Figure 10. Attitude to management responses in summary scale structure.
**Nationality effect**

New Zealand and overseas visitors had significantly different attitudes towards management options to cope with increased use-levels. New Zealand visitors had more negative attitudes toward controlling use-levels by manipulating use conditions in particular, and using information management to a lesser extent.

Exploration of the ‘manipulate use conditions’ scale indicated that New Zealand visitors disagreed more with most items comprising the scale. Among these items, making alternative tracks cheaper and encouraging smaller group sizes were most prominent. Conversely, overseas visitors had relatively more agreement with these options, suggesting a greater degree of tolerance for these types of direct management approaches. The consistency of this difference across almost all the various scale items suggests a general reluctance among New Zealand visitors to the Kepler Track to be ‘controlled’ in any way while on their visits.

Exploration of the ‘information management’ scale indicated that while the large majority of visitors agreed with this approach (see Figure 10), New Zealand visitors were less supportive toward using information to direct use. While indistinguishable from overseas visitors in their high agreement with using information to promote better physical and social impact behaviour, New Zealand visitors agreed relatively less with providing information about alternative areas, and with using information on use-levels to divert visitors to other sites. This is a minor difference in the context of the very positive overall visitor attitudes toward the information management option, but does suggest some reserve from New Zealand visitors when information techniques are applied more directly to recreation.

**Age-group effect**

Attitudes toward management options also differed significantly between younger and older visitors (under and over 40 years). While visitors were not distinguished for the management options of rationing/use-limits and increasing accommodation, younger visitors were more negative toward information management, while older visitors were more negative toward the manipulation of use conditions. Younger visitors were less positive toward information management, and particularly with using crowding information to encourage use at other times or places. Older visitors were less positive toward direct manipulation of use conditions, and particularly with the pricing-based approaches (e.g., making peak times more expensive, making alternative areas cheaper). While these results did not provide any explanation for these differences, attitudes towards perceived freedom in the activity and the perceived acceptability of cost-based management options may be important.

**Extreme responses**

Because visitors attitudes were often substantially split either for or against the management options (refer Figure 10), additional exploration of these data were undertaken. The top and bottom 25% of scores for each of the management option scales were selected, representing the more ‘extreme’ attitudes of those who most strongly agreed or disagreed with the options. The main differences indicated from these explorations were between New Zealand and overseas visitors for the ‘information management’ and ‘manipulate use conditions’
options. In both cases these ‘extreme-attitude’ New Zealand visitors were less supportive of the management options. Of the ‘extreme-attitude’ visitors, only 42% of New Zealand visitors agreed strongly with using information management, compared with 60% of overseas visitors.\(^8\) And even more significantly, only 22% agreed strongly with manipulating use conditions, compared with 61% of overseas visitors. Compared with the overseas visitors, New Zealanders appear less tolerant of their recreation being managed, and particularly so for the more direct types of management intervention. No differences were apparent between these visitor groups for the ‘rationing/use-limits’ and ‘increasing accommodation’ options.\(^9\) This was also the case when age-group responses of extreme attitudes were compared, with the only notable difference being the lower agreement with information management among younger visitors (54%) compared with older visitors (65%).

### 6.2 RELATING MANAGEMENT PREFERENCE SCALES TO OVERALL TRIP EVALUATIONS

There were no significant links between the overall visit evaluations (e.g., satisfaction and crowding), and any scales of attitudes towards management options. These results suggest that preferences for different management options were unaffected by any experiences on the track visit.

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\(^8\) Among the overseas visitors, only Germans agreed with the ‘information management’ option at similar levels to New Zealanders (48%)

\(^9\) Among all visitors, those from the US had highest agreement with the ‘rationing/use-limits’ approach to visitor management (72% compared with a mean of 44%). Further exploration of the Kepler Track database would be required if any additional details of these types of responses are required.
7. Summary and discussion

7.1 Overall Visit Evaluations

Overall levels of dissatisfaction were negligible, and very few considered the experience was below their expectations. In particular, results indicate that visitors to the Kepler Track had their visit-experience expectations exceeded more often than was apparent from visitors to other tracks. Overall these results indicate that Kepler Track visitors had very positive visit experiences.

