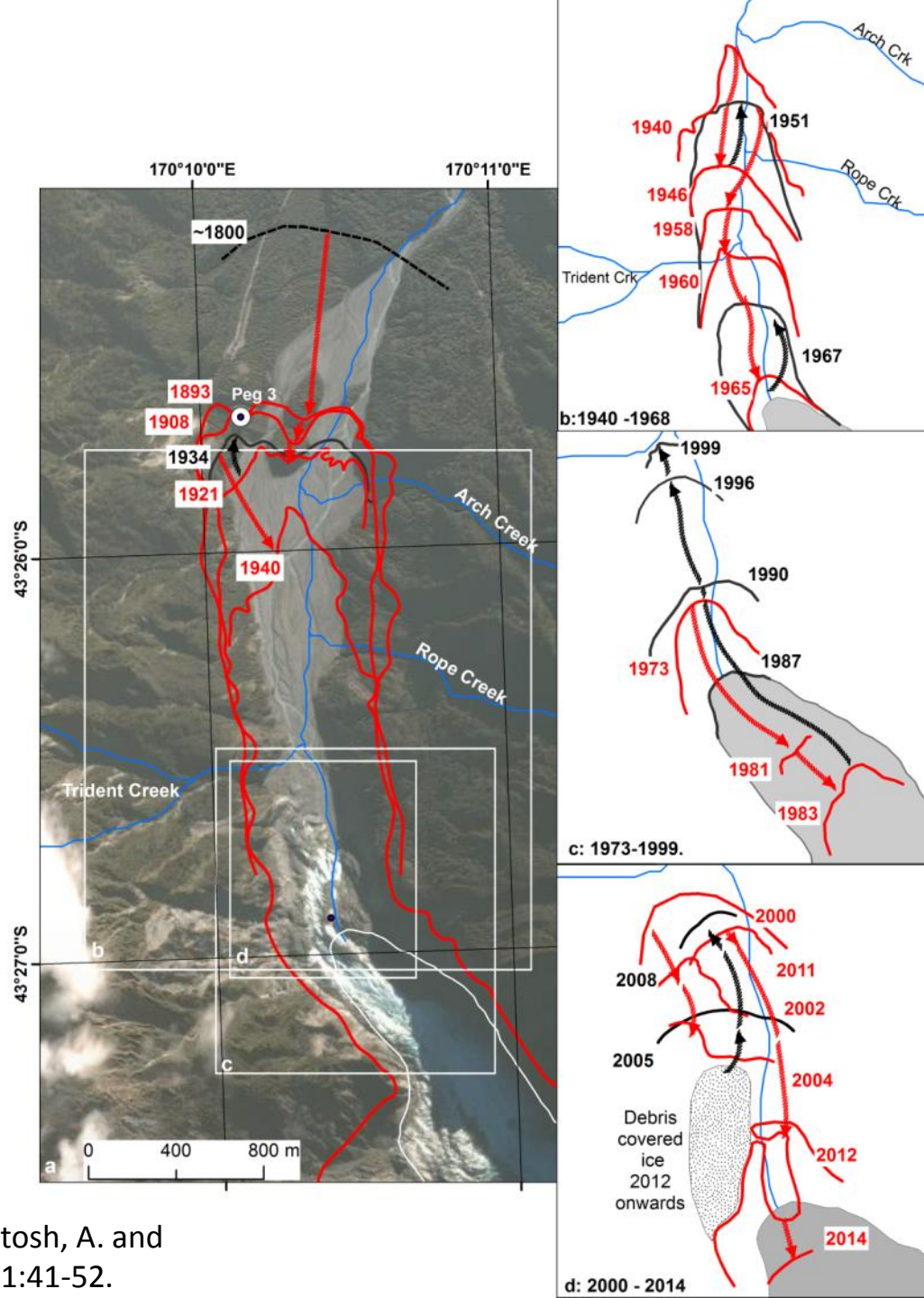


Tourism at the glaciers

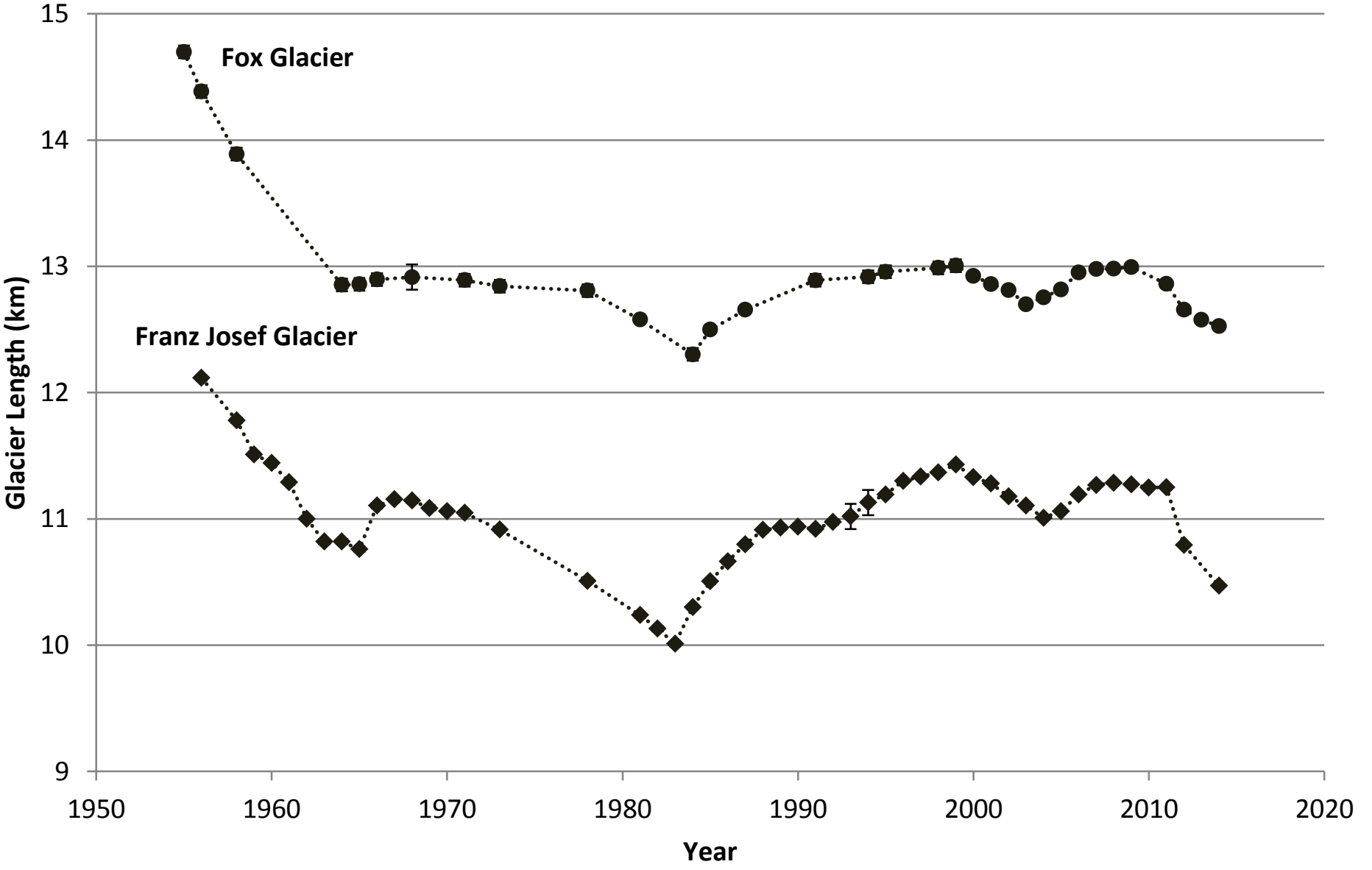
Franz Josef Glacier, August 26, 2014

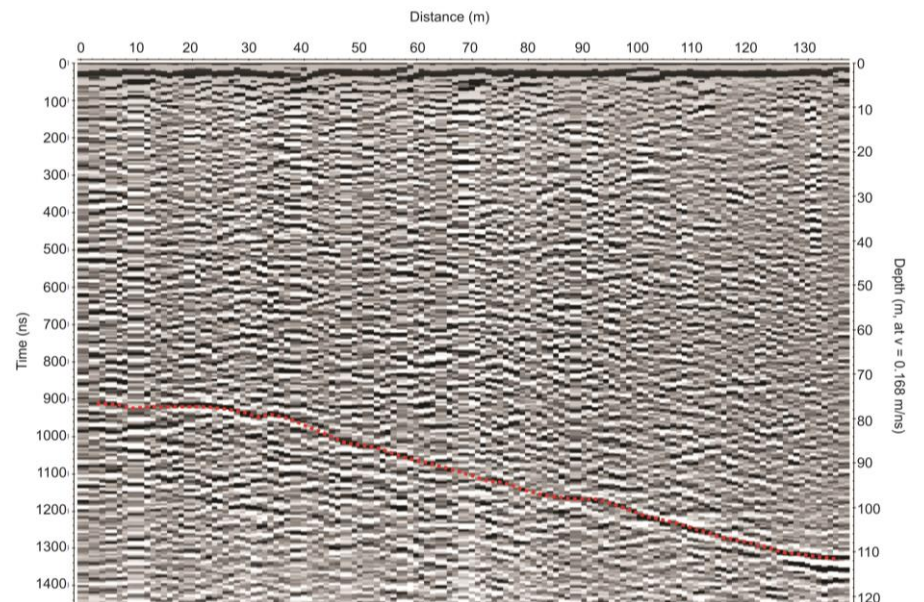
