

9 April 2009

Mr Bob Parker  
Mayor  
Christchurch City Council  
PO Box 237  
CHRISTCHURCH



Dear Bob,

**Submission on the 2009-2019 Long Term Community Council Plan**

Please find attached our submission on your Council's 2009-2019 10-year plan (Long Term Council Community Plan).

The Sustainable Future Institute is an independent think tank specialising in research and policy analysis. Our current work - *Project 2058* - is looking at how to create a sustainable future for New Zealand.

Please also find attached some of our recent work, including timelines of our scenario work and the complementary Think Piece 8 *Magnifying Hope and Reducing Fear*.

We appreciate this opportunity to share our ideas with you. If you have any questions please do not hesitate to contact us.

Yours faithfully

**Wendy McGuinness**  
Chief Executive

**Hayley Vujcich**  
Research Analyst

**Attachments:**

1. Submission on Long Term Council Community Plan
2. Think Piece 8 *Magnifying Hope and Reducing Fear*
3. Pamphlet *Four future scenarios for New Zealand*





# Submission on Long Term Council Community Plans

By the Sustainable Future Institute  
9 April 2009

Long Term Council Community Plans (LTCCPs) are a key mechanism for delivering New Zealanders a sustainable future. To this end, we make the following suggestions as to how your council could actively pursue cost-effective and timely initiatives that deliver outcomes that count.

## **Sustainable Future Institute**

Sustainable Future is an independent think tank specialising in research and policy analysis. As a think tank, Sustainable Future has the freedom to choose its own research agenda. Currently we are pursuing two research projects, one on a national strategy for New Zealand known as *Project 2058*, and a second on genetic modification.

We believe real progress occurs when communities redefine two simple questions: what is acceptable and what is possible? Science often redefines what is possible, and communities need to respond by determining what is acceptable – an example being technological and ethical changes in genetic modification. Recent scenario work, conducted as part of *Project 2058* sought to explore the second question. This work led to *Project 2058* Report 6 (available on our website), a Think Piece (attached) and four timelines that explore New Zealand's future from 2008 to 2058 (attached).<sup>1</sup>

## **Thinking Beyond Ten Years**

It is important to be aware that the Local Government Act 2002 does not limit LTCCPs to a 10 year timeframe. In section 93(7)(a) of the Act it states that a long-term plan must 'cover a period of not less than 10 consecutive financial years' meaning that 10 years is only the minimum required.<sup>2</sup> It can take much longer than ten years to take an idea and implement it into something meaningful for the wider community. This is particularly the case for large infrastructure projects.

We believe councils should explore timeframes longer than 10 years. In *Project 2058*, the team at Sustainable Future decided upon 50 years, as we believed 50 years was short enough to explore the complex nature and often unintended consequences of decisions made today, while long enough to ensure we were not limited by a pre-determined mind-set as to what the future might deliver (and when). For example, if councillors think in terms of a 10 percent chance of a significant earthquake in fifty years, or a 2 percent chance of a significant earthquake in ten years, although both

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<sup>1</sup> See [www.sustainablefuture.info](http://www.sustainablefuture.info)

<sup>2</sup> See the *Local Government Act 2002*,  
[http://www.legislation.govt.nz/act/public/2002/0084/latest/DLM172344.html?search=sw\\_096be8ed802f421e\\_years#DLM172344](http://www.legislation.govt.nz/act/public/2002/0084/latest/DLM172344.html?search=sw_096be8ed802f421e_years#DLM172344)

facts represent the same outcome, the first is likely to provide councillors with a better insight into their responsibility to the community, and therefore better decisions, than the latter. In other words, councils need to think long term, in order to deliver medium term plans.

### **Legal Mandate for Sustainable Development**

The purpose of the Local Government Act highlights the need for local authorities to play a broad role in promoting social, economic, environmental and cultural well-being, with s3(d) specifically requiring local authorities to take a sustainable development approach in their choices and activities. Furthermore, as community outcomes in LTCCP are underpinned by a need to address current and future social, cultural, economic and environmental well-being (s91-93), we consider long-term future thinking and capability building is a critical input into the LTCCP process.

By making sustainable development a central purpose of the Act, New Zealanders are requiring councils to be committed to promoting sustainability.

### **Perspectives on Sustainable Development**

The New Zealand government has spent considerable time and effort in setting out a framework for implementing sustainable development. Besides the Local Government Act 2002, Government established the Sustainable Development Programme of Action (2003). The programme defined a national approach to sustainable development and set out overarching principles and goals, thus giving guidance to territorial authorities. In addition, progress towards sustainable development is also under the watchful eye of international institutions such as the OECD, the United Nations and the World Bank. Reviews conducted by such organisations provide useful insights into how New Zealand could improve outcomes, for example, the OECD prepared an Environmental Performance Review of New Zealand in 2007.<sup>3</sup> This report examined progress made by New Zealand since the previous OECD Environmental Performance Review (1996) relative to its established domestic objectives and international commitments. This report made thirty-eight recommendations, many of which provide valuable insight into ways of improving progress towards sustainable development. Therefore, we consider that in addition to a local and national perspective, councils are likely to benefit from gaining an international perspective.

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<sup>3</sup> See <http://www.oecd.org/dataoecd/6/6/37915514.pdf>

## Five Critical Questions

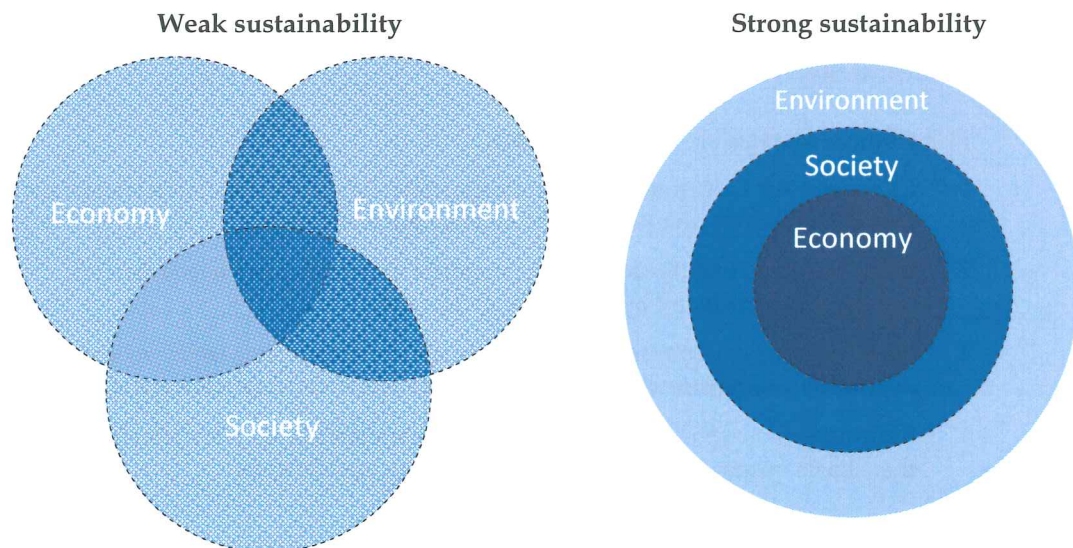
In order to assist councillors to execute the concept of *sustainability*, we have identified five critical questions for councillors to consider when preparing and approving LTTCs. We discuss each in turn below.

