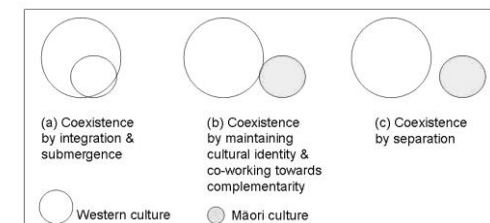
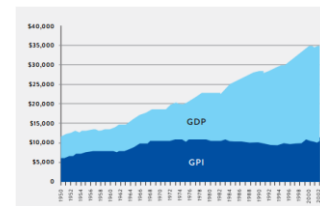
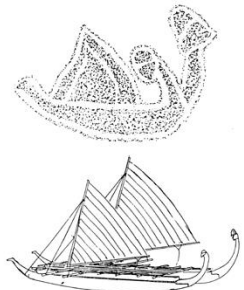
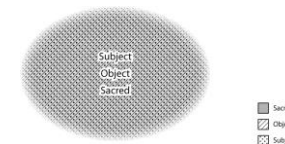
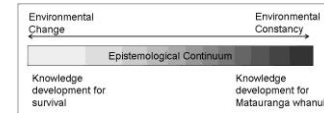


Social and cultural assessment

TANK catchments



Anthony Cole

- Ngāti Koroki / Ngāti Raukawa ki te Tonga
- Kaupapa Māori / transdisciplinary researcher
- Māori cultural wellbeing and survival
- Whānau business (digital publishing and contract research)
- Work mostly with hapū
- Today - social and cultural impact assessment (TANK plan)

3 Key findings

- Risk has been identified for some TANK sub-catchment communities linked with our current minimum flow scenarios (Ag First, Nimmo Bell and MEL)
- Recommendations provide suggestions for how this risk might be mitigated, reduced or possibly avoided
- The TANK plan (generally) and the question of minimum flows (specifically) touches on matters of social fairness and cultural survival that are of deep concern to Mana Whenua and local Māori communities

Contents

- How reliable are these results?
- Social and cultural assessment (SCIA) method
- Results
- Why? (NZ economic history)?
- Hawke's Bay regional economy – structure
- Hawke's Bay regional economy – social fairness
- Summary of findings
- Recommendations

Research outcomes spiral

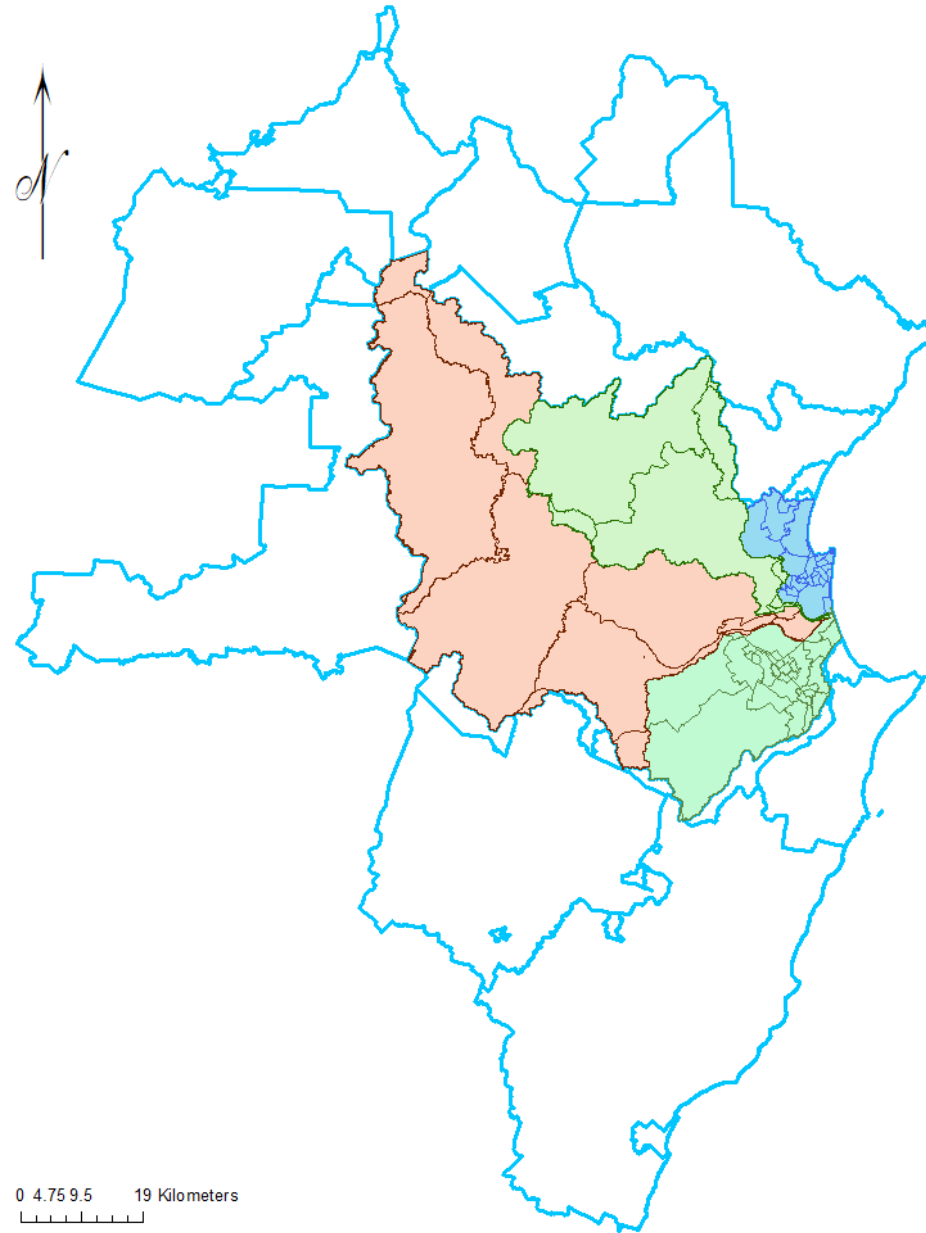
Time	Cost
Long time	High
Adaptive	Medium-high
Quick	Low



Overview of assessment accuracy

- **Theory** – well established
- **Economic time series data** (Statistics NZ, Reserve Bank, NZIER)
- **Catchment boundaries** (HBRC shapefiles)
- **Area unit boundaries** (Statistics NZ shapefiles)
- **Application of area unit data** at catchment scale estimated by spatial apportionment
 - Over-estimation problem

Statistics NZ area units for the TANK catchments

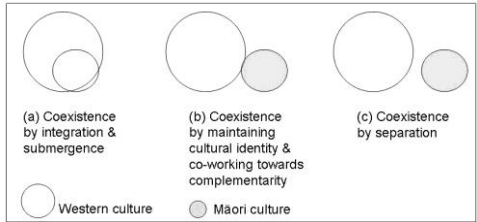
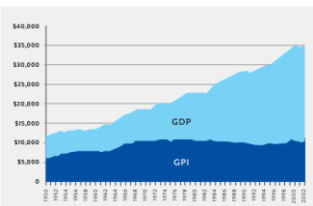


Overview of assessment accuracy

- **2018 Census data** is not yet available
- **Population growth projections** - averaged area unit growth rates (1996-2013) - this really needs a dynamic model
- **Variability** in some Statistics NZ data
 - Confidentiality policies
 - Not all Census questions are answered (i.e. 'not stated')
 - Some data is based on sample population estimates

Social and cultural assessment (SCIA) method

Proposed plan for the management of community ecosystems in the TANK catchments



Assessment rationale

- Evidential *rather than discursive*
- Mixed units - total, percentage, indices, \$ and sample data graphs
- Data structured by sub-catchment and area unit
- This presentation - key insights *only*

Legislative responsibility (RMA 1991, part 2, section 5)

The sustainable management of *community ecosystems in the TANK catchments* while —

- (a) sustaining the potential of *these* natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
- (b) safeguarding the life-supporting capacity of *TANK* water, soil, and ecosystems; and
- (c) avoiding, remedying, or mitigating any adverse effects of *TANK community production and/or consumption* activities on the *catchment* environment.

Legislative responsibility (RMA 1991, part 2, section 5)

The sustainable management of *community ecosystems in the TANK catchments* while *achieving the goals of* —

- (a) Social fairness
- (b) Ecological sustainability
- (c) Do no more harm

Legislative responsibility (RMA 1991, part 2, section 5)

The sustainable management of *aquatic ecosystems in the TANK catchments* while *achieving the goals of* —

- (a) Social fairness – poorly considered
- (b) Ecological sustainability
- (c) Do no more harm
- (d) Māori cultural survival – missing from the RMA (1991)

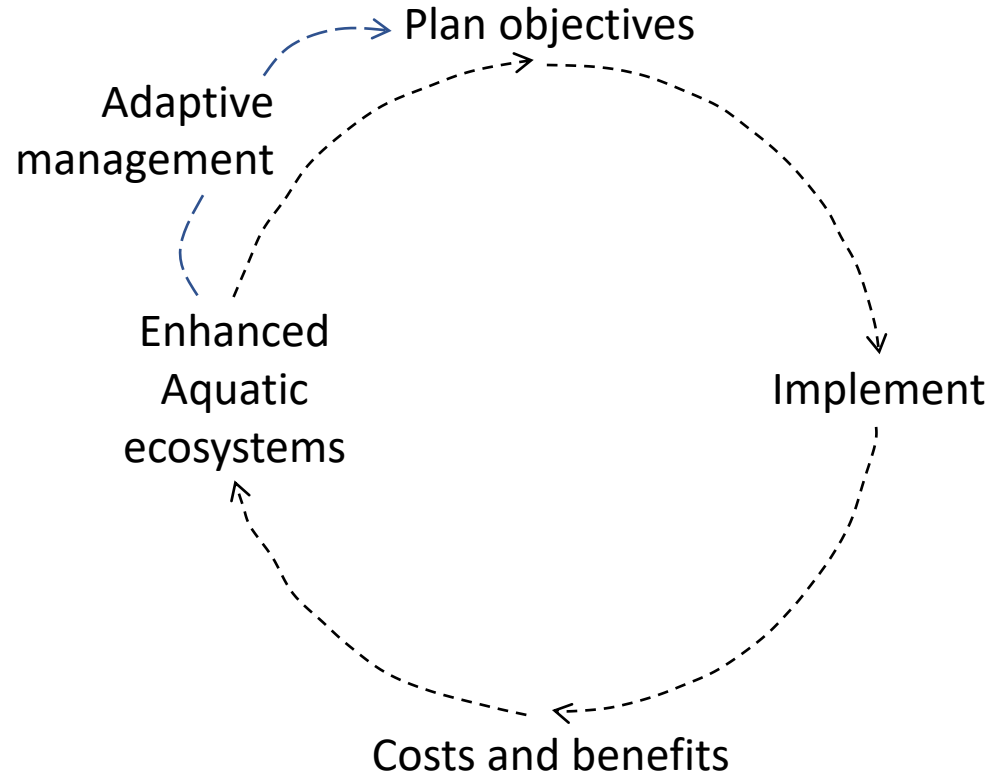
Section 32 requires (RMA 1991, part 4, section 32)

- The **most appropriate** way to achieve the purpose of this Act ...
- Have regard to the **efficiency** and **effectiveness of** policies, rules, or other methods ...
- The **benefits** and **costs** of policies, rules, or other methods ...
- The **risk** of acting or not acting if there is uncertain or insufficient information (*the precautionary principle*) ...

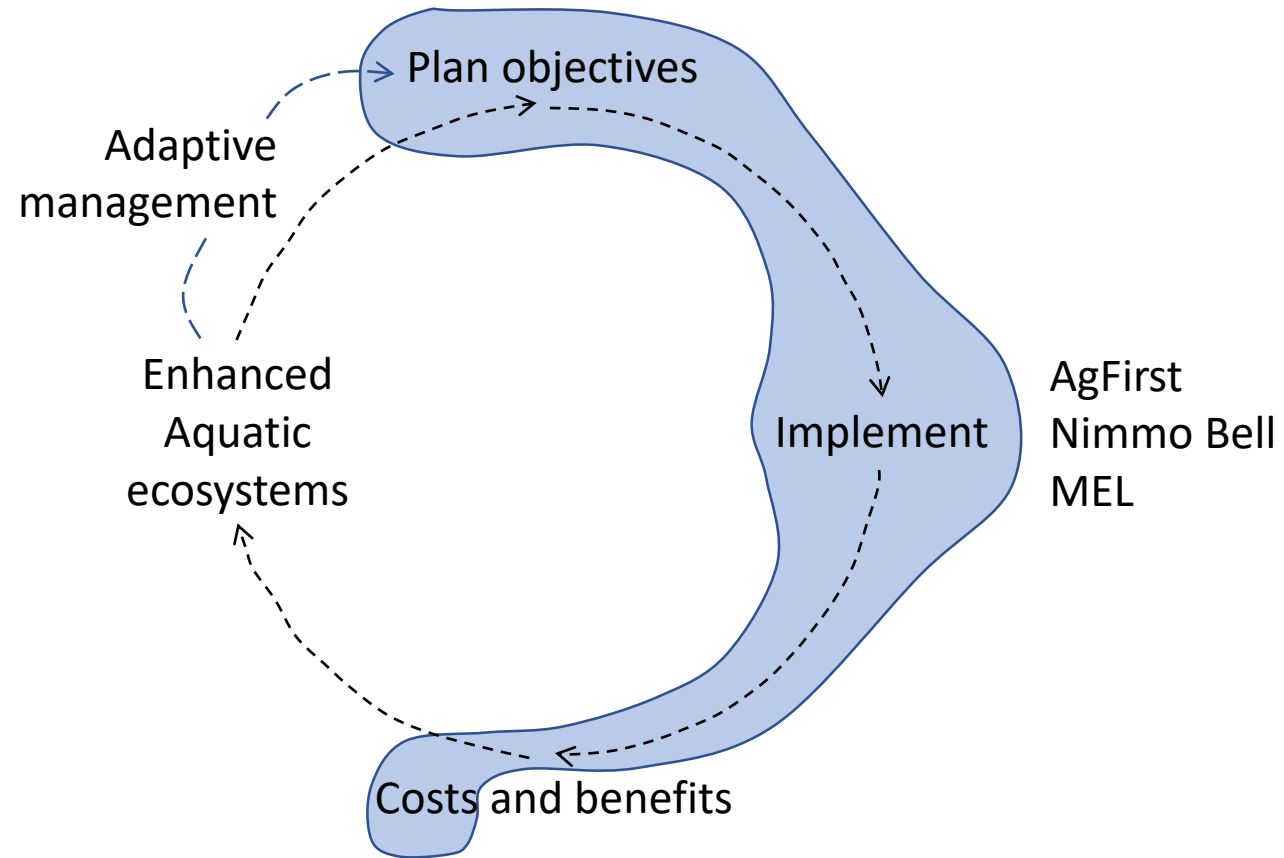
The precautionary principle

- ... implies that there is a **social responsibility** to protect the public **from exposure to harm**, when scientific investigation has found a plausible risk.
- These protections **can be relaxed** only if further scientific findings emerge that provide sound evidence that no harm will result.

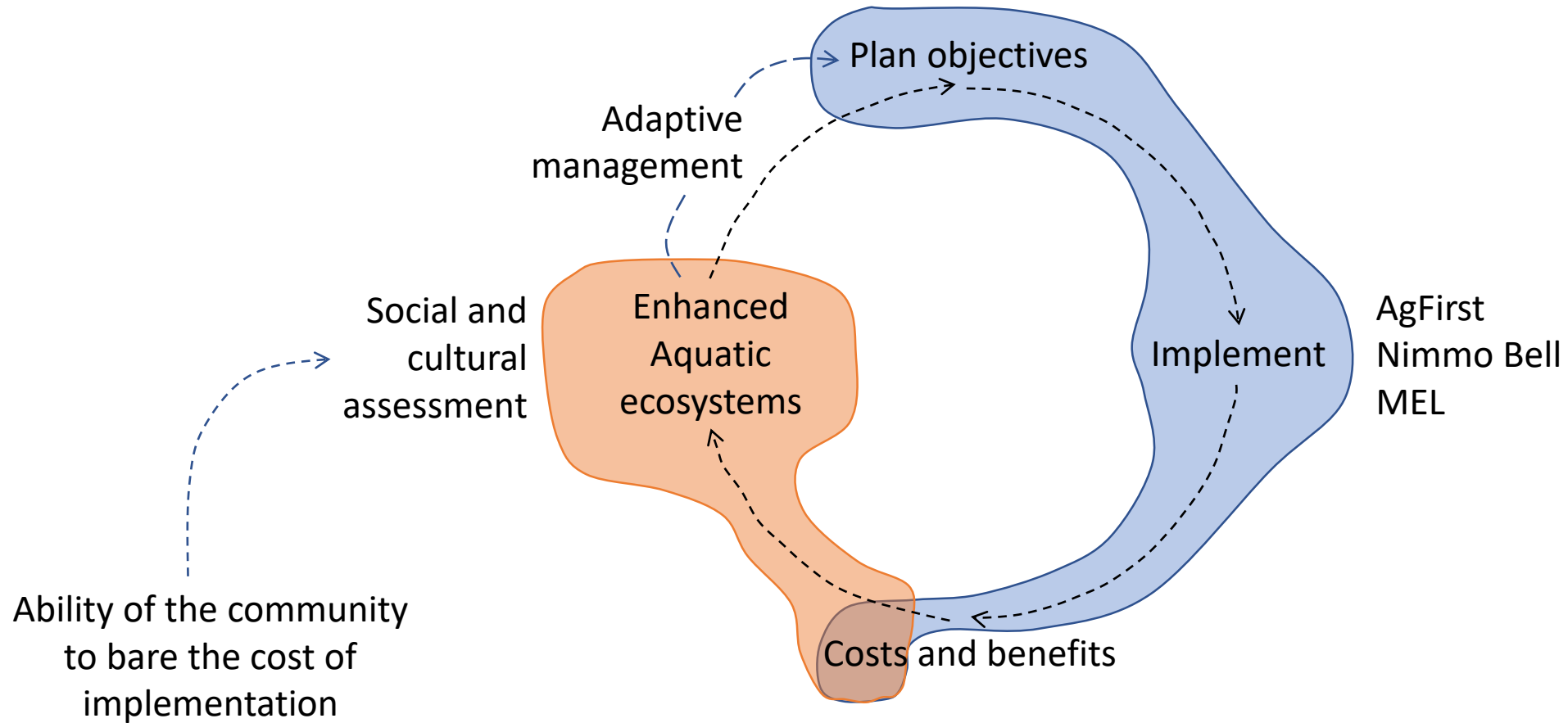
TANK plan implementation pathway



Section 32 (economic evaluation)



Section 32 (social and cultural assessment)

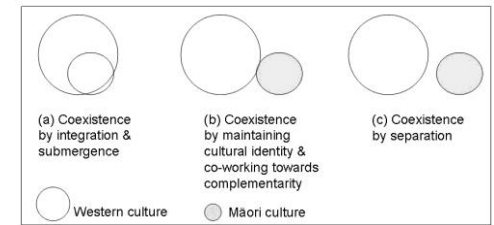
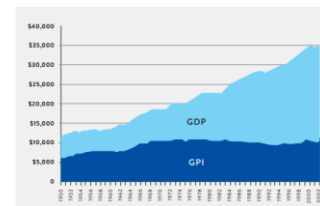
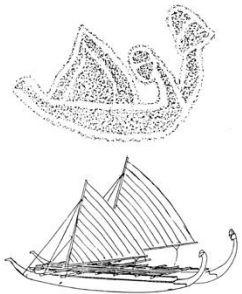


The SCIA measurement problem

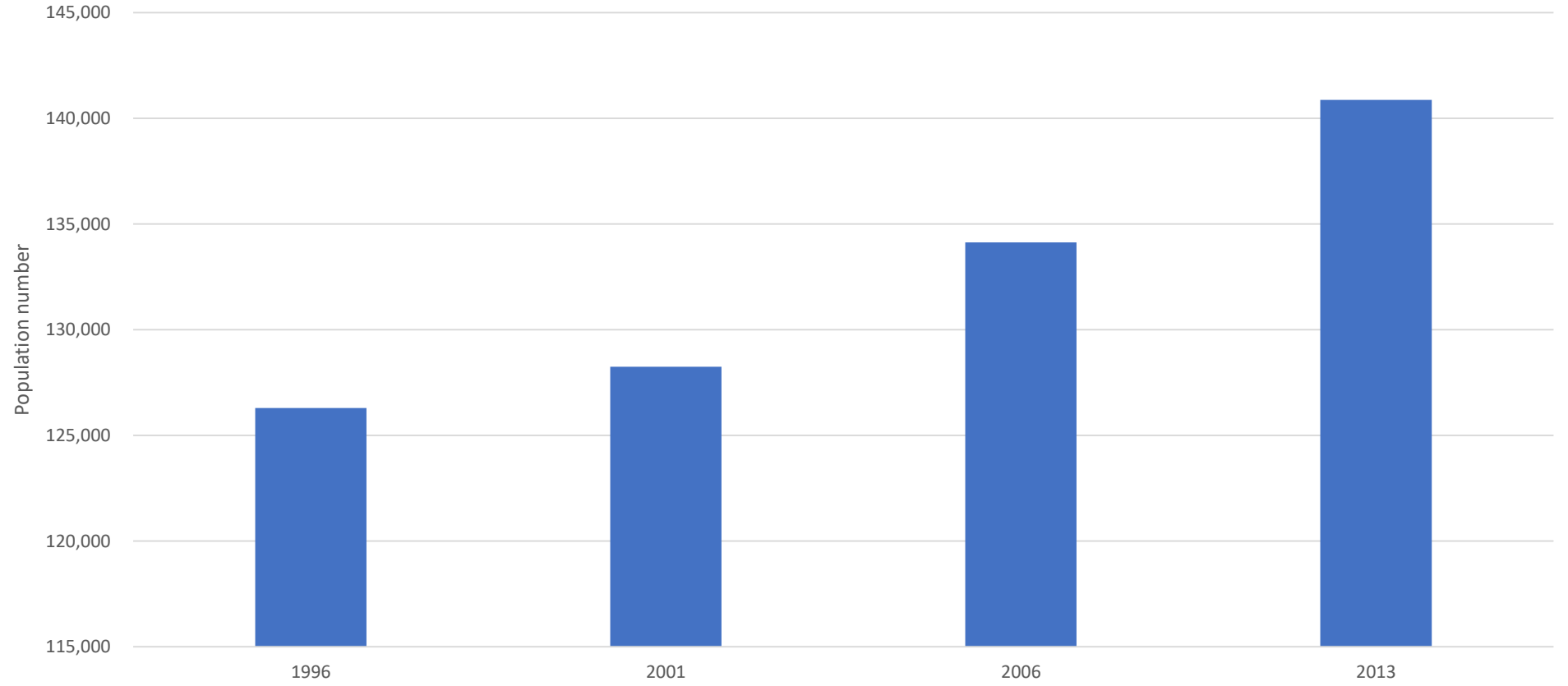
- Look at the economic affects of the TANK plan on TANK catchment communities linked with ...
 - Implementation overall (compliance costs to all communities)
 - Minimum flows/land conversion scenarios (modelling work of MEL)
 - The above compared against the present (business as usual) – i.e. do nothing

Total catchment population

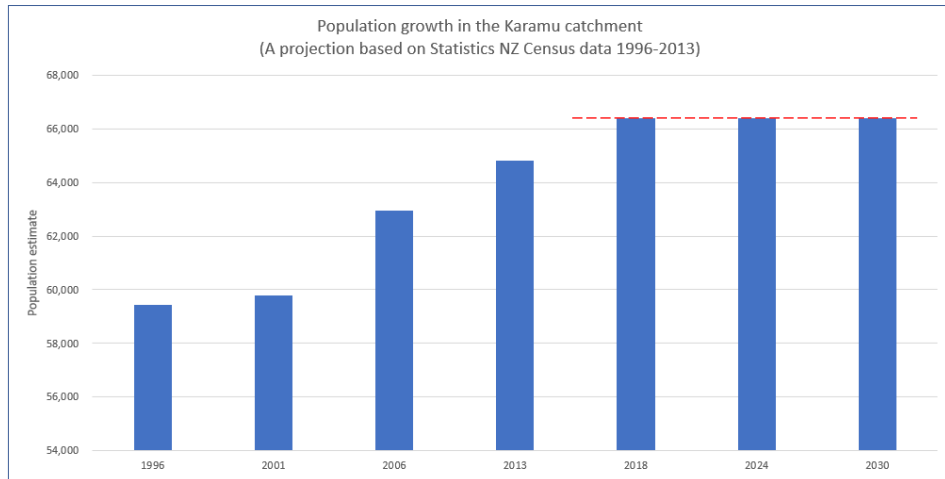
Social and cultural evaluation of TANK catchment communities



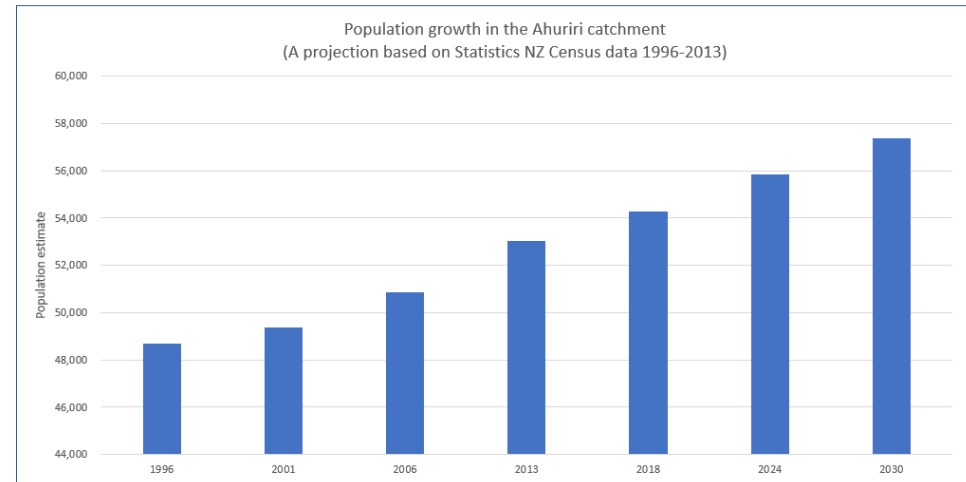
Population growth (TANK catchments combined)
(Based on Statistics NZ Census data)



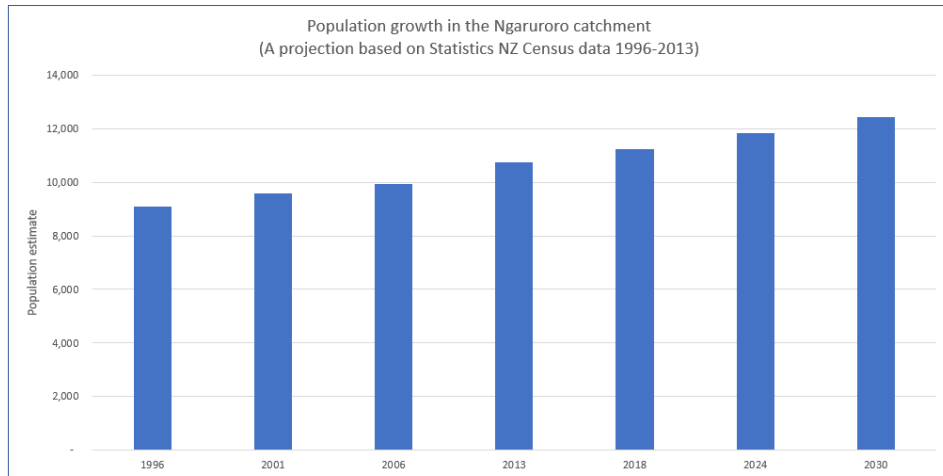
Karamu sub-catchment



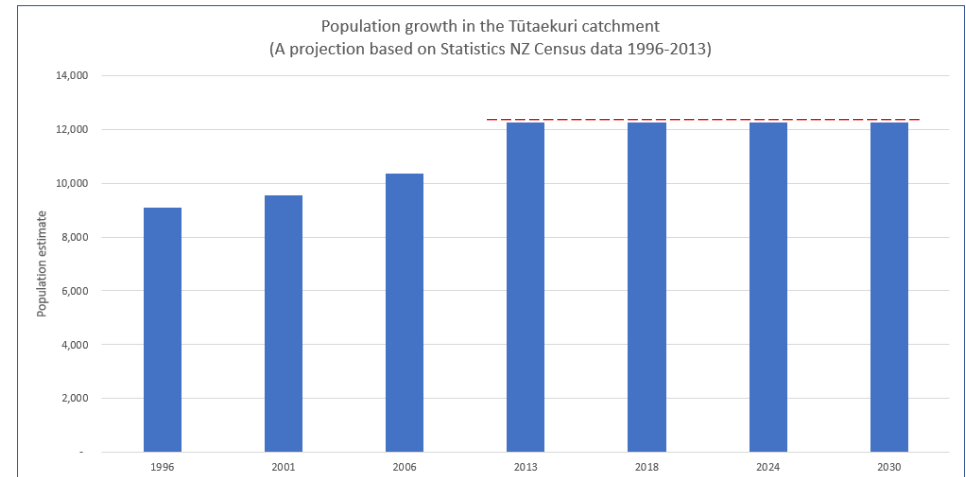
Ahuriri sub-catchment



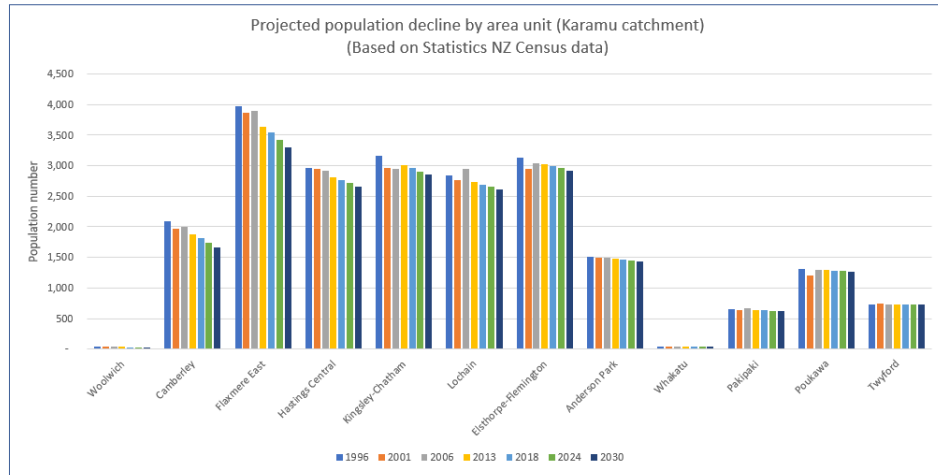
Ngaruroro sub-catchment



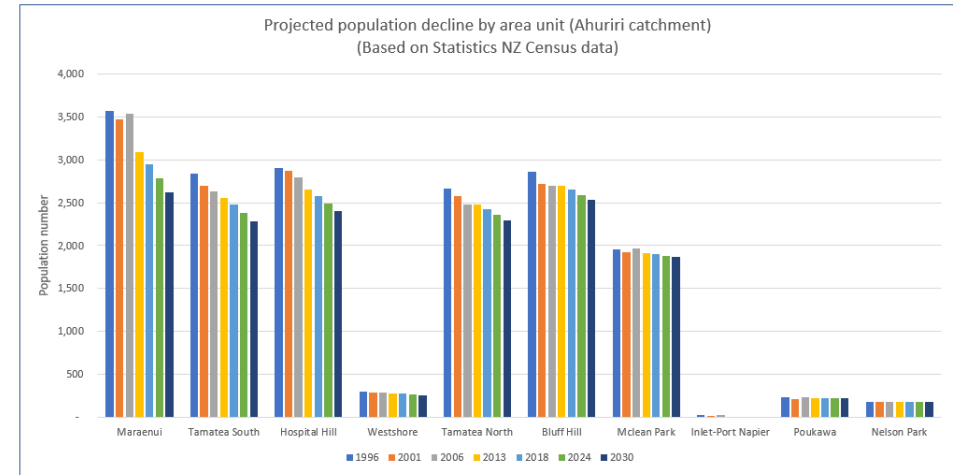
Tūtaekurī sub-catchment



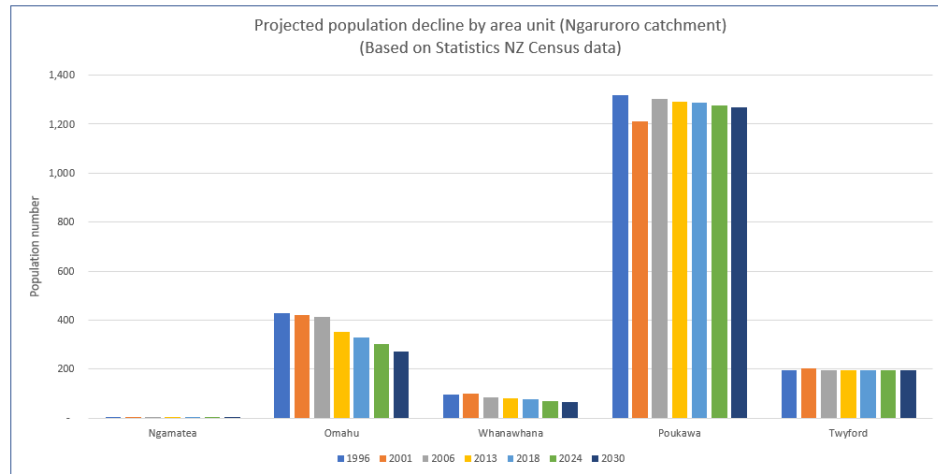
Karamu sub-catchment



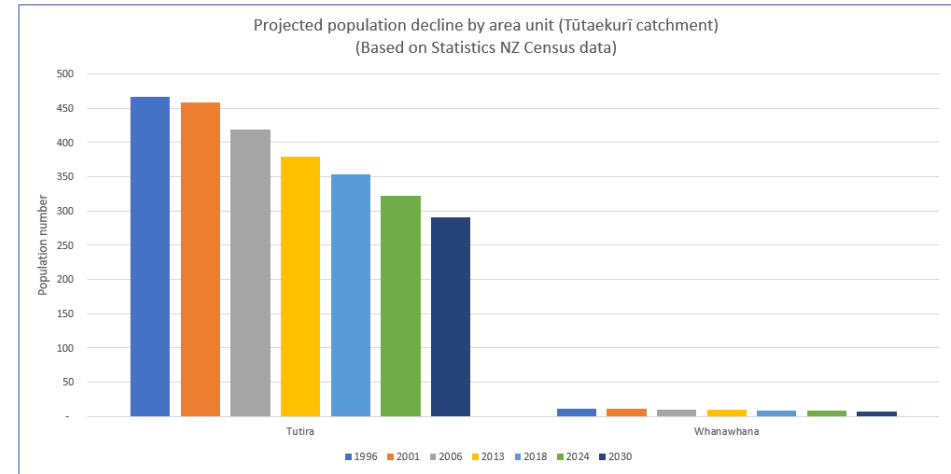
Ahuriri sub-catchment



Ngaruroro sub-catchment



Tūtaekurī sub-catchment

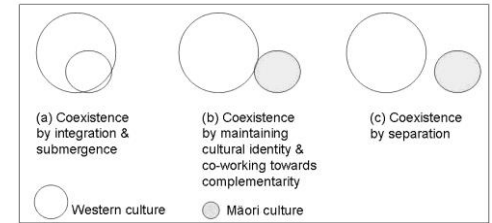
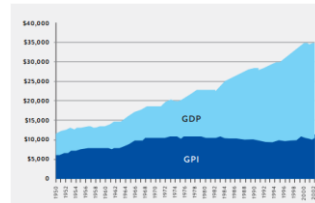
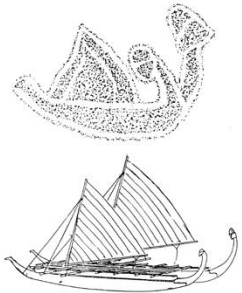


Why is population stagnation a problem?

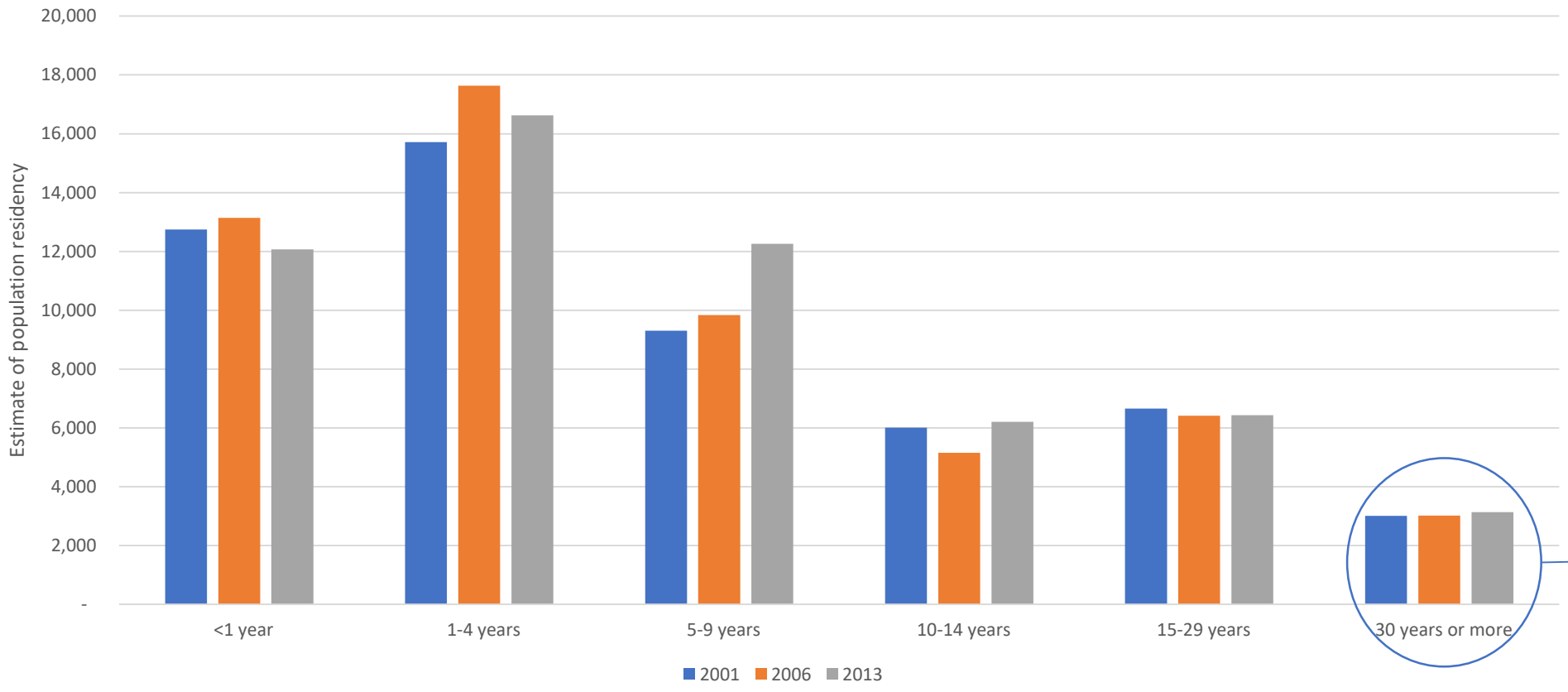
- Emigration - loss of economic, social and cultural capital
- Implications for the local labour market
- Question - why is there a 'net' outflow?