Some caution is required when interpreting these satisfaction findings, as there is a tendency for visitors to give approval to the status quo of social and environmental conditions they experienced on a visit, particularly if they have little previous experience of the site and do not have strong expectations as to what constitutes appropriate conditions. Over time in a situation of changing use conditions, overall satisfactions of such visitors can remain consistently high despite considerable changes in visit experiences. First-time visitors with inaccurate expectations of social and physical conditions on visits, or repeat visitors with expectations based on previous conditions are those most likely to be indicating overall dissatisfaction. These types of visitors are usually also those most subject to being subsequently displaced to different sites, times or activities, and giving negative feedback to others about their experiences. Other visitors may recognise that elements of the visit-experience may not be what they would prefer, but are prepared to rationalise some of their experience preferences in the interests of an enjoyable overall visit. All these considerations suggest that reliance on overall satisfaction measures as a monitor of visit-experience quality can be misplaced.

Perceptions of crowding appeared a more sensitive monitor of effects on visit-experiences, being significantly greater during the high-use Easter period, and being linked with experiences of higher than expected use-levels. However, the proportion of visitors who experienced these higher than expected use-levels did not reflect the different summer and Easter crowding scores. While many summer visitors appeared to have over-estimated the likely use-levels, more Easter visitors indicated they experienced the use-levels they expected. This suggests the background information on use-levels underlying visitor expectations was more accurate for Easter conditions, while tending to promote overestimates for summer conditions. It appears that Easter visitors expected the higher levels of crowding they experienced, but were prepared to accept these conditions without compromising their visit satisfactions. By contrast, summer visitors did not appear any more satisfied despite often experiencing less crowding and use-levels lower than expected.

Despite variations in summer and Easter crowding and use-level evaluations, overall satisfaction levels did not reflect these differences. While the high overall crowding perceptions indicated visit experiences were being affected in some way, particularly at Easter, there was no relationship with how the trip was evaluated overall. In other words, the overall satisfaction score was not sensitive to the different types of recreation experience effects being captured by the crowding scores and use-level evaluations.
7.2 SATISFACTION WITH FACILITIES AND SERVICES

No notable levels of dissatisfaction were apparent for any of the facilities and services on the Kepler Track. And none of the satisfaction scales were linked with any of the overall satisfaction and use-level evaluations. These very consistent and high satisfactions across all the facility and service types indicated a lack of any specific visitor problems with track management infrastructure, and suggested there were no immediate needs for management interventions beyond normal maintenance. The only areas that appeared to require some attention related to the convenience space in huts for relaxing, and the facilities for drying gear. However, these were only minor sources of dissatisfaction (around 15%) and do not appear to warrant high priority on the basis of satisfaction levels alone.

While overall satisfaction scores did not highlight any important satisfaction issues, the significant differences between the satisfactions scales of different visitor groupings did highlight some issues related to crowded perception (uncrowded/crowded) and age-group (under and over 40 years). In summary, crowded visitors were particularly less satisfied with hut conditions, and information services to a lesser extent; and younger visitors were particularly less satisfied with information services and track conditions. While quite simplified, these summary points highlight hut conditions, information services and track conditions as areas where satisfactions were particularly variable. Of these, the lower satisfactions with hut conditions by crowded visitors were most prominent, predominantly based on their lower satisfactions with bunk numbers and space to relax in huts. These crowded visitors were also generally less satisfied with all aspects of information services, although this was very much a secondary distinction. The lower satisfactions with information services among younger visitors were common to all information service items, but were particularly based on their lower satisfactions with information from visitor centres. Their lower satisfactions with track conditions were less prominent.

Overall, these findings suggest that while overall levels of satisfaction with facilities and services were high, hut conditions represent an emerging issue in situations where higher use-levels and/or crowding perceptions occur. It appears that where use-levels and related changes are growing, hut conditions will represent the first area where compromises to the quality of visit experiences may occur. Issues related to satisfactory information services also emerge among the more crowded visitors, although exploration of these results provide no additional explanation of what may underlie their greater dissatisfaction. Similarly, no explanation can be offered for the relatively greater dissatisfaction with information services among the younger visitors. While not an urgent priority, it would appear that for the long term, further investigation of visitor information needs under different types of use-conditions may be appropriate.
Social conditions in huts and the physical condition of the track were the sources of the impacts that most bothered visitors. Over 30% were bothered by seeing too many in the huts and hut noise, while over 20% were bothered by trampling of shortcuts on the track, perceived overdevelopment of the track, insufficient bunks in huts, and having to rush in the morning for a bunk at the next hut. In addition, over 30% were bothered by their perception that the water was not always safe to drink, although this appeared to be a general perception rather than a specific response to their own experience on the Kepler Track. These responses focus attention further on issues of hut congestion, and this focus is reinforced by the strong association between crowding and the hut/track congestion scale, particularly with seeing too many in the hut and having insufficient bunk space.

