

Attitudes to the Environment: Survey Report
Nature Conservation Margaret River Region

Earlier this year, we surveyed residents of the Margaret River region to find out their views on the region’s natural assets: what they valued and how they thought about the natural environment, what risks they saw to the natural environment and what they were prepared to do to help. The response was heartening; over 400 replied, including town and country residents and absentee landowners. Generally, the people who replied cared about the natural environment and were actively involved in seeking to protect it. In Section 1, the pie charts, tables and graphs show the characteristics of those who responded, whether on-line or via snail mail, and the views they have about the Margaret River region’s environment. In Section 2, some of the more complex attitudes toward the environment are outlined and analysed.

Section 1

1.1 Demographics

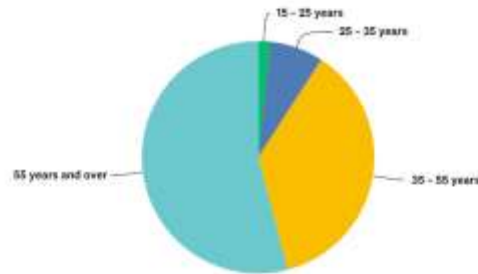
The total sample was N=423. Because some people did not respond to all the questions, the final sample was 387. Demographics are shown in Table 1 and depicted in the pie charts below.

Table 1. Demographics of Sample

Gender	% of sample	Age	
Male	43.86%	15-25 years	1.81%
Female	56.14%	25-35 years	6.99%
		35-55 years	37.05%
		55+ years	54.15%
Education		Residential Status in Margaret River	
Primary school	0.00%	More than 10 years	33.77%
Secondary school	9.82%	Less than 10 years	27.53%
TAFE or educational college	21.96%	Absentee landowner	38.70%
Undergraduate degree	34.37%		
Postgraduate degree	33.85%		
Employment		Annual Income	Household
Unemployed	2.07%	\$0-\$30 000	8.11%
Full-time employed	19.38%	\$30 000 - \$50 000	12.70%
Part-time employed	24.03%	\$50 000 - \$100 000	31.89%
Business owner	18.86%	\$100 000 - \$200 000	30.27%
Retired	29.46%	\$200 000 +	17.03%
Student	1.81%		
Parent/carer	4.39%		

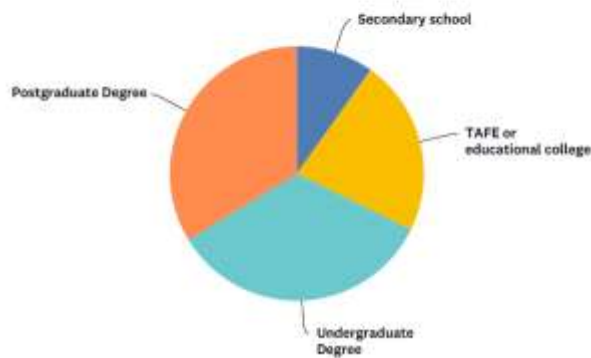
Q1 What is your age

Answered: 414 Skipped: 2



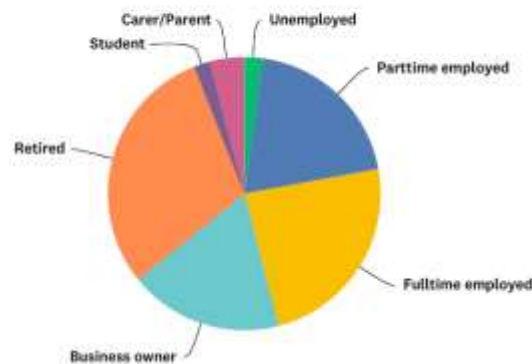
Q3 What is your highest level of education?

Answered: 415 Skipped: 1



Q4 What is your employment type?

Answered: 416 Skipped: 0



More than 50% of the sample was over 55, but the 35-55 age group was also well represented. Women were over-represented, as were those with higher educational qualifications, people on middle to high incomes and those who were retired. Business owners were well represented.