1. What does sustainability mean?
2. What might sustainability look like?
3. What do successful, sustainable LTCCPs contain?
4. What are the obstacles to success?
5. What are the *hot issues* for your region?

### Question 1 What does sustainability mean?

The term sustainable development is often cited as ‘development that meets the needs of the present without compromising the ability of future generations to meet their own needs.’<sup>4</sup> It is possible to go further and discuss sustainable development in terms of weak and strong sustainability. Strong sustainability recognises limits to growth. It is communicated as a number of nested systems whereby the economy is a subset of the environment. On the other hand, weak sustainability holds that the spheres of society, environment and economy have spaces of overlapping but also have areas where they apparently do not connect (see Figure 1). Strong sustainability recognises that different types of capital *cannot* be readily substituted for each other in order to balance the capital of the world (the opposite is weak sustainability). Therefore strong sustainability recognises that the life-giving functions of the environment are *not* fully substitutable for other forms of capital.

Figure 1. Weak versus Strong Sustainability



<sup>4</sup> Report of the Brundtland Commission, *Our Common Future* (1987).

The economy, nested within society, relies wholly on the inputs, from and waste absorption capacity of, natural systems, most of which are currently 'free' to humans. However, humanity is increasingly becoming aware of the full costs of inaction – a recent example would be the reporting of the full cost of combating climate change by Nicholas Stern (2006).

The Local Government Act requires local authorities to undertake planning and decision-making that is genuinely long-term in scope and integrated in nature. This places an onus on councils to not only consider future generations, but also actively pursue expertise in understanding what those future needs may be.

To this end, we recommend the report of the 'World Economic Forum on Global Risks 2009'<sup>5</sup> and our latest *Project 2058* Report 6. What is clear is that the global risks landscape for 2009 will create significant resource challenges that will demand sustainable resource management, sustainable infrastructure investment and reliable energy security that is sufficient to support a high quality of life without damaging the environment to an unacceptable degree. Global risks require local solutions, which emphasises again why LTCCPs must adopt a *strong sustainability* approach.

## **Question 2 What might sustainability look like?**

Notably, the greatest hurdle for councils to meaningfully adopt strong sustainability is identifying what it looks like and how to communicate its complexities. Systems thinking frameworks have been used broadly for community planning, particularly by many Canadian municipal governments.<sup>6</sup> The Canadian Integrated Community Sustainability Plans allow for flexibility in planning by recognising both the integration of short-term opportunities for financial and social gain, as well as having an eye on a long-term and environmentally sound vision for a sustainable future.<sup>7</sup>

Another step that can be taken is to adopt the principles of sustainability as defined by The Natural Step (TNS):

To become a sustainable society we must:

1. Eliminate our contribution to the progressive build up of substances extracted from the Earth's crust (e.g. heavy metals and fossil fuels),
2. Eliminate our contribution to the progressive build up of chemicals and compounds produced by society (e.g. dioxins),
3. Eliminate our contribution to the progressive physical degradation and destruction of nature and natural processes (e.g. over-harvesting forests); and
4. Eliminate our contribution to conditions that undermine people's capacity to meet their basic human needs (e.g. unsafe working conditions).

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<sup>5</sup> See <http://www.weforum.org/pdf/globalrisk/2009.pdf>

<sup>6</sup> Section 8.2 of the Canadian Municipal Funding Agreement (MFA) requires municipalities over the life of the MFA to develop or enhance an Integrated Community Sustainability Plan (ICSP).

<sup>7</sup> For Bathurst example, see <http://www.naturalstep.org/en/canada/bathurst-sustainable-development-canada>

Such a route has recently been taken by the Hastings District Council, who chose to frame their pre-LTCCP work<sup>8</sup> with these principles and is investigating committing itself to the TNS approach.<sup>9</sup> Thus the LTCCP can create a common understanding of sustainability between all those involved in the Community Outcomes process for social, cultural, economic and environmental well-being.

Community participation is best nurtured through transparency of decision-making, a clear vision of success and a process of thorough understanding and dialogue. This can best be achieved by providing the community with an opportunity for comprehensive understanding of the process and sharing a common language of sustainability, what it is that the community hopes to achieve long-term and how it is going to go about achieving it. This meaningful participation creates a strong foundation for the community to move forward together and a sense of belonging and trust within the community.

### **Question 3 What do successful, sustainable LTCCPs contain?**

What might an LTCCP that delivers a sustainable future look like? Most importantly, such an LTCCP must have a clear vision of where the community is going. This goal needs to be bold and exciting, bringing together people and all parties under one shared purpose. It should identify the significant global, national and local risks and opportunities and set out a comprehensive response to the landscape ahead. Finally, it should discuss the governance structure (who is responsible for what tasks) and the rights and responsibilities of its citizens. Without responsibility, there are no rights.

A successful LTCCP will be a plan that meets the current and future needs of its citizens. It is one that turns consumers into citizens, ratepayers into guardians, and economies into communities. Each LTCCP should be inspirational, goal-orientated, measurable and uniquely designed for the community it serves. Finally, it must be clear and concise; LTCCPs that are long on detail but short on clarity are more likely to magnify the problem rather than be part of the solution.

### **Question 4 What are the obstacles to success?**

Using our scenario work to look ahead to what a sustainable future for New Zealand might look like, we have identified five obstacles that may prevent or slow down progress towards a sustainable future. We urge councils to actively pursue strategies that remove these obstacles:

**Obstacle 1: A pre-determined mindset** – Issues such as mental inertia and groupthink are key obstacles to robust thought and planning across all sectors of society, and it can often be difficult to counteract the effects of these. Groups that fail

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<sup>8</sup> *What should the future of Hastings look like?* See <http://www.hastingsdc.govt.nz/projects/sustainability/sustainability.pdf>

<sup>9</sup> <http://thenaturalstep.org/en/new-zealand/hastings-district-council>

to review or revise their mindsets with regularity lose the ability to be flexible and adaptive to changing social expectations. In order to produce effective outcomes, LTCCP processes need to be designed to invite critical independent thinking and seek out alternative views.

**Obstacle 2: A negative attitude** – Creating a culture of optimism and ‘give-it-a-go’ is critical for building robust and productive communities. Councils have a key role in enabling citizens, in particular young people (18 – 25 years) to move forward. If the first experience for young people is a negative experience, it can act as a barrier. Whether it is in the form of altering a house, continuing education, starting a business, or dealing with a health problem, councils need to ensure there are no barriers in place and that councils create the right incentives for sustainable development.