Population residency times

Tank catchments (2006-2013)

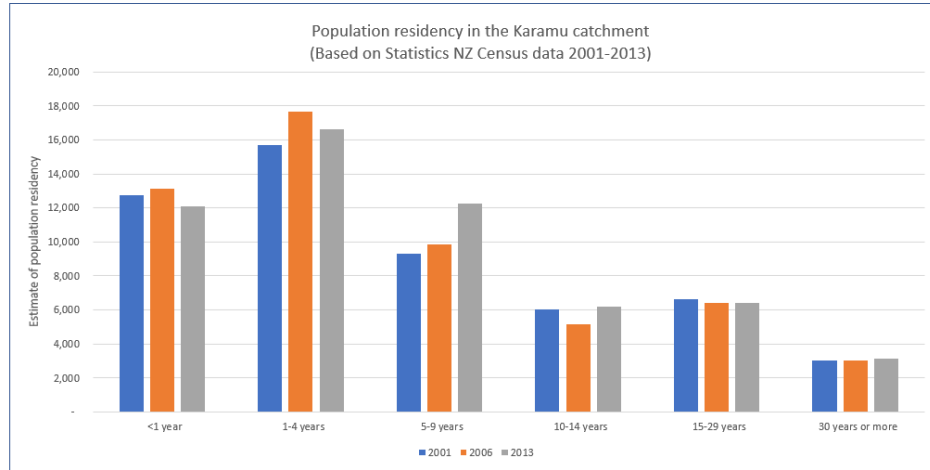


Population residency in the Karamu catchment
(Based on Statistics NZ Census data 2001-2013)

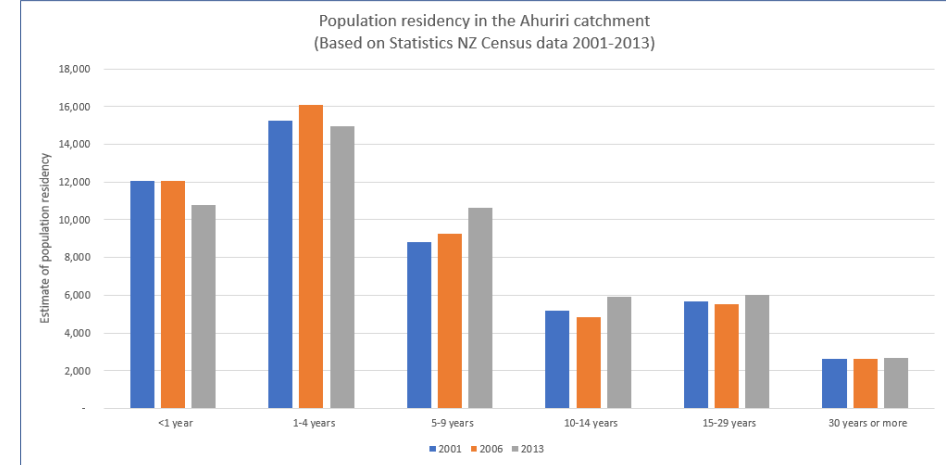


Cultural memory

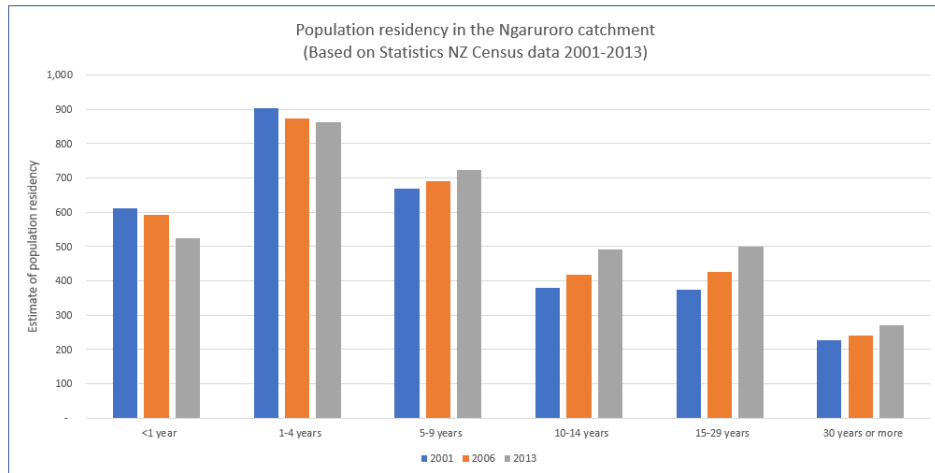
Karamu sub-catchment



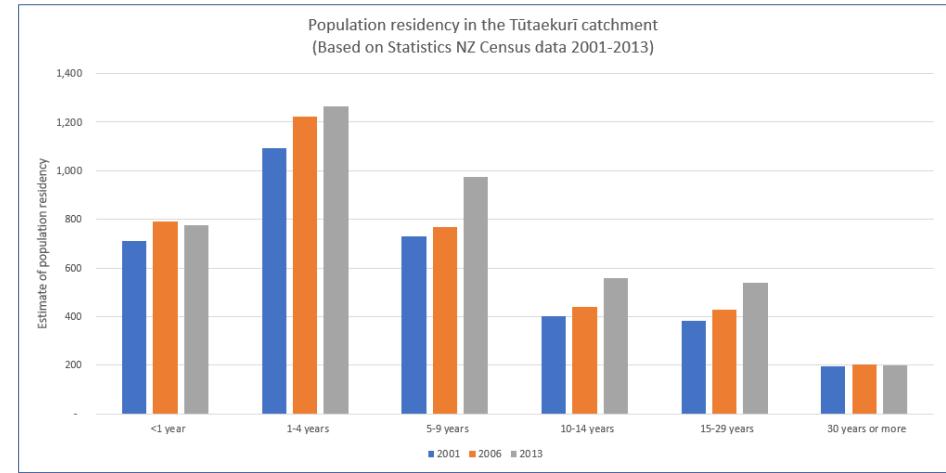
Ahuriri sub-catchment



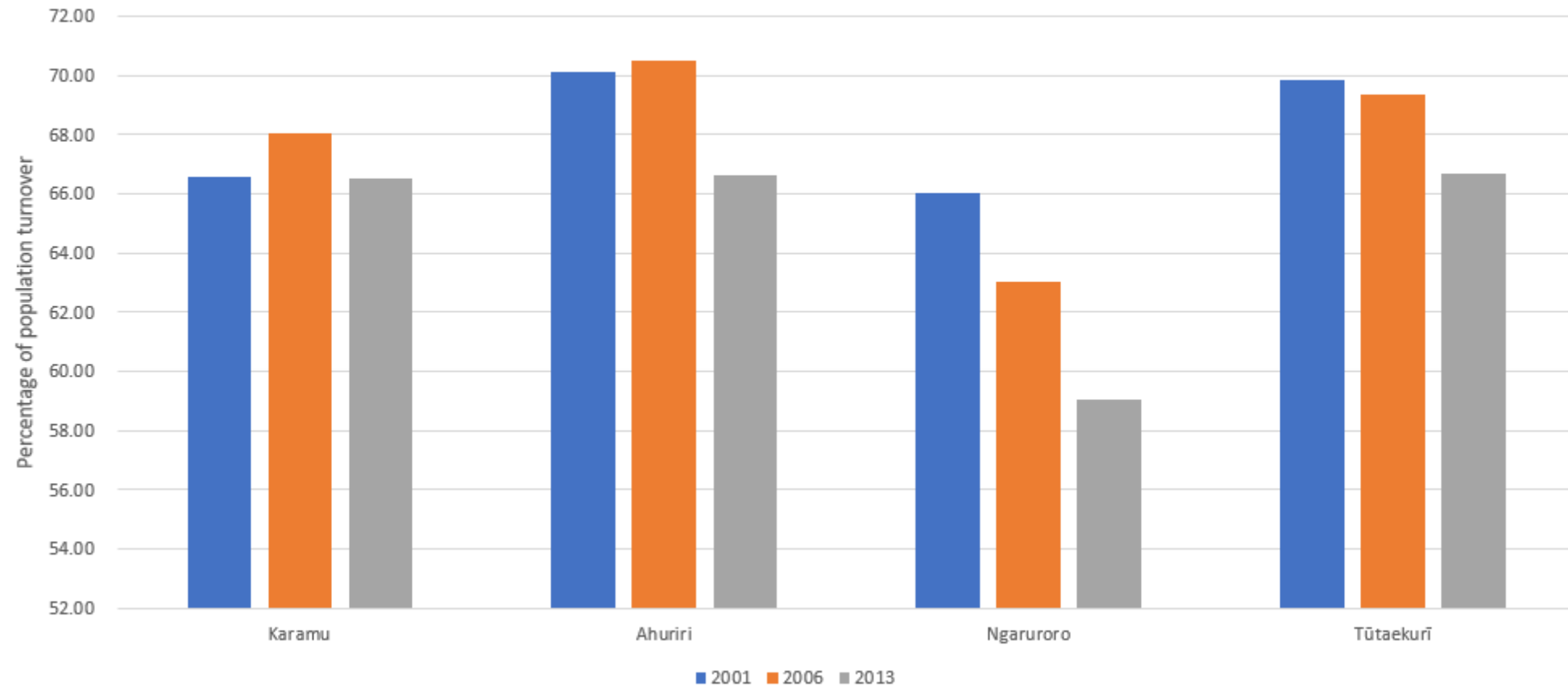
Ngaruroro sub-catchment



Tūtaekurī sub-catchment



Population residency (0-9 years only) in the TANK catchments
(Based on Statistics NZ Census data 2001-2013)

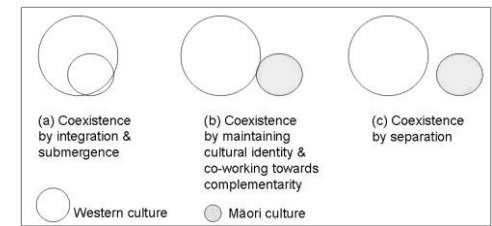
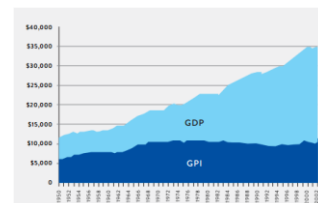
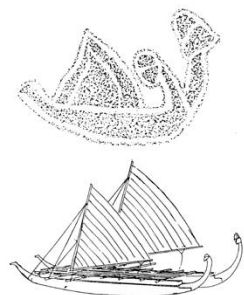


Key issues

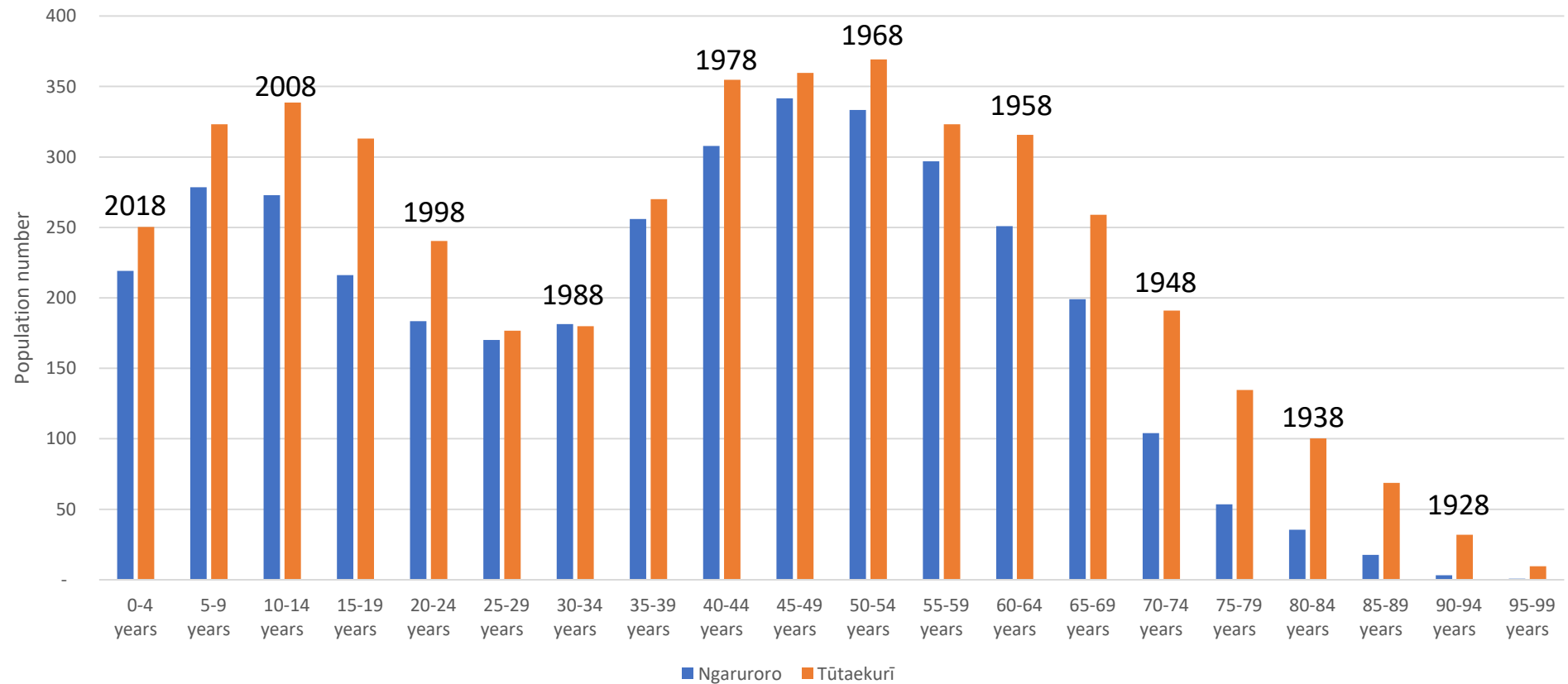
- The creation and maintenance of (Māori) 'cultural memory' is at risk
- Approx. 60-70% population turnover (0-9 years)
 - Need for ongoing education on local environmental context, policies, rules
 - Upward pressure on the housing market
 - 10 yearly shifts in sub-catchment population *age structure*

Population age structure

Tank catchments (2006-2013)



Population age structure of two TANK catchments
(Based on Statistics NZ Census 2013 data)

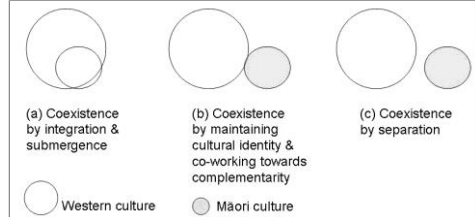
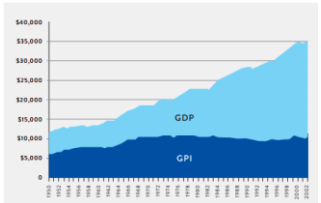
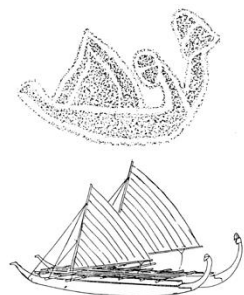


Key issues and implications

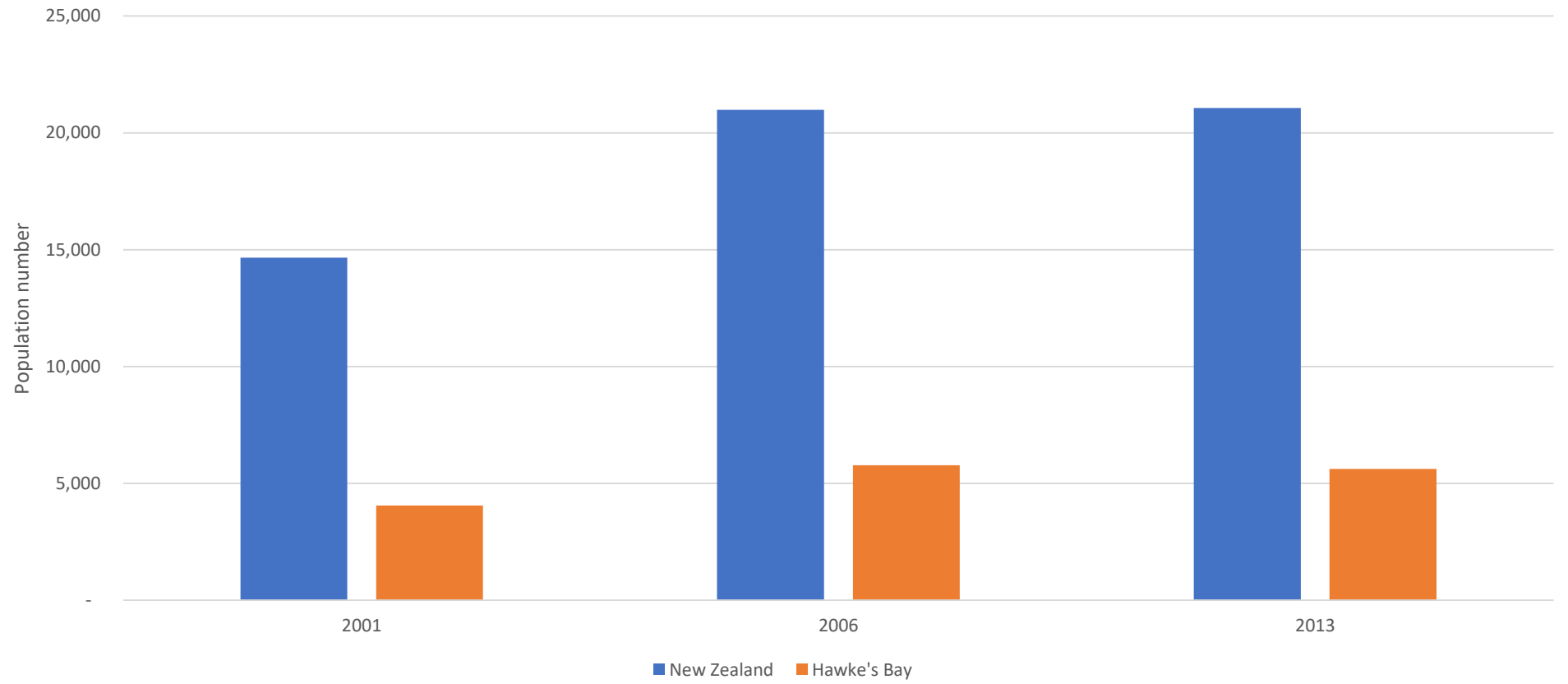
- An ageing population that spans the next ca. 50 years, followed by ...
- A sub-replacement population (ca. 30 years)
- Expanding urban populations (Ahuriri and Karamu)
- Sub-replacement rural populations (Ngaruroro and Tūtaekurī)
- Implications:
 - Infrastructure and services for ageing population?
 - Labour market compensation will be needed (next 80 years)
 - Because of high population turnover (50-60% in 0-9 years) age structure is migration dependent (difficult to predict/plan for)

Whānau Kahungunu

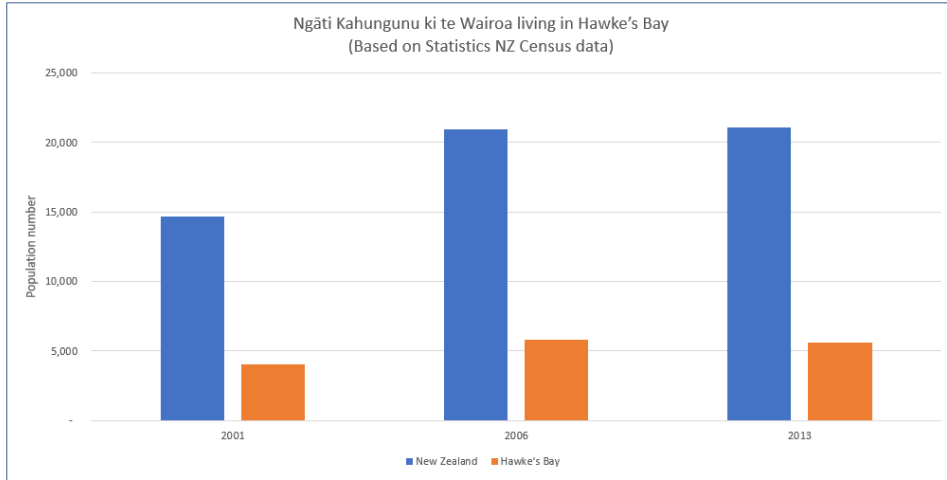
Tank catchments (2006-2013)



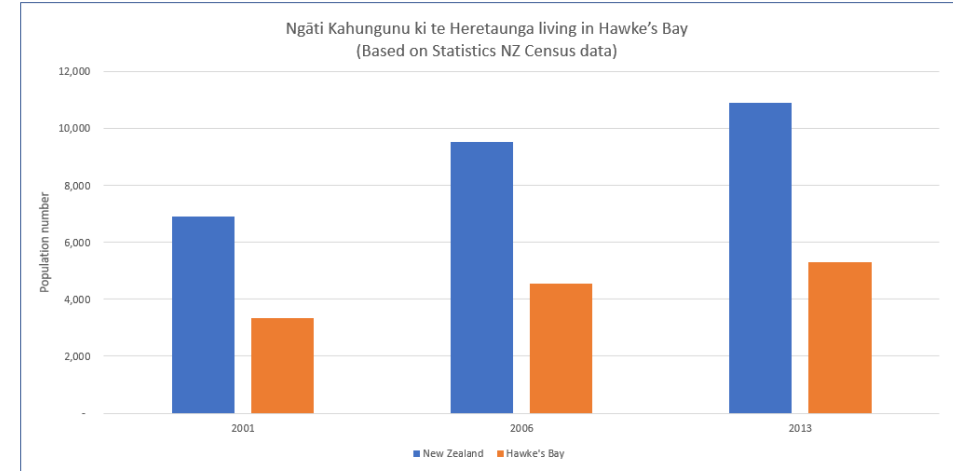
Ngāti Kahungunu ki te Wairoa living in Hawke's Bay
(Based on Statistics NZ Census data)



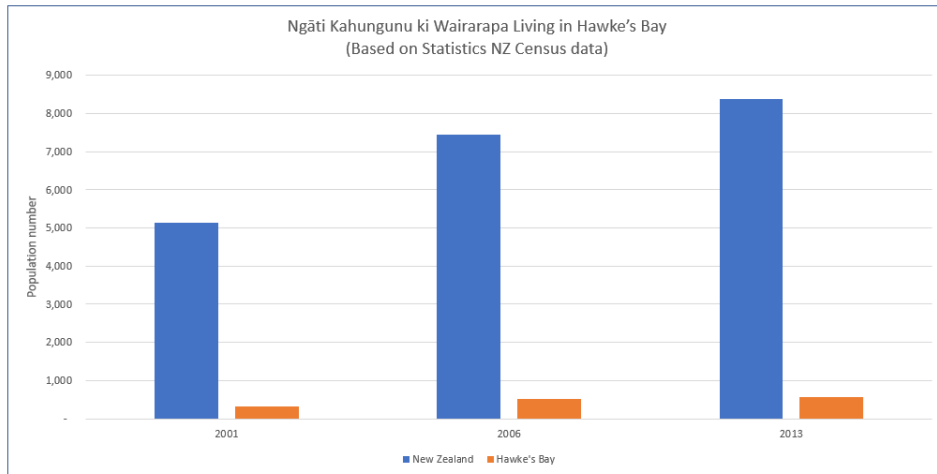
Kahungunu ki te Wairoa



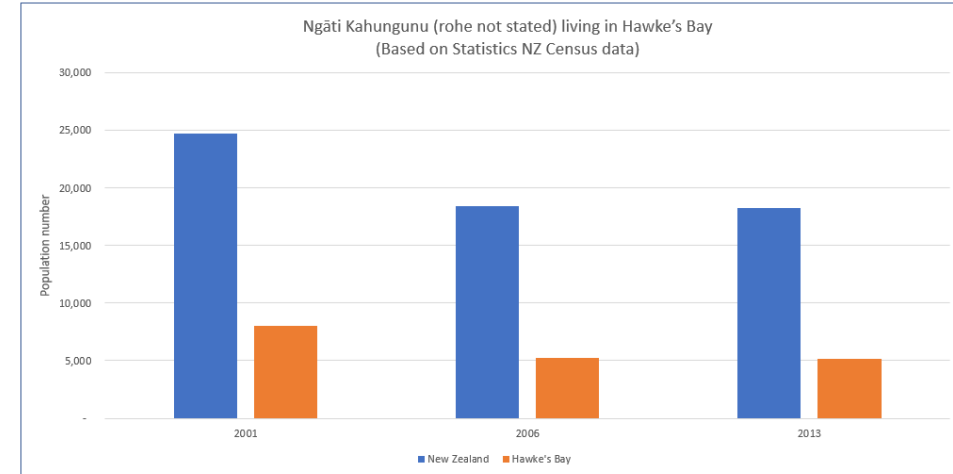
Kahungunu ki te Heretaunga



Kahungunu ki te Wairarapa



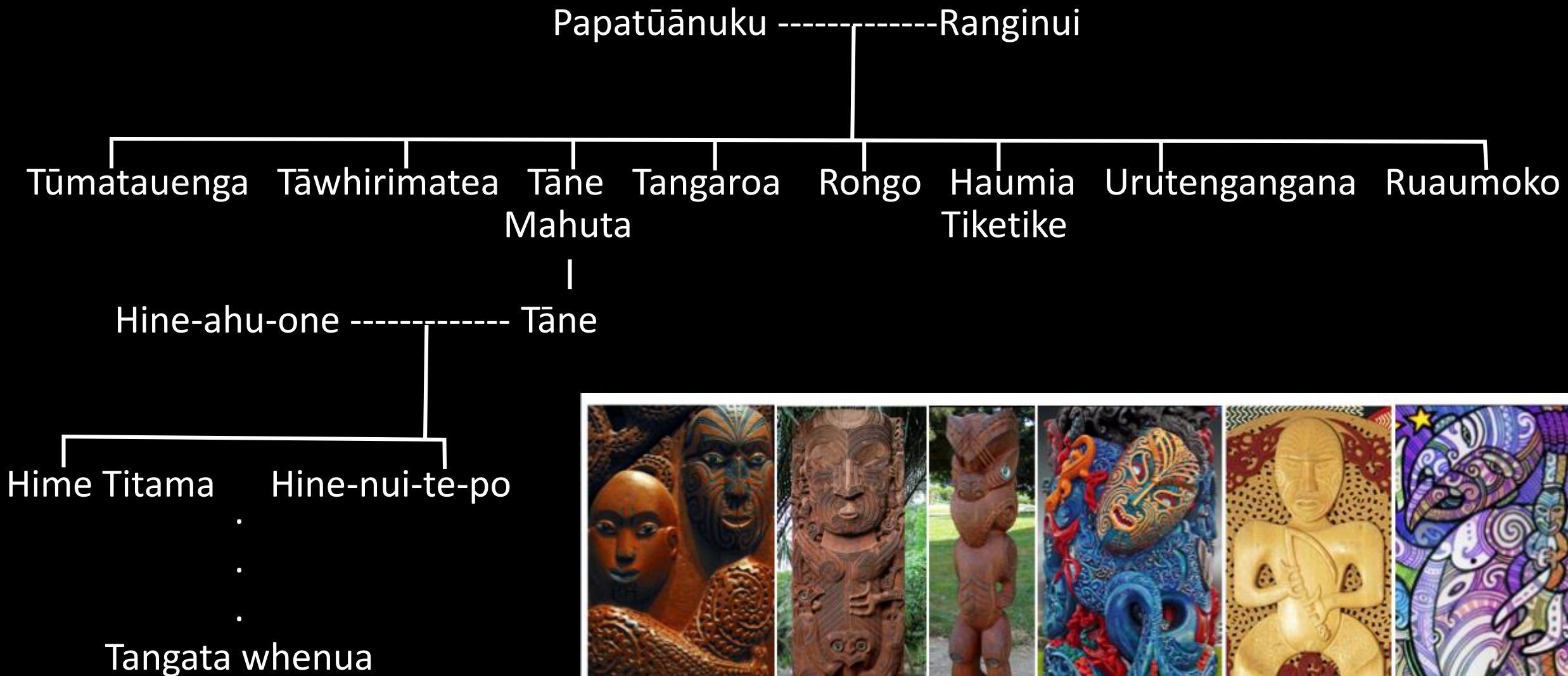
Kahungunu (Not stated)



Whānau Kahungunu residency implications

- Māori cultural wellbeing and survival = whānau Māori (1st priority)
- For whānau to come home they need jobs, homes, social and ecosystem services (An estimated 27,342 whānau members)
- This situation diminishes cultural survival prospects
- We need to think of Whānau Māori in the broadest possible sense – more than just a *nuclear family*
- When you are talking to Mana Whenua about ‘ecosystems’ you are really making reference to their family members

The Māori family tree (whakapapa)

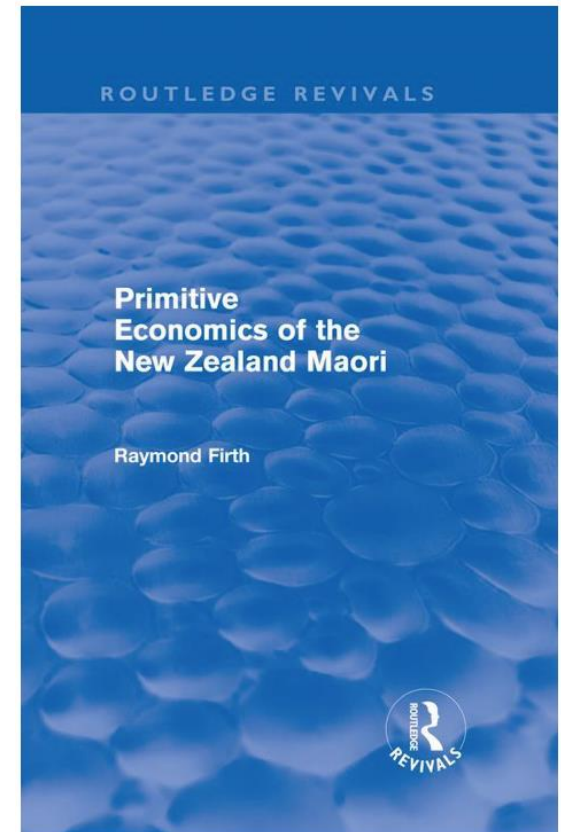


Tangata Whenua (Teina – younger siblings)



Raymond Firth (1929)

- “The life of the Māori, cannot be explained on the assumption that economic interests and needs have created their social structure ... Though modified by them, that structure had biological and social foundations of its own ... **The economic activities of the Māori were developed, in short, within a framework set by the family ...**”



2 models of economy in NZ

NZ mixed market economy

- Pākehā worldview
- English language
- Incentives and rewards
- Theoretically (value-free)
- Property rights
- Profit-making
- Free markets
- Pākehā cultural survival
- Whānau Māori decline
- Rules, laws, customs

Whānau Māori = Ōhanga Māori

- Te Ao Māori
- Te Reo Māori
- Incentives & rewards
- Kaupapa-based
- Whānaungatanga
- Manaakitanga
- Kotahitanga
- Whānau Māori survival
- Maintains whānau Māori wellbeing
- Kawa, kaupapa, tikanga

The Ōhanga of our tūpuna

- Our tūpuna lived on these islands for 800–1,000 years while maintaining the survival and wellbeing of *themselves and the natural world* (i.e. *Te whānau o Rangi rāua ko Papatūānuku*)



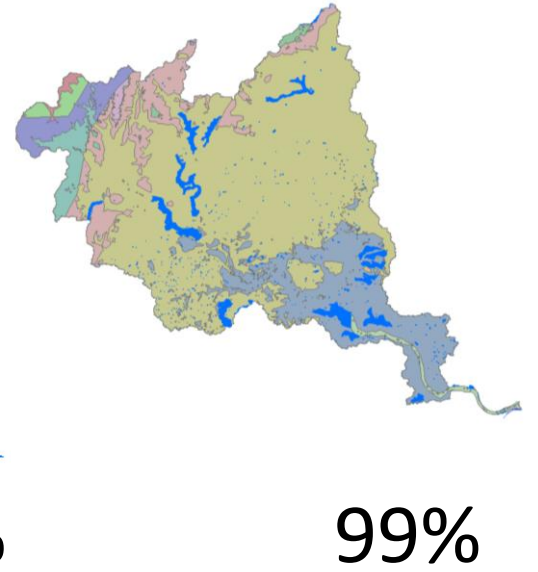
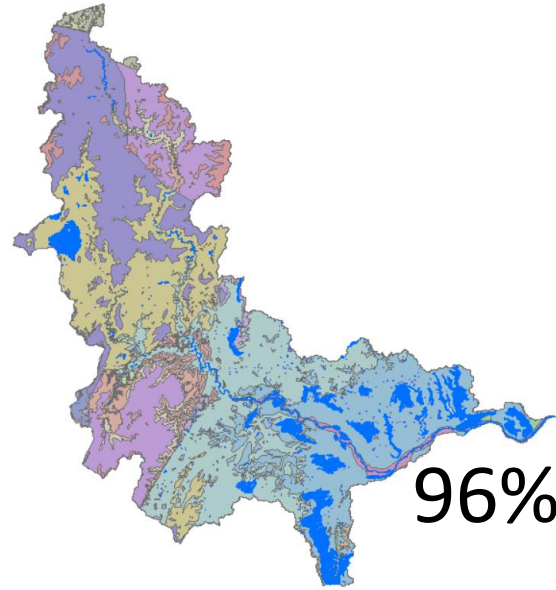
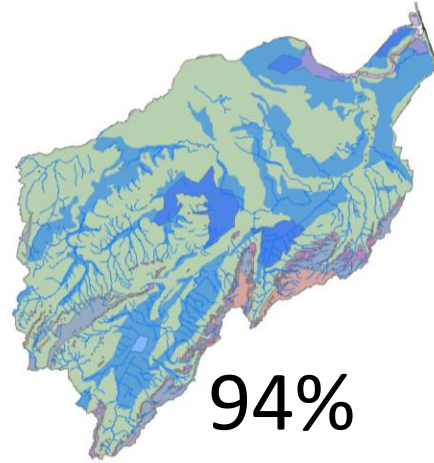
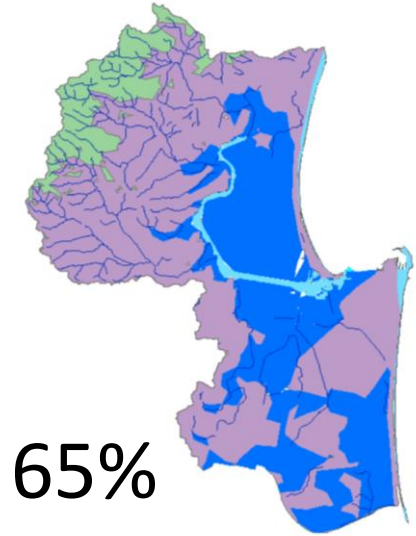
Capitalism and the market economy

- Within approx. 170 years, the introduction of a new model of economy has driven hapū and the natural world into decline, in some cases to the point of extinction



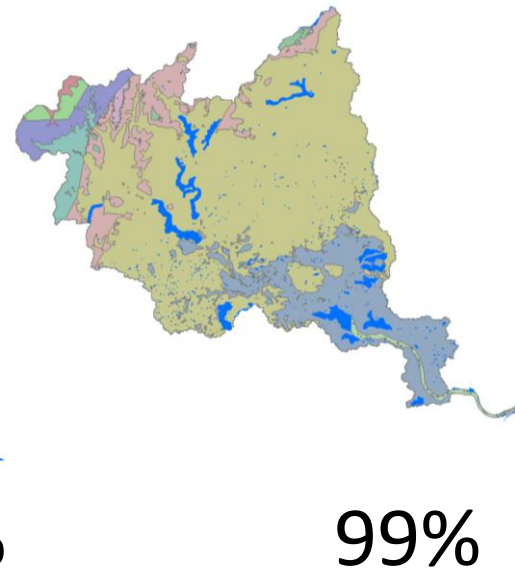
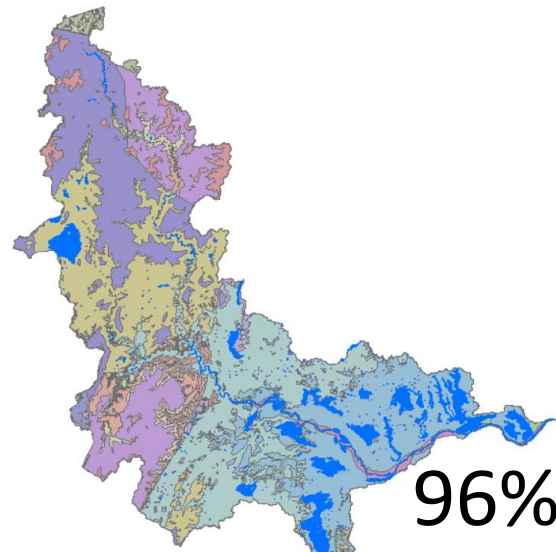
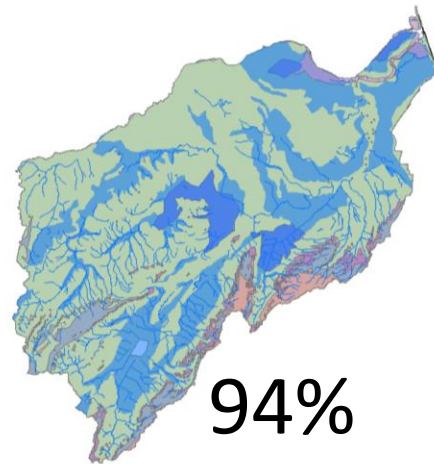
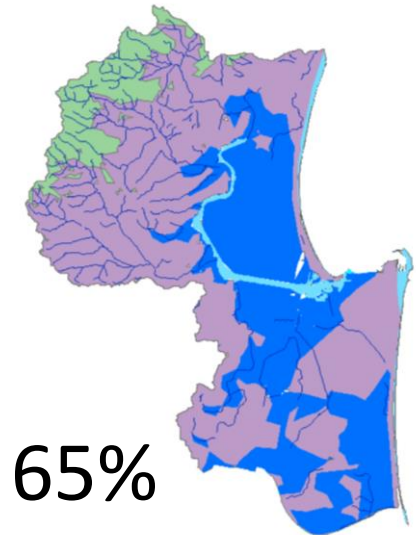
TANK (indigenous forest)

pre-1840

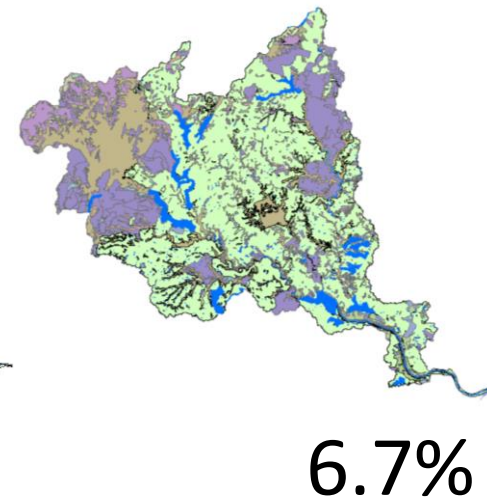
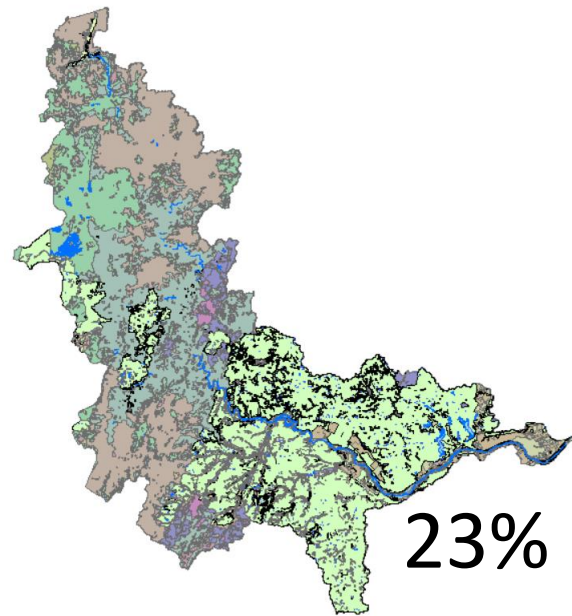
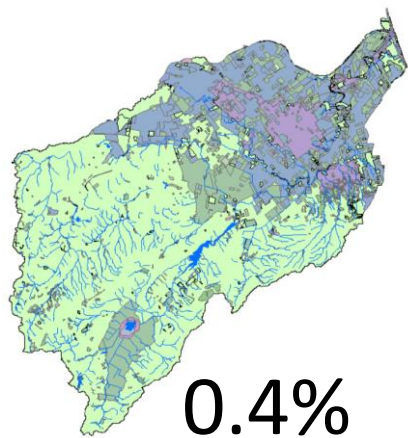
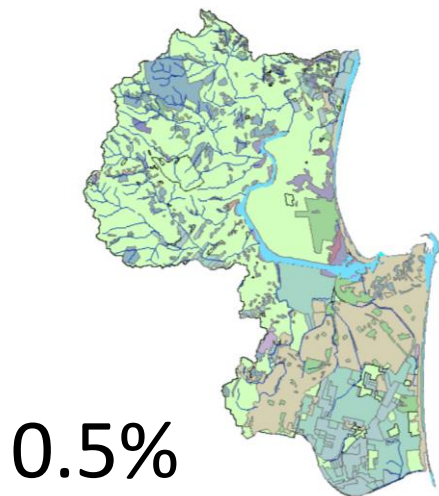


TANK (indigenous forest)

pre-1840

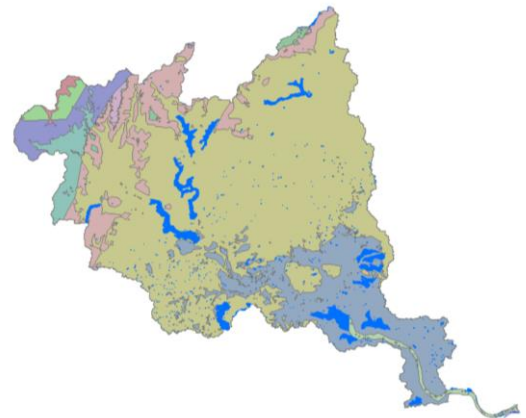
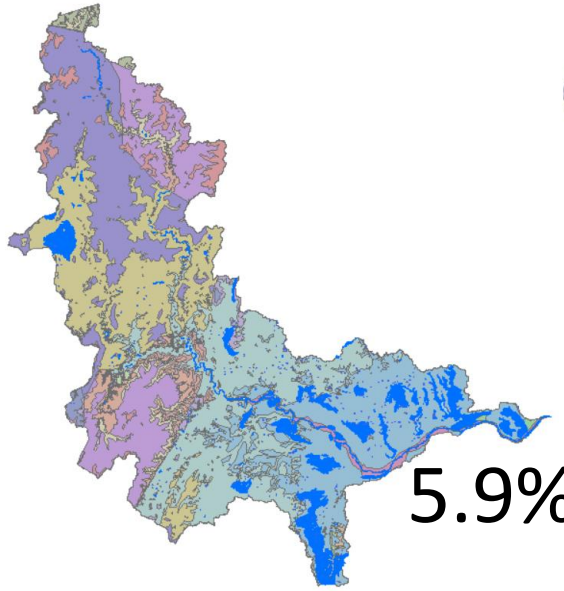
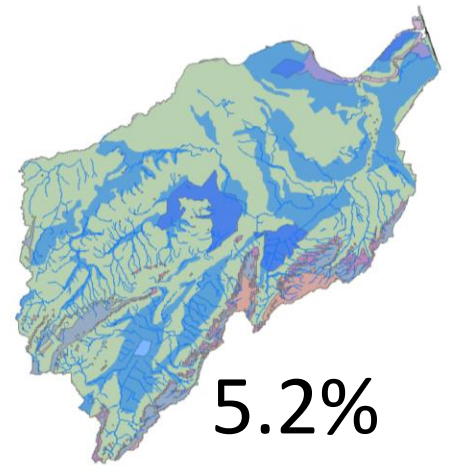
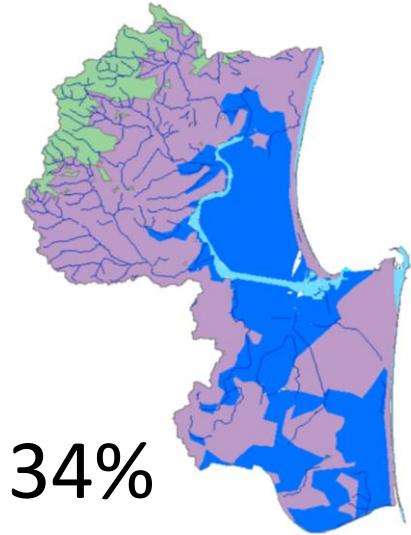