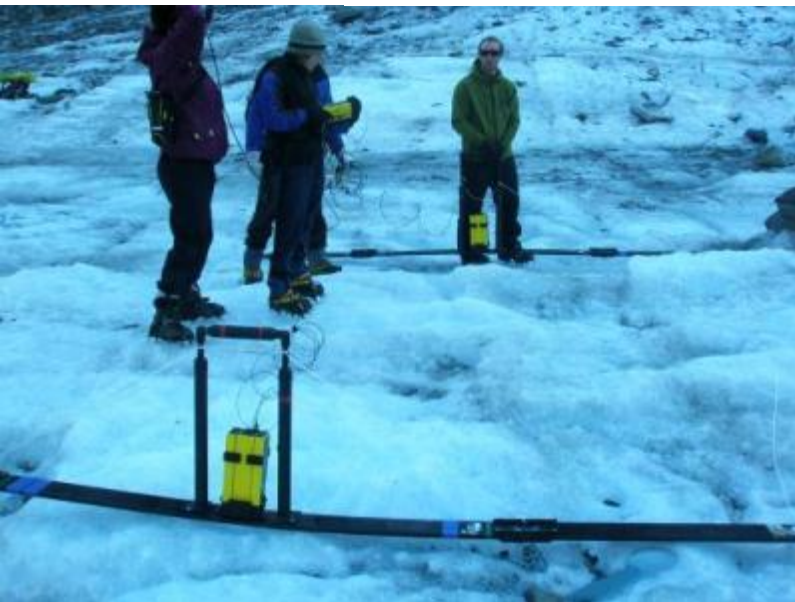
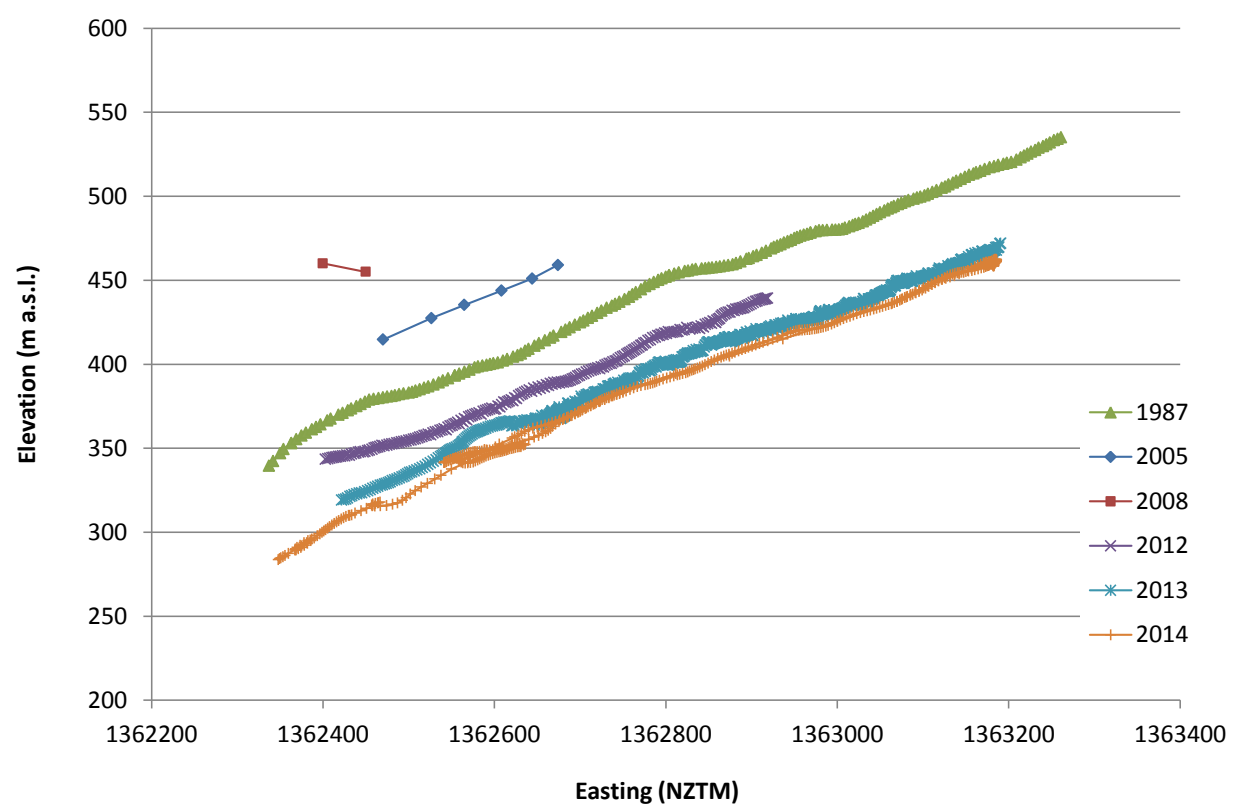


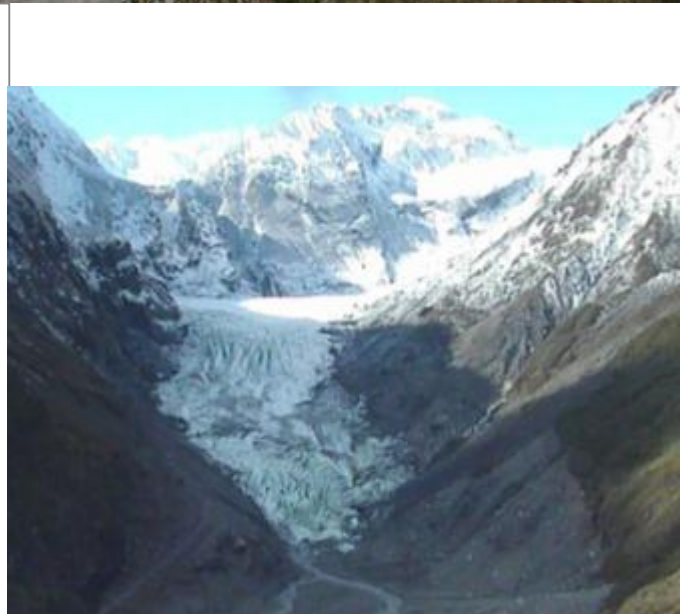
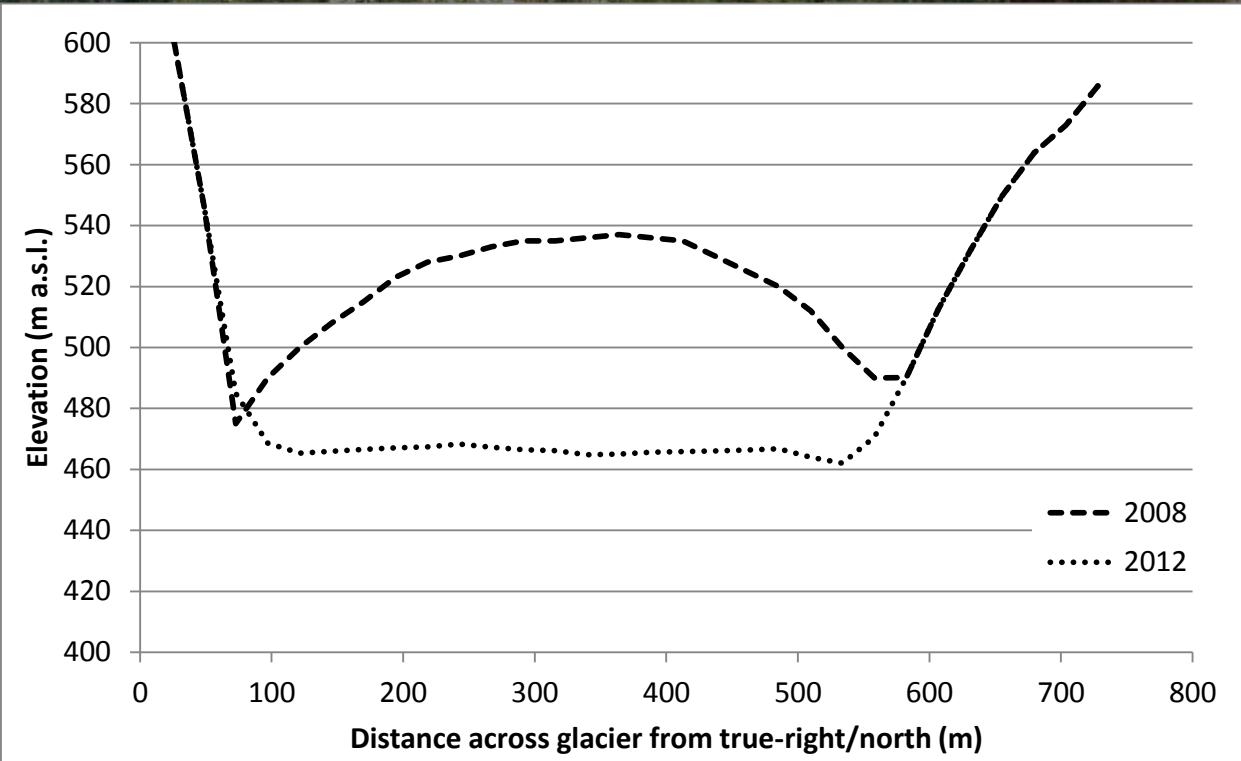
Photos by Trevor Chinn

