

**Four Scenarios for New Zealand's Future:
Are We Heading in the Right Direction?
Progress Report 2005/06 –
Objective 1, FRST Contract CO9X0310**

Rhys Taylor and Melissa Brignall-Theyer

Landcare Research
PO Box 40, Lincoln 7640
New Zealand

Landcare Research Internal Report: LC0607/063

PREPARED FOR:
Landcare Research

DATE: December 2006



ISO 14001

Reviewed by:

Approved for release by:

Will Allen
Social Scientist
Landcare Research

Bob Frame
Science Leader
Sustainability & Society

© Landcare Research New Zealand Ltd 2006

No part of this work covered by copyright may be reproduced or copied in any form or by any means (graphic, electronic or mechanical, including photocopying, recording, taping, information retrieval systems, or otherwise) without the written permission of the publisher.

Contents

Summary	5
1. Introduction	7
2. Background	7
2.1 The scenarios.....	8
2.2 Scenario game materials and approach taken	9
3. Objectives	10
4. Methods	11
4.1 The ‘scenarios game’	11
4.2 Workshop organisers’ feedback.....	11
4.3 Drivers-of-change analysis	12
4.4 Participant feedback analysis	12
5. Results and Discussion	12
5.1 Workshop organisers’ feedback.....	13
5.2 Matters addressed by drivers-of-change analysis grouped by the ‘well-beings’ ...	15
5.3 Participant feedback analysis	18
6. Recommendations	20
7. Acknowledgements	20
8. References	20
Appendix 1 Sample of 2005/06 scenarios workshop programme.....	21
Appendix 2 Feedback form example.....	26
Appendix 3 Drivers-of-change summary	28

Summary

Project and Client

This is a progress report on the development of a participative game enabling creative thinking around sustainable development. The game is derived from continuing Landcare Research work that describes four plausible but contrasting futures for New Zealand in 2055 (Frame et al. 2005). These are logically linked across axes of socio-economic and environmental characteristics. The scenarios are either rich or poor in natural resources and ecosystem services and strong or weak on social cohesion. Using drivers of change and future trend information, the game brings these scenarios to life. It has been used by different groups ranging from a district health board to a regional youth policy development group. Feedback was sought from participants on the scenarios plausibility, utility and scope for further development.

The scenarios work is part of the wider 'Building Capacity – Enabling Research' programme (Objective 1, FRST CO9X0310) at Landcare Research, which focuses on key issues faced by New Zealand society in the sustainable development journey:

www.landcareresearch.co.nz/research/sustain_business/

This work aims to:

- take the long-term view, imagining futures different from the present
- seek gains that are mutually reinforcing rather than trade-offs between the dimensions of sustainable development – considering social and environmental interactions, for example
- gain an understanding of sustainable development's implications for personal and organisational behaviour, in varied sectors of society
- achieve gains through working together rather than in 'academic' detachment.

Objectives

This year involved testing content and developing process for the participative game approach to using the scenarios devised in the previous year, with a view to refining these scenarios in 2006/07 and extending the game approach into strategic approaches for sustainable development.

Methods

- Repeated participatory workshops were run using the scenarios game.
- Feedback was collected from participants through group brainstorming and by written forms.
- Facilitator observations and telephone interviews were recorded.

Results

Fifteen scenario workshops were run during the year, considerably more than we had expected. This approach was successful in gaining useful information on developing the game. The participants also found the workshops helped them think about longer-term implications of decision making. This approach identified the limitations of the game, spread new light on drivers of change and how they are perceived across New Zealand, and provided considerable detail that will help refine both drivers and scenarios for a new edition in 2007.

Conclusions and Recommendations

The game, once refined, will be worthy of publication as a tool for ‘sustainable futures’ education and discussion. Its facilitation, operating instructions and timing have been simplified with experience, and ways to improve content of scenario descriptions have been identified along with a need to devise a follow-up participative strategic activity.

1. Introduction

As New Zealand heads into the 21st century it is imperative that we take heed of the work and warnings set out internationally over several decades, such as the sustainability principles of the Brundtland Commission on Environment and Development (1987), United Nations Agenda 21 (1992), and The Millennium Ecosystem Assessment (2005). New Zealand exhibits many of the unsustainable trends of the developed world (PCE 2002). Yet although current directions appear ecologically unsustainable, prompting a change of direction is proving difficult.

A goal of the New Zealand Future Scenarios research project was creating tools to help people – and especially public policy makers – become aware of a resource-depleted-future and socio-economic consequences of the resulting competition for resources, both between and within countries.

For New Zealand to take on principles of sustainability within public policy we will have to change from a short-term to a long-term mindset to be more focused on future generations' needs, and to do this we need to think creatively, rather than reproduce current mind-sets and established short-term thinking habits.

Scenarios are recognised internationally as one of the ways of thinking creatively about the future and may be a useful tool to help people make (or prepare to make) decisions that will in the long term prove more sustainable and 'successful', despite the choices not necessarily being the most appealing or comfortable in the short term.

2. Background

Landcare Research's 'Building Capacity – Enabling Research' team developed four scenario narratives during 2004, working with an independent group of participants drawn from Government ministries, academia and business, mostly in Wellington. A full account appears in the research publication *Work in Progress* (Frame et al. 2005a) and a shorter screenplay *100% Pure Conjecture* (Frame et al. 2005b)

www.landcareresearch.co.nz/research/sustain_business/publications/scenarios_screenplay.pdf
a version of which also appears as a Chapter in *New Zealand Identities – Departures and Destinations* (Liu et al. 2005) (illustrated with pictures from the National Archive, to show how much changes in 50 years).

Scenario narrative content from 2004 was regarded as a working draft for 2005/06. It was influenced by peer reviews, including informal Māori cultural input gathered through a November 2004 hui held at Landcare Research in Palmerston North.

2.1 The scenarios

The four scenarios each have a distinct character, and are logically contrasted on two axes: resource use and social cohesion (Fig. 1).

A: Fruits for a Few – Benefits of global market access, communications, health protection and use of natural resources are aspects reserved to an elite, which also values sustainability (the main contrast from New Frontiers). Majority of population, outside the elite, are dissenting landless labourers with shortened lifetimes, regardless of ability.

B: The Shire – International geopolitical instability contrasted to strong social cohesion and distinctive identity here in Aotearoa prompted a voluntary disconnect from globalisation. Equitable, educated, environment – friendly and dull.

C: New Frontiers – The market competition and growth orthodoxy holds sway within an individualistic meritocracy, but the unfettered consumption pollutes and has strained the resource base. Education and health advantages only for those who can afford to buy them.

D: Living on No. 8 Wire – New Zealand reacted too late to sustainability challenges and got left behind globally, but social cohesion permitted an ingenious and inventive subsistence economy, as seen in other Pacific Islands.