1.2. Views about the Environment

What people like about the environment and what they do.

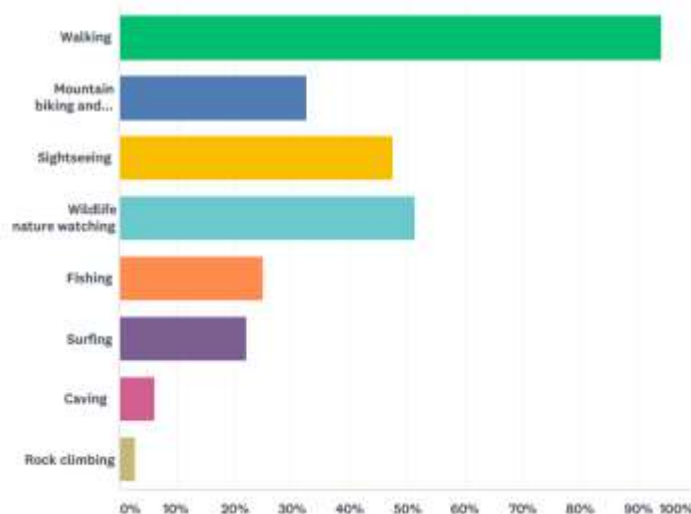
We asked people why they like to spend time in the natural environment and the top five reasons given were:

- To enjoy the scenery and wildlife
- To be somewhere I like
- For health and exercise
- For the fresh air and
- To be close to nature.

In a further question, we asked people to tell us what sort of things they typically do when they undertake nature based activities; their responses indicated that the most common reasons related to the nature experience itself – walking, sightseeing and watching wildlife (There were quite a few who enjoyed surfing, fishing and mountain biking too!).

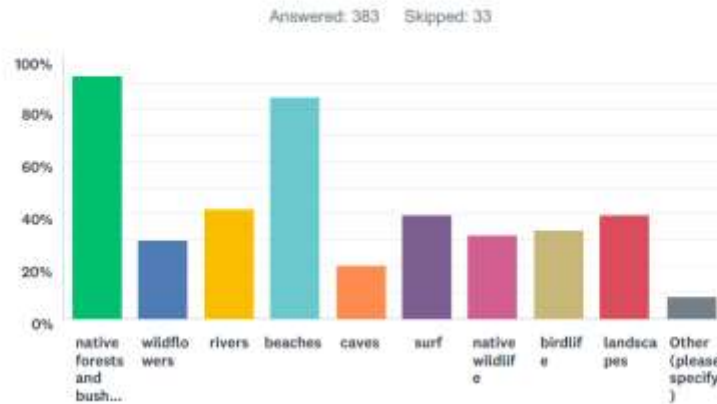
Q11 If you undertake nature based activities what type of activities do you typically do? You may select more than one option.

Answered: 379 Skipped: 37

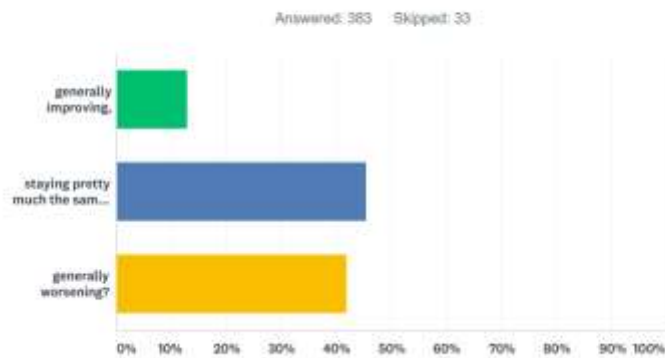


When we asked people to think specifically about the natural environment in Margaret River, it wasn't a surprise to learn that the forests and bushlands, closely followed by the beaches, were top of mind. But our respondents were clearly worried about what was happening to the environment in the Margaret River region, with over 40% saying it was generally worsening and only 12% thinking that things had got better. Most, however, thought it was staying pretty much the same.

Q12 What are the first four things that come to your mind about the natural environment in Margaret River?