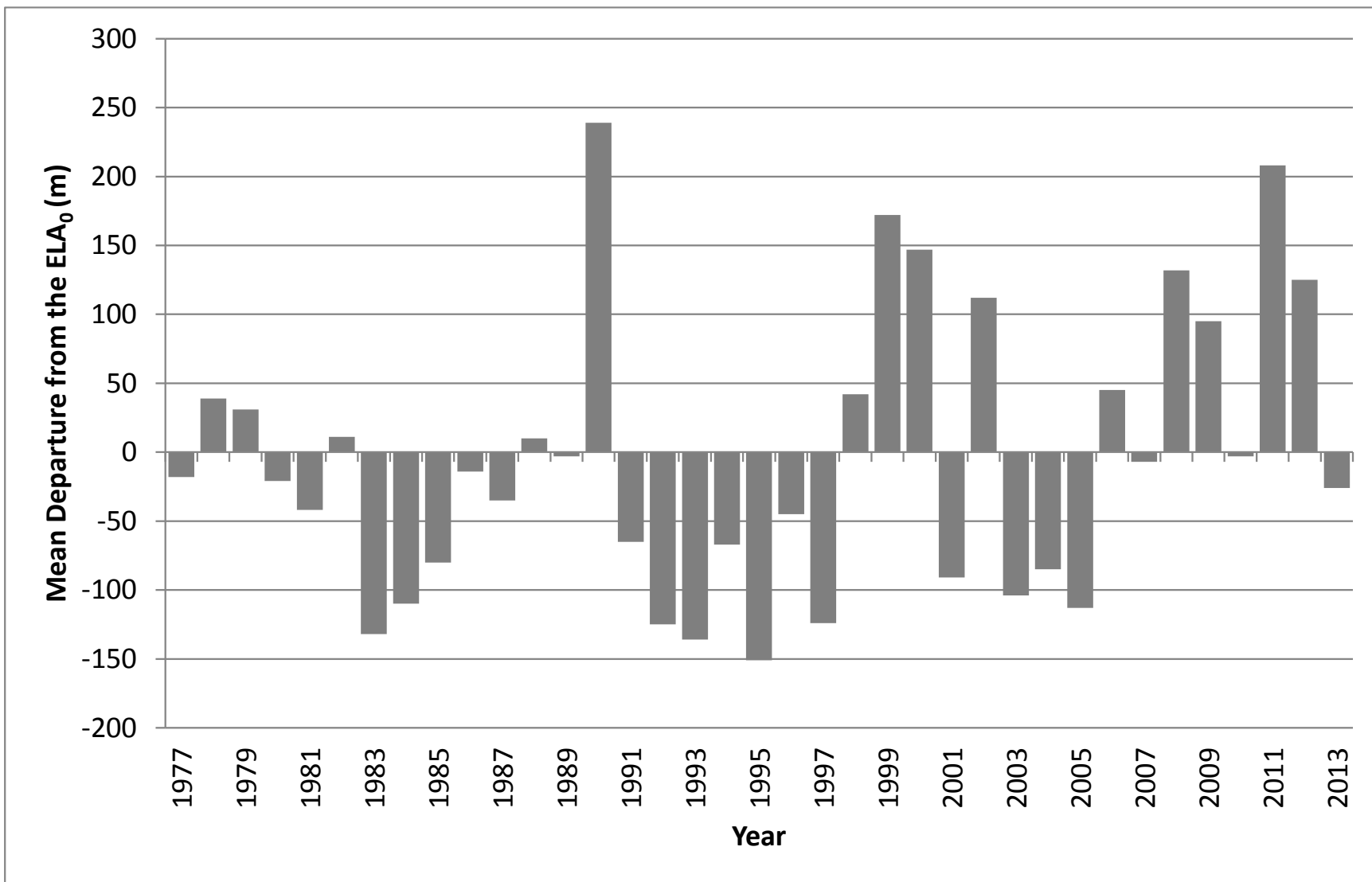


Purdie, H., Anderson, B., Chinn, T., Owens, I., Mackintosh, A. and Lawson, W. (2014): *Global and Planetary Change*, 121:41-52.









Data from Willsman et al. (2014)