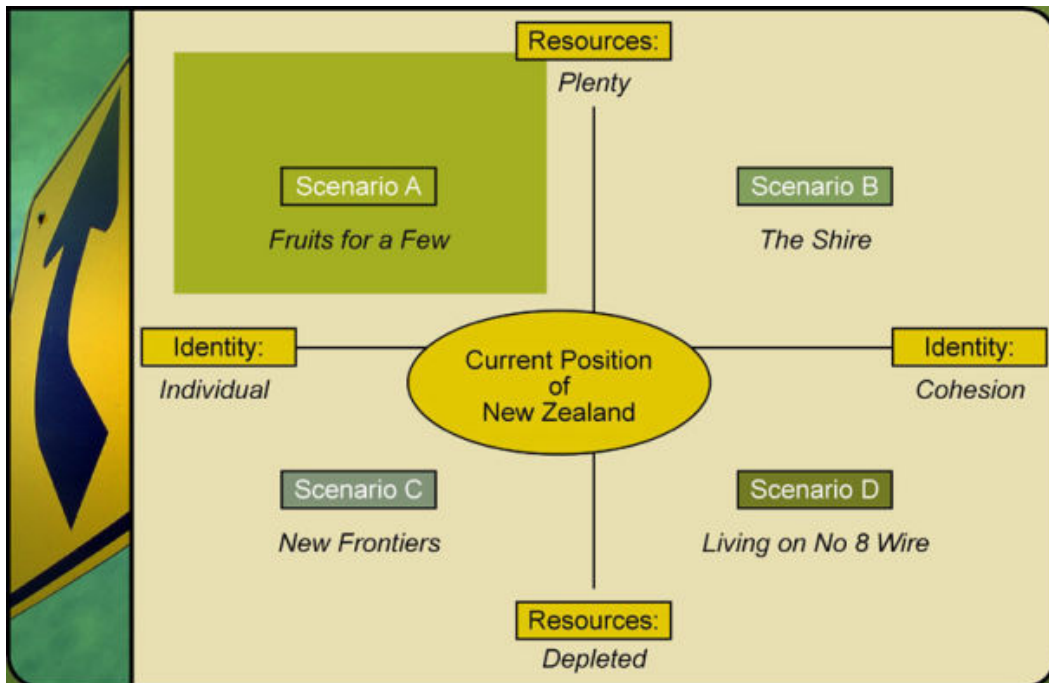


Fig. 1 Graphic representation of the four scenario ‘spaces’ created by our two main variables (reproduced from Frame et al. 2005a).

2.2 Scenario game materials and approach taken

The work programme for 2005/06 took a summary of the scenarios ‘out on the road’, using a participative game (see Fig. 2 for materials and Appendix 1 for a programme example), to see how a diversity of people reacted to them and to gather information that would assist in rewriting during 2006/07.

We planned to:

- observe while facilitating
- brainstorm ‘drivers of change’ lists from each group in order to compare these
- invite written comment on imagined positive and negative experiences within the scenarios (through role-playing, as if members of future generations)
- seek forced-choice mapped positions for today and desired future locations within the logical frame of these four scenarios, and
- gather other feedback on the appeal and impact of the gaming approach.



Fig. 2 Scenario game materials from left to right and top to bottom: 20-year trend cards, role cards, scenario description cards, and wild cards. There are also future possibility cards, which are missing from this graphic.

Pilot sessions were run in the first half of 2005. These did not seek written feedback. They were run with the Ministry of Economic Development at a conference in Napier (40 participants, March), the Impact Assessment Association in Wellington (12 participants, May), the Tourism Industry Association (30 participants, May), and the Public Health Association (15 staff and 40 conference participants, June–July).

Eleven varied groups, totalling over 600 people, have subsequently participated in the full structured scenarios workshops, which included written feedback from participants. These events¹ were:

- **Geraldine** elected reps, school students, business, farmers and public (representing the varied community of a small Canterbury town) in June 2005
- Three workshops in Auckland as part of the Northcote child & youth development project in cooperation with the Ministry of Social Development (a part of the Government's Programme of Action for Sustainable Development). These included a workshop comprising parallel sessions for adult Mandarin speakers (**Northcote-M**) and English speakers (**Northcote-E**) in October 2005 and three later sessions with Māori, Pākehā and Pasifica school students (**Northcote-S**) in December 2005
- The **Far North** District Council senior staff, mayor, councillors and some guests from Northland Regional Council (November 2005)
- Christchurch City Council policy staff (**CCC**) in November 2005
- Canterbury & West Coast Community Public Health workers (**Health**) in February 2006
- Landcare Research Auckland staff team members with guests from Auckland University (**LCR**) in May 2006
- **Transport** policy analysts from the Ministry, Transit NZ and other related Wellington agencies, in May 2006
- Policy analysts from the Ministry for the Environment (**MfE**) in June 2006
- One session we had planned with Bay of Plenty Regional Council in June 2005 was postponed indefinitely by the Council, outside our control.

Several of these events required advance briefings to and/or training of voluntary facilitators to support Landcare Research's small facilitation team, when large participant numbers were expected.

A briefing for Tourism Industry Association conference just after the year end (June 2006), for 30 national and 30 international journalists, resulted in published newspaper articles and National Radio (Morning Report and CheckPoint) interviews of Bob Frame and these in turn to coverage on John Campbell's current affairs programme on TV3 (which we have videotaped).

3. Objectives

- Summarise feedback from organisers, with observations on strengths and weaknesses of the Scenarios workshops in their current draft format.
 - Compare and analyse perceptions of important 'drivers of change' documented by 11 different groups, and see how they compare with the formative **Wellington** set devised in 2004 prior to, and central in, creating the four scenarios.
 - Analyse a subset of questions given to all workshop participants: Within this scenarios framework, where do you think New Zealand is now? Where is it going at present (trend direction)? And where would you like it to go (personal goal)?
-

¹ With the name or abbreviation **in bold** used subsequently as a short form to conveniently reference the sources.

Further work (in 2006-07) will take account of the role-playing observations made by participants, in order to edit and enliven the scenarios narratives.

