LP VALUES QUESTIONNAIRE RESULTS

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LP QUESTIONNAIRE RESULTS

INTRODUCTION

The following results are drawn from responses to a questionnaire. The administration of the questionnaire and resulting analysis are exploratory in nature. No formal statistical analysis had been performed, however, basic descriptive statistics are used to draw conclusions from the data. The intent of this study is to narrow down the large body of human values-related information so that future studies and examinations of LP's stakeholders and their values can be more focused. Future projects may include the physical mapping of key human values; the determination or forest characteristics necessary for the protection of those values; and the incorporation of this knowledge into computer models that can be used to predict the effects of alternative harvesting scenarios on the integrity and presence of the values on LPs license area.

METHODOLOGY

A questionnaire was developed for LP Canada Ltd. by KBM Forestry Consultants Inc. in the fall of 2003 (Appendix ---). This questionnaire borrowed questions from several previously conducted studies[1,2,3] and was approved for distribution by LP staff on September 19. Copies of the questionnaire were colour-coded according to the targeted stakeholder group and distributed to individuals and groups on LPs mailing lists (Table ---). An on-line version of the questionnaire was posted on September 26th. This version requested respondents to identify their stakeholder group from a drop-down menu. The groups in the drop-down menu corresponded with the groups represented by each different colour of hard copy questionnaire that was distributed. Advertisements were placed in the Star and Times and …on …. informing the general public about the opportunity to complete a questionnaire.

Table 1. Targeted questionnaire distribution numbers.

Stakeholder Group	Number of Surveys Distributed	Number of Completed Surveys	Response Rate (%)
General Public	?	17	n/a
Loggers	60	15	25.0
Aboriginal	60	1	1.7
Highschool Students	90	64	71.1
Trappers/Outfitters	187	32	17.1
Environmental Groups	105	11	10.5

[1] Macfarlane, B. L. and P. C. Boxall. 1999. Forest values and management preferences of two stakeholder groups in the Foothills Model Forest. Natural Resources Canada, Northern Forestry Centre Information Report NOR-X-364. 17 pp.
[2] Lavallee, L. and D. Tindall. ????. Survey of Human Values Associated with Forests. University of British Columbia.
[3] Manitoba Conservation. 2000. Ecosystem and Forest Values Survey. PRA Inc.

Recreational Groups	192	42	21.9
LP Employees	170	45	26.5
Government	225	47	20.9
RM's/Towns	260	17	6.5
Other	0	13	n/a
Total	**1349**	**304**	**n/a**

Questionnaires were mailed by respondents directly to KBM where they were entered into a database via the online questionnaire form. The deadline for returning surveys was set at October 15th and then extended until October 31st.

A total of 305 surveys were returned of which 10 were completed on-line. This gives a hard copy survey response rate of approximately 26%. Preliminary raw data was presented to LP staff on November 7th. It was decided that three separate analyses would occur. One that included all stakeholder groups except the high school students, another that would consist of high school students only, and a third that would isolate those indicating that they are of aboriginal heritage. The following descriptive analysis and results have been produced by KBM with guidance from LP.

PART A - DEMOGRAPHIC PROFILE OF RESPONDENTS

The following graphs outline the results of Part A of the questionnaire. Part A asked a series of personal questions from which socio-economic, demographic-related information was gathered. For the purposes of the following analysis, high school respondents have been removed from the sample leaving a sample size of 241. Of 241 respondents, 0.4% identified themselves as Aboriginal, 2.5% did not chose a stakeholder group, 2.1% identified themselves as students (other than high school), 1.2% chose the "other" category, 4.6% are environmental groups, 6.2%are loggers, 7.1% are the general public, 7.1% are municipal representatives, 13.3% are trappers or outfitters, 17.4% are members of recreational groups, 18.7% are LP employees, and 19.5% are government employees (Figure 1).

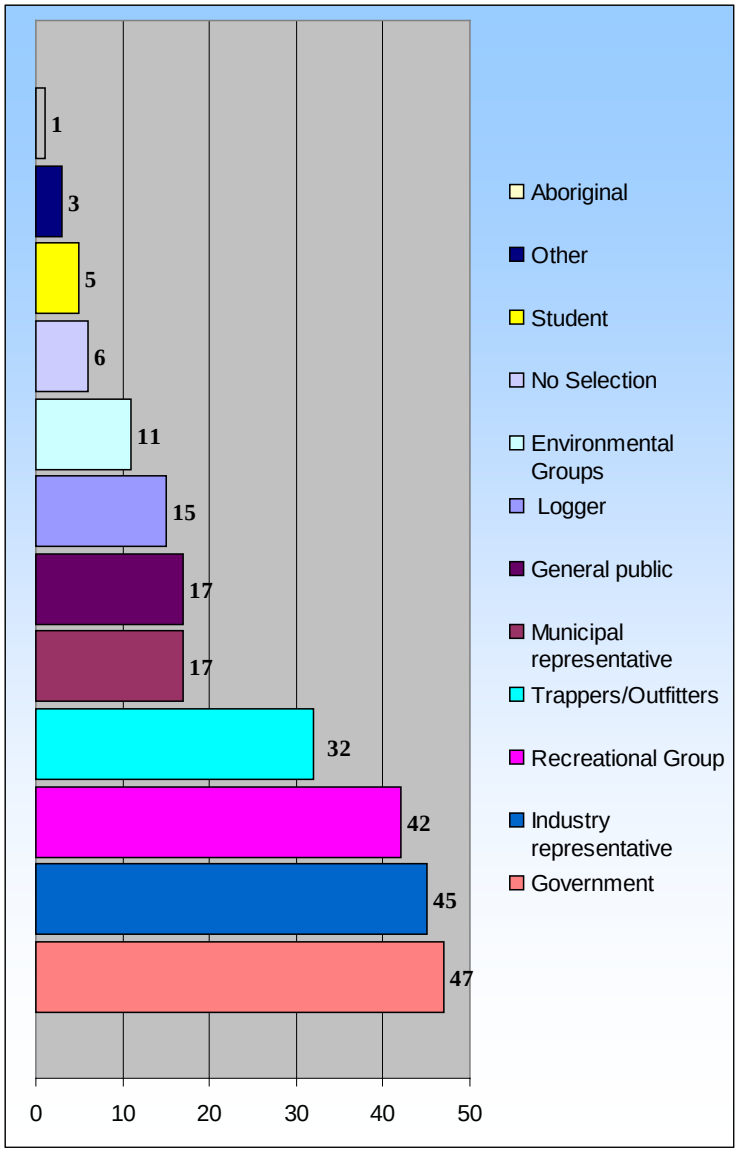


Figure 1. Breakdown of respondents by stakeholder group.

A breakdown of the respondents by gender reveals 53 females and 178 males completed questionnaires along with 10 respondents who chose not to identify their gender (Figure 2).

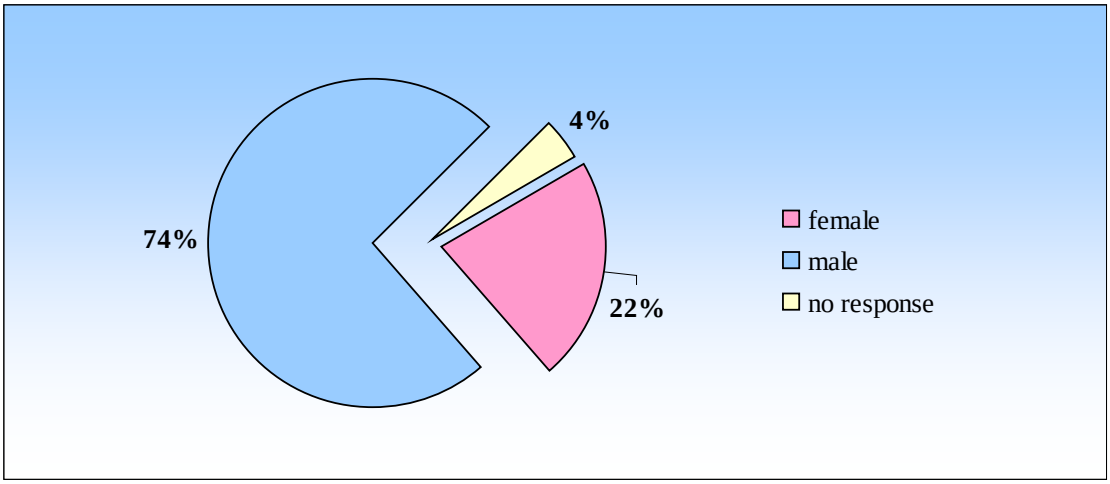


Figure 2. Gender breakdown of respondents.

The age distribution of respondents shows the greatest response from those in the 41-50 year old category (Figure 3). The only respondents under 20 years of age are the high school students whose analysis will be performed separately.

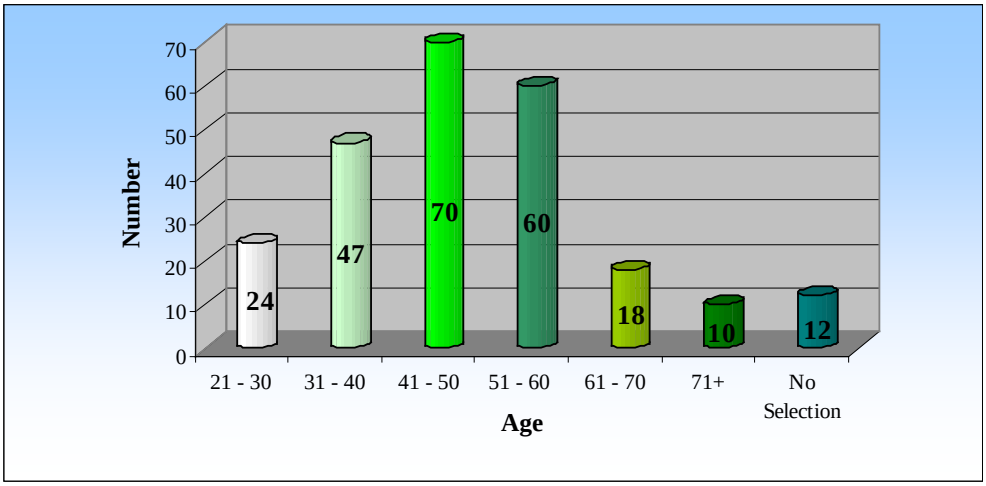


Figure 3. Age distribution of respondents.

The questionnaire asked respondents to identify their home town. For the purposes of subsequent analysis, LP was interested in delineating between those respondents who live within the Swan Valley, within LPs Forest Management License (FML) area, and outside of LPs FML area. As such, respondent's hometowns were classified into the above three categories and it was discovered that 45.6% of respondents are from the Swan Valley, 19.1% are from within the FML area, 29.0% are from outside the FML, and 6.2% did not provide a response (Figure 4).

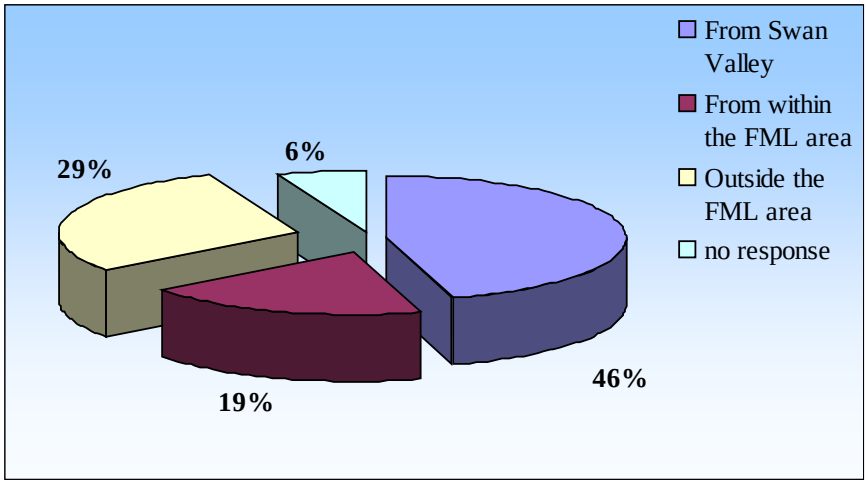


Figure 4. Respondents' place of residence.

Respondents were asked their ethnic origin. Responses varied considerably as to the level of detail (country, continent, region, etc.), and as such were classified into five categories. (Some respondents denoted two (or more) ethnicities. In these cases, they were counted twice. For this section, therefore, sample size may not be 241.) European ancestry accounted for 63.5% of the sample, 15.4% identified themselves as Canadian, 7.1% are Aboriginal (First Nations and/or Metis), 2.9% are classified as "other", and 0.4% is an Other North America (besides Canadian) (Figure 5).

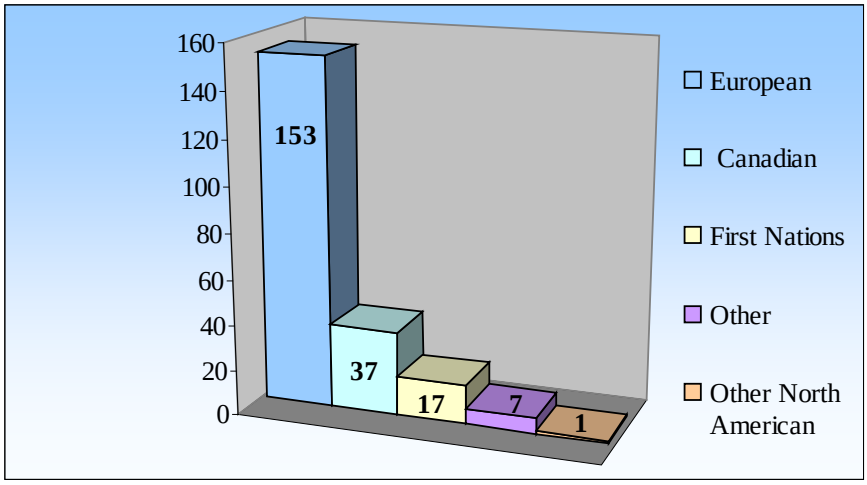


Figure 5. Broad ethnic origin of respondents.

From the above re-classification, we can also describe more specifically the European component of the sample. Europeans were further broken down into 15 categories (Figure 6).

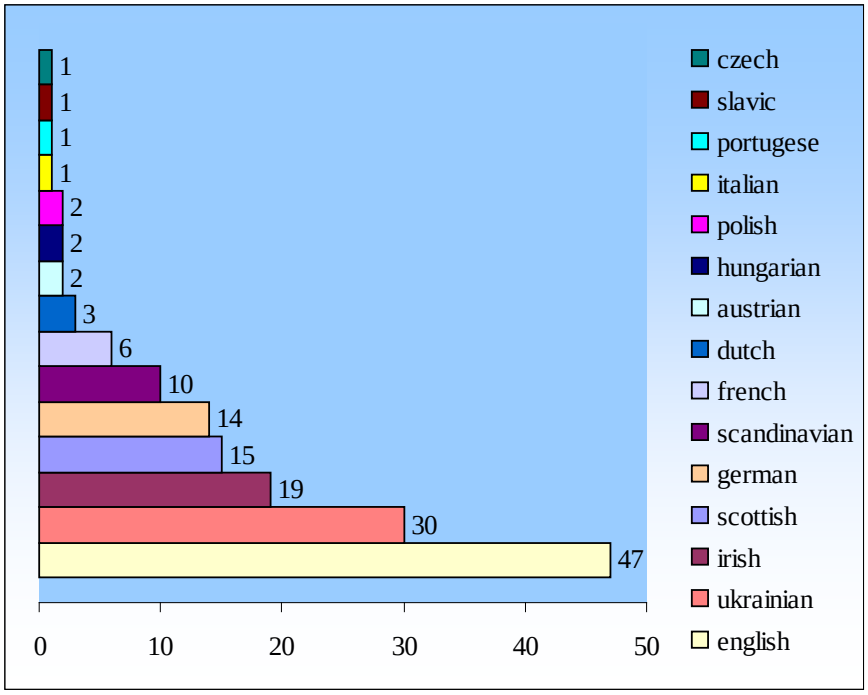


Figure 6. Break-down of the European component of the sample.

Respondents were also asked to identify how much they work (Figure 7) and for what type of organization (Figure 8).

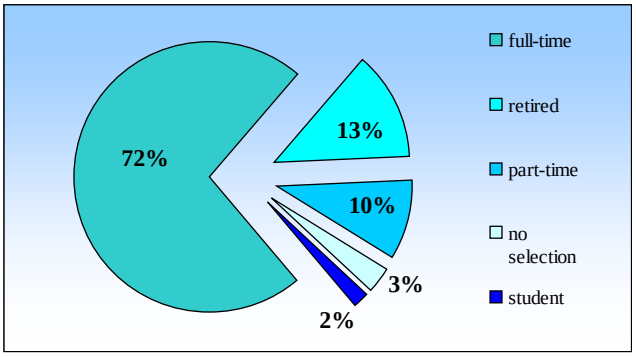


Figure 7. Respondents' work levels.

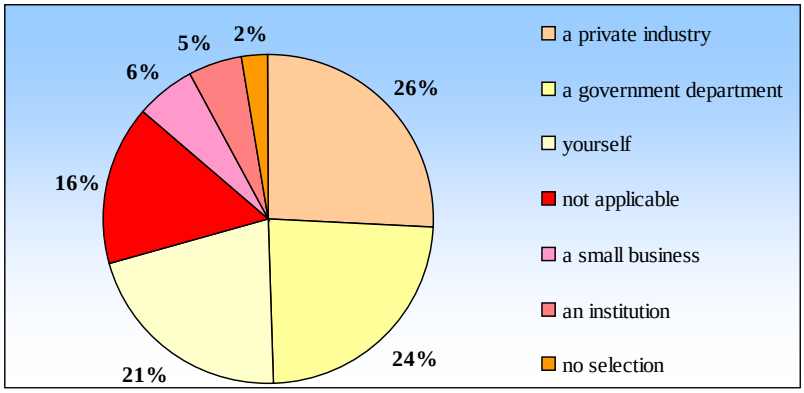


Figure 8. Organizations for which respondents work.