**Obstacle 3: A lack of relevant and timely information** – Vital to ensuring that councils can deliver great outcomes that move society towards a sustainable future is the provision and use of timely and relevant information. In the course of our work we have found that locating data in order to develop useful information is extremely challenging. Without baseline data, New Zealand can neither develop strategic knowledge, nor monitor our progress. We suggest that councils should attempt to collect data to measure success and identify critical problems.

**Obstacle 4: A lack of long-term thinking** – To solve the complex and integrated problems of today, the models of yesterday may no longer be suitable. Sustainable Future believes that the adoption of strong sustainability and principles such as those of The Natural Step are one possible solution to the emerging challenges. This must also include creating a shared vision for your region, district or city in a transparent manner that encourages participation and ownership. Nationally, we believe that New Zealand should establish an independent advisory body focused on providing long-term thinking and public participation. We suggested the body should be named the Sustainable Development Council (SDC).<sup>10</sup>

**Obstacle 5: Disparities within and between communities** – Central to sustainability is working to ensure equity within and between generations. New Zealand currently faces a range of disparities in health, technological adoption, wealth and education. For example, research from 2006 indicates that geographical health inequalities are at historically high levels (Pearce & Dorling, 2006). Technology adoption disparities are likely to have a high impact on the ability of councils to deliver sustainable outcomes, as has been demonstrated by the recently announced national broadband plan and the lack of cable to areas such as the West Coast. In addition, we refer to Table 1, which shows disparity of income is an area of concern for New Zealand, whereas we rank highly in education.

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<sup>10</sup> For more information, see Report 4 of *Project 2058, Institutions for Sustainable Development: Developing an optimal framework for New Zealand*, Wellington: Sustainable Future (2008) p. 4.

**Table 1. Social and Economic Disparities**

Source: UNDP, (2007-2008).<sup>11</sup>

Total Human Development Index	Includes Education Index	Includes Disparity of income <sup>12</sup>	Includes RST expenditure (% GDP)	Includes GDP (per capita)
1. Iceland (0.968)	1= Australia (0.993)	1. Japan (4.5)	1. Israel (4.46)	1. Luxembourg (60 228)
3. Australia (0.962)	1= New Zealand (0.993)	42. Ireland (9.4)	20. Australia (1.70)	16. Australia (31 794)
19. Italy (0.945)	6. Norway (0.991)	64. Macedonia (1.25)	25. Russia (1.17)	27. UAE (25 514)
20. New Zealand (0.944)	12. Ireland (0.978)	65. New Zealand (12.5)	26. New Zealand (1.16)	28. New Zealand (24 996)
21. UK (0.942)	18. UK (0.970)	66. Australia (12.5)	27. Ukraine (1.16)	29. Greece (23 381)
177. Sierra Leone (0.336)	177. Burkina Faso (0.255)	126. Bolivia (168.1)	91. Peru (0.10)	174. Malawi (667)

**Obstacle 6: Disparities between the public and private sector** - Disparities can also develop where the benefits are borne by the private sector and the risks by the public sector. Genetic modification is a case in point. At a global level, another example is the bailing out of private sector companies by government; what the Governor of the Bank of England calls *moral hazard*.<sup>13</sup> A further example may be the aluminium smelter in Bluff, where we understand the power is supplied at a much lower rate to the company than to individual taxpayers. The challenge is for councils to ensure there are no disparities within their regions, no *moral hazards* that create unfair advantages for some, and disadvantages for others.

**Obstacle 7: Lack of Cash and Credit** - History reminds us that a time of crisis is an opportunity to make strategic leaps. There is no doubt that the recession will deliver negative impacts, but it can also be seen as an opportunity to build resilient communities. Leadership in local government needs to be responsive to emerging problems - such as the transition to non-fossil fuel transport. New Zealand will need strong leadership to ensure that we build capacity during the recession, what we refer to as a strategy of magnifying hope and reducing fear - see attached Think Piece 8, *Magnifying Hope and Reducing Fear*.

<sup>11</sup> *Human Development Report 2007/2008 and 2008 Update*. Retrieved 6 April 2009 from <http://hdrstats.undp.org/indicators/>

<sup>12</sup> Inequality in income or expenditure (ratio of richest 10% to poorest 10%)

<sup>13</sup> 'G20 summit must make the moral case for capitalism', *Telegraph* (UK), 9 March 2009. Retrieved 6 April 2009 from <http://www.telegraph.co.uk/comment/telegraph-view/5067611/G20-summit-must-make-the-moral-case-for-capitalism.html>

### **Question 5 What are the hot issues for your region?**

Finally, we would like to take this opportunity to flag several issues – hotspots – which we consider councils should discuss within their LTCCP. These are:

**a. Dairying** – New Zealand’s largest export earner, the dairy industry, brings many benefits to many communities around the country. However, the industry is also responsible for considerable environmental and social costs, including polluting waterways through unfenced streams and over-fertilisation. A recent review<sup>14</sup> of the *Dairying and Clean Streams Accord* found that water quality targets set under the Accord were not being met. To clean up the waterways, local government needs to put pressure on the dairy industry. Initiatives could include the policing of the voluntary *Dairying and Clean Streams Accord*, and petitioning Government to implement national legislation that protects the quality of waterways for future generations. While some progress is being made in this area, local government needs to make a firm and forward-thinking commitment to improving the negative effects of dairying.

**b. Genetic modification** – The recent control breaches at Plant and Food’s genetically modified *Brassica* experiment near Lincoln draws attention to the inability of the appropriate authorities to adequately monitor GM experiments in the outdoors. A full review of the current weaknesses in the funding, decision-making and compliance processes are contained in our recent letter to the Hon Nick Smith.<sup>15</sup> Because there are unresolved issues around GM crops and trials such as liability, ecological impacts, and adverse impacts on primary producers and key markets, Sustainable Future recommends that all local authorities work to develop policy to protect themselves and their citizens against adverse effects of this rapidly moving science.