4. Methods

4.1 The ‘scenarios game’

A summary of the game stages (for greater detail see Appendix 1):

- Warm-up activity using randomly allocated picture cards of recent historical trends (trend cards), to build awareness of change as experienced within the life of participants. For example: A picture of the typical family car 20 years ago, one of today and then a question mark for 20 years in the future, encouraging the participants to come up with their own ideas about what a family car might look like in 20 years
- A more abstract task, of imagining a possible future situation (future possibility cards), e.g. ‘you have to book timeslots to use key roads’ are randomly allocated for the participants to consider and discuss what social, environmental and economic factors could have driven New Zealand to this situation
- Brainstorming a drivers-of-change list, shared within group, with facilitation of process but no attempt to influence or define content. This was often done by focusing on the drivers of change related to the participants’ area of work
- Brief explanation of Landcare Research’s scenario construction, then participants read a first scenario description (random allocation of 1 of the 4) and discuss their imagination of life there
- Random allocation of role cards, representing a descendant in 2055 two generations ahead of now. Look at scenario through those eyes and record some positives and negatives on a feedback sheet
- ‘Wild cards’ arrive, representing sudden events or crises, e.g. and influenza pandemic, New Zealand and global, to test the resilience of the particular scenario from viewpoint of someone in that role
- Additional feedback, and/or repeat process (staying in same role) in a contrasting scenario narrative, as time allowed. No pilot sessions allowed time for a look at all four but several had time for examination and comparison of a pair of scenarios
- Gathering of all present in the room to hear from others about each of the four scenarios and life there, to compare experiences.

4.2 Workshop organisers’ feedback

We interviewed most of the workshop organisers (or our hosts, for those where our Landcare research team was effectively the organiser) and asked them the following questions:

- How useful was the workshop and in what context/expectations?
- How could we make such a workshop more useful, e.g. adding an extra activity to an introductory half-day of scenarios?
- How, if at all, has the workshop affected the way you work or the decisions you have made subsequently?

We then summarised this feedback (see Results section).

4.3 Drivers-of-change analysis

As part of the scenarios workshop, all participants were invited, within ‘brainstorming’ groups, to identify forces or influences that may drive change in the New Zealand environment, economy and society, from now and at some time in the next 50 years (Appendix 1). These words and phrases were recorded on flip-chart sheets and transcribed, with minimal editing, into an Excel spreadsheet. Additionally, we then summarised the data, grouping into the 10 ‘well-being’ categories below (elaborating and overlapping the four well-beings widely used by local government in New Zealand). These are qualitative measures and their analysis is necessarily subjective, but the exercise has served to help indicate where the weight of driver suggestions lay.²

Well-being ‘headings’

- Economic
- Socio-economic
- Social
- Socio-cultural
- Cultural
- Cultural–Economic
- Socio-environmental
- Environmental
- Environmental–Economic
- Environmental–Cultural

4.4 Participant feedback analysis

Results of a ‘where are we now?’ question from the feedback forms (sample at Appendix 2) were collated by putting a grid over the axes on each participant’s form and recording in an Excel spreadsheet coordinates of where the participants put their marks for New Zealand’s position now (X), their goal for New Zealand in 50 years time (G), and the trend direction they believe New Zealand to be heading towards in the next 50 years (T). These data were then made into Excel graphs (e.g. Fig. 7).

5. Results and Discussion

² For example, one group’s response was: ‘Resource scarcity – competition for these and inequitable distribution. Privatisation of the commons. Loss of access for some.’ For scoring, this comment was categorised as both ‘Socio-environmental’ and ‘Environmental–Economic.’ Many observations crossed categories.

5.1 Workshop organisers' feedback

Three questions were asked in telephone interviews with the workshop organisers. The following is a summary of their responses as well as the authors' observations from the workshops.

Q1: How useful was the workshop and in what context?

The workshop appears to have been reliably *good at getting people thinking* in all the settings where it has been tested. However for a minority at each event it may have baffled, due to the underlying *sustainability issues not being on their radar yet*. Engagement with the content may have contributed to sustainability awareness-raising but we would need to have conducted follow-up interviews of participants to seek firmer evidence.

Some did not understand the game's relevance to their current work-tasks and short-term needs, as long-term perspectives did not strongly motivate them. For example some Geraldine participants *wondered what it was about, although it was interesting...will this discussion make any difference to our government or which directions the future will take?* For ordinary citizens the connection with current reality needed to be stronger, to better engage them, because they were mostly not people professionally involved in strategy or policymaking, and had no sense of power to influence events beyond their household. The timing of their event, two weeks prior to district council public consultation on community outcomes for the Long Term Council Community Plan (LTCCP), was however deliberate, providing a local 'warm-up activity', with the knowledge and support of a district councillor and planning staff.

Professionals whose work involved future awareness, such as economic development, tourism and local government planning, responded with more enthusiasm. *This sort of thinking is important for our region/ industry/council* were representative comments, along with *helps us to know more about what we don't know*. Awareness and discussion of issues resulted from participation.

We observed more engagement of adults who had already accumulated life experience, especially of seeing technical and social change happen around them, than for young people of 10–12, still at school. You needed to be able to look back (to have hindsight) in order to have foresight. This view was echoed by our Māori participants, including in this case some of the slightly older students, who more readily took on an inter-generational perspective.

In a cultural contrast, the Chinese participants, who included first-generation migrants, exhibited relatively stronger individualism and short-term focus, but new migrants from China also relished the opportunity to freely discuss alternative futures in this setting. One 70-year-old man, brought out by his family, said (in translation): *This process is very interesting for us Chinese people. We can think of the future and talk about our opinions. This cannot happen in China. It makes us very happy to be here.*

The scenarios provided for and allowed debate of a communitarian perspective in contrast to the individualist and helped participants to clarify how community priorities in future might well differ from those of individuals'. The school students observed that current society is very individualised and competitive but that other options still exist today, particularly seen in their experience of Māori and Pasifika people's loyalty to whanau and community.

Because the four narrative scenarios are positivist, each aiming to define briefly how a future life-world has been caused, they may restrict the reader's imagination, yet they do need to have sufficient coherence to be both internally logical and distinct from one-another. We need to resist having personal futures (those that are aspired to by participants) projected on to bland, unclear scenarios, leading to reinterpretation; so they must have a strong character, perhaps even extreme. Not all the scenarios proved equally plausible, although they were originally intended to be. Aspects mentioned most often were (a) an over-negative or depressing impression created by description of New Frontiers, (b) by the title itself of Fruits for a Few and (c) the youth suicides behaviour example within The Shire.

Even the strong background colours of the cards may have influenced thinking, we were told, because of people's pre-existing association of colours (such as red and blue) with political or other cultural perspectives – so the next set may have to be on a uniform background colour to reduce this unexpected effect. Many participants said they found the overall effect of 'visiting' the scenarios in new roles depressing, but whether this was anxiety created by trying to engage with an uncertain future in a new role (not necessarily as prosperous or influential as their own in real life) or an affect of the text narrative about resources and society on the cards is hard to ascertain. It may be helpful to accentuate some positives specifically to aid participants' engagement?

Q 2: How could we make the workshop more useful and/or add an extra activity?