2012



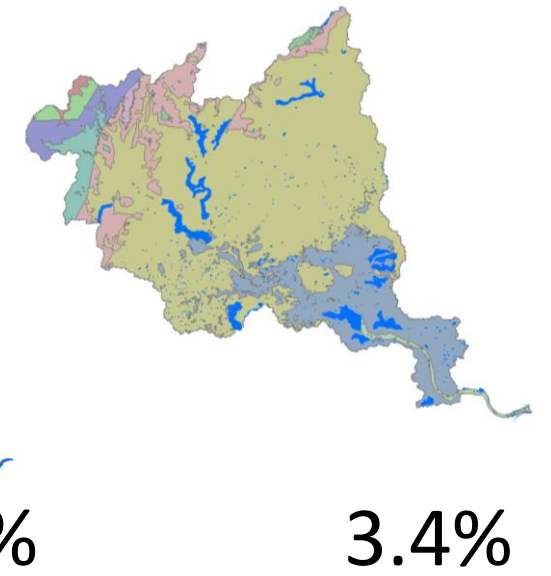
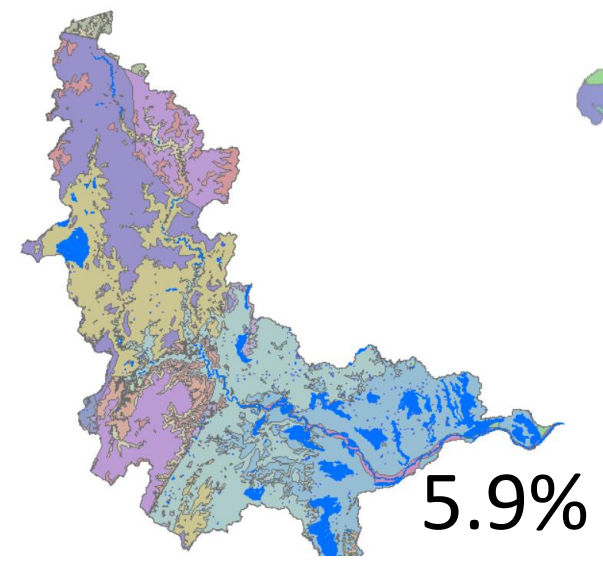
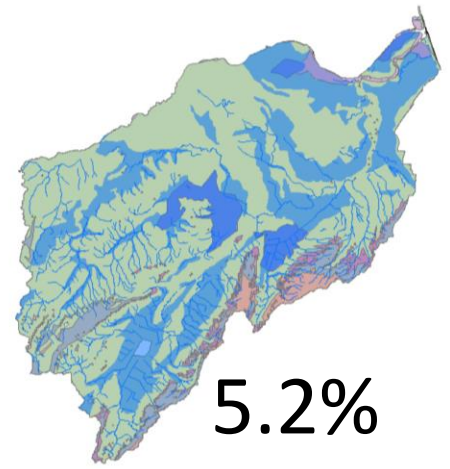
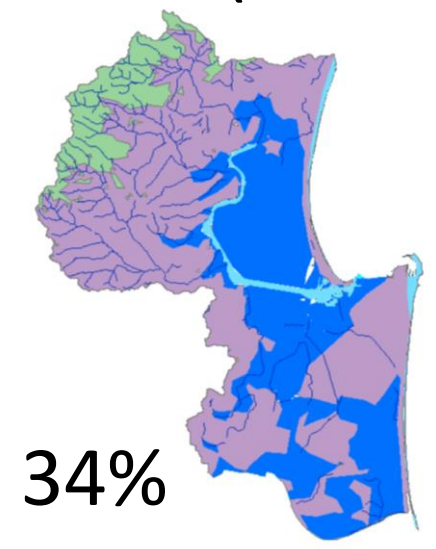
TANK (wetlands)

pre-1840

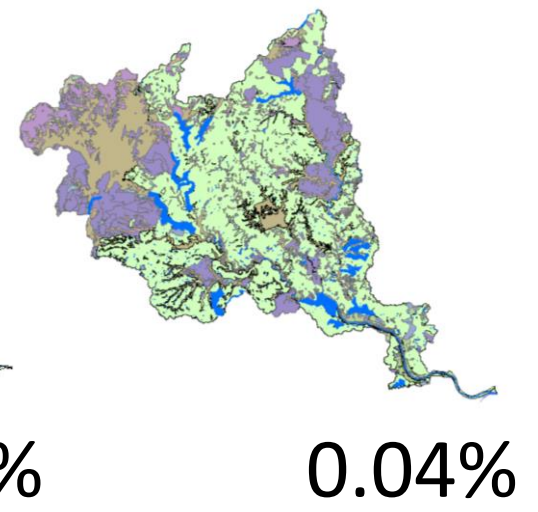
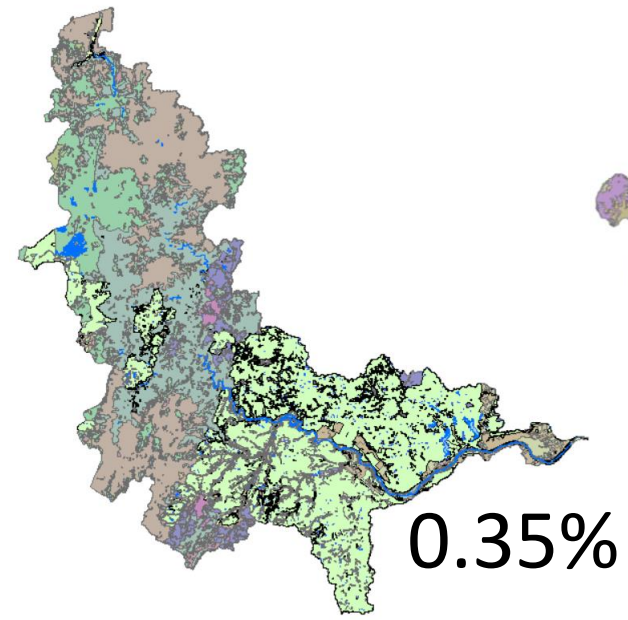
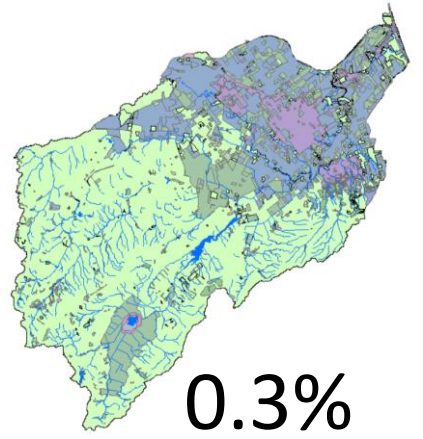
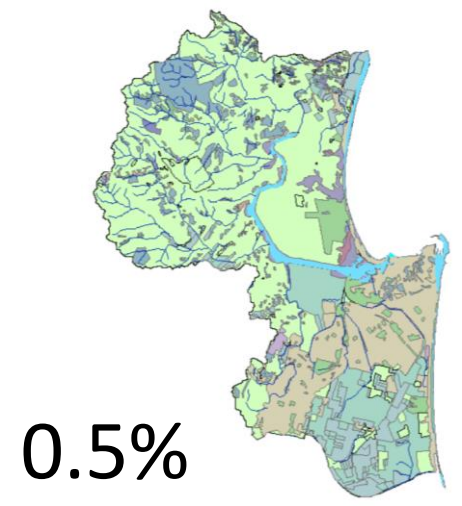


TANK (wetlands)

pre-1840



2012

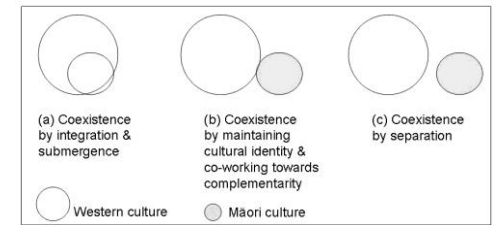
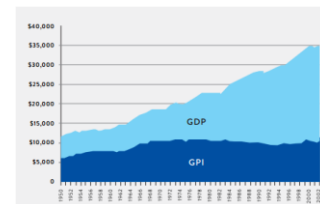
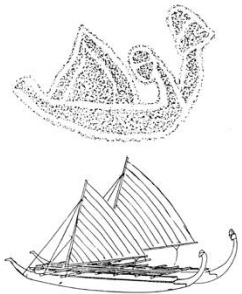


Key issues

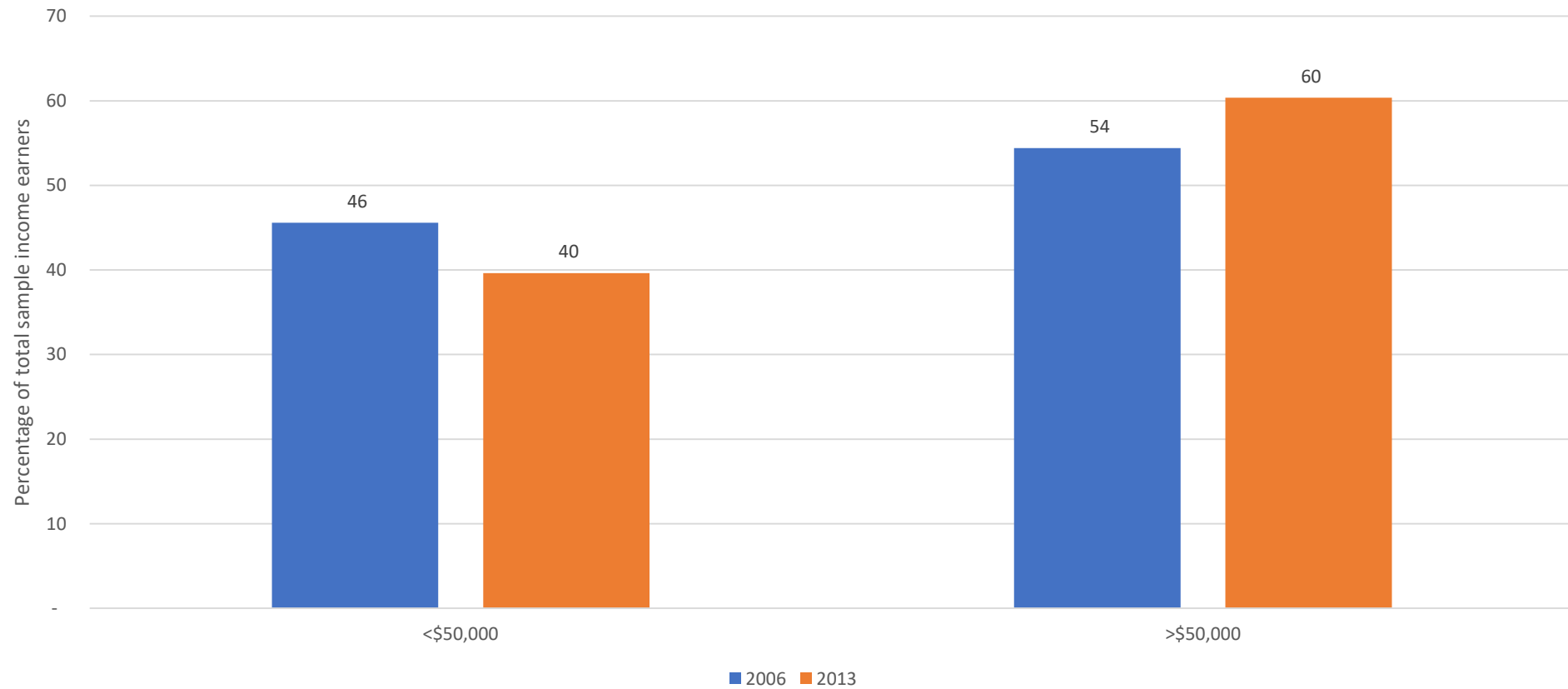
- Whānau Māori is more than a nuclear family
- The Māori economy = whānau Māori (ecosystem)
- 2 models of economy in New Zealand
- The mana/mauri of whānau Māori in Hawke's Bay is seriously diminished, in some cases to the brink of extinction
- This is a very sensitive matter for Mana Whenua

Personal income

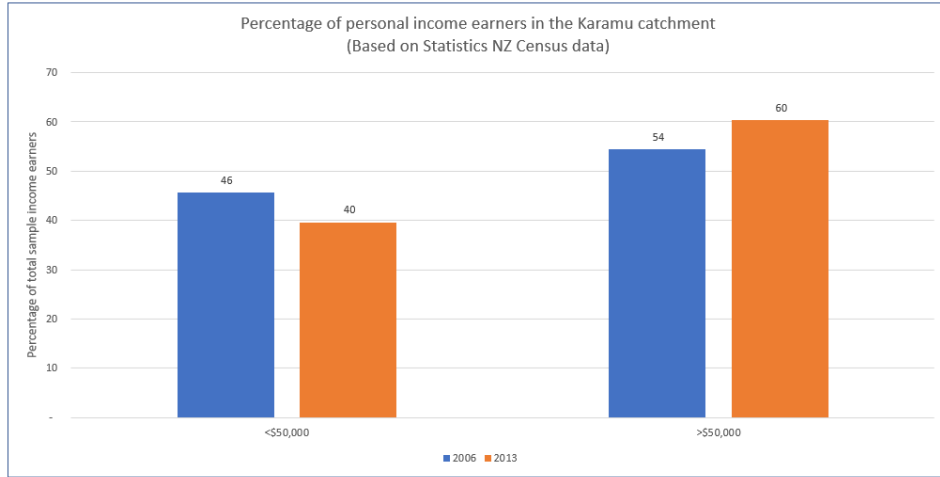
Tank catchments (2006-2013)



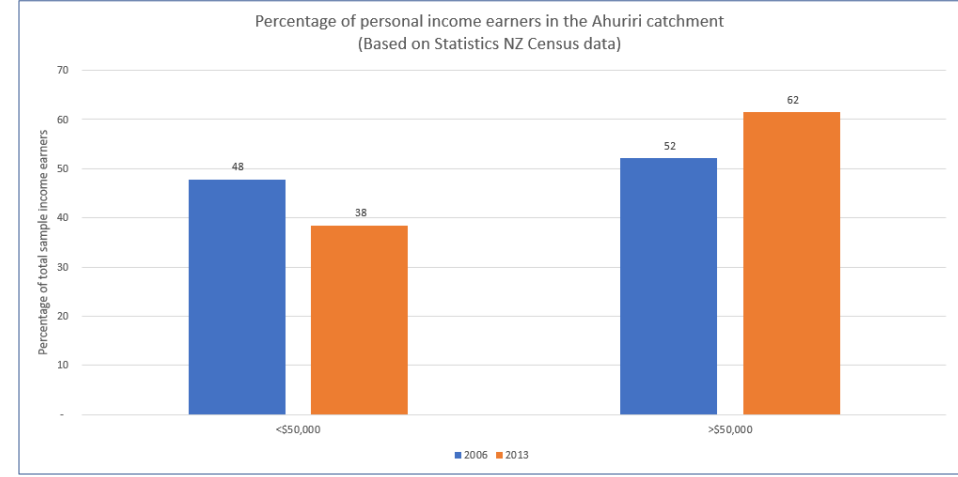
Percentage of personal income earners in the Karamu catchment
(Based on Statistics NZ Census data)



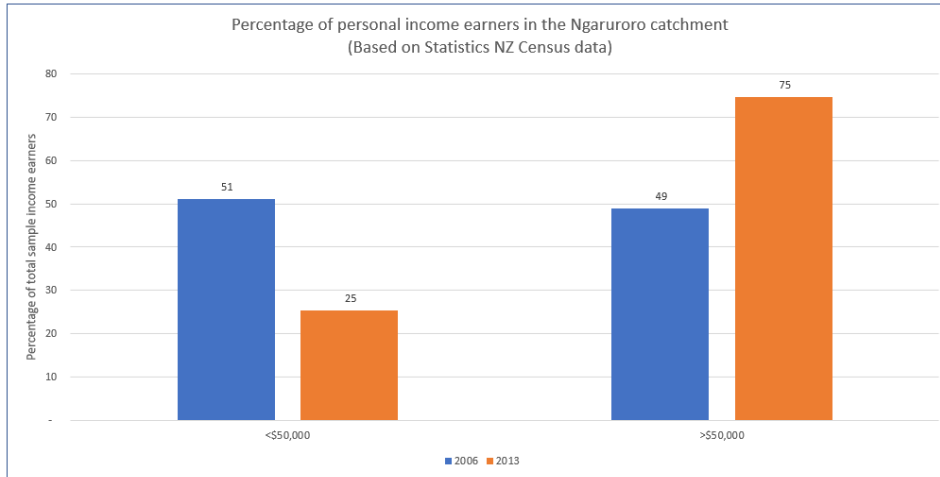
Karamu sub-catchment



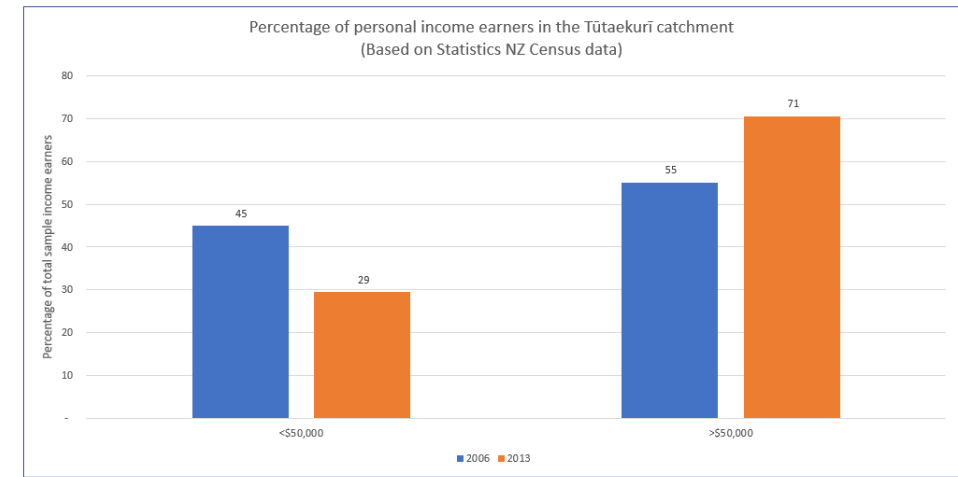
Ahuriri sub-catchment



Ngaruroro sub-catchment



Tūtaekurī sub-catchment

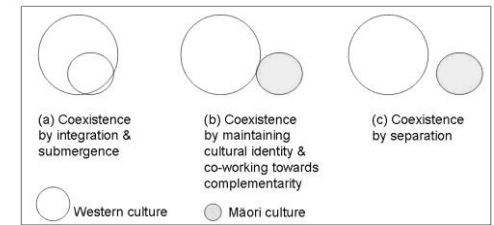
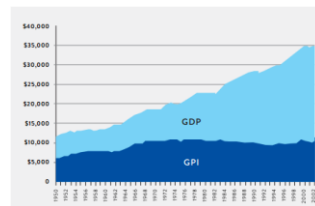
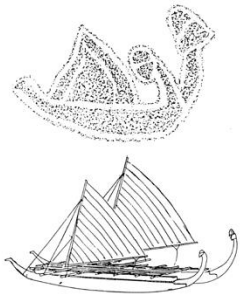


Income characterisation

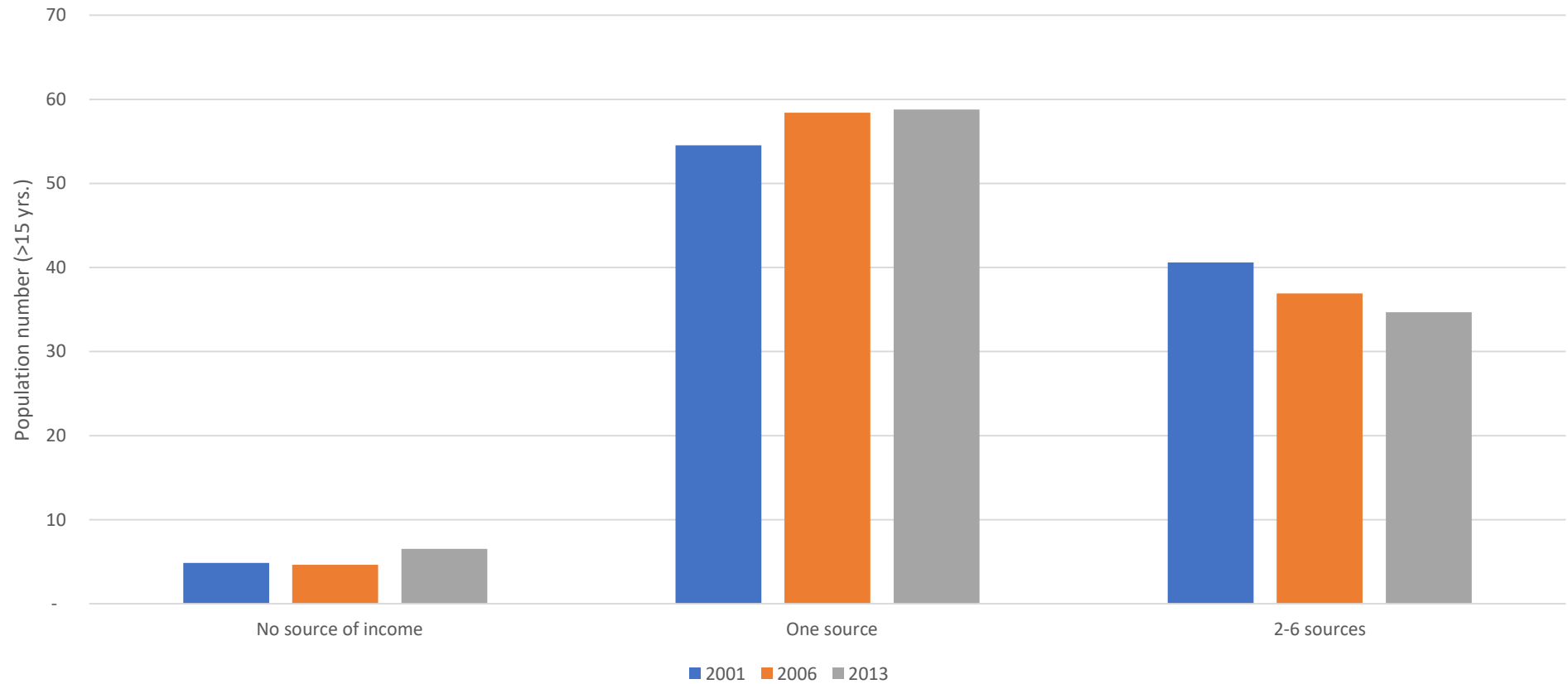
- An average of 30-40% of sub-catchment populations earn <\$50,000/year
- Area unit population incomes can be higher/lower than this average
- At \$50,000/year you need both parents working to survive (i.e. implications for family wellbeing)

Personal income sources

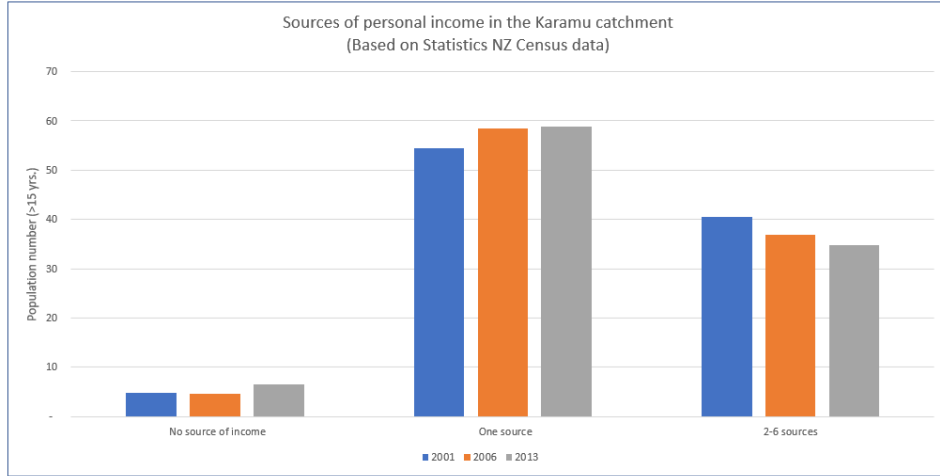
Tank catchments (2006-2013)



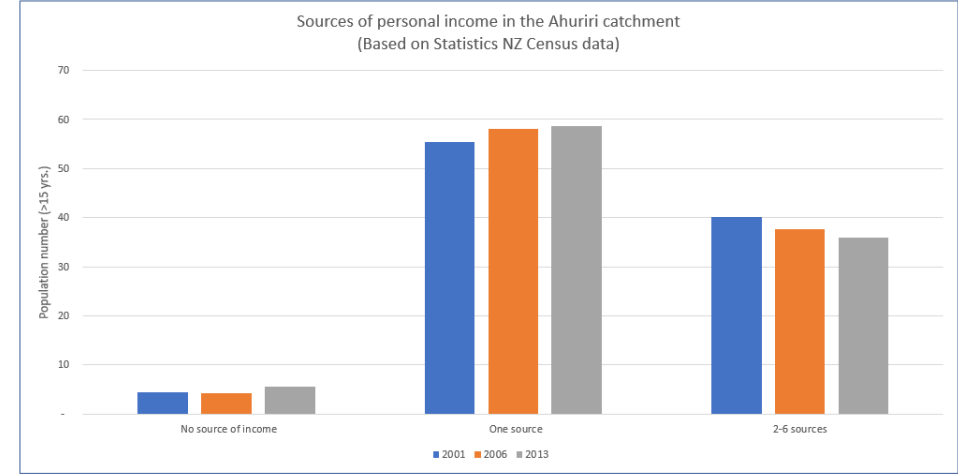
Sources of personal income in the Karamu catchment
(Based on Statistics NZ Census data)



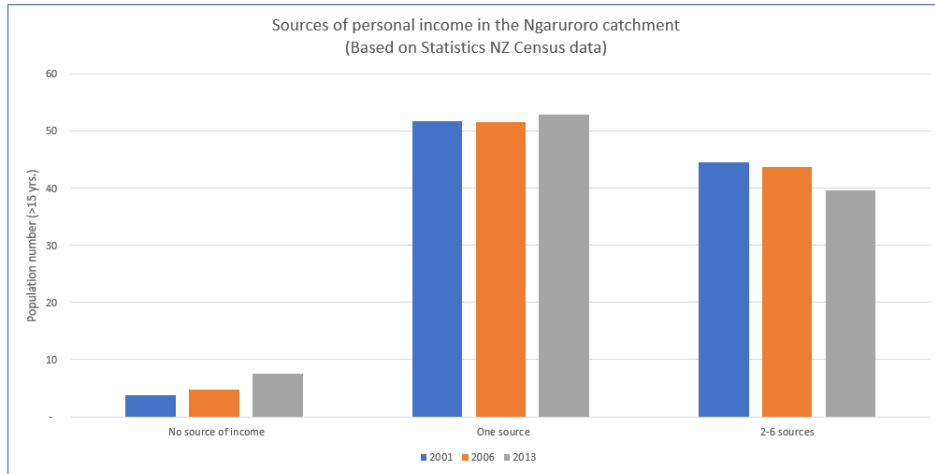
Karamu sub-catchment



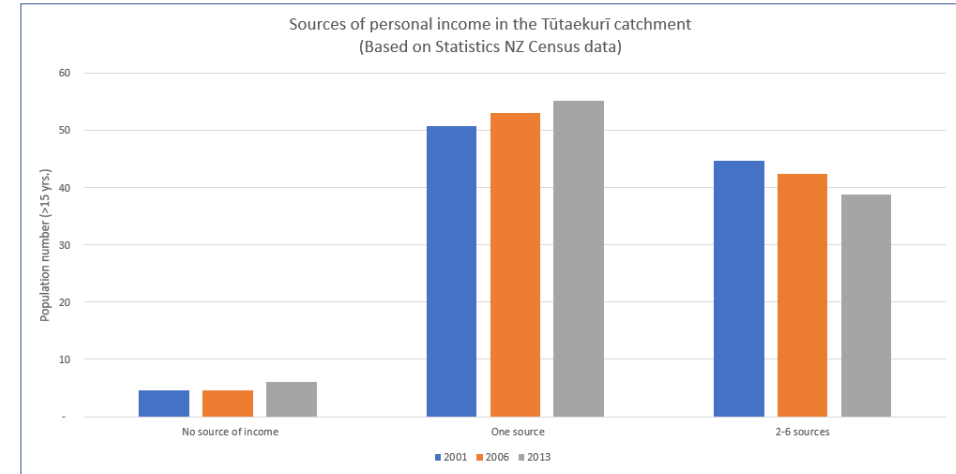
Ahuriri sub-catchment



Ngaruroro sub-catchment



Tūtaekurī sub-catchment

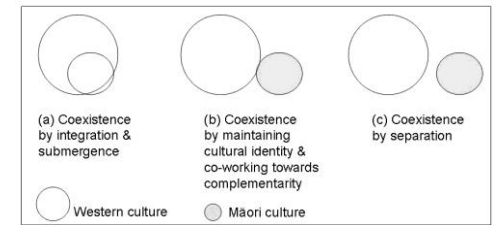
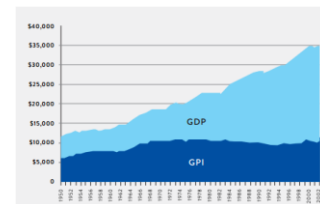
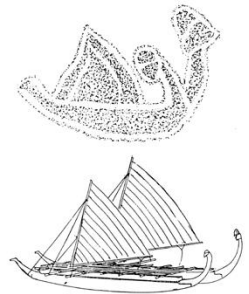


Personal income sources

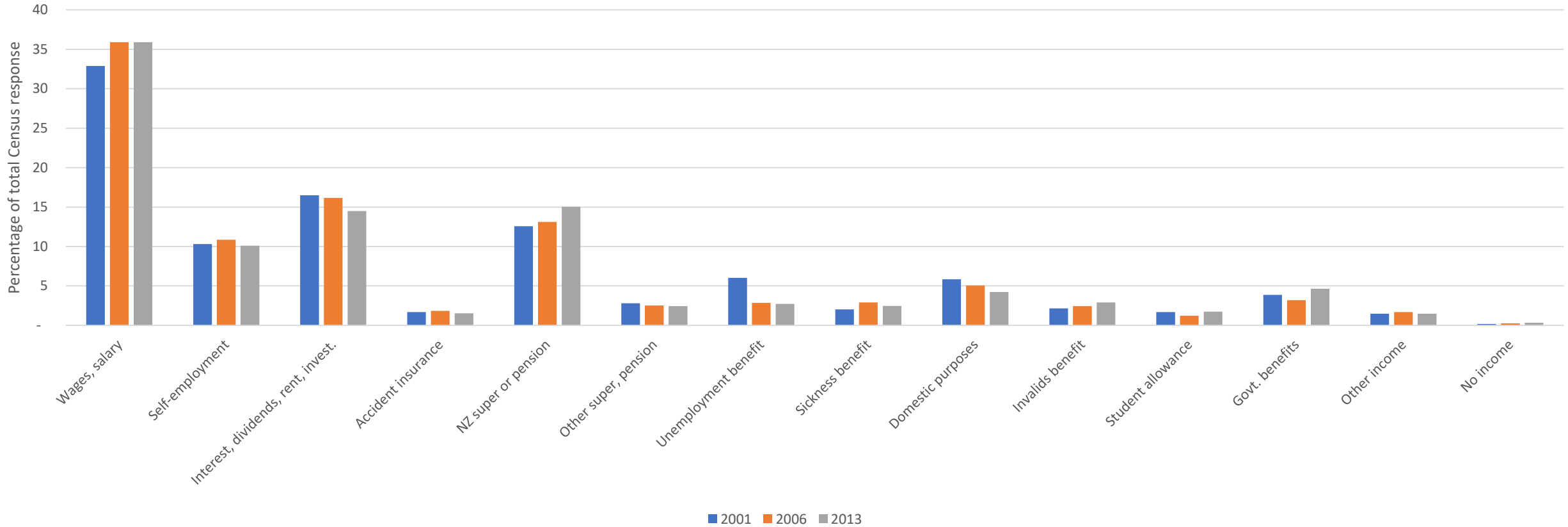
- An average of 40% of sub-catchment populations have multiple sources of personal income (<\$50,000/yr. cohort?)
- Area unit populations can be higher/lower than this average

Income earning and welfare dependency

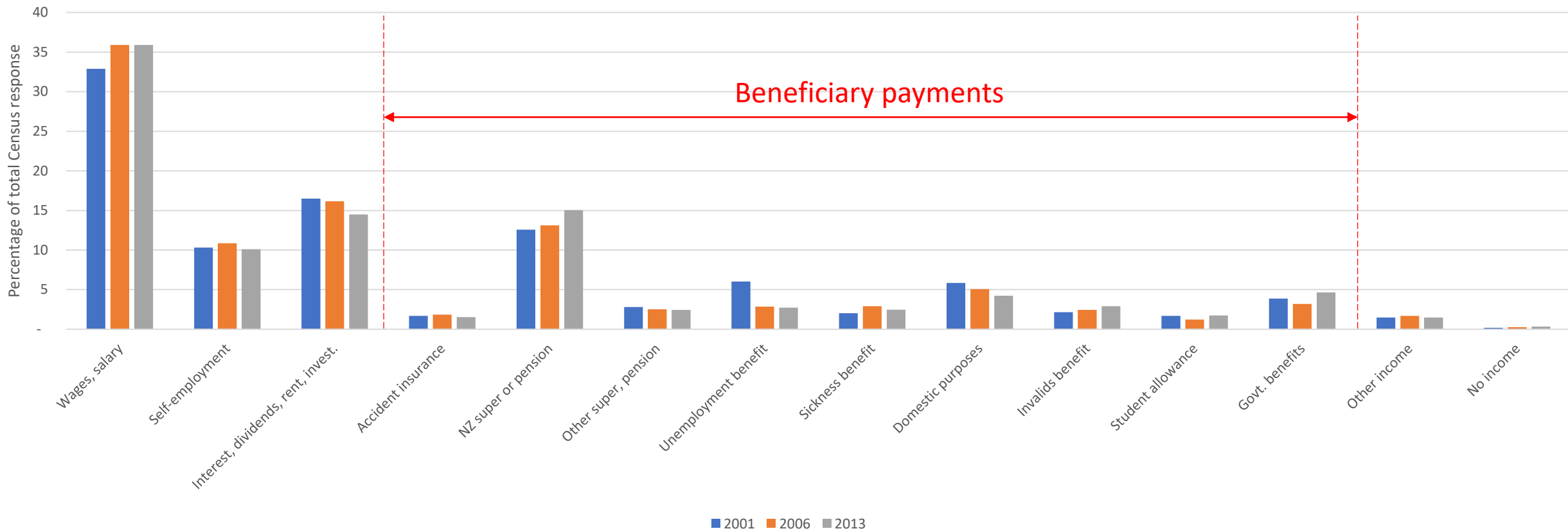
Tank catchments (2006-2013)



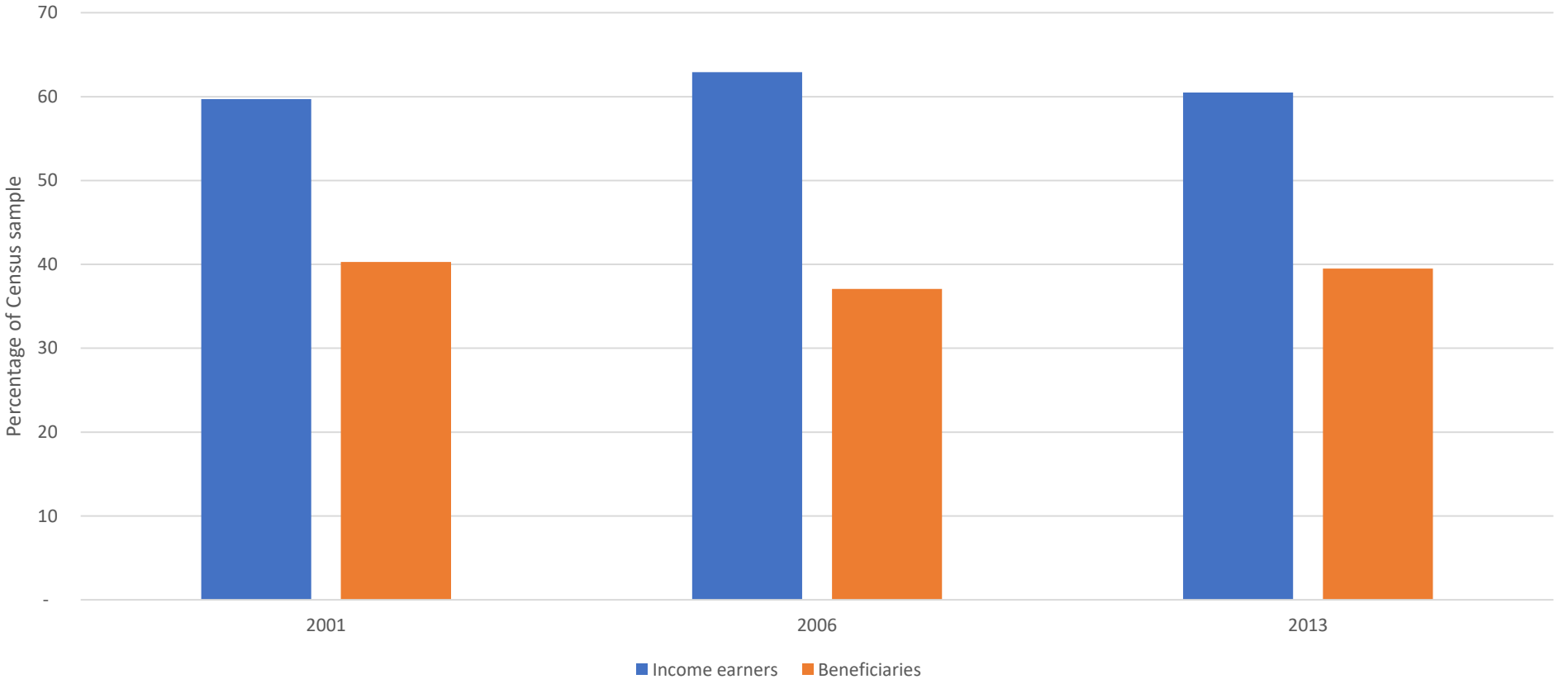
Sources of family income in the Karamu catchment
(Based on Statistics NZ Census data)



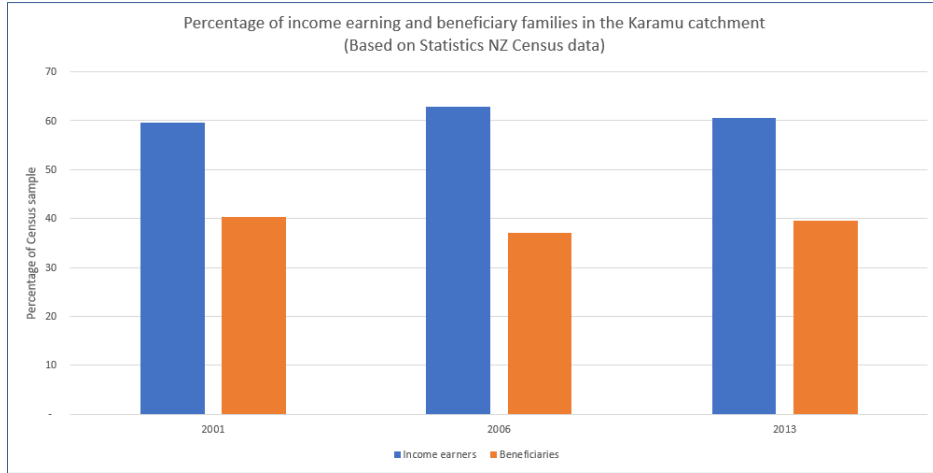
Sources of family income in the Karamu catchment (Based on Statistics NZ Census data)



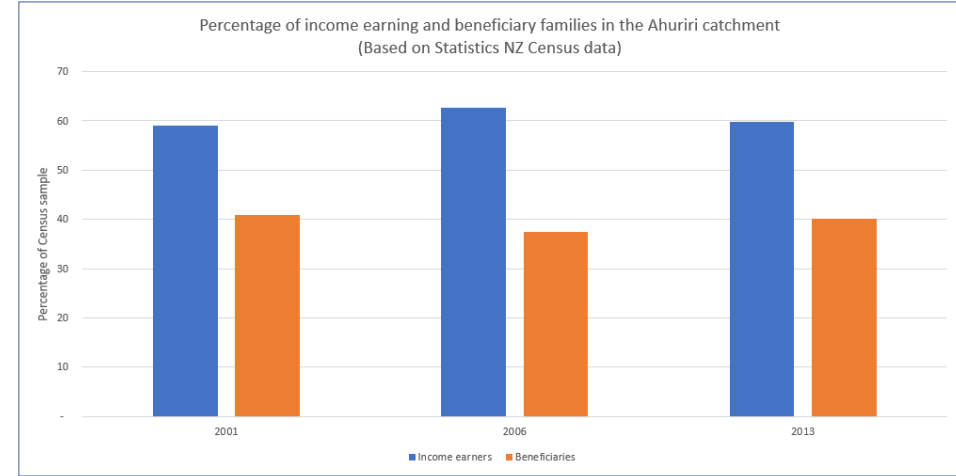
Percentage of income earning and beneficiary families in the Karamu catchment
(Based on Statistics NZ Census data)



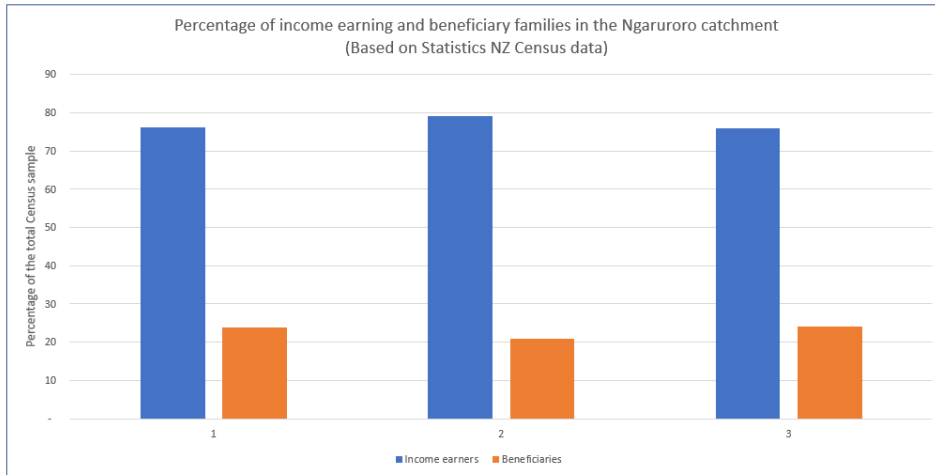
Karamu sub-catchment



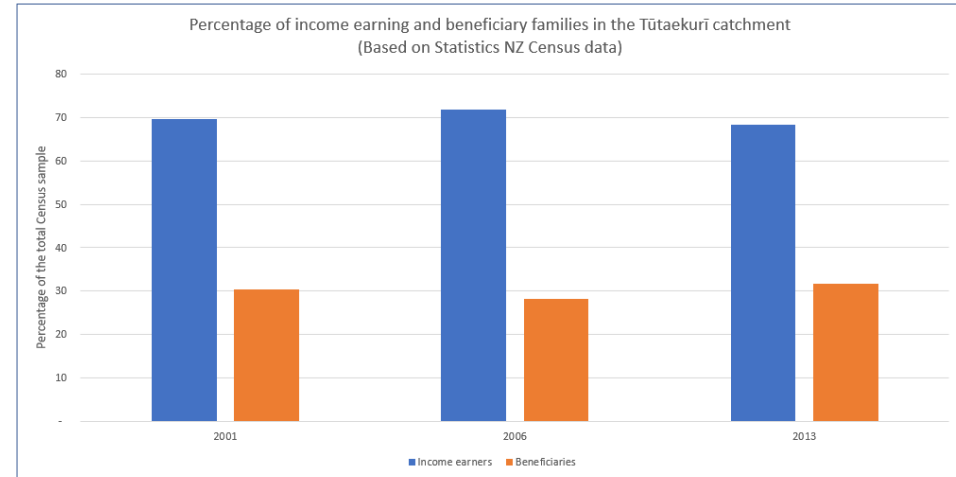
Ahuriri sub-catchment



Ngaruroro sub-catchment



Tūtaekurī sub-catchment

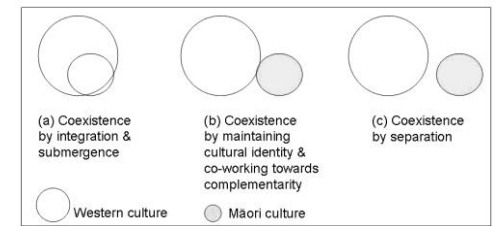
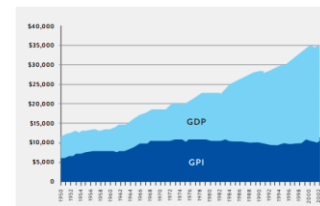
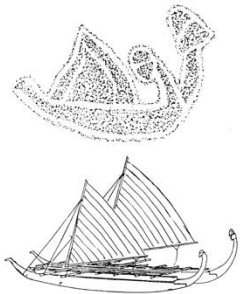