Respondents were asked to identify their total household income (Figure 9) and their level of education (Figure 10).

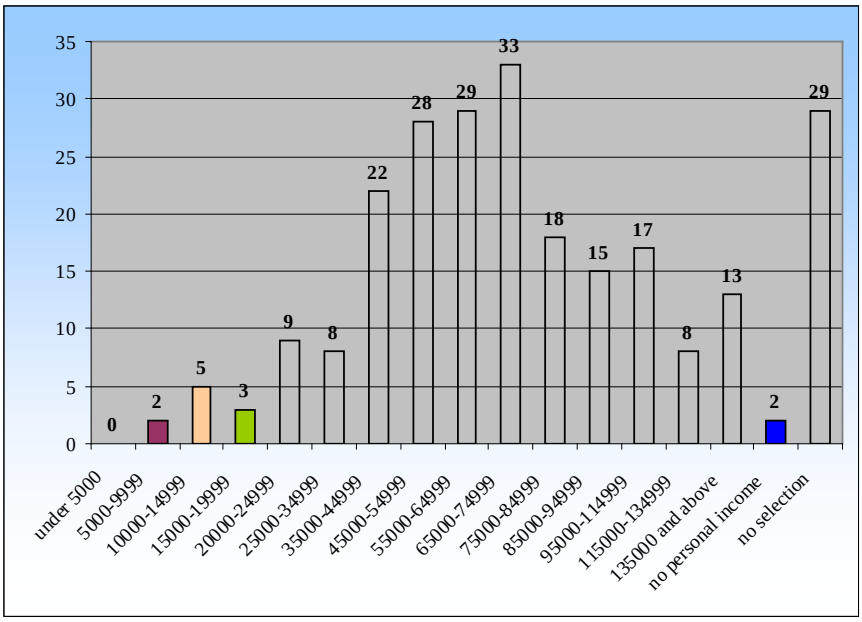


Figure 9. Total household income of respondents.

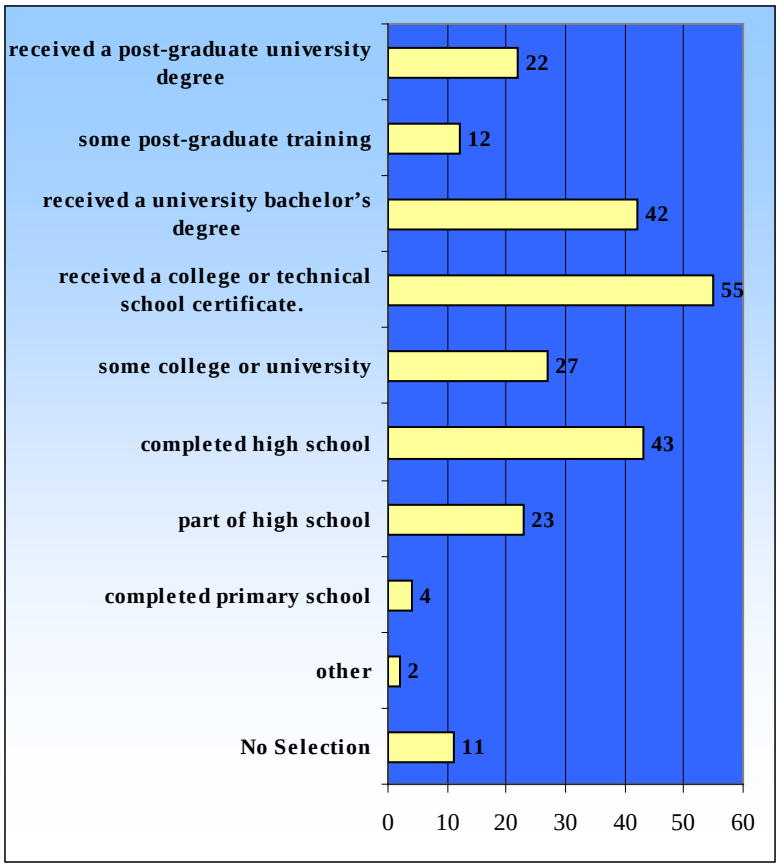


Figure 10. Level of education of respondents.

Respondents were also asked to reveal the number of children they have that are under 18 (Figure 11), 19 and over (Figure 12), and 19 and over still living at home (Figure 13). From these responses it was also possible to calculate respondents' total number of children

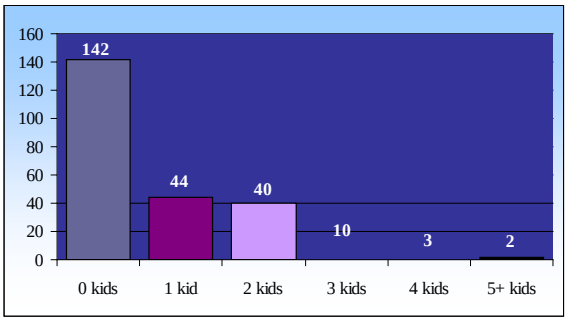


Figure 11. Children 18 and under.

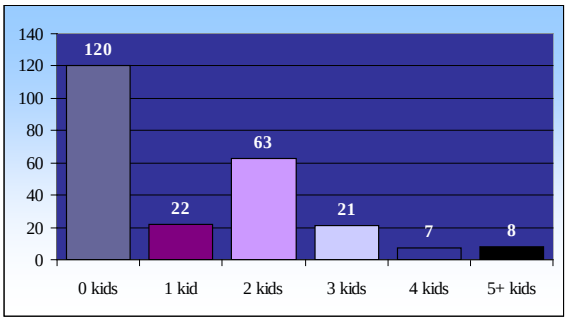


Figure 12. Children 19 and over.

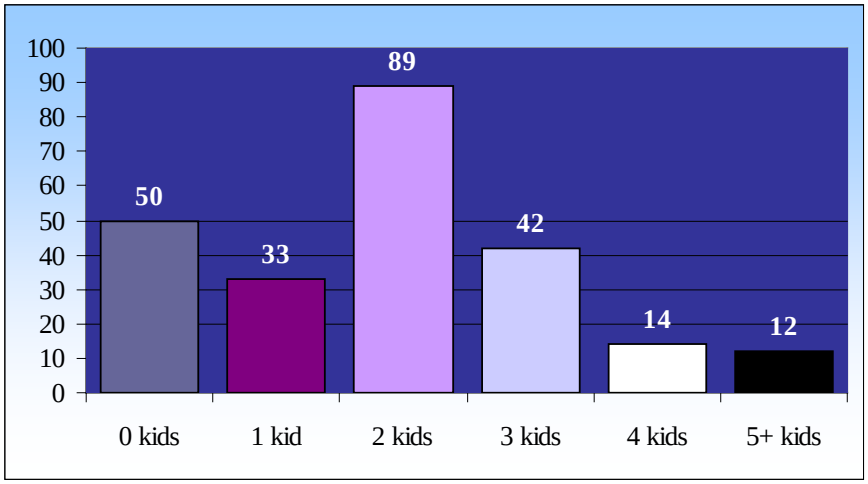


Figure 13. Total number of children.

PART B – VALUES STATEMENTS

The questions in Part B were analyzed several ways. First, the number of respondents that classified the statement as "extremely important" was tallied. Second, the two top categories of "extremely important" and "very important" were grouped and tallied. A third analysis used respondent's rankings of their top three values. A tally was made of how many respondents ranked each statement as number one. A fourth analysis calculated the median for each statement.

Statements were then ranked according to the results of each analysis method to determine the "most important" statements. (The aboriginal stakeholder group was removed from the stakeholder comparative analysis as their responses will be analyzed separately).

Part B questions were also analyzed according to stakeholder group. For this analysis, the number of respondents from each group that classified the statement as "extremely important" was tallied. The median was then calculated for each statement for each stakeholder group (Tables 2-13).

Table 2. Question 1. Community Values.

Statement	"Extremely Important"	Rank	High Importance (sum of "Very" and "Extremely Important"	Rank	Number of #1 ranks	Rank	Median
Continued existence of small cities/towns across the province.	135	1	209	2	55	1	4
Low unemployment in communities and the province.	122	2	210	1	37	2	4
Community social stability (absence of large population fluctuations).	44	5	171	5	3	5	3
Community economic diversity.	77	4	197	3	16	4	3
Equity between resource communities and large cities in the province.	43	6	153	6	1	6	3
Outdoor recreation opportunities close to communities.	106	3	192	4	28	3	3

Table 3. Question 1 –detailed.

Statement	Logger	Median	Municipality	Median	Env. Group	Median	General Public	Median	Government	Median	Industry	Median	Recreational	Median	Student	Median	Trapper/Outfitter	Median
Continued existence of small cities/towns across the province.	7	3	14	4	3	3	10	4	20	3	26	4	28	4		3	20	4
Low unemployment in communities and the province.	8	4	10	4	6	4	4	3	19	3	27	4	27	4	1	3	17	4
Community social stability (absence of large population fluctuations).	1	3	4	3	3	3	1	3	9	3	6	3	7	3	1	3	8	3
Community economic diversity.	4	3	4	3	4	3	9	4	13	3	11	3	14	3	2	3	12	3
Equity between resource communities and large cities in the province.	3	3	4	3	2	3	4	3	4	3	3	3	9	3	2	3	10	3
Outdoor recreation opportunities close to communities.	2	3	11	4	3	2	9	4	15	4	21	3	21	4	3	3	16	4

Table 4. Question 2. Ecological/Environmental Values.

Statement	"Extremely Important"	Rank	High Importance (sum of "Very" and "Extremely Important"	Rank	Number of #1 ranks	Rank	Median
Continued existence of a variety of ecosystems across the province.	130	7	216	7	24	2	4
Healthy populations of wildlife and fish species.	172	4	228	3	23	3	4
Maintaining the diversity of plants, animals and other living organisms.	136	6	215	8	13	6	4
Clean water.	210	1	236	1	77	1	4
Clean air.	203	2	232	2	20	4	4
Healthy soils.	174	3	226	4	6	8	4
Wilderness landscapes (large, un-logged, natural areas).	110	9	191	10	17	5	3
The functioning of natural ecosystems.	127	8	220	6	10	7	4
The habitat needs of wildlife.	145	5	223	5	5	9	4
Growing trees and tending plantations.	76	11	169	11	5	9	3
Forest pests and diseases.	48	12	162	12	1	12	3
The effects of different timber harvesting practices.	102	10	200	9	5	9	3

Table 5. Question 2 – detailed.

Statement	Logger	Median	Municipality	Median	Env. Group	Median	General Public	Median	Government	Median	Industry	Median	Recreational	Median	Student	Median	Trapper/Outfitter	Median
Continued existence of a variety of ecosystems across the province.	3	3	9	4	11	4	13	4	26	4	19	3	3	4	3	4	16	4
Healthy populations of wildlife and fish species.	8	4	13	4	11	4	13	4	32	4	27	4	5	4	4	4	28	4
Maintaining the diversity of plants, animals and other living organisms.	5	3	9	4	11	4	13	4	27	4	18	3	5	3	4	4	21	4
Clean water.	11	4	14	4	11	4	17	4	39	4	38	4	6	4	4	4	27	4
Clean air.	10	4	13	4	11	4	14	4	37	4	38	4	6	4	4	4	27	4
Healthy soils.	8	4	11	4	11	4	13	4	30	4	30	4	5	4	4	4	26	4
Wilderness landscapes (large, un-logged, natural areas).	2	2	7	3	10	4	15	4	12	3	19	3	6	3	3	4	18	4
The functioning of natural ecosystems.	4	3	9	4	11	4	12	4	24	4	20	3	4	4	3	4	15	3.5
The habitat needs of wildlife.	5	3	11	4	11	4	13	4	18	3	22	3.5	5	4	3	4	27	4
Growing trees and tending plantations.	7	3	8	3.5	2	2	5	3	8	3	13	3	4	3	0	3	12	3
Forest pests and diseases.	3	3	1	3		2	5	3	7	3	8	3	0	3	1	3	10	3
The effects of different timber harvesting practices.	3	3	7	3	4	3	11	4	12	3	17	3	3	4	3	4	17	4

Table 6. Question 3. Employment and Work Values.

Statement	"Extremely Important"	Rank	High Importance (sum of "Very" and "Extremely Important"	Rank	Number of #1 ranks	Rank	Median
Physically challenging work.	12	8	85	9	3	8	2
High paying work.	41	5	137	7	11	3	3
Job security.	117	2	200	2	53	2	3
Opportunity for promotion.	38	6	152	6	3	8	3
Workplace where there is a sense of community.	72	3	196	3	10	4	3
Intellectually challenging work.	70	4	183	4	7	6	3
Working outdoors.	37	7	112	8	9	5	2
Work that requires a range of skills.	41	5	167	5	4	7	3
Meaningful work (work that gives you a sense of purpose).	124	1	210	1	55	1	4

Table 7. Question 3 – detailed.

Statement	Logger	Median	Municipality	Median	Env. Group	Median	General Public	Median	Government	Median	Industry	Median	Recreational	Median	Student	Median	Trapper/Outfitter	Median
Physically challenging work.	1	3	0	2	0	1	0	2	2	2	2	2	0	2	0	2	5	2
High paying work.	2	3	1	3	1	2	3	2	5	2	18	3	0	3	1	3	5	2.5
Job security.	7	3	6	3	3	2	6	3	25	4	29	4	2	3	2	3	15	3
Opportunity for promotion.	2	2	1	3		3	3	3	6	3	10	3	0	3	2	3	4	3
Workplace where there is a sense of community.	1	3	5	3	4	3	9	4	13	3	11	3	1	3	2	3	8	3
Intellectually challenging work.	2	3	5	3	8	4	4	3	16	3	12	3	2	3	3	4	7	3
Working outdoors.	2	2	0	2	1	2	3	2	7	3	4	2	0	2	0	2	13	3
Work that requires a range of skills.	1	2	2	3	2	3	5	3	5	3	10	3	1	3	1	3	7	3
Meaningful work (work that gives you a sense of purpose).	6	3	10	4	9	4	11	4	26	4	16	3	4	3	5	4	13	3

Table 8. Question 4. Recreation / Outdoor Experience Values.

Statement	"Extremely Important"	Rank	High Importance (sum of "Very" and "Extremely Important"	Rank	Number of #1 ranks	Rank	Median
Outdoor recreation in wilderness areas (no logging activities).	92	1	153	4	47	1	3
Outdoor recreation in natural, non-wilderness settings (areas with logging activity).	32	5	118	5	13	4	3
Outdoor recreation in developed natural environments (e.g. campgrounds, lakes or beaches with facilities).	71	2	165	2	16	2	3
Outdoor recreation in highly developed outdoor environments (e.g. golfing).	21	6	107	6	3	7	2
Knowing and identifying natural phenomena (e.g.birds, plants).	4	7	21	7	12	5	3
Having a sense of place (getting to know and feel at home in a particular natural environment).	59	3	169	1	15	3	3
Having a sense of competence in the woods.	63	4	162	3	11	6	3

Table 9. Question 4 – detailed.

Statement	Logger	Median	Municipality	Median	Env. Group	Median	General Public	Median	Government	Median	Industry	Median	Recreational	Median	Student	Median	Trapper/Outfitter	Median
Outdoor recreation in wilderness areas (no logging activities).	0	2	7	3	10	4	12	4	14	3	13	3	6	3	3	4	14	3
Outdoor recreation in natural, non-wilderness settings (areas with logging activity).	3	2	2	3	1	2	0	2	8	3	4	2	3	2	0	3	2	2
Outdoor recreation in developed natural environments (e.g. campgrounds, lakes or beaches with facilities).	3	2	7	3	1	2	4	3	7	3	15	3	4	3	2	3	8	3
Outdoor recreation in highly developed outdoor environments (e.g. golfing).	1	2	3	3	0	1	1	2	2	2	5	2	1	2	1	2	1	2
Knowing and identifying natural phenomena (e.g.birds, plants).	1	3	1	3	5	3	8	3	7	3	5	2	1	3	1	3	4	3
Having a sense of place (getting to know and feel at home in a particular natural environment).	3	2	3	3	3	4	7	3	14	3	5	3	0	3	2	3	10	3
Having a sense of competence in the woods.	4	3	4	3	2	3	7	3	10	3	9	3	2	3	0	3	12	3

Table 10. Question 5. Cultural/Spiritual Values.

Statement	"Extremely Important"	Rank	High Importance (sum of "Very" and "Extremely Important"	Rank	Number of #1 ranks	Rank	Median
First Nations traditional beliefs and way of life.	21	10	70	8	4	6	2
Metis traditional beliefs and way of life.	18	11	59	10	2	7	2
First Nations sacred sites and artifacts.	42	6	134	6	1	8	3
Metis sacred sites and artifacts.	33	7	101	7	1	8	2
Rights of First Nations to resources on their traditional territories.	27	8	68	9	1	8	2
Rights of Metis to resources on their traditional territories.	24	9	51	12	1	8	2
Canadian historical sites and artifacts.	70	5	182	5	12	3	3
Being able to provide for yourself and your family.	172	1	221	1	105	1	4
Having close friends and family.	152	2	218	2	34	2	4
Being wealthy.	14	12	59	10	1	8	2
Spending time outdoors in natural places.	131	3	206	3	12	3	4
Contributing to the well-being of other people, your community, or society.	107	4	206	3	8	5	3

Table 11. Question 5 – detailed.