Suggestions received included, with our discussion added:

- There needs to be either more of a preamble explanation at the start of the scenarios game, or for organisers to get the participants prepared beforehand, through background reading.
- Increasing the use of 'quotes' from people experiencing that future, as anecdotes or cameos within the descriptions, might make them easier to grasp and then allow users greater room for imagination. We will take this into account when rewriting the longer scenario descriptions and when designing web pages, which might have voice recordings added to them.
- To effect some change as well as stimulate insightful discussion, we would need to create a recommended part two for the game, as an immediate or follow-up strategy session. This might be to ask: what does the range of four imagined futures mean for the participants' organisation/strategy and what can participants do to move perceived trends away from unwanted futures and towards wanted futures? Or, alternatively, it might be a strategic planning tool which back-casts from preferred future positions (visions?) towards the present and tries to avoid entering unwanted scenario spaces in that process, having been warned of hazards.
- Making it a preparatory process for the LTCCP public consultation process may give it a home within local government and make it more relevant for communities.
- The language and delivery style needs to change so that it is accessible to more people, especially school students. Some participants felt that there was too much jargon and pictures would help them imagine the scenarios better. It needs to have more introductory explanation, be more current in metaphors employed, and rely less on implicit life-

knowledge from past years. The Northcote trial sessions employed the skills of a local youth leader, who added informal quizzes, music and games to the event, to convert a potentially ‘boring’ activity into entertainment, but may well have trivialised the process and content too. Short attention span was certainly noticeable in the young people, who were not necessarily voluntary attendees. Their note recording was also of low and variable quality compared to the adults. The young people’s main discussion focus was on short-term materialism and contrasts between rich/winners and poor/losers in each scenario, although a minority noted some longer-term social and environmental issues. The local hosts, however, found them *an impressive group of young people*.

Q3: Did the workshop affect the way you work, or the decisions you make?

The workshop contributed along with other initiatives to designing a contract with Ministry of Health that has a more proactive stance on environmental health, rather than a reactive stance, which has been the norm in past contracts. Sustainable development is not explicit in Ministry of Health contracting yet.

It opened up the communities to longer-term thinking, providing a gear shift. It was a useful lever.

The Northcote workshops were used by sponsors, in an immediate follow-up session, to help them prioritise actions for a youth strategy, which was their underlying agenda for the day. The pragmatic summary focus that they employed dropped much of the richness and diversity of detailed observations made by participants, and hauled long-term thinking back towards today and short-term political needs, without clarifying future vision(s).

5.2 Matters addressed by drivers-of-change analysis grouped by the ‘well-beings’

All groups combined

Economic, socio-economic and social categories within the suggested drivers list are twice the size of the environmental and cultural (Fig. 3). Cultural is the smallest of the four, but particularly so in the original Wellington set (Fig. 4). Participants demonstrated they had a very anthropocentric focus in their lists of drivers of change, and relatively few environmental influences were listed frequently across the participants (viz.):

- End of cheap oil
- Climate-change effects, especially on food production and freshwater supply
- Pollution impacts, especially on water.

There was a distinct difference in the weighting between well-beings in the total range of over 80 drivers listed cumulatively by our 2005/06 scenarios game participants (Appendix 3), compared to the drivers list devised by the original central Wellington group in 2004, which (the latter) was much more driven by economics and less by society (Fig. 4), than the collective view from around the country (Fig. 5). This fits with observations by a member of the original Wellington group that the financial influences of Treasury and Central Government departments are centrally important drivers in public policy, or alternatively suggests that a relatively myopic 2004 world view is revealed in Wellington that overstated the importance of economic drivers and failed to take into account social and environmental concerns that we found in the wider population across the regions by 2005? Another plausible explanation could be that the game participation alerts participants to a wider picture, including social and environmental drivers, before they volunteer their own list of drivers.

The Wellington team did not have the ‘prompts’ provided by game participation before suggesting their list of drivers. One way to check this would be to invite a control random group to offer drivers of change before game participation and a second equal-sized group of socially similar participants to provide a drivers list after participation, to see if any significant difference emerges, and if so this may reveal one of the impacts of game participation on perception?

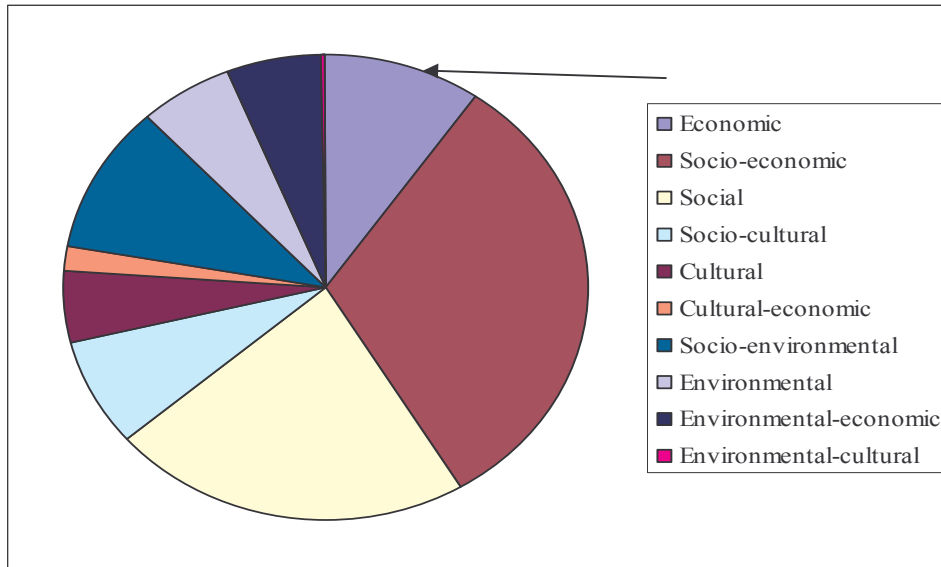


Fig. 3 Proportion of each well-being represented in the drivers of change for all 11 groups combined ($n = 480$ comments when all the well-being categories were combined).

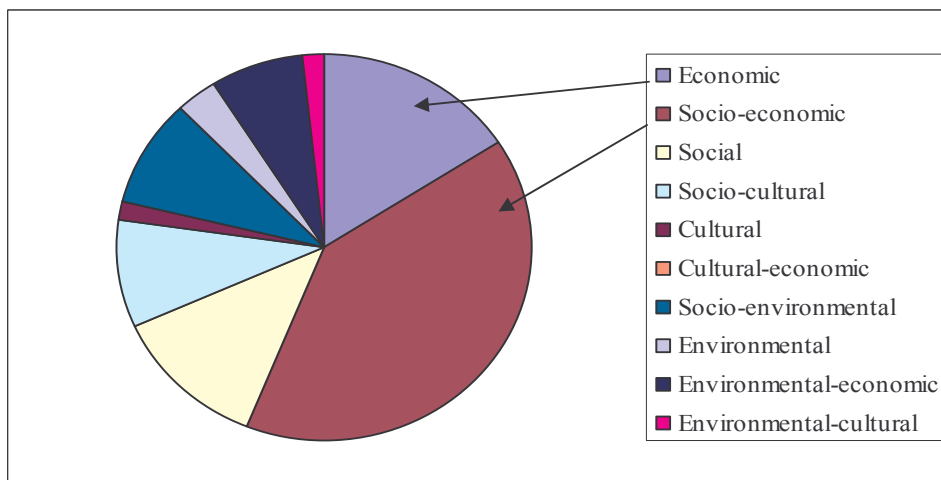


Fig. 4 Proportions of each ‘well-being’ category represented in the drivers of change identified by the original Wellington group in 2004. Economic and socio-economic drivers outweighed cultural, social and environmental here.