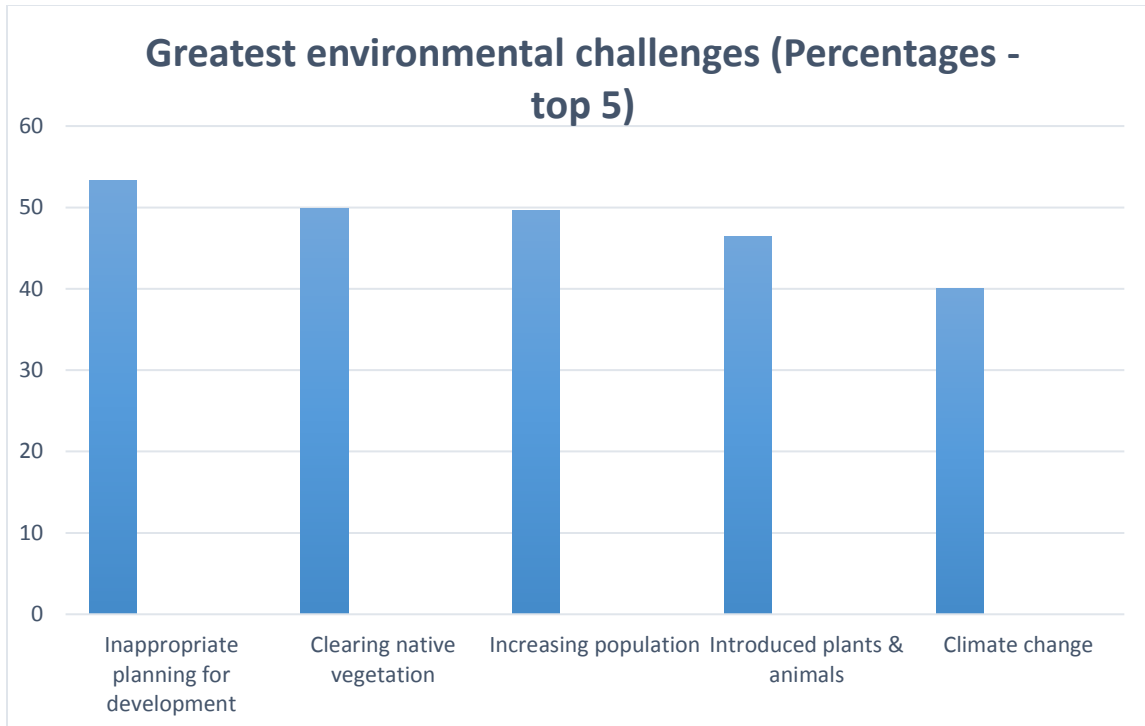


Q13 When you think about the quality of the environment in the Margaret River region just now, do you think it is:



Perceived threats to the Environment.

Generally speaking, the people who responded to the survey were interested in environmental issues and nominated inappropriate planning decisions and clearing native vegetation for housing as the two greatest challenges to the natural environment of the Margaret River region, followed closely by increasing population, introduced plants and animals and climate change.



The “word cloud” below was derived from people’s responses to an open-ended question about what people particularly cared about and wanted to see protected. The biggest lettering shows the most frequently nominated characteristics. As you can see, many relate to very similar attributes (and there was some idiosyncratic spelling of “forests”).

Q22 What particular parts of the natural environment (eg. plants, animals, landscapes or ecosystems) of the Margaret River region do you particularly care about/ want to see protected?



What people want to help them protect the environment.

When we asked what sort of information and support people would need to be more involved in nature conservation, they indicated that they wanted more presentations and workshops, environmental events, website events and e-mail/newsletters. Many were already actively engaged in environmental protection and conservation, nominating planting and bushland management, attending events and purchasing environmentally friendly products as the most common activities. A good proportion were also volunteering to support conservation, although the activities they were engaged in and wanted to develop further were varied – they included both hands on, citizen science type activities and general support for environmental events and organisations. The majority of our sample said that their principle motivation for volunteering was to care for the environment, and while they were clearly happy to contribute financially, they also thought that governments- national, state and local- should fund the conservation activities in the region.