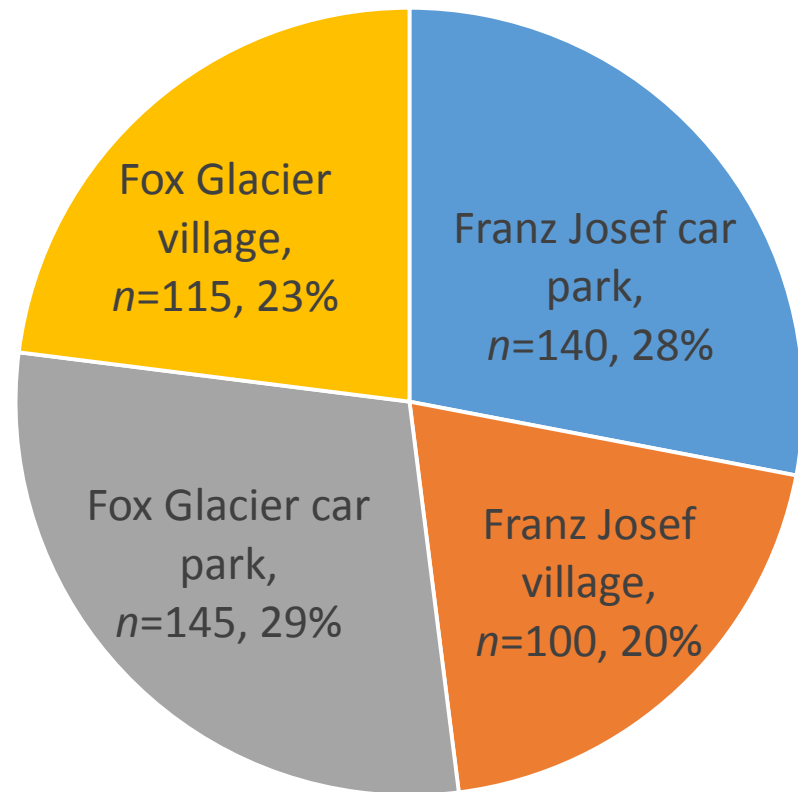
Research interest

- 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

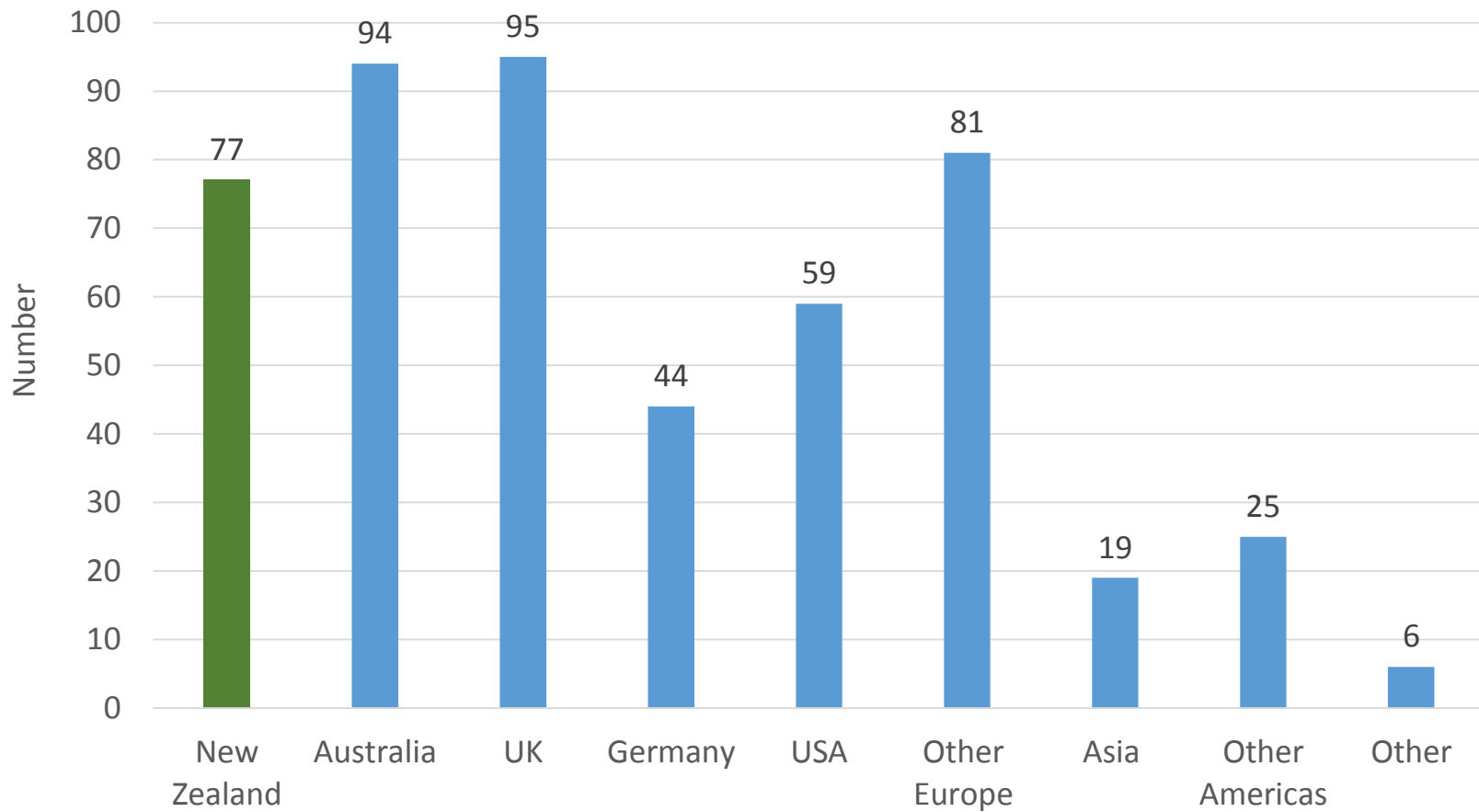


Survey limitations

- 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

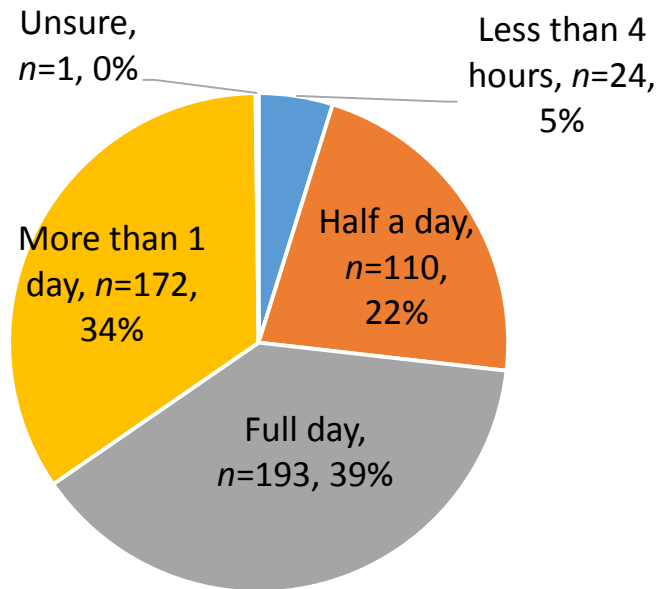


Usual residence



Visit details

- Nights stayed
 - 39.6% 1 night
 - 42.5% 2 nights
- Time at glaciers:

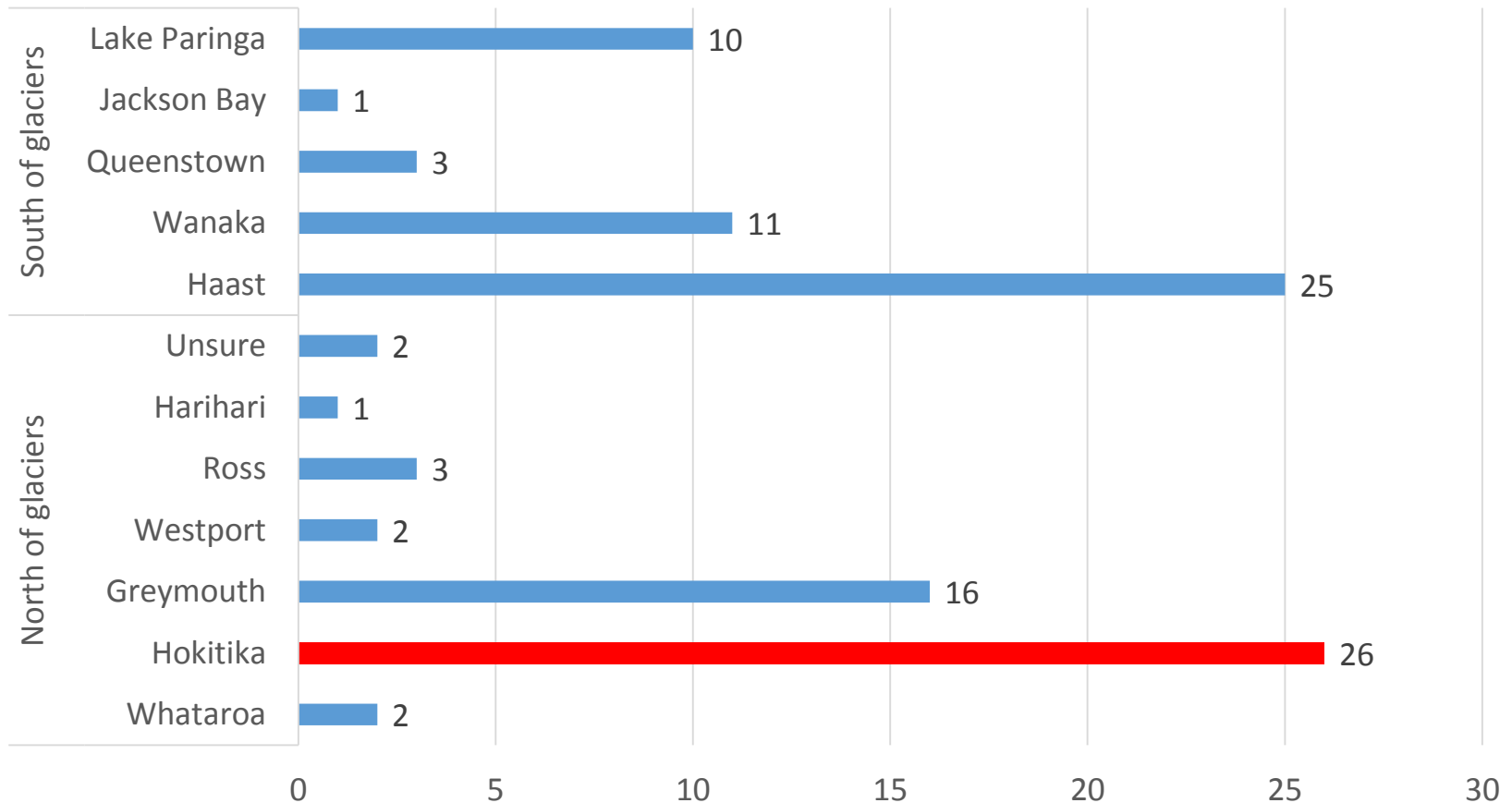


- 84% first visit
- Independent walk to final barrier
 - Franz Josef $n=233$
 - Fox Glacier $n=203$
- 51.8% ($n=259$) did a commercial activity
 - Over half (55.6%) of these visitors also walked up glacier valley
- 33.2% ($n=166$) did a flight activity