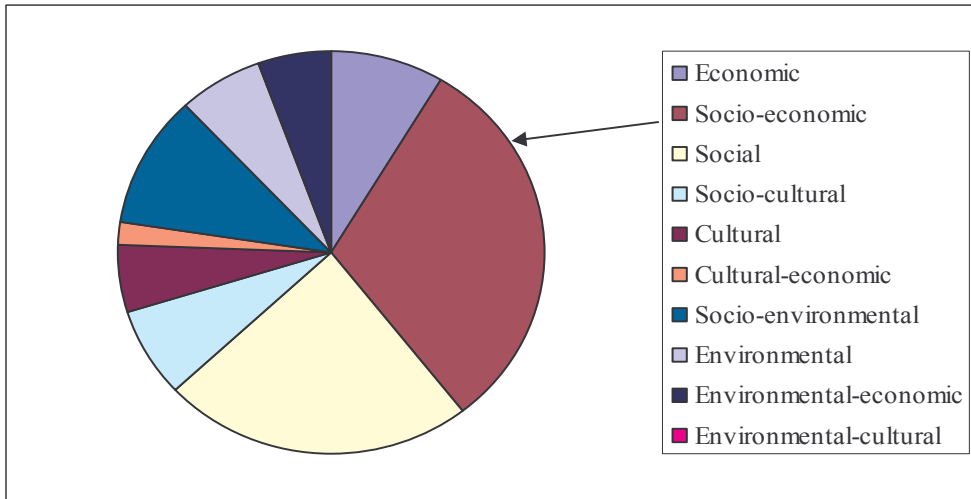


Fig. 5 Proportion of each ‘well-being’ category represented in the drivers of change (2005/06 game participants, excluding the Wellington-based 2004 original set). The social are most prominent.

Between-group variation

Figure 6 shows the variation of well-beings represented in the drivers of change for each of the 11 groups. This figure highlights the dominance of an economic viewpoint from the Wellington group (seen also in Fig. 4), compared to a community like Geraldine, where the proportion of social drivers proposed were more prevalent. In fact, the community groups and councils in general put more emphasis on social drivers than the other groups.

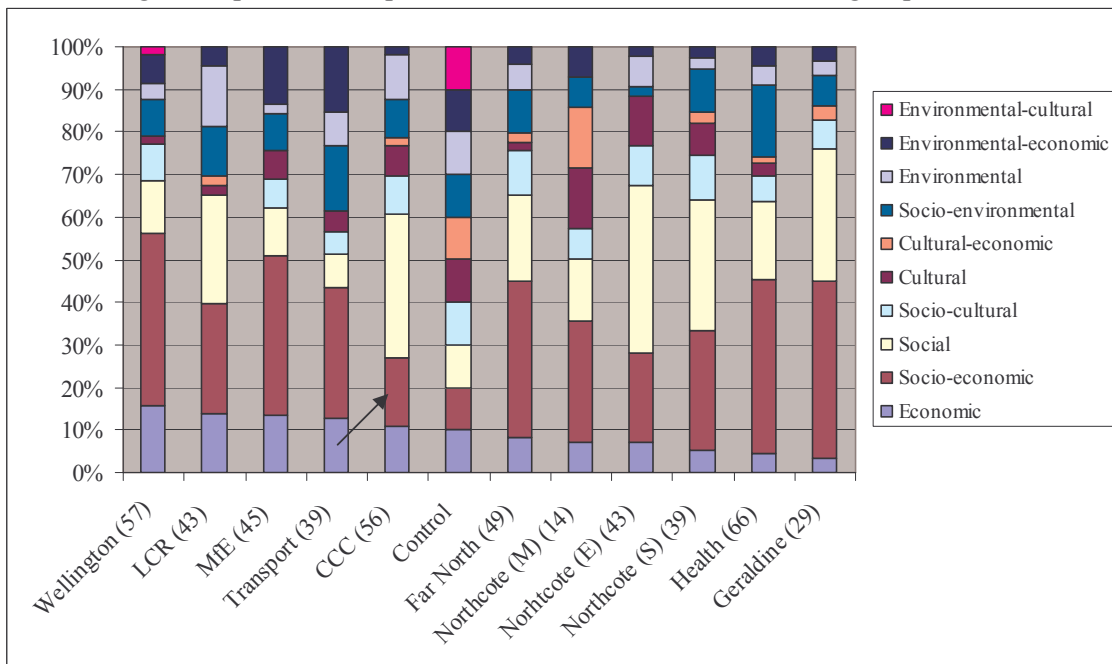


Fig. 6 Variation between groups in the mix of drivers proposed. The relative proportion of each well-being represented in the drivers of change is identified for each participating group. Numbers in brackets are the total number of comments made by each group. The hypothetical ‘control’ histogram at the centre shows, for comparison, how all the well-beings would look if represented equally, but is not a likely real-world situation.

Not surprisingly Landcare Research proposed the most environmental comments, by proportion, but when all the environment-influenced well-being categories were combined, the Transport group proposed the most, by proportion. The Mandarin-speaking group at Northcote, by proportion, proposed more culturally oriented drivers than any other group, but their total number of comments was a lot less than any other group (due to difficulties with translation), therefore this may not be a true representation of that group's viewpoint.

5.3 Participant feedback analysis (Note: not all groups were asked for written feedback)

As part of the written feedback participants were asked three questions: 'Where is NZ now?' (within the artificial constraints of our two dimensional grid), represented by an '**X**'; 'Where do they want New Zealand to be in 50 years time?' represented by a '**G**' and 'Where do they think New Zealand is actually heading?' represented by '**T**' (Appendix 2). There was not unanimity on any of these points between participants (Fig. 7), but a cumulative effect began to emerge as the sample size grew. The majority of participants located '**now**' within the two quadrants labelled individualism (Fruits for a Few and New Frontiers) but varied greatly in their view of the current state and trends of resource depletion and ecosystem functioning (from optimism to pessimism, perhaps, or reflecting lack of reliable knowledge?). Then nearly all located their **personal goal** for the future within the one quadrant for cohesion and 'resources plentiful/ecosystems sound' (The Shire). Yet the same participants' view of the **current trend** '**T**' was predominantly towards the opposite quadrant, individualism plus resource depletion (New Frontiers). In other words, as a goal they sought greater environmental sustainability and social cohesion than they saw today but observed a trend for the future in the opposite direction. This view prevailed both in the potentially more personally influential participants (staff at various Ministries, in local government) and in the apparently less-influential (school students, citizen-voters).

