

**Public Perceptions and Attitudes toward Sustainable Forest Management: Central
Nova Scotia, 2000**

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Disclaimer: The conclusions drawn in this report are those of the authors and should not be construed as representing the views of the Partners of the Nova Forest Alliance.

Executive Summary

Forests are an integral part of the economy and way of life of Nova Scotians. Increased knowledge about the interaction between the forest environment and people is an essential part of understanding sustainable forest management in a region. Therefore, a comprehensive study of sociocultural character, including perceptions and attitudes, is necessary to ensure the viability of our forests. Within this context, the current research is directed at an in-depth understanding of the perceptions, beliefs, and behaviour of the people living in and near the Nova Forest Alliance (NFA) Model Forest Project Area, which constitutes an area of 458,000 ha or 1.3 million acres and stretches between Truro and Halifax and Windsor and Caribou Mines. In particular this study focuses on the general public's ideas about the sustainability of Nova Scotia's forests.

Several objectives helped to define the research initiative. First, the NFA recognized the importance of sociocultural research and the need to develop a research program capable of exploring questions and concerns over a period of several years. Second, the research in the first instance was aimed at developing baseline information on sociocultural dimensions of the NFA region, and thus an increased understanding of the area. Third, the research was envisioned as contributing information useful to various committees within the NFA structure, such as the Criteria and Indicators and the Communications Committees. Finally, the research program was seen as an opportunity to provide a benchmark for the evaluation of model forest programming.

This report presents the findings of a major part of the second stage in the sociocultural research program supported by the NFA, a mail survey on the general public's opinions toward our forest. It presents a brief summary of the methodology employed, detailed research results, and conclusions.

- The sample consists of 643 people living in or near the Nova Forest Alliance Project Area. Five hundred and two people responded from the Nova Forest Alliance Project Area and 141 from Halifax/Dartmouth. The response rates were 50% and 39% respectively. This represents a combined margin of error of 3 percent (19 times out of 20) and a total response rate of 48 percent.
- The sample had equal representation from both genders, and was reasonably well educated (30% were university or college graduates). All age groups were well represented, except for those under the age of 25. Of those economically active, 20% were employed in blue collar positions and 40% in a white-collar occupation. Thirty-seven percent were retired, students, unemployed, or in domestic occupations. About 10% percent were dependent on the forest industry for their economic livelihood.

- Due to the nature of the sample, respondents currently live in and had been raised in rural areas. About a third owned woodland. The distribution of woodland acreage owned mirrors that of the population. A quarter of respondents owned mediumly to large woodland properties (26% over 50 acres). Few woodland owners (maximum 5%) were members of forest-related organizations.
- A high proportion (83%) of respondents were interested or very interested in forest issues, and 54% felt that they were at least somewhat informed. Few (10%) considered themselves knowledgeable or very knowledgeable about forest management. Relatively few (20%) said that they or members of their household had quite a lot of experience working in the woods. About half (51%) visited the forest one or two times a month.
- Respondents considered the forest an important part of the Nova Scotians' economy, and very important to the environment and quality of life. Forest health was tied for fourth place with crime prevention and job creation behind provision of health care, quality of education, and food safety as important issues in Nova Scotia.
- Most respondents (71%) said that little or no opportunity was given for them to express views on the use of forests in Nova Scotia. The majority (90%) indicated that citizens' participation in forest decision making was valuable. Eighty-eight percent felt that it was important for them to have a say in directing how the forests of Nova Scotia are used.
- Sources of information important to the general public included environmental groups, woodland owners, various forest professionals, and families and neighbours. Confidence in these sources was high. The preferred media used were television and newspaper. The Internet seems to be increasingly important.
- Respondents were asked what types of information about forests would be useful. Information about ecological issues and management practices, such as forest preservation and reforestation, ranked the highest.
- About three quarters of the respondents to the survey (77%) had not taken any action to express their views on the use of Nova Scotia's forests. Among those who had, key activities involved discussing concerns with friends, neighbours or coworkers, or contacting another landowner.
- Only a small proportion (12%) of the sample had heard of the Nova Forest Alliance Project Area project. Respondents considered the following to be the most important things the Nova Forest Alliance can do to improve the management of Nova Scotia's forests: promote reforestation (43%), inform and educate the public (29%) and young people (27%), promote sustainable forest practices (27%), and improve forest management (24%)

- The leading use of the forests by over sixty percent of the respondents was recreational in nature, including walking, hiking, and sightseeing. The key products harvested or gathered in the last three years were berries (61%), firewood (46%), fish (41%), Christmas trees (38%), and plants and flowers (37%). Few (10%) had income from timber activities, and even fewer (6%) derived income from non-timber activities.
- To the respondents, sustainable forest management was defined in terms of two main dimensions: the use or non-use of certain management practices, such as balancing harvesting and reforestation, and clearcutting, and the promotion of ecological values, such as forest preservation and protection of the environment.
- The largest percentage of respondents do not believe that forest management is currently sustainable as practiced on private company woodlands (52%), on privately-owned woodlands (43%), or on Crown lands (48%). On average, about 30% said that they did not know. When asked about the commitment of various organizations to sustainable forest management in Nova Scotia, they scored the following as having the highest levels of commitment: the NFA, forest associations, and environmental groups. A third felt that Nova Scotia forest managers are not doing a good job of managing the forests. Over half said they did not know.
- The environmental benefits of forests were seen as significantly more important than social benefits, which were rated more important than economic benefits. However, all were seen as important forest values.
- Attitudes toward forest sustainability are reflected in the level of agreement or disagreement to a series of statements presented to respondents. Statements that ranked the highest level of agreement included: *protecting the environment (90%) and endangered species (87%) is more important than protecting jobs in the forest industry; society has an obligation to protect endangered species (90%); forest companies should do more to protect the environment (80%); more forests need to be replanted (90%); protecting jobs in the forest industry and protecting the forest environment are both possible (87%); and the most important objective of forest management is to protect the environment (85%)*.
- Support was evident for the regulation of timber harvest contractors (86%), for incentives to develop protected areas (59%), for the protection of Old Growth forests (78%), and for forest management to produce quality wood products (56%). Respondents agreed that *consumer demand for forest products threatens the environment (80%)*, and that *Nova Scotia will have little harvestable wood in 10 to 20 years (61%)*. They felt that *insufficient planting or natural regeneration was taking place to meet future timber needs (59%)* and that there is insufficient wood for all users (52%). Respondents valued the forest as part of the landscape. They

