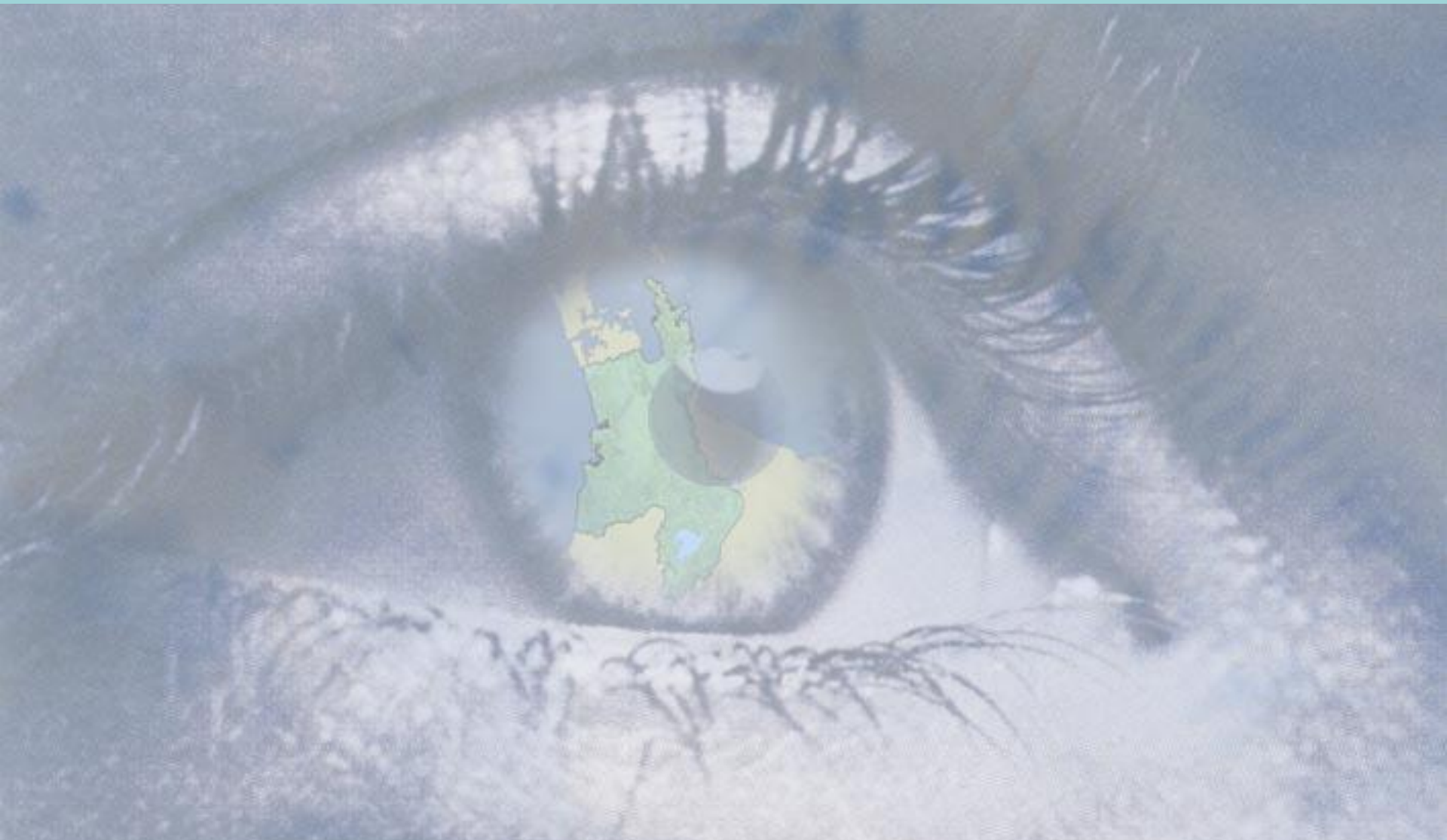
Future Scenarios for the Waikato



Scenarios

- Four stories about the future
- These are not stories about what we think or what we believe will happen nor are they stories about what is most likely to happen
- The stories take alternative views about what may happen if some of the early signs of change that we see today come together in different ways
- Other stories which are also plausible could be told

4 Scenarios

- Crowded House
  - Massive international movement of people and changes in agriculture and energy production
- Sleeping In
  - Keep on talking about climate change until it really hits home
- Nature Counts
  - A bio-economy where we value land much differently using resource productivity as a key economic indicator
- Science Society
  - A society where science takes off,

The things the scenarios suggest will really cause future changes

- The stories explore a combination of *what if's*
- The major *what if's* (but, not the only ones):

1. Keep on using resources like we do today
   - Or, we use resources more carefully
2. We measure our economy using economic indicators only
   - Or, we include other social, cultural and environmental measures to decide how well we are doing

‘GDP’

(profit)

Scenario 1

- New Zealand has more people than expected
- Less money from government

‘mine’

Natural Capital (resources)

‘maintain’

How we measure ‘wealth’ in Waikato

‘GPI’

(people)