Fundamental to this is understanding the desired future of GM in your area. We urge councils to work with one another and discuss with the community what that desired future might be. We support the actions of staff from seven councils on the *Inter-council Working Party on GMO Risk Evaluation and Management Options* who met recently to discuss community consultation. Councils on the Working Party include Whangarei, Kaipara, Far North and Rodney District Councils, Waitakere City Council, and Auckland and Northland Regional Councils. A legal opinion commissioned by the member councils of the Working Party on GMOs indicates that local government does have jurisdiction regarding GMOs under the RMA and Local Government Act 2002 should the council choose to exercise it. In addition, we agree with the recommendations of Dr. Somerville, Q.C., which was to include policy

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<sup>14</sup> N. Deans & K. Hackwell, (2008). *Dairying and declining water quality – Why has the Dairying and Clean Streams Accord not delivered cleaner streams?* Fish and Game New Zealand and Forest and Bird. Retrieved April 9 2009 from [http://www.forestandbird.org.nz/files/file/Dairying\\_and\\_Declining\\_Water\\_Quality\(3\).pdf](http://www.forestandbird.org.nz/files/file/Dairying_and_Declining_Water_Quality(3).pdf)

<sup>15</sup> See [http://www.sustainablefuture.info/Site/Hot\\_Topics/Genetic\\_Modification/Genetic\\_Modification.aspx](http://www.sustainablefuture.info/Site/Hot_Topics/Genetic_Modification/Genetic_Modification.aspx)

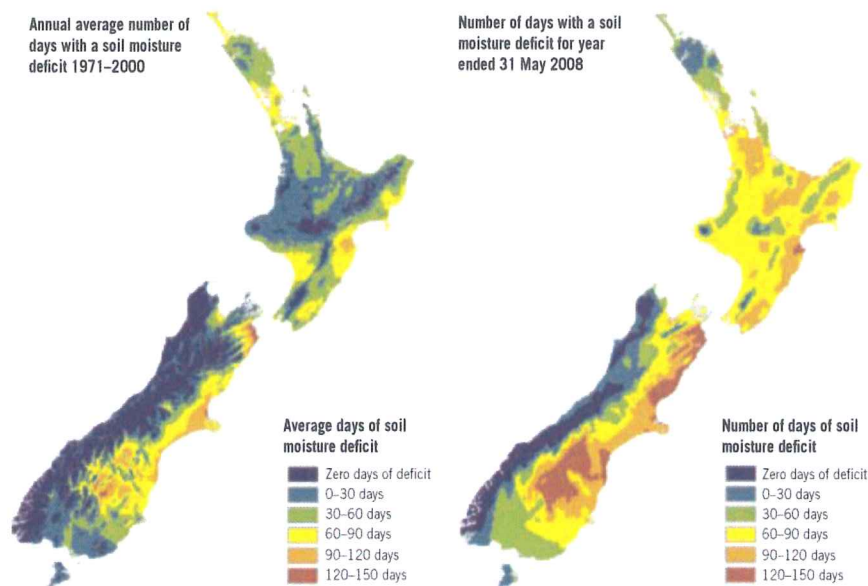
about GMOs and the Precautionary approach in the Long Term Council Community Plan, District Plan and Regional Plan.<sup>16</sup>

Our position is that there may be a place for GM organisms in the outdoors in the long-term, but not in the foreseeable future. We argue that New Zealand is better off keeping its GM-free status until we have in place a robust funding, decision-making and compliance system and the benefits of adopting GM crops and animals exceeds the risks of undertaking experiments on New Zealand soil.

**c. Land use, water, energy and food** – Councils will need to be both flexible and rigorous in its resource management, in order to adapt to changes in climate. The 2008 drought, as depicted in Figure 2, is an example of what may lie ahead.

**Figure 2. Changing soil moisture deficit in New Zealand**

Source: NIWA, (2008).<sup>17</sup>



In developing LTCCPs, councils need to ensure that plans are both robust and equitable in dealing with complex issues such as changing land use, water (rights, the development of appropriate infrastructure, water quality, water storage, water allocation, and water waste), green energy and food assurance. We make two further comments regarding water quality and water allocation:

#### Water Quality

While sewage and wastewater discharges from point-sources are still a significant influence on water quality in some areas, the effects of non-point-sources of pollution

<sup>16</sup> For further information, contact Dr Kerry Grundy, Whangarei District Council, [kerryg@wdc.govt.nz](mailto:kerryg@wdc.govt.nz)

<sup>17</sup> <http://www.maf.govt.nz/mafnet/rural-nz/statistics-and-forecasts/sonzaf/2008/page-02.htm>

on streams, rivers, and lakes have been identified as the most serious freshwater management challenge in New Zealand today.<sup>18</sup>

#### Water Allocation

At present, there is much attention being paid to water usage across settlements in New Zealand. Currently only 11 of the 73 territorial local authorities have metering systems that measure – and attach a price tag – to the amount of water that comes into homes and gets flushed down the drains.<sup>19</sup> Sustainable Future supports metering. In particular, we urge councils whose boundaries include agricultural land to urgently consider charging the agriculture industry for water used. In addition, we suggest councils consider requiring irrigation to occur in the late evenings or early mornings to improve water absorption efficiency and reduce water consumption by agricultural activities.

#### **d. Broadband**

Access to broadband is a disparity issue that must be actively pursued in order to deliver productivity gains for *all* New Zealanders.

#### **e. Leaky Homes**

The Government's new leaky-home investigation seeks to quantify the scope of leaky-homes, thought to affect up to 80,000 houses.<sup>20</sup> Councils in Auckland, Wellington, Christchurch, Manukau, North Shore, Rodney, Tauranga and Waitakere are considered to have the most leaky houses. Clearly, this is a significant issue for councils to help put right.

#### **f. Population – Aging, Regional Disparity, and Immigration**

We believe that understanding the demographics within the region is a significant issue for planning for the right infrastructure for the community. Figure 3 below indicates the expected national changes in age over time. It will be critical to understand the level of change likely to occur in your area, and furthermore what this change means in terms of the type of infrastructure needed in 2020 - 2030.

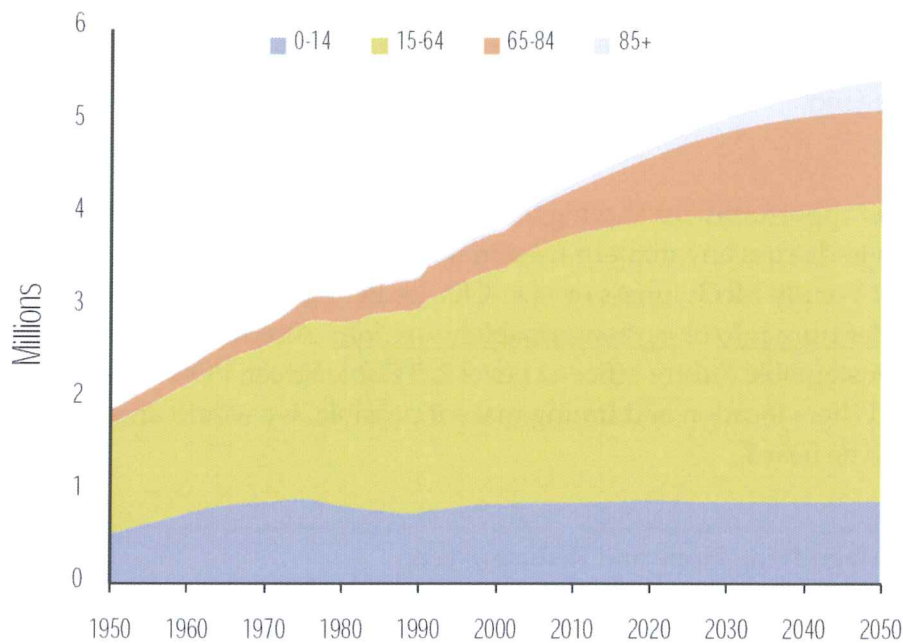
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<sup>18</sup> 'Point-sources refer to discharges of pollutants from a single facility at a known location (for example, a wastewater treatment plant). Non-point-source pollutants do not have a single point of origin (for example, they may include pollutants that have run off wide areas of disturbed or developed land after rainfall).' Ministry for the Environment, *Environment New Zealand 2007*, p. 264-267.