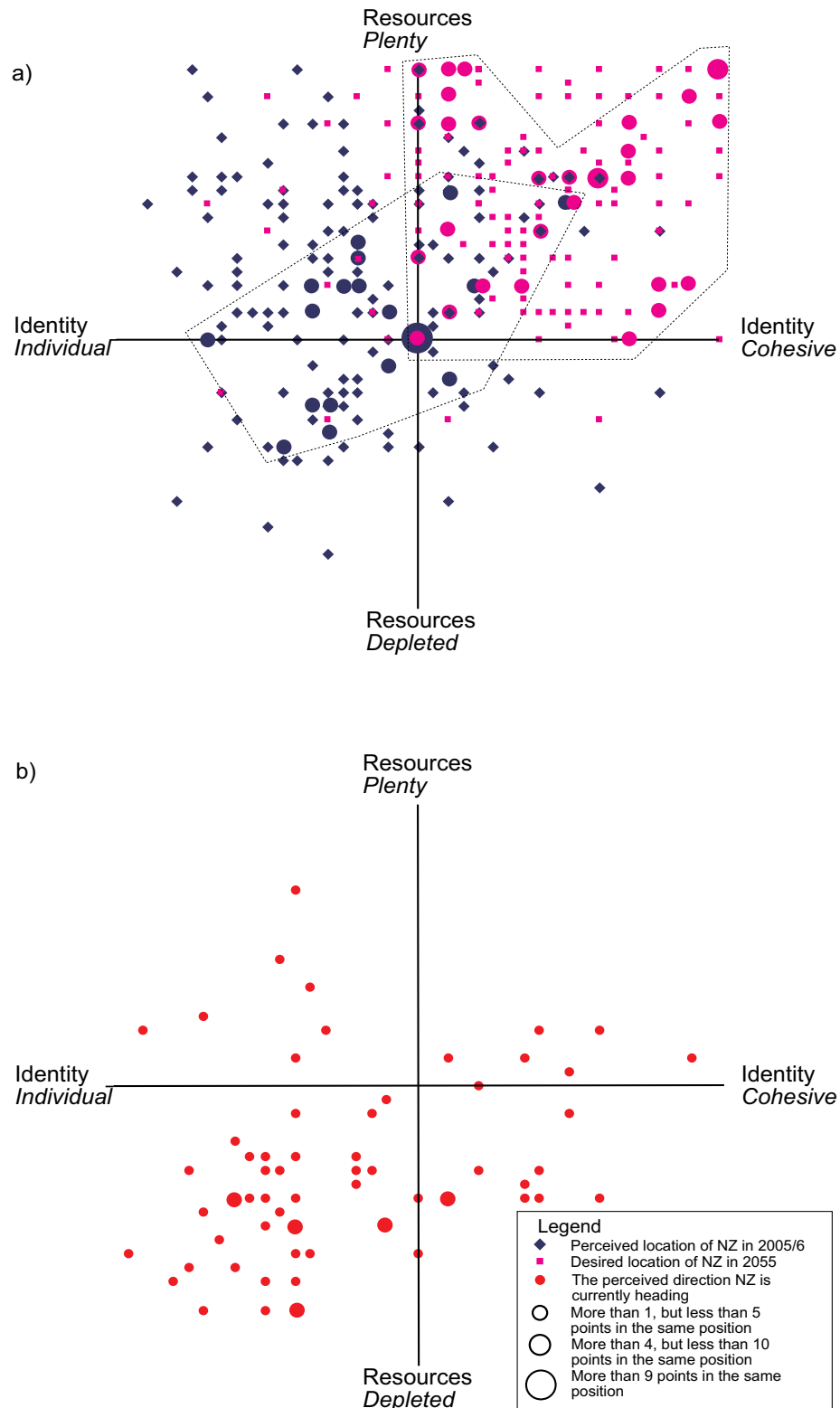


Fig. 7 (a) Colours show workshop participants' perceptions about where New Zealand is in 2005/06 (blue), compared to where they want us to head in future (pink; mostly in the top-right quadrant) and in the lower chart (b) where they think we are actually heading on present trends (red; mostly in the lower-left quadrant).

6. Recommendations

The trial of a half-day scenarios game and accompanying detailed descriptions of four contrasting future scenarios have proved sufficiently accessible and engaging (as a thought-provoking tool) that they appear suited to further refinement and publication. This will include rewriting the scenario description cards to make their language more accessible to people. Continued development in 2006/07 is recommended. A second step (also a half-day activity) focused on strategic sustainability and risk exposure implications of future directions should also be developed and tested.

7. Acknowledgements

This continuing research is funded by FRST as part of the Building Capacity for Sustainable Development: The Enabling Research, CO9X0310.

The authors thank the workshop organisers and participants who so willingly took on role-playing and provided feedback. We also thank our team leader Bob Frame, the graphic design team at Landcare Research, Tamsin Rees, and the report reviewers and editor.

Feedback welcomed direct to the authors or to scenarios@landcareresearch.co.nz

8. References

Brundtland GH, Khalid M, et al. 1987. Our common future: World Commission on Environment and Development. Oxford & New York, Oxford University Press.

Frame R, Taylor RE, Delaney K 2005a. Work in progress: Four futures for New Zealand. Manaaki Whenua Press, Lincoln, New Zealand.

Frame R, Molisa P, Taylor RE, Toia H, Wong Liu Shueng 2005b. 100% pure conjecture: Accounts of our future state(s). In: Liu JH et al. *New Zealand identities – departures and destinations*. Wellington, Victoria University Press.

The Millennium Ecosystem Assessment 2005.
<http://www.millenniumassessment.org/en/products.global.overview.aspx>

Parliamentary Commissioner for the Environment 2002. Creating our future: sustainable development for New Zealand. Wellington. Office of the Parliamentary Commissioner.

United Nations Commission on Environment and Development 1992. Agenda 21. Paris, UNCED.

Appendix 1 Sample of 2005/06 scenarios workshop programme

‘Scenarios for New Zealand’ Transport Sector workshop
May 2006, Wellington (includes an additional activity in the afternoon)

Facilitator notes:

9 am Introduction to topic and how we created this ‘game/exercise’ by Rhys, to incl.: Wellington (mostly Govt agencies) team 2004, developed into report, screenplay/NZ Identities book chapter and a participative game tested in 2005 with varied groups of users – different ages, cultures, professionals, councillors and public. First return visit to Wellington.