expressed some concern about the abilities of woodland owners to manage the land. They were definitely worried about the long-term health and sustainability of the forest.

- They definitely felt that society had a role to play in the management of forest. The following statements reflect this viewpoint. *Ownership of forested land does not give people the right to do whatever they want with it (77% agreed). Where forests are privately owned, society should not have any control over what the owners do with them (71% disagreed). Legislation should be enacted requiring forest landowners to adhere to best forest management practices on their own land (70% agreed).*
- The general public was in favour of forest management practices such as selection and partial cutting (69%), leaving clumps of trees to protect wildlife (86%), using specialized equipment designed to protect the environment (70%) and closing the forest roads to control garbage dumping (76%). Opinions were divided about the acceptability of the use of herbicides and pesticides.
- Almost half (47%) of respondents felt that clearcutting should be allowed only where suitable for the area and species. However, more than a third (38%) felt clearcutting should be banned. NFA residents were more likely to consider the practice acceptable with limitations. Strong opinions were noted when the general public were asked to consider at what point clearcutting was an acceptable practice. They felt that clearcutting should be used to harvest dead and dying stands (65%), and if replanting was to occur immediately after harvesting (46%). Most did not consider clearcutting to be an acceptable practice on publicly owned (67%) or privately owned land (65%).
- The respondents strongly advocated the regulation of various forest activities by the provincial government, especially the activities of contractors and clearcutting.
- Leading threats to the forest as perceived by the general public included: harvesting faster than forest growth, too little planting, lack of long range planning, and clearcutting (indicated by over 80% of respondents). Recreational uses and oil and gas pipeline activity were not considered threats by over 64 percent of users. On the other hand, current forest uses are perceived as threatening wildlife and fish habitat and waterways by more than 70% of respondents.
- Overall, the general public sample has a strong wish to preserve the forests for future generations and to manage the forests sustainably.
- NFA residents and Halifax residents did not differ significantly in their views. In fact, people living in the model forest expressed very deep concerns about the future of the forests, particularly with reference to the availability of timber and to current management.

- In general, women espoused stronger pro-environmental positions and men frequently articulated pro-economic attitudes. Youth were more likely to value the recreational use of forests and to have stronger environmental protection values. Those with economic ties to the forest were more in favour of current forest practices than others, but not at the expense of the environment.

To summarize, clearly, respondents were worried about all aspects of the forest environment. They expressed concern about the viability of the forest, not only as a productive environment, but as an environment for recreation, as wildlife habitat, and as part of a rural landscape. These views were expressed most emphatically by the residents of the model forest.

They recognized the value of forest industry to the economy of Nova Scotia, and certainly saw the need to have a viable industry. However there were strong reservations about some forest management practices, such as clearcutting, and they articulated a desire for increased government regulation of forest activities. They firmly believe that society has a role to play in the management of Nova Scotia's forests. While they value participation in decision-making processes, few opportunities are perceived to exist for making a real contribution. Related to this, the media, especially television and newspapers, are particularly important venues to reach the public with information about forests. If the NFA and its partners want to get the message out about sustainable forest management to the public, energy must be focussed on using the mass media effectively, including the Internet.

The forests are used by the public mainly for non-economic purposes, including nature-based leisure activities such as walking and birdwatching. This underpins the importance of the forest as an aesthetic environment. This sample is very worried about the environmental impact of forest activities, and exhibited a strong desire to preserve and protect the forest. They see the forest as an integral part of the total ecosystem in the province and believe that damage to the forest ecosystem will have a direct impact on the quality of their life. Youth and women express these views more strongly than anyone else, regardless of where they live.

The recurring theme throughout this project is the need to protect and preserve the forests of Nova Scotia, not only for now, but for future generations.

Table of contents

Introduction.....	1
Materials and Methods.....	2
Demographics:	
Age, gender, education, occupation.....	3
Residence.....	5
Participation in forest issues and decision making.....	9
Forest use.....	24
Forest management: The sustainability of Nova Scotia’s forests.....	27
Clearcutting.....	38
Forest problems and values.....	39
Suggestions for the Nova Forest Alliance.....	43
One wish.....	44
Summary of results.....	47
Conclusions.....	50
References.....	51
Appendices:	
Appendix A: Sample questionnaire and cover letter.....	53
Appendix B: Comments on clearcutting.....	65