Statement	Logger	Median	Municipality	Median	Env. Group	Median	General Public	Median	Government	Median	Industry	Median	Recreational	Median	Student	Median	Trapper/Outfitter	Median
First Nations traditional beliefs and way of life.	0	2	0	2	3	3	5	3	5	2	5	2	0	2	1	3	1	2
Metis traditional beliefs and way of life.	0	2	0	2	3	3	4	2	2	2	5	2	0	2	0	3	3	2
First Nations sacred sites and artifacts.	5	2	1	3	6	4	8	3	8	3	4	2	1	2	1	3	3	2
Metis sacred sites and artifacts.	3	2	1	2.5	6	4	6	3	6	3	4	2	1	2	1	3	3	2
Rights of First Nations to resources on their traditional territories.	0	2	0	2	7	4	6	3	2	2	3	2	0	2	2	3	4	2
Rights of Metis to resources on their traditional territories.	0	1	0	2	7	4	4	2.5	1	2	4	2	0	1	2	3	4	1
Canadian historical sites and artifacts.	4	3	4	3	5	3.5	7	3	11	3	8	3	3	3	2	3	14	3.5
Being able to provide for yourself and your family.	10	4	10	4	7	4	10	4	34	4	34	4	5	4	4	4	24	4
Having close friends and family.	8	4	10	4	7	4	10	4	30	4	29	4	6	4	4	4	18	4
Being wealthy.	0	2	0	2	0	1.5	2	2	1	2	5	2	0	2	0	2	3	2
Spending time outdoors in natural places.	2	2	7	3	9	4	11	4	22	3	23	4	4	4	4	4	19	4
Contributing to the well-being of other people, your community, or society.	4	3	7	3	8	4	7	3	21	3	16	3	2	4	4	4	14	3

Table 12. Question 6. Aesthetics / Visual Values.

Statement	"Extremely Important"	Rank	High Importance (sum of "Very" and "Extremely Important"	Rank	Number of #1 ranks	Rank	Median
The beauty of natural areas surrounding your community.	121	1	217	1	58	1	4
The beauty along major transportation routes.	54	4	166	4	6	4	3
The beauty of natural areas in which people recreate.	84	3	200	3	20	3	3
The beauty of your community	98	2	202	2	24	2	3

Table 13. Question 6 – detailed.

Statement	Logger	Median	Municipality	Median	Env. Group	Median	General Public	Median	Government	Median	Industry	Median	Recreational	Median	Student	Median	Trapper/Outfitter	Median
The beauty of natural areas surrounding your community.	4	3	11	4	6	4	12	4	19	3	21	3	4	4	3	4	15	3
The beauty along major transportation routes.	2	3	5	3	4	3	7	3	3	3	2	3	5	3	1	3	11	3
The beauty of natural areas in which people recreate.	2	3	5	3	7	4	9	4	12	3	9	3	4	3	3	3	12	3
The beauty of your community	3	3	10	4	8	4	8	3	11	3	16	3	3	4	4	4	11	3

Summary of Top Ranking (Most Important) Statements

* denotes that the statement's median was 4 ("extremely important")

Community Values
*Continued existence of small cities/towns across the province.
*Low unemployment in communities and the province.
Outdoor recreation opportunities close to communities.
Ecological / Environmental Values
*Clean water.
*Clean air.
*Healthy populations of wildlife and fish species.
Employment and Work Values
*Meaningful work (work that gives you a sense of purpose).
Job security.
Workplace where there is a sense of community.
Recreation / Outdoor Experience Values
Outdoor recreation in wilderness areas (no logging activities).
Outdoor recreation in developed natural environments (e.g. campgrounds, lakes or beaches with facilities).
Having a sense of place (getting to know and feel at home in a particular natural environment).
Cultural / Spiritual Values
*Being able to provide for yourself and your family.
*Having close friends and family.
*Spending time outdoors in natural places.
Aesthetics / Visual Values
*The beauty of natural areas surrounding your community.
The beauty of your community
The beauty of natural areas in which people recreate.

Summary of Low Ranking (Least Important) Statements

Community Values
Equity between resource communities and large cities in the province.
Community social stability (absence of large population fluctuations).
Community economic diversity.
Ecological / Environmental Values
Forest pests and diseases.
The effects of different timber harvesting practices.
Growing trees and tending plantations.
Employment and Work Values
Physically challenging work.
Working outdoors.
Opportunity for promotion.
Recreation / Outdoor Experience Values
Knowing and identifying natural phenomena (e.g.birds, plants).
Outdoor recreation in highly developed outdoor environments (e.g. golfing).
Outdoor recreation in natural, non-wilderness settings (areas with logging activity).
Cultural / Spiritual Values
Being wealthy.
Rights of Metis to resources on their traditional territories.
Metis traditional beliefs and way of life.
Aesthetics / Visual Values
The beauty along major transportation routes.

PART B – ACTIVITIES

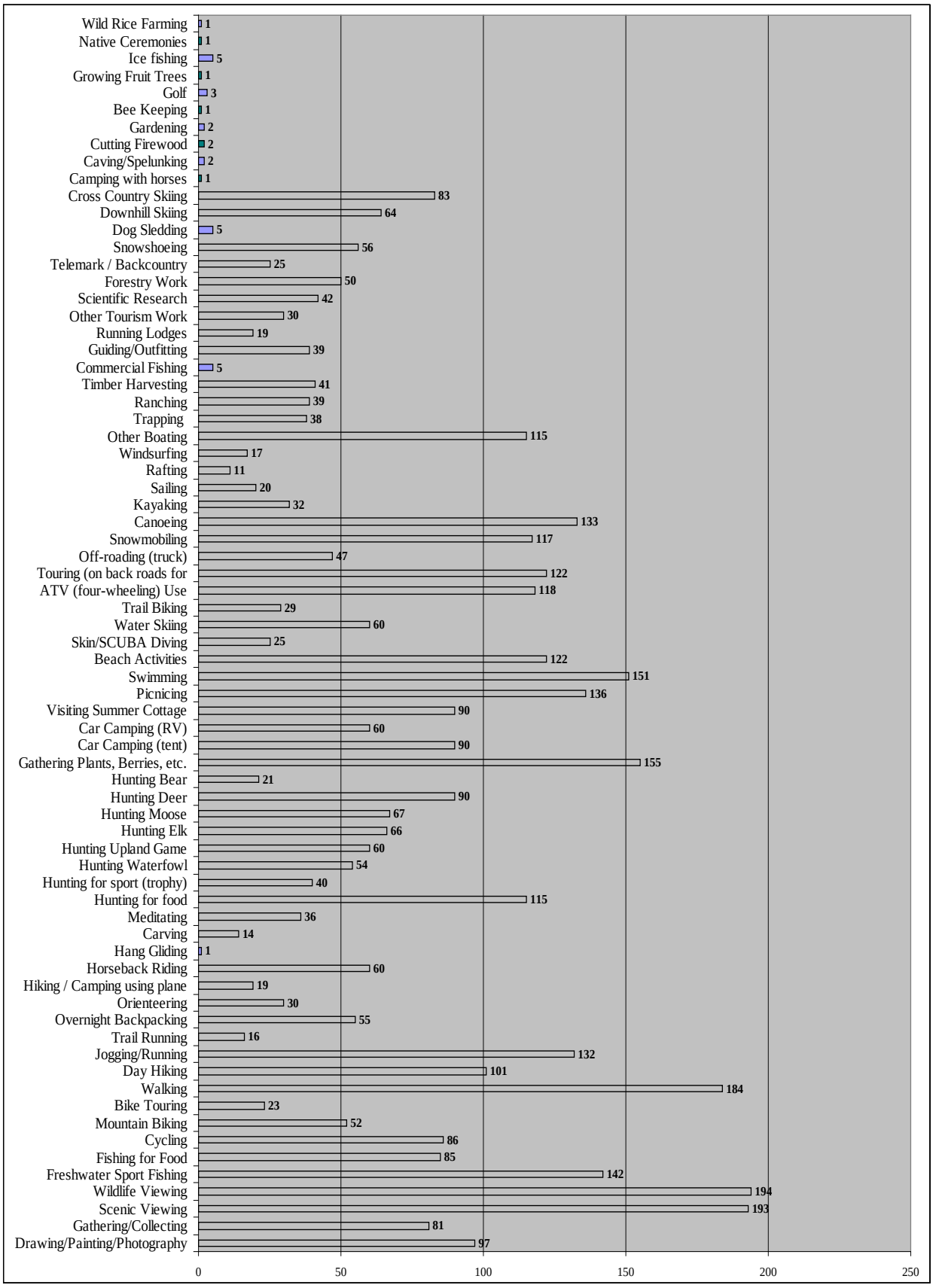
The end of Part B asked respondents to identify outdoor activities in which they participate. The following are the results of that question.

Table 14. The top twenty activities.

Activity	Number of Respondents
1. Wildlife Viewing	194
2. Scenic Viewing	193
3. Walking	184
4. Gathering plants, berries, etc.	155
5. Swimming	151
6. Freshwater sport fishing	142
7. Picnicing	136
8. Canoeing	133
9. Jogging/Running	132
10. Touring (on back roads for scenery)	122
10. Beach activities	122

Activity	Number of Respondents
12. ATV (four-wheeling) use	118
13. Snowmobiling	117
14. Hunting for food	115
14. Other boating	115
16. Day Hiking	101
17. Drawing/Painting/Photography	97
18. Visiting Summer Cottage	90
19. Car Camping (tent)	90
20. Hunting Deer	90

The following graphs show the number of respondents that take part in each activity.


Wild Rice Farming 1
Native Ceremonies 1
Ice fishing 5
Growing Fruit Trees 1
Golf 3
Bee Keeping 1
Gardening 2
Cutting Firewood 2
Caving/Spelunking 2
Camping with horses 1
Cross Country Skiing 83
Downhill Skiing 64
Dog Sledding 5
Snowshoeing 56
Telemark / Backcountry 25
Forestry Work 50
Scientific Research 42
Other Tourism Work 30
Running Lodges 19
Guiding/Outfitting 39
Commercial Fishing 5
Timber Harvesting 41
Ranching 39
Trapping 38
Other Boating 115
Windsurfing 17
Rafting 11
Sailing 20
Kayaking 32
Canoeing 133
Snowmobiling 117
Off-roading (truck) 47
Touring (on back roads for 122
ATV (four-wheeling) Use 118
Trail Biking 29
Water Skiing 60
Skin/SCUBA Diving 25
Beach Activities 122
Swimming 151
Picnicing 136
Visiting Summer Cottage 90
Car Camping (RV) 60
Car Camping (tent) 90
Gathering Plants, Berries, etc. 155
Hunting Bear 21
Hunting Deer 90
Hunting Moose 67
Hunting Elk 66
Hunting Upland Game 60
Hunting Waterfowl 54
Hunting for sport (trophy) 40
Hunting for food 115
Meditating 36
Carving 14
Hang Gliding 1
Horseback Riding 60
Hiking / Camping using plane 19
Orienteering 30
Overnight Backpacking 55
Trail Running 16
Jogging/Running 132
Day Hiking 101
Walking 184
Bike Touring 23
Mountain Biking 52
Cycling 86
Fishing for Food 85
Freshwater Sport Fishing 142
Wildlife Viewing 194
Scenic Viewing 193
Gathering/Collecting 81
Drawing/Painting/Photography 97
0
50
100
150
200
250

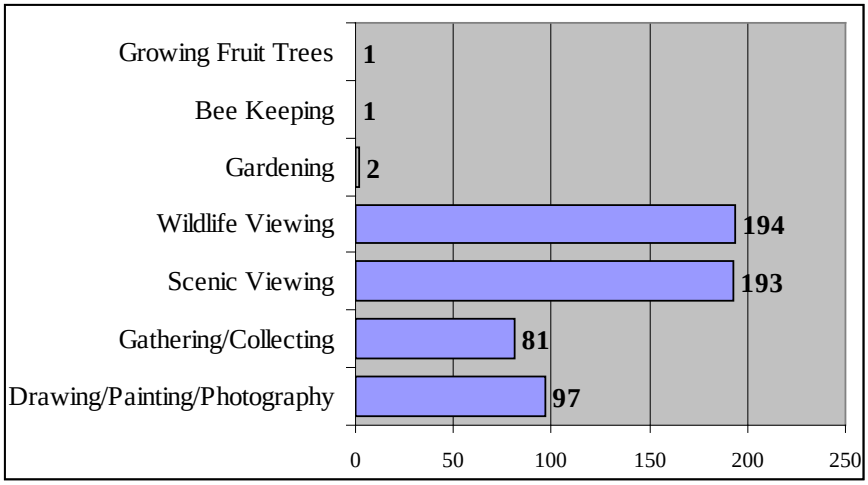


Figure 14. Nature study activities.

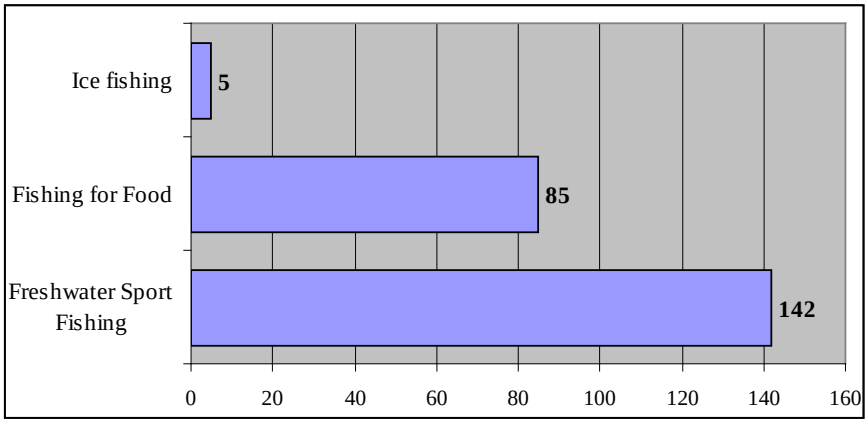


Figure 15. Fishing.

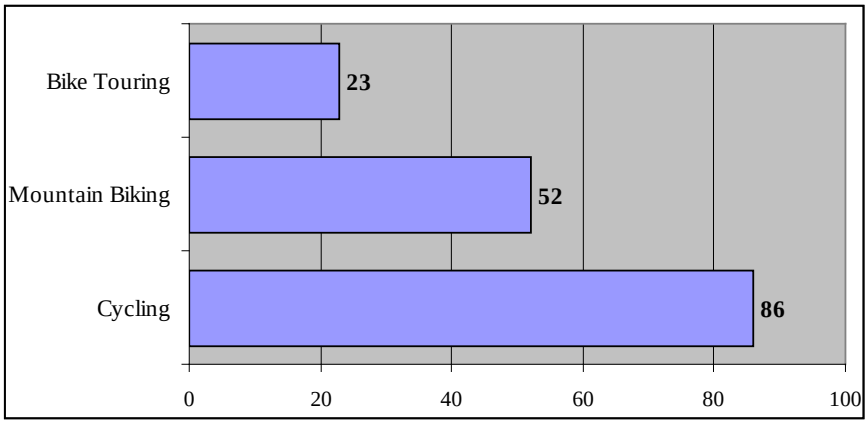


Figure 16. Cycling.

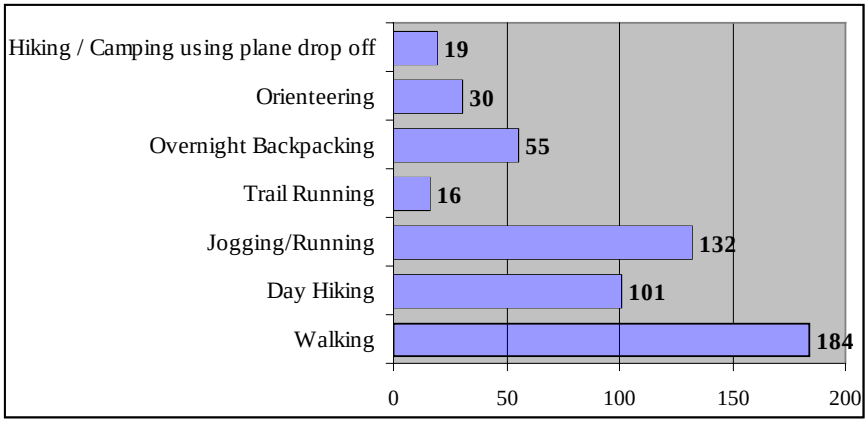


Figure 17. Hiking, jogging.

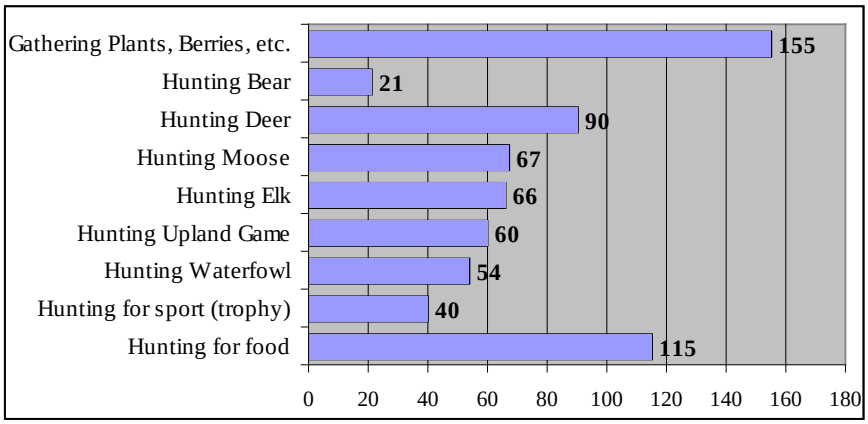


Figure 18. Hunting and gathering.

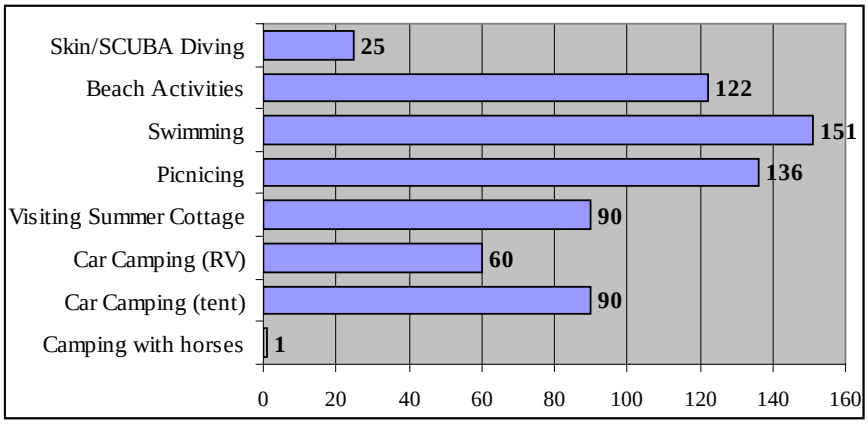


Figure 19. Camping and swimming.

