

1 | Mapping perceptions of forest management and the effect on social acceptability

Respondents

Outcomes from the Resilient Forests programme may see future changes in forestry management practice.

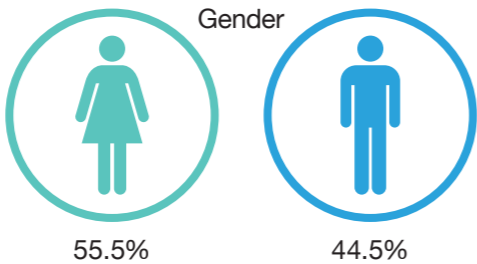
A segmentation study was performed to develop prototypes of New Zealand public responses to plantation forest management practices, generating baseline prototypes characterised on social licence concerns regarding three forest management practices.

We conducted an online survey of a representative stratified sample (n = 1501) of members of the New Zealand public during August 2020. The survey focussed on attitudes towards forest management practices in New Zealand commercial forests, with a particular emphasis on:

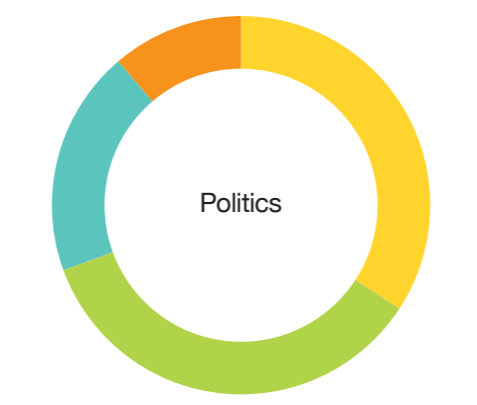
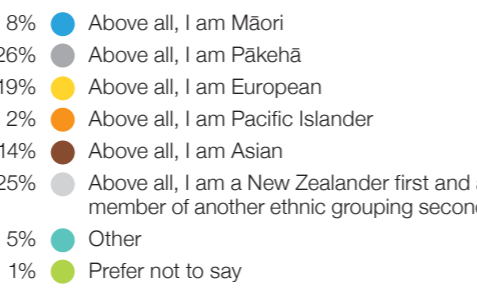
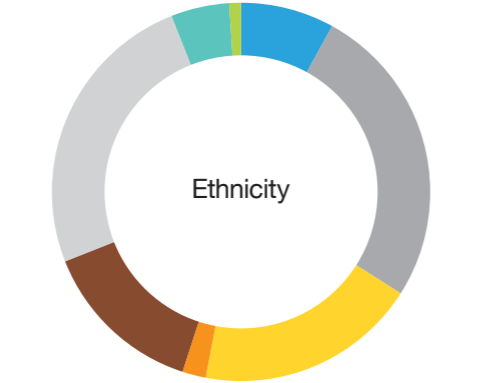
- a) Harvesting on steep slopes
- b) Changing to different species in smaller sized forest areas
- c) Chemical sprays and pesticide use in forests.

Results show 1) a moderate to high level of public concern for the forest management practices we studied, 2) a generally low level of knowledge of forestry activities and 3) a mixed set of responses to forest management practices. There were key differences in 1) perceived levels of engagement in decision making, 2) values of forestry for the economy and 3) trust in the forestry sector.

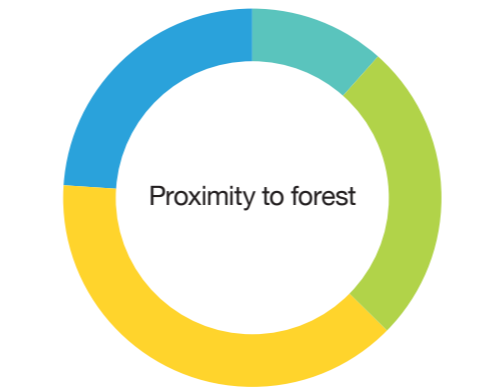
Age: Responses were sought from a wide age range, with median age of 40-45 years. 134 persons were younger than 25 years, and 271 respondents were over the age of 65 years.



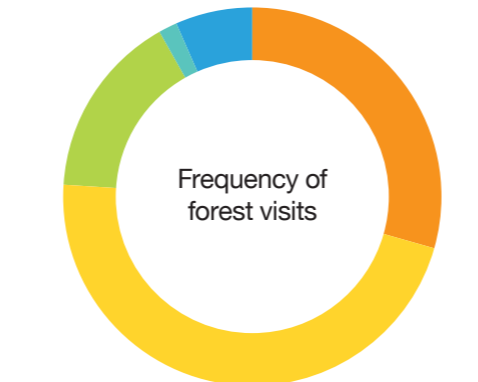
Gender: The respondents were mostly female (55%), with two gender diverse respondents and two respondents who did not indicate gender.



Impact of forestry

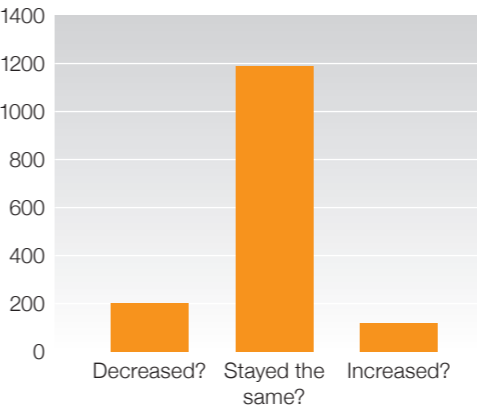


Proximity to forest: Most of the respondents live in metropolitan areas, and are located away from immediate forest access (within walking distance). However, 39% live within 10 minutes drive of a forest.