List of tables

Table 1: Response to the mail survey.....	3
Table 2: Gender of respondents.....	4
Table 3: Age of respondents.....	4
Table 4: Level of education of respondents.....	4
Table 5: Occupation of respondent by Statistics Canada classification.....	5
Table 6: Respondents' places of residence.....	6
Table 7: Respondents' residences when growing up.....	6
Table 8: Current and former community types.....	7
Table 9: Residence and background of respondents.....	7
Table 10: Woodland acreage owned by respondents.....	8
Table 11: Economic dependence on forest industry.....	8
Table 12: Membership in organizations.....	9
Table 13: Prior knowledge of the NFA Model Forest Project.....	9
Table 14: Interest in forest issues.....	10
Table 15: Informed about forest issues.....	10
Table 16: Extent of knowledge about forest management.....	11
Table 17: Extent of experience working in the woods.....	11
Table 18: The number of trips made to forests in Nova Scotia's countryside in past year.....	12
Table 19: Opportunities to express views on use of forests in Nova Scotia.....	12
Table 20: Value of citizen participation in deciding use and management of forest.....	13
Table 21: Importance of personal participation.....	13
Table 22: Expression of opinions.....	14
Table 23: Actions undertaken to express opinions on forests.....	14
Table 24: Importance of sectors to Nova Scotia's economy.....	15
Table 25: Importance of forestry to aspects of life in Nova Scotia.....	16
Table 26: Importance of various issues in Nova Scotia.....	16
Table 27: Sources of information on forest issues.....	18
Table 28: Media used to access information on forest issues.....	19
Table 29: Relative confidence in information sources.....	20
Table 30: What categories of information about forests would be helpful to you?.....	21
Table 31: What types of information about forests would be helpful to you?	21
Table 32: Purpose for visiting forest in Nova Scotia's countryside in last year.....	25
Table 33: Harvest from Nova Scotia's forest in the last three years.....	26
Table 34: Income from timber activities.....	27
Table 35: Income from non-timber activities.....	27
Table 36: What does sustainable forest management mean to you?.....	28
Table 37: Sustainability on company lands.....	30
Table 38: Sustainability on private lands.....	30
Table 39: Sustainability on Crown land.....	31
Table 40: Commitment to Sustainable Forest Management in Nova Scotia.....	32
Table 41: Are Nova Scotia's forest managers doing a good job?.....	32
Table 42: Level of agreement with environmental / economic statements.....	34

Table 43: Perspectives on a variety of environmental issues.....	36
Table 44: Evaluation of management practices.....	37
Table 45: Attitudes towards clearcutting.....	38
Table 46: Agreement with certain clearcutting practices.....	39
Table 47: Relative importance of forest values.....	40
Table 48: Attitudes towards government regulation.....	40
Table 49: Threats to forests.....	42
Table 50: Extent of threat from forest use.....	43
Table 51: Potential actions by Nova Forest Alliance.....	44
Table 52: If you had one wish for the future of Nova Scotia's forest, what would it be?.....	45

Introduction

Forests are an integral part of the economy and way of life of Nova Scotians. Increased knowledge about the interaction between the forest environment and people is an essential part of understanding sustainable forest management in a region. Therefore, a comprehensive study of sociocultural character, including perceptions and attitudes, is necessary to ensure the viability of our forests. Within this context, the current research is directed at an in-depth understanding of the perceptions, beliefs, and behaviour of the people living in and near the Nova Forest Alliance (NFA) Model Forest Project Area which constitutes an area of 458,000 ha or 1.3 million acres and stretches between Truro and Halifax and Windsor and Caribou Mines. In particular the survey focuses on the general public's perceptions about the sustainability of Nova Scotia's forests.

Several objectives helped to define the research initiative. First, the NFA recognized the importance of sociocultural research and the need to develop a research program capable of exploring questions and concerns over a period of several years. Second, the research in the first instance was aimed at developing baseline information on sociocultural dimensions of the NFA region, and thus an increased understanding of the area. Third, the research was envisioned as contributing information useful to various committees within the NFA structure, such as the Criteria and Indicators and the Communications Committees. Finally, the research program was seen as an opportunity to provide a benchmark for the evaluation of model forest programming.

More specific objectives related to the survey were as follows.

- to determine what sources of information members of the general public use to get information on forestry issues, and the value they place on these sources
- to assess the level of knowledge about the NFA Model Forest Project and to determine how the NFA might better serve the public's needs
- to assess views on sustainable forest management
- to ascertain views on a variety of forest issues, and to determine what issues they consider important to the health of Nova Scotia's forests
- to determine the value the public places on a variety of forest management practices, particularly clearcutting
- to ascertain what the general public perceives as threats to Nova Scotia's forests and the forest industry
- to determine the value placed on public participation in decision-making on forest issues
- to find out what priorities the general public has for the use of our forest
- to determine what value is placed on the forest industry relative to other aspects of life in Nova Scotia
- to determine what attitudinal differences exist, if any, between rural and urban residents

This report presents the findings of a major part of the second stage in the sociocultural research program supported by the NFA, a mail survey on the general public's opinions towards our forest. It presents a brief summary of the methodology employed, detailed research results, and conclusions.

Materials and methods

A mail survey of the general public was conducted in the spring of 2000. The initial process of questionnaire preparation began in the fall of 1999, with a meeting of the partners of the Nova Forest Alliance in Stewiacke. At this meeting, the partners were asked to develop a list of questions that would serve as a basis for the questionnaires developed for both the woodland owners and the general public. After this session, the research team of the Nova Forest Alliance met to begin the initial process of developing the questionnaires. The research team consisted of Lauranne Sanderson, Ken Beesley, and Rebecca Colborne of the Nova Scotia Agricultural College, Tom Beckley and Ian Millar from the Canadian Forest Service, Peter Duinker and Eldon Gunn from Dalhousie University, and Brian Sykes from the Nova Forest Alliance. When a final draft was prepared, it was circulated to all members of the Partnership of the Nova Forest Alliance for review. Numerous suggestions were received from all sectors within the NFA Partnership and where possible incorporated into the final questionnaire. In addition, the questionnaire was sent to be peer-reviewed by academics and researchers working in the forestry industry. The questionnaire was then revised and pre-tested on a small sample of the general public. See Appendix A for the sample questionnaire and cover letter. The first mailing took place in the second week of March, a postcard was sent two weeks later, and another questionnaire was sent out in April. To increase return rates, respondents were asked to send in a ballot to win one of three prizes.