Section 2: Attitudes to the Environment: What Are They and What Do They Predict?

2.1 Attitude measures

We measured several types of attitudes to the environment: Ductile and Elastic Worldviews, Love and Care for Nature, and Concern about Biodiversity. Ductile and Elastic Worldviews are two major dimensions defined by Price et al (2014)¹ to characterise people's views about the natural world: the idea that the environment is *elastic* captures the view that ecosystems are resilient and able to bounce back from both damage and efforts to protect them, whereas believing that the environment is *ductile* indicates a view that ecosystems are altered by human activity and unable to bounce back from damage or efforts to protect them.

The Love and Care for Nature Scale was devised by an Australian researcher to develop a reliable and valid measure of the explicitly emotional aspect of the human-nature relationship in order to examine its unique contribution to pro-environmental behaviours. They found that those people who expressed stronger levels of love and care for nature were also those who reported more frequent pro-environmental behaviours and indicated they were more willing to make personal sacrifices, such as accepting increased costs or cuts in living standards in order to protect the environment.²

Concern for Biodiversity is a set of questions derived from a UK DEFRA survey.

¹ Price, J., Walker, I. & Boschetti, F. (2014) Measuring cultural values and beliefs about environment to identify their role in climate change responses, *Journal of Environmental Psychology*, 37, 8-20.

² Perkins, H (2010) Measuring love and care for nature, *Journal of Environmental Psychology* 30(4):455-463 DOI: [10.1016/j.jenvp.2010.05.004](https://doi.org/10.1016/j.jenvp.2010.05.004)

Our initial analysis looked at these four variables: Ductile environmental worldview (M = 3.98, SD = 0.58), Elastic environmental worldview (M = 1.84, SD = 0.57), Love and Care for Nature (M = 4.04, SD = 0.65), and concern for biodiversity (M = 4.27, SD = 0.74). The correlations between scales are shown in Table 2. All correlations – the relationships-were significant.

Ductile and Elastic worldview were negatively correlated, as might be expected, since they are opposite in nature. Ductile worldview was also moderately correlated with Concern for Biodiversity and Love and Care for Nature; those people who envisage the environment as more easily damaged are also those who express strong positive feelings about the natural world and are concerned about the need to protect biodiversity.

Table 2. Correlations and Internal Consistency

	Ductile	Elastic	Lovenature	Biodiversity
Ductile Worldview	-	0.561	0.400	0.326
Elastic Worldview	-0.561	-	-0.375	-0.380
Love & care for nature	0.400	-	0.375	0.304
Concern for Biodiversity	0.326	-	0.380	0.304

*all correlations significant to p<0.001

2.2 Demographic predictors of attitudes

Figures 1 & 2 shows that the attitudes did not differ much between people on the basis of age, gender, education, or residential status. For those interested, the error bars are standard deviations – measuring the variability among people in that group.