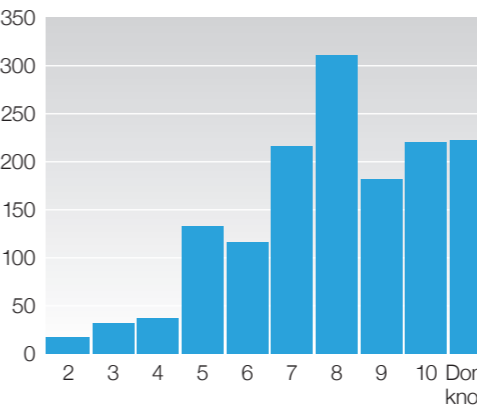
Frequency of forest visits: Three quarters of respondents seldom or never visit a pine forest, while 16% visit frequently. Less than 2% of respondents made daily visits.

Over the last five years has your level of trust in radiata pine forest management practices in New Zealand:



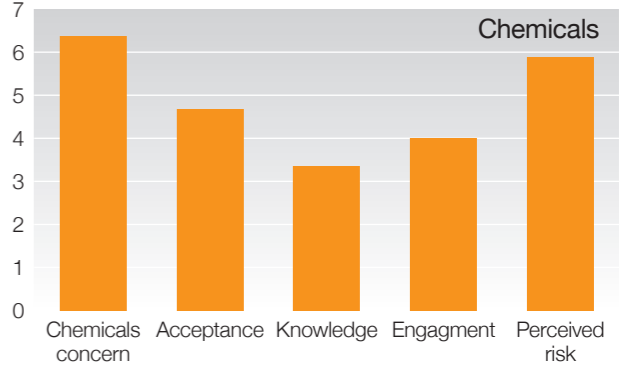
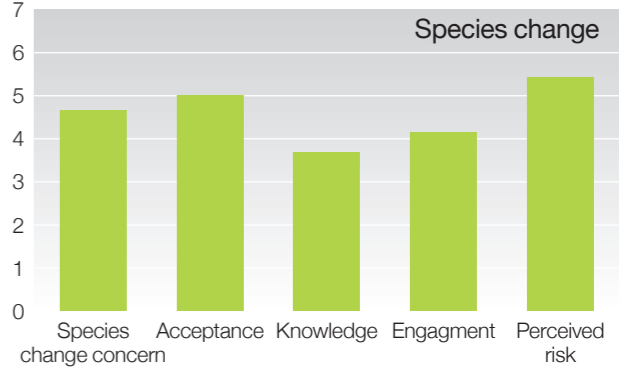
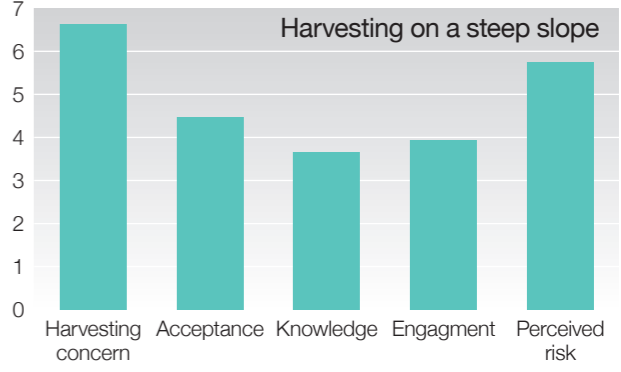
Level of trust in forestry: Overall, trust in the forest sector has remained similar within the public, with 80% stating they held the same level of trust as five years ago. However, there are regional and demographic differences in how trust has altered, noticeably Māori have a greater proportion who have decreased trust in forestry, and younger respondents having increased trust, and older respondents decreased trust. Trust in forestry is altered mostly through the media, government policy decisions, and personal observation.

In your opinion, do you think commercial forestry is good or bad for your regional economy, where 1 = 'very bad for the regional economy' and 10 = 'very good for the regional economy'.



Is forestry good for the regional economy? Overall, forestry is seen as good for the regional economy, with a mean score of 6.16 out of 10. Some regions (Carterton; Ruapehu) saw forestry as very good for the regional economy, with mean scores above 8.0 out of 10. Others (Otorohanga; Kawerau) had a mean score of less than 4.00 out of 10. Younger respondents (<30yrs) felt forestry was not as good for the regional economy.

Forest management practices



There is a moderate level of concern about both harvesting on steep slopes, and use of chemicals and pesticides within forests, and lower level of concern about changing to different species or different forestry regimes.