<sup>19</sup> Emma Page. (2009, April 5). 'Bill for water says lobby group'. *Sunday Star - Times*, A.5.

<sup>20</sup> Anne Gibson. (2009, March 4). 'Govt, councils to meet leaky home owners', *NZ Herald*. Retrieved 6 April 2009 from [http://www.nzherald.co.nz/nz/news/article.cfm?c\\_id=1&objectid=10559802](http://www.nzherald.co.nz/nz/news/article.cfm?c_id=1&objectid=10559802)

**Figure 3. New Zealand's aging population**  
 Source: Statistics New Zealand, (2008).<sup>21</sup>



As stated earlier, research indicates that some regions may be disadvantaged over the supply of medical health services. Although this is arguably an issue for the District Health Boards, council plans should support initiatives to improve health care services – which may include data collection and improved infrastructure (such as helicopter ambulances and medicinal hot pools).

Lastly, some councils have a key role in managing immigration. We believe LTCCPs must consider the needs and rights of those immigrants and consider the implications of climate change refugees in the future.

<sup>21</sup> The Treasury, *Briefing to the Incoming Minister of Finance 2008: Medium-term Economic Challenges*. Retrieved 6 April 2009 from <http://www.treasury.govt.nz/publications/briefings/2008/12.htm>

**To Conclude**

The challenge is therefore to deliver LTCCPs in which councillors have explored what is possible, decided what is acceptable, and developed a clever plan that contains a shared vision with measurable goals, which is then published in a clear and concise manner. This is clearly a difficult task, but one that is critical for the future of New Zealand.

**Contact Details**

We appreciate this opportunity for sharing our ideas with you. If you have any questions or wish to discuss any matter raised in this submission, please do not hesitate to contact Wendy McGuinness or Jean-Charles Perquin at (04) 499 8888, or [wmcg@sustainablefuture.info](mailto:wmcg@sustainablefuture.info) or [jcp@sustainablefuture.info](mailto:jcp@sustainablefuture.info). Alternatively, we can be contacted at the Sustainable Future office at Level 2, 5 Cable Street, PO Box 24 222, Wellington 6142. Where location and timing make it possible, we would appreciate the opportunity to be heard.

**Attachments**

1. Think Piece 8: Magnifying Hope and Reducing Fear
2. Timelines: Exploring the Four Scenarios

## Magnifying Hope and Reducing Fear

Prepared by Wendy McGuinness

## Think Piece 8

December 2008

### SUMMARY

It's easy to run a country when things are going well, but 'things' are clearly not. New Zealand, like every country on the planet, starts 2009 facing 'The Three Gs': Global political change, Global economic change and Global climate change. History tells us that in a time of crisis, sure-footed small steps without a long view won't take us very far; whereas ambitious leaps based on clarity of thought will deliver a nation to new levels of development. This Think Piece aims to highlight our thinking as to how this government can use this time of global change, not only to manage the negative effects, but to propel New Zealand into a much stronger place in the long term. We do this by discussing the results of our latest report: *Four Possible Futures for New Zealand in 2058*.

*Four Possible Futures for New Zealand in 2058* explores four long-term scenarios for New Zealand (see Table 1 below) and finds: Scenario One will be hard work but worthwhile, Scenario Two will be difficult to manage, Scenario Three will be the loss of a nation and Scenario Four will be doom and gloom.

In view of this, *game theory*<sup>1</sup> would suggest that New Zealand should not just focus on managing itself effectively, but on pursuing a strategy of actively ensuring the world also manages itself well — if it does not, New Zealand cannot succeed in the long term. Put bluntly, the best approach for New Zealand is to support international management of global challenges, and in our view, this is best achieved by (i) supporting multi-lateral agreements that resolve global challenges and (ii) leading by example.

Our scenario exercise makes it clear that New Zealand needs to:

1. Be seen to deliver on all of our international agreements and legal obligations.
2. Design and apply indicators that measure progress in a comprehensive and integrated manner.

3. Identify, investigate, reflect on and consider the implications of all available strategic options in an open and transparent manner. Such an approach will not only deliver the best decisions, but just as importantly, gain the commitment of New Zealanders to actively deliver on those decisions.
4. Focus more on what is 'important' rather than what is 'urgent'.
5. Respond appropriately, rather than over-react, under-react or not react at all.
6. Support and engage in thinking long-term about the future.
7. Develop a dynamic, creative and effective strategy for sustainable development that not only propels this country into an exceptional position internationally, but does so in such a way that other countries emulate our practices.

History tells us that there is no better time to propel a nation forward than during a time of crisis. So the real question New Zealand should be focusing on is how can New Zealand make the three G's (noted above): Global political change, Global economic change and Global climate change work in our favour? The remainder of this paper investigates how to build a nation, by magnifying hope and reducing fear.

**Table 1 The Essence of the Four Scenarios**

Source: *Four Possible Futures for New Zealand in 2058* (Sustainable Future, 2008)

