Tourism at the glaciers

Hokitika, August 28, 2014
Photos by Trevor Chinn

Mean Departure from the ELA (m)

Year

Data from Willsman et al. (2014)
Research interest

• Understand how climate-induced change at the glaciers might affect visitor behaviour

• Survey: The current visitor experience
  • Visitor and visit details
  • Activities during visit
  • Reasons for visiting
  • Importance of the glacier(s)
  • Expectations and satisfaction
  • Implications of climate change
Survey methods

- Two survey periods:
  - December 2013-January 2014
  - February 2014
- Sample of 500 visitors
Survey limitations

• A sample only – no way to know how representative they are of all visitors
• Poor representation of Asian visitors and tour groups
• Data not picked up by survey questions e.g., price consideration for choosing activities, weather impacts
Usual residence

<table>
<thead>
<tr>
<th>Region</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>77</td>
</tr>
<tr>
<td>Australia</td>
<td>94</td>
</tr>
<tr>
<td>UK</td>
<td>95</td>
</tr>
<tr>
<td>Germany</td>
<td>44</td>
</tr>
<tr>
<td>USA</td>
<td>59</td>
</tr>
<tr>
<td>Other Europe</td>
<td>81</td>
</tr>
<tr>
<td>Asia</td>
<td>19</td>
</tr>
<tr>
<td>Other Americas</td>
<td>25</td>
</tr>
<tr>
<td>Other</td>
<td>6</td>
</tr>
</tbody>
</table>
Holiday arrivals
YE Mar 2014

Australia, 469,856, 40%

China, People's Republic of, 177,744, 15%

United States of America, 124,016, 11%

United Kingdom, 76,080, 7%

Germany, 52,160, 4%

Japan, 45,952, 4%

Korea, Republic of, 34,208, 3%

Canada, 26,512, 2%

Singapore, 25,904, 2%

Other Asia, 71,984, 6%

Other Europe, 42,848, 4%

Pacific, 24,400, 2%
Australia, 488,800, 69%
United Kingdom, 96,048, 14%
United States of America, 42,784, 6%
China, People's Republic of, 30,656, 4%
Fiji, 14,688, 2%
Germany, 10,400, 2%
South Africa, 10,176, 1%
Canada, 14,416, 2%
Visit details

• Nights stayed
  • 39.6% 1 night
  • 42.5% 2 nights

• Time at glaciers:
  • 84% first visit
  • Independent walk to final barrier
    • Franz Josef \(n=233\)
    • Fox Glacier \(n=203\)
  • 51.8% \((n=259)\) did a commercial activity
    • Over half (55.6%) of these visitors also walked up glacier valley
  • 33.2% \((n=166)\) did a flight activity
Direction of travel

1% lived nearby
8% unknown

35% travelling north
3% return north

1% return south
52% travelling south
79.6% \((n=398)\) stayed previous night in glacier region

- **North of glaciers**
  - Hokitika: 26
  - Greymouth: 16
  - Westport: 2
  - Ross: 3
  - Harihari: 1
  - Unsure: 2

- **South of glaciers**
  - Haast: 25
  - Wanaka: 11
  - Queenstown: 3
  - Jackson Bay: 1
  - Lake Paringa: 10

- North of glaciers:
  - Jackson Bay
  - Queenstown
  - Wanaka
  - Haast
  - Unsure
  - Harihari
  - Ross
  - Westport
  - Greymouth
  - Hokitika
  - Whataroa
55.3% (n=275) staying current night in glacier region

![Bar chart showing the number of people staying current night in various locations in New Zealand. The locations are divided into 'South of glaciers' and 'North of glaciers'. The chart includes cities and towns such as Milford Sound, Te Anau, Lake Moeraki, Queenstown, Makarora, Wanaka, Haast, Kaikoura, Arthurs Pass, Lake Brunner, Christchurch, Punakaiki, Ross, Westport, Greymouth, Hokitika, and Whataroa. The number of people staying in each location is indicated by the length of the bars, with Hokitika having the highest number (25 people) and unspecified locations having the lowest number of people (1 person).]
Other activities at the glacier region

- Other activities: 7
- Rafting: 7
- Horse trek: 8
- Quad bikes: 8
- Okarito: 11
- Sky dive: 11
- Bicycle hire: 12
- Maori performance: 16
- Kayaking: 20
- Bird watching: 35
- Wildlife centre: 51
- Gillespies Beach: 61
- Other bush walks: 115
- None of these activities: 146
- Hot pools: 157
- Lake Matheson: 169

Number of respondents
Most memorable aspect of visit: 569 things reported

- 396 glacier-specific
  - 87 specifically mentioned flights
  - 39 mentioned activities
- 173 non-glacier
  - 135 related to natural environment/scenery, views (e.g., waterfalls)
Importance of seeing the glacier