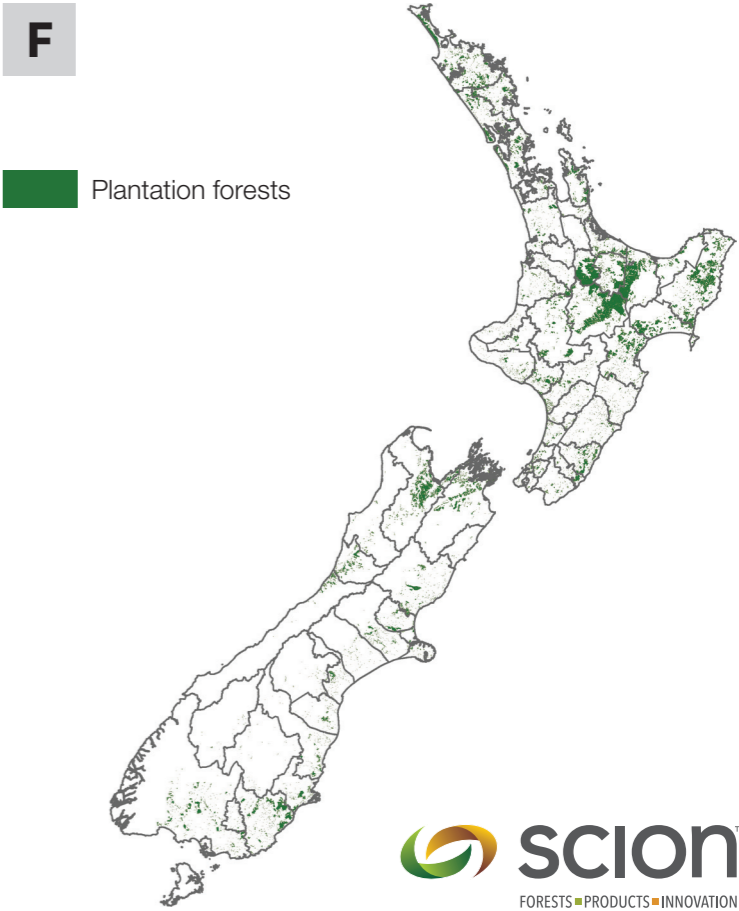
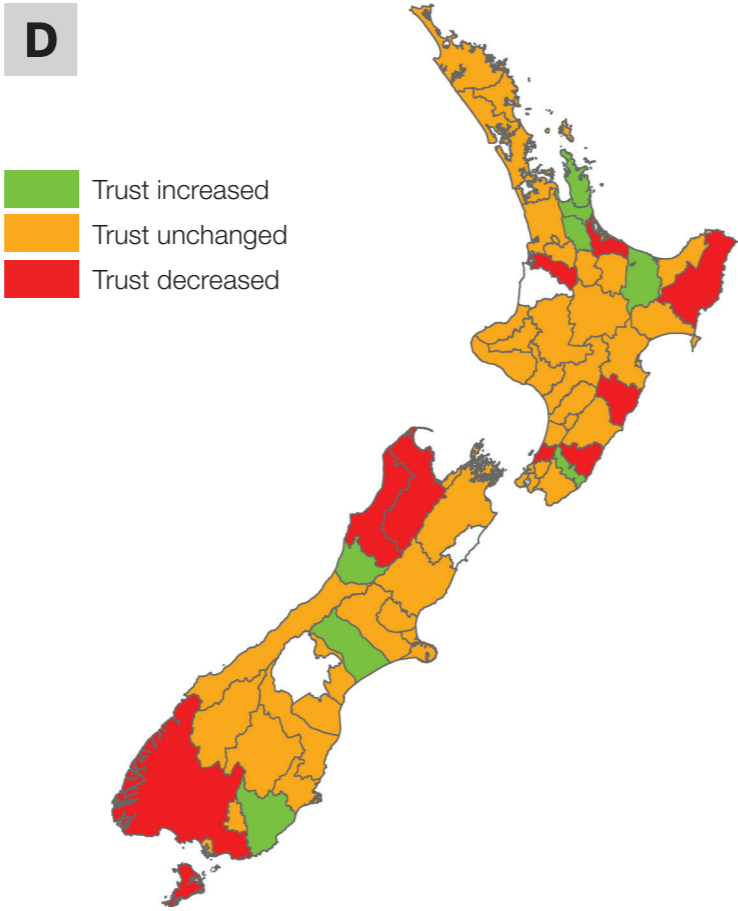
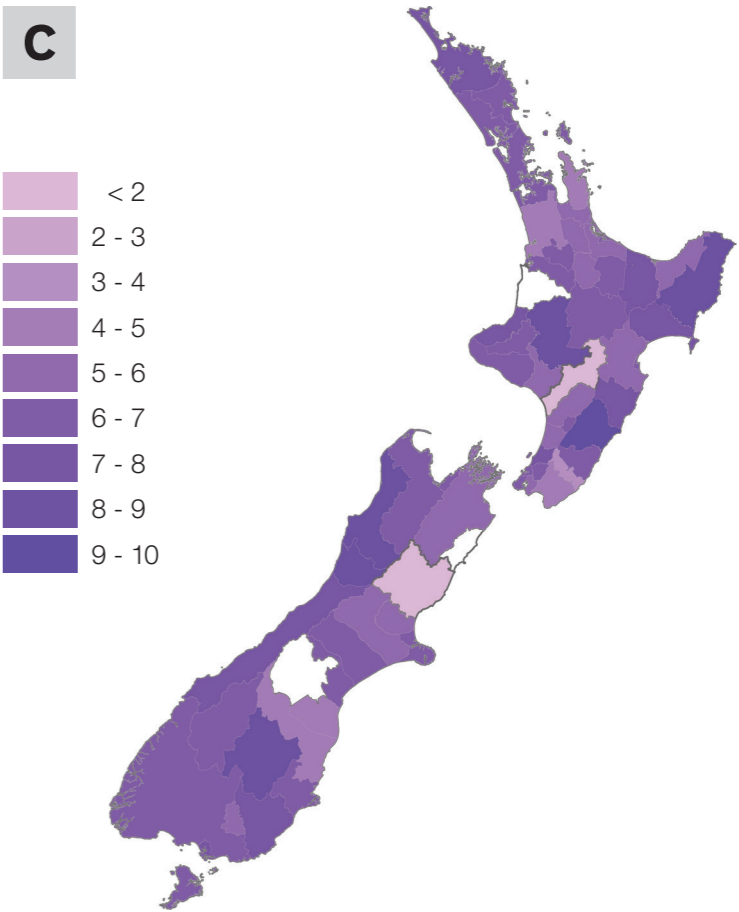
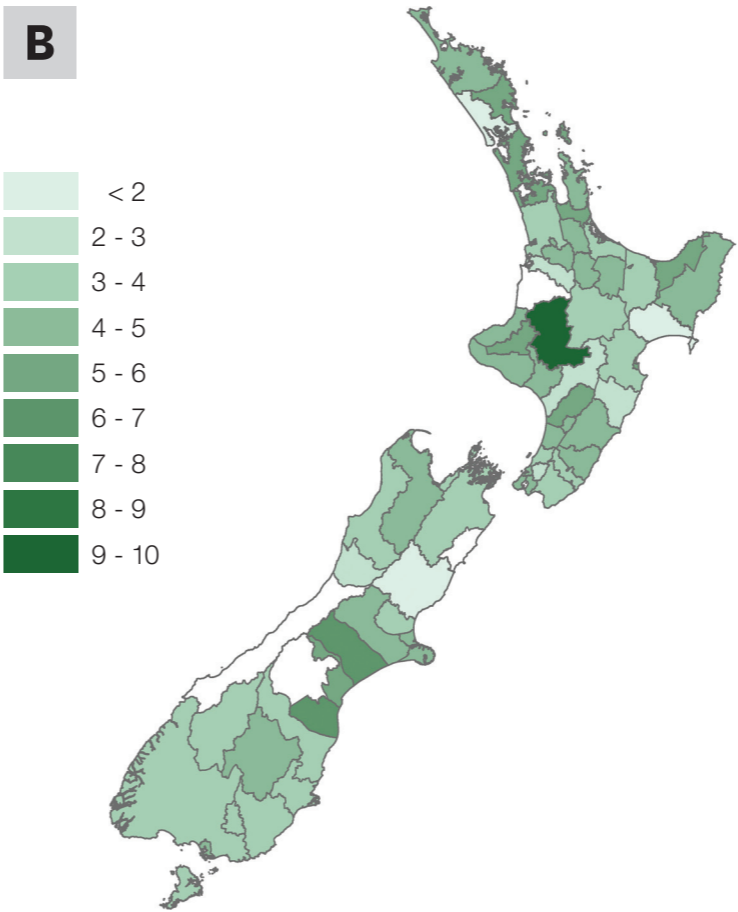
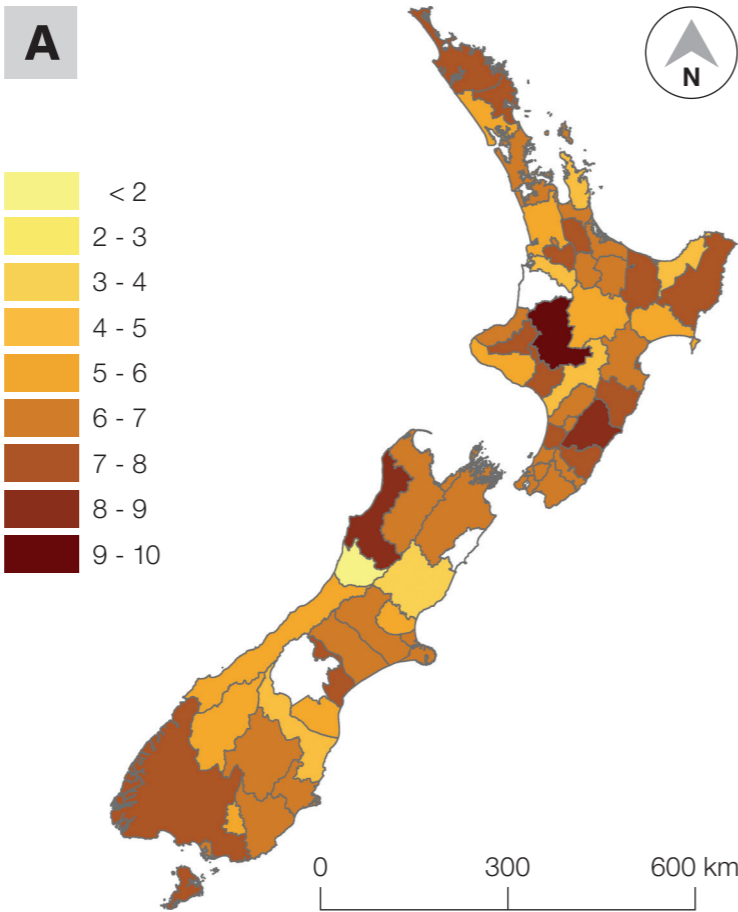
The perceived impacts and risks to the community are moderate for harvesting on steep slopes, and use of chemicals and pesticides also. Overall, there was a very low level of knowledge about what each of these forestry practices entails, and a low perception of forest industry engagement with the public about decisions around how these management practices are being undertaken and the impacts that might result in their communities.