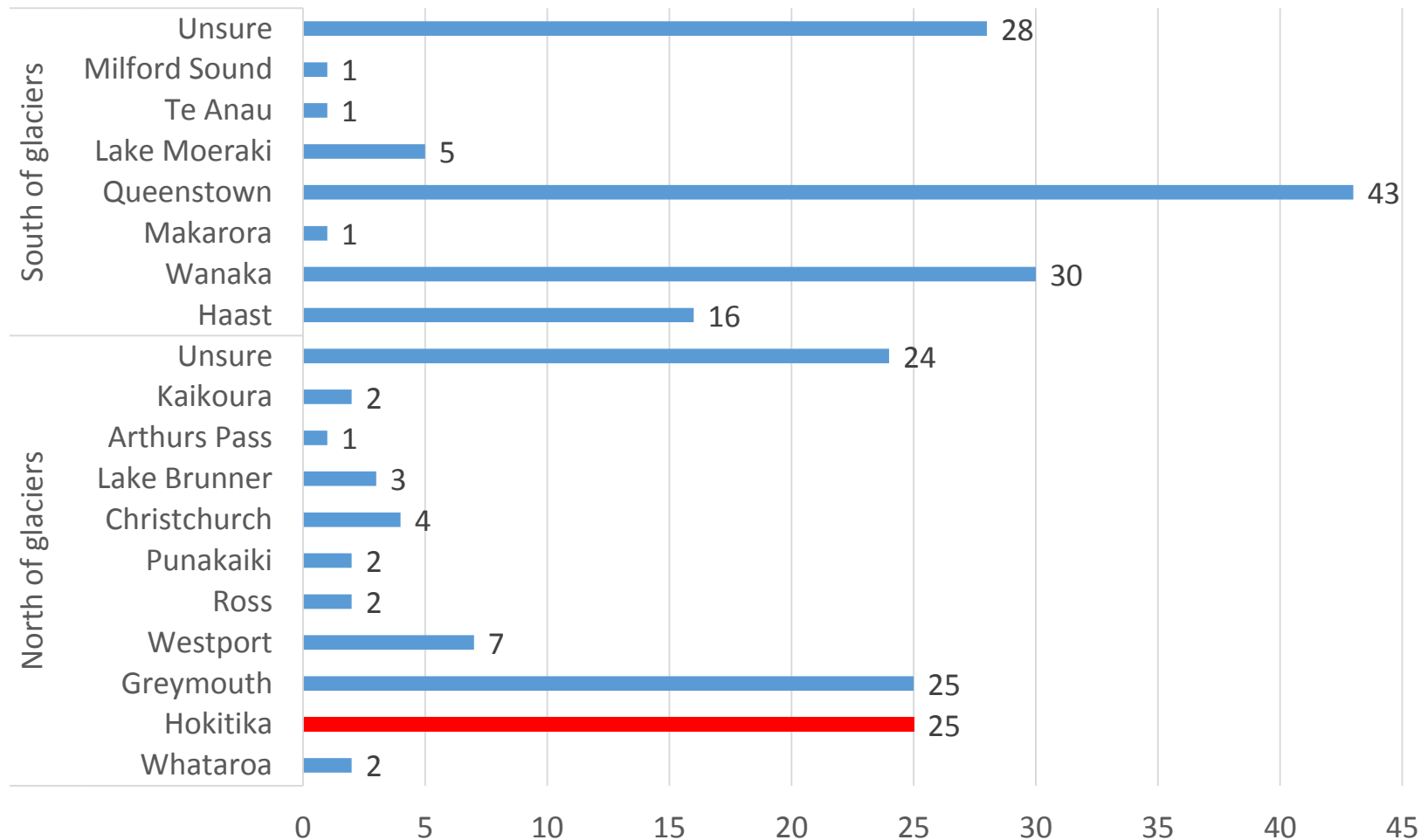
Direction of travel



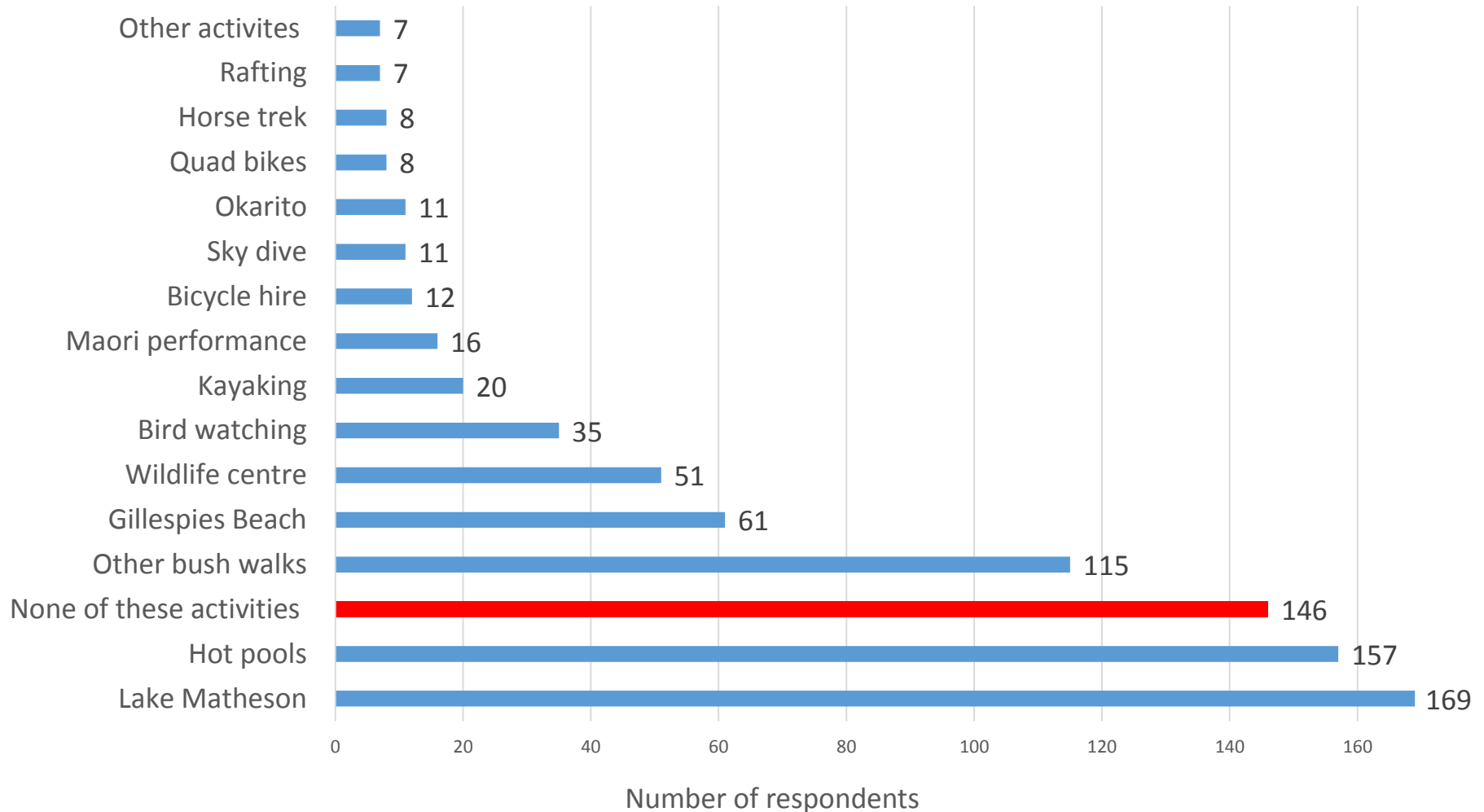
79.6% ($n=398$) stayed previous night in glacier region