Two samples were chosen from the 1998 database of registered voters in the Nova Forest Alliance Project Area and in the Halifax Dartmouth region. A random sample of 1050 people was selected from 45,954 people living in the Nova Forest Alliance Project Area. Four hundred people were selected from the Halifax/Dartmouth region, from a list of 140,517 names. The sample from Halifax was included to ensure representation from the urban population living on the fringe of the model forest.

Overall, we achieved an exceptional response rate for a mail survey. Six hundred and forty-three people returned the questionnaire for a response rate of 48 percent. These response levels allow for a 5% margin of error within the NFA region (19 times out of 20), and a 7% margin of error (19 times out of 20). See Table 1 for a breakdown of the response rates. The responses were coded and analyzed using SPSS 10 (Statistical Package for the Social Sciences). Cross-tabulation by gender, age, woodland ownership, economic dependence on the forest industry, and residence were undertaken.

Table 1: Response to the mail survey

Types of Responses - NFA residents	Frequency
completed questionnaires	502
undeliverable	49
deceased	2
unwilling/unable	7
Total returns from 1082	562

Types of Responses - Halifax residents	Frequency
completed questionnaires	141
undeliverable	35
unwilling/unable	8
total returns from 400	185

Demographics

To set the research findings in context, various sociodemographic characteristics of the respondents are presented. These characteristics include gender, age, education, and occupation. We also consider where respondents currently reside, and where they resided growing up. Finally, a few questions are related to property and forest-related matters.

The respondents are virtually evenly split by gender (Table 2), and the age distribution is dominated by middle-aged groups (ages 35-54), with the elderly slightly more represented in the Halifax portion of the sample (Table 3). Overall, the sample is reasonably well-educated, with 30% being university or college graduates; however, significantly more N.A. area respondents have a lower education level than do Halifax area respondents (Table 4). The marked occupational descriptor of the respondents would be 'not economically active'. That is, over 40% of the sample does not work full-time basis; rather they are retirees, homemakers, students, unemployed, or unclassified (Table 5). Twenty percent of respondents work at blue-collar jobs, but most work at white collar occupations.

Table 2: Gender of respondents

Gender	NFA area (%)	Metro Halifax (%)	Total (%)
Male	52	51	52
Female	48	49	48
Total	100	100	100

chi-square = .048 p = .826
 n = 630

Table 3: Age of respondents

Age	NFA area (%)	Metro Halifax (%)	Total (%)
Under 25	7	8	7
25 - 34	17	18	17
35 - 44	24	17	23
45 - 54	23	24	23
55 - 64	14	12	13
65+	15	21	16
Total	100	100	100

chi-square = 6.288 p = .279
 n = 636

Table 4: Respondents' level of education

Education Level	N.A. area (%)	Metro Halifax (%)	Total (%)
Some high school or less	21	12	19
High school diplomas	25	23	25
Some post secondary	27	24	26
University or college graduate	23	28	24
Post graduate study	5	13	6
Total	100	100	100

chi-square = 16.620 p < .001
 n = 626

Table 5: Occupation of respondent by Statistics Canada Classification

Standard Occupational Classification	Frequency	Percent
Retired	116	19.4
Trades, transport, and equipment operators	78	13
Domestic occupations	70	11.7
Sales and service	63	10.6
Business, finance, and administrative	59	9.9
Social science, education, government service, and religion	39	6.5
Health occupations	32	5.4
Natural and applied sciences and related occupations	24	4
Primary industry	23	3.8
Student	22	3.7
Management occupations	21	3.5
Unemployed	12	2
Multiple occupations listed	11	1.8
Processing, manufacturing, and utilities	8	1.3
Art, culture, recreation, and sport	2	0.3
Unclassified	18	3
Total	598	100

$n = 598$

Residence

Respondents are characterized not only by their social attributes, but also by their community type. They were asked their current community type and the type of community they grew up in. Five options were offered: city, town, village, rural non-farm and farm. Most of the respondents currently live in a rural non-farm community (Table 6), while almost as many, proportionately, grew up in a city environment (Table 7). When current and childhood communities are cross tabulated, a description of the respondent's residential history is developed (Table 8). In this case, we find that the diagonal on the matrix tends to be the dominant cell, i.e., more people that live in a city currently also grew up in a city, and so on. Such detailed information can be collapsed into a simple scale which describes current residence and background (Table 9), and in this case the respondents are identified as mainly rural/rural.

Table 6: Respondents' place of residence

Place	Total (Percent)
City	22
Town	12
Village	22
Rural non farm	38
Farm	6
Total	100

$n = 643$

Table 7: Respondents' residence when growing up

Place	Total (Percent)
City	24
Town	18
Village	17
Rural non-farm	26
Farm	15
Total	100

$n = 634$

Table 8: Current and former community types*

Where live (%)	Where grew up (%)				
	Urban / urban		Urban with rural		
	City	Town	Village	Rural nonfarm	Farm
City	48	24	13	10	9
Town	8	31	12	9	4
	Rural with urban		Rural / rural		
Village	12	15	49	19	19
Rural nonfarm	31	26	23	60	45
Farm	1	4	3	2	23
Total	100	100	100	100	100

n = 643

Table 9: Residence and background of respondents*

Locale	Percent of respondents
Urban residence / urban background	23
Rural residence / rural background	47
Urban residence / rural background	19
Rural residence / urban background	11
Total	100

n = 643

*This is a recoded variable which was obtained by combining two variables: where respondents currently reside and where they grew up. Urban/ urban refers to respondents living and having been raised in an urban setting. Rural/rural describes respondents who are living and have grown up in rural area. Rural with urban refers to respondents living in a rural area and having grown up in an urban setting.