2 Mapping perceptions of forest management and the effect on social acceptability

Regional variations in attitudes to forest management

Regional variations in attitudes to forest management practices (Map A-C), trust in the sector (Map D), and perceived benefit to the regional economy (Map E). Map F denotes where New Zealand plantation forests are grown in relation to Territorial Authority boundaries. Maps A) through E) provide mean data by responses from each Territorial Authority (no data is available for Mackenzie; Kaikoura or Waitomo due insufficient response/ single respondent). Respondents provided attitudinal scores to the following questions:

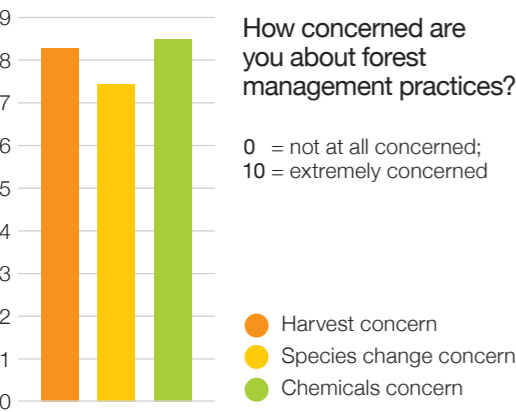
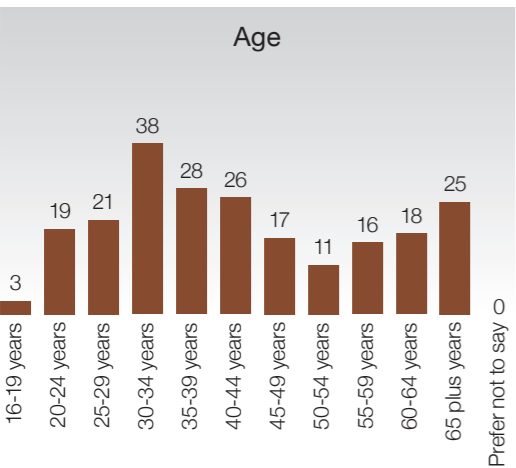
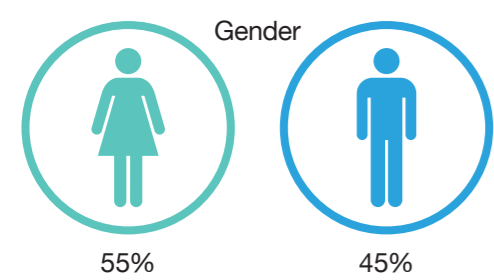
- A** How concerned are you about **harvesting on steep slopes**, where 0 = 'not at all concerned' and 10 = 'extremely concerned'?
- B** How concerned are you about **changing to different species in smaller sized forest areas**, where 0 = 'not at all concerned' and 10 = 'extremely concerned'?
- C** How concerned are you about **chemical sprays and pesticides use in forests**, where 0 = 'not at all concerned' and 10 = 'extremely concerned'?
- D** Over the past 5 years has your **level of trust in radiata pine forest management practices in New Zealand**: decreased, increased, or stayed the same?
- E** In your opinion, **do you think commercial forestry is good or bad for your regional economy**, where 1 = 'very bad for the regional economy' and 10 = 'very good for the regional economy'?



3 Mapping perceptions of forest management and the effect on social acceptability

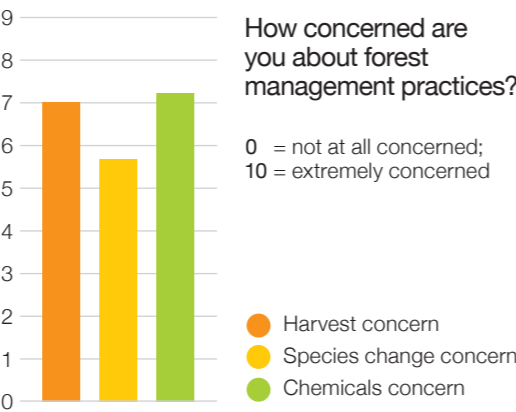
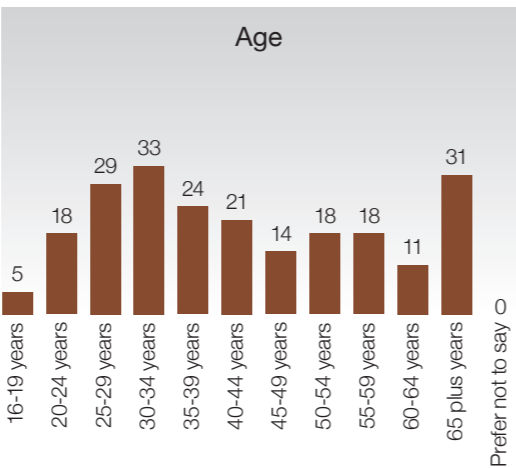
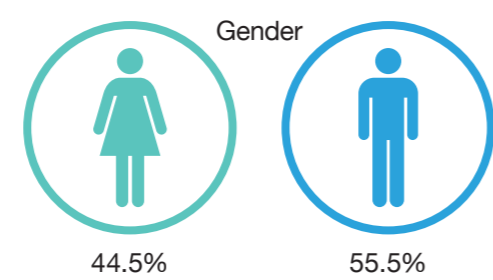
Most highly concerned

Cluster 1 are the most highly concerned about all three forest management practices, however, they also feel that forestry is good for the regional economy and have increased their level of trust in the forest sector. This group are more likely to know someone working in forestry, who might have influenced their views. Demographically, almost half of the cluster (47%) resides in the Auckland region, they are highly metropolitan, and are likely to hold higher post-graduate and tertiary level qualifications (well educated). They are also more likely to be Māori, Pacific or Asian, and live in a larger household of more than 5 persons. The cluster is skewed towards those aged 20-24 years and 30-34 years of age.



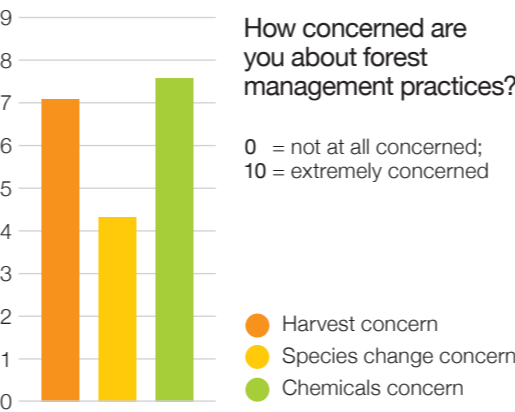
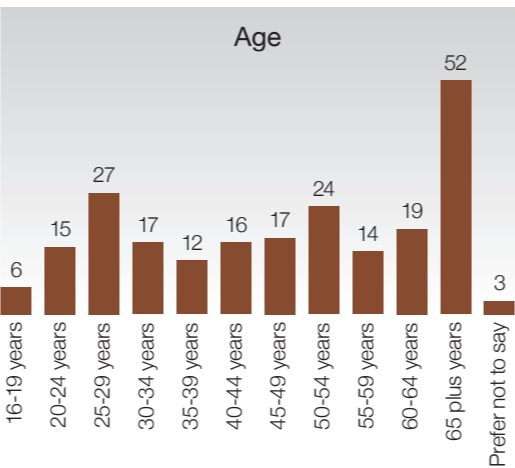
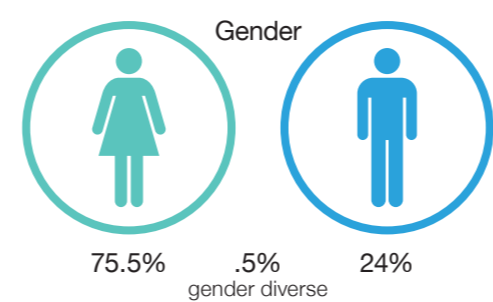
Highly concerned