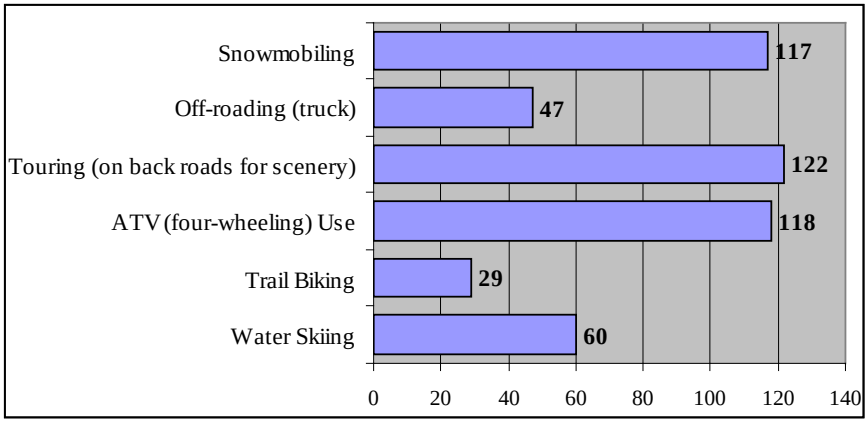


Figure 20. Motorized activities.

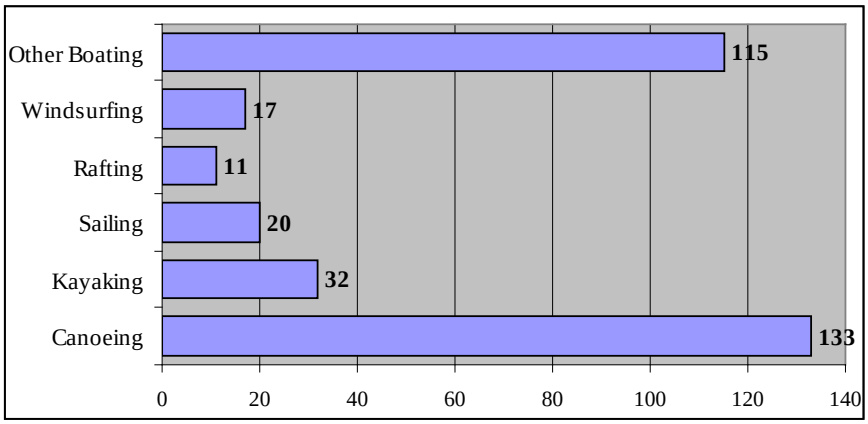


Figure 21. Boating.

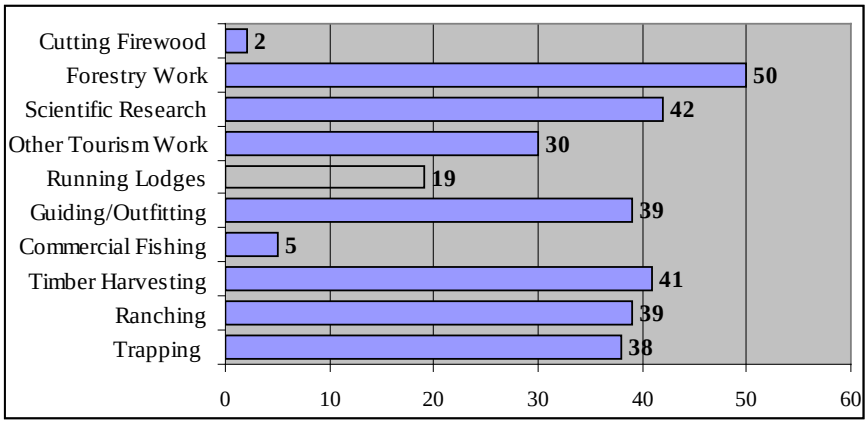


Figure 22. Work activities.

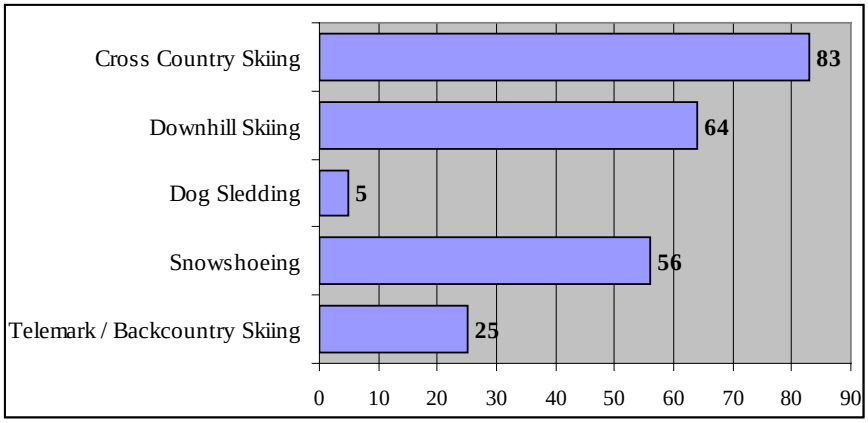


Figure 23. Winter activities.

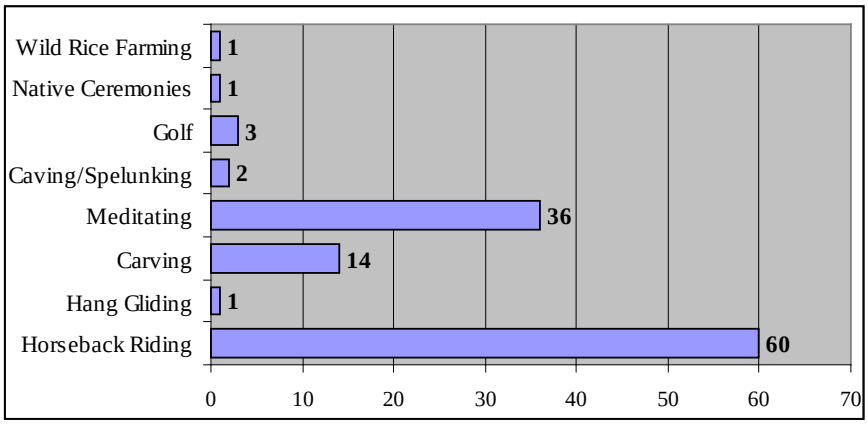


Figure 24. Other activities.

PART C – FOREST MANAGEMENT KNOWLEDGE

The following are the results from the first section of Part C of the questionnaire. These questions sought to gauge the respondents' level of knowledge about forest management in Manitoba. For preliminary analysis, the percentage of correct answers was determined per stakeholder group for each statement (Table 15). These percentages were then averaged to give an overall success rate.

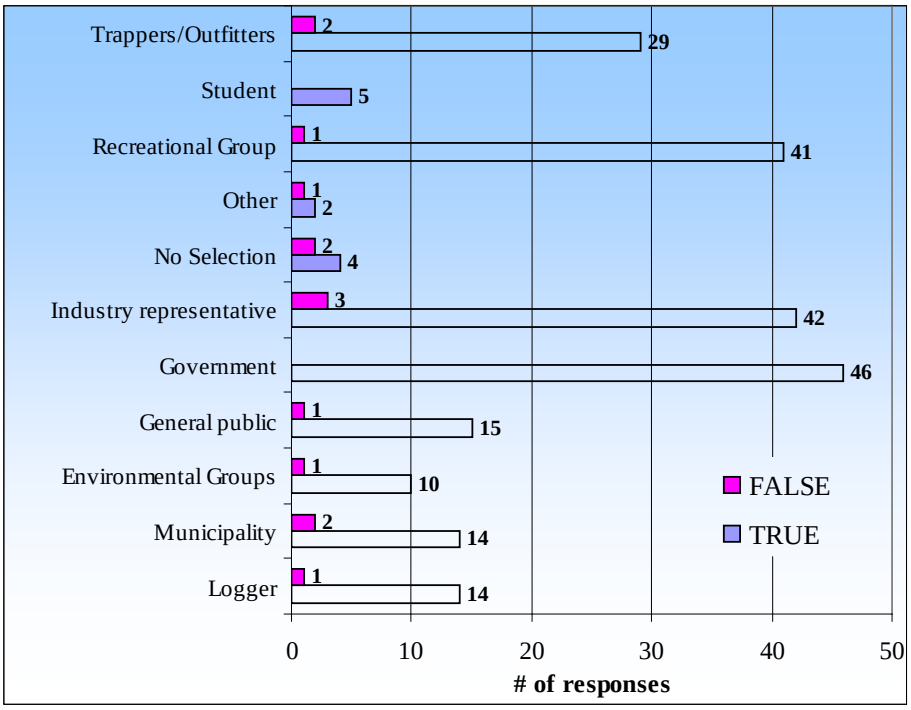
Table 15. The percentage of correct answers for each stakeholder group for each true/false statement.

Stakeholder Group	Statement											Avg.
	1	2	3	4	5	6	7	8	9	10	11	
Logger	93.3	93.3	100.0	76.9	93.3	85.7	42.9	93.3	92.9	93.3	86.7	**86.5**
Municipality	93.3	75.0	93.8	75.0	86.7	81.3	18.8	81.3	86.7	100.0	75.0	**78.8**
Environmental Groups	90.9	87.5	100.0	50.0	60.0	90.9	66.7	81.8	90.9	81.8	90.9	**81.0**
General public	93.8	87.5	100.0	50.0	73.3	75.0	37.5	81.3	100.0	87.5	93.8	**80.0**
Government	97.9	95.3	93.5	60.9	91.3	76.1	63.6	95.6	97.8	97.8	89.1	**87.2**
Industry representative	97.7	86.7	91.1	74.4	84.4	63.4	40.9	90.9	77.8	80.0	78.6	**78.7**
No Selection	80.0	83.3	100.0	83.3	100.0	100.0	66.7	100.0	100.0	66.7	50.0	**84.5**
Other	66.7	50.0	100.0	0.0	66.7	100.0	66.7	66.7	100.0	100.0	100.0	**74.2**
Recreational Group	97.6	81.0	90.5	66.7	90.5	78.6	50.0	85.4	85.7	83.3	78.6	**80.7**
Student	83.3	100.0	80.0	60.0	80.0	80.0	60.0	100.0	80.0	80.0	100.0	**82.1**
Trappers/ Outfitters	96.7	87.1	93.5	86.2	90.3	71.4	64.5	90.3	93.5	93.5	71.0	**85.3**
Average	**90.1**	**84.2**	**94.8**	**62.1**	**83.3**	**82.0**	**52.6**	**87.9**	**91.4**	**87.6**	**83.1**	**81.7**

“Forest companies are required to follow government guidelines when harvesting timber”
(TRUE)

In Manitoba, the following guidelines, regulations and conditions must be adhered to by forest companies:
The Forest Act and associated Forest Management License conditions
Manitoba Environment Act
The Lands Act (work permits)
Ten Year Forest Management Plan Submission Guidelines
Planning and Submission Requirements for Annual Operating Plans
Timber Harvesting Practices for Forest Operations in Manitoba
Consolidated Buffer Management Guidelines
Manitoba Stream Crossing Guidelines
Pre-harvest Surveys
Protection of Softwood Understory in Mixedwood and Hardwood Forests

222 correct answers (94.0%)
14 incorrect answers (6.0%)

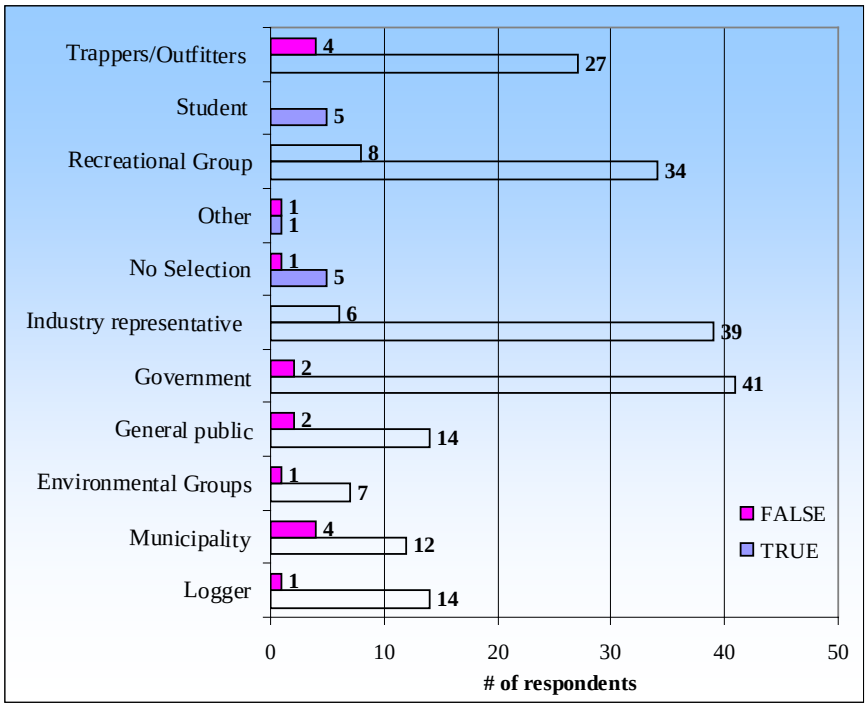


"Insects such as caterpillars can cause severe damage to forests."
(TRUE)

Insects are capable of causing severe damage to forests. A current example of such damage is the mountain pine beetle infestation in British Columbia where approximately 2 million hectares was affected in 2002 and an additional estimated 4.2 million hectares in 2003. Classifying insect infestations as damaging, however, is only part of the story. While it is true that insects are capable of killing vast areas of forest, they are also an important part of a forest's natural life cycle. Insects play a role in forest renewal by removing weaker, older, diseased trees and making room for a new forest.

In some instances, therefore, it may be wise to let insects do their thing. In other cases, when the impacts to other forest values justify it, it is prudent to manage insects. These impacts can include (but are not limited to) timber supply impacts, impacts on recreational areas, and the increased likelihood of wildfire. Insect management often consists of taking measures to stop infestations.

199 correct answers (86.9%)
30 incorrect answers (13.1%)

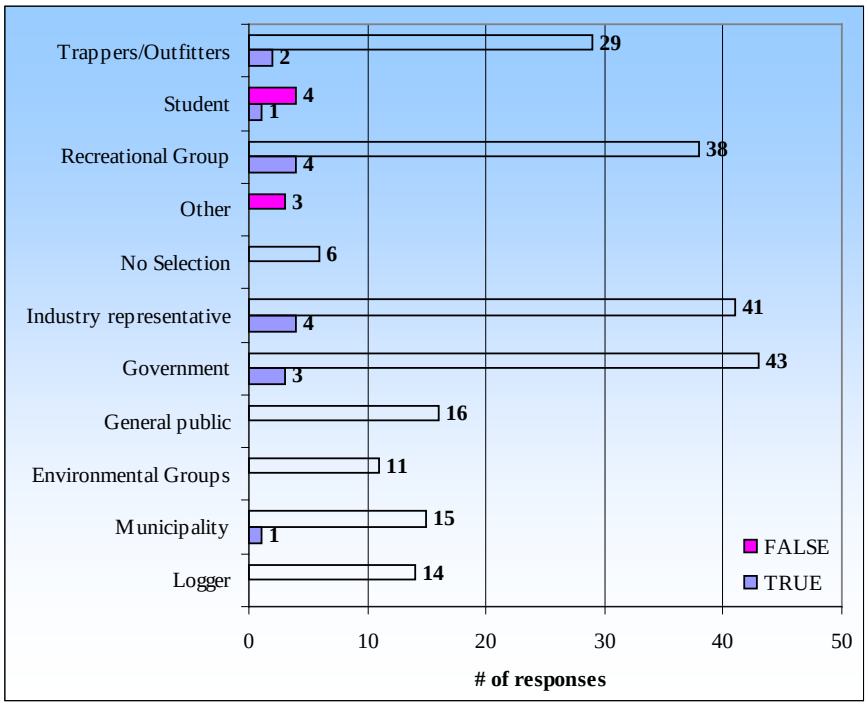


"There are no old-growth trees in Manitoba."
(FALSE)

The term "old growth" is extremely difficult to define. Tree size is not the critical factor that determines old growth, nor is age. Old growth forests are sometimes defined based on composition (types of trees and vegetation, presence of lichens, etc.), structure (dead standing or fallen trees, wide variations in tree size and spacing, multiple canopy layers, etc.), or historical incidence of natural stand-replacement (insects or fire).

Regardless of the definition of old growth, it is important to maintain a component of older forests on the landscape to satisfy the habitat needs of other organisms and contribute to healthy levels of biological diversity across the landscape. No matter what definition of old growth is used, there are occurrences of this phenomenon across the landscape in Manitoba.

