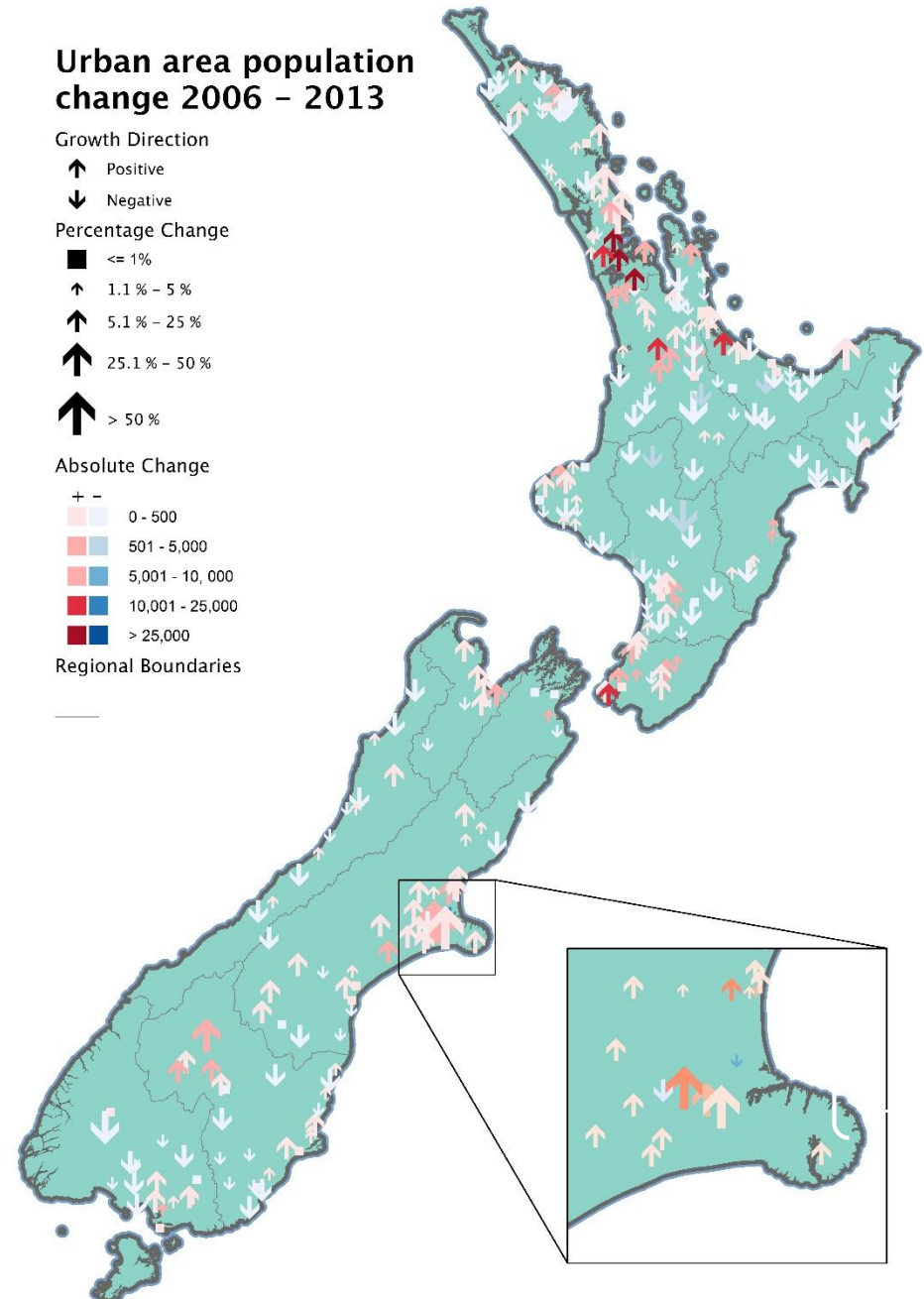
Percentage Change

- ≤ 1%
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- + - 501 - 5,000
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- + - 10,001 - 25,000
- + - > 25,000

Regional Boundaries





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Thankyou – we'll keep you posted

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