Cluster 2 are the second most highly concerned about all three scenarios, and have a moderate knowledge of forest management activities. They are more likely to have decreased their level of trust in forestry. This group are also more likely to know someone in forestry, who might have influenced their views. The group are more likely to live near a pine forest and have visited a forest recently. They are more likely male and live in government-supplied rental accommodation. They are more likely to be European or Asian, aged 25-44 years of age.



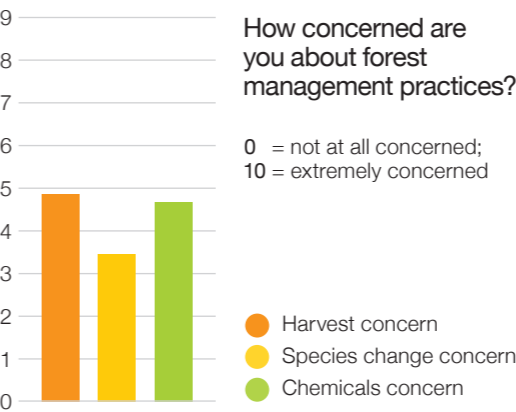
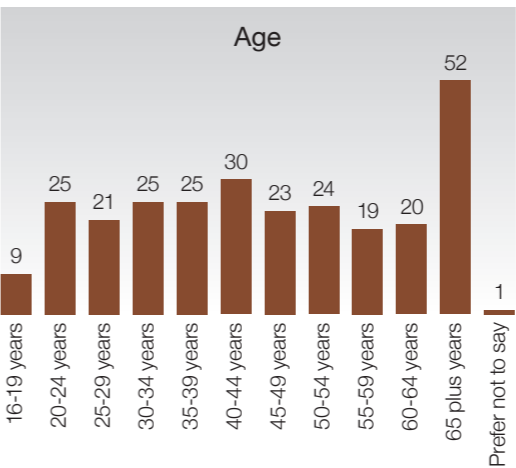
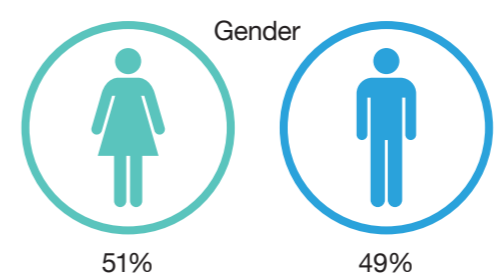
Accepting but concerned

Cluster 3 are accepting of forestry but are highly concerned about the impacts of forestry activities. They exhibit a moderate degree of concern about harvesting on steep slopes and chemical use in forest operations, but a low concern about forests changing to different species of smaller size. This group had very high concern for the risks and likely impacts from the forestry activities outlined, particularly the use of chemicals. The group are much less likely to have visited a forest recently. They are more likely to be older females, aged over 65 years of age.



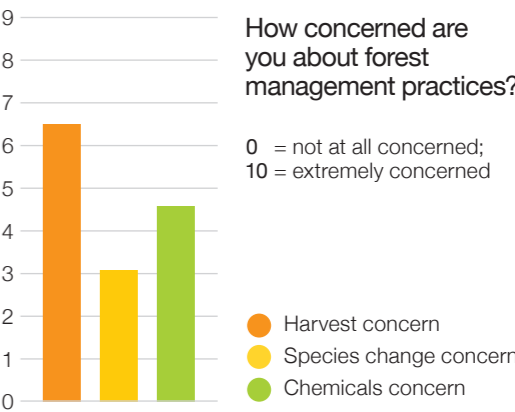
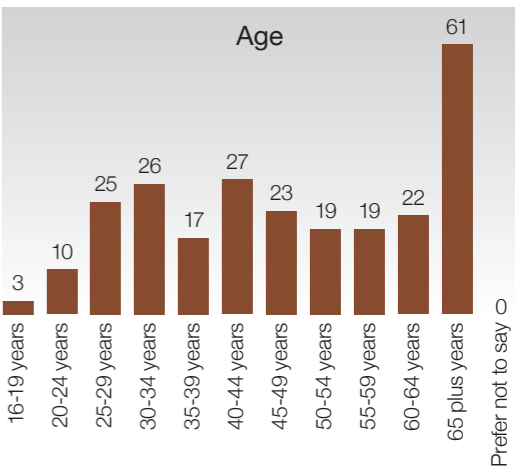
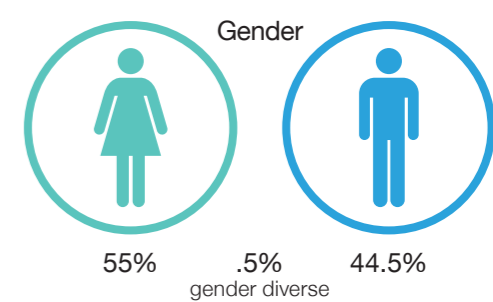
Very low concern

Cluster 4 have very low concern (lowest across all the clusters) for the various forest management practices outlined. They have no close associates working in the industry, don't reside near a pine forest, and hold very low knowledge about forestry activities. This cluster is more accepting of the need for the forestry management practices outlined and feel that forestry is good for the regional economy yet feel a low level of engagement in decision-making. They are more likely than other clusters to state that their level of trust in the sector remains at a similar level to five years ago. Demographically, they are younger males, aged 16-25 years (Millennials), living alone in rural urban townships. The cluster has a high proportion of Pakeha/European ethnicity, and a much lower than average proportion of Māori.