	The world does manage its strengths, weaknesses, opportunities and threats	The world does not manage its strengths, weaknesses, opportunities and threats
New Zealand does manage its strengths, weaknesses, opportunities and threats	<p><b>Scenario 1: Power to the People</b> Concepts such as global unity and balance are no longer myths. Intolerance is a thing of the past, as diverse cultures coexist peacefully, all partaking in one global community. Sustainability, once a determined lifestyle choice, is now the norm. The climate change and peak oil crises are under control as the world embraces innovative, sustainable technologies and systems. The New Zealand public is educated, diverse and informed, choosing to stay in New Zealand where infrastructure is of an excellent standard and the lifestyle is unmatched. The burning question for New Zealanders in 2058 is: How do we maintain peace and prosperity?</p>	<p><b>Scenario 2: An Island Paradise — but Back to the Jungle</b> Everyone wants a piece of what we have got, and despite our desirable lifestyle, there is increasing tension with the outside world that requires constant management. To stand up to this pressure, New Zealand has cultivated a resilient national identity and robust infrastructure, and has been among the first countries to make some tough decisions. There is particular pressure on our resources and immigration policy, and as we fend off those countries once considered to be superpowers, we look for allies in countries that are similarly positioned. The burning question for New Zealanders in 2058 is: How do we protect what we have?</p>
New Zealand does not manage its strengths, weaknesses, opportunities and threats	<p><b>Scenario 3: Missed the Global Bus</b> Our isolation is more pronounced than ever, as we lag behind politically, economically and in the management of our resources and environment. To make up for these shortfalls, our government grasps at unsuccessful 'quick fixes', fuelling rather than rectifying the nation's downward spiral. Corruption, diminished cultural identity, an increase in slums and local terrorism have forced many educated New Zealanders elsewhere. The burning questions for New Zealanders in 2058 are: What happened? What can we do?</p>	<p><b>Scenario 4: It's All Over Rover</b> It is the end of the world as we know it. As each country embarks on a policy that is characterised by short-term goals designed to meet the self-interest of a few, the only international interaction is conflict-based and is fuelled by fear, an arms race and nuclear proliferation. As climate change, resource shortages, biodiversity depletion, population growth and inequality escalate; these global problems spiral out of control. The burning question for New Zealanders in 2058 is: Do we have another 50 years?</p>

The scale of change we face is by no means unique in the history of the world. About two million years ago, two species (halfway between ape and human) walked the earth: the *Paranthropus boisei* and the *Homo habilis* (see Figure 1). Both lived in East Africa at a time when climate change was causing forests to vanish.

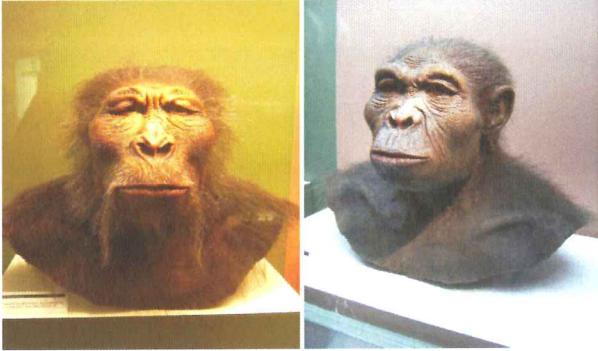


Figure 1: Scientific reconstructions of *Paranthropus boisei* (left) and *Homo habilis* (right)

The *boisei* were highly specialised, lived within a strict social structure and were led by a dominant male whose strength and power held the group together. In contrast, the *habilis* was the archetypal jack-of-all-trades. They were inquisitive scavengers prepared to try almost anything to survive. They were tough, active, gregarious and noisy, always on the move and always alert to the possibilities of an opportunity. While the *boisei* died out, the *habilis* went on to become what many believe to be our earliest human ancestor.

This lesson from history suggests that a culture which promotes independent thought, supports inquisitive thinking, rewards success and cultivates adaptive and diverse skills is more likely to be successful in a time of crisis. In view of this, the focus should be on making every individual strong, inquisitive and dynamic, rather than on central control of the masses.

Abraham Lincoln, the sixteenth President of the United States, understood that a time of great crisis also delivers an opportunity to unite individuals with a common resolve. Lincoln did this very effectively after the Civil War, stating in the Gettysburg address:

... We here highly resolve that these dead shall not have died in vain--that this nation, under God, shall have a new birth of freedom--and that government of the people, by the people, for the people, shall not perish from the earth.

Lincoln was using the idea of democracy and freedom — what Joseph S. Nye calls 'soft power' in the latest *Harvard Business Review* — to propel the country forward. Nye argues that soft power is embodied in the culture, values and policies of nations, whereas hard power, is what the name implies: aggressive initiatives. Importantly, Nye believes that neither 'hard power' nor 'soft power' can solve complex problems by themselves and that the right combination of hard and soft power is necessary: what he calls 'smart power'.

In terms of the four possible futures described in Table 1 above, New Zealand can only win if the world wins. This does not mean we have no influence; rather it is quite the contrary. We can shape our future by helping to shape the world. This can be done in two ways: firstly, by using soft power to support positive global initiatives, and secondly we can be an exemplar, solving complex problems in ways that propel the nation forward during a crisis.

It is not the strongest of the species which survive, nor the most intelligent, but the ones most responsive to change." Clarence Darrow

Julius Vogel (see Figure 2) provides an excellent example of leadership in New Zealand during a crisis. In the late 1860s, New Zealand had been in a depressed state for over three years; farmers were receiving low prices for their wool and wheat, and gold production had declined. Net immigration was not encouraging and the situation presented an enormous challenge to the government. In response, Vogel promised a plan to 'extend the benefits of regular and systematic immigration to the Colony throughout its length and breadth'.

In February 1870, Julius Vogel, largely working on his own, presented a budget to government that was both simple and ambitious. It was a scheme to increase the population and revolutionise communications, including the building of roads and railways. In 1893, Vogel acknowledged a further purpose, which was to bring peace; the scheme did 'more to put an end to hostilities and to confirm peaceful relations [with Māori], than an army of ten thousand men'.<sup>2</sup> At a time of crisis, Vogel's plan got the country working again. Importantly, Vogel's strategy was a big leap from the past. He showed resolve, used soft power and remained focused on the long term. This emphasis on future thinking is further supported by a recent essay<sup>3</sup> released by the New Zealand Institute which stated that the 'challenge extends beyond managing through the next 12-24 months'.



Figure 2: Julius Vogel

The benefits of critical thinking cannot be underestimated. After the Bay of Pigs invasion (1961), John F. Kennedy sought to avoid *groupthink*<sup>4</sup> during the Cuban Missile Crisis (1962). He did this by creating a culture of critical thinking: he sought out independent expert advice and demanded autonomous thought to such an extent that he was absent from some meetings, and if he did attend, he would not venture an opinion early in the process.

However, critical thinking focused solely on what is urgent will not suffice. In *7 Habits of Highly Effective People*, Steven Covey introduced the idea that effective people spend most of their time on what is 'important' rather than what is 'urgent'. The challenge for governments in times of crisis is having the ability to tell the difference. Applying this concept to the three G's mentioned earlier: Global political change, Global economic change or Global climate change — we wonder which of the three G's does this government consider most important?

Governments must ensure that decision-makers, policy analysts and experts appraise all alternative courses of action. In times of crisis this, in effect, demands that not only should the line drawn between the public service (including the policy analysts and experts) and Government be seen to exist, but that it is sufficiently valued to act as an additional deterrent against poor decision-making.

Historically global crises have followed a pattern of short bursts of disruption followed by long periods of stability, but we may be entering a time when the opposite is true — being long periods of disruption followed by short bursts of stability. In which case, New Zealand will need strong leadership in order to prevent us spiraling out of control. Government has two strategic options. The first is to move the country 'out of the process' all together by providing an enticing strategy based on hope. The second is to accelerate the country 'through the process', in such a way that we take the pain quickly and move to a stronger, more stable position in the medium term. We believe the years ahead is likely to require both strategies: magnifying hope and reducing fear.