220 correct responses (93.6%)
15 incorrect responses (6.4%)



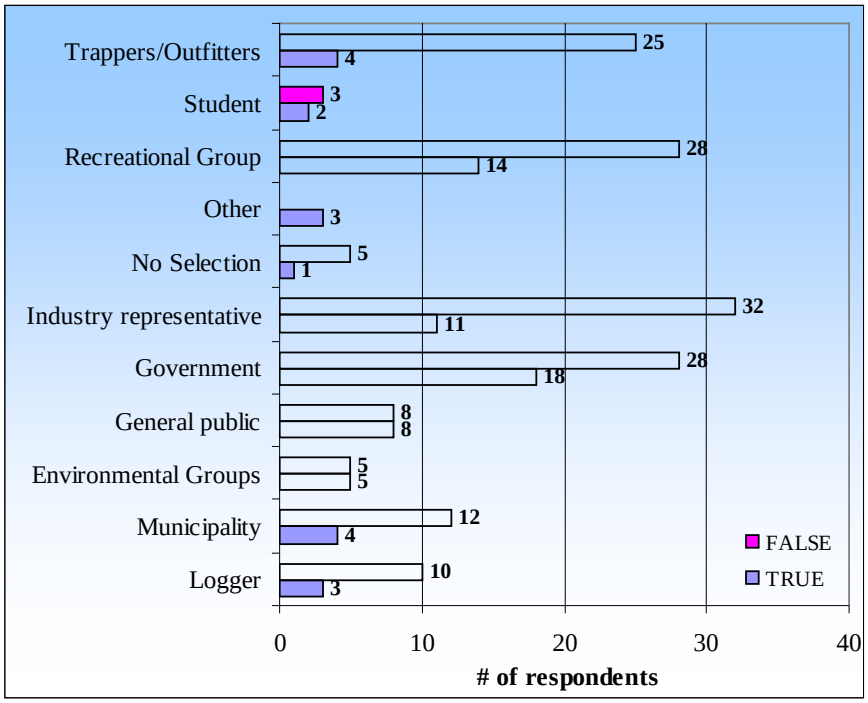
“Chemicals are commonly used to control weeds in Manitoba’s forests.” (TRUE)

Herbicides may be used to control undesirable vegetation on areas considered for planting or seeding on some sites. The application of herbicides for vegetation management (e.g. SIP, stand release) is implemented through the Manitoba Forestry Branch.

Glyphosate is the only registered chemical for aerial application in Manitoba. Glyphosate is a broad-spectrum herbicide sold under the trade name of Vision® for forestry application (Roundup® for agricultural and household application). When applied as directed (from label) to the foliage of actively growing brush and trees at the proper stage of growth, it will effectively reduce weed and brush competition from deciduous tree species.

Further details on vegetation management using herbicides can be found on Manitoba Conservation’s website at: http://www.gov.mb.ca/conservation/forestry/forest-renewal/techniques/fr16-vegmgmt.html.

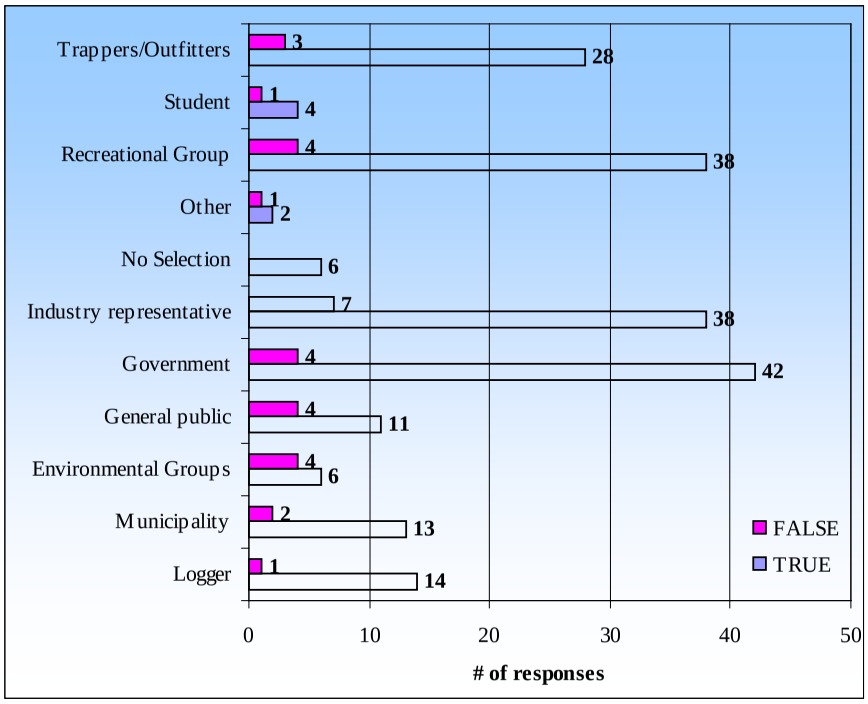
156 correct answers (68.1%)
73 incorrect answers (31.9%



"Over time, there is a natural replacement of the kinds of trees in forests." (TRUE)

There are many natural forces that affect the life cycle of forests. These include fire, insect and disease infestations, and windthrow. These events tend to target older forests and result in their replacement with young vigorous forests. Depending on the nature of the event, the kinds of trees in the original forest may be replaced by different species. This is because different tree species are adapted to different conditions. One of the most important of these conditions is a tree's tolerance of shade. Large scale stand-replacing events (a large catastrophic fire for example) are well suited to regenerate with a shade intolerant species like jack pine that grows best in full sunlight.

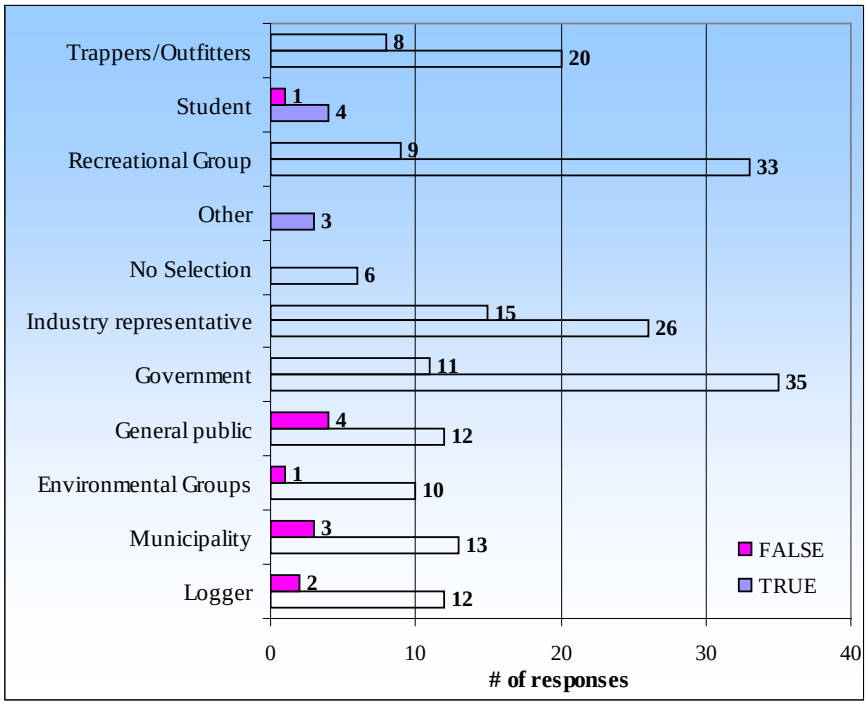
202 correct responses (86.7%
31 incorrect responses (13.3%)



“Clear-cutting is the most common method of harvesting trees in Manitoba.” (TRUE)

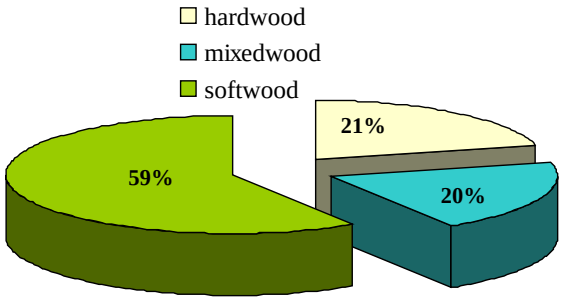
Clear-cutting is the most common method of harvesting trees when the desired future forest consists of shade intolerant species that require full sunlight to grow. In most of Manitoba, aspen, jack pine and spruce are the predominant tree species – all of which are shade intolerant. Clear-cutting best mimics the natural catalyst for the regeneration of a forest in Manitoba, i.e. fire.

174 correct answers (76.3%)
54 incorrect answers (23.7%)



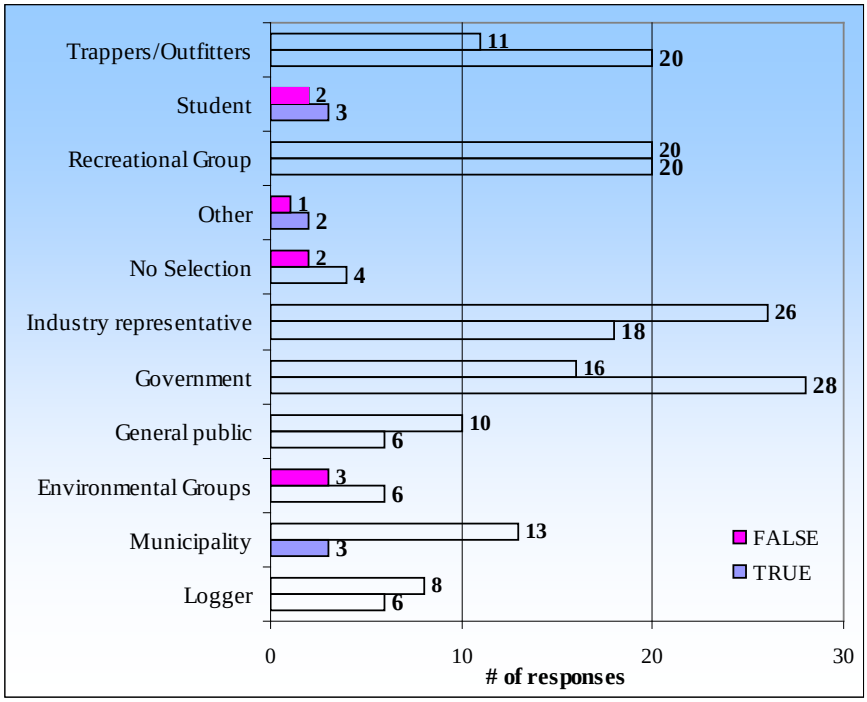
"Manitoba has more softwoods (trees with needles) than hardwoods (trees with leaves)."
(TRUE)

Manitoba's forests are composed primarily of boreal species with 59% being softwood (Figure ---).



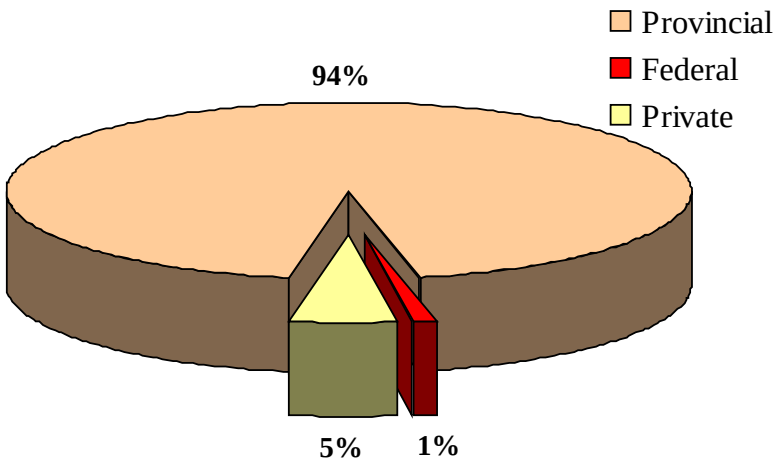
More than 2.6 million cubic metres of softwoods and 1.3 million cubic metres of hardwoods are currently allocated via Forest Management Licence (FML) agreements with forest products companies or through quotas to small forestry companies and individuals. There are approximately 3.0 million cubic metres of unallocated productive softwoods and hardwoods, but much of that wood is in remote, inaccessible areas.

116 correct responses (50.9%)
112 incorrect responses (49.1%)

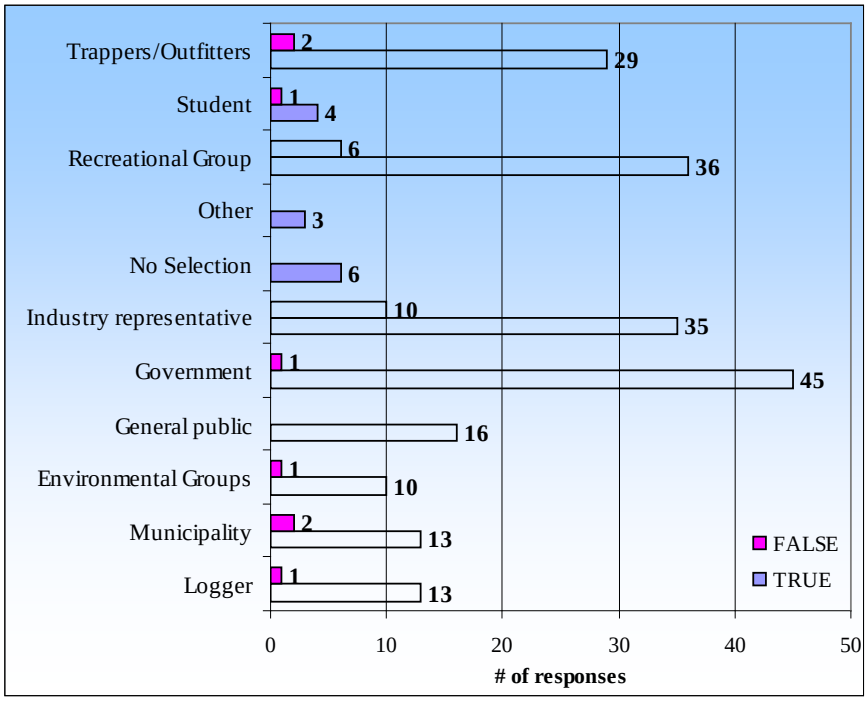


”Most of Manitoba’s forested land is owned by the provincial government.” (TRUE)

Manitoba’s forests are primarily provincially owned (Figure ---).



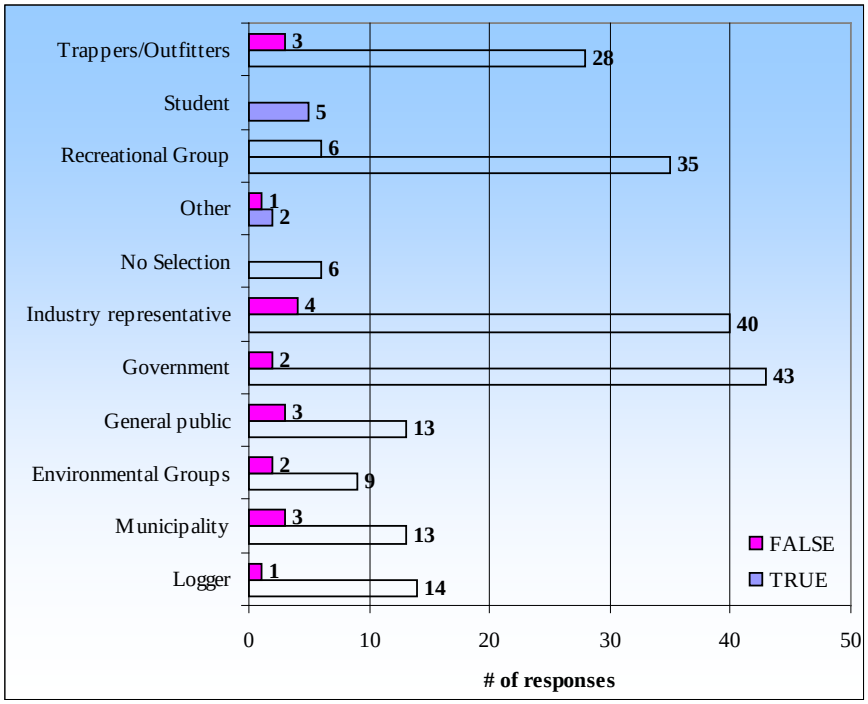
210 correct answers (89.7%)
24 incorrect answers (10.3%)



“Forest fires help jack pine open its cones and shed its seeds.”
(TRUE)

Jack Pine is a tree species that has adapted to fire. Jack pine trees can bear serotinous cones that require high temperatures to open and release seeds, and non-serotinous cones (that will open when mature, even in the absence of high temperatures). The occurrence of lethal fires tends to favor serotinous-type jack pine trees to the detriment of non-serotinous trees. (Serotinous jack pine trees killed by a fire can disperse seeds, thus ensuring stand regeneration, while previously dispersed seeds from non-serotinous trees will be destroyed by the same fire.)