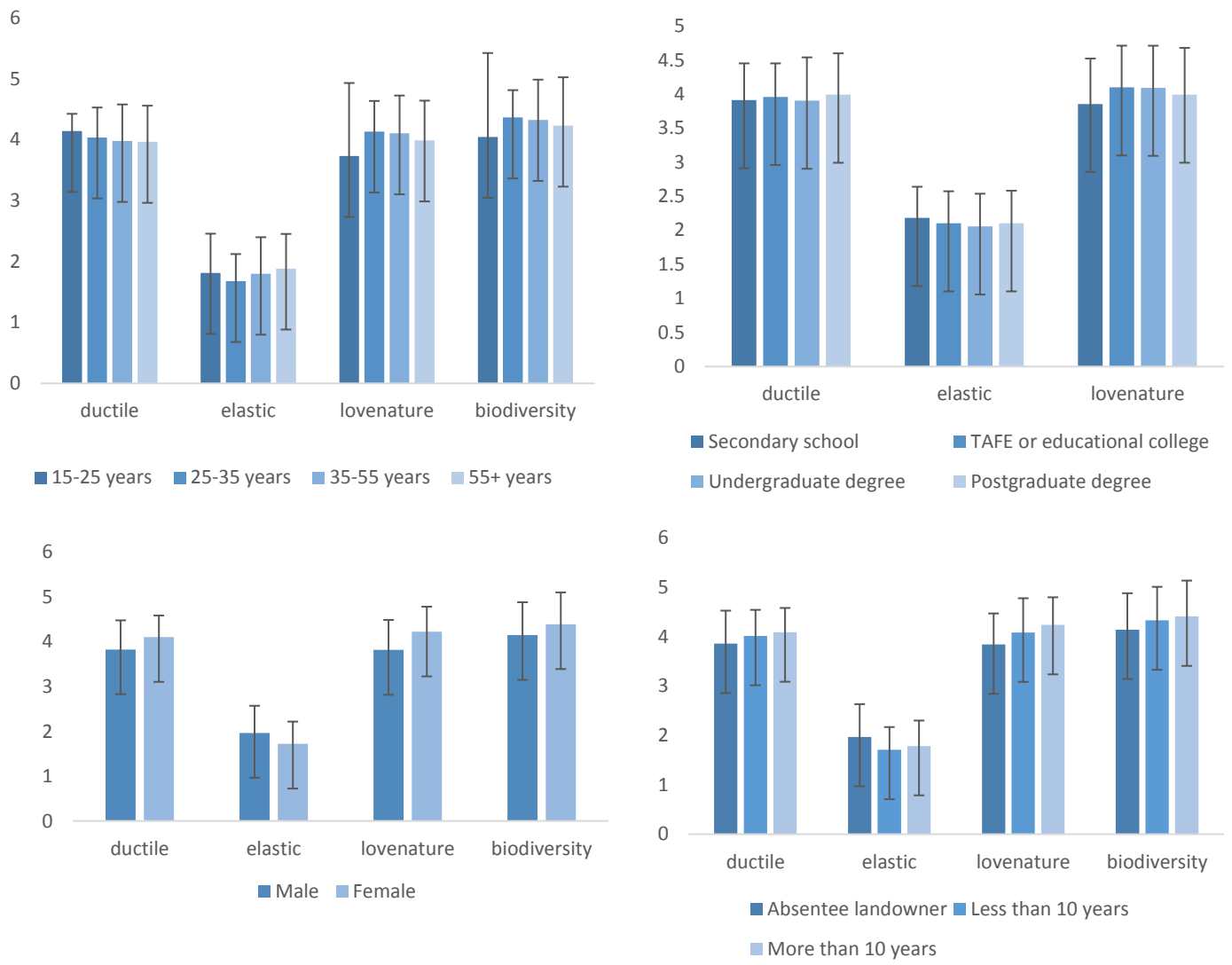


Figure 1. Top-left, mean and Standard Deviation by age; bottom-left, by gender; top-right, by education; and bottom-right, by residential status.