Family income type

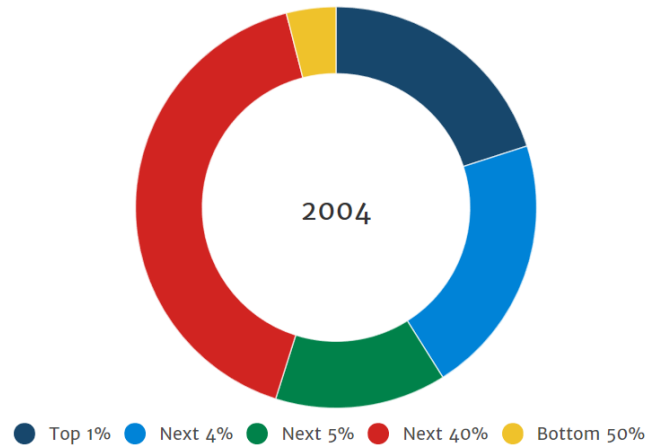
- Approximately 40% of urban families are welfare dependent
- Approximately 25–30% of rural families are welfare dependent
- This is partly an ageing population
- Its difficult to grow regional GDP with a welfare dependency component of this scale

Income inequality

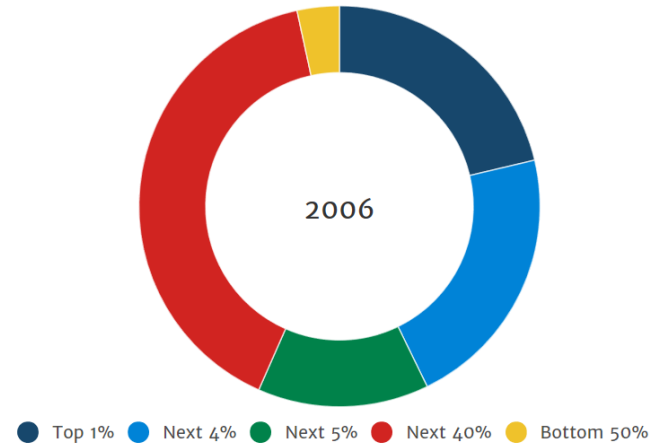
Tank catchments (2006-2013)



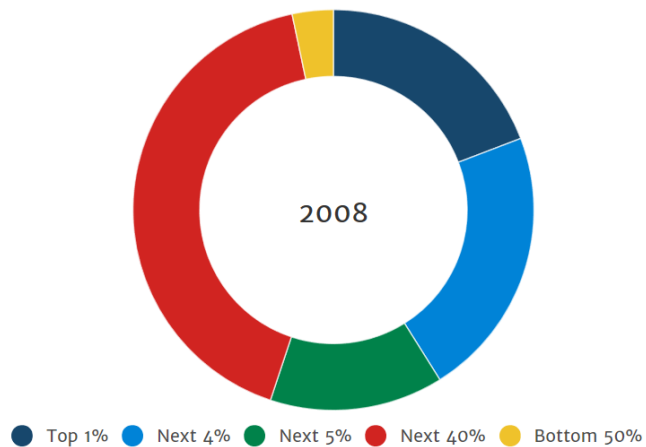
Proportional breakdown of total net wealth



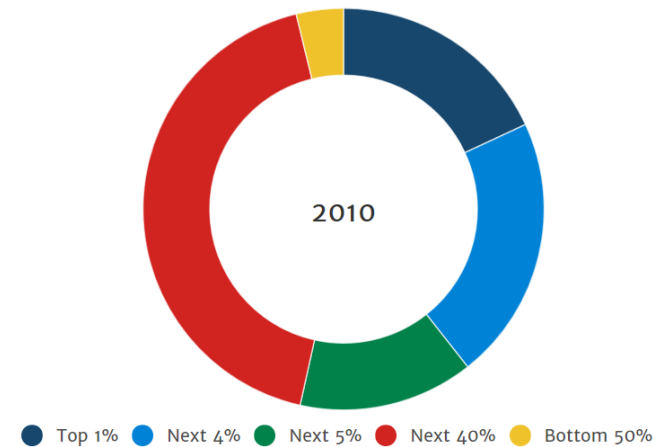
Source: Statistics New Zealand



Source: Statistics New Zealand

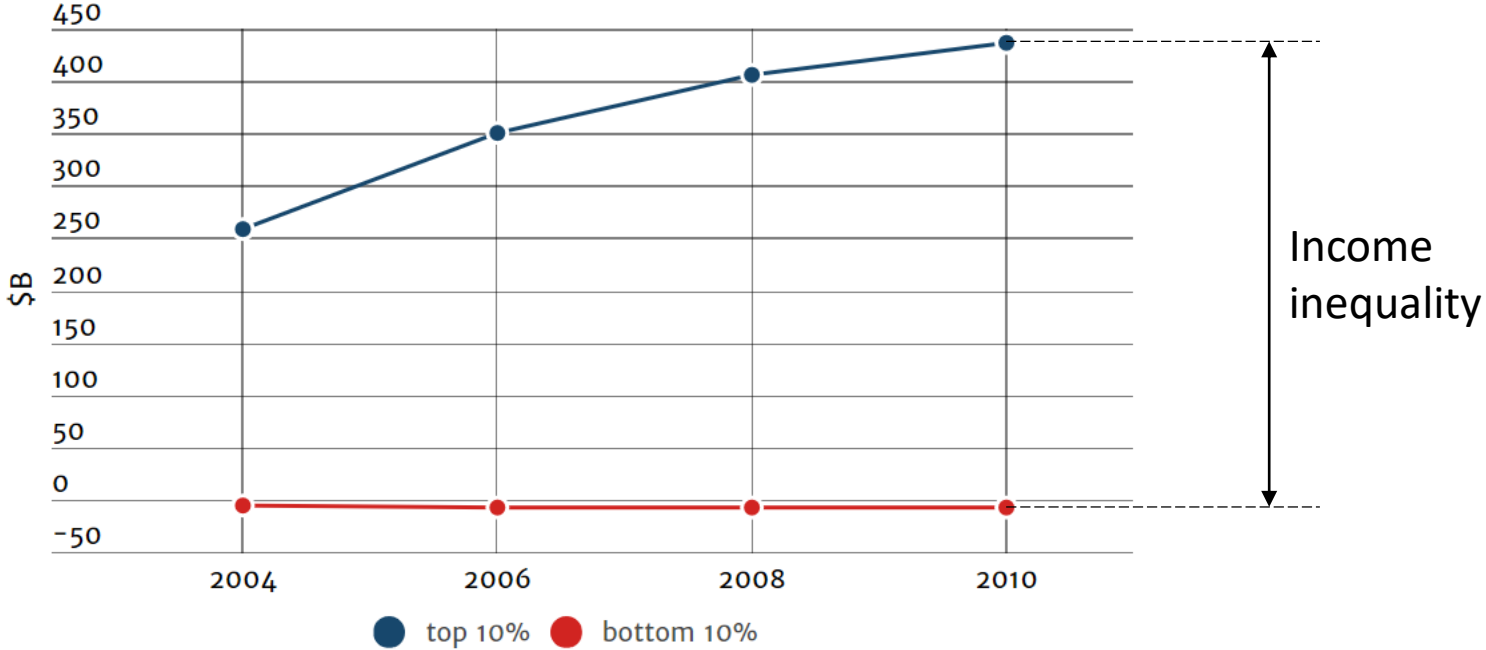


Source: Statistics New Zealand



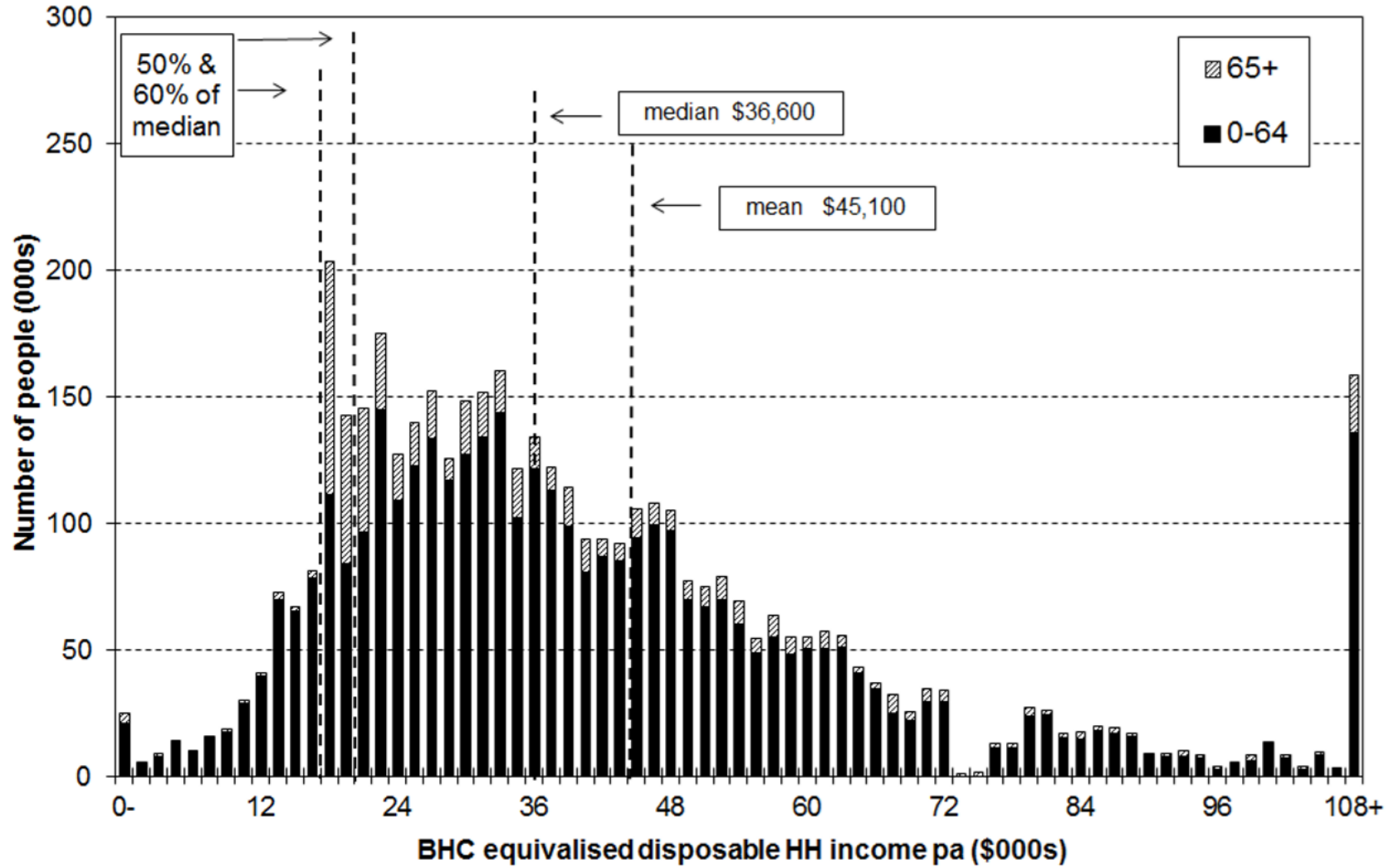
Source: Statistics New Zealand

Total net worth of top 10 per cent vs bottom 10 per cent

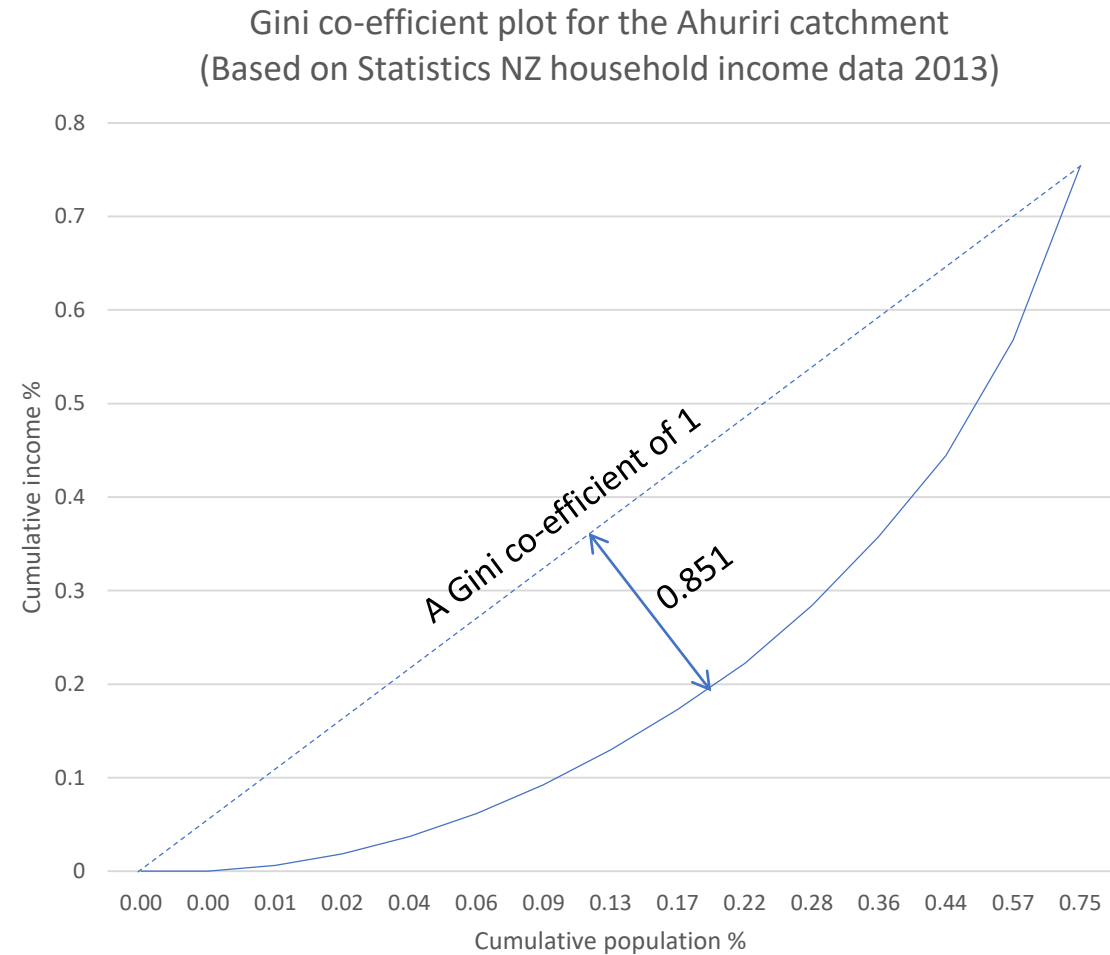


Source: Statistics New Zealand

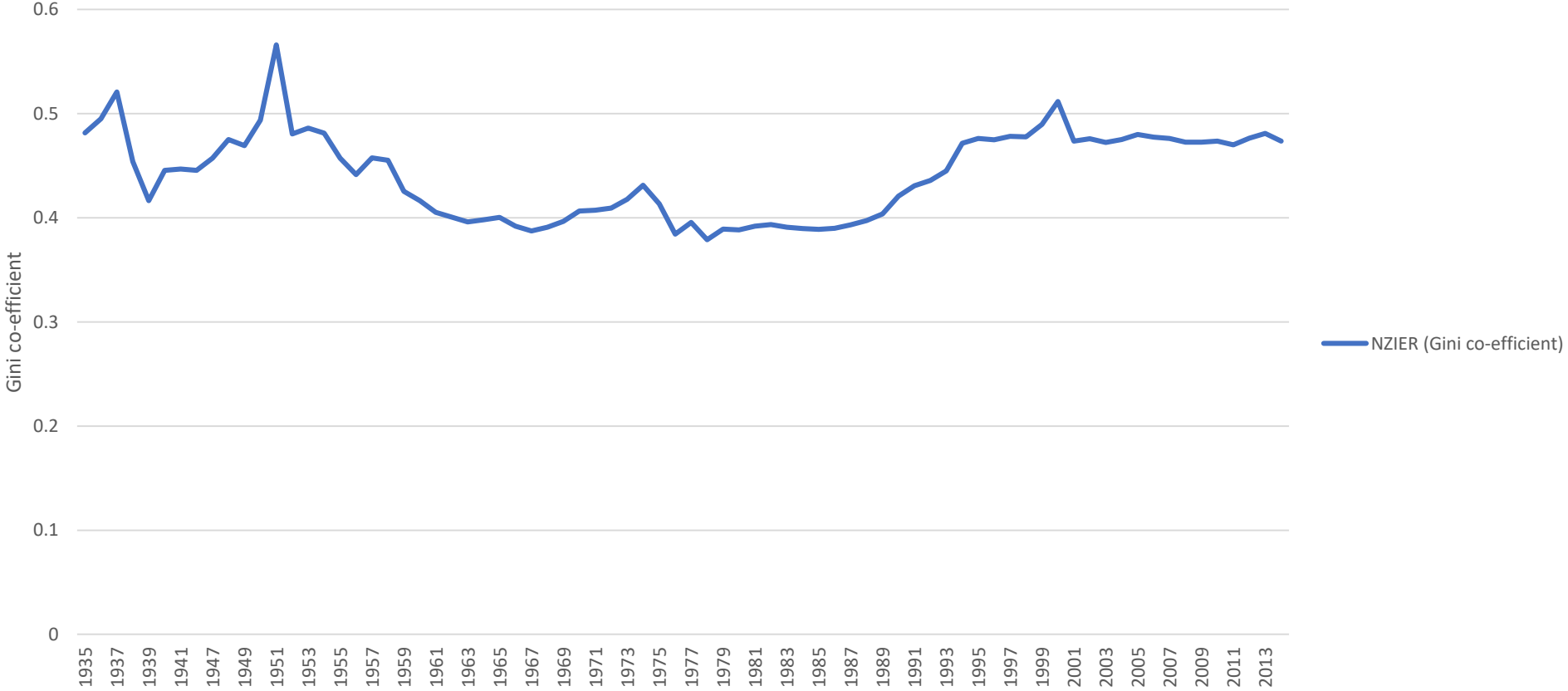
BHC household income distribution for all individuals: HES 2015



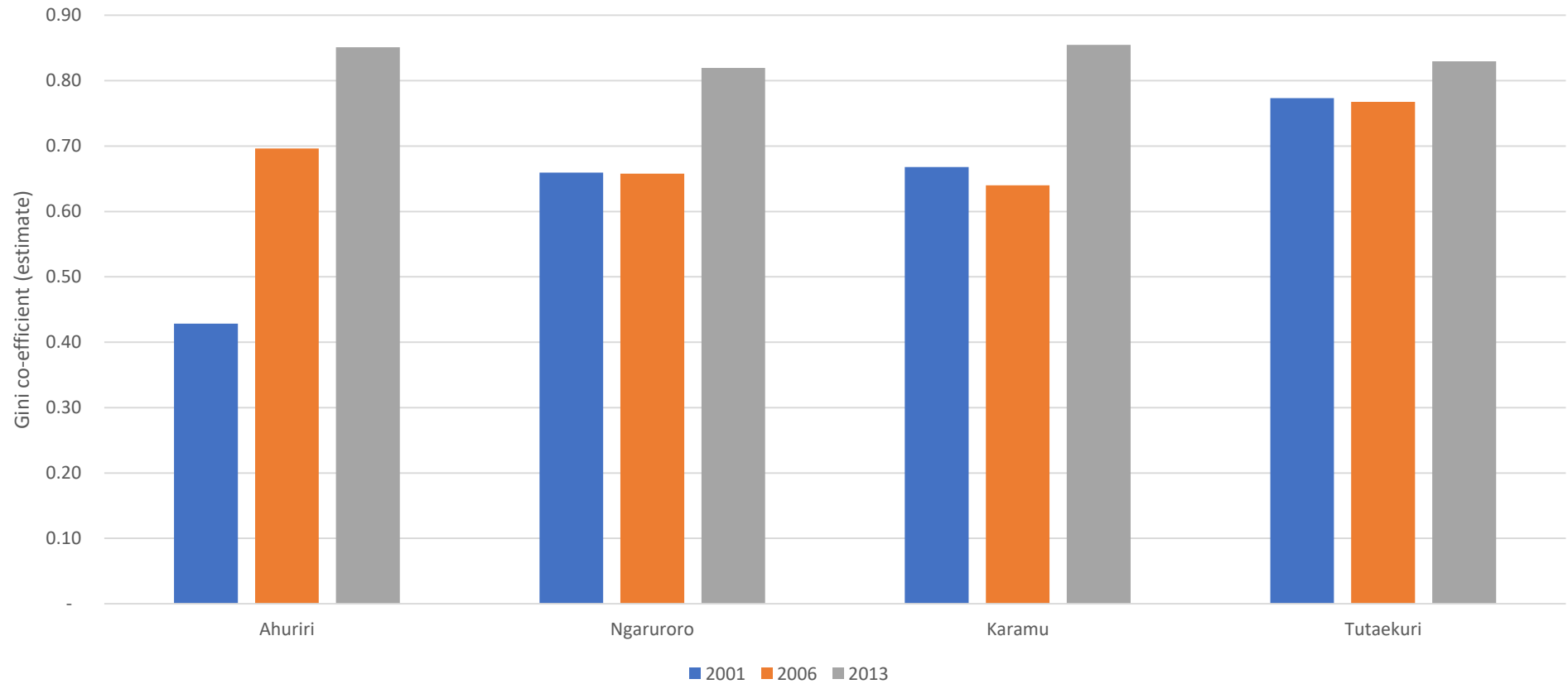
What is a Gini co-efficient?



Income inequality in New Zealand
(Based on NZIER long-term data series)



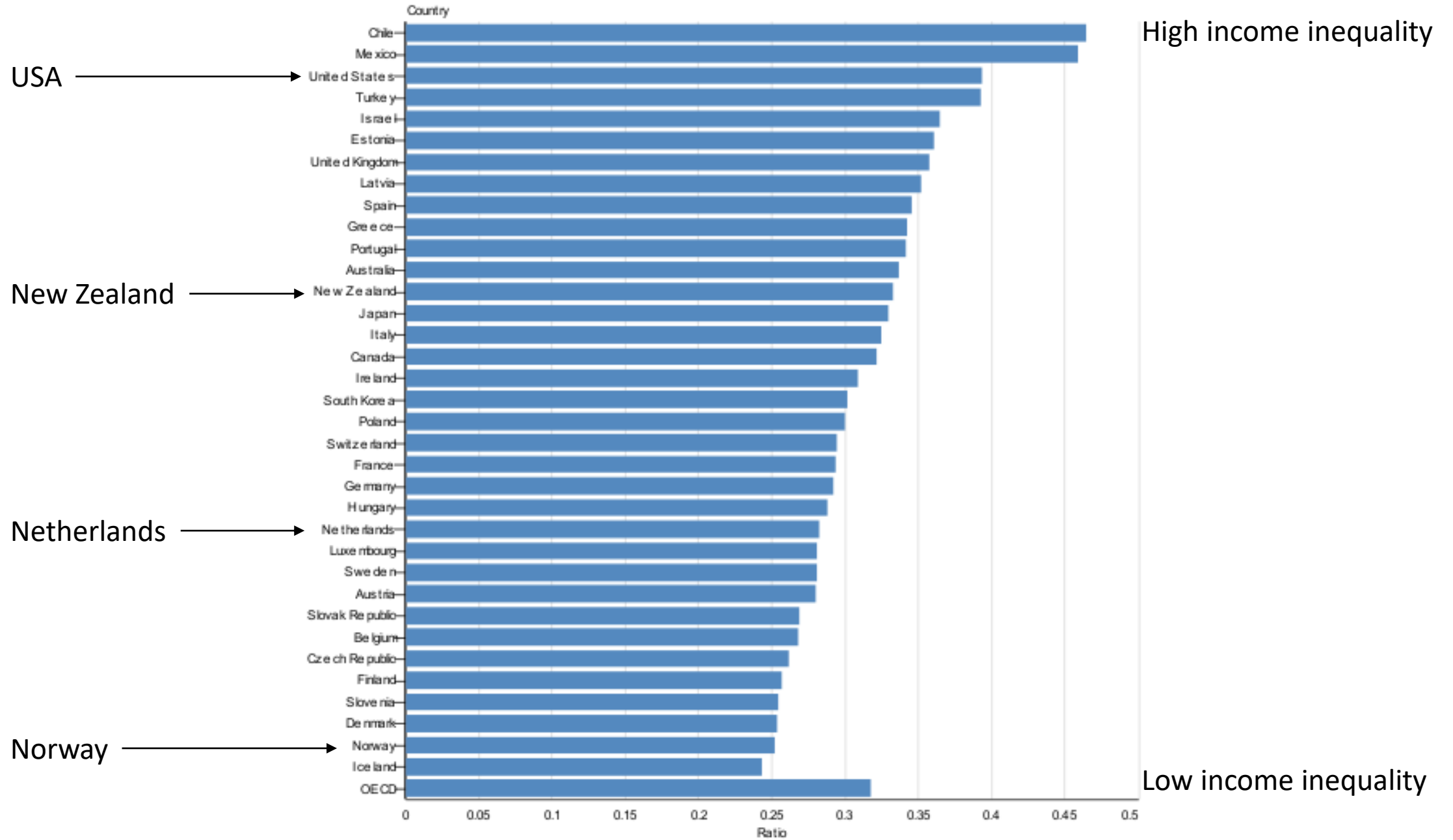
Income inequality by TANK catchment
(Based on Statistics NZ Census data)



Key message

- Growing inequality in sub-catchment populations
- Gini co-efficient is well above the national average
- The national average is already a concern internationally

Income inequality for OECD countries (2014)



Source: OECD

The top 1%



In a capitalist market economy some income inequality is necessary because it provides the conditions needed for innovation, creativity and human excellence

WE DID IT! WE MONEY-GRUBBED OUR WAY TO OWNING HALF THE WORLD'S WEALTH!
ARE YOU THINKING WHAT I'M THINKING?

THE OTHER HALF!!!



The top 1%

Social fairness problems

How your credit card security stacks up...



DAVE GRANLUND © www.davegranlund.com

Income inequality becomes a problem when income is not trickling down ...

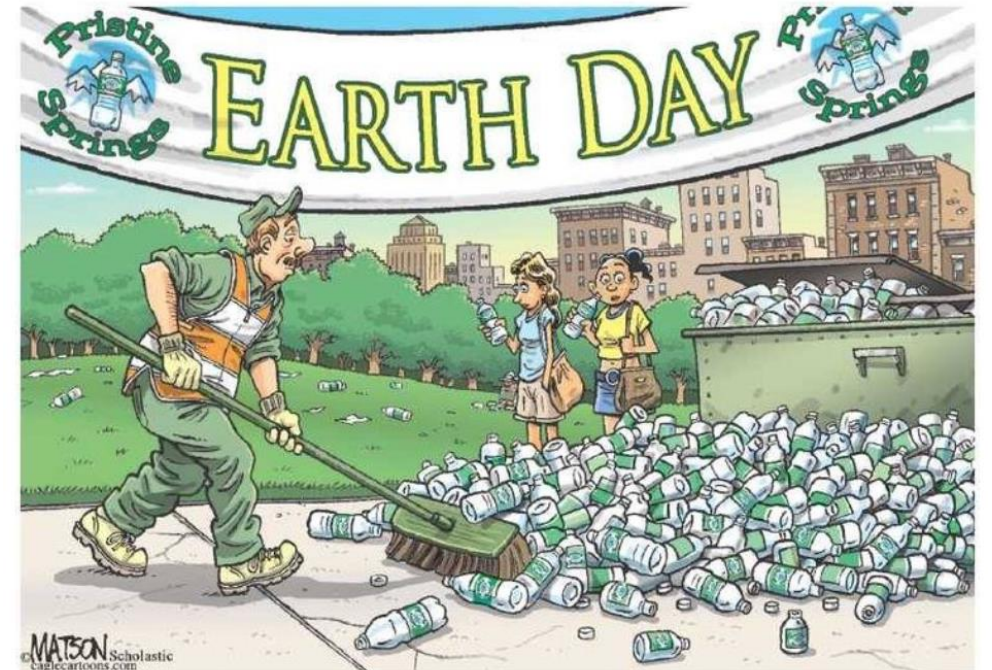
The bottom 50%

The top 1%



Sustainability problems

... and when wealth accumulation harms the environment,



The top 1%

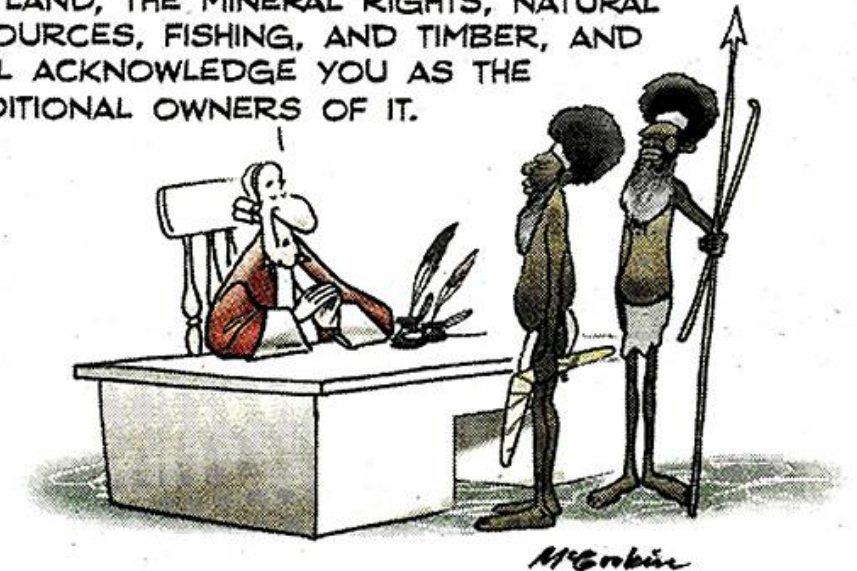


... and leads to unchecked cultural wellbeing decline and **extinction**

The indigenous inhabitants of this land had a wise saying - "Every time you take something from the Earth, you must give something back."



HOW ABOUT A COMPROMISE? WE KEEP THE LAND, THE MINERAL RIGHTS, NATURAL RESOURCES, FISHING, AND TIMBER, AND WE'LL ACKNOWLEDGE YOU AS THE TRADITIONAL OWNERS OF IT.



Cultural extinction rates

- 6,900 languages ... 6,900 distinct cultural entities
- Language extinction rate (on average) 1 every 3 months
- Over the next 100 years - *projected loss of 50–90% of the worlds linguistic/cultural diversity*
- Why?

For a culture to survive ...

1. Freedom to give expression to its language, values, behaviours and institutions (i.e. whānau Māori) *on a daily basis*
 2. Adapt to change *with creativity/innovation*
 3. Respond to **disturbance** events
 - *Reclaims*
 - *Reframes*
 - *Reinstates*
- } essential identity

TANK sub-catchments - key Issues

Ageing, mobile population

Loss of whānau Kahungunu to other regions & overseas

30-40 % population earning <\$50,000

40 % population has multiple income sources

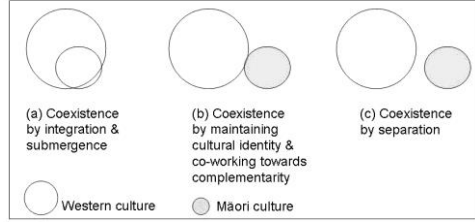
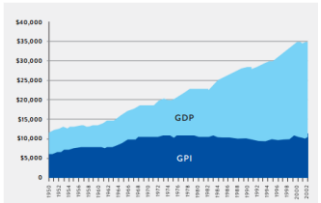
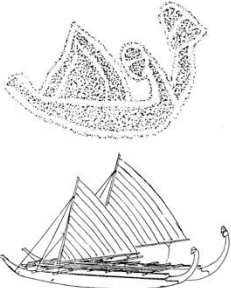
40 % population is welfare dependent

Increasing income inequality (above the national average)

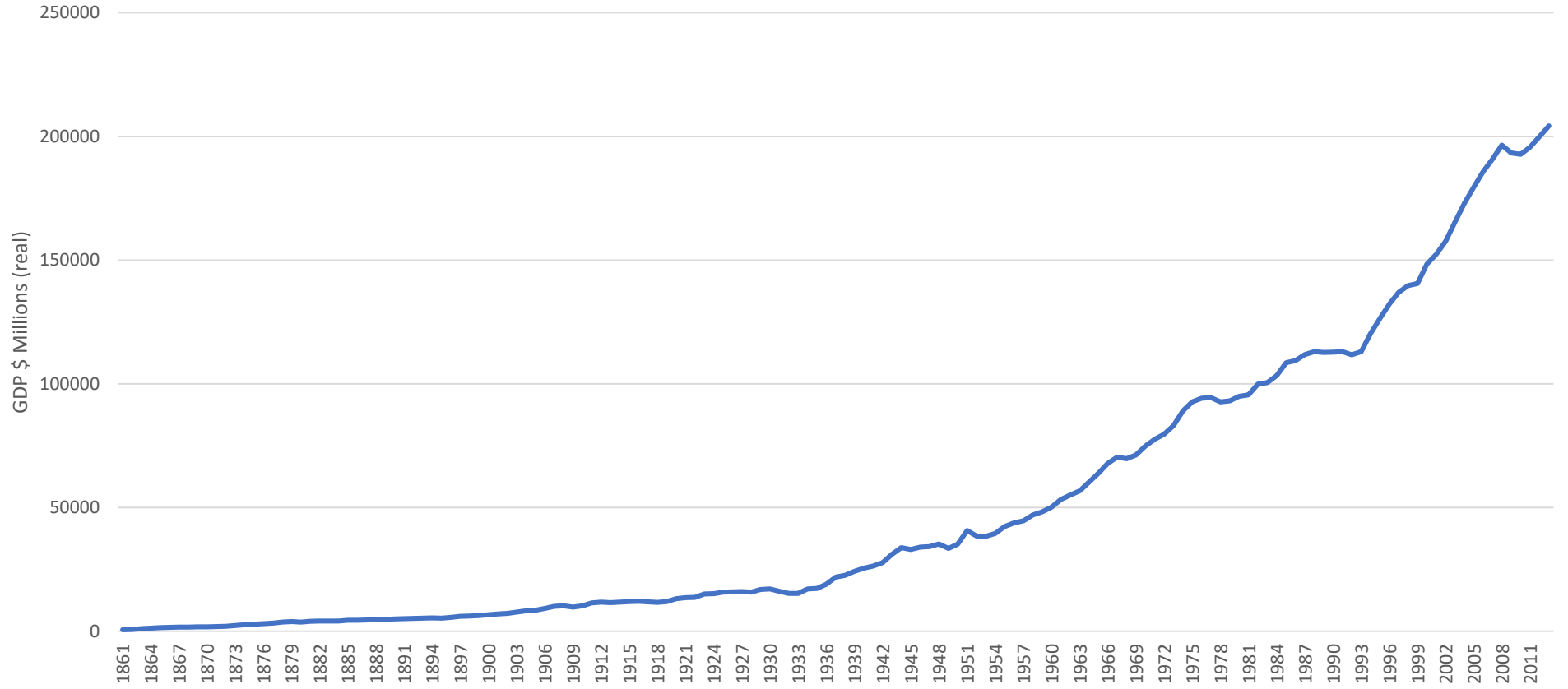
Whānau Māori wellbeing at threshold levels (near extinction)

Why?

#1 - There is a problem with GDP accounting



Annual GDP \$Millions (real) for New Zealand
(Based on NZIER 'Data.1850' long-term data series)



Measurement of Gross Domestic Product

- Involves a national accounting *blind spot*
- GDP counts all final goods and services
- This means that ...

...

- Natural disasters
- Disease
- Unemployment
- Ecological species extinction
- Vehicle accidents
- Crime
- Family breakdowns
- Suicide
- Ecosystem decline

... are good for GDP

- Gambling
- Drug and alcohol addiction
- Illness
- Pollution
- Water scarcity
- Over-harvesting
- GHG emissions
- Deforestation
- Cultural extinction ...

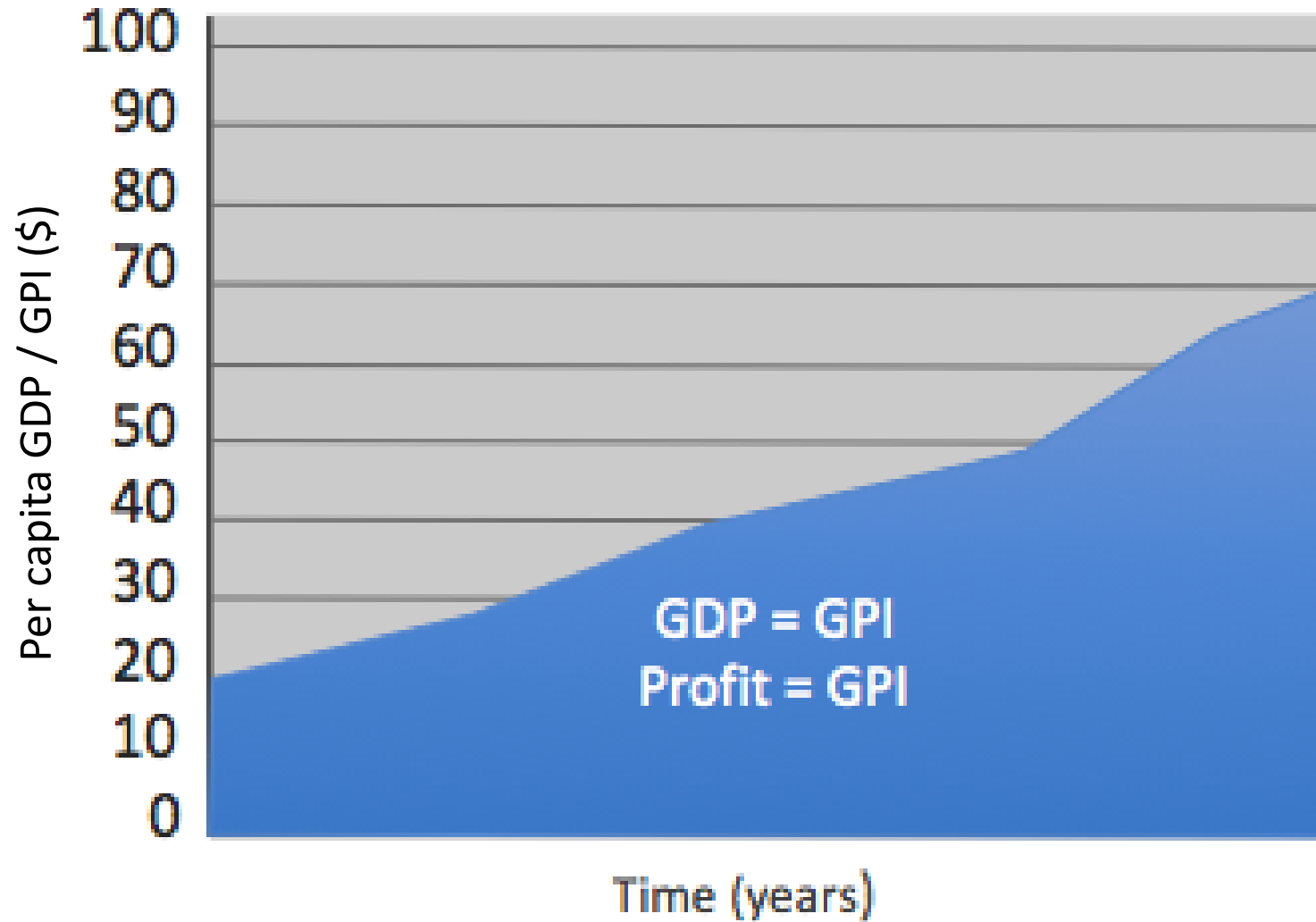
Genuine progress indicator (GPI) accounting

- Requires a shift in thinking
- Old GDP thinking was based on the question ...
 - How fast and big can we grow GDP?

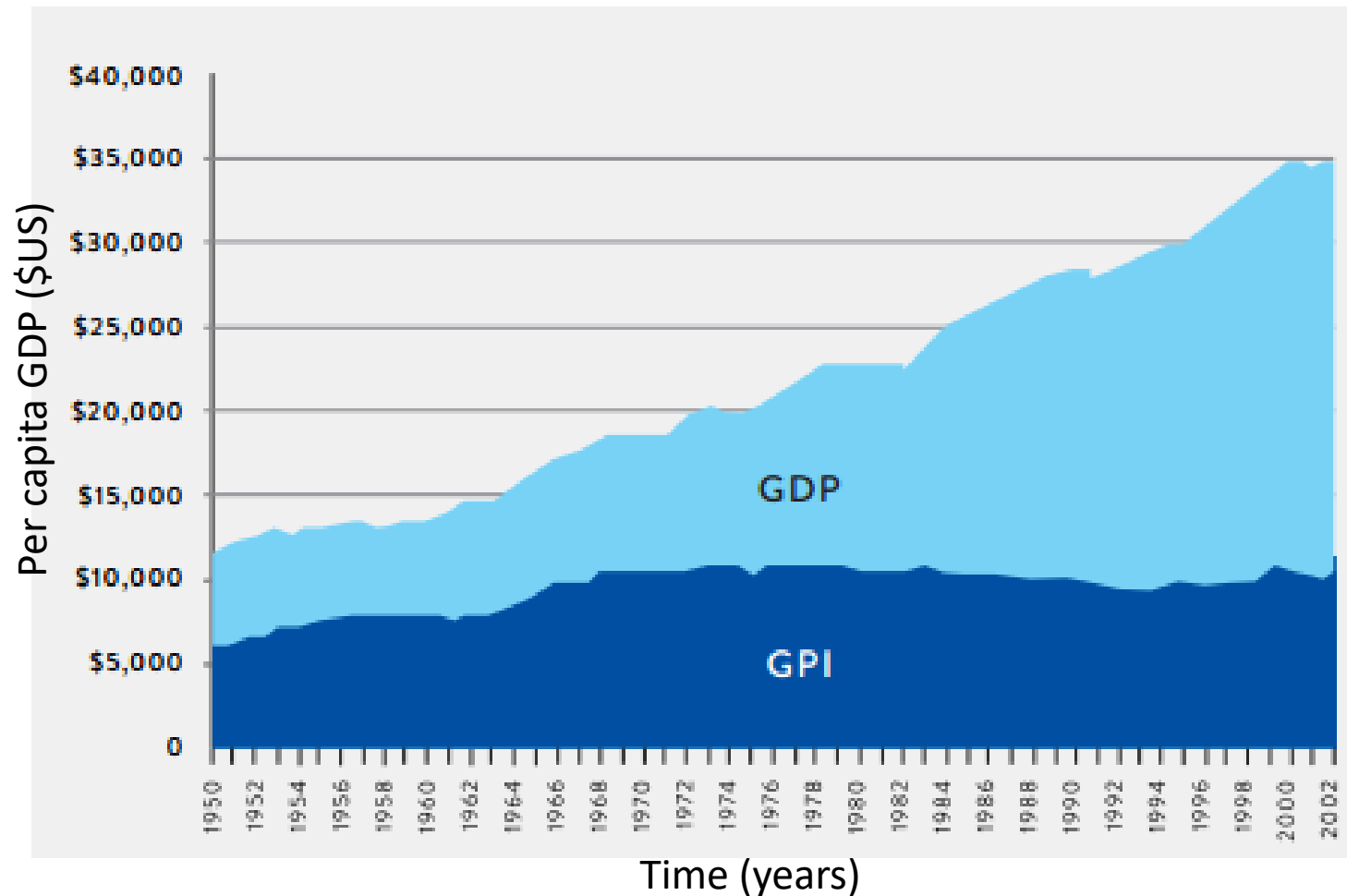
Genuine progress indicator (GPI) accounting

- Requires a shift in thinking
- Old GDP thinking was based on the question ...
 - How fast and big can we grow GDP?
- In GPI thinking ...
 - Growth is not irrelevant, but ... the key question is ...
 - ‘What is the best way to grow?’ or ...
 - ‘Are there methods of growth that avoid unwanted ecological, social, financial and cultural effects?’