As expected, a certain percentage of the general public sample owned woodland. About one-third of the respondents are woodland owners, and most of these own less than 20 acres (Table 10). Further analysis found that older and rural respondents were more likely to own larger acreages, while female respondents were more likely to own smaller acreages. While the survey was of the general public, it was recognized that potential respondents could well be economically or otherwise involved with forests and the forest industry. Indeed, 12% of respondents in the NFA area and 5% in Metro Halifax indicated a level of household dependence on the forest industry of Nova Scotia (Table 11), and 2-5% of respondents are members of at least one organization related to forests, the environment, conservation, hunting or fishing, or natural history (Table 12). Finally, when

asked if they had heard or read about the Nova Forest Alliance Project Area Project before answering the questionnaire, 12% of respondents confirmed that they had, and that group was dominated by those with a level of economic dependence on the forest industry (Table 13).

Table 10: Woodland acreage owned by respondents

Acreage	NFA area	Metro Halifax	Total
Less than 20 acres	67	59	66
20 - 49 acres	7	9	7
50 - 99 acres	10	27	12
100 - 99 acres	8	--	7
200 or more acres	8	5	7
Total	100	100	100

chi-square = 7.64 $p = .106$

$n = 217$

Table 11: Economic dependence on forest industry

Do you or does any member of your household depend upon the forest industry in Nova Scotia for his or her economic livelihood?	NFA area (Percent)	Metro Halifax (Percent)	Total (Percent)
Yes	12	5	10
No	88	96	90
Total	100	100	100

chi-square = 6.162 $p < .05$

$n = 625$

Table 12: Membership in organizations

Membership in organization	<i>n</i> =	Percent of respondents
Natural history or birdwatching club	584	2
Hunting or fishing organization	589	5
Environmental or conservation organization	584	4
Forest related organization	590	5

Table 13: Prior knowledge of the NFA Model Forest Project

Had you heard or read about the Nova Forest Alliance Project Area project before receiving this questionnaire?	NFA area (%)	Metro Halifax (%)	Total (%)
Yes	13	6	12
No	79	86	80
Not sure	8	8	8
Total	100	100	100

chi-square = 5.181 $p = 0.75$
n = 623

Participation in forest issues and decision making

This section begins with an exploration of respondents' self-assessed levels of interest in forests, awareness, and aspects of participation. Very few respondents indicate no interest in forest issues, while over one-third suggest they are very interested (Table 14). Analyses reveal that respondents with substantially higher levels of interest are male, woodland owners, rural residents, and economically dependent on forest activities. While interest is high, how well informed respondents considered themselves were mixed, with about half feeling somewhat or well informed and half feeling not very or not at all informed (Table 15). Those who feel they are more informed tend to be males, woodland owners, and dependent on the forest.

Table 14: Interest in forest issues

How interested are you in issues concerning the forests of Nova Scotia?	NFA area (%)	Metro Halifax (%)	Total (%)
Very interested	39	31	37
Interested	45	47	46
Somewhat interested	15	20	16
Not interested	1	2	1
Total	100	100	100
Don't know (frequency)			10

chi-square = 10.143 $p < .05$

$n = 629$

Table 15: Informed about forest issues

How informed are you about the forests of Nova Scotia today?	NFA area (%)	Metro Halifax (%)	Total (%)
Very informed	4	2	10
Somewhat informed	45	34	44
Not very informed	42	52	43
Not at all informed	9	12	4
Total	100	100	100
Don't know (frequency)			1

chi-square 8.016 $p < .05$

$n = 636$

Respondents were then asked to assess their level of knowledge about forest management and their household's level of direct experience with work in the woods. Most admitted slight or no knowledge about forest management. The reported levels of knowledge were higher for NFA and rural residents, men, and those economically dependent on the forest (Table 16). Similarly, most respondents indicated that their household had little or no experience with working in the woods, though more experience was revealed for N.A. and rural residents, men, woodland owners, and households with an economic dependence on the forest (Table 17). How often a person visited the forest would also have an impact on her or his level of knowledge about forest issues. About ten percent of the respondents averaged more than one trip per week to the forests in Nova Scotia's countryside. More than a third visited about once a month (Table 18).

Table 16: Extent of knowledge about forest management

Extent of knowledge	NFA area (%)	Metro Halifax (%)	Total (%)
Very knowledgeable	3	--	2
Knowledgeable	10	2	8
Somewhat knowledgeable	33	26	32
Slightly knowledgeable	36	40	37
Not at all knowledgeable	18	32	22
Total	100	100	100

chi-square = 24.225 p <.0001
n = 621

Table 17: Extent of experience working in the woods

Extent of experience	NFA area (Percent)	Metro Halifax (Percent)	Total (Percent)
A lot of experience	10	1	8
Quite a bit of experience	14	4	12
Some experience	27	19	25
Little experience	23	24	23
No experience	26	52	32
Total	100	100	100

chi-square = 43.47 p <.0001
n = 625

Table 18: The number of trips made to forests in Nova Scotia's countryside in past year

Number of trips made to forests in Nova Scotia in past year	NFA area (%)	Metro Halifax (%)	Total (%)
Less than 12	34	57	39
13 to 24	14	4	12
25 to 52	16	13	15
more than 52	14	4	10
don't know	24	23	24
Total	100	100	100

chi-square = 23.512 $p < .0001$
 $n = 518$

Previous research has pointed to the fact that people want to be engaged in forest issues, have opportunities to express their opinions, and participate in decision-making. This research provides some confirmatory evidence. For example, while most respondents indicate that they have little opportunity to express their views on the use of Nova Scotia's forests (Table 19), the vast majority also feel that it is valuable to have citizens participate in deciding how the forests of Nova Scotia are used and managed (Table 20), and that it is important for them personally to have a say in directing how the forests of Nova Scotia are used (Table 21).

