Objectives of the Workshop

The objectives of this workshop were threefold:

• Inform national level stakeholders and experts about the research project and results to date;
• Obtain input and feedback from participants about tourism’s vulnerability to climate change and adaptive capacity;
• Identify and discuss suitable case studies for further exploration.

Stakeholders present at the workshop represented: Ministry of Tourism, Ministry for the Environment, Local Government New Zealand, Civil Aviation Authority, Wellington City Council, Hikurangi Foundation, New Zealand Ski Areas Association, NIWA, Covec Ltd, Victoria University Wellington, Lincoln University.

The following aspects of tourism and climate change were discussed and allow research to progress with a particular view to case study analyses.

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**Conceptual Framework**

The vulnerability framework provided by the Intergovernmental Panel on Climate has been discussed and found useful in its application for tourism (see slide below).

There was agreement that it is useful to discuss tourism’s *present* exposure to climate variability and the broad direction of changes, as this directly relates what businesses are already doing in terms of coping mechanisms. A focus on present variability and adaptation options can identify better where immediate gains can be made that match the relatively short planning horizons of most tourism businesses. It is also the variability and ‘extreme events’ that matter, rather than changes in average conditions (see slide below). It was noted, though, that tourists’ expectations of long term conditions matter, for example in their expectation of viable snow sports facilities over longer time frames.

Some tourism businesses (e.g. the ski industry) require more substantial infrastructure investments and therefore may have planning horizons of several decades, making the exploration of detailed and quantitative climate change scenarios in addition to current variability and trends more relevant. The presentation on snow data illustrated this.
Bigger Picture – Drivers of Business Variability

Weather and climate are fundamental to some tourism activities (e.g. the snow industry) and they are not relevant to other businesses. Some tourism businesses may benefit from adverse weather conditions (e.g. indoor activities). Climate is also indirectly related to business drivers such as tourism demand (e.g. NZ’s attractiveness), compliance issues and resource related aspects (e.g. the use of water). While it is important to understand weather/climate in the bigger context of business drivers it might be challenging to allocate specific priority weightings (as discussed for planned business interviews) to the different factors (see slide below).

Drivers of business variability

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<th>Influencing factors</th>
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<td>1. Exchange rate</td>
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<td>2. Country of origin economy</td>
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<td>3. Linkages and price of airfares</td>
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<td>4. Within industry/activity competition</td>
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<td>5. Inter industry/activity competition</td>
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<td>6. NZ’s attractiveness cf other countries</td>
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<td>7. Costs of operation/ production</td>
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<td>8. Compliance costs – RMA, etc</td>
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<td>9. Weather/ climate</td>
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<td>10. Government support (inc. marketing)</td>
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<td>11. Integrity of natural resource base</td>
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<td>12. Market segment change</td>
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<td>13. Other</td>
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Instead of taking such a prescriptive, top-down approach, several participants suggested that it might be more useful to discuss business drivers and potential risk factors in an open-ended way and with a view of how businesses are already addressing these kinds of challenges. Business drivers include those that are beyond a business’ control (e.g. foreign exchange rate) and those where the business has capacity to increase its resilience either on its own or in conjunction with other businesses or local organisations (e.g. diversification, risk management, compliance). Most tourism businesses are likely to already manage variable ‘weather conditions’ to some extent, irrespective of longer term climate change expectations. These are important stepping stones to discuss vulnerability to climate change.

It was also noted that many tourism businesses operate diverse portfolios, for example farming businesses combined with (eco) tourism operations. Some of these diversifications may reflect seasonality and are already a form of adaptation to changing visitor expectations.

Identification of potential case studies

The impacts of climate change on tourism need to be discussed in a rather specific way as they depend on a combination of three factors, namely:

Activity x Location x Climate event.

Whether the exposure to a particular climate event at a specific location for a selected tourism activity actually matters depends on factors such as:

- How important is this activity for the local economy
- Who benefits from this tourism activity (which socioeconomic groups)
- What are the adaptive capacities to deal with the impact

All of these need to be included in a vulnerability assessment.

The workshop also discussed that case studies could benefit from taking a more integrated approach, e.g. by evaluating the vulnerability of a small region based on the range of tourism activities and weather conditions in this region, or it could consider a tourism activity in its various forms across the country. In addition, the relevance of particular types of weather conditions and their potential change under climate change could be explored for particular locations.

A discussion based on those complementary perspectives around potentially vulnerable aspects of tourism revealed the following examples in relation to “climate events”, “tourist activities” and “key regions”.

Climate events:

- Changes in extratropical storm tracks affecting Northland with consequences of high winds and flooding
- Summer time flooding/drought in Otago affecting the fishing industry
- Flooding and water supply for Marae (across NZ)
- Heavy rain on the West Coast and implications for campgrounds
- Higher temperatures and reduced snow accumulation affecting the ski industry
- Adverse weather affecting whale watching in Kaikoura
• Extreme events affecting the transport system
• Sea level rise and the location of airports, terminals and feeder roads

Activities:
The discussion on activities raised the question what kinds of tourists are most important to New Zealand and also how tourism demographics and countries of origin might look in 2030. There is a clear link to a parallel FRST funded project on tourism scenarios. Different types of tourists would demand different products and activities, for example in the area of adventure tourism. It was noted that even though adventure tourism is iconic to New Zealand at present, only a minority of tourists actually participate.