**Special Thanks:** To the Board of [Futures Thinking Aotearoa](#) (The New Zealand Futures Trust), Guy Salmon ([Ecologic](#)) and Roger Dennis ([Innovaro & Innovation Matters Consulting](#)) for externally reviewing this Think Piece.

**Find Out More:** Read Report 6: *Four Possible Futures for New Zealand in 2058* at [www.sustainablefuture.info](http://www.sustainablefuture.info)

# SCENARIO I POWER TO THE PEOPLE

## 2008

**2015 //** New Zealand becomes a republic, recognising the Treaty of Waitangi as a founding document. National eco-verification and genetic engineering (GE)-free standards are introduced.

**2018 //** Global celebrations for the inaugural 'One Earth Day' take place. At the same time, the world switches from using GDP to holistic indicators to measure well-being.

**2021 //** New Zealand launches the world's first full fleet of electric vehicles.

**2025 //** New Zealand achieves a fully renewable energy system. Construction is completed of a 'super-smart grid'.

**2029 //** Business practices have been transformed in the last 15 years, with self-organising and replicating business models and processes predominating.

**2032 //** Zero-emission solar/wind ship technologies are now a major form of global trade transport.

**2034 //** The first global parliament is established, named United Nations for One Earth (UNOE). People increasingly identify as part of a common humanity.

**2045 //** The Centre for Global Food Research is founded by the global parliament, UNOE, to ensure sustainable food production and protection of biodiversity.

**2050 //** The global population stabilises at 8.5 billion, largely due to extensive and sustained programmes of education and women's empowerment.

**2055 //** The Orbital Solar Power station goes on line. Together with the Great Sahara and Gobi Desert solar farms, solar power provides 65% of global energy needs.

**2058** New Zealand's population reaches 7 million. The country continues to be a desirable place to live due to its reputation for innovative leadership, effective immigration policies, cultural diversity and clean-green initiatives.

**2013 //** Global oil production peaks bringing economic hardship for many, though emerging renewable technologies offer hope.

**2017 //** The United Nations hold the 'One Earth — Unity in the Energy-Climate Era' conference, a pivotal moment for the global society's shift to a sustainable future.

**2020 //** Global greenhouse gas emissions peak. The Organisation of Petroleum Exporting Countries, renames itself the Organisation of Clean Energy Exporting Countries in an effort to rebrand.

**2024 //** Ecocrete, a zero-greenhouse gas emission alternative to concrete, is developed in Sweden.

**2026 //** Global commitment to a closed-loop, 'cradle-to-cradle', zero-waste economy is deemed a success with 90% of products producing no waste.

**2030 //** New Zealand's main exports are water, high-quality, 'low-carbon' meat, and increasingly low-input, organic standard grains.

**2039 //** Mandric, a fusion of Mandarin and Arabic, is now widely taught around globe as a second language.

**2040 //** The Global Carbon Park initiative now protects over 10% of the earth's surface. Reforestation generates income and has replaced deforestation.

**2047 //** Formerly named the internet, connections between biological and electronic worlds are progressed through the Humanity Interface (HI), with people connecting to the interface using microchip implants.

**2056 //** UNOE announces reversal of extinction trends, recovery of some world fisheries, and that warming due to climate change is likely to remain around the 2°C.

## 2058

# SCENARIO 2

## AN ISLAND PARADISE – BUT BACK TO THE JUNGLE

### 2008

**2012** // A weak climate change agreement is passed at the post-Kyoto summit.

**2020** // Renewed global climate change talks fail for a third time, sparking panic, conflict, and triggering the eventual collapse of the United Nations.

**2024** // New Zealand's leading exports are food and agricultural production techniques. This intellectual property generates over 40% of export earnings.

**2029** // New Zealand begins major export of tidal and wave power generation technology and expertise, seizing the opportunity to share with other countries, many of whom are increasingly desperate for renewable energy.

**2032** // 20% of the Asian continental population is affected by unprecedented drought and famine. The Chinese Federation invades the Russian Union in search of gas and food supplies, starting a four-year war that leads to the deaths of over 15 million people.

**2034** // New Zealand exports 'space' for the first time, leasing land and ecosystem services. This quickly becomes one of the country's top export earners.

**2037** // Compulsory military service is introduced in New Zealand and full satellite surveillance of the country is launched as New Zealand lurches towards a police state.

**2040** // The Chinese Federation places pressure on New Zealand to grant it exclusive water export rights, as several foreign blocs take an increasing interest in New Zealand

**2045** // 40% of all species in existence in 1900 are now extinct. The announcement sparks a resurgence of spirituality across the globe as a sense of desperation spreads.

**2053** // The global population reaches 10.5 billion. On average, global temperatures are now 2.5°C higher than in pre-industrial times. Many countries are faced with famine.

**2058** // The New Zealand population reaches 15 million. The country commences the construction of three offshore floating settlement islands funded largely by the Indonesian Protectorate arrangement.

**2009** // New Zealand develops and implements a long-term, integrated strategy towards strong sustainability.

**2016** // Largely motivated by the increased national security and economic opportunity this offers, the Clean, Green, New Zealand Act is passed, committing the country to a path to a low-carbon economy.

**2021** // The Maori King Movement gains support, receiving recognition under New Zealand's new constitution.

**2028** // The world's aviation fleet is grounded due to fuel shortages and civil unrest. Airships and hover trains emerge as a major form of long-distance transportation.

**2030** // 18% of New Zealand's population is comprised of climate refugees. Globally, millions of people are being forced to migrate from their homes as many areas become unsuitable for occupation.

**2033** // Only 30% of Papua New Guinea's original rainforest remains intact. Global ecosystems are in dire states.

**2036** // The first major terrorist attack occurs in New Zealand, with a strike on the national museum, Te Papa. The event shocks the nation and marks a sharp hardening of New Zealand's willingness to cooperate with the global community.

**2038** // The European Military Alliance starts construction of the first moon mine. The Russian Union continues to mine the depleting reserves of the Arctic Circle.

**2042** // New Zealand becomes an Indonesian Protectorate in an arrangement where food and water are supplied in return for military assistance and protection from the increasingly hostile Chinese Federation.

**2050** // A major earthquake on the Indian peninsula triggers an eventual military push into the Chinese Federation in search of glacial water supplies.

**2055** // Cold fusion technology makes promising breakthroughs. The celebrated moment of optimism is short lived as the technology remains prohibitively expensive.

### 2058

# SCENARIO 3 MISSED THE GLOBAL BUS

## 2008

**2013** // The International Coalition for Climate Change (ICCC) is created, pressuring less compliant countries such as New Zealand. The global debate on whether GM is the answer intensifies.