Table 19: Opportunities to express views on use of forests in Nova Scotia

How much opportunity do you believe there is for people like you to express your views on the use of the forests of Nova Scotia?	NFA area (%)	Metro Halifax (%)	Total (%)
A great deal of opportunity	5	4	5
Some opportunity	24	26	24
Little opportunity	54	57	55
No opportunity	17	13	16
Total	100	100	100
Don't know (frequency)	61	20	81

chi-square = 1.381 $p = .710$
 $n = 614$

Table 20: Value of citizen participation in deciding use and management of forest

How valuable is it to have citizens participate in deciding how the forests of Nova Scotia are used and managed?	NFA area (%)	Metro Halifax (%)	Total (%)
Very valuable	32	34	33
Valuable	58	55	58
Of little value	9	9	9
No value	1	2	1
Total	100	100	100
Don't know (frequency)	38	15	53

chi-square = 1.699 $p = .637$
 $n = 632$

Table 21: Importance of personal participation

Is it important for you to have a say in directing how the forests of Nova Scotia are used?	NFA area (%)	Metro Halifax (%)	Total (%)
Yes	90	84	88
No	10	16	12
Total	100	100	100
Don't know (frequency)	89	20	109

chi-square = 2.897 $p = .089$
 $n = 625$

Respondents were further asked to indicate if they had taken any action to express their views and opinions on the use of Nova Scotia's forests, and to indicate the types of action taken. While only about one-quarter of the respondents indicated that they had taken any action (Table 22), there were those who were more likely to have done so. That is, respondents were more likely to have taken action if they fit into any of the following categories: younger, male, woodland owner, rural resident, or economically-dependent on the forest. Several types of action were indeed taken by respondents, though relatively few engaged in any type of action (Table 23). The two most common actions were discussing forest concerns with friends, neighbours, and co-workers, and contacting a landowner. Other more formal actions are well represented on the list, but relatively few respondents (less than 20%) took these actions.

Table 22: Expression of opinions

In the past year, have you taken any action to express your views and opinions on the use of Nova Scotia's forests?	NFA area (%)	Metro Halifax (%)	Total (%)
Yes	26	15	23
No	74	85	77
Total	100	100	100

chi-square = 5.96 $p < .05$
 $n = 573$

Table 23: Actions undertaken to express opinions on forests

Type of Action	NFA area (%)	Metro Halifax (%)	Total (%)
Discussing with friends, neighbours, co-workers	94	96	94
Contacting landowner	58	44	56
Giving money to environmental or conservation organization	18	13	17
Attending a lecture or seminar on forest issues	18	9	17
Attending a public meeting on forest issues	17	9	16
Calling or writing a government forestry official	14	9	13
Calling or writing to a politician	11	9	11
Calling or writing to a forest industry representative	11	9	10
Joining an environmental or conservation organization	11	9	10
Boycotting forest-related consumer products	8	17	9
Joining a forest association	4	4	4
Calling a 'phone-in' or 'talk-back' show	6	4	6
Writing to a newspaper or magazine	5	4	5
Serving on a committee dealing with forest management	4	4	4
Attending public rally or protest about a forestry issue	2	9	3
Other	5	9	5
$n =$	133	23	156

Within the context of information, awareness, and participation, respondents were asked about the importance of five economic sectors to the provincial economy. While the forest sector was top rated, it was clearly felt that fisheries, agriculture, and tourism are also very important economically, while mining trailed (Table 24). Rural and NFA area residents tended to place more importance on forests and agriculture, and urban residents and those with a strong economic link to forest activity emphasized tourism more.

With specific reference to forestry, respondents were asked to assess the importance of forestry to six aspects of life in Nova Scotia. The results indicate that respondents strongly feel that forestry is very important to the Nova Scotia environment and the quality of life experienced in the province. The other aspects of life were also considered as having important links to forestry, in rank order: the economy, employment, recreation, and tourism (Table 25). Further analysis suggests a variety of structural influences on these ratings: for example, younger respondents emphasize the environment, recreation, and tourism, woodland owners focus more on the quality of life, and rural and NFA area residents and those linked with forest activities stress the economy and employment.

In order to place forest issues in a broader context, respondents were asked to rate the importance of seven issues in Nova Scotia. In rank order, the leading issues were perceived to be healthcare provision, food safety, and (all tied for third) crime prevention, job creation, and forest health (Table 26). Women consistently rated most of these issues higher than did men.

Table 24: Importance of sectors to Nova Scotia's economy

Sector	Very important (%)	Important (%)	Somewhat important (%)	Not important (%)	Total	n =	Don't know (Frequency)
Forest	71	25	3	1	100	632	6
Agriculture	67	26	6	1	100	616	5
Tourism	67	26	5	1	100	628	6
Fisheries	65	28	6	1	100	628	6
Mining	29	37	30	4	100	594	25

Table 25: Importance of forestry to aspects of life in Nova Scotia

Aspect of Life	Very important (%)	Important (%)	Somewhat important (%)	Not important (%)	Total (%)	n =	Don't know (Frequency)
Environment	82	15	2	1	100	629	4
Quality of life	67	28	4	1	100	619	10
Economy	53	38	8	1	100	619	7
Employment	52	36	11	1	100	628	10
Recreation	50	37	12	1	100	620	7
Tourism	47	37	15	1	100	599	17

Table 26: Importance of various issues in Nova Scotia

Issue	Very important (%)	Important (%)	Somewhat important (%)	Not important (%)	Total	n =	Don't know (Frequency)
Provision of healthcare	86	12	1	1	100	634	2
Quality of education	78	19	2	1	100	630	3
Food safety	71	23	5	1	100	624	3
Crime prevention	63	30	6	1	100	629	3
Job creation	63	30	6	1	100	627	3
Forest health	63	32	4	1	100	634	3
Government debt reduction	41	38	19	2	100	623	6

To ensure that the NFA uses the best methods to get its message across, it must be aware of the most effective mechanisms to do so. In this study, respondents were asked what their sources of information are, what media they use to access information, their relative level of confidence in various information sources, and what types of information would be helpful to them. Over half of the respondents indicate that four groups of people are key sources of information: environmental groups, woodland owners, forestry industry employees, and government forestry employees (Table 27). The second cluster of sources, receiving at least at least a one-third response rate, includes a variety of forest-related workers and general social contacts. Relatively few (less than one-third) used other sources, such as forest workers, elders, journalists, educators, or politicians.