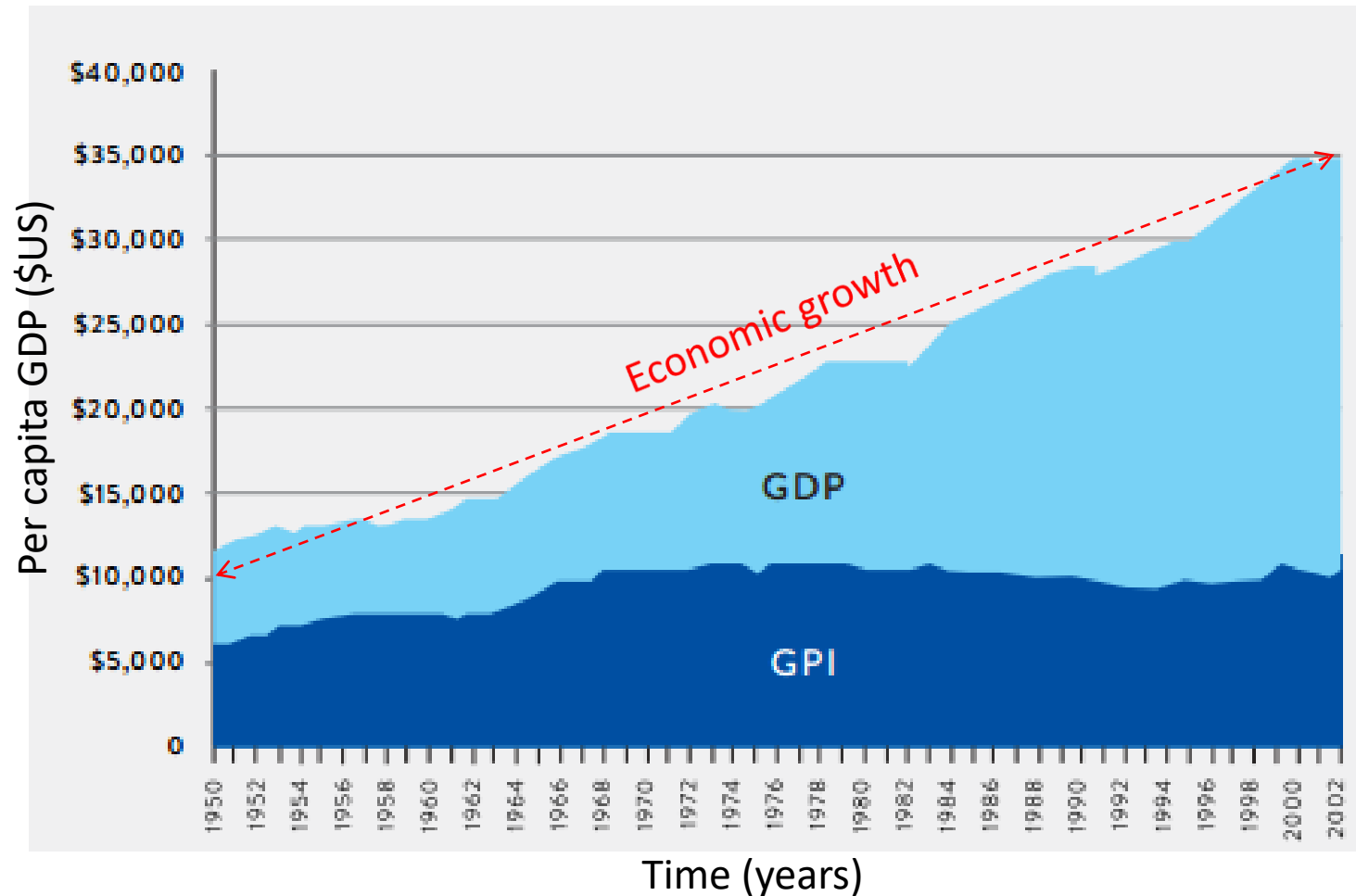
What does genuine progress look like?



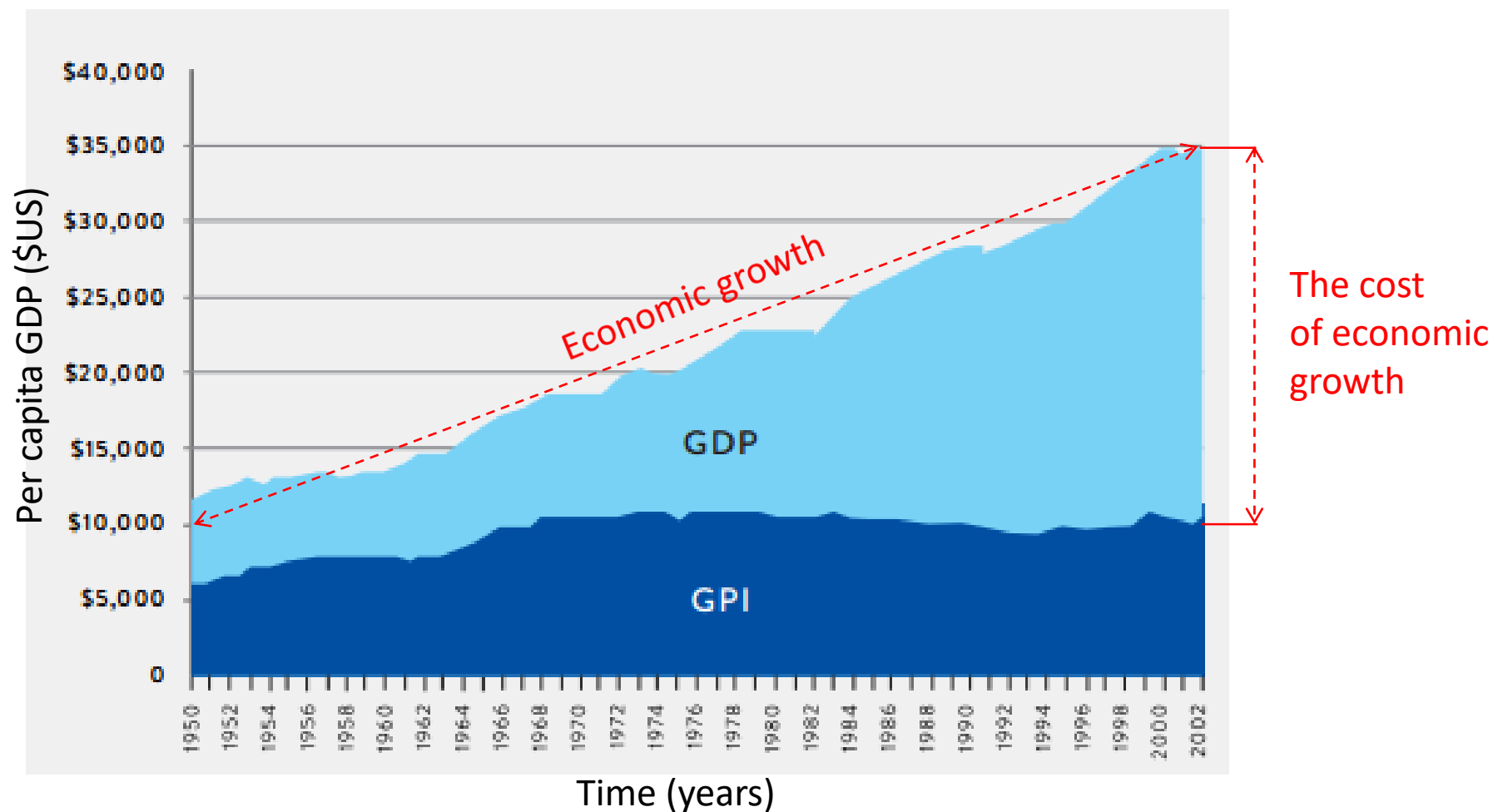
GDP/GPI per captia (1950–2002) for the USA



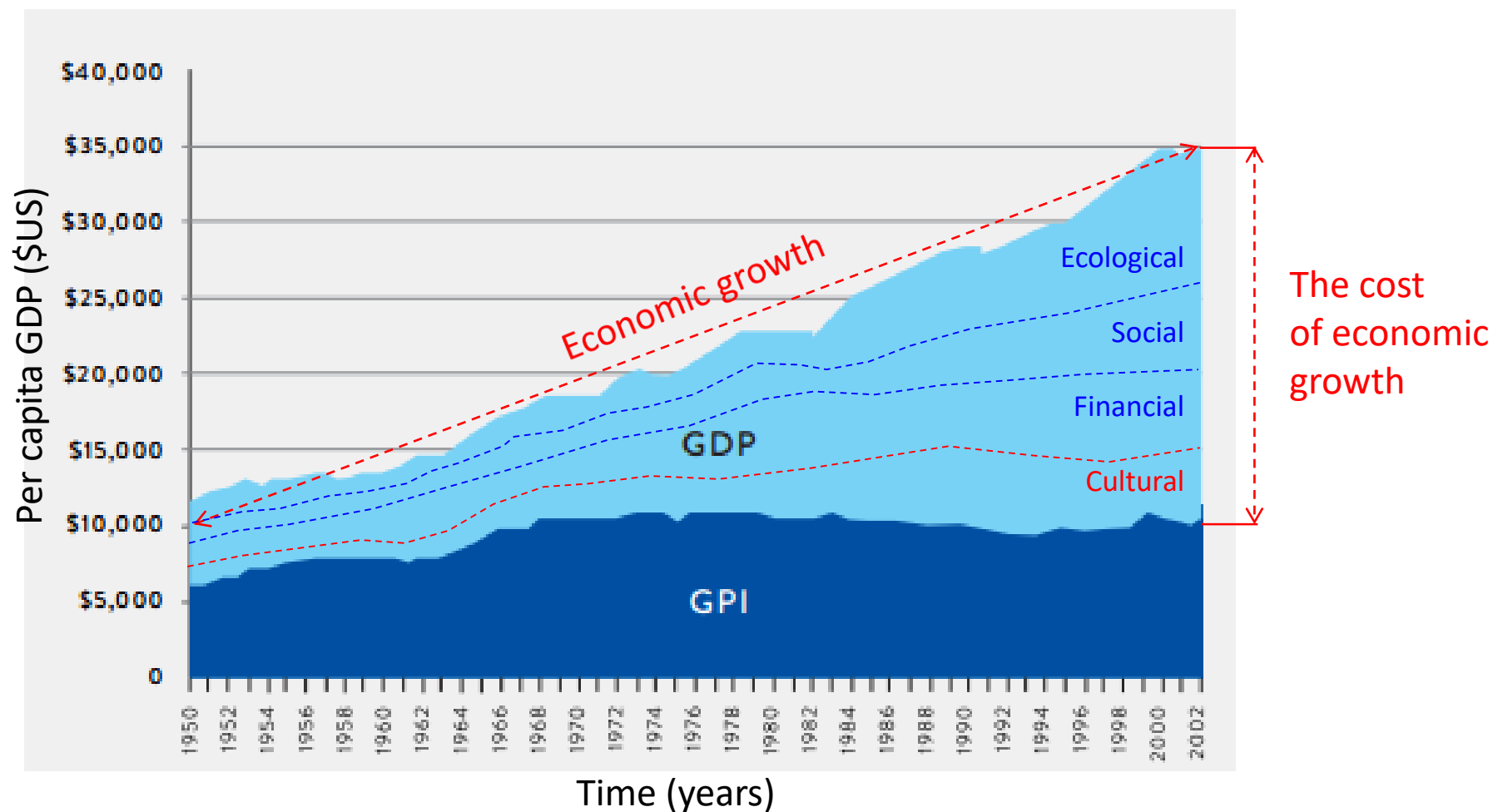
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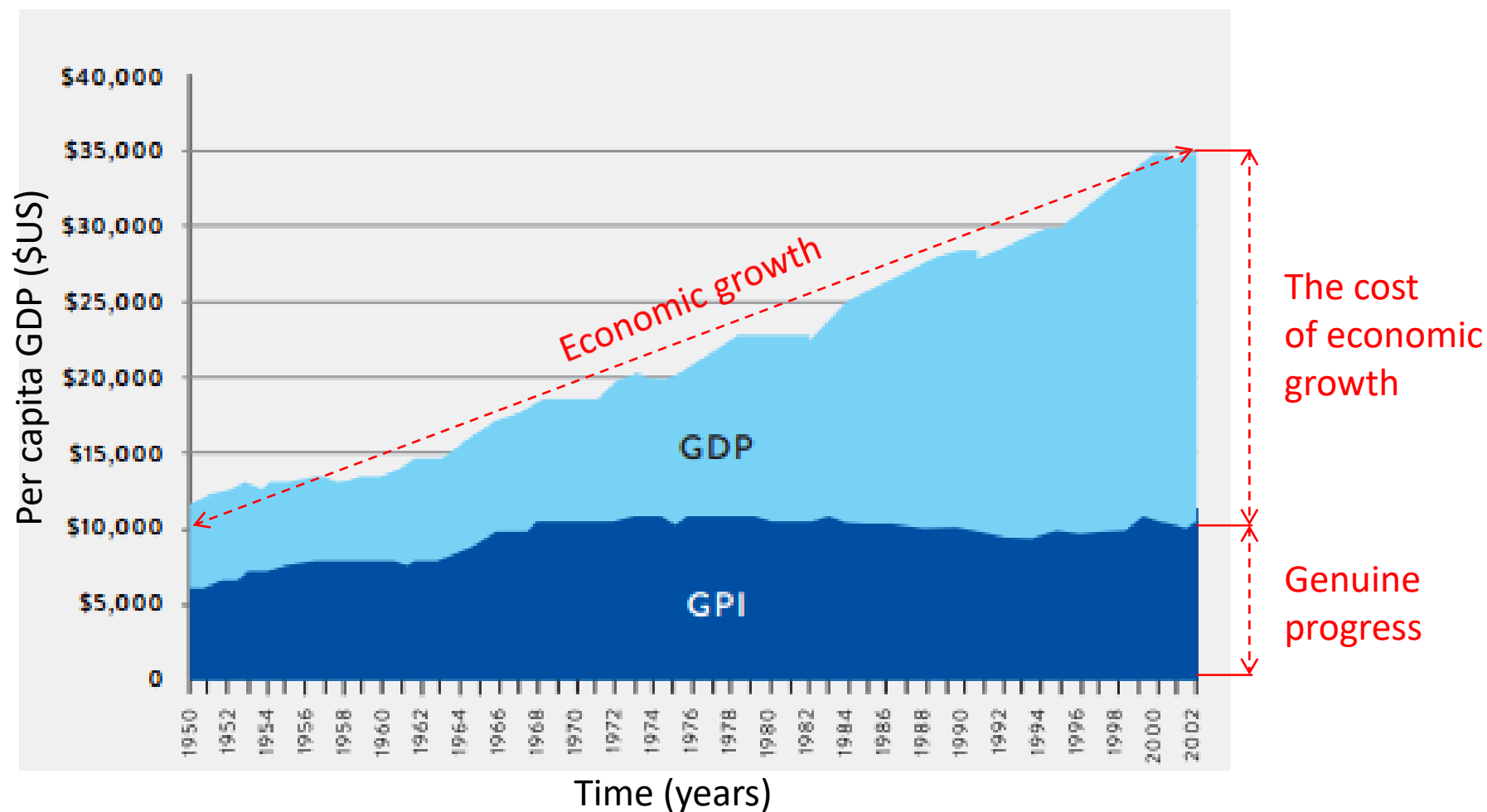
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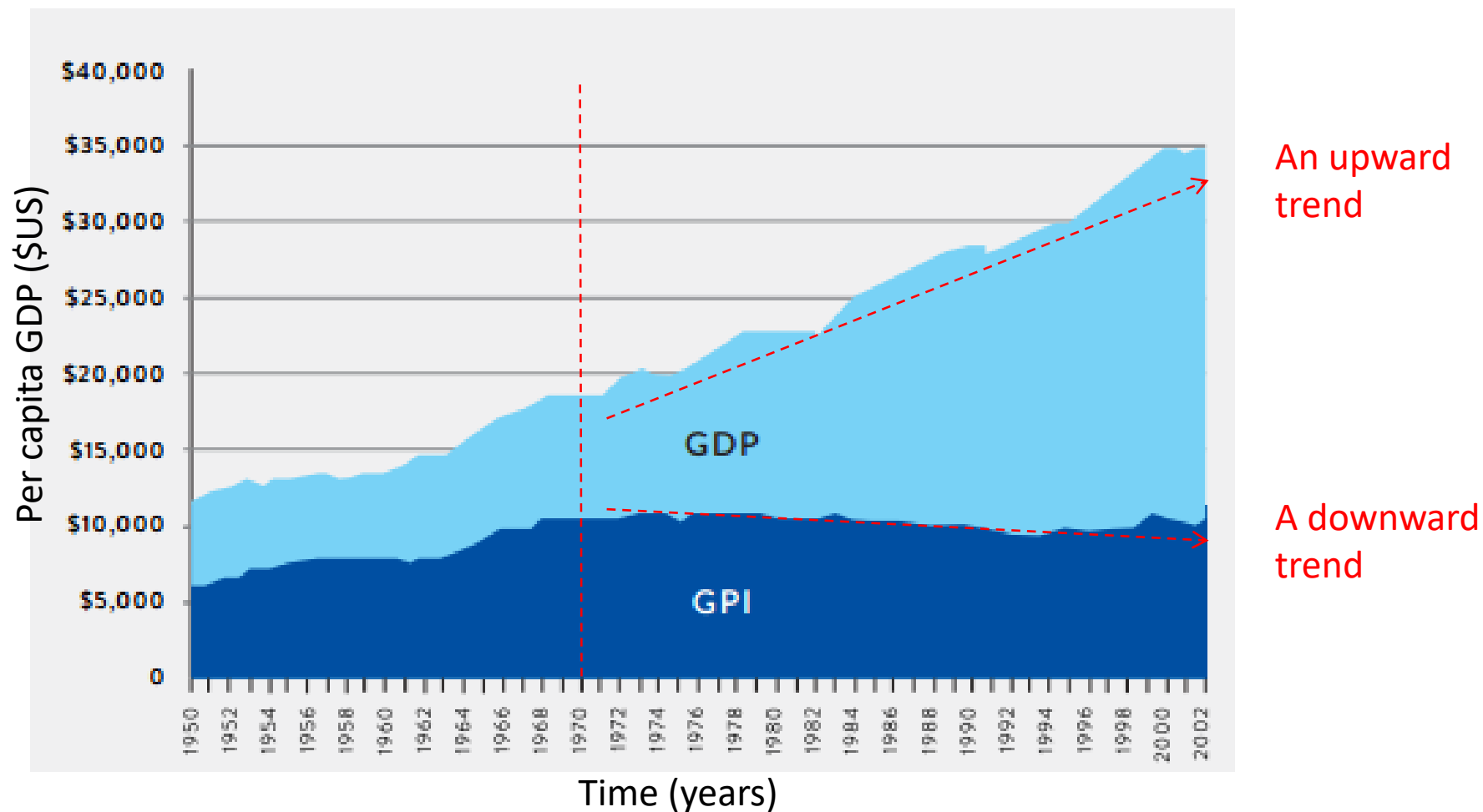
GDP/GPI per captia (1950–2002) for the USA



GDP/GPI per captia (1950–2002) for the USA

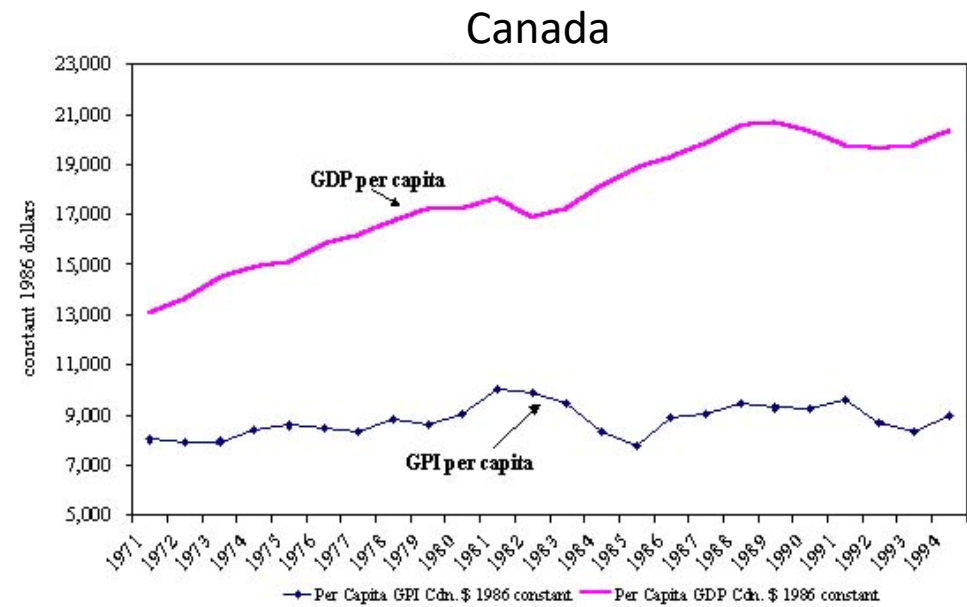
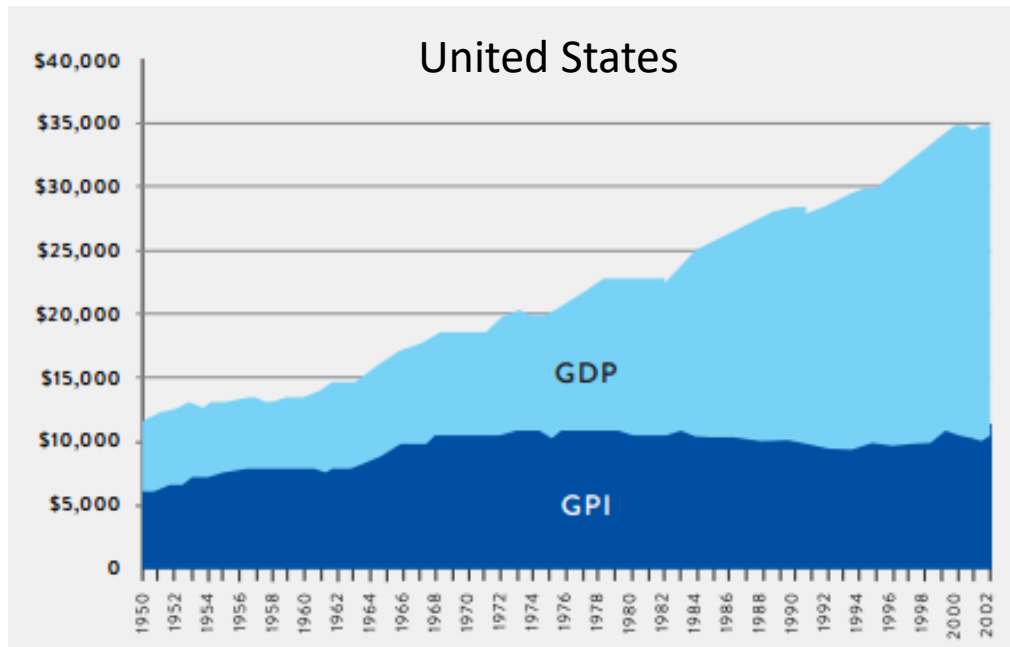


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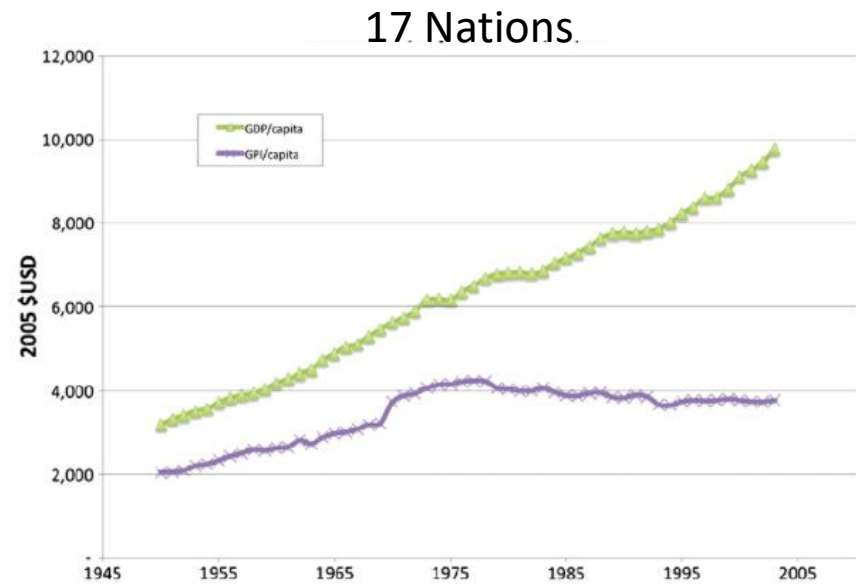
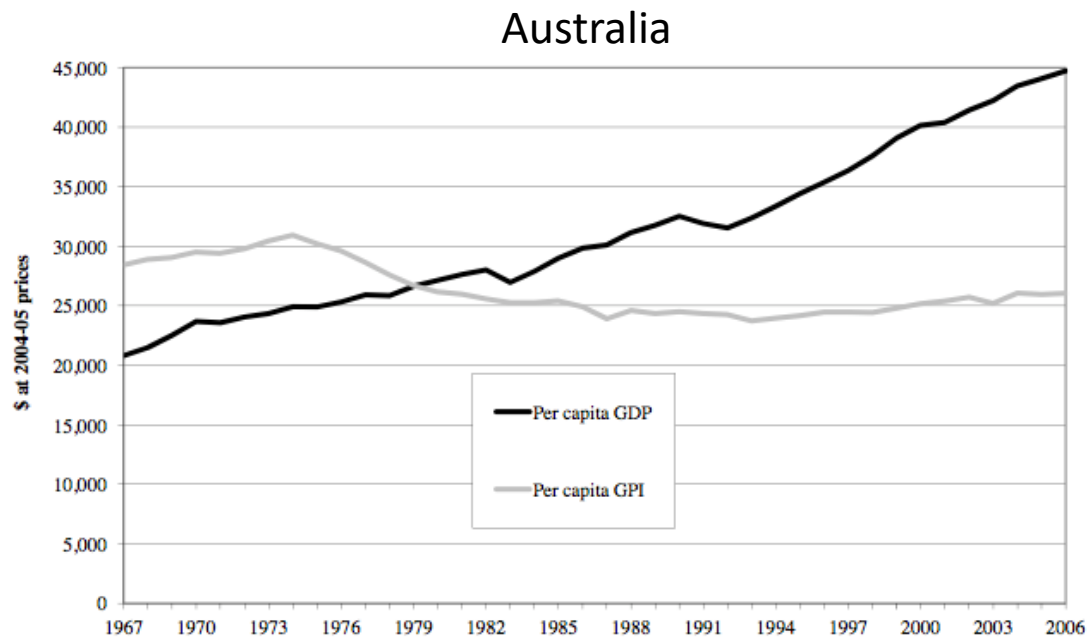


The key message of GPI accounting so far ...

More economic growth \neq more wellbeing



Source: Messinger and Tarasoff (1997)



As noted - 2 models of economy in NZ

NZ mixed market economy

- Pākehā worldview
- English language
- Incentives and rewards
- Theoretically (value-free)
- Property rights
- Profit-making
- Free markets
- Pākehā cultural survival
- Whānau Māori decline
- Rules, laws, customs

Whānau Māori = Ōhanga Māori

- Te Ao Māori
- Te Reo Māori
- Incentives & rewards
- Kaupapa-based
- Whānaungatanga
- Manaakitanga
- Kotahitanga
- Whānau Māori survival
- Maintains whānau Māori wellbeing
- Kawa, kaupapa, tikanga

GDP Growth

Wellbeing decline

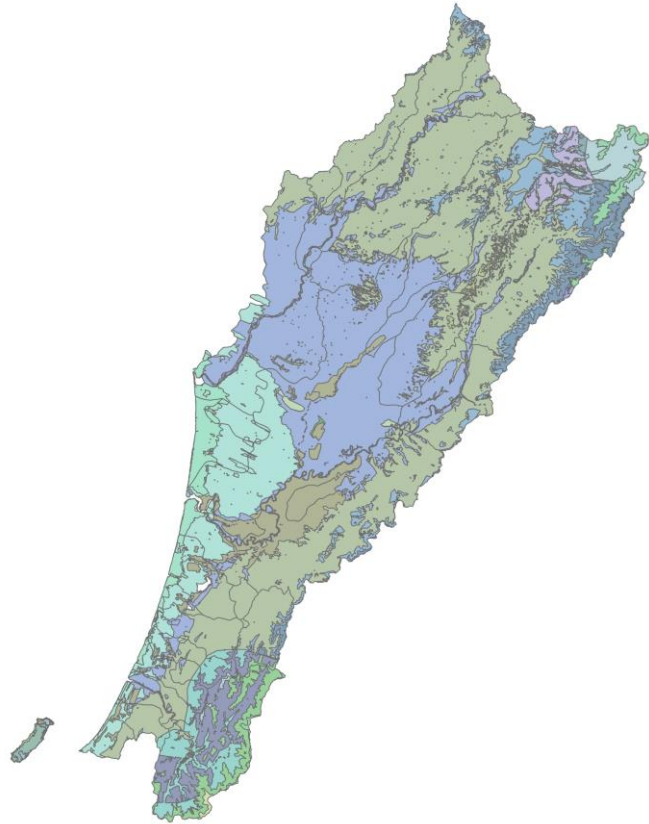
NZ mixed market economy

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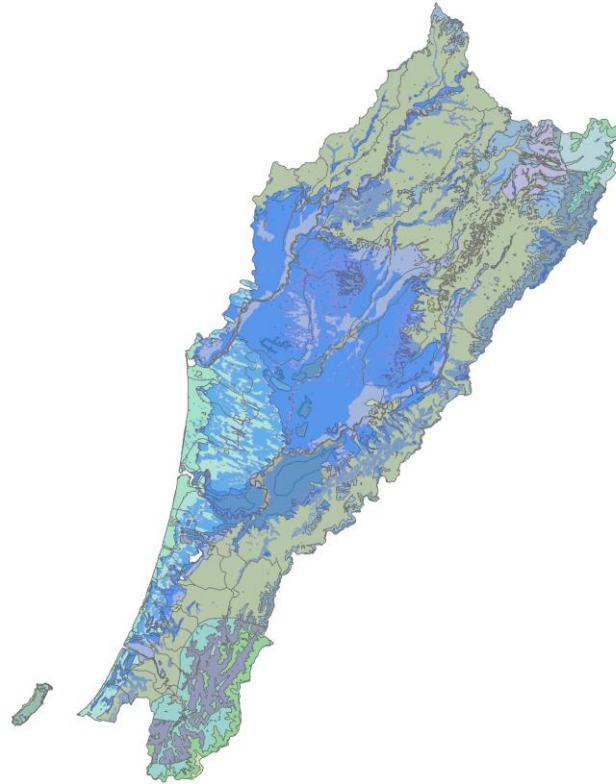
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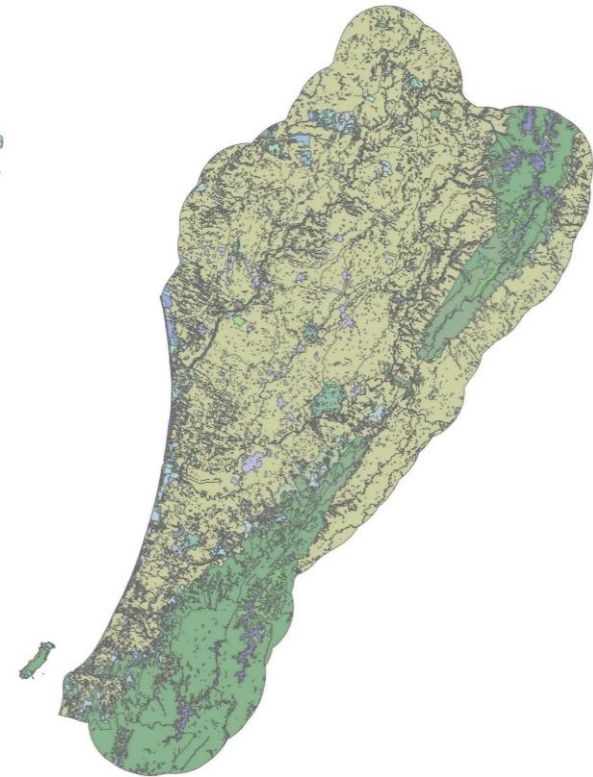
Manawatū and Horowhenua



Pre-1840 Ngahere

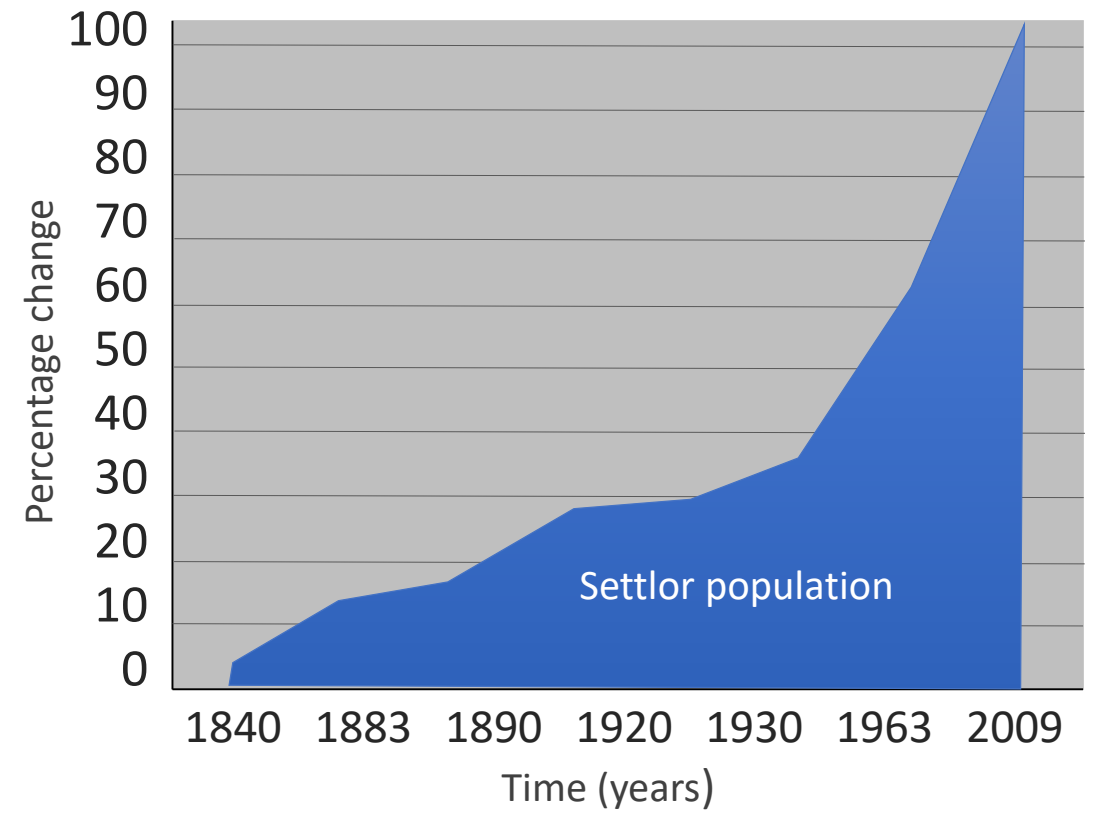


Pre-1840 kūkūwai



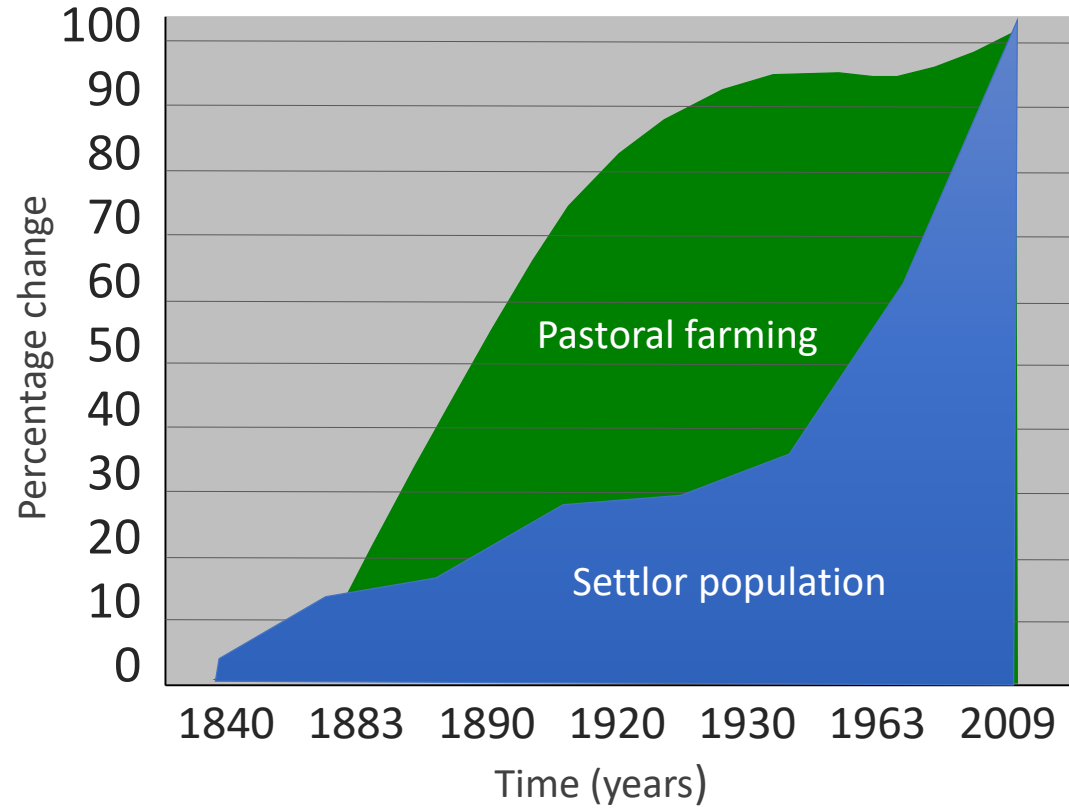
2012 Landcover

Manawatū and Horowhenua (1840–2009)



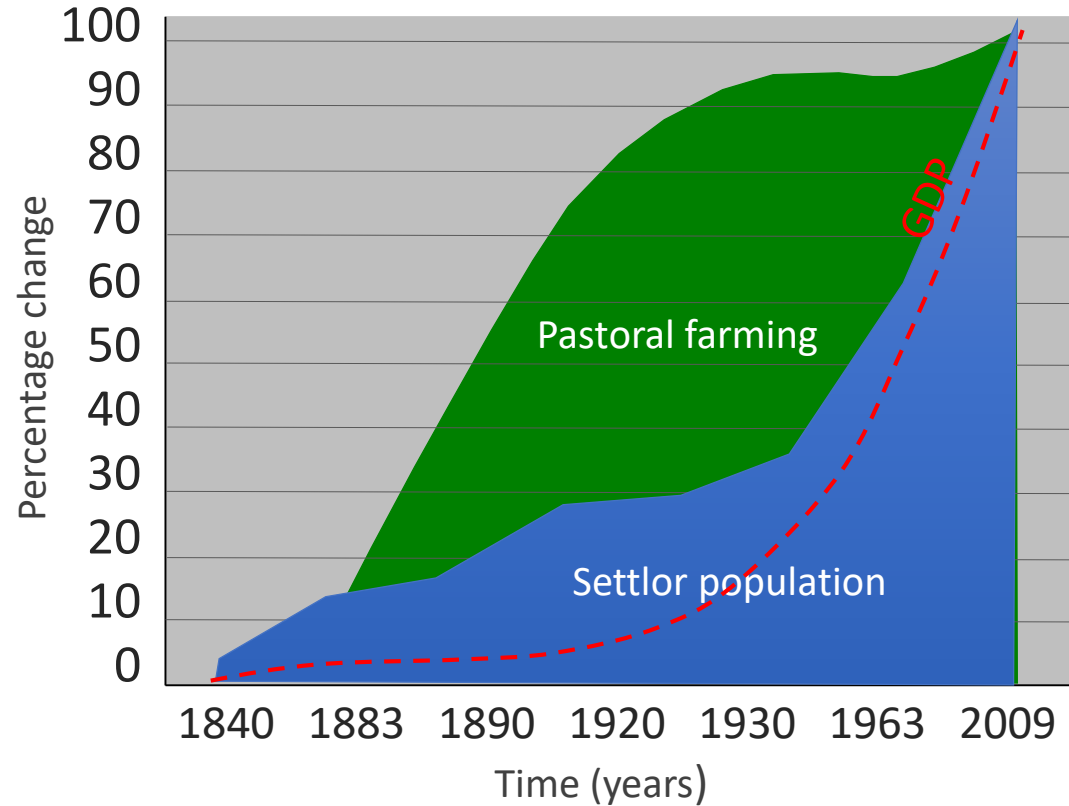
Manawatū and Horowhenua (1840–2009)