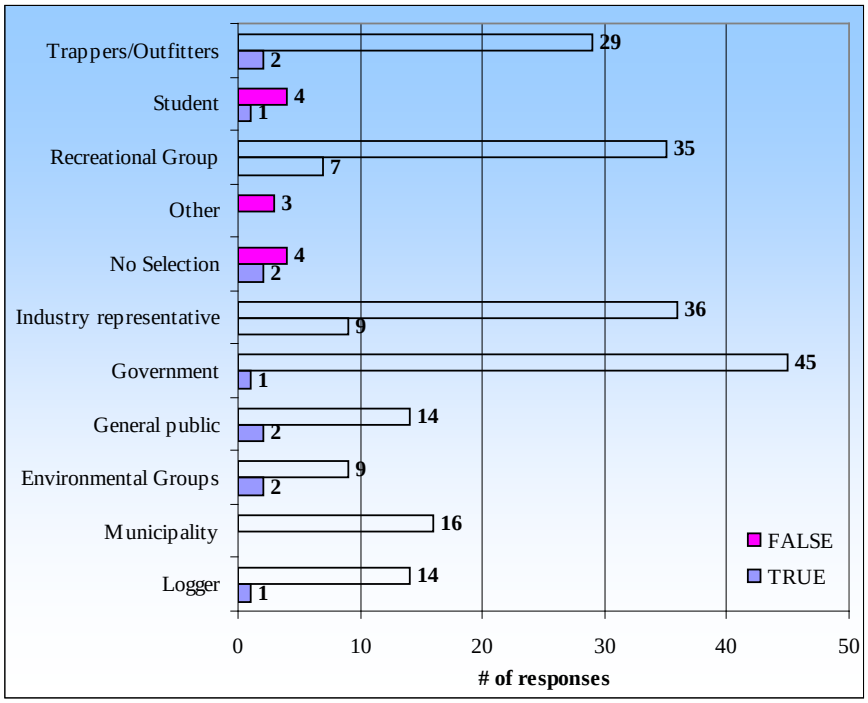
208 correct responses (89.3%)
25 incorrect responses (10.7%)



“The seedlings planted after harvesting are usually hardwoods (trees with leaves).” (FALSE)

All seedlings planted in Manitoba are softwood (trees with needles) container stock seedlings (grown in containers in greenhouses). For more information on forest renewal in Manitoba, you can check the Manitoba Conservation website at: http://www.gov.mb.ca/conservation/forestry/forest-renewal/techniques/fr5-treeplant-intro.html

209 correct responses (90.0%)
27 incorrect responses (10%)

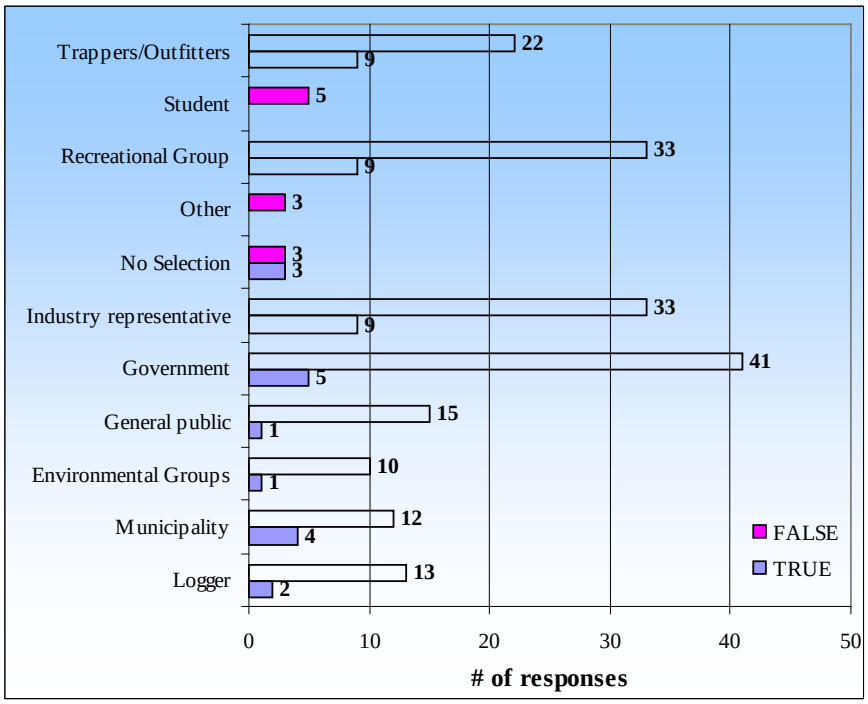


"All areas where trees are harvested must be planted in order for the forest to return."
(FALSE)

In Manitoba, forest renewal and its associated activities are determined prior to harvest with a pre-harvest site inspection. The soil type present, understory vegetation and existing competition are all examined to determine the best course of action. Some sites may be left to regenerate naturally from existing seed and/or sucker growth. In most cases, an attempt is made to ensure that the post-harvest stand is similar to the pre-harvest stand. Often, to accomplish this, site preparation and planting of trees is necessary. For more detailed information about required stocking levels (trees per hectare), and other regeneration standards, please see Manitoba Conservation's website at:

http://www.gov.mb.ca/conservation/forestry/forest-renewal/fr2-standards.html

190 correct responses (81.6%)
43 incorrect responses (18.4%)



WHAT THE RESULTS MIGHT MEAN

All stakeholder groups performed well on the true-or-false question section. The top three scoring stakeholder groups with regards to forestry knowledge were the government, the loggers, and the trappers/outfitters respectively. It makes sense that these groups were better able to answer the questions since all three of these groups depend directly and clearly on the integrity of the forest for their livelihoods. The lowest scoring groups were the municipality representatives; those that did not chose a stakeholder group, and surprisingly, LP staff.

Overall, knowledge was highest for statements 1, 3 and 9 showing that stakeholders understand that forest companies must follow government guidelines; that there are old growth trees in Manitoba; and that forest fires are responsible for the opening of jack pine cones and subsequent seed release

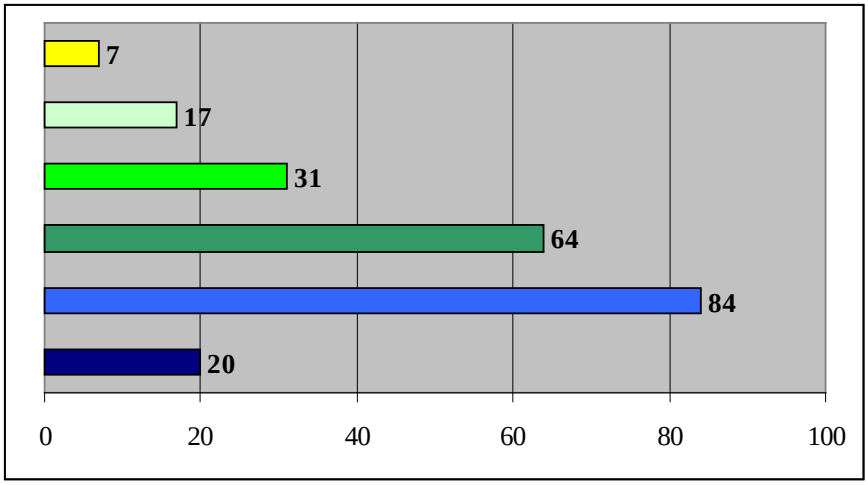
.

Overall, knowledge was lowest for statements 4 and 7. This indicates that stakeholders have a poor understanding of the presence of chemical weed control applications in Manitoba. In addition, stakeholders were unsure of the composition of the forest and assumed that there were more hardwoods than softwoods in Manitoba.

PART C – PUBLIC'S ROLE IN FOREST MANAGEMENT

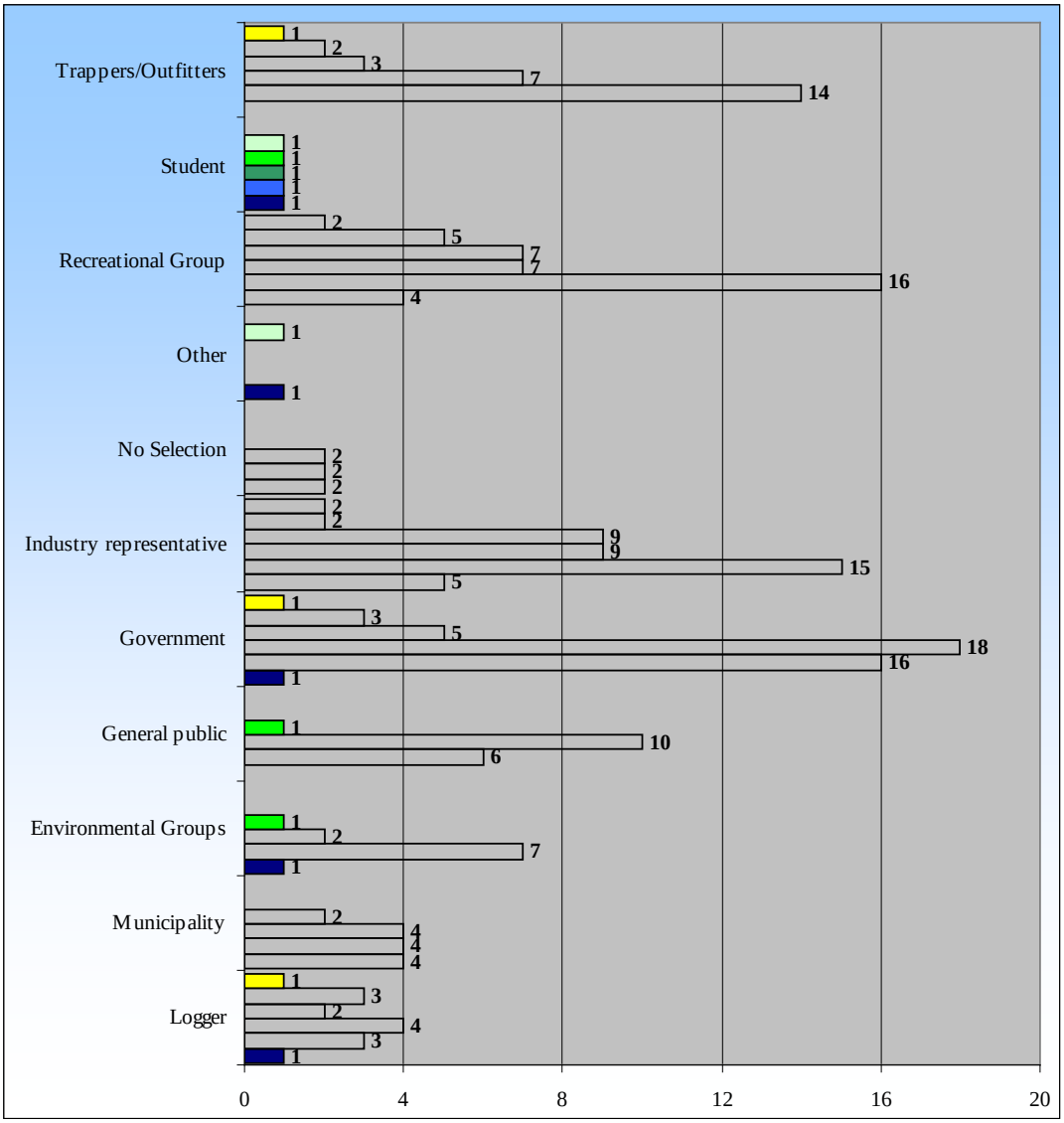
The second section of Part C asks respondents to pick their top two choices for a realistic role that the Canadian public should have in forest management. Respondents were given six choices based loosely on Sherry Arnstein's ladder of citizen participation (1969), as well as an "other" option in case new ideas arise.

Respondents' first choices were dominated by a desire to act as full and equal partners in setting management goals (Figure 25). Responses were also broken out by stakeholder group (Figure 26).



	Have no role; let government and industry resource professionals set all management goals and priorities.
	Let the professionals set goals and priorities and then inform and educate the public about their decisions.
	Suggest goals and let government and industry resource professionals decide their priority.
	Serve on advisory boards that review and comment on management goals.
	Act as full and equal partners with government and industry resource professionals in setting management goals.
	Set management goals and have government and industry resource professionals carry them out.

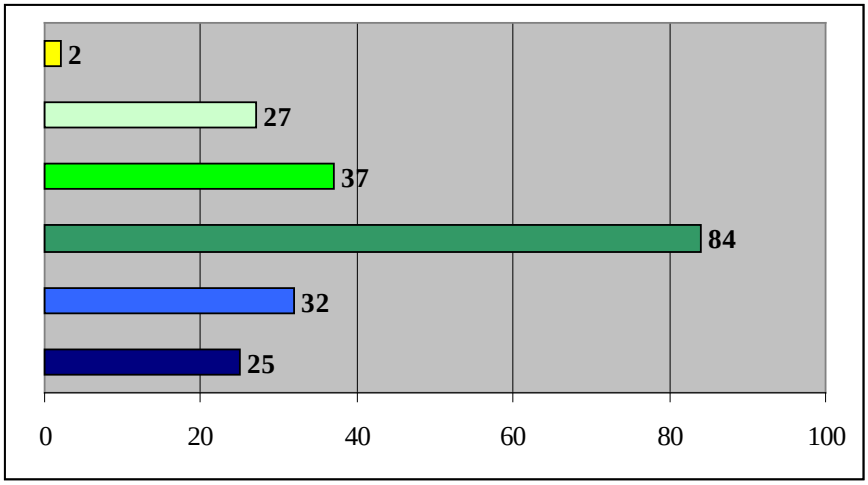
Figure 25. Decision making roles - first choice.



	Have no role; let government and industry resource professionals set all management goals and priorities.
	Let the professionals set goals and priorities and then inform and educate the public about their decisions.
	Suggest goals and let government and industry resource professionals decide their priority.
	Serve on advisory boards that review and comment on management goals.
	Act as full and equal partners with government and industry resource professionals in setting management goals.
	Set management goals and have government and industry resource professionals carry them out.

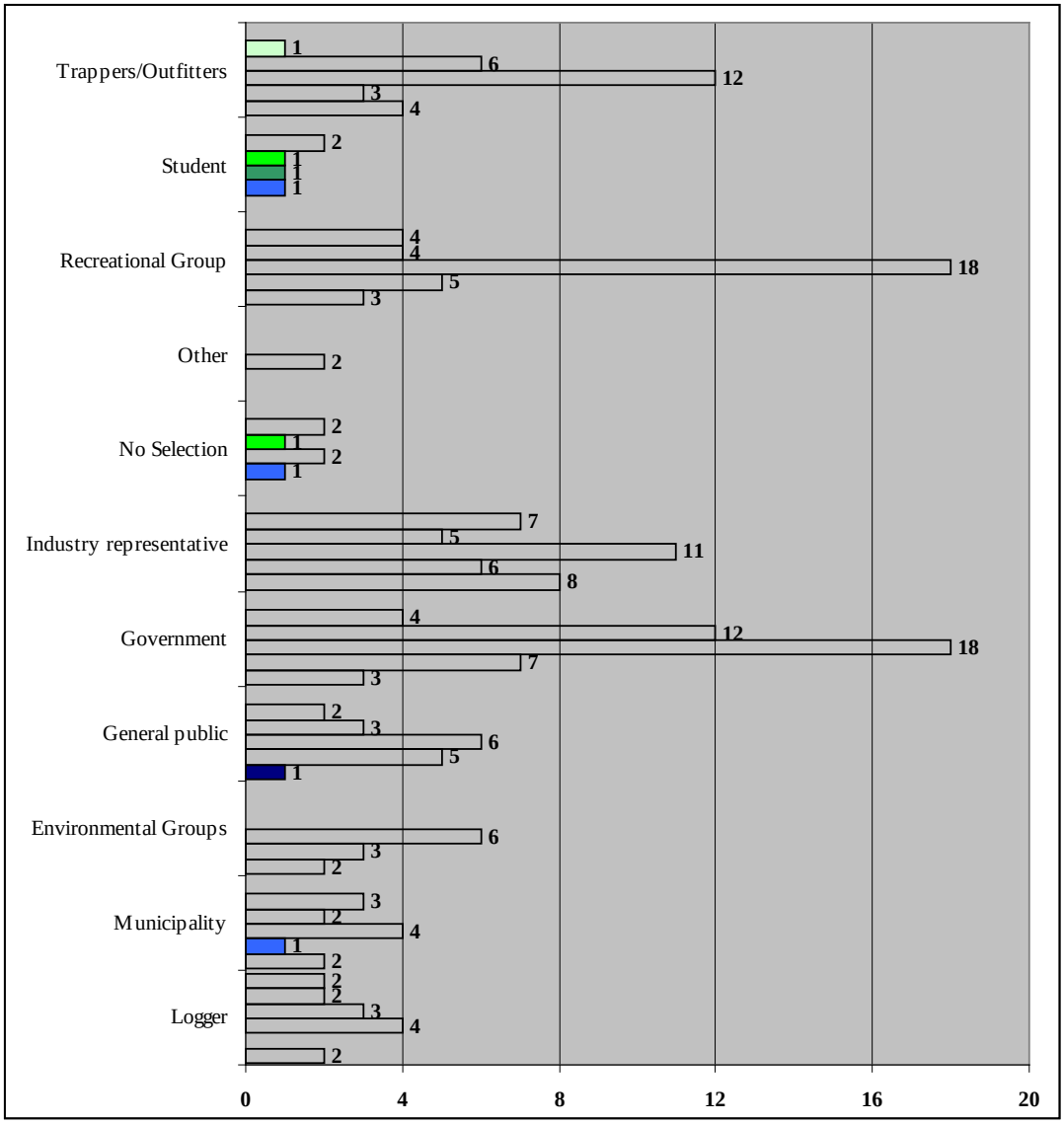
Figure 26. Decision making roles – first choice – by stakeholder group.

Respondents' second choices were dominated by the desire to serve on advisory boards that review and comment on management goals (Figure 27). These responses are also broken down according to stakeholder group (Figure 28).



	Have no role; let government and industry resource professionals set all management goals and priorities.
	Let the professionals set goals and priorities and then inform and educate the public about their decisions.
	Suggest goals and let government and industry resource professionals decide their priority.
	Serve on advisory boards that review and comment on management goals.
	Act as full and equal partners with government and industry resource professionals in setting management goals.
	Set management goals and have government and industry resource professionals carry them out.

Figure 27. Decision making roles – second choice.



	Have no role; let government and industry resource professionals set all management goals and priorities.
	Let the professionals set goals and priorities and then inform and educate the public about their decisions.
	Suggest goals and let government and industry resource professionals decide their priority.
	Serve on advisory boards that review and comment on management goals.
	Act as full and equal partners with government and industry resource professionals in setting management goals.
	Set management goals and have government and industry resource professionals carry them out.

Figure 28. Decision making roles – second choice – by stakeholder group.

PART C – FOREST MANAGEMENT DECISION MAKING

The second question in the second section of Part C asks respondents how important it is that forest land managers make decisions based on their own knowledge and expertise, the advice of scientists and technical specialists, the views of the public, and political pressure. The following figures show the importance that respondents place on each of the above groups, as well as the same broken down by stakeholder group. There are also figures that illustrate the relative importance of each of these inputs (and the same broken down by stakeholder group).

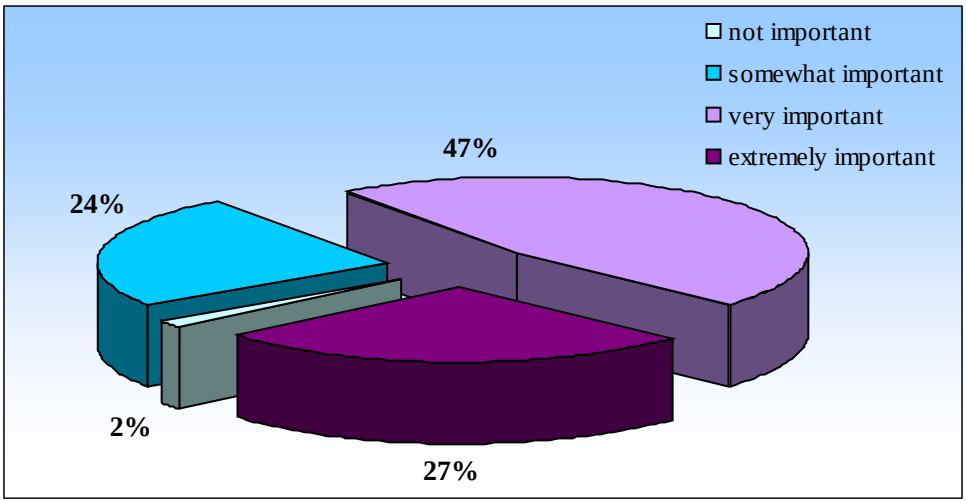


Figure 29. The importance of forest land managers making decisions based on their own knowledge and expertise.