This event offers stimulation for your imagination as a preparation for a Futures focus by the Ministry and its partner agencies, and is *also* a contribution to our action-research process at Landcare Research. We do appreciate this opportunity to work with you.

9.20 (latest) “We need to spread into two rooms so that we can have discussions and hear ourselves comfortably. Melissa Brignall-Theyer will look after half the group in one room and I will cover the remainder. We meet back here at coffee break (check this, also water) and at lunchtime.

“Once people are seated in these small groups of four, please introduce yourselves first, then we can start”.

Each group of four people given two randomly-selected Trend Picture Cards, that look back 20 years for influences on aspects of life in the present. These could be out already on tables in any break-out rooms not previously used as plenary space. Do not put out any of the other resource materials at this stage.

“In pairs discuss the question about existing trends taken onward, pursuing that theme ahead about 20 years. Then tell the other pair what the topic is and what you think might happen in future. Additional cards will be provided after a few minutes – or catch the facilitator’s attention, to get another Trend Card earlier.

This is only a short session – get extra picture cards out to them and be ready to move on.

9.30 Future possibilities –

“In this second stage we will be looking for newly emerging drivers of change, perhaps ones without any historical trends. Your group of four will be given two Future Possibility cards (topics drawn at random), for an aspect of New Zealand in 2055, to consider. Again discuss these first in the pairs, then in your group of four. We ask: How might people have got there from today’s circumstances? What influences may drive such changes through to 2055, to make them different from present-day New Zealand life?”

You may need to describe one example to help them?

During this time, facilitator looks out for a suitable ‘volunteer’ to help you in the next part. Will need flip-chart paper, or printing whiteboard and pens. (Please don’t use non-printing whiteboards, as we want to keep the results for research use.)

9.45 Get several groups of four together in each room, to make a larger group around the facilitator. Move seats if necessary.

For our next activity, one person will be invited to help me by being the recorder, using this (flip-chart/sheet of paper/printing whiteboard).

“This is a ten-minute *Brainstorming* session, on forces or influences that may drive change in society, environment and economy, here in New Zealand. You can include both the established and the emerging drivers.

Varied views are expected, and all thoughts offered are to be noted, without debate, although they may need to be summarised.”

NB: Add facilitator’s name, MoT, May06 and ‘drivers of change’ label to all sheets.

9.55

Here’s a 5-minute break. “Have a stretch, a glass of water, or make a toilet visit now, if you need to! There is not time now for phone calls. Please return to sit with your original group of four people.” We will have coffee at 10.30.

Rhys & Melissa make contact now, review progress.

Facilitators quickly collect back the first two sets of cards and provide new large-size ones about scenarios, ready for participants’ return to the tables. Aim to get all four scenarios offered in each room if there are at least four tables.

10.00 “These are some plausible but speculative New Zealand scenarios for 2050. First, let’s look together at the coloured chart, which shows – in simplified form – the logical contrasts used to help distinguish four future scenarios A,B,C,D: (as devised by a reference group in Wellington, 2004, for Landcare Research).

Explain these further...

10.05

“Next, I’m giving out copies of just one of these scenario summaries, chosen at random, for each group of four people. On one side is a summary of the scenario and on the reverse, to help illustrate it and get you thinking about living there, some more detailed health and youth implications, so do please read both sides *before* launching into discussion. Remember, these are considered to be just possibilities offered as a tool for discussion, so they are not projections, or future predictions!”

“For a few minutes, read and reflect quietly on the possibilities offered by life in such a scenario for your children or grandchildren’s generations, nearly 50 years ahead now. Then discuss the broad picture for 5 minutes in the group of four.

10.15 “Each participant will now get a ‘future role’ card – these are drawn at random – but there will be different ones available if you really need to exchange! Their aim is to place you in the shoes of a future descendant, who would almost certainly be in a different livelihood or social position.

Consider the experience and quality of life available in that future scenario, from the perspective of the new role you are playing, Think about it quietly before you discuss. Try to imagine life in that scenario seen through their eyes, as a member of your granddaughter’s or

great-nephew's generation of 2055 (rather than through your own role, stuck back here in 2005). You may then wish to compare differences in experience within your group, finding contrasts between the roles we provided?"

10.20(earliest) to .25(latest, to hand these out) "A recording sheet invites you to note positive and negative aspects that occur to you. We will collect this later. Please indicate the role that you played and which scenario you were in. There is no need to put your real name on the sheet. Discuss these responses with the group before you write, as it may help clarify your thoughts. We expect that different roles will see these future scenarios in different ways – and as researchers we hope to capture that diversity."

10.30 Back to larger room for coffee break (unless coffee delivered to each room). "Keep your recording sheets, as you will need them again. On each table of four people, facilitators swap the two or more matching scenario cards they just used for the same number of those diagonally opposite on the grid (*The Shire* swapped with *New Frontiers*; and *Fruits for a Few* swapped with *No. 8 Wire*)

Back from coffee 11.00 latest. "We have time this morning for you to contrast the first experience of 'life in a possible future' with a second scenario out of the four, representing a different future. Please stay in the same role and sit with the same group of four people, looking at this second scenario to see what differences result for your lifestyle and opportunities. I suggest you read the notes then discuss the scenario in your four, before you write anything.

11.05 "If you are ready now, begin recording the differences, the plus and minus of this scenario for your role, on your feedback sheets."

Meanwhile facilitators select wild cards, for use soon.

11.10 "I will deliver extra information or news item to your group, presented in the form of a *wild-card*. Living out there in the future is an unpredictable place, with sudden changes as well as slower trend changes! Please indicate on your notes any particular effects created by the wild-cards in either of the scenarios and also indicate what topic these cards were on.

11.15 "Continue writing comments on those questions that interest you. The feedback sheet continues into additional questions – it would be good to have your thoughts on those, too. You can come 'out of role' for these later questions, if it helps.

11.25 (latest) "Come back to the present. We will combine small groups now in order to represent all four scenarios, to tell the wider group a little about each scenario. We will allow time for at least one spokesperson per group to speak, so you hear a summary of all four scenarios. If there is time, let's hear too about expected life experiences within each scenario – views from a selection of the roles you have played today.

We have 6 minutes per scenario for these summaries. Then collect the feedback sheets and all return to plenary room. (Careful time-keeping to ensure all four get covered.) Note-taking recording is not essential and would slow their comments. Tape-recording 'live' might be interesting, however. If recorded, ensure that start of each scenario is very clearly labelled.

11.50 (earliest) Wrap-up comments by facilitator might include these questions:

If these are considered plausible future scenarios for Aotearoa/New Zealand (among, a much larger number of possible ones), how do they relate to emerging public policy objectives for transport/environment?