55.3% ($n=275$) staying current night in glacier region



Other activities at the glacier region

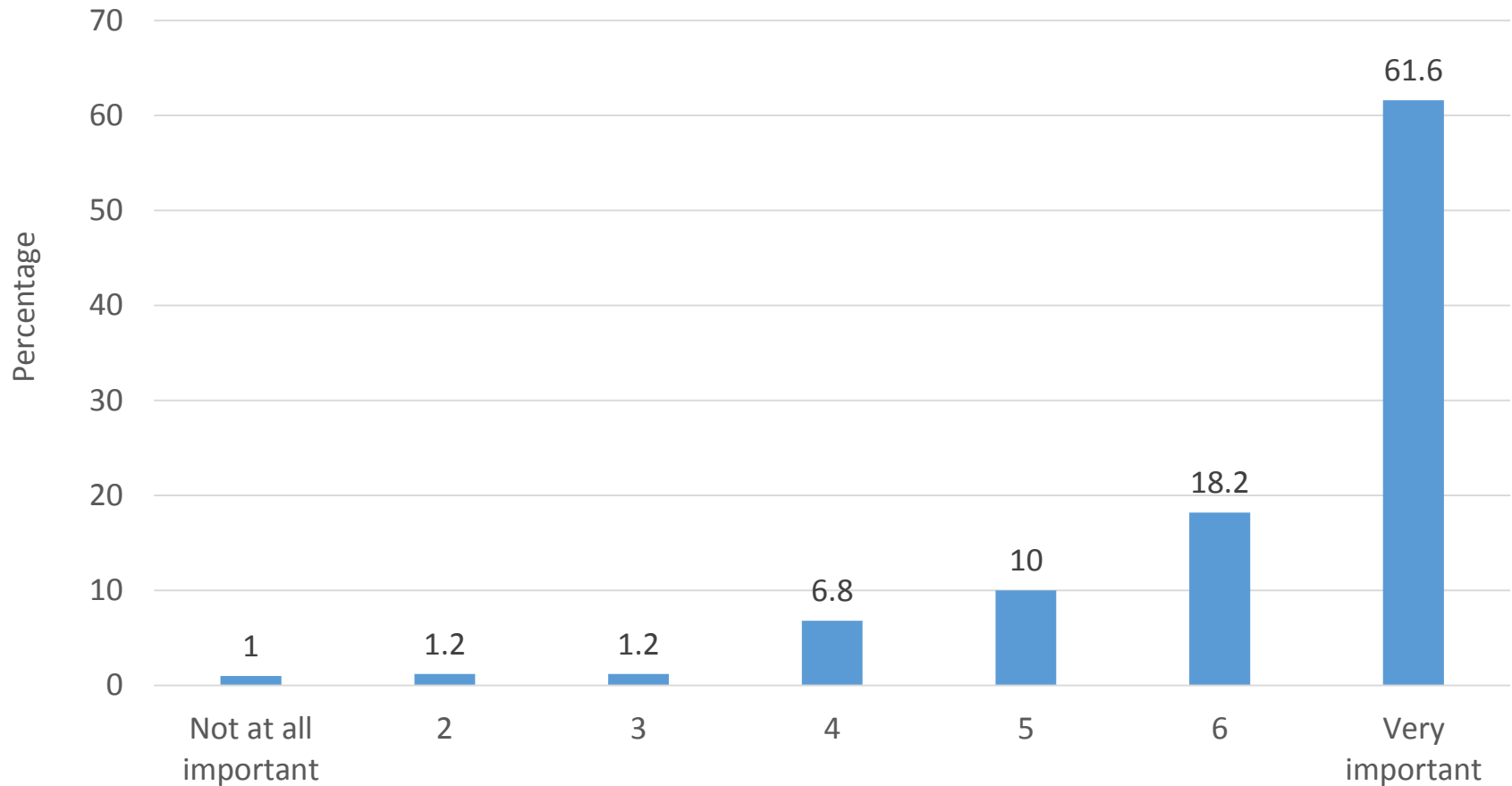


Most memorable aspect of visit: 569 things reported

- 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



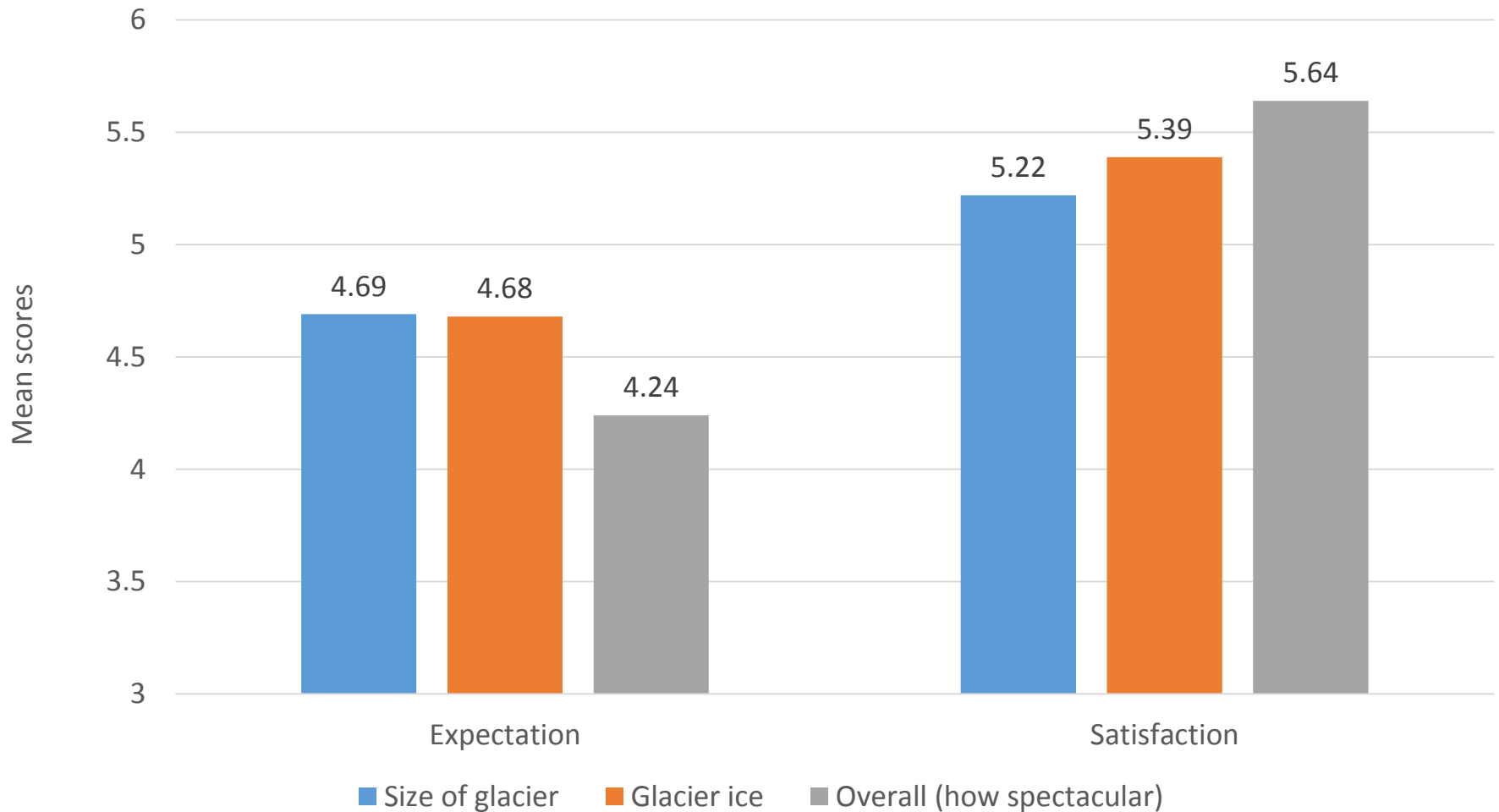
Reasons for visiting: 3 highest and 3 lowest mean scores

Reason for visiting	Mean
To see a natural feature that may disappear in the future	6.01
To be close to nature	5.71
To view an easily accessible glacier	5.61
To experience a rainforest	4.34
To be with friends and family	4.16
To experience solitude	3.94