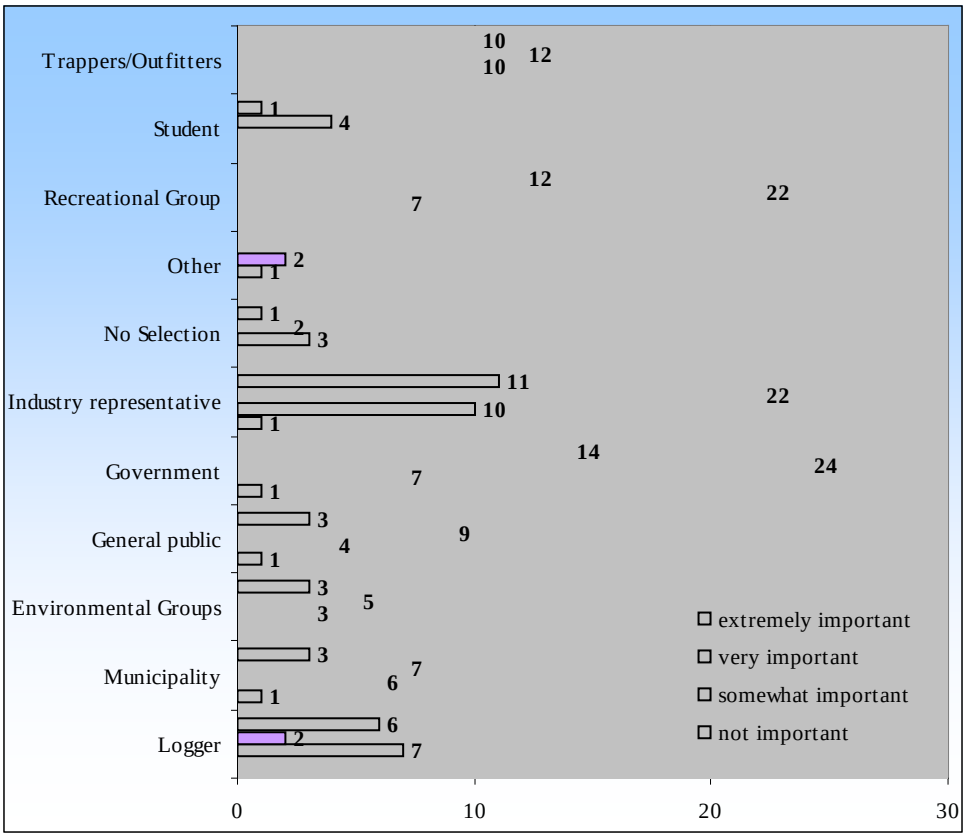


Figure 30. The importance of forest land managers making decisions based on their own knowledge and expertise – broken down by stakeholder group.

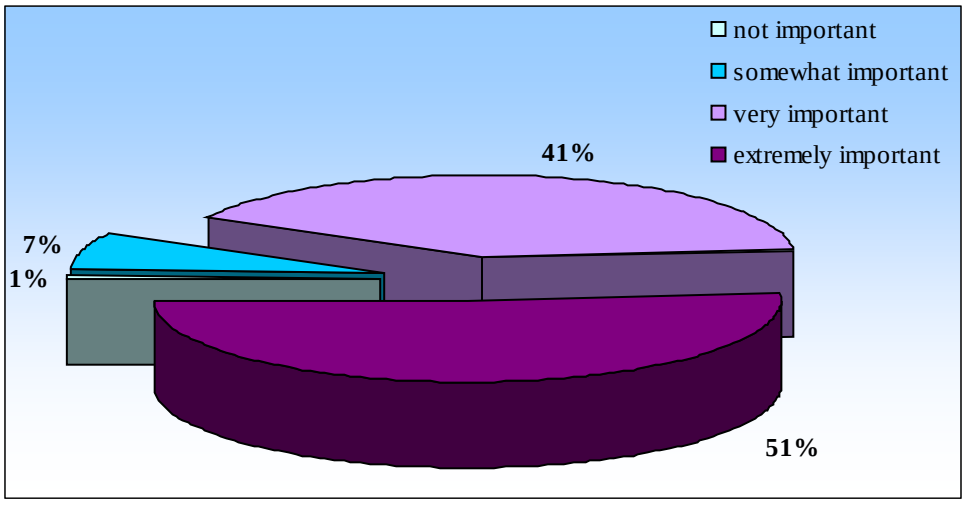


Figure 31. The importance of land managers making decisions based on the advice of scientists and technical specialists.

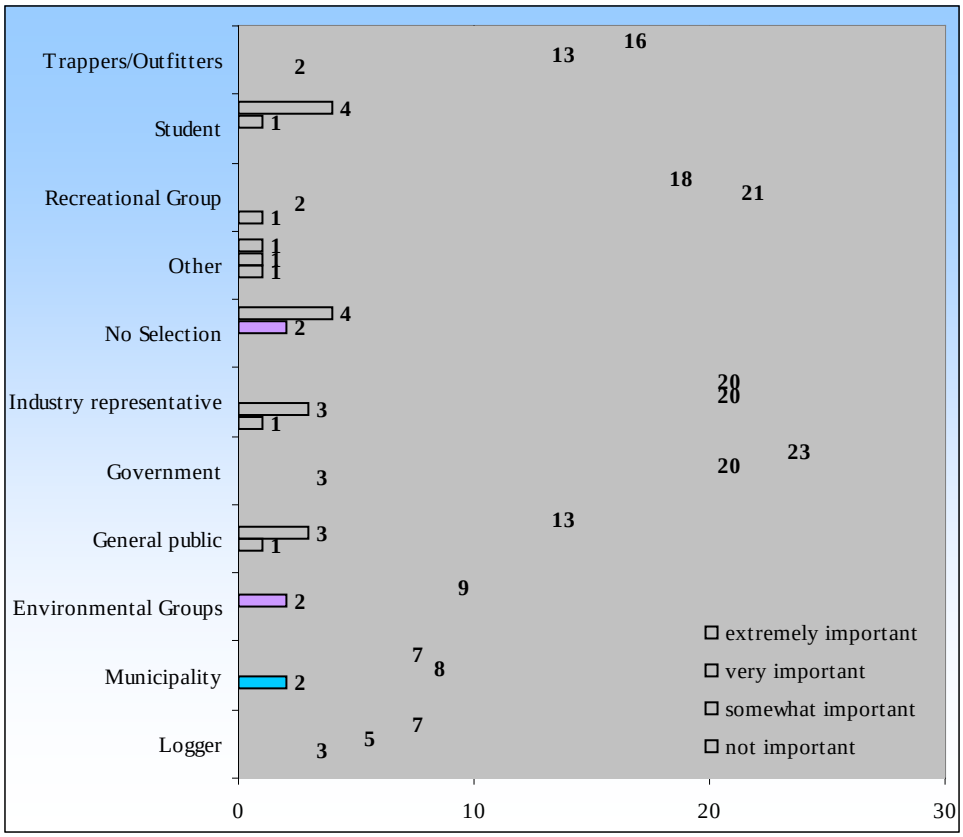


Figure 32. The importance of land managers making decisions based on the advice of scientists and technical specialists – broken down by stakeholder group.

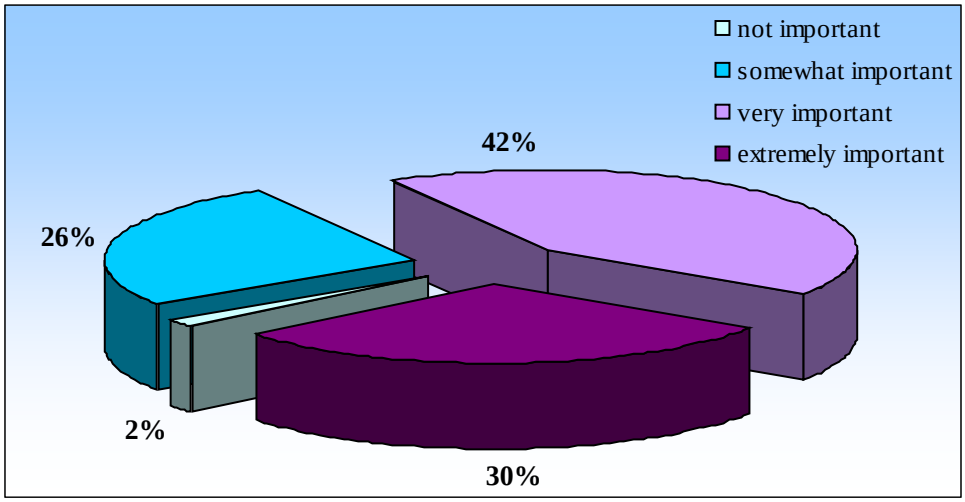


Figure 33. The importance of land managers making decisions based on the views of the public.

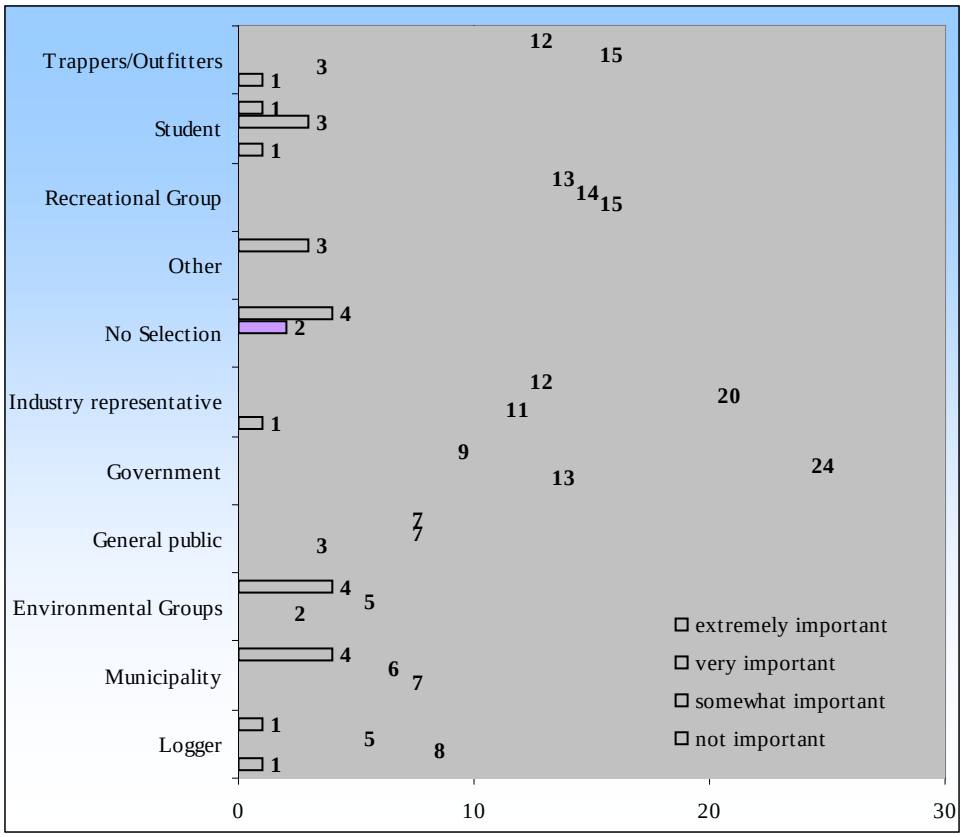


Figure 34. The importance of land managers making decisions based on the views of the public – broken down by stakeholder group.

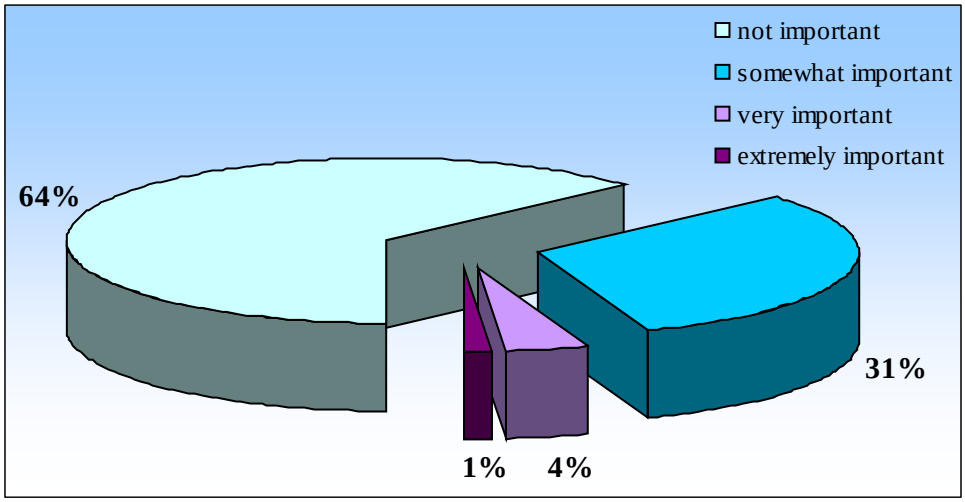


Figure 35. The importance of land managers making decisions based on political pressure.

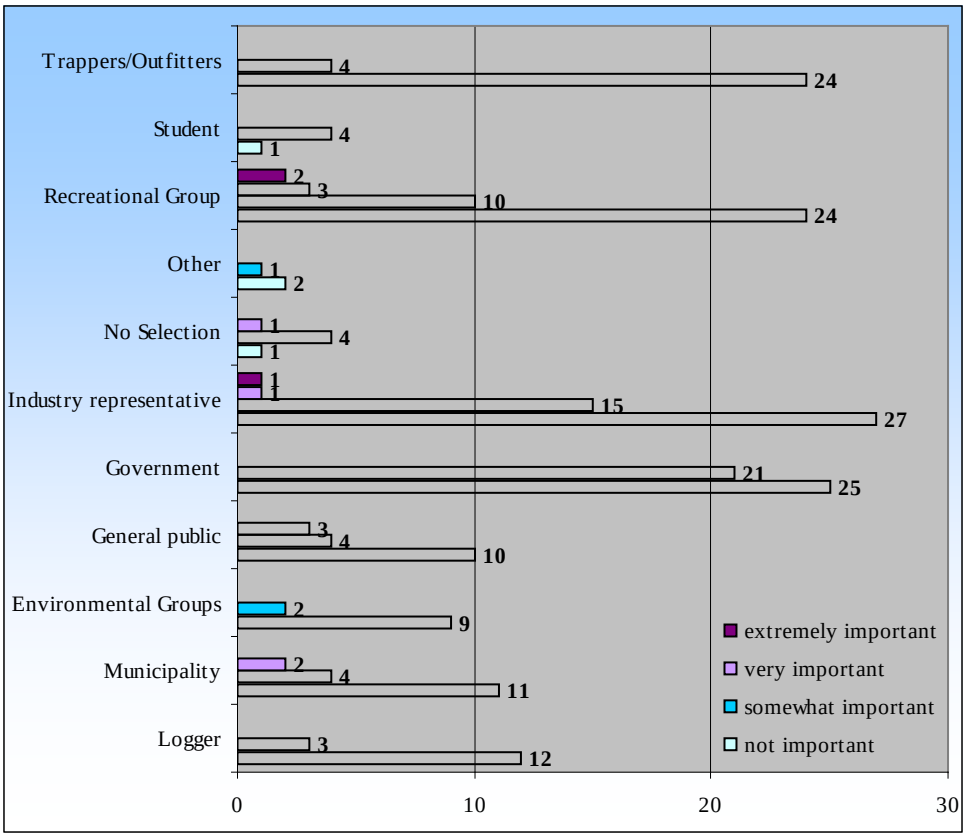


Figure 36. The importance of land managers making decisions based on political pressure – broken down by stakeholder group.

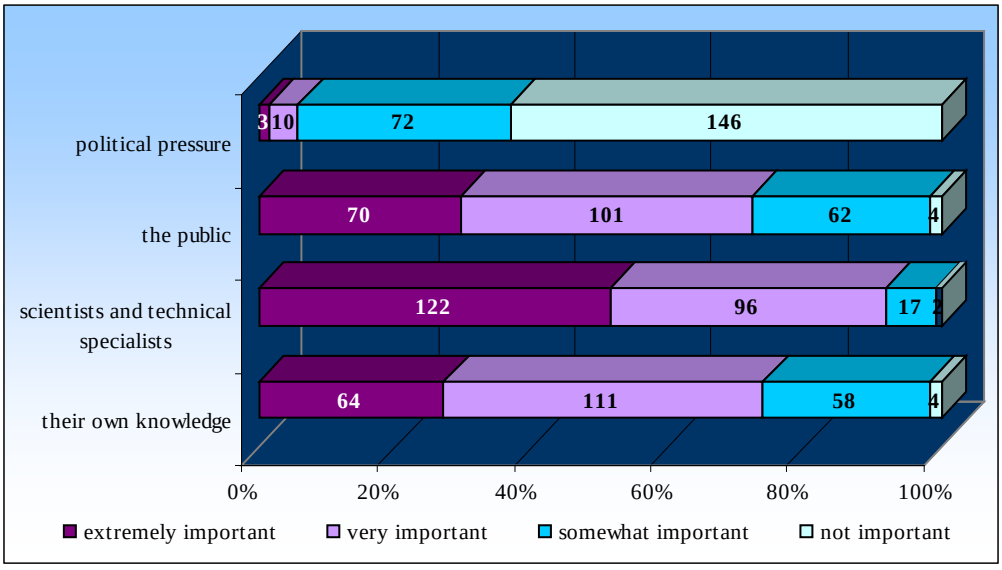


Figure 37. Relative importance of each input to decision making.