**2015** // Argentina wins the Rugby World Cup held in Japan and Korea. The revolutionary tournament — a 'sustainable world event' — ignites people's imaginations and bolsters Japan's growing reputation for advanced sustainable solutions.

**2018** // New Zealand finds its investments in infrastructure and GM, and an increased reliance on coal, are strongly at odds with the G8B-led global community. Strategic decisions have 'locked in' New Zealand's carbon intensive economy.

**2023** // Global greenhouse gas emissions peak after a firm approach is taken over the nine extremely difficult 'bridge' years that follow the G8B Tokyo Summit. The G8B and ICCC's voluntary carbon trading systems are now widely adopted. New Zealand remains poorly placed.

**2031** // The trans-Atlantic floating transport-trade tunnel is opened and incorporates floating wind and current power stations. Connecting the eastern United States with Europe, it is hailed as the 21st century's first marvel of engineering, revolutionising trade.

**2034** // Carbon is now the main globally traded commodity and generates the greatest source of economic flow. A continued lack of a robust carbon trading mechanism in New Zealand means the country largely misses out.

**2036** // Global demand for coal and oil drops dramatically. China and other G8B countries now have largely renewable electricity systems, greatly impacting New Zealand's coal exports and economy.

**2042** // The G8B announces that the majority of the global community is now 100% renewable in terms of energy production and waste.

**2049** // New Zealand attains Third World status. Within months, negotiations are under way to become a state of Australia.

**2058** Australian resource extraction corporations move from Australia to the easy pickings in unregulated New Zealand. There is international condemnation of this move by the G8B but little action is taken.

**2010** // New Zealand commits to becoming a leader in genetic modification (GM) agricultural technology and techniques. The country re-brands as a modern cutting-edge destination, with 'Live the Future' replacing '100% Pure NZ'.

**2014** // G8 and BRIC countries align to create the 'G8B' at the Tokyo Summit. This soon becomes the dominant international governing body, superseding the United Nations. Stalling progress on climate change and fractious membership have led to the UN's demise.

**2017** // The European Union unexpectedly bans GM dairy products after Europe is hit by a severe GM food safety scandal.

**2020** // More Maori live in Australia than in New Zealand. Much understanding of the Treaty of Waitangi and of te reo Maori is lost.

**2025** // International corporate invasion of New Zealand accelerates as companies look to take advantage of the nation's poor environmental regulation and gain access to resources.

**2028** // A major viral pandemic hits the New Zealand GM livestock population. There are widespread livestock deaths and a devastating impact on exports, industry and local communities.

**2033** // New Zealand initiates the large-scale export of water. Water rights conflicts escalate in water harvest areas as the remaining agricultural sector is impacted.

**2035** // Many citizens meet in virtual holographic cafés, pioneered in the Middle East.

**2040** // Argentina begins major export of third generation desalination water technology, reducing worldwide demand for imported fresh water. Together with the drop in coal demand, this is a major blow for New Zealand's economy, sending it into a nose dive.

**2045** // The 'Planet Earth Peace Festival' is attended by over 450 million people in either real or virtual life. Despite many small wars and conflicts, the world has managed to avoid descending into a full-scale world war for 100 years.

**2052** // The first large-scale extra-terrestrial power plant is opened on Mars by the International Spatial Agency for Sustainable Energy.

## 2058

# SCENARIO 4 ALL OVER ROVER

## 2008

**2012 //** The Kyoto Protocol Commitment Period One ends without significant emissions reductions. Further global climate change talks end with no follow up agreement or framework attained.

**2016 //** Most of New Zealand waterways are now unsafe for human use. Several tropical diseases and pests that have appeared in the last few years decimate the fruit and wine industries. National unemployment reaches 9%.

**2021 //** The World Wide Web crashes for two weeks bringing the world economy to a standstill and causing widespread social disruption.

**2025 //** The New Zealand population reaches 10 million with a rush of climate refugees, prompting massive cultural change, civil unrest and a move towards a police state.

**2028 //** Several Pacific Islands — deserted by their inhabitants as a result of climate change effects — are sold as dumps, particularly for nuclear waste.

**2030 //** In an increasingly desperate attempt to combat climate change, stage-three geo-engineering experiments fail, collapsing fish stocks in the Northern Indian ocean.

**2032 //** Global governance institutions and any hope of global cooperation dramatically collapse as an increasingly weak United Nations disintegrates.

**2037 //** The Noble Peace Prize is awarded to a corporation for the first time, to a manufacturer of boats that collect rubbish from oceans and decontaminate water.

**2039 //** The global population passes 9 billion with resource depletion significantly threatening the livelihood of people in many countries

**2047 //** In the aftermath of WWIII, the global political landscape is unrecognisable as three isolationist blocs form. The remnants of the GCU, now renamed Americaralia, control the Pacific

**2052 //** New Zealand is swamped with environmental and political refugees. Cultural intolerance leads to racism, terrorism and state violence.

**2058 //** The long-term survival of modern civilisation appears in serious doubt. The New Zealand population reaches 15 million with the few remaining wealthy people living in isolated and heavily fortified communities. The majority of people survive through subsistence farming on small parcels of land not controlled by Americaralia.

**2009 //** Climate change talks fail at the UN Copenhagen conference. The talks are marked by strong resistance from developed nations to make any binding emissions targets at a level significant enough to avoid dangerous climate change.

**2015 //** New Zealand falls from being the world leader in 2007 in protein production efficiency, to tenth in the world. Other countries use innovative agricultural production methods more effectively to boost efficiency.

**2018 //** World oil production peaks. The United States, Britain, India and Israel invade Saudi Arabia while China and Russia sign an Energy Allegiance Pact.

**2022 //** Ecological tipping points are reached in many areas of the globe. Efforts are made by a weak UN to resurrect climate change talks but fail after India and China disagree with strong measures.

**2027 //** 90% of seeds produced in India are 'owned' by Monsanto International and most of these use sterile seed GM technology.

**2029 //** Flooding, storm surges and landslides become increasingly frequent

**2031 //** For the first time, New Zealand's highest export earner is coal in an attempt to capitalise on increasingly desperate energy needs.

**2035 //** The world's major corporations form the Global Corporate Union (GCU), a new global governance system to maintain conditions for business. Led by the giant World Water Inc, the GCU fills the power vacuum left by the United Nations.

**2038 //** New Zealand effectively splits into two states, triggered by the effects of uneven resource demand, with the North Island heavily reliant on the South Island for electricity and coal export revenue.

**2040 //** World War III erupts as separatist crime syndicates challenge the GCU for global control. Many civilians lose their lives in the fighting and resulting disruption.

**2050 //** Runaway climate change is causing vast ecological transformation in most parts of the globe. Atmospheric carbon dioxide concentrations pass 600ppm and average temperatures are now 3°C above pre-industrial levels.

## 2058