Cycle tourism was suggested as integrated case study for a number of reasons:
1. Currently, the government is investing into a national cycle network; investment can be climate-proofed right now
2. The cycle network would cover different parts of NZ and therefore likely to cut across various aspects of climate exposure (e.g. wind, rain etc)
3. Cycle tourism is a low-carbon product and therefore allows integration of climate change adaptation and mitigation measures
4. There is an opportunity for a range of adaptation measures, including the provision of tourism-specific weather/climate information, the construction of facilities, complementary products etc.

Region:
It was agreed on that a destination perspective is important as this is how some of the climate impacts manifest and also how adaptation can be organised (e.g. in partnership between businesses, council, community groups etc.).
Discussions around a suitable case study region showed that there are many potential regions of interest in New Zealand and each of them would probably provide interesting lessons for how tourism can adapt to climate variability and change. Canterbury was discussed with respect to issues of water availability and allocation, and also as an important cruise ship destination (cruise ship tourists are very limited in their itinerary flexibility). Queenstown was mentioned in relation to ski tourism and also as an example where operators start working together across different product types. There is already work going on in the area of sustainable tourism and transport provision in a multi-stakeholder partnership (including the Hikurangi Foundation). Rotorua was mentioned as an iconic tourist destinations but climate exposure is probably less relevant. Northland provides an interesting case study in terms of climate events and also diversity of tourism products and stakeholders (including iwi and hapu). It was also mentioned that it is close to the largest domestic source market, Auckland. Coromandel is also an important destination for Aucklanders but less so for international tourists (which is the core of this current project).

Adaptation
It was suggested to relate any communication about tourism’s adaptation to the measures that businesses are already (successfully) putting in place, and also to document their experiences with successes and barriers. The ski industry, for example, has already invested heavily into snowmaking systems. It is important to
understand what businesses (and destinations) can and are doing now to deal with climate variability, and to identify where such responses provide a ready mechanism to deal with expected changes over decadal time scales under climate change. Such an approach would increase buy-in by tourism stakeholders who otherwise might show little interest in longer term climate change per se.

Adaptation options can be assessed on a quadruple line basis, i.e. with respect to their economic, environmental, social and cultural impacts. Economic analyses will be key to make adaptation relevant for businesses. It was also suggested to explicitly look at barriers to implementation. One barrier could be inadequate governance structures, and it was discussed who the natural leader for regional adaptation initiatives would be. The group agreed that it will be useful to explore the role of Regional Tourism Organisations further in this respect.

One key of adaptation is to avoid getting locked into one particular ‘future’. Instead adaption should recognise that several different futures might eventuate and it is about increasing resilience to adapt to either of them.

A discussion around time horizons revealed that there might be a mismatch between business planning and investment horizons (<10 years) and climate change impacts (>20 years). Other factors that influence investment horizons, such as duration of DoC concessions, may also be relevant. There is potential for ‘market failures’ in the sense that businesses may not make decisions that could make economic sense due to lack of information or other external constraints, and there could be a role for public sector organisations or other players to facilitate larger scale and strategic change, for example through the creation of partnerships and collaborations.

Finally, workshop participants discussed the need for tangible outputs from this project. Tourism can learn from other sectors, e.g. agriculture, that have longer experience with dealing with climate change. A toolkits for ‘checking resilience’ is one practical example that might help tourism businesses in their adaptation.

**Conclusions and next steps**

Based on the discussions at the workshop, the research team will consider in more detail the potential to deliver the following case studies:

- vulnerability of ski fields in Queenstown/Wanaka, using detailed NIWA snow modelling, and the interaction of skiing with other activities as risk management approach
- vulnerability of Northland as a region with its diverse tourism activities and social, cultural and economic importance of various activities and adaptation options for different stakeholder groups
- vulnerability of cycle touring across New Zealand, with a particular focus on cycle ways and related infrastructure currently under development, including its interaction with scenarios of future tourism

Final choices and specifications of the case studies will be made pending further regional workshops and discussion within the research team.
Additional points that the research team will aim to address, again subject to internal discussions and further consultation with stakeholders, include:

- an assessment of the potential role of RTOs and other regional organisations to facilitate strategic change, including business diversification and influencing tourists’ perceptions and expectations of weather and climate conditions and the attractiveness of regions for diverse tourist activities

- level of information and adaptation options in response to changing natural hazard conditions in selected activities such as mountaineering

- further analysis of observed sensitivity of particular regions and sectors within regions to historical climate variability to provide a high-level overview of potentially vulnerable regions and activities

- production of short leaflets that provide tick-lists that cover:
  - how to assess a business/regions vulnerability to climate change
  - top-10 tips on how specific sectors can become more resilient to weather and climate-related business variability