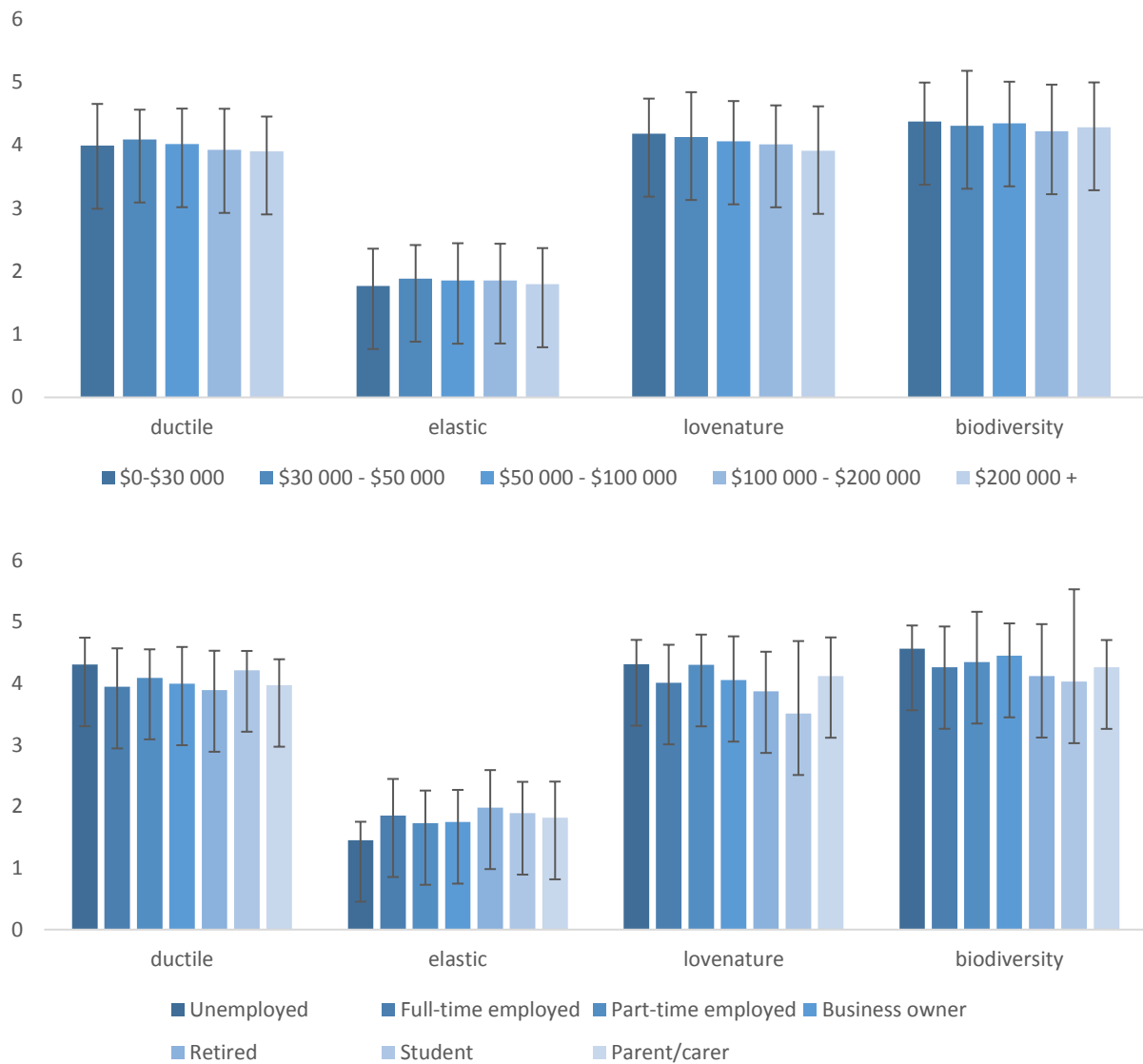


Figure 2. Top, variable means and SDs by income; bottom, by employment status

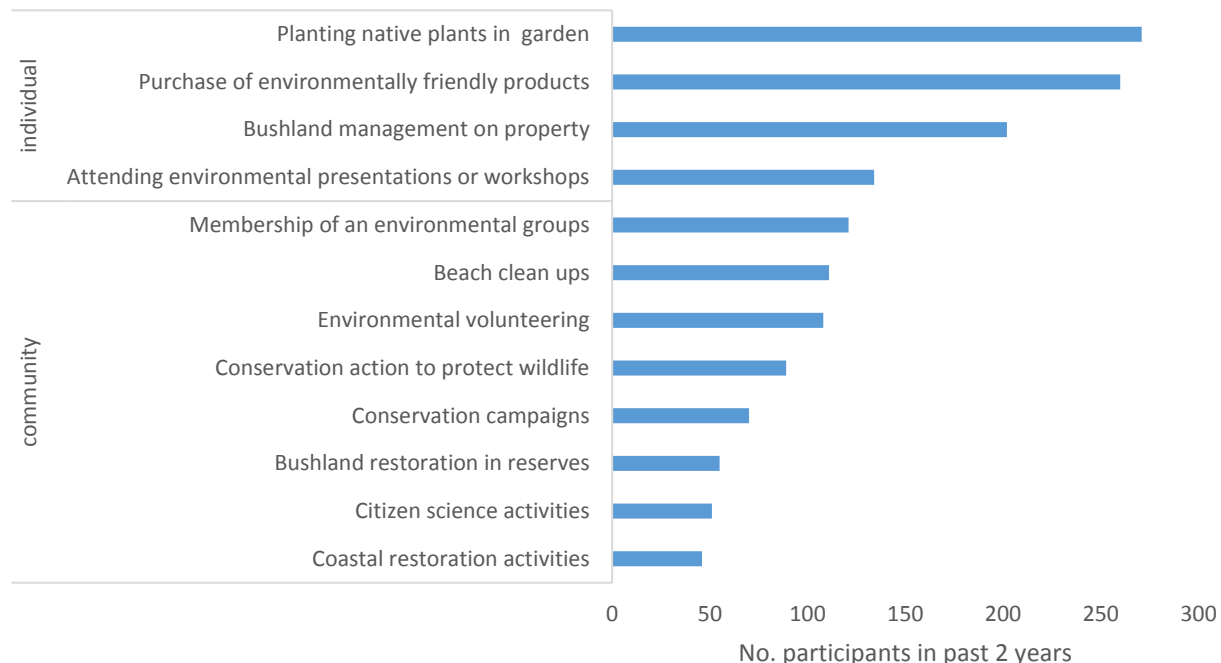


Figure 3. Conservation activities reported by participants in the past two years

2.4 Analysis – Predicting participation in conservation activities

When we used the statistical technique, regression, to attempt to identify what best predicted who engaged in the most conservation activities over the past two years, we found that the strongest predictor of total conservation behaviours was residential status in the Margaret River region, with longer length of residence predicting higher levels.

Holding an “elastic” worldview was also a predictor of total conservation activities. High scores on “love and care for nature” and concern about biodiversity also predicted participation. Having a postgraduate education was a minor contributor.

When we divided total conservation actions into two categories – individual and community activities – and conducted further regression analyses, we found that the best predictors for *individual* conservation activities were mostly income level variables - people in higher income brackets were significantly more likely to be report participating in an individual conservation activity in the past 2 years than those on lower incomes, not surprising given that several of the actions required fairly substantial capital investment. Postgraduate education (compared to secondary school education), love and care for nature, and elastic worldview were marginal predictors.

Interestingly, group-level conservation behaviours were predicted by entirely different variables, for instance, income played no discernible role in predicting participation in community level

conservation actions. People from all walks of life and income levels took part. Absentee landowners were less likely than residents of greater than 10 years to participate in group-level conservation behaviours, probably due to reduced opportunities. Again people's attitudes were important: love and care for nature (positive), and concern about biodiversity (positive), and elastic worldview (negative) were significant.

2.4. Analysis: Predicting Volunteer behaviour

Figure 6 compares the number of people who reported current participation in volunteer activities, compared to the number of people who expressed interest in volunteering in the future. Activities that participants currently engage in the most were: introduced species removal, beach and waterway clean-ups, and hands-on environmental restoration. Activities that participants expressed the most interest in volunteering in include: vegetation and wildlife surveys, beach and waterway clean-ups, and hands-on environmental restoration.

Least popular activities for both categories were those that require specialist knowledge (pro-bono accounting or legal advice), and did not directly involve contact with nature (office work, communications).

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The responses are shown in Figure 4 comparing the number of people who reported current participation in volunteer activities with the number of people who expressed interest in volunteering in the future.