Percentage

Very important: 61.6%

Not at all important: 1%

Other: 1.2%, 1.2%, 6.8%, 10%, 18.2%
Reasons for visiting: 3 highest and 3 lowest mean scores

<table>
<thead>
<tr>
<th>Reason for visiting</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>To see a natural feature that may disappear in the future</td>
<td>6.01</td>
</tr>
<tr>
<td>To be close to nature</td>
<td>5.71</td>
</tr>
<tr>
<td>To view an easily accessible glacier</td>
<td>5.61</td>
</tr>
<tr>
<td>To experience a rainforest</td>
<td>4.34</td>
</tr>
<tr>
<td>To be with friends and family</td>
<td>4.16</td>
</tr>
<tr>
<td>To experience solitude</td>
<td>3.94</td>
</tr>
</tbody>
</table>
Glacier experience factors

• Size of the glacier
  • 1=expected smaller; 7=expected bigger

• Look of the ice
  • 1=expected dirtier; 7=expected cleaner

• How spectacular it was overall
  • 1=expected it to be much less spectacular; 7=expected it to be much more spectacular

• Satisfaction with these three aspects
  • 1=very dissatisfied; 7=very satisfied
Mean scores for glacier experience factors

- Expectation:
  - Size of glacier: 4.69
  - Glacier ice: 4.68
  - Overall (how spectacular): 4.24

- Satisfaction:
  - Size of glacier: 5.22
  - Glacier ice: 5.39
  - Overall (how spectacular): 5.64
Relationship between expectation and satisfaction

![Bar chart showing mean satisfaction scores for size of glacier, look of ice, and spectacular views, with expected worse, as expected, and expected better categories.]

- **Size of glacier (n=451)**
  - Expected worse: 5.72
  - As expected: 5.51
  - Expected better: 4.77

- **Look of ice (n=470)**
  - Expected worse: 5.7
  - As expected: 5.55
  - Expected better: 5.12

- **Spectacular (n=473)**
  - Expected worse: 6.15
  - As expected: 5.68
  - Expected better: 5.22
Images of the glaciers

• 67% \((n=337)\) saw images before their visit

• How accurate were these images?
Pre-visit information sources
What did you expect from your glacier visit?

• 5 glacier visit factors
  • Getting close to the glacier
  • Number of people
  • Peacefulness in the valley
  • Interpretation and information
  • Facilities in the glacier valley

<table>
<thead>
<tr>
<th></th>
<th>Expectation</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td>Getting close to glacier</td>
<td>3.98</td>
<td>5.49</td>
</tr>
<tr>
<td>Number of people</td>
<td>4.1</td>
<td>5.19</td>
</tr>
<tr>
<td>Peacefulness</td>
<td>4.46</td>
<td>5.3</td>
</tr>
<tr>
<td>Interpretation &amp; information</td>
<td>4.32</td>
<td>5.3</td>
</tr>
<tr>
<td>Facilities in glacier valley</td>
<td>3.98</td>
<td>5.59</td>
</tr>
</tbody>
</table>
Climate change and the glaciers

• 73.6% agreed climate change was ‘definitely happening’

• What do you think will happen to the glaciers over the next 20 years?

- Get smaller, $n=419$, 84%
- Get bigger, $n=4$, 1%
- Fluctuate/stay the same, $n=38$, 7%
- Don't know/unsure, $n=39$, 8%
If you knew the ONLY way to see the glacier was by helicopter would you have visited the glacier region?
Would you have visited the glacier region if you knew you might not be able to see the glacier?

- No, definitely not: 22%
- Yes, definitely: 15.3%
Implications and conclusions

- Physical changes in both glaciers continue to present challenges for tourism
  - Access
  - Aesthetics
  - Hazard management
- Challenges not limited to climate – nor necessarily specific to the location
- Region has a history of being adaptive and resourceful
  - Experience in meeting environmental challenges
Implications and conclusions

• Seeing the glacier/s very important
  • Part of New Zealand ‘tour’
  • Reason for visiting
  • Other activities visible but secondary

• Not much time in region

• Glacier experience
  • Matched expectations – glacier and visit experience
  • Overall, satisfied with current glacier experiences
Implications and conclusions

• 27% of visitors reported seeing ‘inaccurate’ images of the glacier – contributed to unrealistic expectations
  • Also relevant for ‘crowding’, ‘natural quiet’ etc
  • Some ability to influence
• Opportunities to capitalise on physical changes (including reduced access / visibility)?
  • Differentiated experiences (valley / ice)
  • Climate change education / interpretation
• Valley floor access options and issues
• Importance of diversification