Less concerned

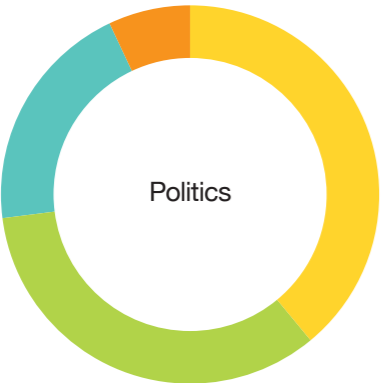
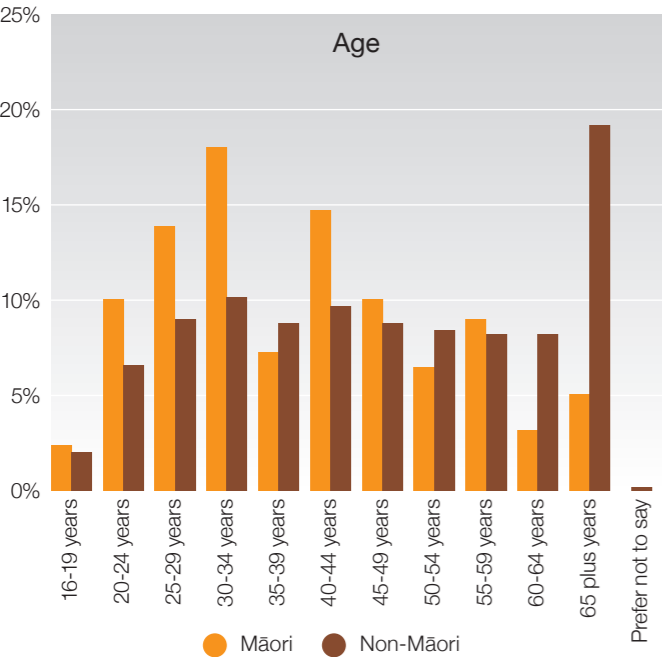
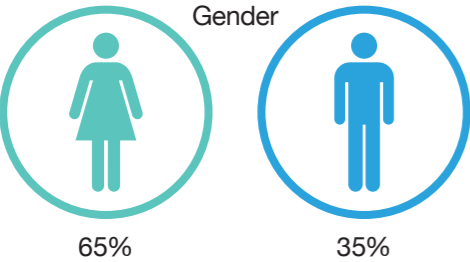
Cluster 5 are much less concerned about species change and use of chemicals than average but show a moderate level of concern for harvesting on steep slopes. They have limited knowledge about forestry activities but a higher acceptance of the need for the forestry practices outlined and feel higher engagement in decision-making around forestry management compared to other clusters. They feel forestry is very good for the regional economy. The cluster are more likely to have visited a pine forest recently, but they reside further away from the forest than those in Cluster 2, needing to drive for a while to get there. Demographically, they are older (65 years +), and reside in rural areas.



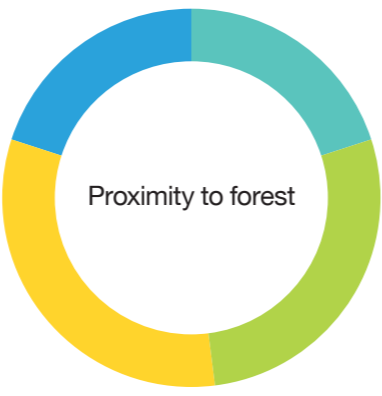
4 Mapping perceptions of forest management and the effect on social acceptability

Demographics of Māori respondents

Māori respondents were younger than the total respondent population, and had a higher proportion of females than males. Political views were similar to the total respondent population.



39% I care about ensuring a society that is equitable across all groups
34% I care about ensuring a society that is more environmentally sustainable
20% I care about ensuring a society that looks after the vulnerable
7% I care about ensuring a society that is focused mainly on economic stability



20% Within walking distance
28% Within driving distance (about 5-10 minutes)
32% Within driving distance (more than 10 minutes)
20% Don't know