Where may we be heading right now relative to these four directions, do you actually want to go there, and what are the longer-term consequences of current direction(s)?

If some of the future scenarios had features that you consider desirable (and we are especially interested in sustainability), can you back-cast towards the present day to imagine what drivers might have brought those desired features into prominence?

If you think that the future for New Zealand will be very different from all of these four, do we need to give weight to other particular drivers of change in creating such scenarios as a discussion tool?

“We break for lunch at 12 noon, reconvene 12.45 pm.”

Afternoon session – creating four Transport scenarios.

12.45pm The game process and materials: other editions. Rhys – What we propose for a transport edition. Questions & brief discussion.

Suggested categories within each scenario description:

- moving people,
- alternatives to moving people (virtual travel),
- moving goods within New Zealand,
- moving goods to and from New Zealand (incl. ports, airports)
- and....?

1.00pm “We will split now into two rooms, each room with two contrasted scenarios. This morning, all four scenarios were covered in each room, although each of you only had time to look at two in detail.
(show diagram again)

“This time you should pick a room where a scenario that you have looked at previously is listed. You will work with some new colleagues. Melissa and Bob Frame, who has now joined us, will work with New Frontiers and The Shire respectively in room ---, while I and another will work with Fruits for Few and No. 8 Wire scenarios in room ---.

“Our aim is to draft about five paragraphs that describe the transport dimension of each scenario, set in 2055. Each scenario group will need a patient person as recorder, preferably someone with clear handwriting! The result needs to be concise, yet use plain English not jargon.

“We’d like to have approximately equal numbers working on each scenario. We do not have favourites among them, believing that all four are useful and have elements that are plausible.

1.40pm All gather to report back, in main/plenary room.

1.50 pm Final activity – suggesting roles.

“What new roles (or differences from those used this morning) should we invite people to play when considering the future, particularly in terms of transport? We need roles that will bring out good points in discussion and prompt insights.

(Rhys provide sticky pads OR do as a brainstorm activity.)

2pm is scheduled end,

but we could continue informal discussion of how to use the ‘game’ in a transport edition as a tool for participating agencies and industry colleagues as they look together at strategic plans, especially in the ‘values’ context of sustainability.

Appendix 2 Feedback form example

Feedback form, LCR Transport Sector Scenarios workshop, May 2005

1. What role or character did you take on? _____

2. Under which of the four scenarios did you do the first scenario analysis?

Fruits for a Few The Shire New Frontiers

Living on No. 8 Wire (tick or underline which one)

3. Please describe 3 positive and 3 negative aspects of New Zealand life in this scenario, viewed from your future role in 2055:

+ _____
+ _____
+ _____

- _____
- _____
- _____

4. Under which of the four scenarios did you do the second scenario analysis?

Fruits for a Few The Shire New Frontiers

Living on No. 8 Wire (please tick or underline which one)

5. Please describe 3 positive and 3 negative aspects of New Zealand life in this scenario as viewed from your future role in 2055:

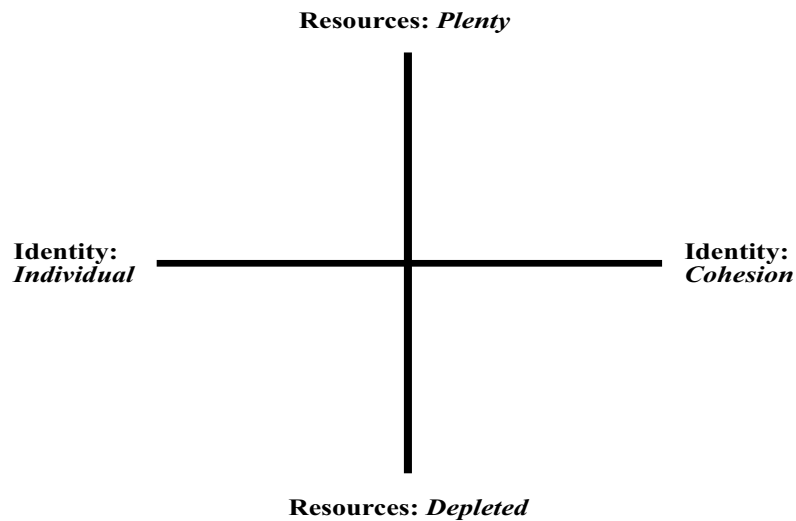
+ _____
+ _____
+ _____

- _____
- _____
- _____

These additional questions will be useful in our research – no name is required!

6. Starting with the future person’s perspective that you had when in role, what policies must New Zealand see implemented in the next 10 years, to help avoid unwanted effects of change in later years (e.g. your ‘negatives’ in the comments above) or to promote the positives?

7. Where are we now? Below are shown the same intersecting axes that were used to help define the four scenarios used today. Please identify where you place New Zealand now in 2005 (with an 'X') and a goal where you personally would like New Zealand to be in 50 years time (with a 'G'). If you think New Zealand is not heading towards that goal, add an arrow labelled 'T' for the current trend. **Remember the axes represent a continuum, so your marks can be placed anywhere in the area.**



8. Coming out of role, what are the implications for Ministry and Government Agency strategy and policymaking?

12. Any other observations on today's scenarios workshop facilitation or process and the experimental materials that we used? (We do aim to improve these, so constructive criticism is very useful.)

Thanks for taking part today.

Appendix 3 Drivers-of-change summary

The table below summarises a multi-page spreadsheet capturing all the driver descriptions offered in the year's scenario workshops and the original Wellington set, which is too large to reproduce here.

Well-being	Driver	Sub-categories
Economic	Materialism	3
Economic	Advertising/ Marketing	1
Economic	Competition	2
Economic	Technology	6
Economic	Financial systems	3
Socio-economic	Globalisation and power blocks	4
Socio-economic	Media	2
Socio-economic	Telecoms and communications	2
Socio-economic	Transport	4
Socio-economic	Political structures	7
Socio-economic	Rich–Poor gap	3
Socio-economic	Immigration	2
Socio-economic	Sources of ideas and research	1
Socio-economic	Health	5
Social	Ageing population	2
Social	Community involvement	3
Social	Identity of self in society	3
Social	Family structure	3

Social	Gender equality	1
Social	Education	2
Social	Chance and Fate	2
Social	Crime	1
Social	Fear of violence, etc.	2
Social	Arts and entertainment	1
Socio-cultural	Values and world view	4
Socio-cultural	Religion	2
Cultural	Culture – languages	1
Cultural	Culture Māori – including Treaty issues	3
Cultural	Discrimination	2
Socio-economic– Cultural	Sport	1
Socio- environmental	Food	2
Socio- environmental	Human impact on the environment	4
Environmental– Economic	Climate change	1
Environmental– Economic	Resource availability	5
Environmental– Economic	Natural disasters	2