Many others indicated they were aware of these impacts, but indicated that they were tolerant of them (e.g., noticed but not bothered). Visitors were also highly aware of other impacts, such as seeing too many along the track each day and perceived overdevelopment of huts and signs, but were more often tolerant of these rather than being bothered by them. Understanding the distinction between simply noticing these impacts and being bothered by them appears an important research issue for managers. Some types of impacts appeared to be tolerated very little by visitors (e.g., seeing litter, toilet paper/waste, and wood cutting), and while these were not prominent impacts overall, they do suggest particular visitor sensitivity to this type of perceived inappropriate behaviour in natural settings.

The importance of hut congestion issues was reinforced from the significant differences in impact perceptions between uncrowded and crowded visitors, and the association between higher perception of social congestion impacts and higher perceptions of crowding. In summary, crowded visitors had greater perceptions of almost all social and physical impacts, although the impacts associated with hut congestion (e.g., too many in huts, insufficient bunk space) were most prominent. Impacts based on track congestion closely accompanied those from hut congestion, but tended to be of lesser importance. Other secondary impacts perceived at notably higher levels by crowded visitors were the over-development of huts (from the ‘overdevelopment’ scale) the littering of huts, tracks and campsites (from the ‘physical damage’ scale), and inadequate water and toilet facilities (from the ‘water/toilet/hygiene’ scale). These were not noted at high levels overall, but indicate perceptions which may accompany the more specific hut-based crowding impacts.

At present, the high overall satisfaction score and generally consistent satisfaction with facilities and services among different visitors suggests that, while the distinction between crowded and uncrowded visitors is not immediately important for managers, it will be important for long term management approaches should use-levels increase. Given the strong association between crowding and hut congestion, focus on hut conditions appears to be the most important immediate concern for maintaining the quality of both current visit experiences and those under future conditions of higher use-levels. This focus should not be confined to the bunk capacities of huts, as issues of the general numbers present in huts and the availability of hut space were apparent.
When considering management options for addressing future increases in visitor use-levels, most visitors were highly positive toward information management. That is, the strategic use of information to better match visitor expectations with likely experiences, and to give prospective visitors a better basis to choose visit timing and location that better suits their preferred visit experiences. This may be a particularly important component of any general improvements undertaken in visitor information services. These results indicated clearly that such information management approaches were considered most preferred among all types of visitors, although New Zealand visitors and younger visitors were relatively less supportive. The main question this poses for managers is whether such information management approaches represent an effective tool of practical value. This is an area where additional investigation should be encouraged, as it offers the possibility of developing management approaches with much higher degrees of visitor (and public) support. Further investigation of the attitude characteristics of New Zealand visitors and younger visitors may also be appropriate, although given the highly positive support for information management overall, the small degree to which these visitor groups were relatively less supportive does not appear very important.

Attitudes were more evenly split toward options involving development of facilities, encouraging alternative types of accommodation or visit type (e.g., camping, guided trips) and applying allocation systems such as bookings. Most visitors were highly negative toward the more regulatory options of manipulating use, which aimed to more directly channel or reduce visitor numbers. New Zealand visitors and older visitors in particular were relatively less supportive of these options. Booking systems for huts (and campsites), which are being actively considered as management options for controlling visitor numbers on many of the Great Walks, were opposed by around half the walkers overall. No explanation of reasons for this negative attitude can be drawn from these analyses, and no differences were apparent between the attitudes of different visitor groups. But this finding suggests specific investigation is required to find how booking systems are perceived by visitors, and what happens to visitor patterns when such systems are imposed.\(^\text{10}\)

Compared with overseas visitors, New Zealanders were found to be much less tolerant of their recreation being managed, and particularly with both manipulation of use conditions and information management. They disagreed significantly more with all the options included in the ‘manipulation of use-levels’ scale. This consistency across all the options in this scale indicates a general reluctance to allow their recreation to be ‘controlled’ in any way. And while overall support for information management approaches was high, New Zealanders were also more negative toward these. Exploration of the extreme positive and negative responses here added support to these findings.