Crowded House

- This is a future where climate change affects global agriculture production; food is produced in new areas of the world as the global warming affects rainfall patterns, water availability and average daily temperatures
  - Siberia becomes a ‘bread basket’ to the world
- This triggers a massive movement of people around the world
- Fossil fuels are taxed as most international governments impose carbon taxes to help pay for the impacts of climate change

Crowded House: 2

- Economy based on primary industries (as today)
- New Zealand is relatively less affected by climate change in terms of agricultural production (although there is more extreme weather)
  - Some of New Zealand's traditional markets wane; and access to new markets may be a problem for a time
- New Zealand accepts a large no. of *climate refugees*
  - Larger population than expected
  - This increases fiscal pressures on NZ governments

Crowded House:3

- On a personal level the problems mean that:
  - Housing is less affordable
  - Energy is more expensive
  - And, eventually, multiculturalism policies are abandoned

‘GDP’

(profit)

•Climate change impacts are bigger than expected

•The economy is weaker and slower growing than anticipated

Scenario 2

‘mine’ — Natural Capital (resources) — ‘maintain’

How we measure ‘wealth’ in Waikato

‘GPI’

(people)

Sleeping In

- Climate change is not arrested and no effective international policies or mechanisms are put in place
  - Extreme weather events occur more frequently
- Globalisation continues (mainly of the global economy)
  - Fairly ‘easy’ to move people with skills and production around the world
  - Emerging economies continue to become more sophisticated and more competitive with New Zealand primary industries
  - New Zealand’s economy continues to grow (more slowly)
  - The ecological base narrows (*including* the international farm production base – people’s diets converge) and some new energy sources begin to come on stream
- But, the rich-poor divide grows

Sleeping In: 2

- Economy based on primary industries (as today)
- New Zealand experiences more extreme weather events and copes relatively well until late 2020's when climate change triggers a series of *huge* floods – three years in a row – that affect lake Taupo and the Waikato
  - Harder to get insurance
- Economy goes into recovery mode – less investment in environment, decrease in social spending and less uptake of new technologies

Sleeping In: 3

- On a personal level:
- Middle and lower income households are most affected
  - Harder to get insurance, housing costs higher (construction requirements)
  - Higher educational costs (to compete in international talent pool)
  - Few comparable economic opportunities in NZ
- After the floods
  - Environmental concerns and constraints grow
  - Fewer farmers, more industrial agriculture

‘GDP’

(profit)

‘mine’

Natural Capital (resources)

‘maintain’

How we measure ‘wealth’ in Waikato

- New Zealanders discuss and understand the value of nature in a new way
- Economic growth comes from biological and life sciences

Scenario 3

‘GPI’

(people)

Nature Counts

- Early international, but variable responses to global resources depletion (oil, water)
  - New ways to account for ecosystems services include resource productivity not just labour productivity
- New Zealand one of global first followers to adopt sustainable development initiatives connected to changing way world looks at ‘global and national economies’

Nature Counts: 2

- Bio-economy emerges
  - New educational focuses and approaches
  - New ‘accounting’ approaches
- Land use decisions based on value of ecosystems services
  - Land categorised as marginal provider of ecosystems services can be developed
  - New infrastructure designs o accommodate impacts of climate change

Nature Counts: 2

- As an individual
  - Security concerns
  - Land use restrictions which affect resale values (transition requirements)
  - Inclusive democracy values all views
  - Children have different educational system focus

‘GDP’

(profit)

‘mine’

Natural Capital (resources)

‘maintain’

Scenario 4

How we measure ‘wealth’ in Waikato

‘GPI’

(people)

- Science and scientists become more important for economic growth
- More things are known about what you as an individual are doing; more things are known about what companies are doing

Science Society

- Global problems grow
- International science networks consolidate, work independent of political processes
- Investment increases
- Rapid advances in ICT, nano, bio and other technologies
- Technical ability to measure what has not been previously measured

Science Society: 2

- Knowledge economy
- Global systems more integrated, interdependent
- More and more effective regulation and compliance regimes
- Embedded technologies
- Understanding nature of advances an issue
- Trust an issue

Science Society: 3

- Increased longevity, enhanced capabilities (e.g. memory, sleep drugs)
- Personal identity and cultural learning from layered participation in many different networks (virtual, real)
  - Smaller, more radical groups pop up
- Less privacy, more active and passive surveillance
- Technology – lots of gadgets to do things for us; ‘buried’ everywhere, in everything

What are challenges in the scenarios

- The Crowded House and Sleeping In scenarios raise questions about how much money there is to spend, how willing people, companies and governments are to act before something happens and how helpful people are with each other
- The Nature Counts and Science Society scenarios raise questions about what we value (money, environment); how science and technology changes will change the way we work and live and how much freedom we will have to be an individual

What do you think

Consider each story as if this is the future that happens:

- If you could determine one thing about the future in each story what would it be?
- What did you like in each story?
- What did you not like in each story?
- Can you do anything about what you liked?
- Can you do anything about what you did not like?
- If you cannot do anything, what can be done and who can do it?