Detailed analyses indicate that some respondents are more likely to select certain sources

over others. For example, younger respondents reveal a preference for information from teachers and professors, the NFA, environmental groups, journalists, and friends, family, and neighbours, while older respondents prefer forestry officials, and consultants, woodland owners, and professional foresters. Male respondents favour independent woods workers as sources, whereas women are more likely to select local politicians, environmental groups, and teachers. Woodland owners focus on using forest work contractors, other woodland owners, and independent woods workers, while those who do not own woodland emphasize the use of environmental groups as sources of information. Urban residents stress educators, journalists, and environmental groups as sources, in contrast to rural residents who focus on elders, the forestry industry, contractors, woodland owners, and independent woods workers. Finally, those respondents with a level of dependency on the forest are more likely to select elders, forest industry people, consultants, woods workers, and the NFA, while those who are not dependent choose relatively more often educators, environmental groups, and journalists.

Table 27: Sources of information on forest issues

Source	NFA area (%)	Metro Halifax (%)	Total (%)
Environmental groups	59	66	60
Woodland owners	60	45	57
Forest industry employees	54	46	52
Government forestry employees	51	54	52
Professional foresters	49	48	49
Friends, family, neighbours	4	38	44
Forest associations	43	47	44
Nova Forest Alliance	40	35	39
Forestry consultants	37	38	37
Independent woods workers	36	21	33
Forest work contractors	32	18	29
Elders	32	17	29
Forestry workers	32	18	29
Journalists	23	26	23
School teachers	19	22	20
Provincial politicians	18	21	19
University / college professors	17	23	18
Local politicians	18	18	17
Federal politicians	8	7	8
Other sources	4	3	3

n = 620

Today's electronic age can lead to considerable speculation about the kinds of media used to access information on any issue, including forest issues. To assess this, respondents were asked to indicate the media they would use to get to information on forest issues. The findings reveal that while electronic sources, especially television, radio, and the Internet are important, so are more traditional sources, such as newspapers and magazines, while various other media, particularly meetings, are less likely to be used (Table 28). Detailed analyses suggest that selected media are more likely to be used by various groups. Younger respondents, for example, prefer electronic and print media, while older respondents favour workshops. Women prefer television, radio and newspapers. Woodland owners report a preference for meetings and newsletters, while respondents who do not own woodland are slightly more likely to use electronic media and newspapers. Rural

residents indicate a slight preference for meetings and print media, and urban respondents favour television, the Internet, and newspapers. Respondents with an economic link to forestry stress field tours and newsletters, while others favour electronic media and newspapers.

Table 28: Media used to access information on forest issues

Medium	NFA area (%)	Metro Halifax (%)	Total (%)
Television	76	80	77
Newspaper	73	84	76
Radio	55	53	55
Internet	39	42	40
Magazines	40	30	38
Pamphlets / flyers	40	30	38
Newsletters	39	30	37
Books / reports	31	28	30
One-on-one meetings	29	16	26
Field tours	25	26	25
Lectures / seminars	18	21	18
Workshops	17	15	17
Other media	1	0	1

n = 617

Given a sense of preferred sources of information and media, we then asked about the relative confidence respondents have in various information sources. Respondents were asked to indicate their confidence in sources on a one-to-ten scale, where one represented “no confidence” and ten meant “a lot of confidence.” The strongest levels of confidence were given to sources such as professional foresters, the Nova Forest Alliance, woodland owners, forest associations, elders, forestry consultants, and environmental groups (Table 29). Most other sources received a moderate confidence rating (with mean scores between 5.2 and 6.6), except for all politicians who achieved mean confidence scores of 3.8 or below.

Table 29: Relative confidence in information sources

	<i>n</i> =	Little or no confidence	Moderate confidence	A lot of confidence	Total	Mean*	Don't know (%)
Professional foresters	506	8	37	55	100	7.4	13
Nova Forest Alliance	368	8	36	56	100	7.3	35
Woodland owners	535	7	44	49	100	7.1	10
Forest associations	475	6	48	46	100	7	17
Elders	443	10	43	47	100	6.9	19
Forestry consultants	482	12	45	43	100	6.9	8
Environmental groups	541	11	40	49	100	6.9	8
Forestry industry employees	512	11	46	43	100	6.6	11
Independent woods workers	498	12	51	37	100	6.5	14
Family, friends, neighbours	517	11	53	36	100	6.5	10
College / university professors	488	18	46	36	100	6.1	15
Government forestry employees	525	15	55	30	100	6	10
School teachers	503	21	51	28	100	5.8	13
Forest work contractors	499	22	50	28	100	5.7	13
Journalists	506	26	56	18	100	5.2	12
Local politicians	541	48	44	8	100	3.8	8
Provincial politicians	549	56	39	5	100	3.4	8
Federal politicians	546	64	33	3	100	3	8.5
Other	21	10	23	67	100	7.7	--

*Scale from one to ten; one is no confidence, ten is very confident.