Growth in the settlor economy



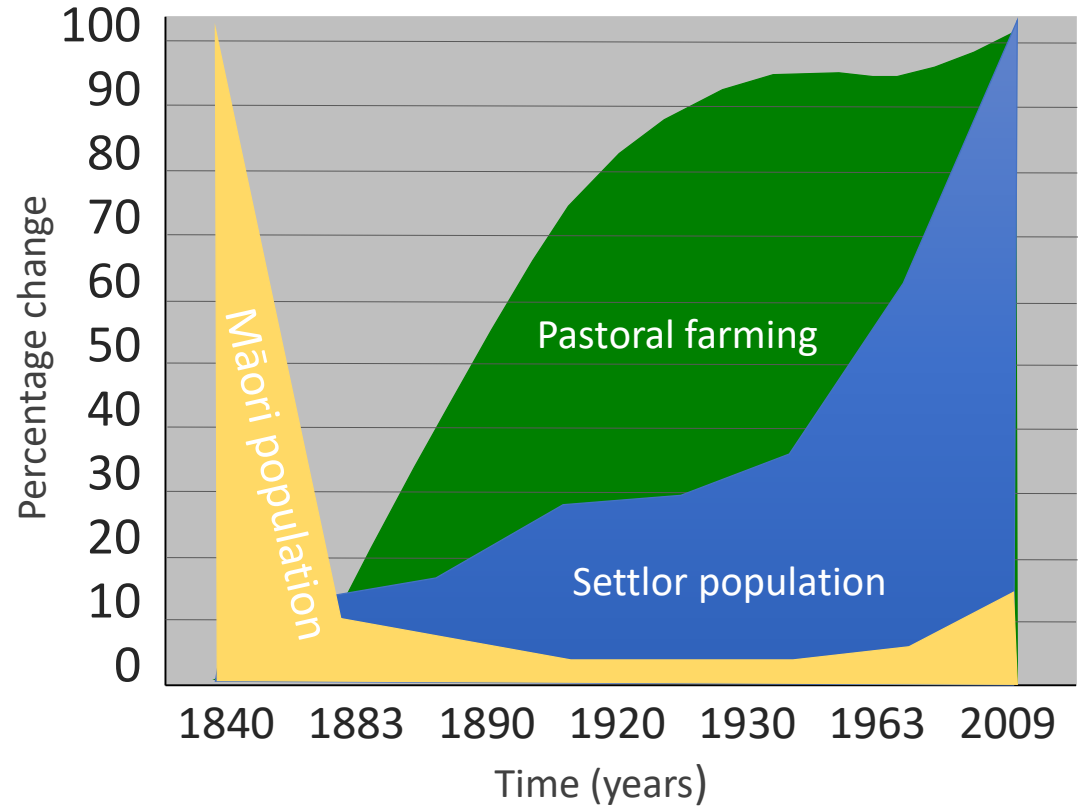
Manawatū and Horowhenua (1840–2009)

Growth in the settlor economy



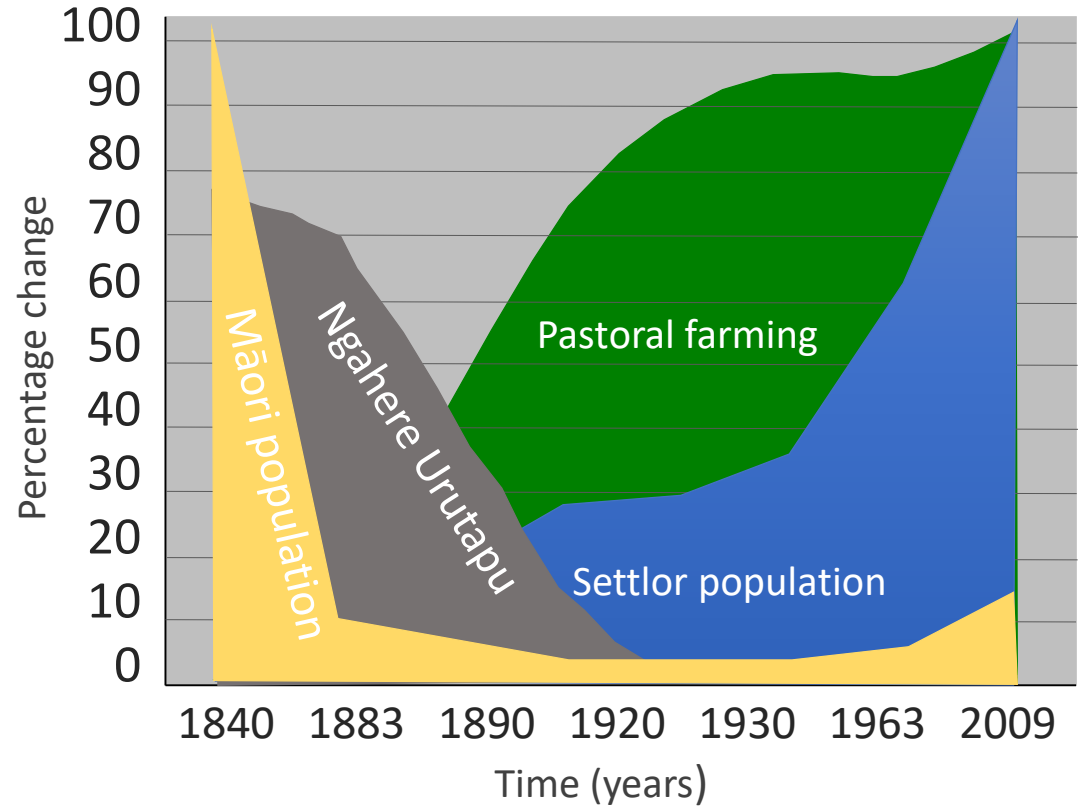
Manawatū and Horowhenua (1840–2009)

Decline in Te Whānau o Rangi rāua ko Papatūānuku



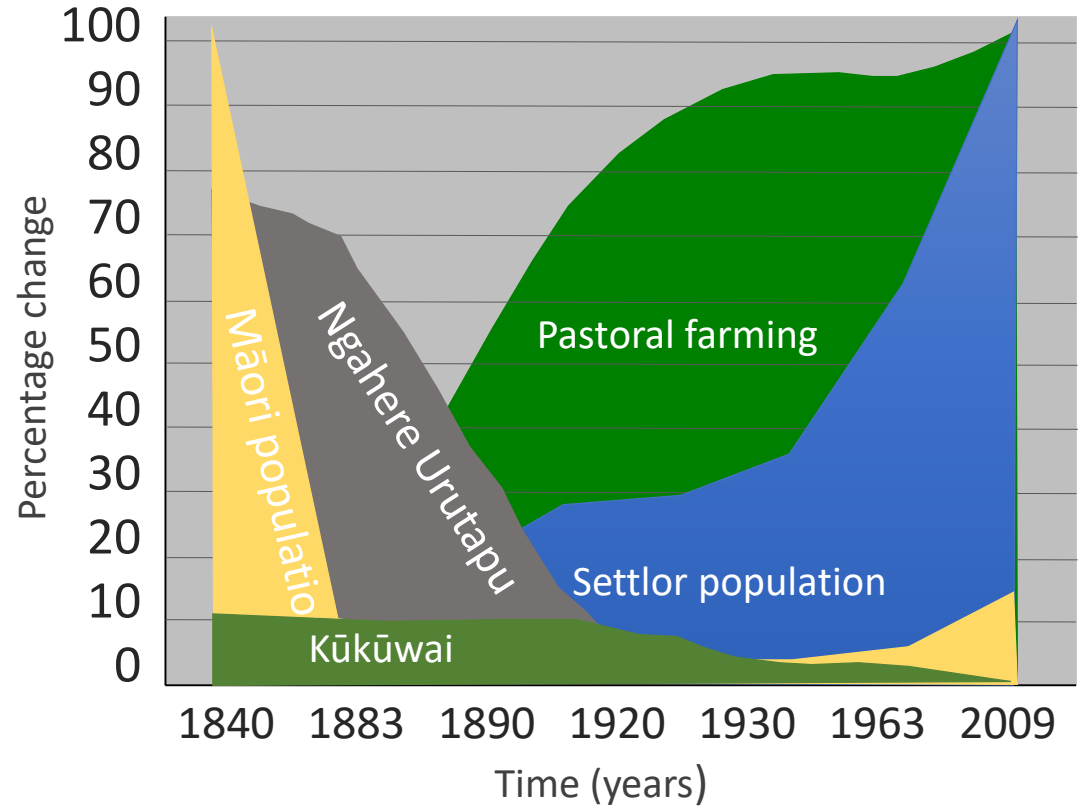
Manawatū and Horowhenua (1840–2009)

Decline in Te Whānau o Rangi rāua ko Papatūānuku



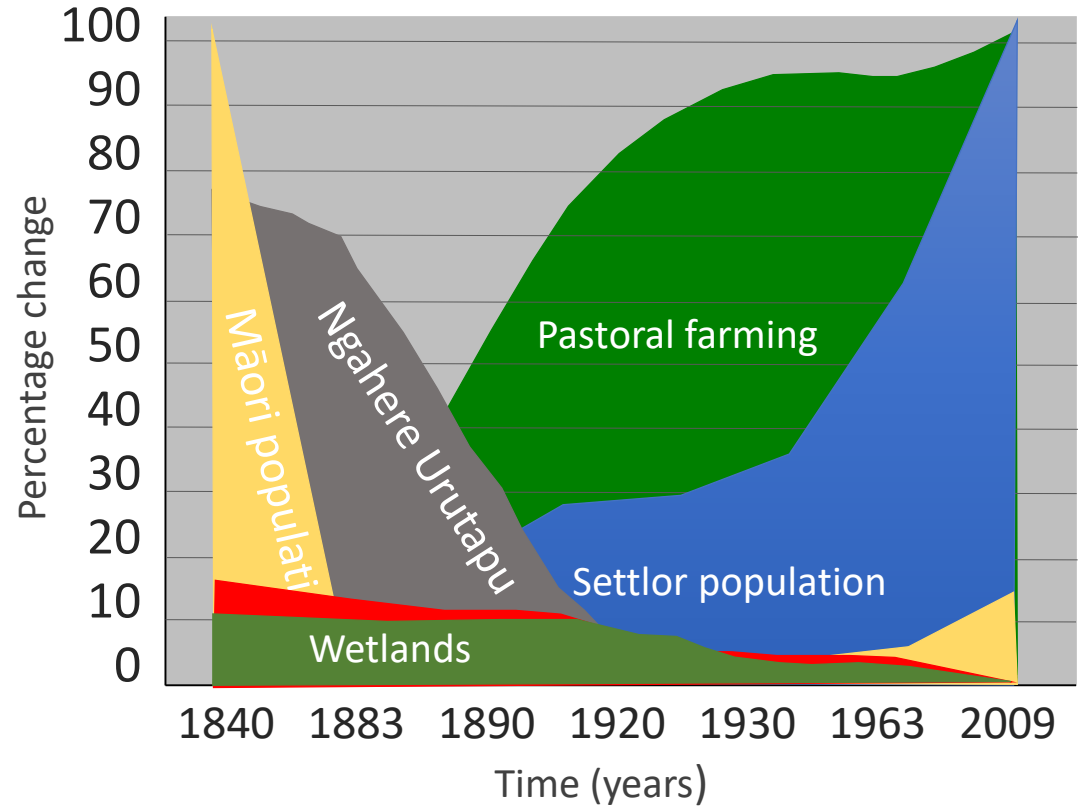
Manawatū and Horowhenua (1840–2009)

Decline in Te Whānau o Rangi rāua ko Papatūānuku

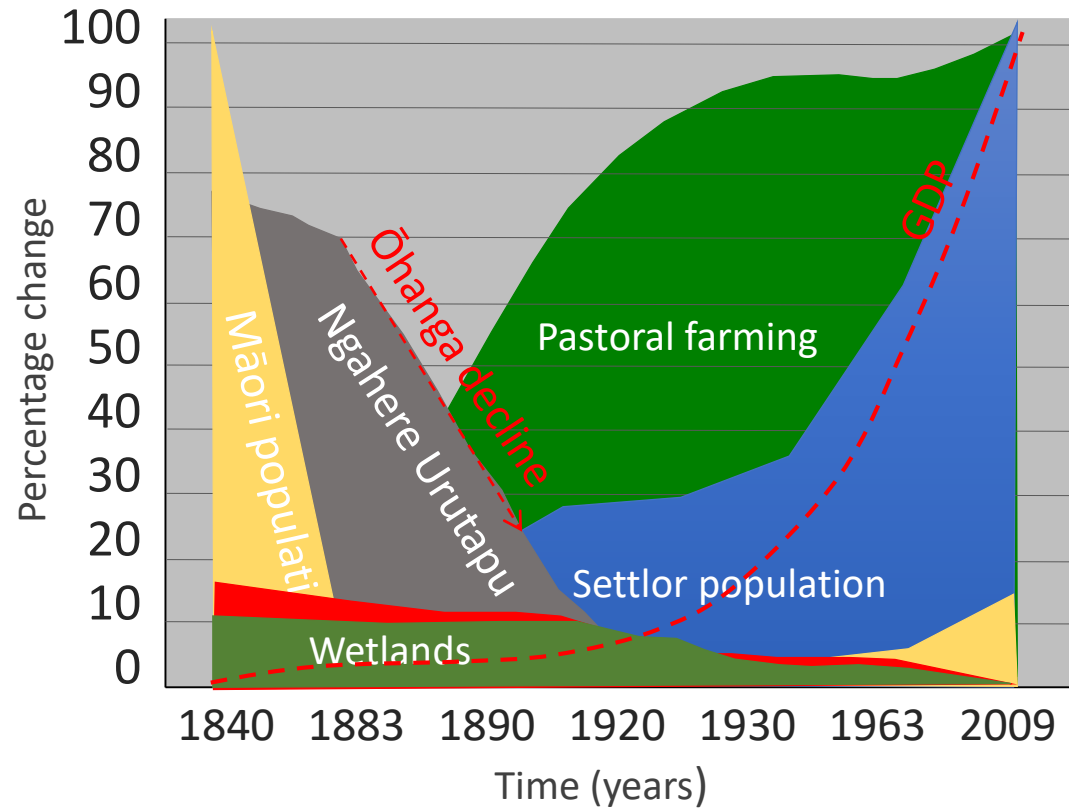


Manawatū and Horowhenua (1840–2009)

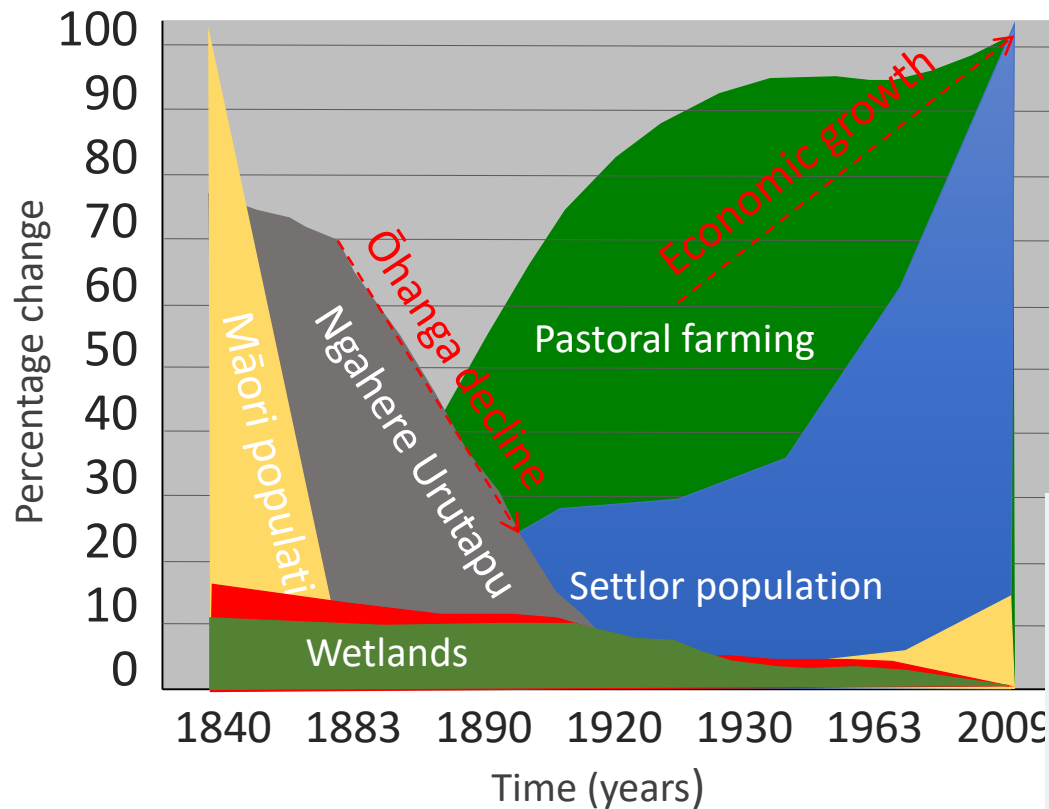
Decline in Te Whānau o Rangi rāua ko Papatūānuku



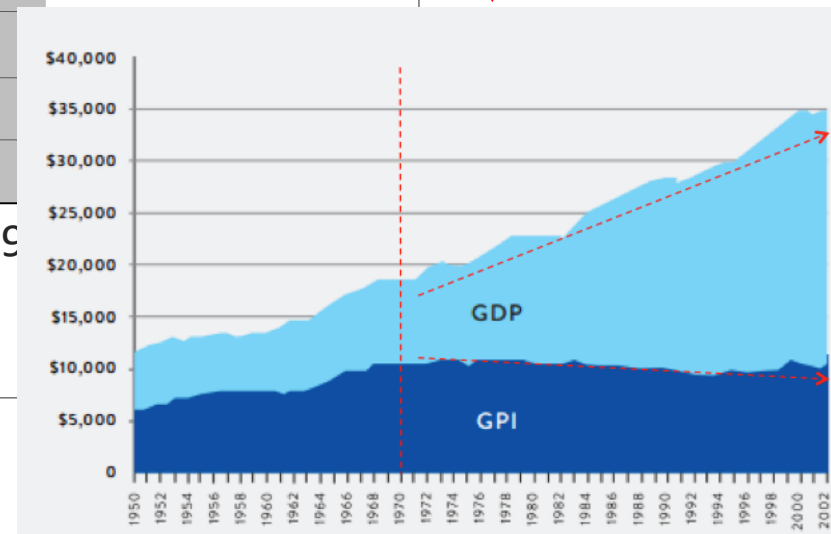
Manawatū and Horowhenua (1840–2009)



Manawatū and Horowhenua (1840–2009)

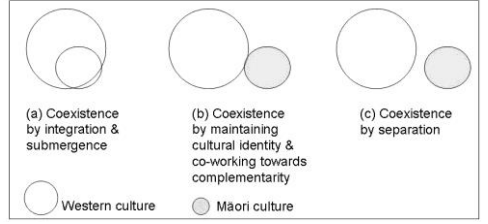
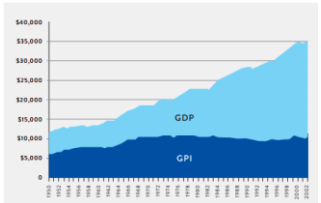
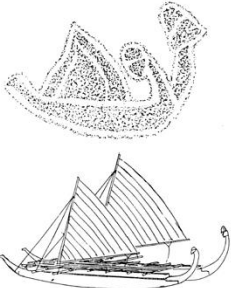


Striking similarity

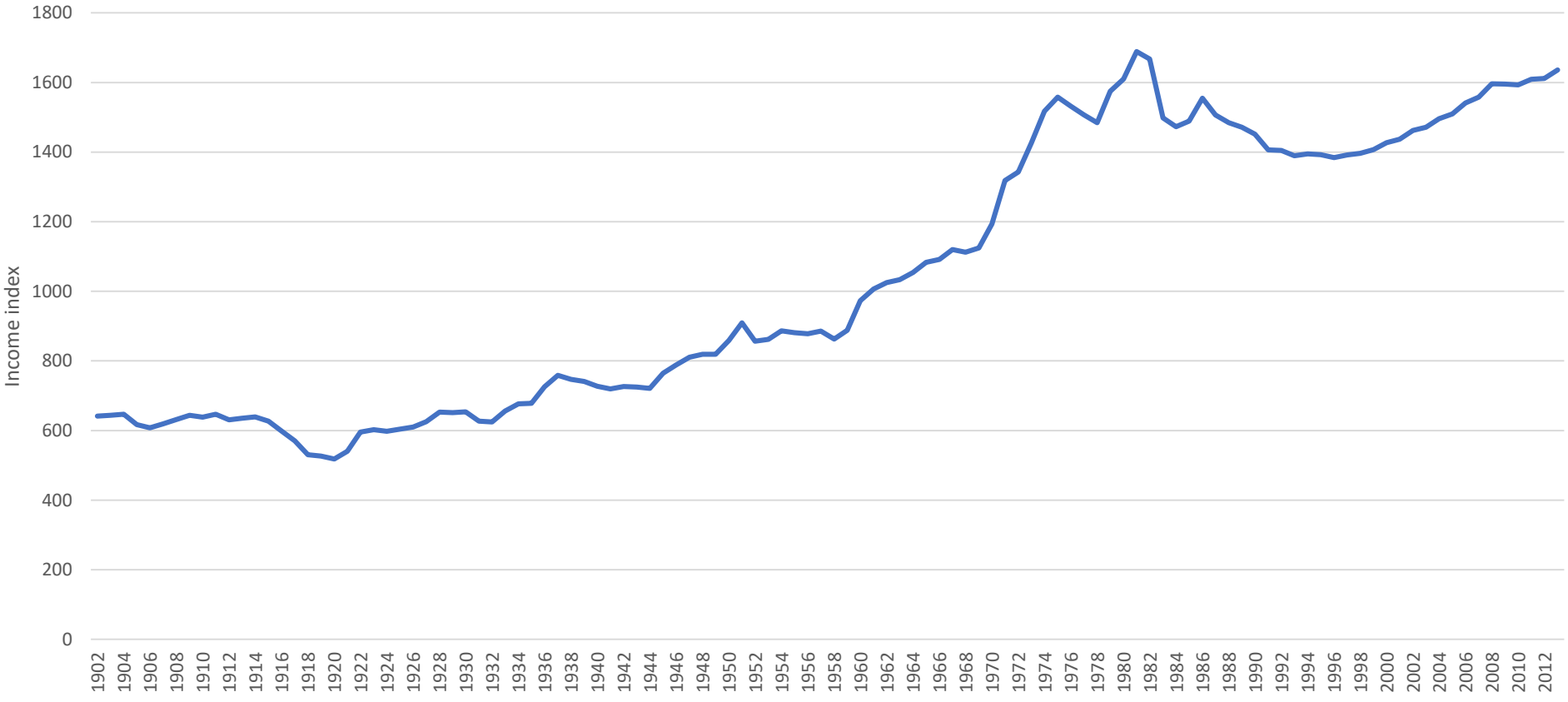


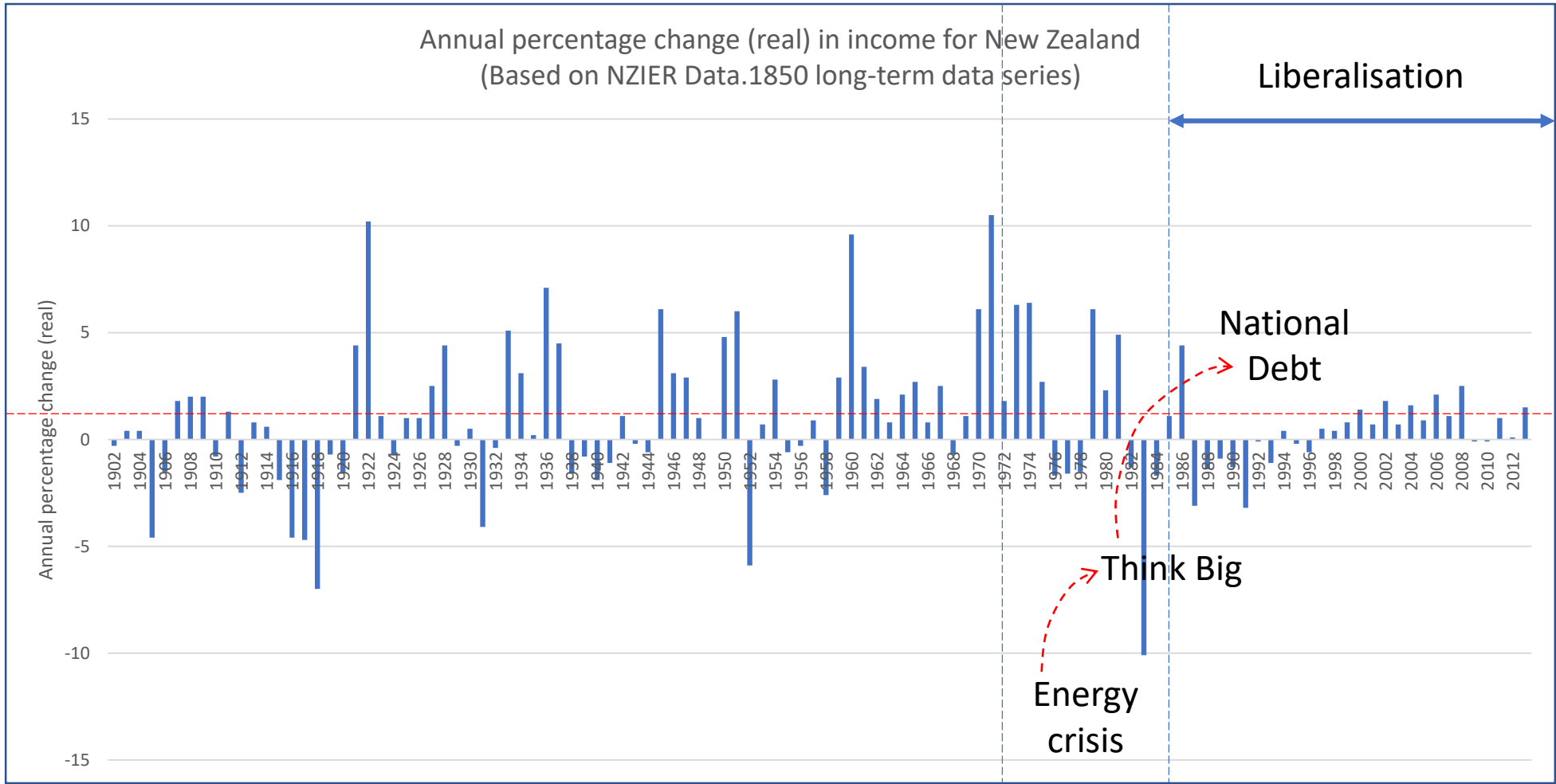
Why?

#2 – Low wage growth for 3 decades



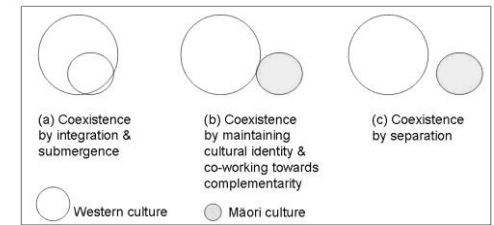
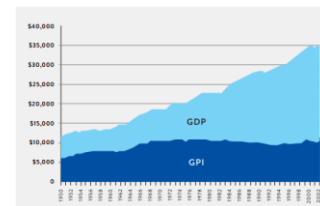
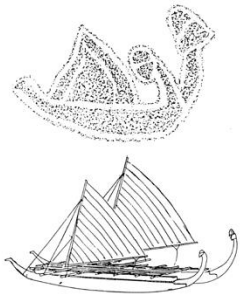
Average weekly income index (real) for New Zealand
(Based on NZIER Data.1850 long-term data series)



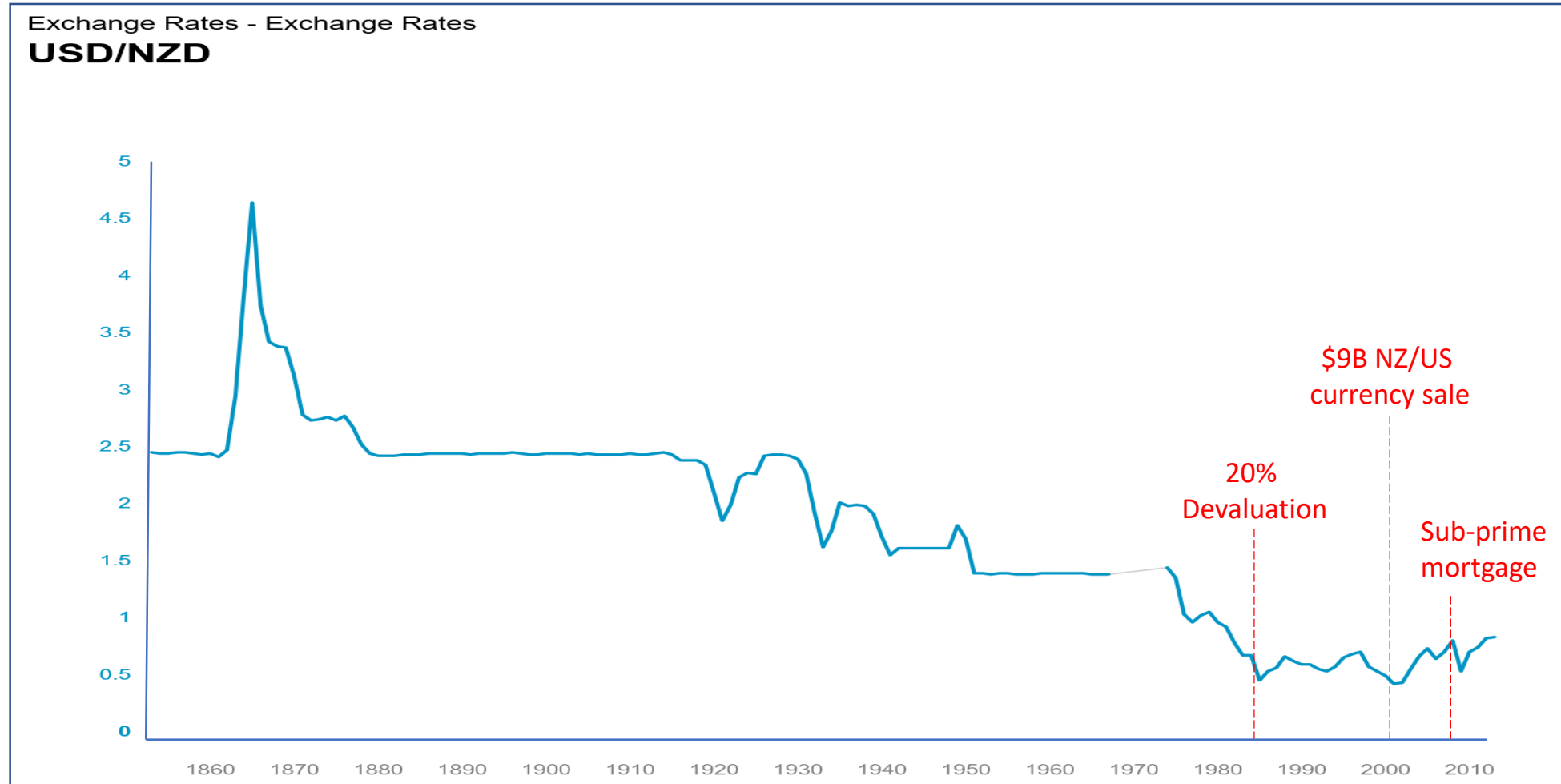


Why?

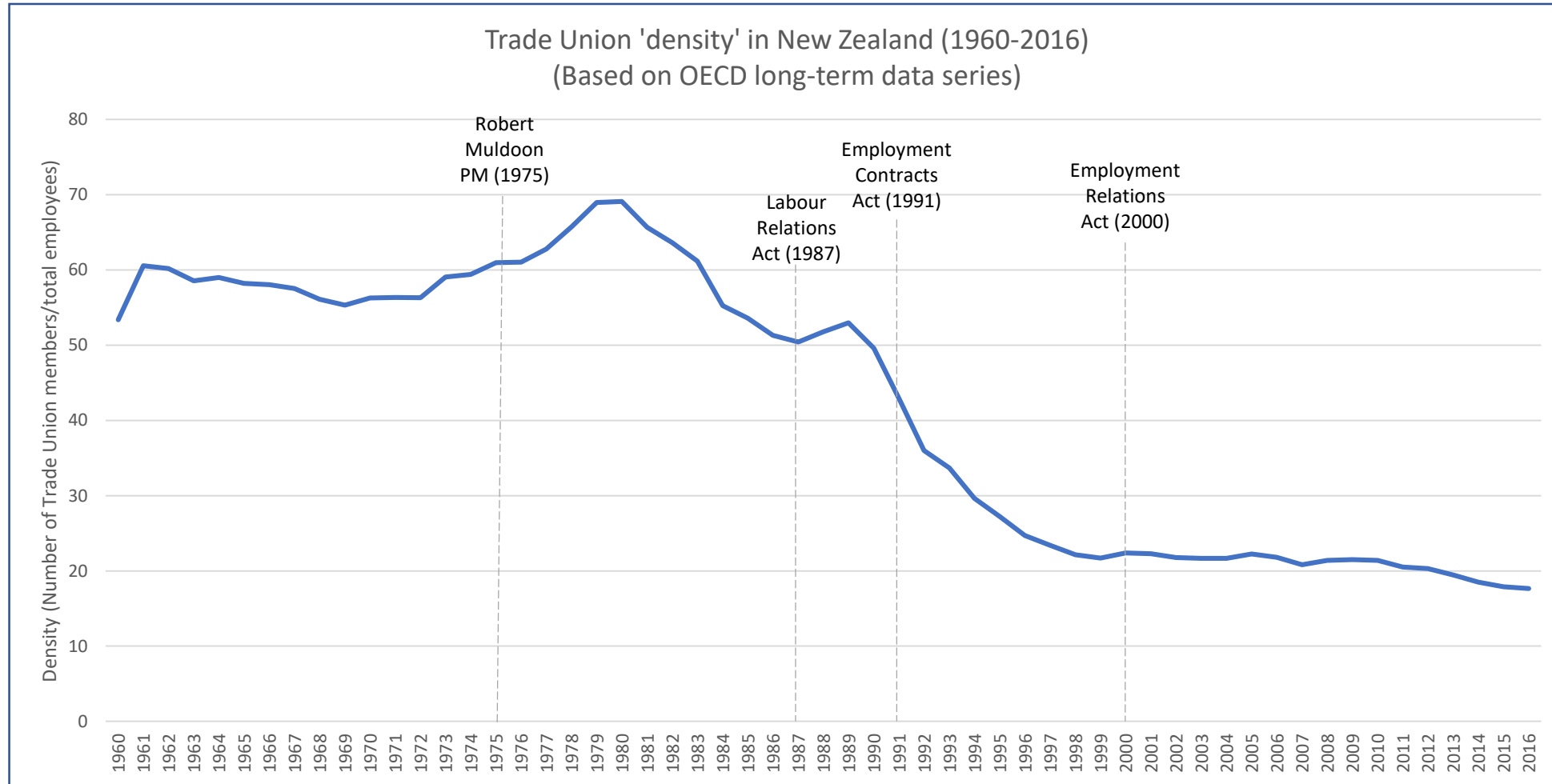
6 macro-economic coping strategies



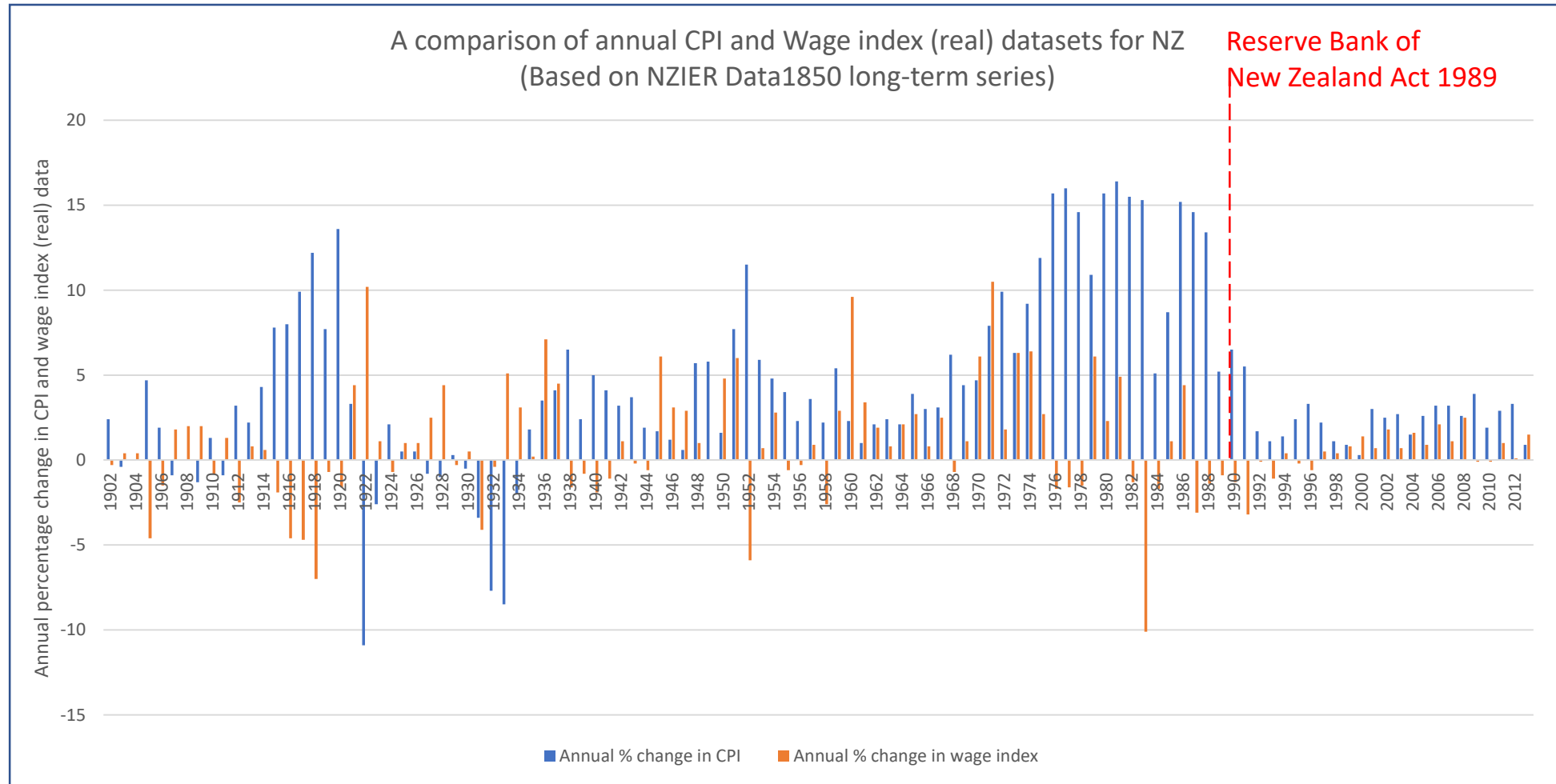
Coping strategy # 1 – currency trading



Coping strategy # 2 – free wage bargaining



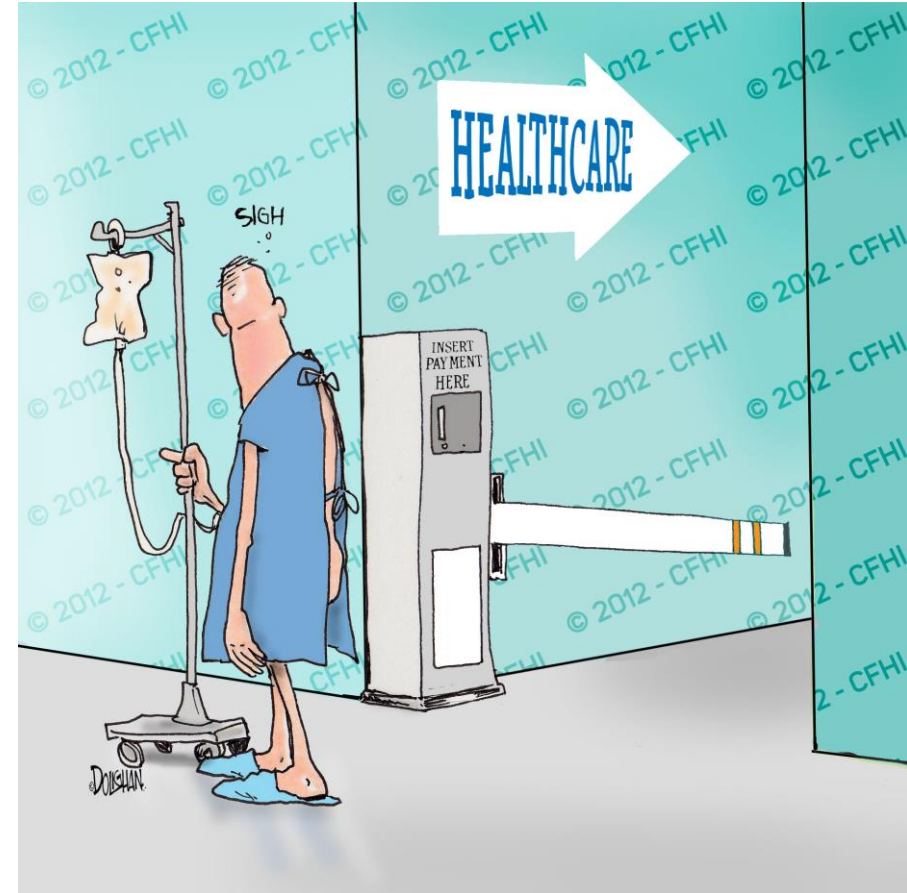
Coping strategy # 3 – control inflation



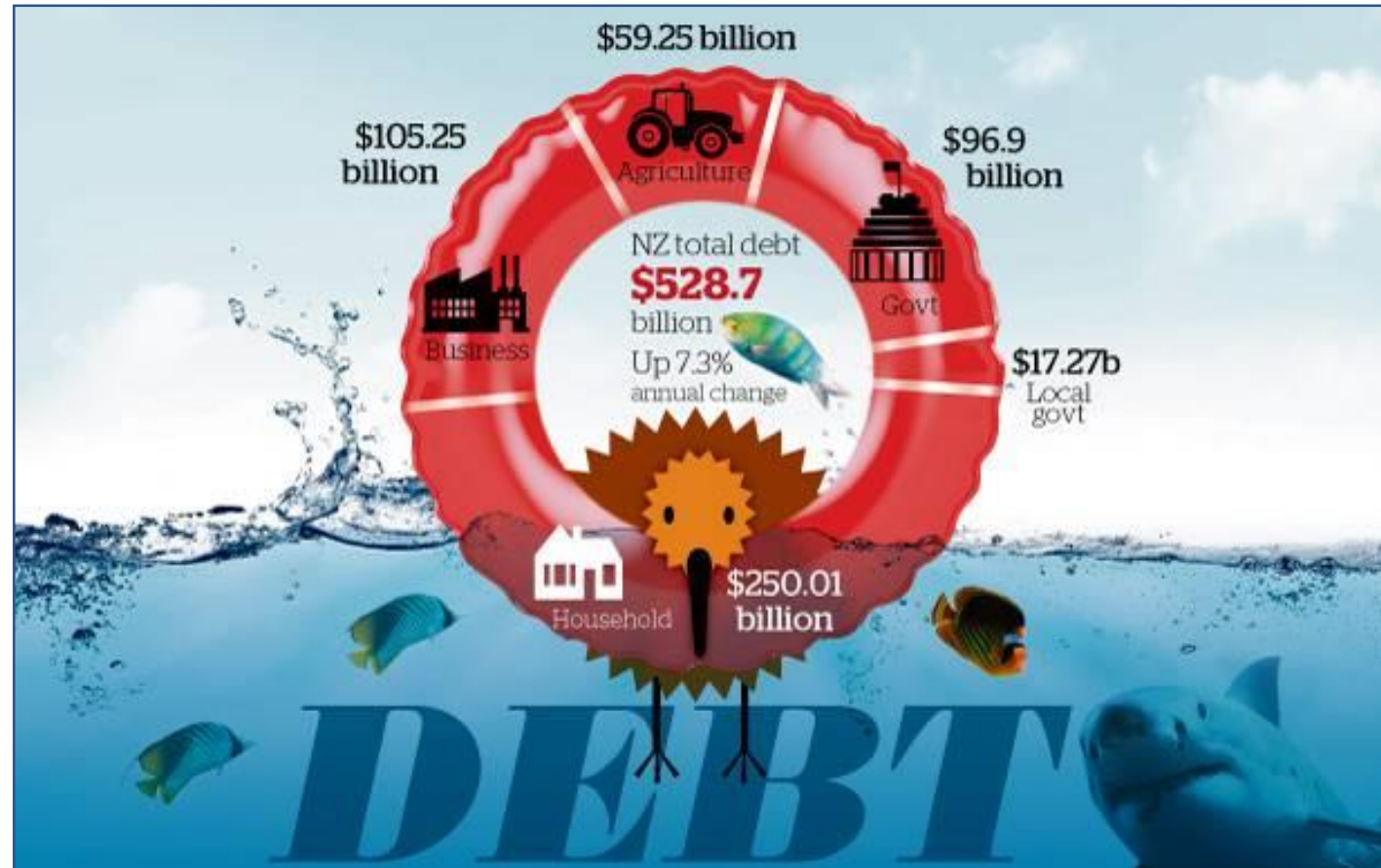
Coping strategy # 4 – state asset sales



Coping strategy # 5 – user pays



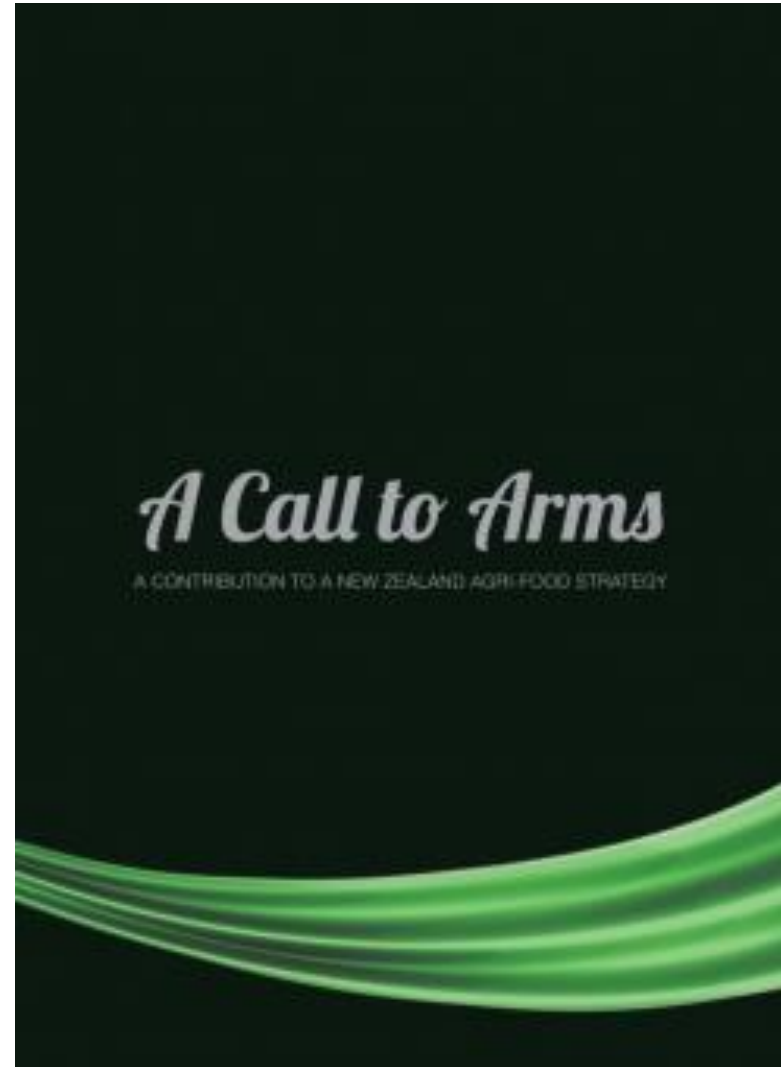
Coping strategy # 5 – aggressive debt reduction



Source: NZ Herald https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11873204

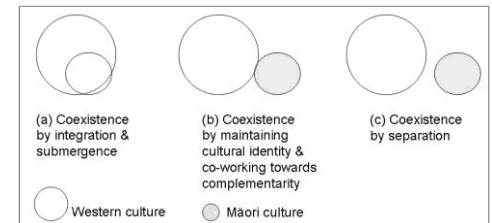
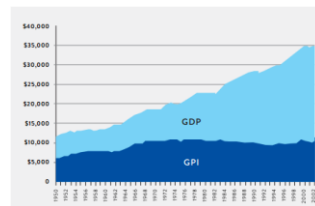
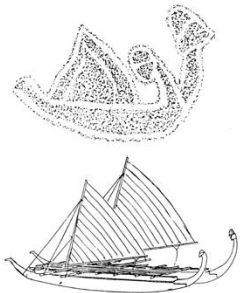
A call to arms

- “The Government’s Business Growth Agenda calls for a trebling of the real value of food exports to about \$60 billion (in real terms in 2011 dollars) by 2025 if we are to achieve the standard of living to which we aspire. **This is a real compound annual growth rate (CAGR) of around 7% over the next 13 years ... (Riddet Institute, 2012)”.**



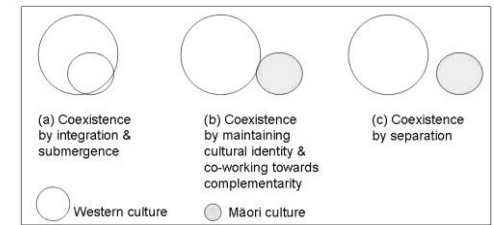
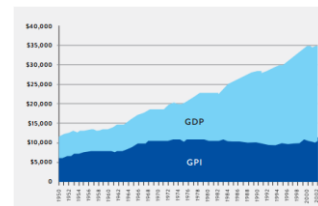
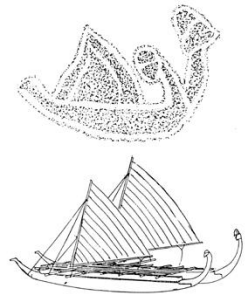
Why?