\(^{10}\) Inferences have been drawn from simple comparisons between independent studies undertaken before and after implementation of a booking system on the Routeburn Track, but these have not been part of any specifically designed assessment. If required, specific additional analyses of the Kepler database, and others in the Great Walks study may provide more information on attitudes toward booking systems.
Overall, preference was apparent for less intrusive management interventions, and indicates perceived freedom may be an important component of the visit experience. Additional investigation of the role played by perceived freedom in recreation experiences seems appropriate. Clearly this is a particular issue to investigate among New Zealanders in particular, and between age-groups to a much lesser extent. The more tolerant attitudes of overseas visitors to management of their recreation is a useful finding if continued growth in tourist numbers is anticipated on the Kepler Track. But any applications of new management approaches should take account of what appears to be lower tolerance among New Zealand visitors for any perceived loss of freedom. In addition, it is important to note that whatever the pros and cons of the other types of management options (e.g., facility developments, alternative types of visit opportunities and allocation (booking) systems), these were not viewed differently by New Zealanders and overseas visitors.

7.5 **CONCLUSIONS AND RECOMMENDATIONS**

While there were no urgent needs for immediate management actions to address current problems, visitor responses indicated that there were existing effects on visit experiences from the presence and behaviour of other visitors. These effects were mainly associated with hut congestion, and general perceptions of crowding. While these effects appeared to be largely tolerated, with many visitors indicating they were not bothered by them, results linking crowding with perceptions of hut/track congestion impacts indicated some of these evaluations were becoming more negative at the higher use-levels.

Overall these results indicated that preventative actions to minimise future compromises to the quality of visit-experiences will need to be taken, but that despite the high use levels on the track, these are not critical at present. If management control is required, visitors indicated a preference for such actions to be based most upon information use to guide visitor choices, rather than any more regulatory approaches to limit or channel visitor opportunities. Initially some development of long-term information approaches could be undertaken, as stringent controls do not yet appear essential. However, New Zealanders were less supportive of management in general, and any proposed actions would need to allow for the effects on their perceived sense of recreational freedom. In summary, the main management actions which could be undertaken include:

- Specific attention to the facility capacity (e.g., space for washing-up, toilets) and bunk capacity of huts
- Optimising the use of hut space for relaxation and for access to facilities within and around the huts (e.g., can the hut space be reconfigured)
- Provision of general information about the features of the Kepler, and for planning visits to it (possibly more targeted at overseas visitors)
- Provision of information approaches which forecast visitor numbers and hut loadings in advance, indicate where and at what times on-track 'bottlenecks' during the days walk are most likely, and general suggestions on visit timing
and organisation to maximise the opportunities for avoiding ‘crowded’ visit experiences

- Investigate the visit experience outcomes from possibly applying a booking system on the Kepler Track, particularly address impacts on the New Zealand visitor segment, and consider assessing the effects of the other management initiatives before setting any booking system in place.

Most initial gains should be made by concentrating upon making whatever simple improvements are possible in the use of space in huts. The information management options require generating behavioural change among the visitors rather than the physical changes to hut facilities and their operation. Promoting beneficial behavioural changes through information use represents a more long-term approach, will be based largely on pre-visit information, and may require greater involvement with external agencies. Any consideration of these approaches will require additional investigations in a number of areas to assess the potential effectiveness of information use as a practical management tool. Investigations of the facility and service expectations of different visitor groups will be important, particularly emphasising hut conditions, and having some focus on New Zealander visitors. General investigation of visit expectations will also be important, particularly if reasons for the apparent distinction between the accuracy of summer and Easter use-level expectations can be explored.

While more regulatory management options were not highly favoured, they may still be required if urgent control is required, particularly in the short term. Additional investigations should be encouraged to explore the reasons for the largely negative visitor attitudes toward these more direct options (particularly among New Zealanders), and the extent to which perceived freedom from external controls is an element of preferred recreation experiences. General investigations should explore the possible consequences from more regulatory approaches for future visit-experiences and use-patterns. Similar investigations addressing the other management options would be particularly important if the option of applying a booking system to the Kepler track is being considered. Because there are similar proportions of visitors both for and against this type of option, it is unlikely that it could be implemented without compromising the experiences of some visitors. There is no indication that the perceptions of current New Zealand visitors would be any more affected by imposing a booking system that would those of current overseas visitors.

Monitoring of the quality of visit experiences should not rely on overall visit satisfaction scores. Crowding scores offer a more sensitive overall measure. Any specific monitoring of visit-experience quality should concentrate first upon hut congestion conditions at key huts. For the Kepler this would initially concentrate upon visitor experiences at Luxmore Hut. Any monitoring should address wider elements of hut congestion conditions than simply bunk occupancy. This may involve more specific investigations of the use of space in huts. Monitoring of track congestion conditions does not appear necessary at this point, although this could be implemented as a complement to any hut-based monitoring of visitor experiences. Application of any monitoring approaches or related investigations should include coverage of Easter, as this period can provide a benchmark of high use-level conditions.

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