The third question in the second part of Part C asked respondents to choose the extent to which a variety of groups should have input into decision making (Figure38). Those five groups respondents believed should have the most input are:

1. People living in or close to LP's license area.
2. Scientists
3. Government Foresters
4. Forest Industry
5. Municipal Government

Those five groups that respondents believed should have the least input are:

1. Labour Unions
2. Mining Industry
3. Chambers of Commerce
4. Metis
5. People Living Elsewhere in Manitoba

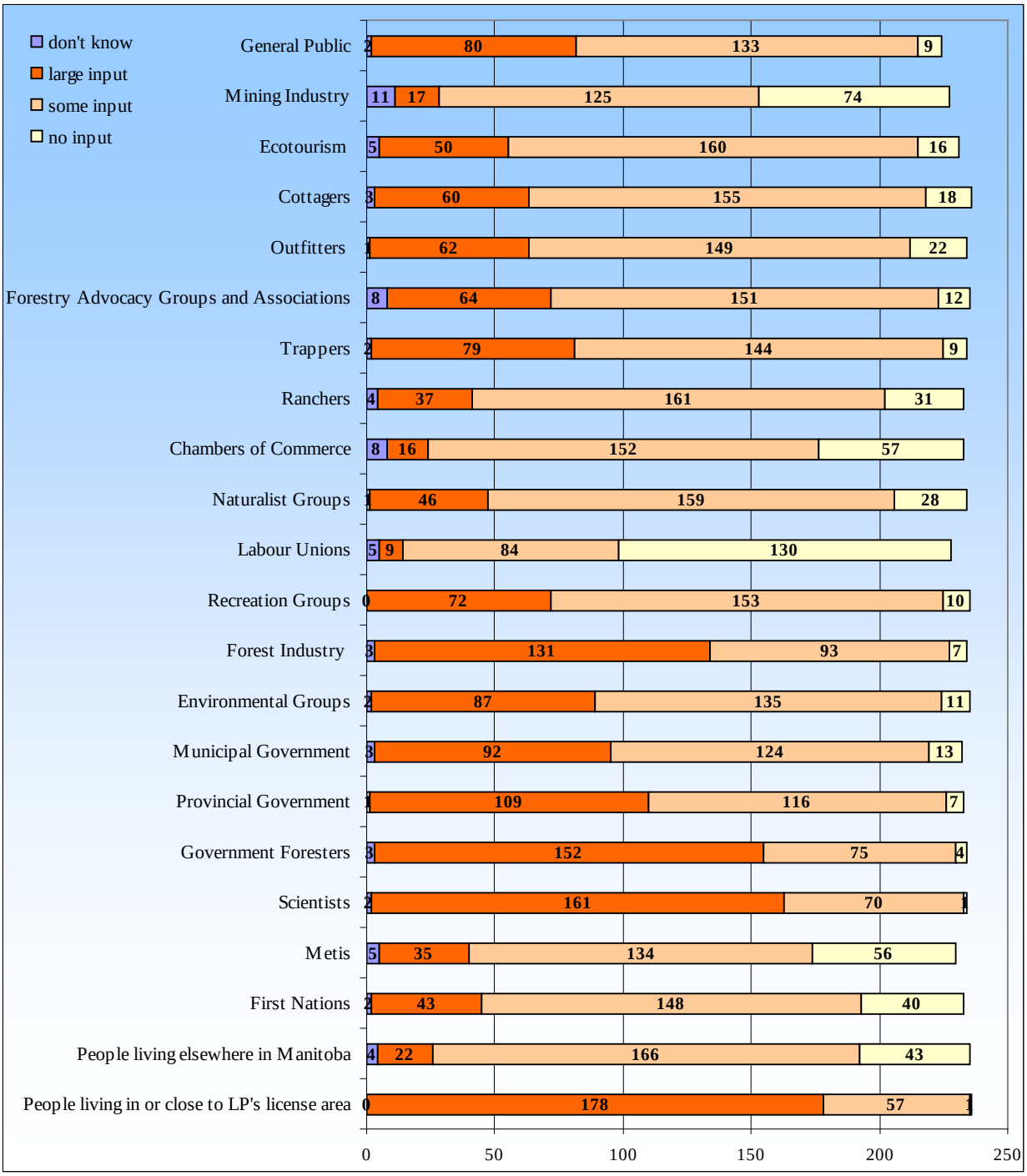


Figure 38. The extent to which stakeholder groups should have input into decision making about public forests.

PART C – LP QUALITIES

The third section of Part C asks respondents to rank a list of possible qualities that LP could strive to achieve.

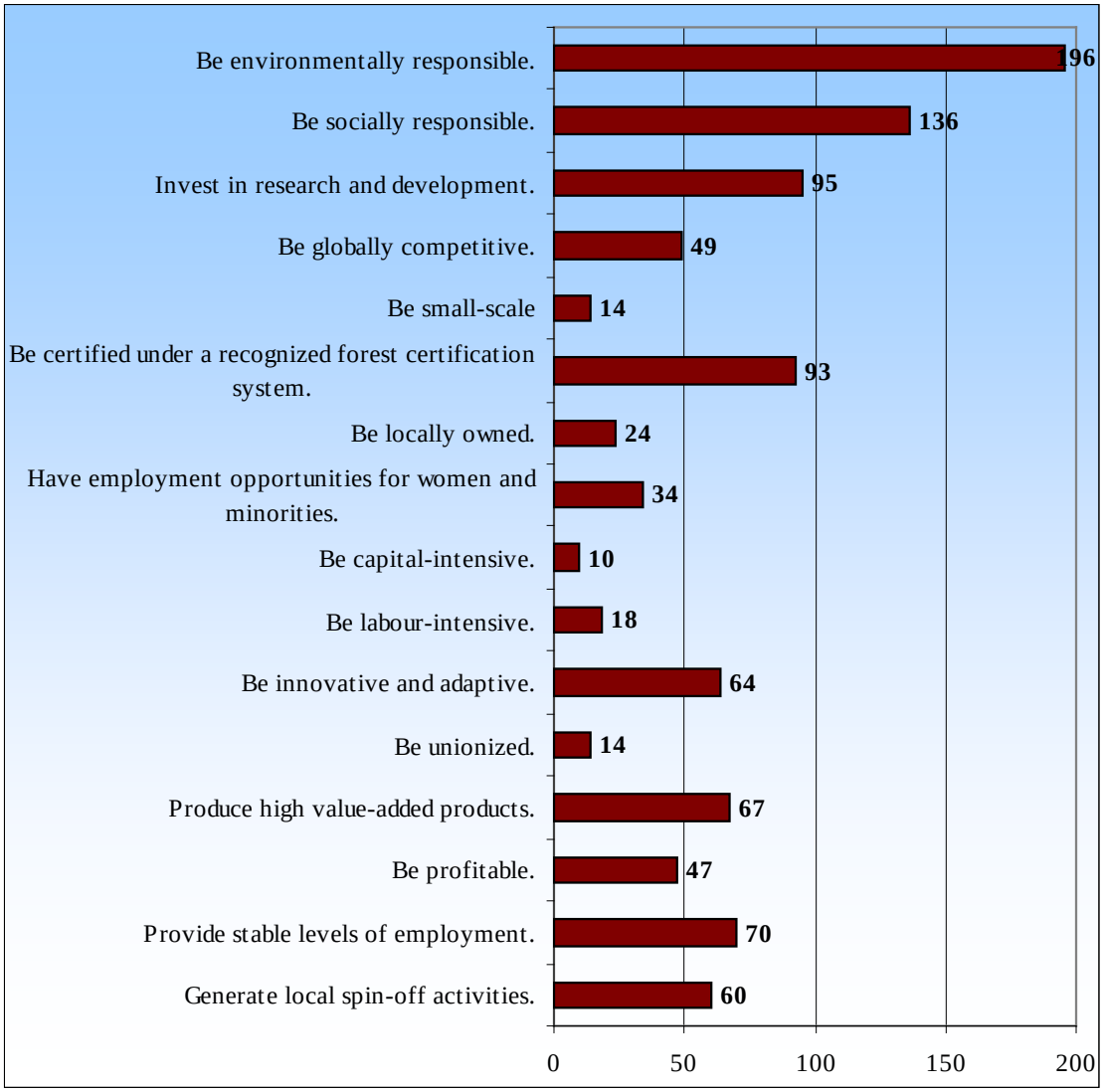


Figure 39. Number of respondents that chose "extremely important" for each possible LLP quality.

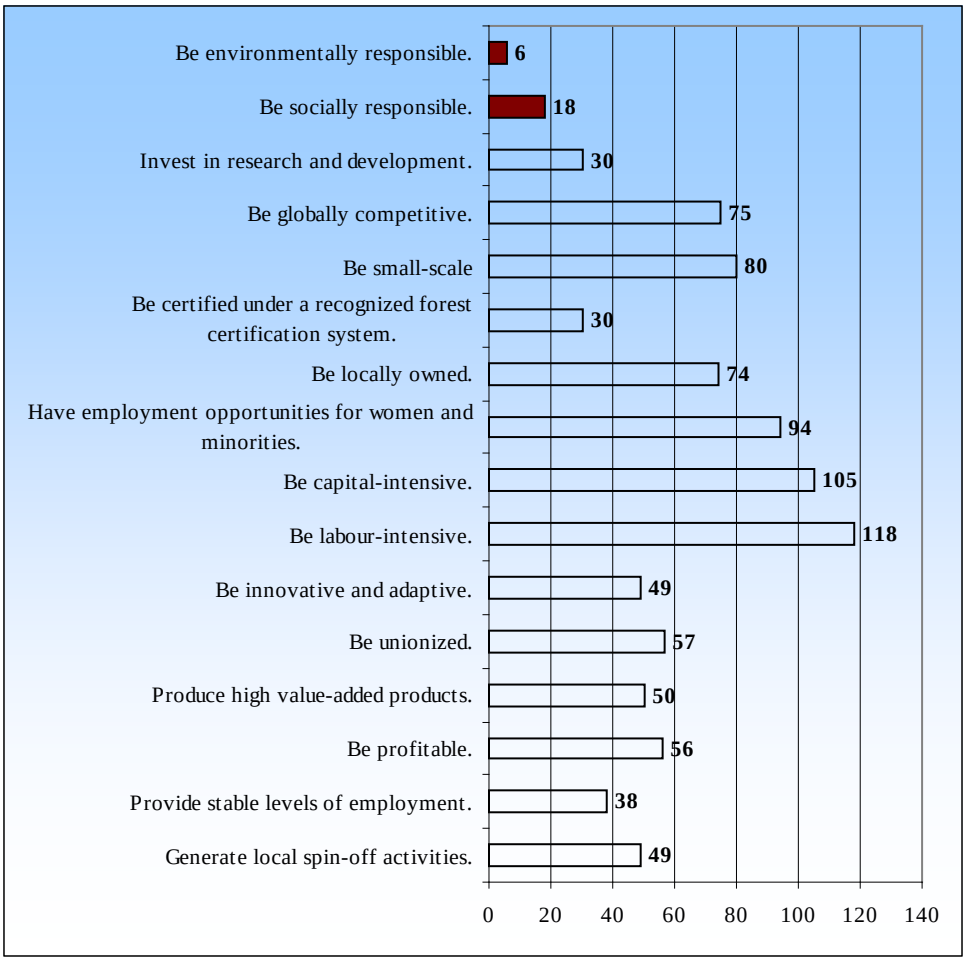


Figure 40. Number of respondents who chose "somewhat important" for each possible LP quality.

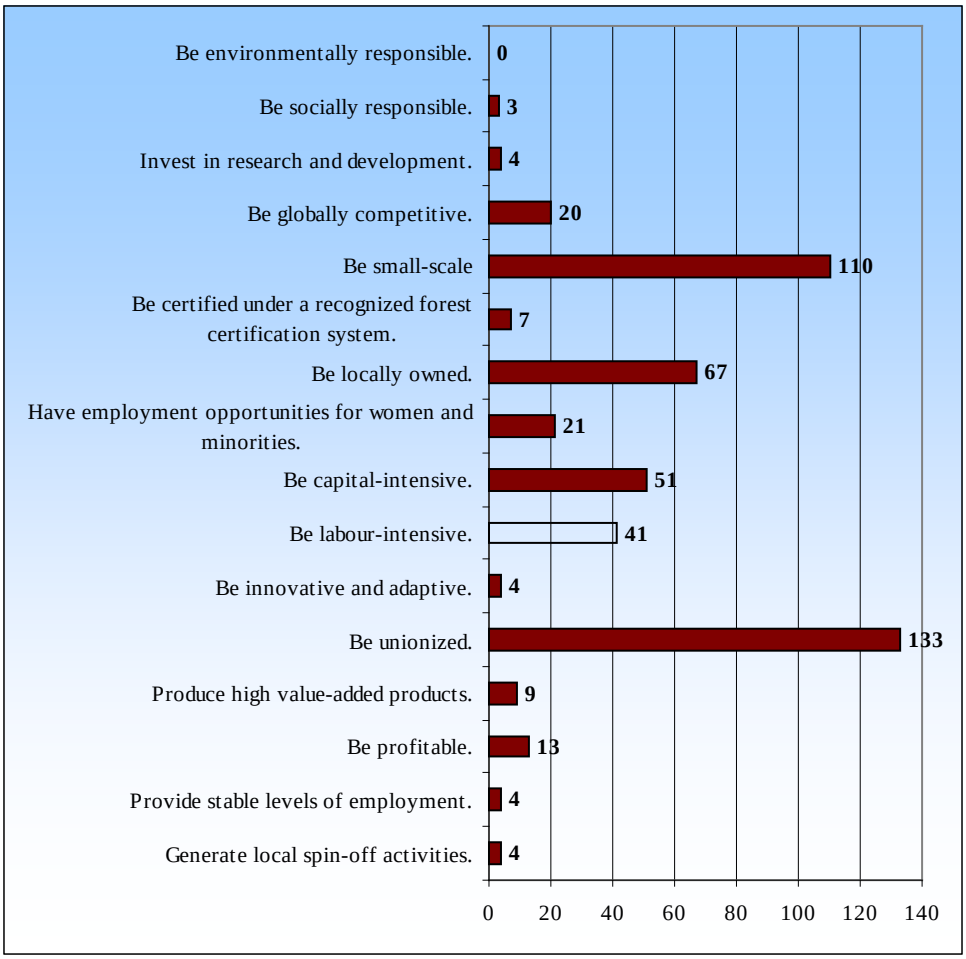


Figure 41. Number of respondents who chose "not important" for possible LP qualities.

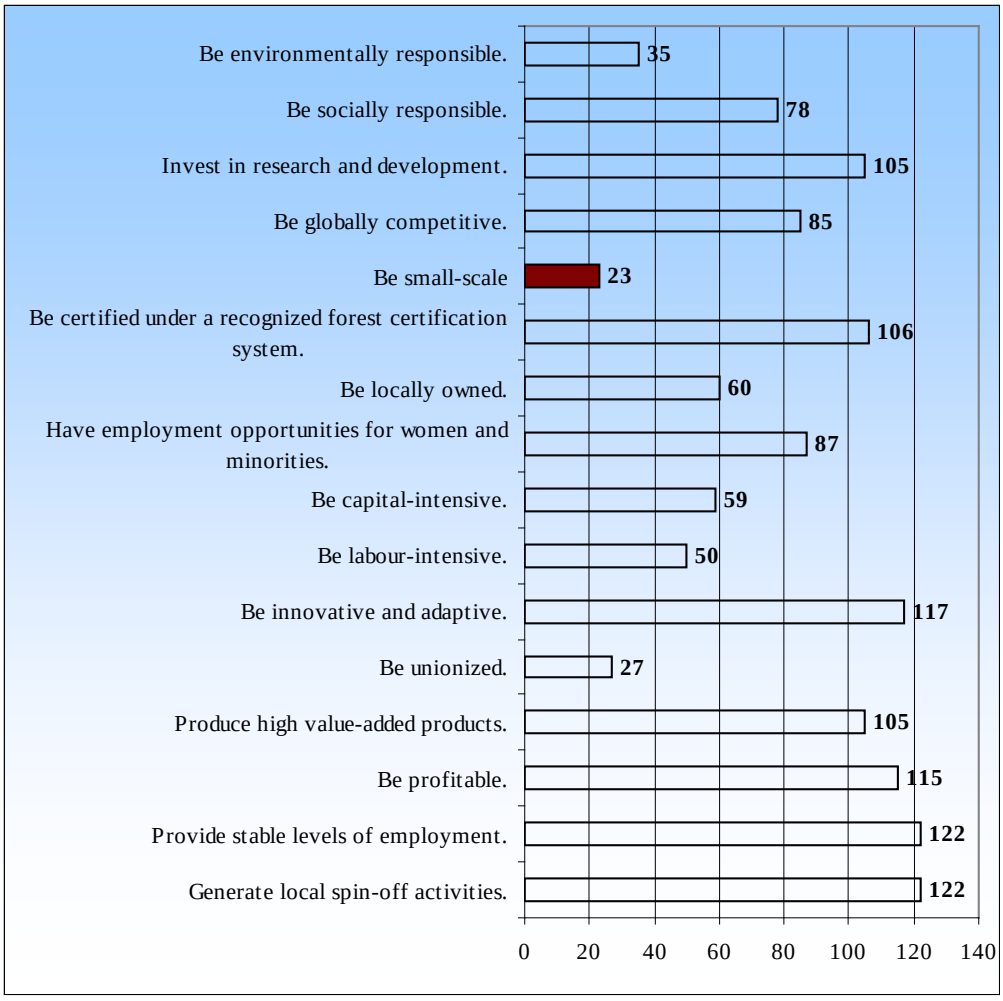


Figure 42. Number of respondents who indicated "very important" for each possible LP quality.