5 household coping strategies

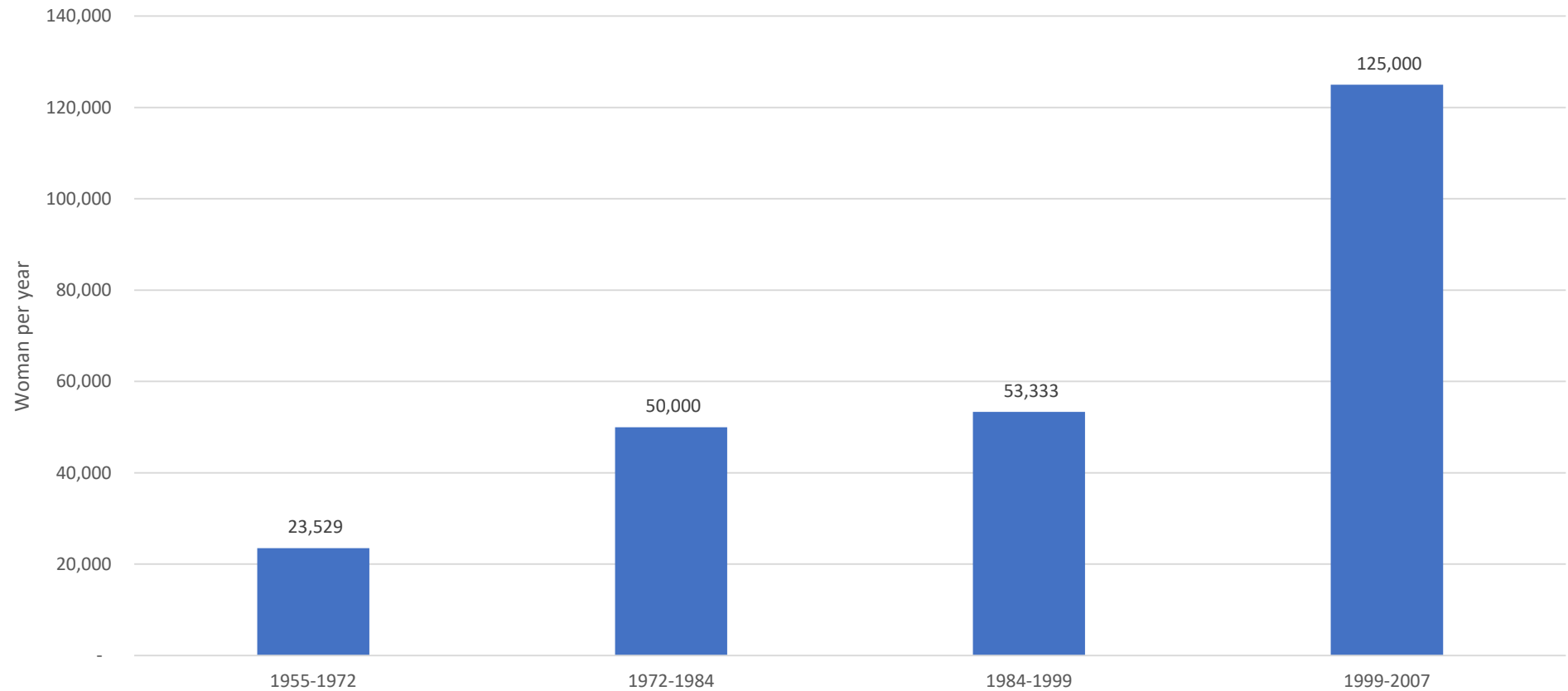


Coping strategy #1

More woman entre the labour market



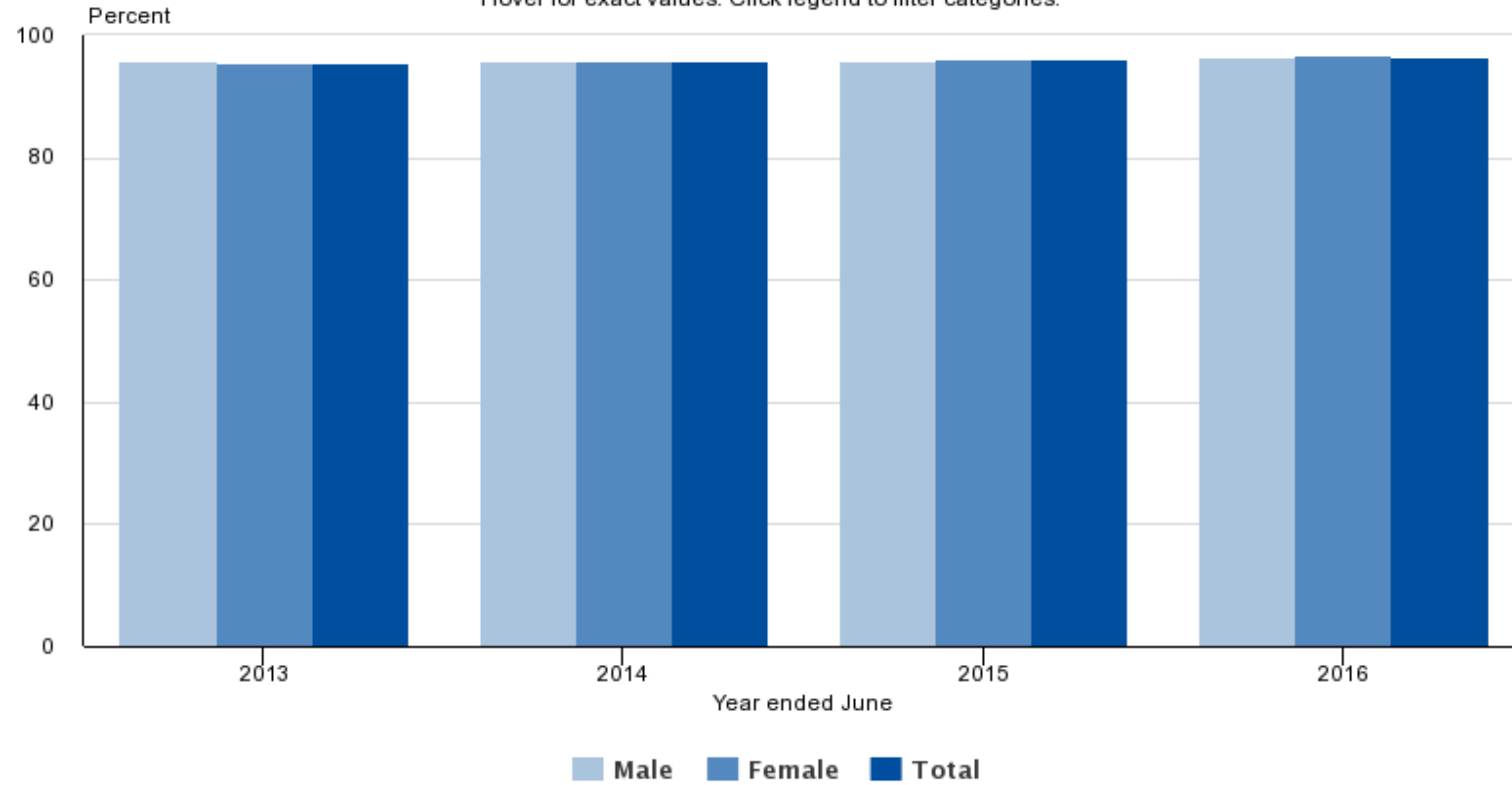
Average rate of entry of woman into the labour force per year (1955-2007)
(Based on NZIER Data1850 long-term data series)



New school entrants with prior ECE participation by sex

Year ended June 2013–16

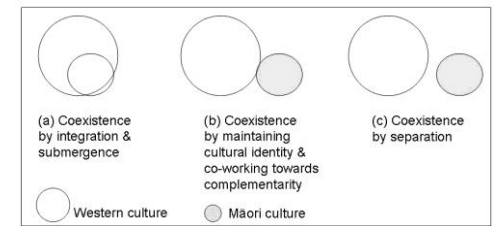
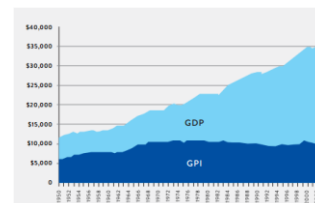
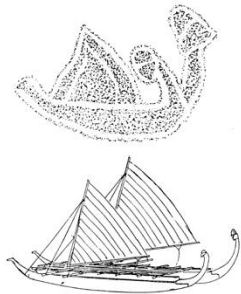
Hover for exact values. Click legend to filter categories.



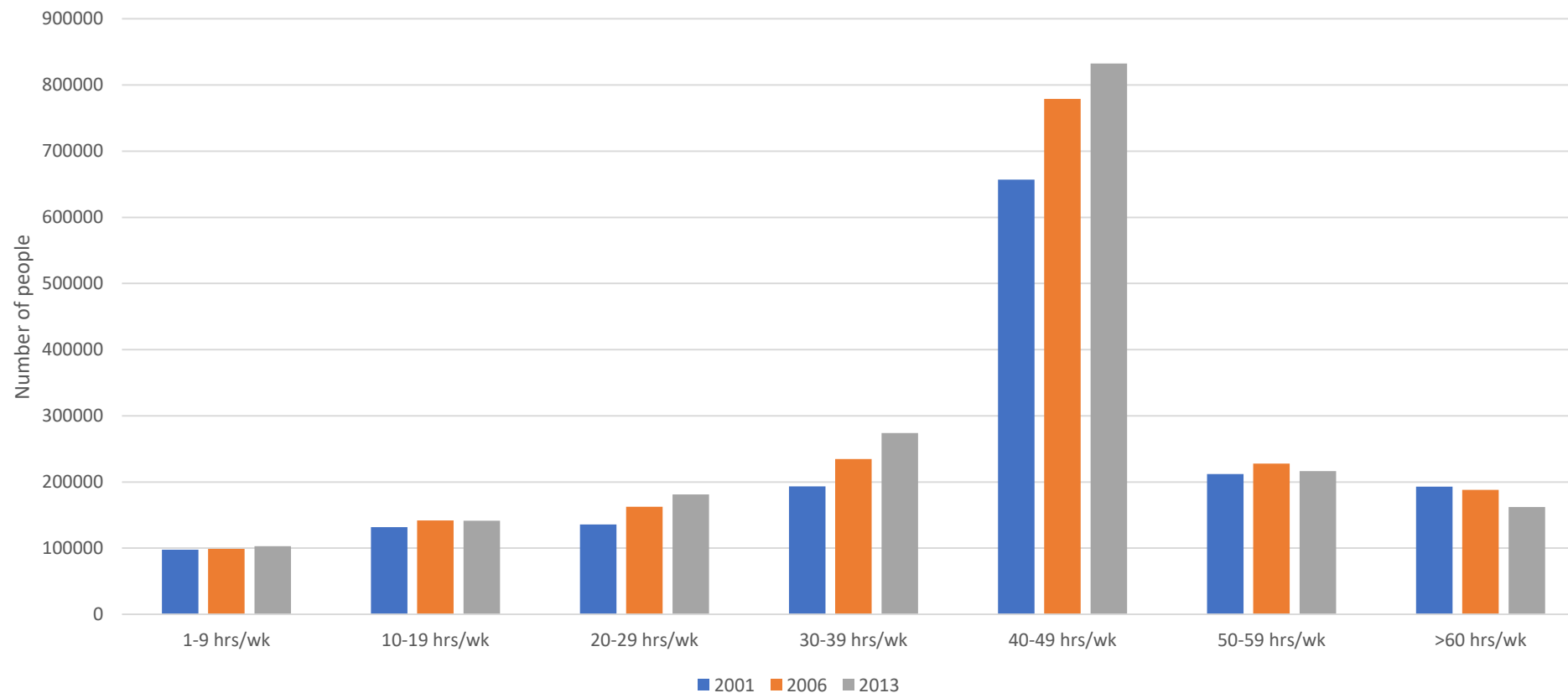
Source: Ministry of Education

Coping strategy #2

Work longer 'paid' hours

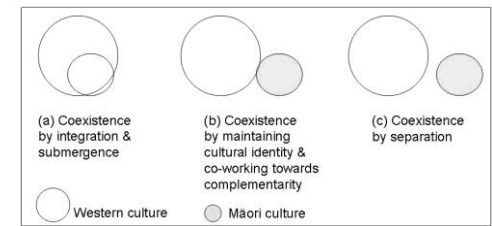
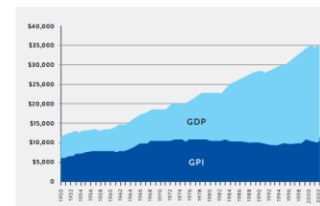


Annual hours worked for the population of the Hawke's Bay Region
(Based on Statistics NZ Census data)

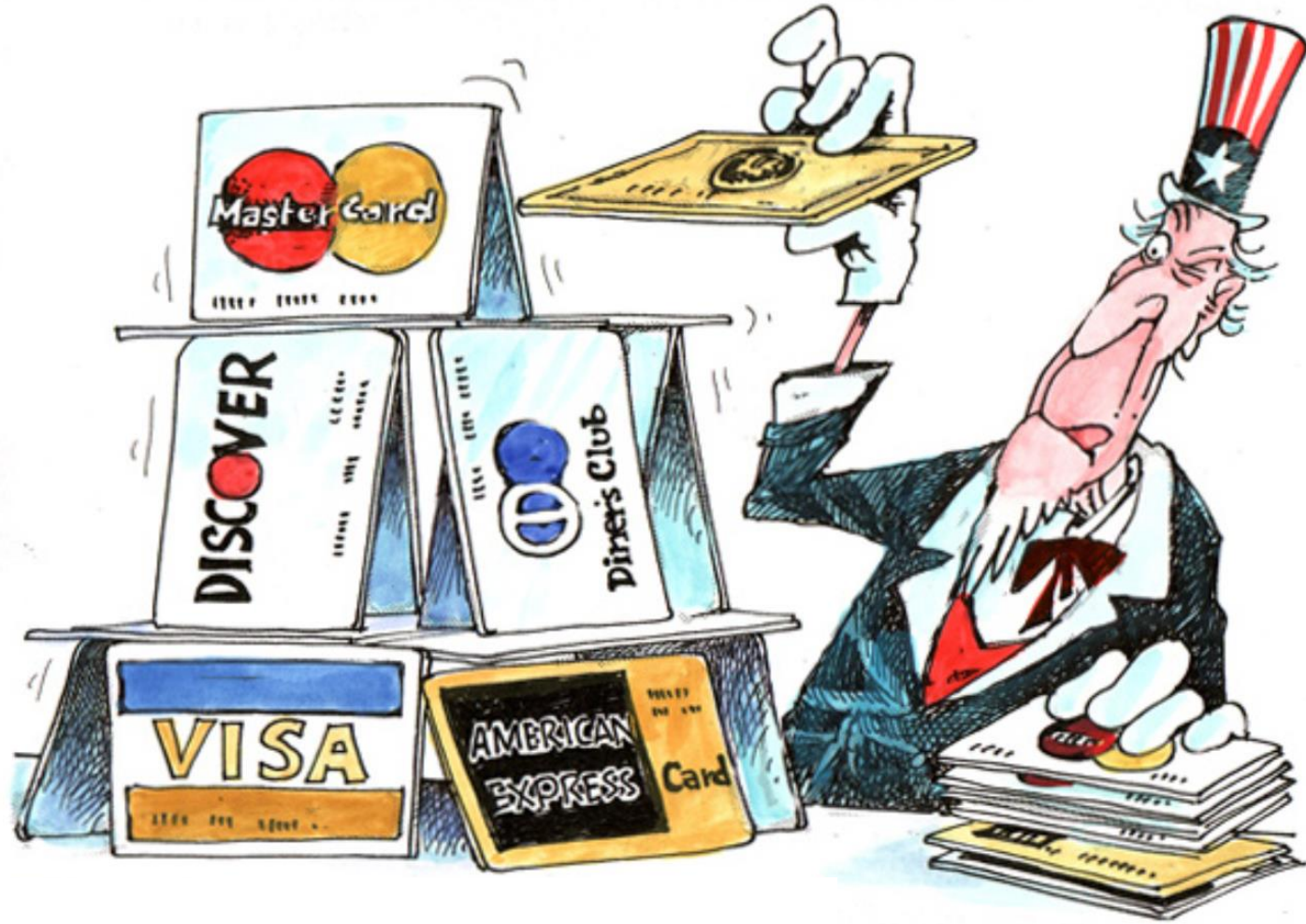


Coping strategy #3

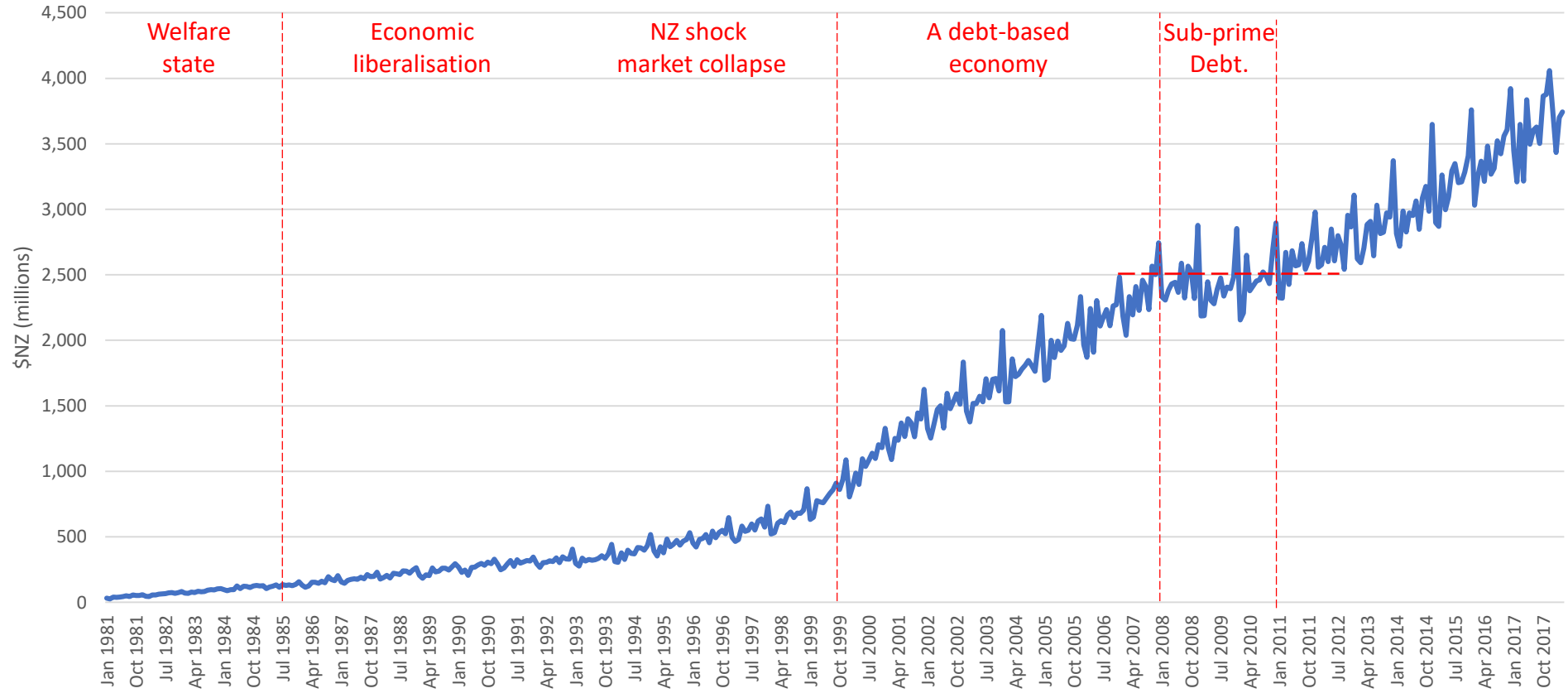
Credit card use



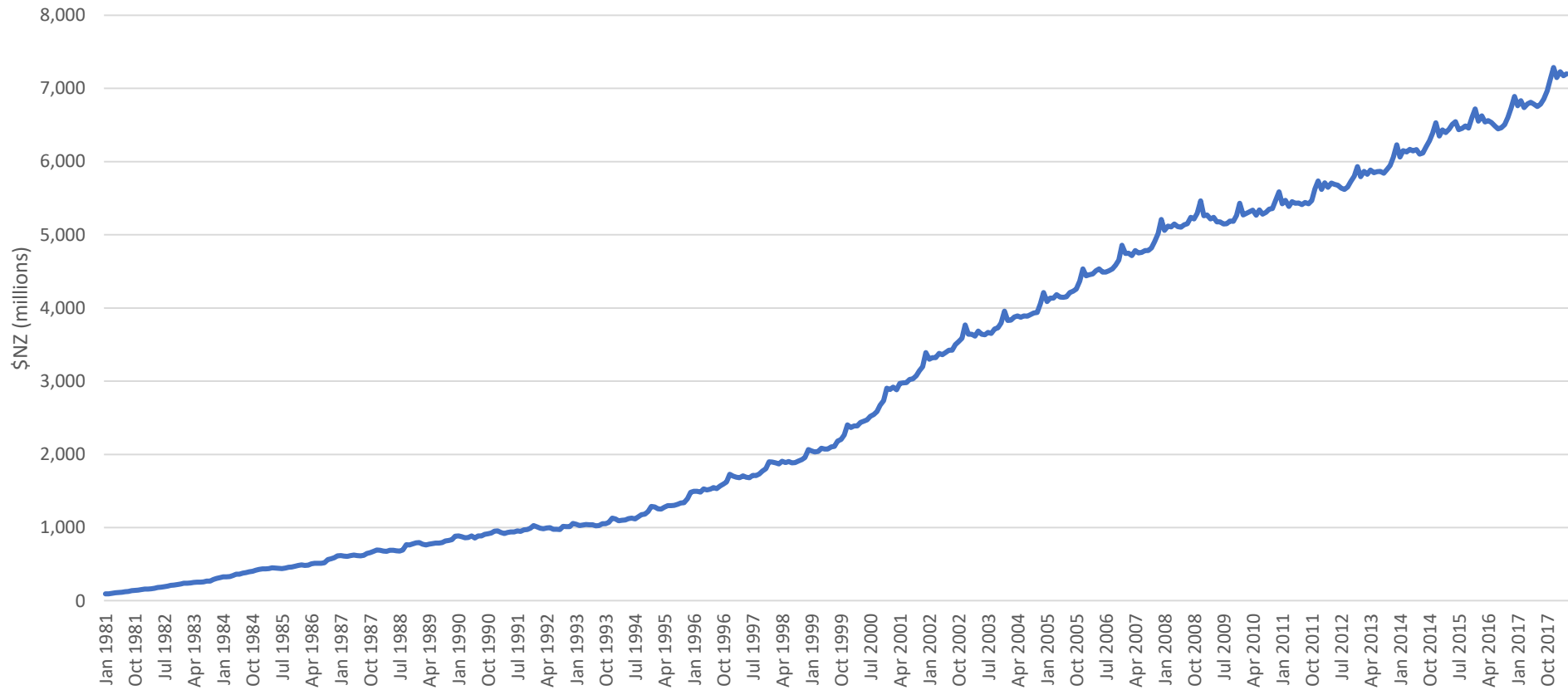
PLAN TO REBUILD U.S. ECONOMY...



Total billings on New Zealand credit cards
(Based on Reserve Bank long-term data series)

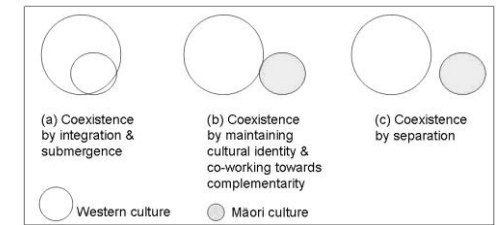
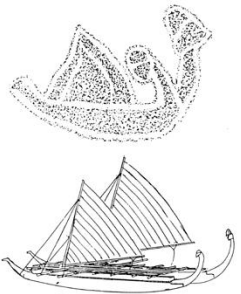


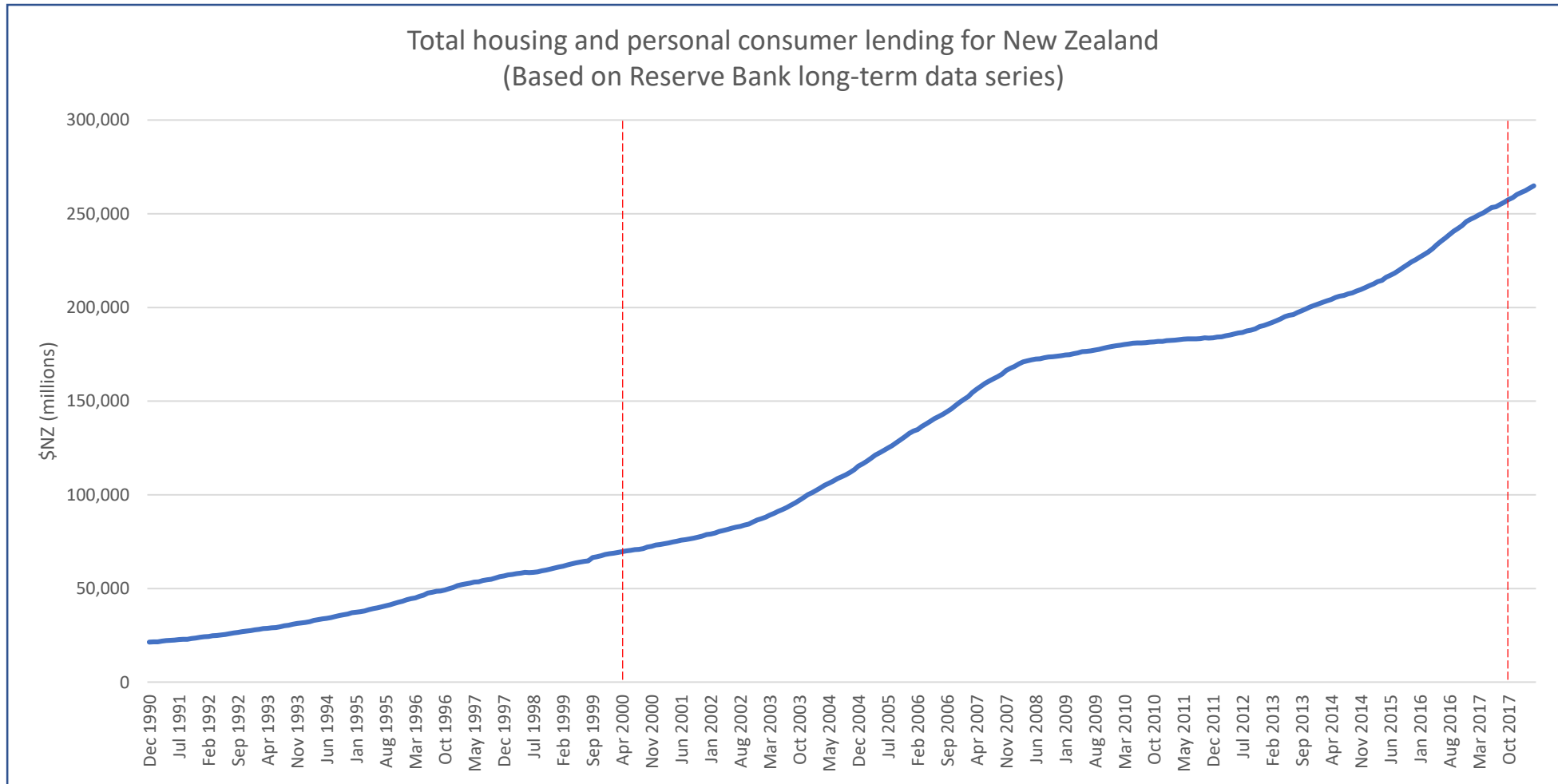
Total advances outstanding on credit cards in New Zealand
(Based on Reserve Bank long-term data series)



Coping strategy #4

The housing market

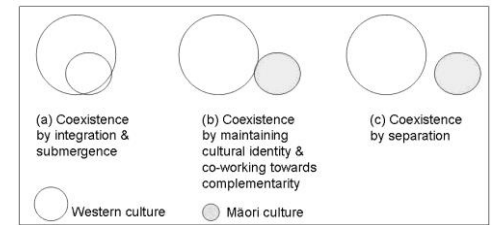
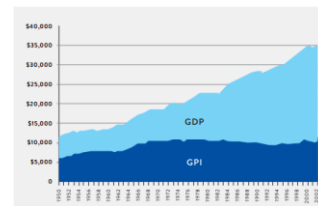
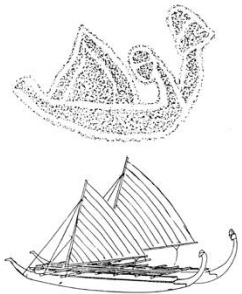




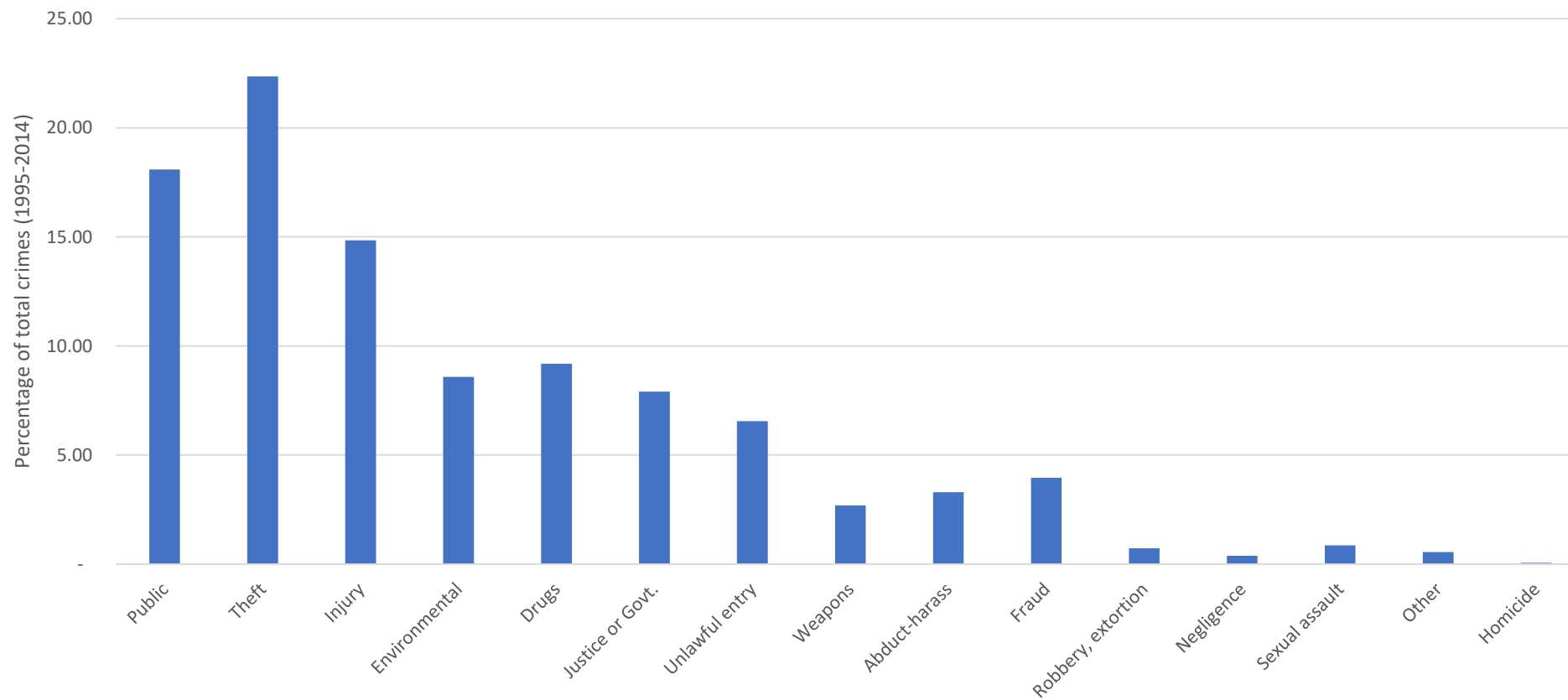
NZ GDP (2016) \$251,767

Coping strategy #6

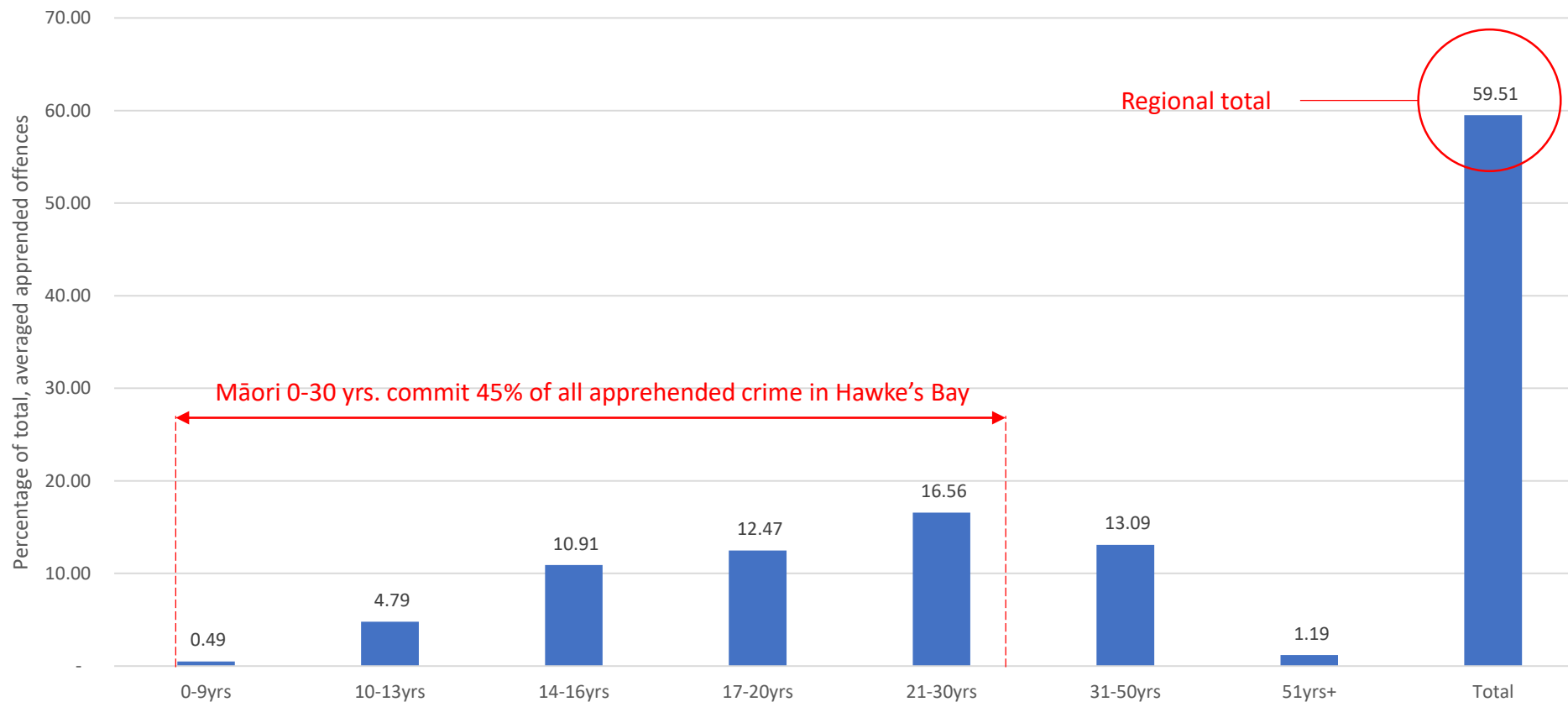
Crime, addictive behaviour, domestic violence,
suicide ...



Crimes leading to apprehension (percentage) in the Hawke's Bay region
(Based on NZ.Stats crime data)



Percentage of total, average apprehended offence in the Hawke's Bay region by Māori ethnicity
(Based on Statistics NZ Crime data series 1995-2014)

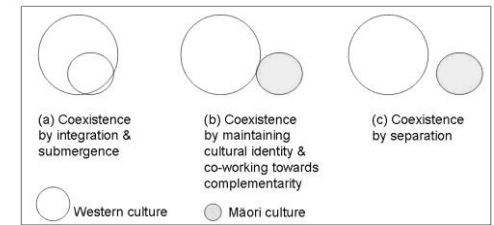
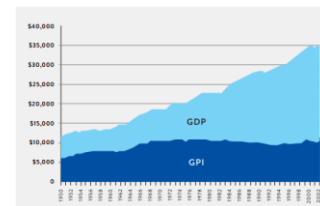
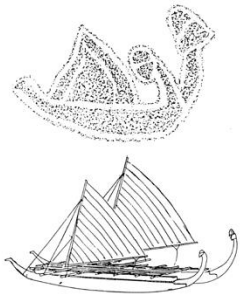


We could also look at Māori ...