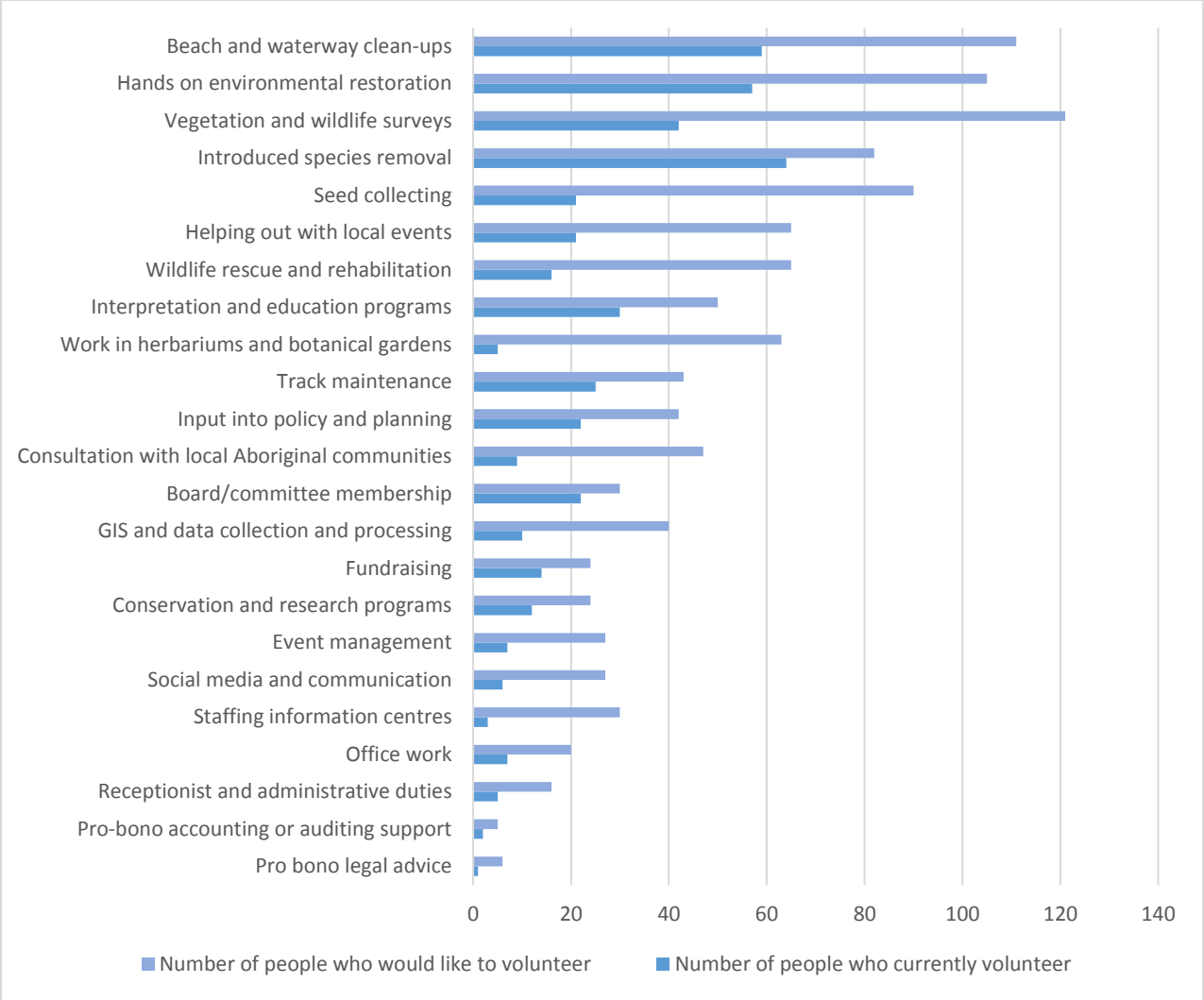


Figure 4: People’s current volunteering and preferences for future volunteering

Conclusion

Overall, the results were encouraging: the majority of Margaret River residents and landowners who responded clearly value the natural environment in the region - in all its manifestations-, are committed to protecting it, and are willing to take part in conservation activities to assist. Their values and attitudes generally reflect a caring and thoughtful attitude to conservation, with an awareness that we are confronting real threats to the natural values of the region.