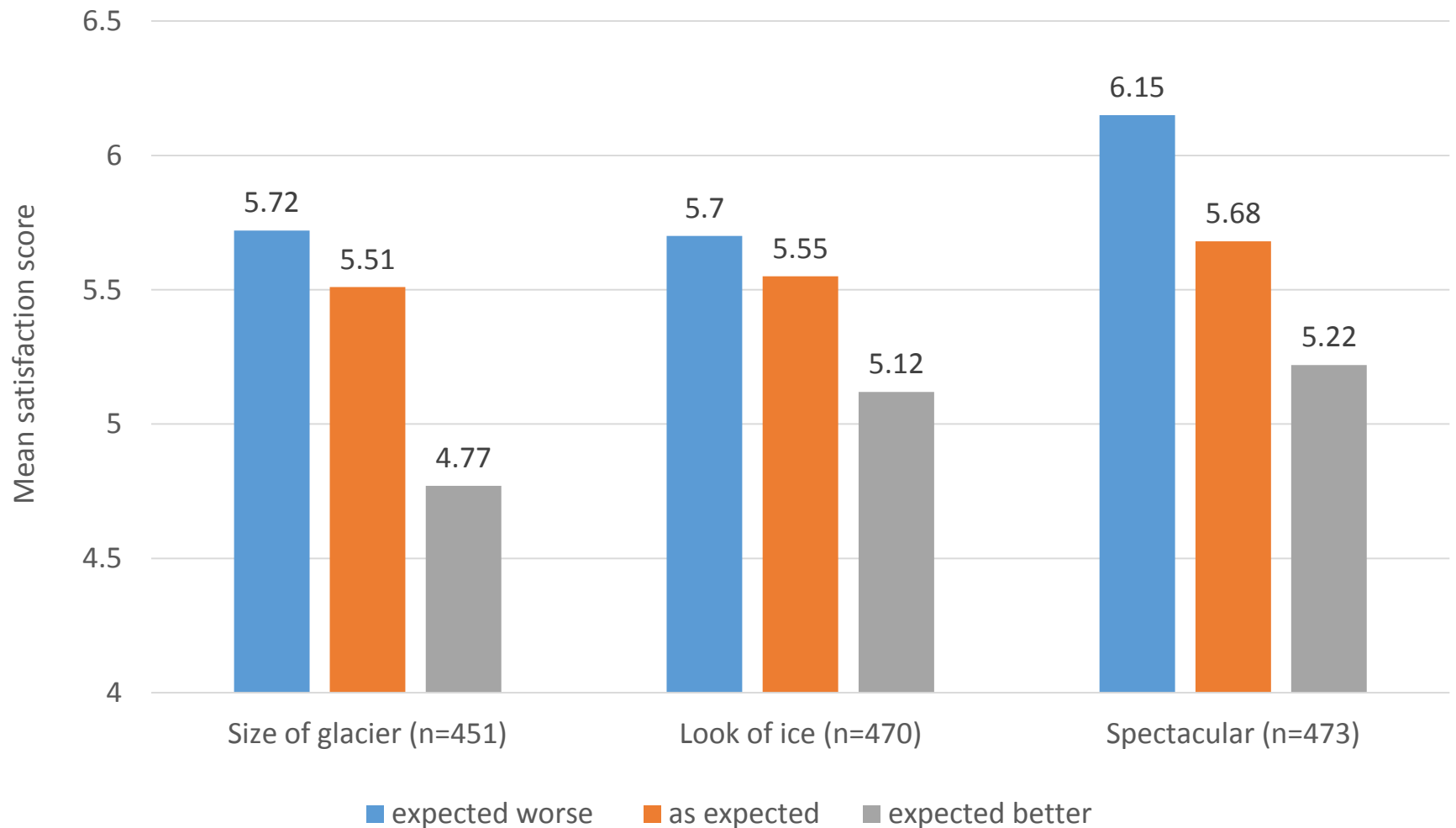
Glacier experience factors

- 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

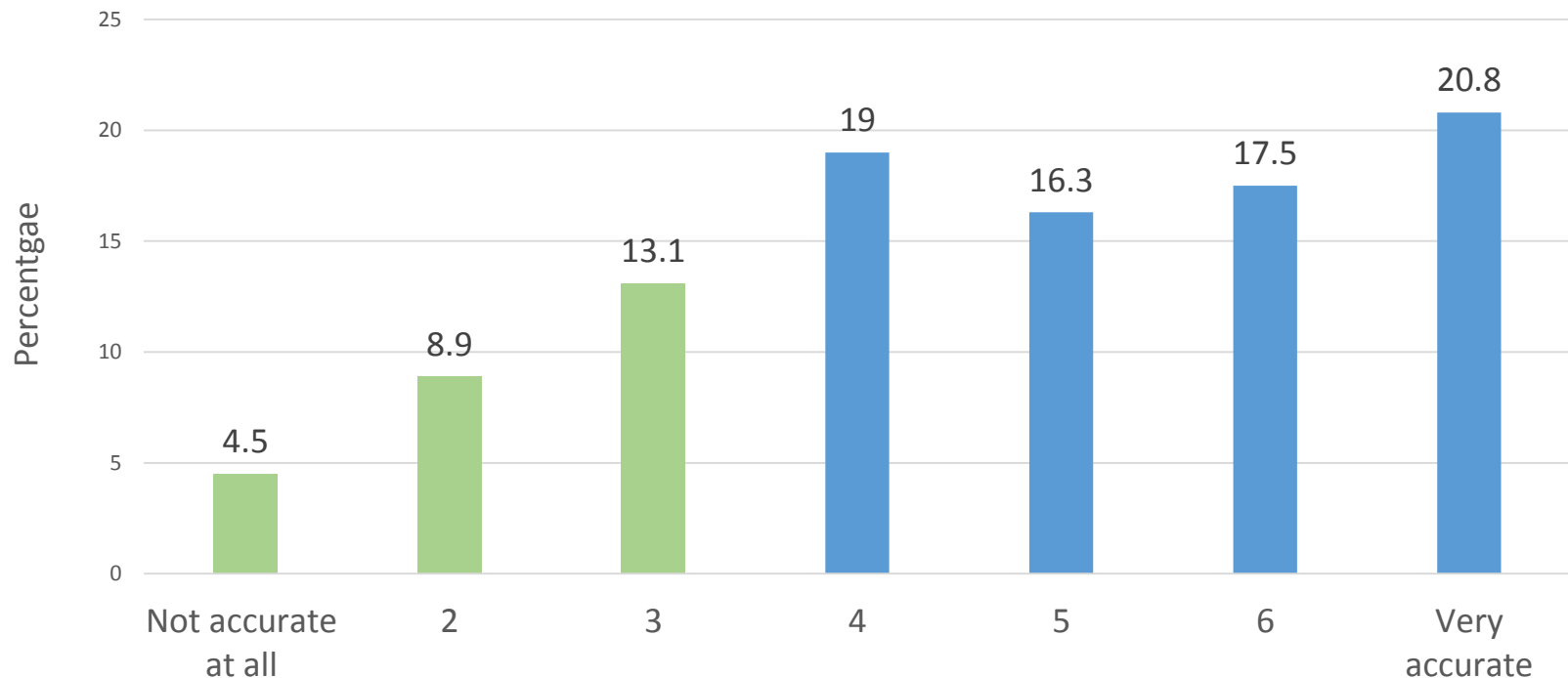


Relationship between expectation and satisfaction



Images of the glaciers

- 67% ($n=337$) saw images before their visit
- How accurate were these images?

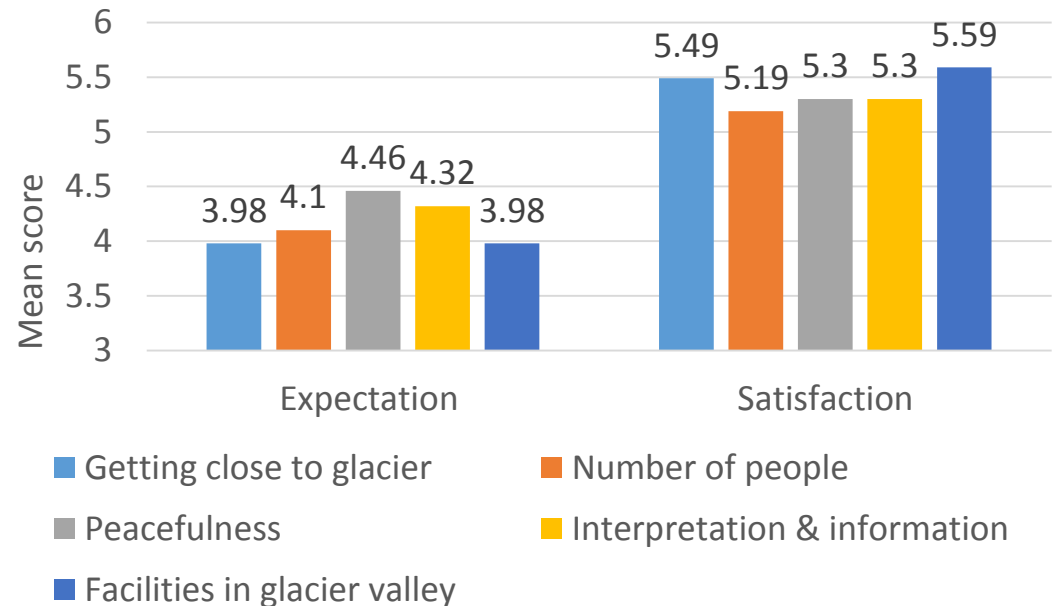


Pre-visit information sources



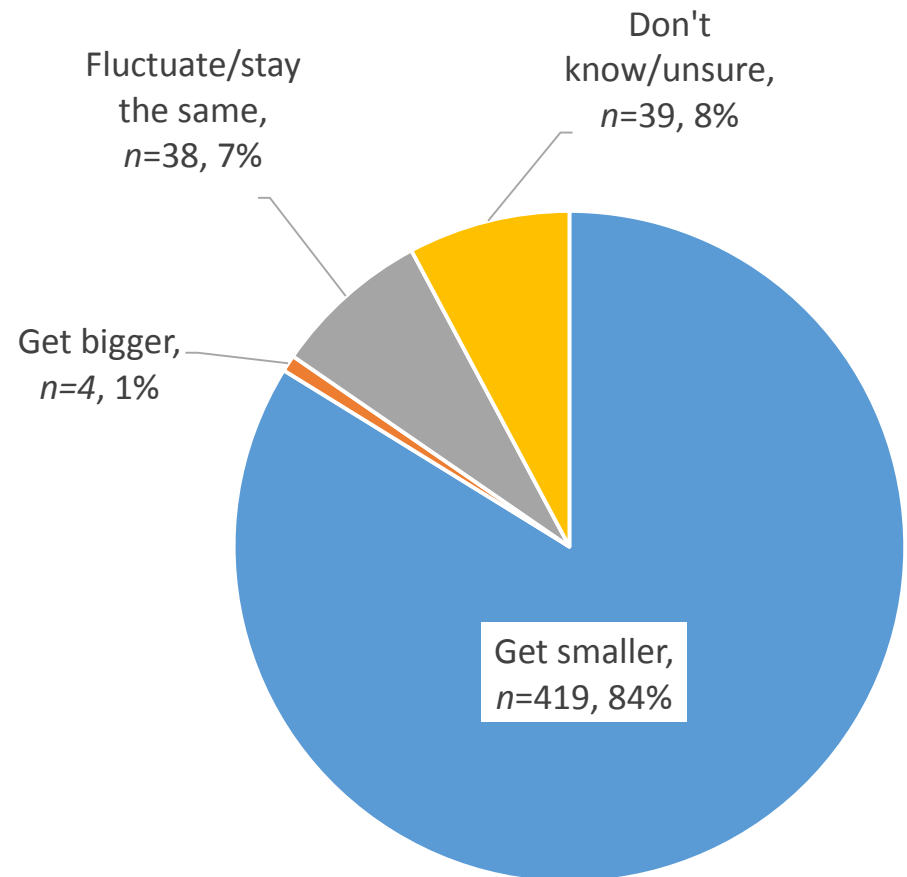
What did you expect from your glacier visit?