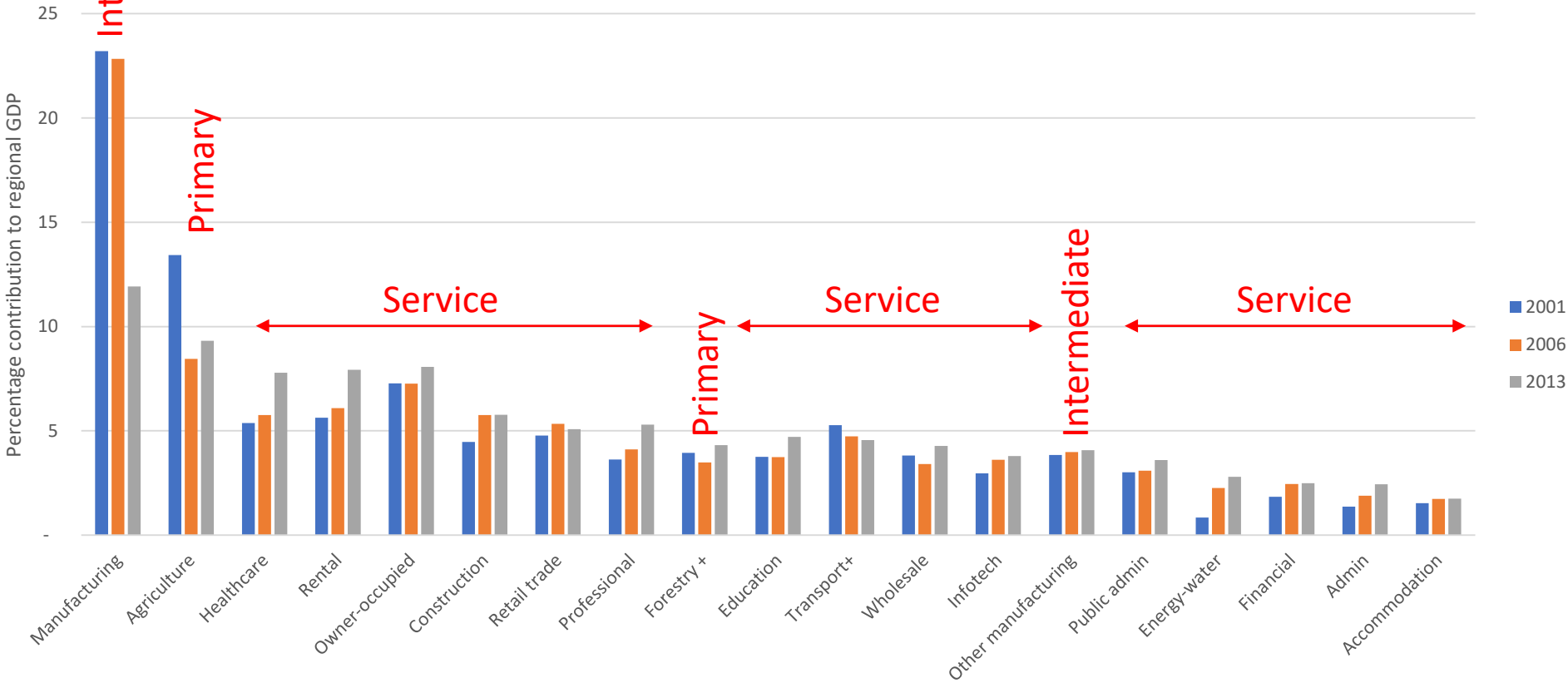
- Drug use (addiction)
- Obesity/diabetes
- Domestic violence
- Suicide
- Educational achievement
- Labour market participation
- Mental health
- Homelessness
- Debt ...

The Hawke's Bay economy

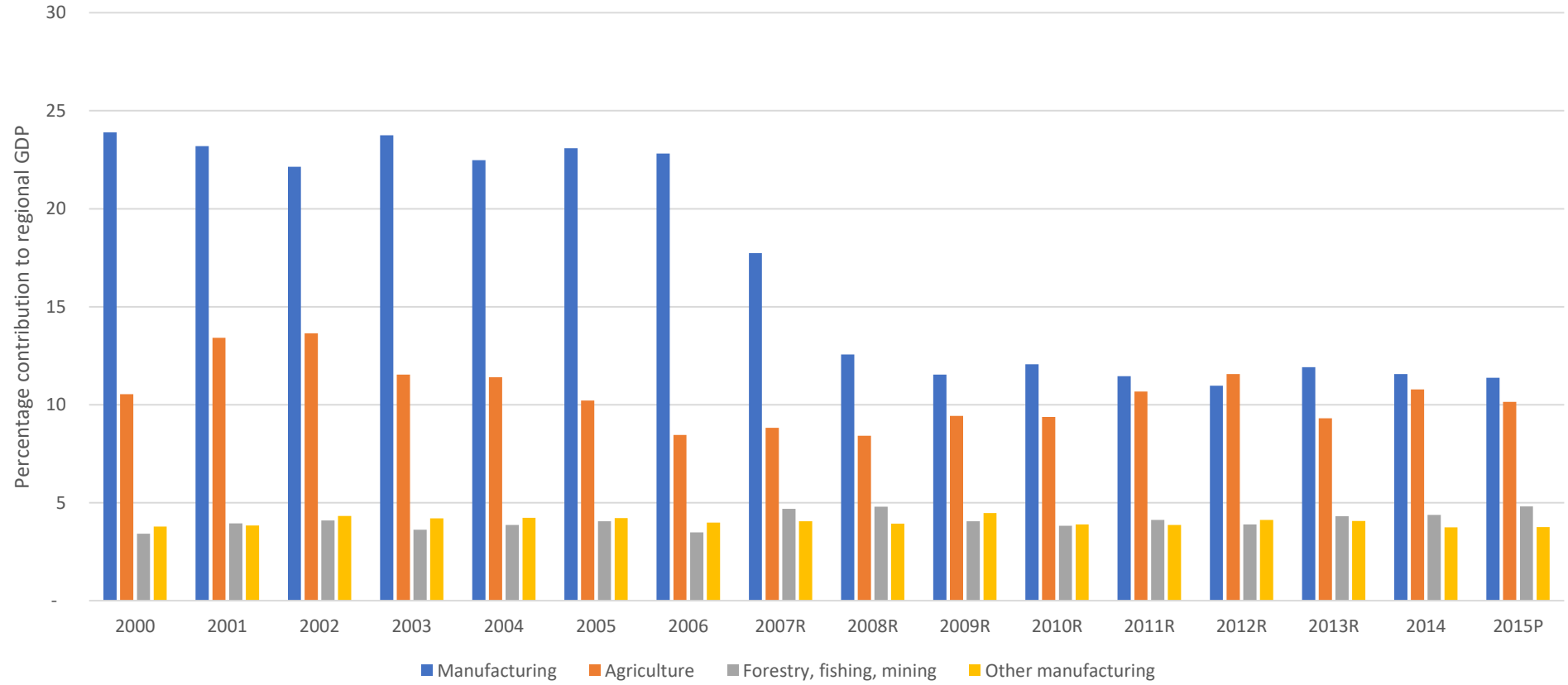
Tank catchments (2006-2013)



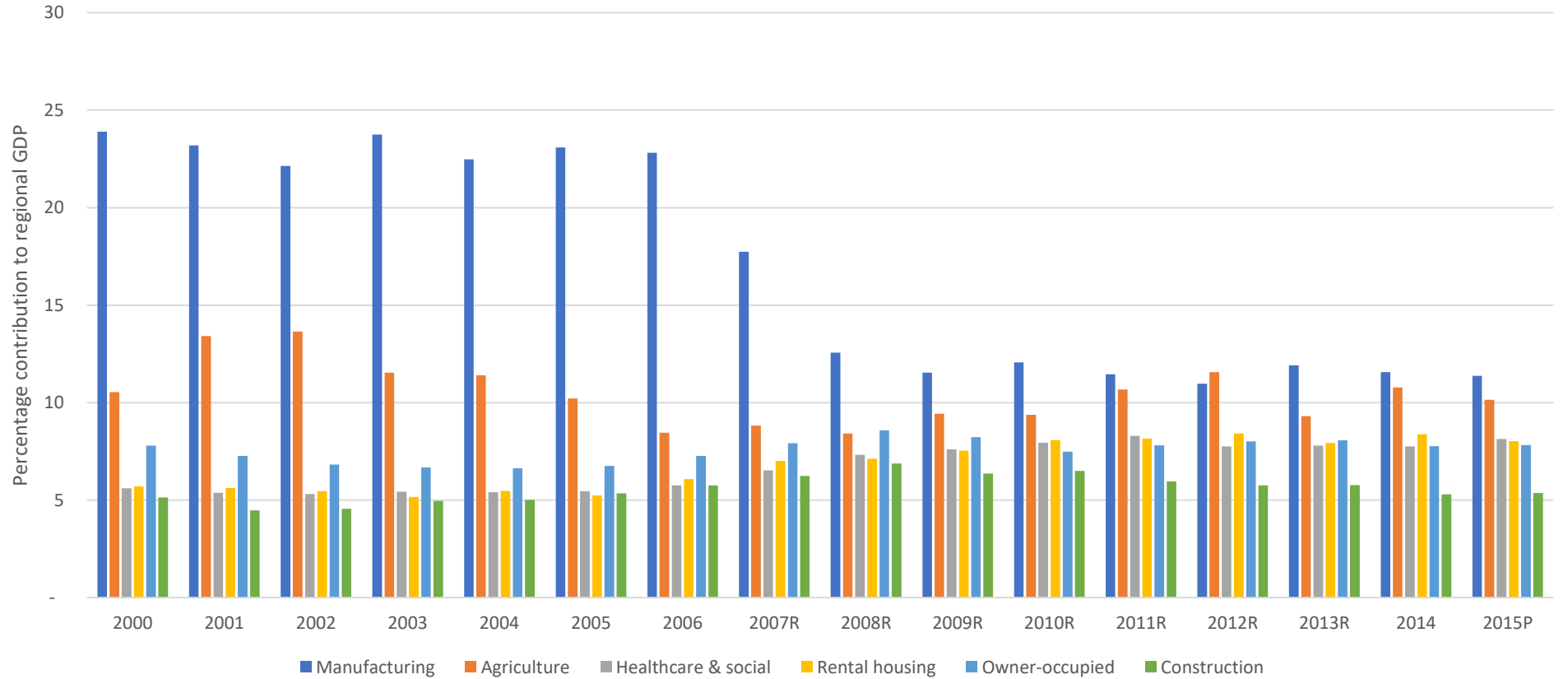
Structural stability in the Hawke's Bay regional economy
 (Based on Statistics NZ long-term data series)



Four 'pillar' industries that contribute 30% to regional GDP in Hawke's Bay
(Based on Statistics NZ long-term data series)



Six industries that contribute 50% to regional GDP in Hawke's Bay
 (Based on Statistics NZ long-term data series)



Surviving globalisation

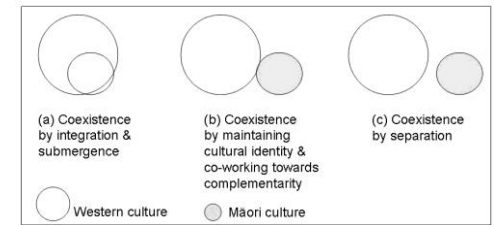
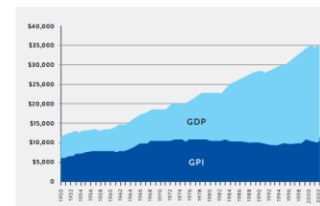
- **Business in a global marketplace** – agile, adaptive, creative, responsive, evidential (i.e. research-based), accountable (i.e. branding), socially fair, ecologically sustainable, resilient and forward looking (i.e. anticipating market shifts, disruptive events)

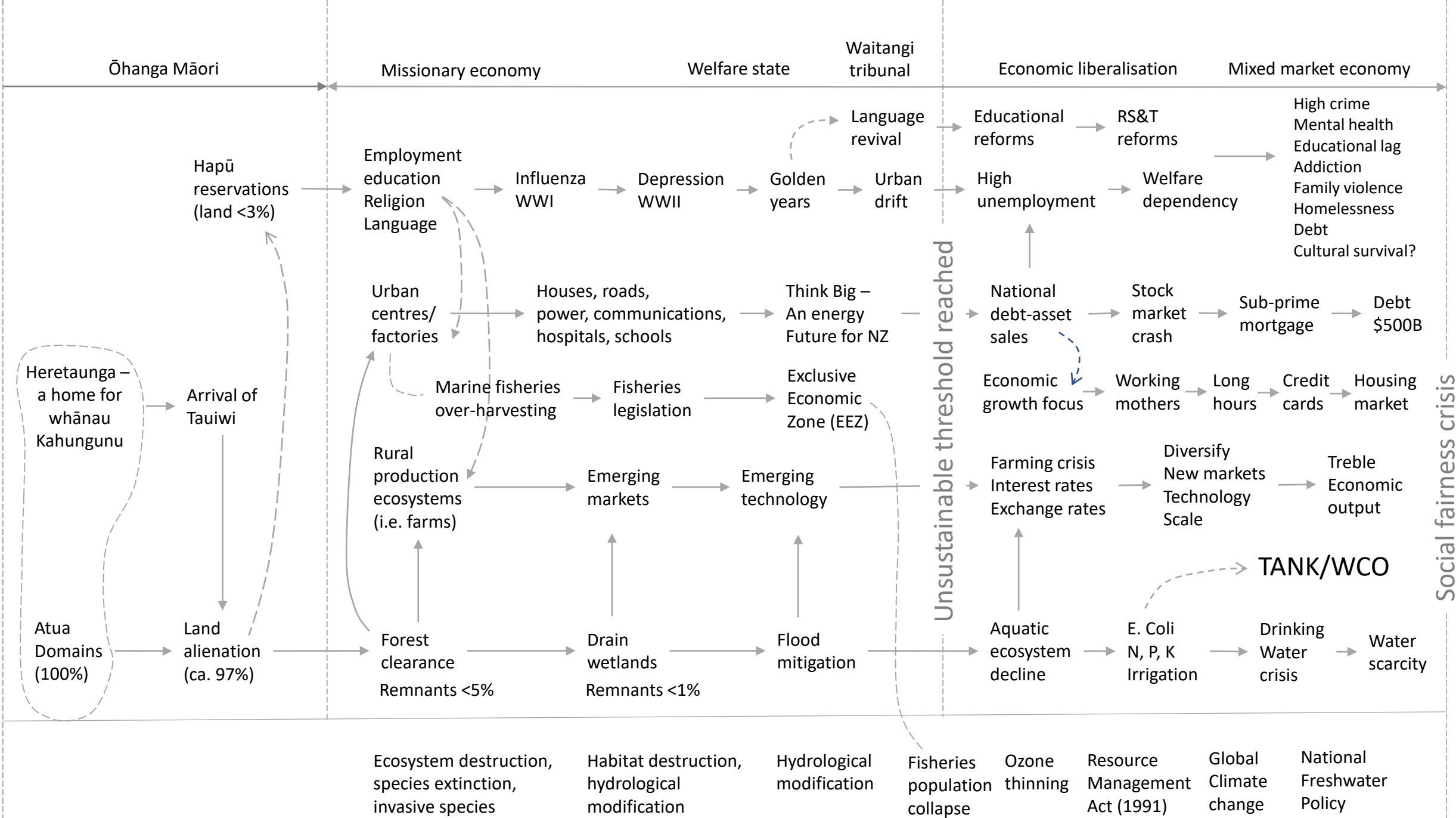
The Hawke's Bay economy

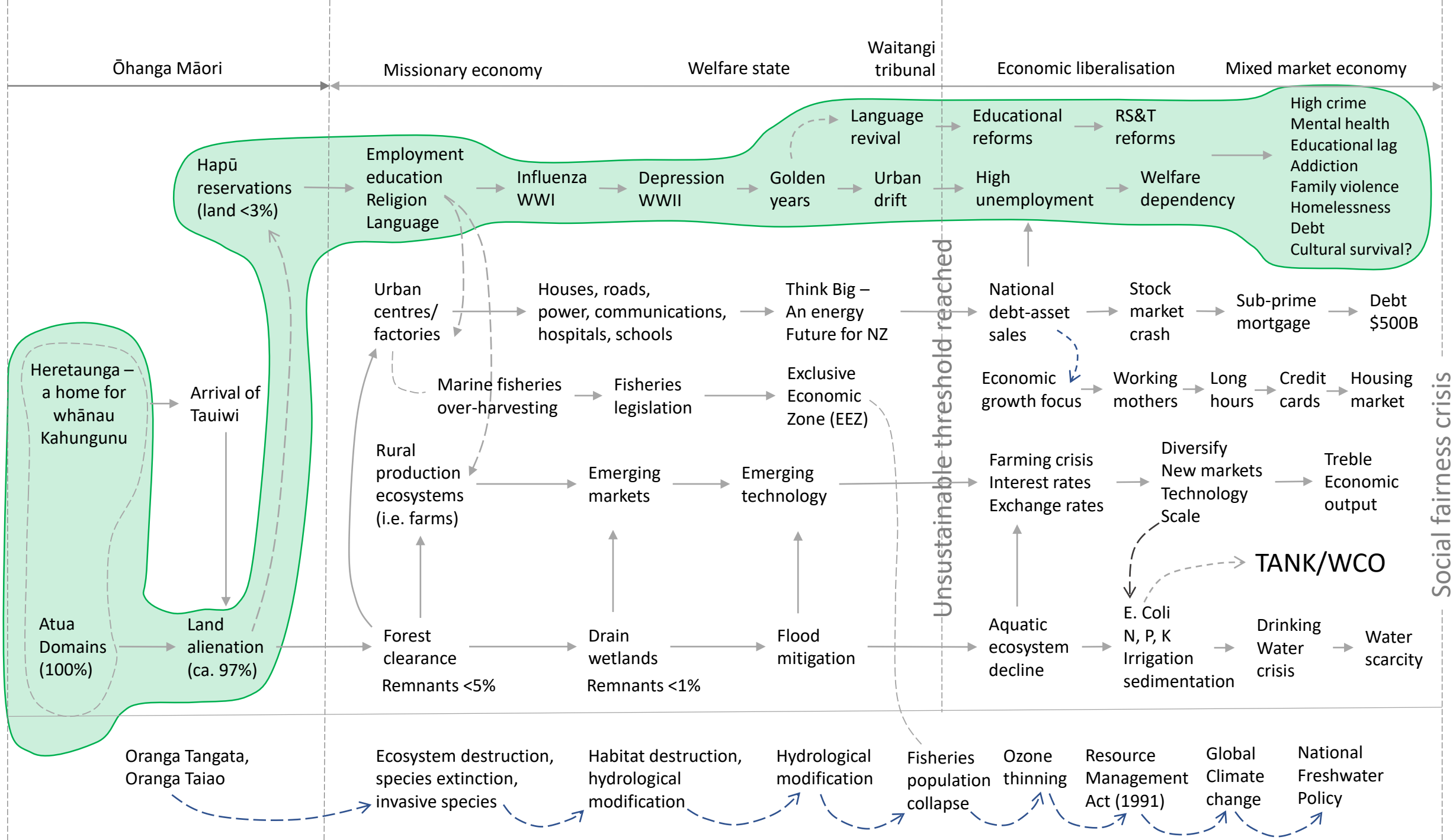
- Worked in the past, but now faces some real challenges
 - Income inequality
 - Ecosystem harm (ecologically unsustainable)
 - Ongoing Māori cultural wellbeing and survival decline
 - High welfare dependency
 - Debt reduction (i.e. economic growth is now water limited)
 - Fragile (dependency on 2-4 key sectors)
 - Ageing/sub-replacement population
 - Mobile population (high turnover) ...

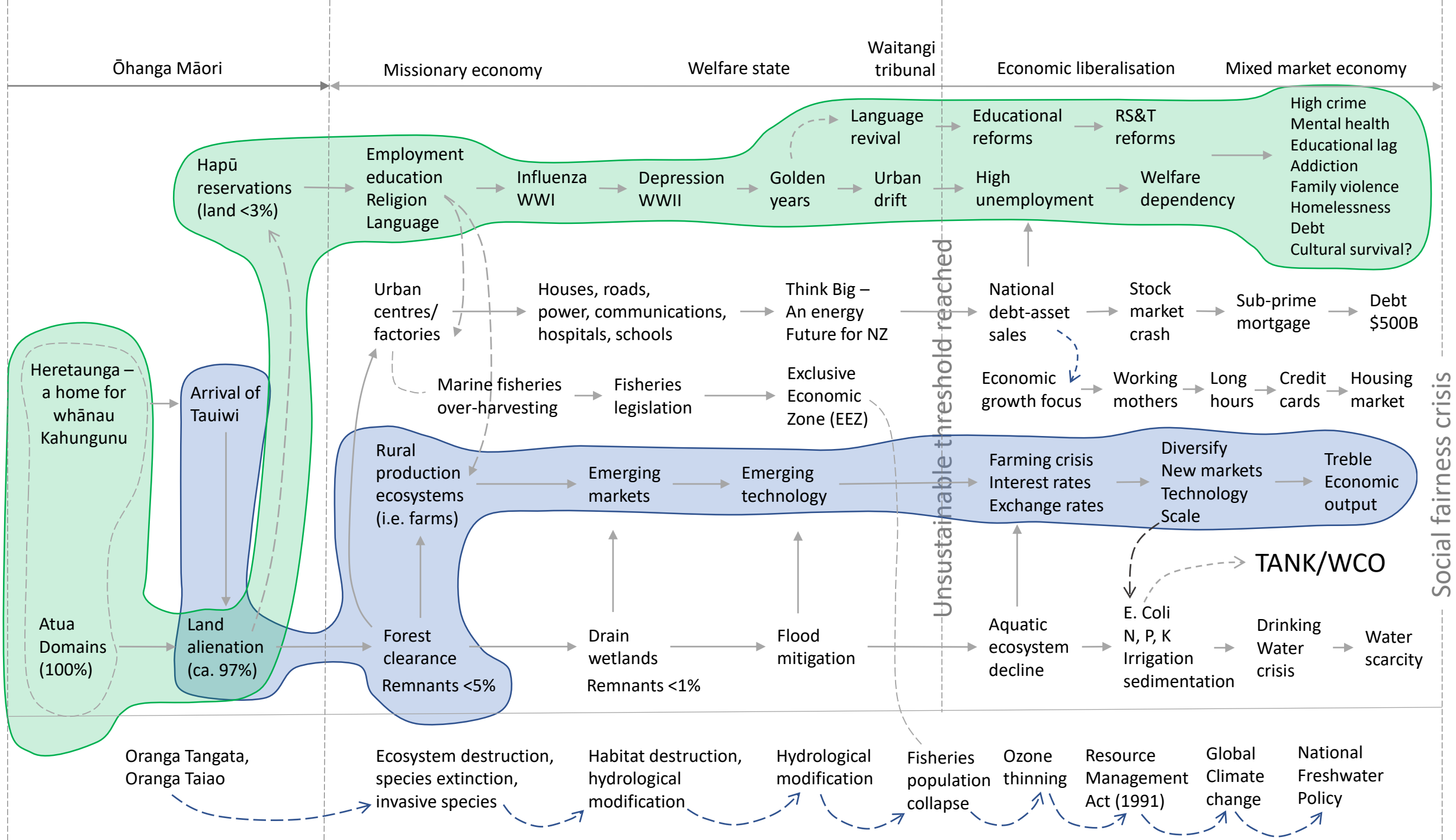
The Hawke's Bay economy

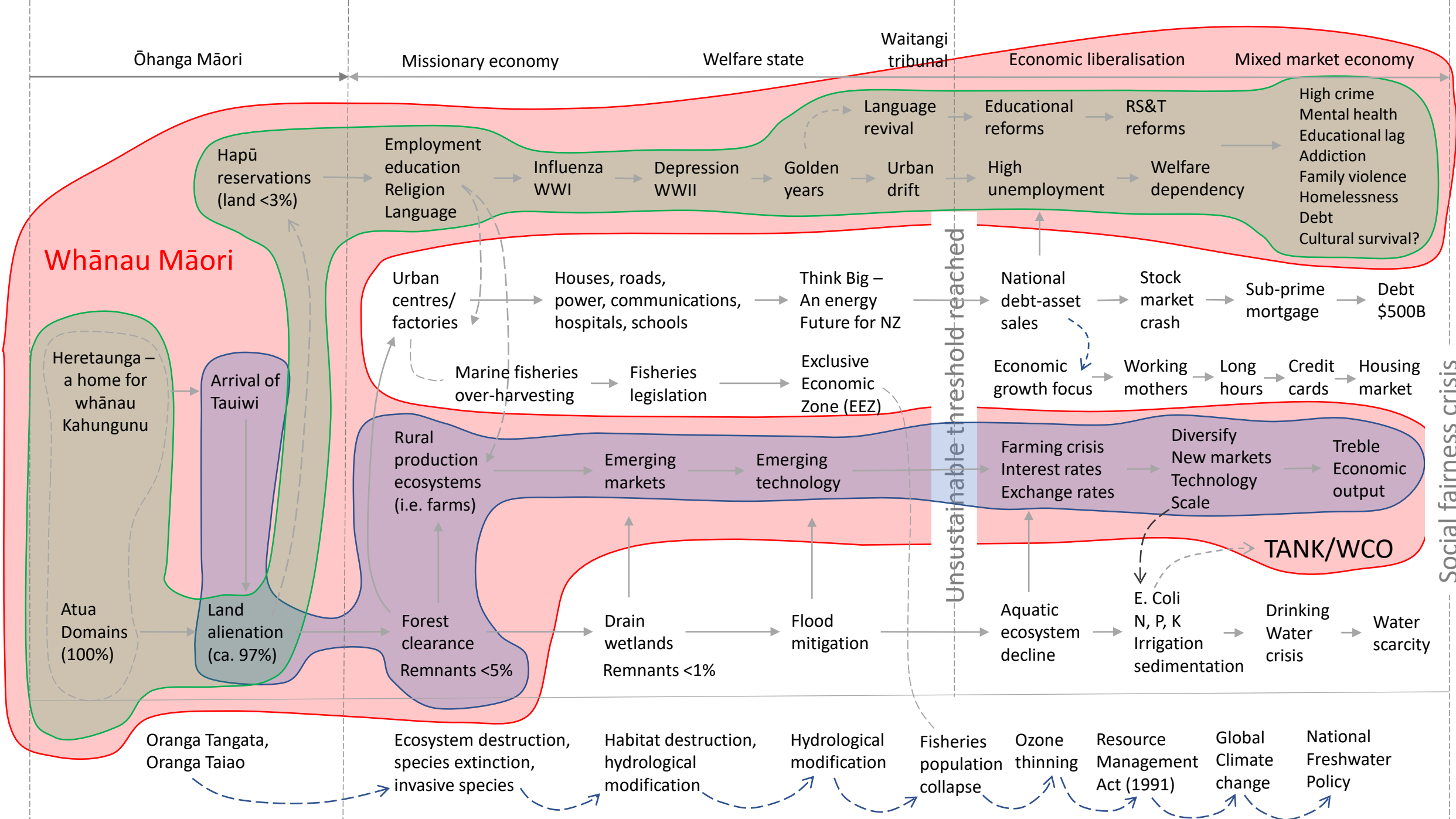
Income inequality and social fairness

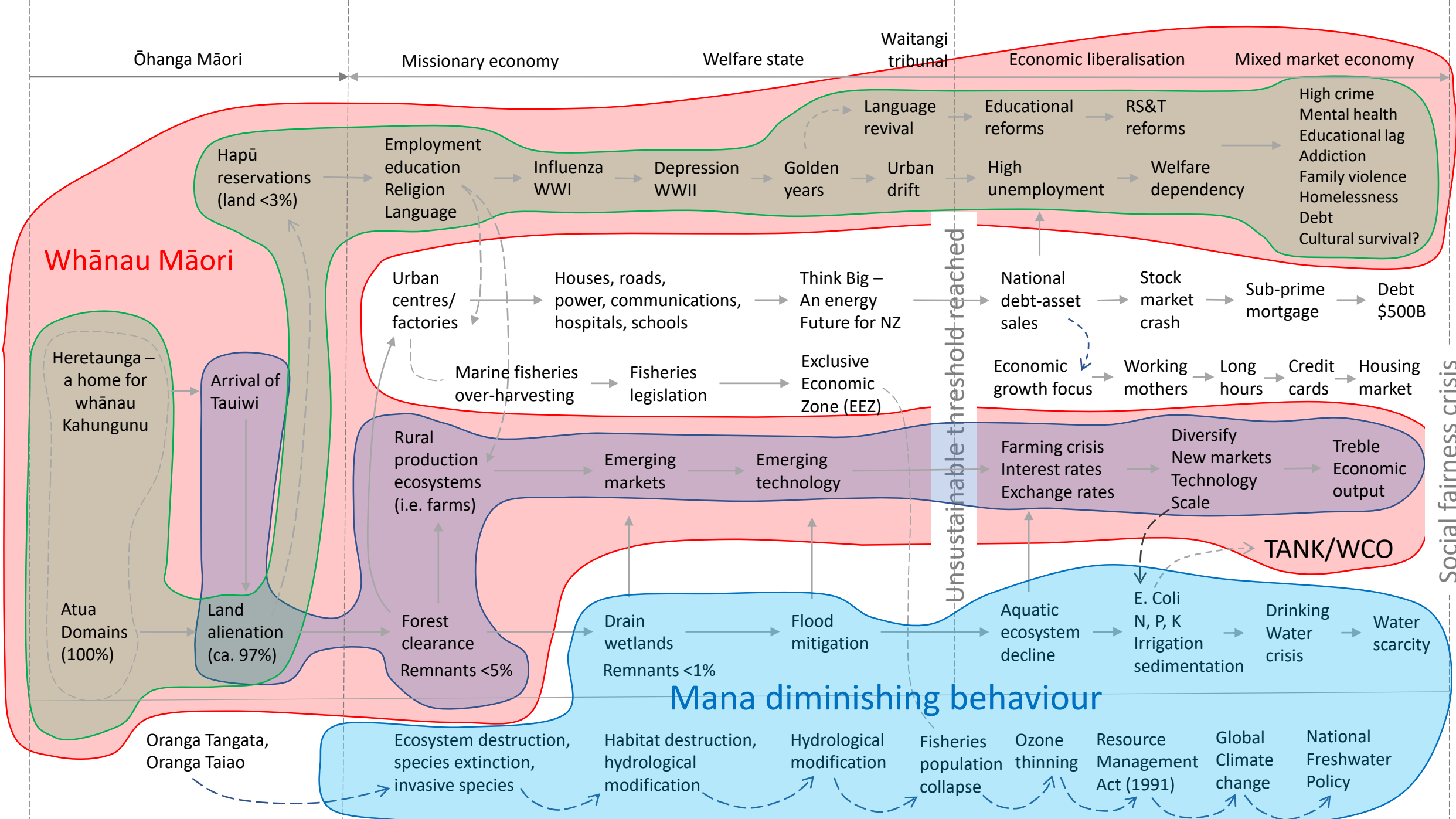




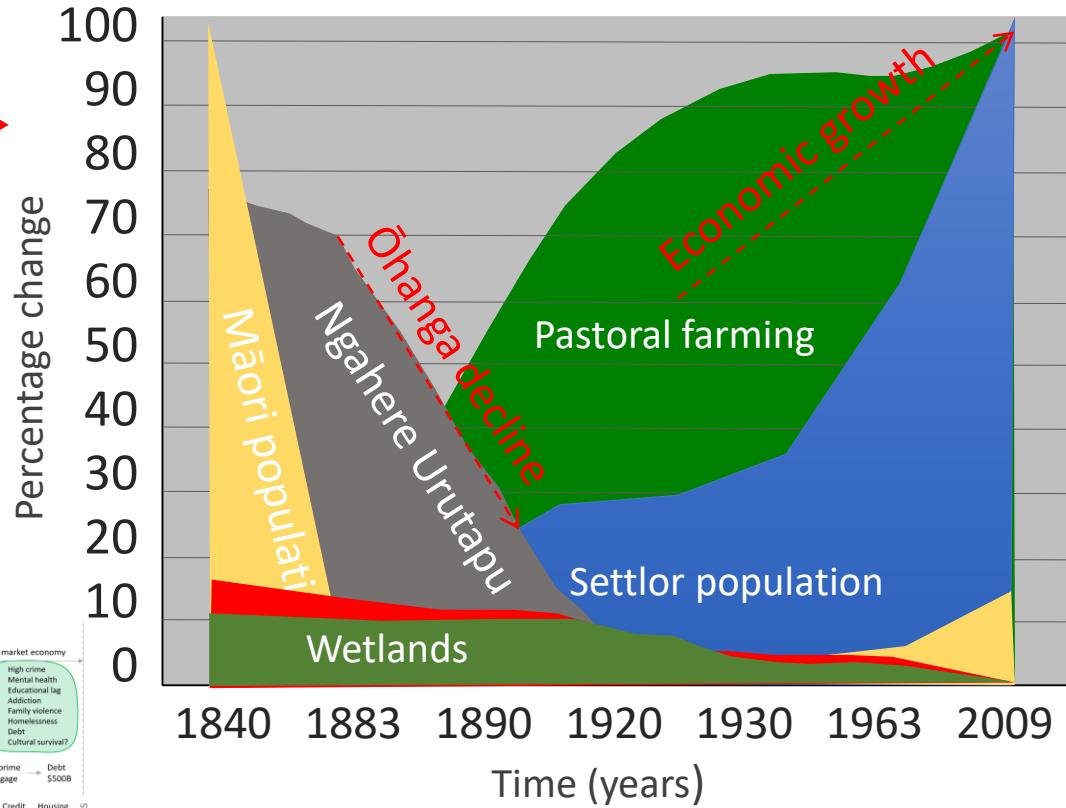








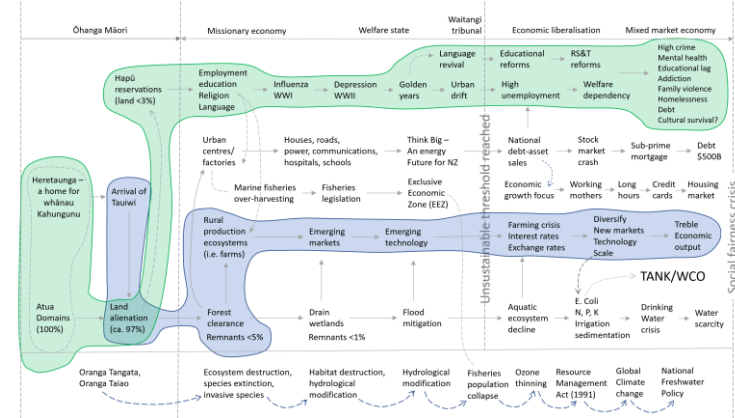
Manawatū and Horowhenua (1840–2009)



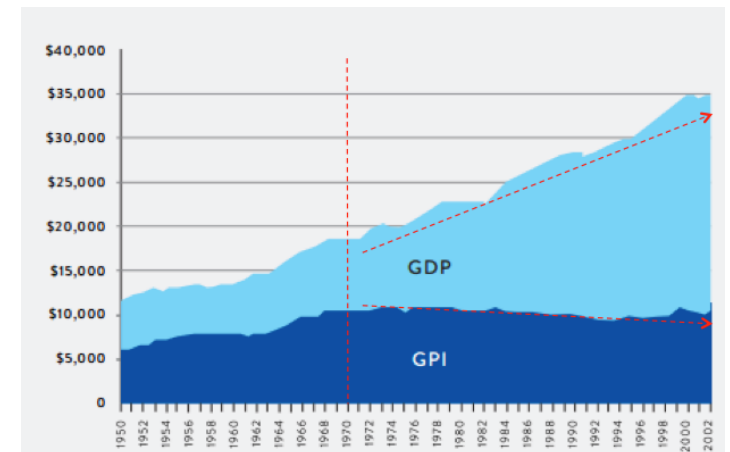
Striking similarity

Striking similarity

Whānau Kahungunu



GDP/GDI for the US economy



Social fairness

- **Inter-generational fairness** - land alienation means the current generation have been deprived of access to te whānau o Rangi rāua ko Papatūānuku within the rohe of whānau kahungunu ki te Heretaunga. This has diminished opportunities for their cultural wellbeing and survival
- **Intra-generational fairness** – the regional economy has failed to allocate and distribute the financial resources, jobs, homes and basic wellbeing means needed for whānau kahungunu ki te Heretaunga to achieve shared community wellbeing and cultural survival. This situation has been exacerbated by ecosystem decline and growing income inequality

Social fairness and the TANK plan

- Tangata Whenua are now faced with a choice between (a) Māori community wellbeing or (b) ecological (i.e. Atua Māori) wellbeing
- This is a choice that whānau Māori should never be asked to make because it concerns the goal of their cultural survival and cultural survival is a *non-negotiable* aspiration



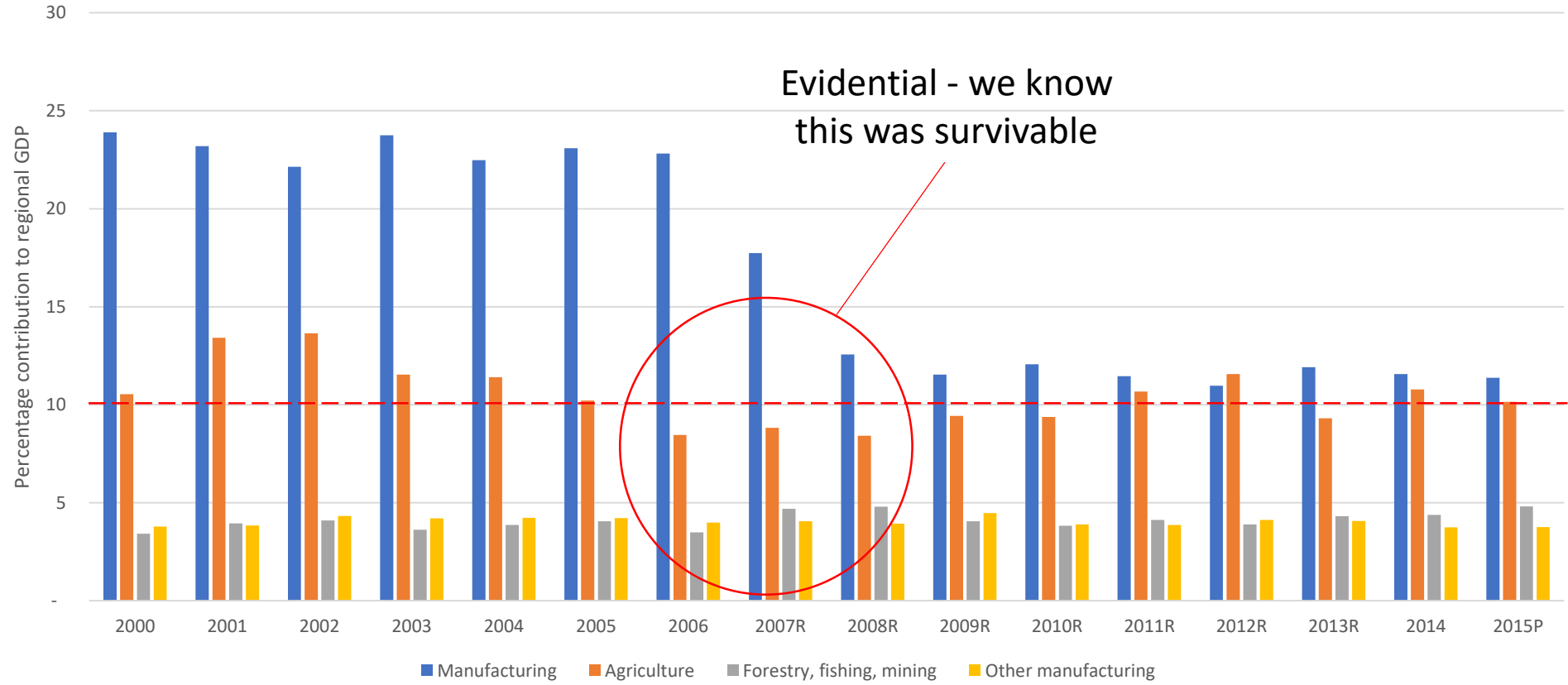
Findings of this SCIA

- The implementation of the current draft TANK plan will result in flows of ecological, social and cultural benefits to TANK communities
- However, there is a high likelihood that TANK plan adoption of minimum flow regimes evaluated by AgFirst, Nimmo Bell and MEL will cause social/cultural and financial harm to some (area unit) communities in the TANK catchments. In particular,
 - TANK catchment communities characterised by high levels of welfare dependency will be at risk
 - TANK catchment communities characterised by high levels of Māori population ethnicity will be at risk

Recommendations

- That the TANK plan proceed to schedule 1 notification while taking specific regard to the following:
 - (a) That the setting of a minimum flow regime and the creation of a long-term implementation plan for the achievement of this regime be undertaken in a way that appropriately responds to the economic, social and cultural *vulnerability* of all TANK catchment communities
 - (b) That the implementation of the TANK plan avoids, remedies or mitigates any decline in regional GDP *exceeding 3 years*

Four 'pillar' industries that contribute 30% to regional GDP in Hawke's Bay
(Based on Statistics NZ long-term data series)



Recommendations

(c) An implementation of the TANK plan be supported by a regional-scale economic development plan aimed at aggressively growing regional GDP with a focus on low-wage earners / unemployment / social business growth

(d) There is an urgent need for a conversation on the subject of social fairness relating to RMA 1991, part 2, section 5(a)

- Inter-generational sharing of wealth (past and future)
- Intra-generational sharing of wealth (now)

Recommendations

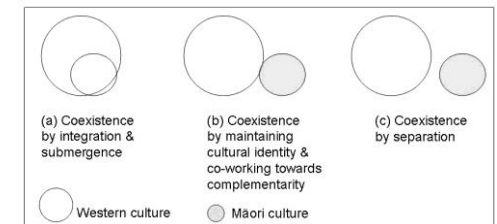
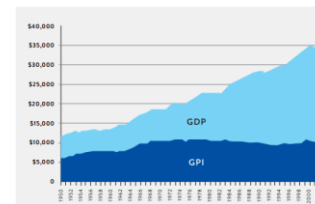
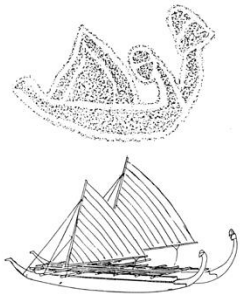
(e) There is an urgent need for a conversation on the matter of Māori cultural survival

The End

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elizabeth@ipansophy.com



NZ's net external debt

As at March 31

	2015	2014	2013	2010	2005	2001
External debt						
Government	\$54.9b	\$47.8b	\$54.7b	\$23.6b	\$16.0b	\$16.7b
Banks	\$117.9b	\$110.7b	\$114.9b	\$133.9b	\$91.0b	\$55.2b
Inter-company	\$44.9b	\$48.6b	\$48.4b	\$51.2b	\$36.6b	\$26.3b
Other	\$29.4b	\$25.7b	\$24.4b	\$24.2b	\$20.6b	\$27.0b
Gross external debt	\$247.2b	\$232.8b	\$242.4b	\$232.9b	\$164.2b	\$125.2b
Gross external lending	\$108.2b	\$93.0b	\$96.3b	\$77.1b	\$64.2b	\$49.0b
Net external debt	\$138.9b	\$139.8b	\$146.1b	\$155.7b	\$100.0b	\$76.2b

Herald graphic