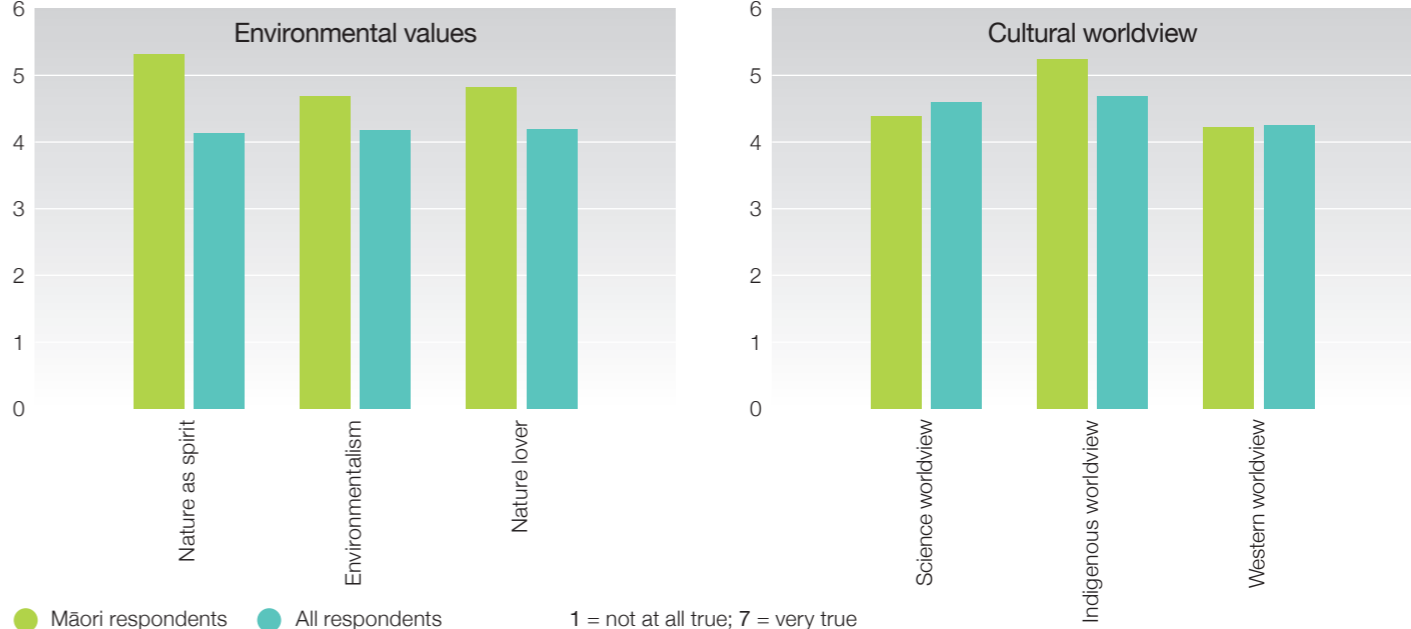
30% Almost never
39% Seldom
17% Frequently
7% Daily
7% Have not noticed them

A much higher proportion (20%) of Māori respondents live within walking distance of a forest than the total respondent population (11%). Māori more frequently visit pine forests as a result, with 24% visiting frequently or daily.

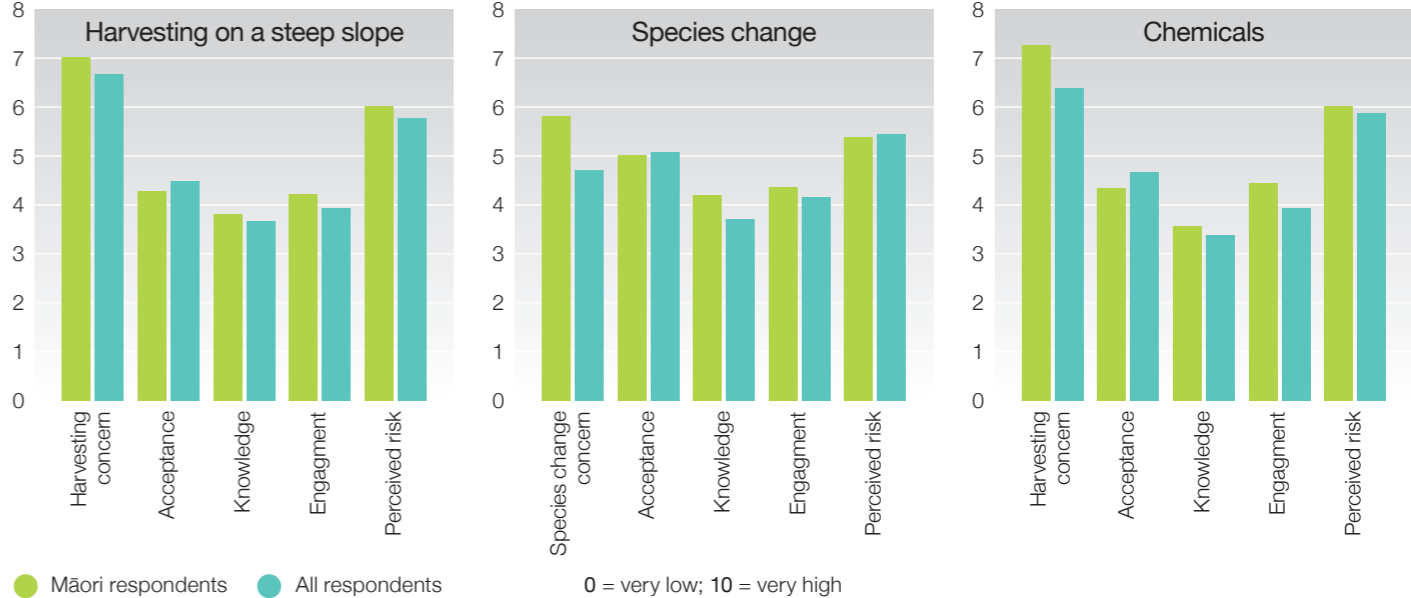


25% of Māori respondents know someone in the forestry sector, compared to 7.6% of the total respondents.

Māori viewpoints on forest management



A similar proportion of Māori to non-Māori respondents hold to Western world viewpoints, though Māori hold more strongly to both Indigenous worldviews and environmental values, particularly seeing nature as spirit.



Māori respondents have higher concern for all three forest management practices, and perceive the practice as more of a risk to their community than non-Māori. These respondents have higher levels of knowledge and feel more engaged in forestry decision-making than the average for all respondents. Māori are very highly concerned about chemical use in pine forests, which is correlated with Māori respondents having higher agreement with the forest as a traditional source of food.

Proportionately, Māori respondents are twice as likely to indicate their level of trust in radiata pine forest management practices has decreased than for all respondents as a whole.