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



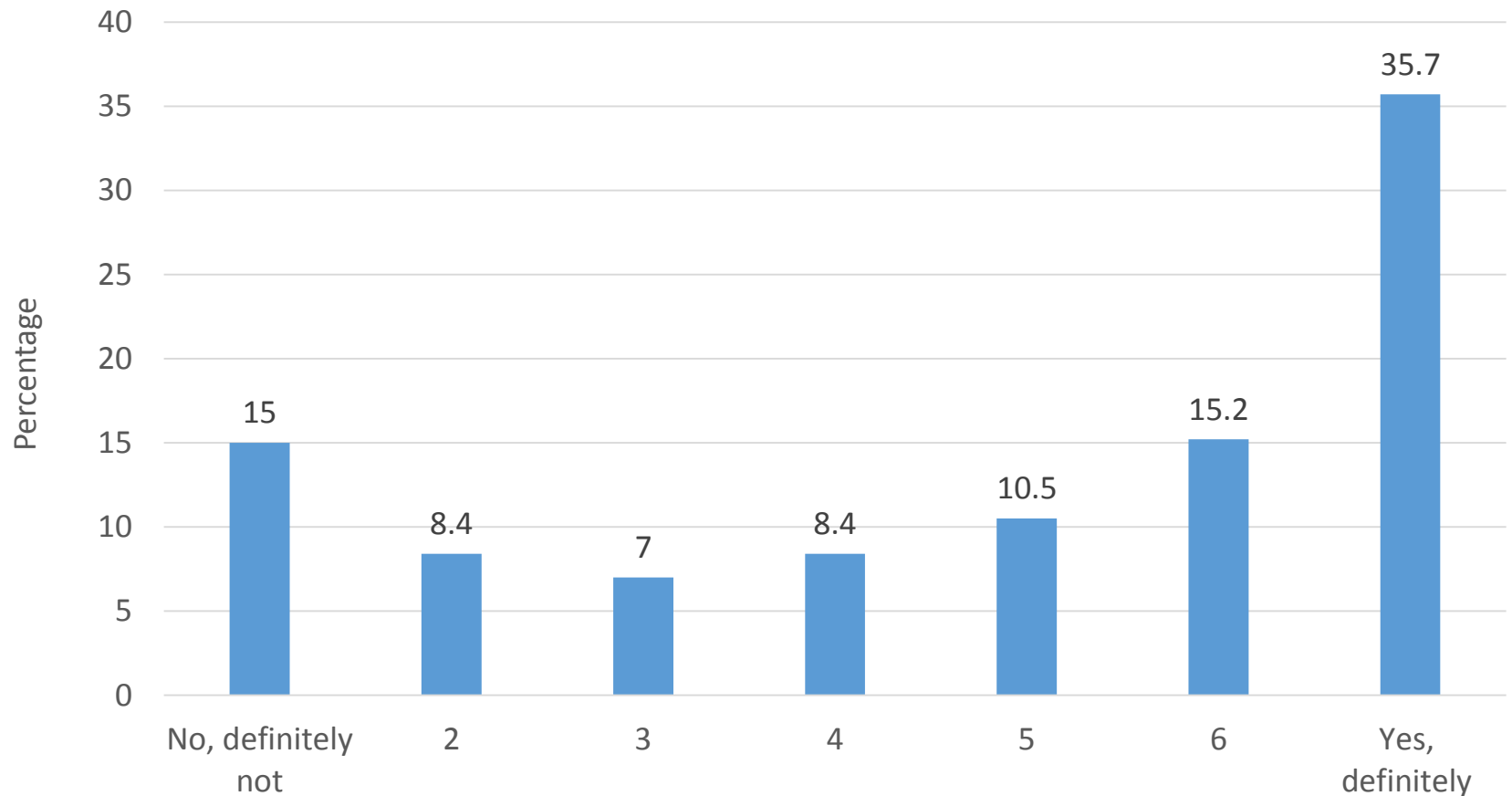
Climate change and the glaciers

- 73.6% agreed climate change was 'definitely happening'
- What do you think will happen to the glaciers over the next 20 years?

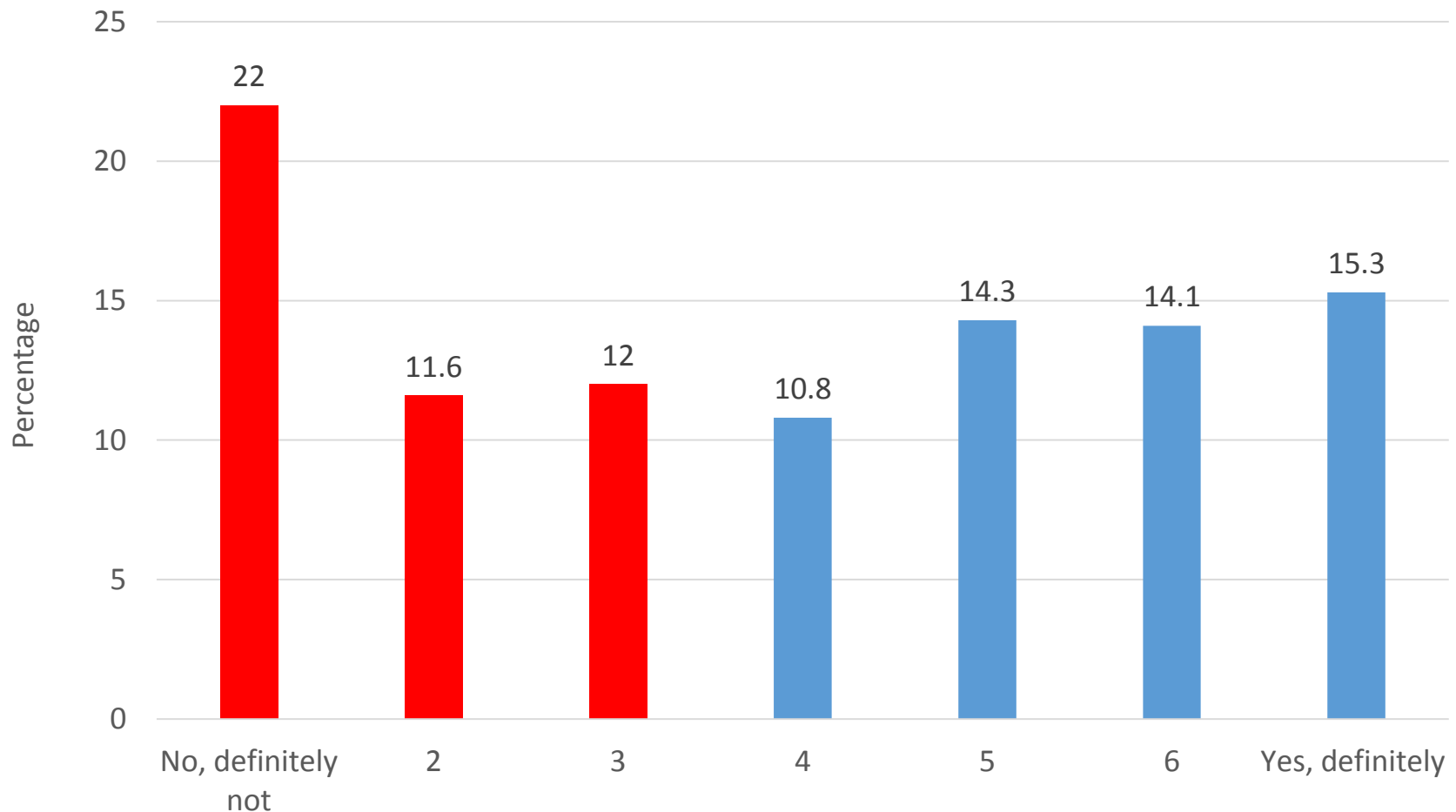


MELT-AWAY DECLINE RECEDE-UNFORTUNATELY MUCH-THE-SAME SIGNIFICANT-RETREAT CONTINUE-MELTING CONTINUE-TO-RECEDE MUCH-SMALLER DECLINE-COMpletely SHRINK-FURTHER DEPENDS
 GLOBAL NO-IDEA COMPLETELY-DISAPPEAR **PROBABLY RECEDE MELT** REDUCE GROWING SLIGHTLY HOPE
 LEFT WON'T-BE DIMINISH **RECEDE MELT** KEEP-RECEDING HOPE WALK
 KNOWS RETREAT GET **SMALLER** UNSURE VALLEY
 LOT GLACIER **DISAPPEAR** DON'T-KNOW WAY
 BE-GONE **DISAPPEAR** DON'T-KNOW WAY
 GONE SHORTER SHRINK **SMALLER** YEARS
 GOING RECEDE-MORE **SHRINK** SMALLER CYCLES
 CONTINUE BAD RECEDE-A-LOT KEEP-RETREATING PROBABLY-DISAPPEAR MAYBE-DISAPPEAR REALLY TINY-BIT-LEFT FLUCTUATING

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?



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