To follow up on the information theme, respondents were given the chance, through an open-ended question, to indicate what types of information about forests they would find helpful. The responses to this question were categorized in a form consistent with previous research, summarized in six categories (Table 30). A few respondents answered the question in the context of the type of media they prefer. Overwhelmingly, the information respondents felt would be helpful fit into two categories: ecological issues and management practices. Information on forest use, public roles, and economic issues was considered less helpful. A detailed breakdown of responses reveals a particular desire for information on

forests and forest activities, such as the amount of forested land, forest and wildlife preservation activities, reforestation, clearcutting, and management (Table 31).

Table 30: What categories of information about forests would be helpful to you?

	Frequency	Percent
Category of information		
<i>Ecological issues</i>	288	40
<i>Economic issues</i>	24	3
<i>Management practices</i>	247	34
<i>Public roles</i>	41	6
<i>Use of forests</i>	52	7
<i>Other</i>	53	7
<i>Media</i>	18	3
Totals	723	100

$n = 346$

Table 31: What types of information about forests would be helpful to you?

	Type of information	Frequency	Percent
<i>Ecological issues</i>		288	39.8
	Amount of forested land remaining in Nova Scotia	36	5
	Forest preservation	35	4.8
	Wildlife preservation	30	4.1
	Native species	22	3
	Protection of the environment	18	2.5
	Forest health	18	2.5
	Condition of forests	13	1.8
	Sustainability	13	1.8
	Threat of insect infestation	13	1.8
	Riparian protection	10	1.4
	Threat of over-harvesting	10	1.4
	Threat of disease	10	1.4
	General threats to forests	9	1.2

	Threat of fire	6	0.8
	Contribution of forests to the environment	6	0.8
	Heritage (saving the forest for future generations)	5	0.7
	Other threats*	5	0.7
	Threat of acid rain	5	0.7
	Effects of pesticides / herbicides	5	0.7
	Protected areas	5	0.7
	Biodiversity	5	0.7
	Erosion	5	0.7
	Garbage dumping	2	0.3
	Types of soil	2	0.3
Economic issues		24	3.3
	Contribution of forests to economy	7	1
	Marketing forest products	6	0.8
	Employment	6	0.8
	Exports	3	0.4
	Economic viability of forest industry	2	0.3
Management practices		247	34.2
	Reforestation	54	7.5
	Clearcutting	38	5.3
	Forest management	31	4.3
	Balance of cutting and regrowth	23	3.2
	Rate of harvesting	22	3
	Regulation	21	2.9
	Silviculture	19	2.6
	Harvesting methods	15	2.1
	Effects of harvesting	12	1.7
	Corporate responsibility	5	0.7
	Companies/individuals harvesting	5	0.7
	Responsibility of woodland owners	2	0.3
Public roles		41	5.7

	Public involvement in forest protection	22	3
	Role of governments in forestry	4	0.6
	Public (Crown) lands	4	0.6
	Programs available	3	0.4
	Public enjoyment of forests	3	0.4
	Government assistance available	3	0.4
	Education	2	0.3
Use of forests		52	7.2
	Recreation	19	2.6
	Diversity of use	8	1.1
	Price of products / costs of harvesting	5	0.7
	First Nations' use of forests	5	0.7
	Development	4	0.6
	Parks	3	0.4
	Tourism	2	0.3
	Hunting / fishing / trapping	2	0.3
	Landowners' rights	2	0.3
	Ownership of forested land	2	0.3
Other		53	7.3
	All / everything / general information	22	3
	Reliable / unbiased information	15	2.1
	Other**	7	1
	History of Nova Scotia's forests	5	0.7
	None	4	0.6
Media		18	2.5
	Newsletters / magazines / newspapers	10	1.4
	Television / radio	4	0.6
	Maps of woods and waterways	2	0.3
	Other media***	2	0.3
Totals		723	100

* monoculture; careless use of the resource; waste of the resource; natural hazards; the dangers of the environment on the forests

** recycling; how forests affect the rainfall; rainforests; wildlife in Nova Scotia: which ones are edible?; was this questionnaire printed on recycled paper?; when forests are open or closed; wetlands

*** local government contact numbers for accessible people to ask questions; more ad campaigns

$n = 346$

Forest use

Information about respondents' direct experience in the forest was elicited from the next series about use of the forest, leading up to an evaluation of forest values.

The first question posed in this section was: *For what purpose(s) did you visit a forest in Nova Scotia's countryside during the last year?* Respondents were given 24 options, and the chance to select as many as appropriate, with the alternative being an indicator that they did not visit a forest in Nova Scotia's countryside. Please note that we were careful to focus the question on forests in rural Nova Scotia, eliminating from the discussion areas such as Point Pleasant Park in Halifax.

Responses indicate that three purposes led as reasons for visiting the forest: walking/hiking, driving for pleasure, and sightseeing (Table 32). Notably, the latter two may reflect a visit to the forest as a secondary activity. The next four reasons focus more on the opportunities present in various forest environments, that is: berry picking, picnicking, camping, and fishing. The remaining purposes for visiting the forest, each with a response below 30%, are mainly linked, as were the above, to leisure or recreational activities. The exceptions to this are those who visited the forest to cut firewood (20%), for employment (6%), for sugaring (4%), for scientific research (3%), or for mineral exploration (2%). Differences were noted among respondent groups. Men and younger respondents tended to choose more active pursuits. Rural residents and those with an economic dependence on the forest industry were more likely to participate in traditional forest-related activities such as hunting and fishing.

Table 32: Purpose for visiting forest in Nova Scotia's countryside in last year

	NFA area (%)	Metro Halifax (%)	Total (%)
Walking / hiking	81	81	81
Driving for pleasure	71	65	70
Sightseeing	64	64	64
Berry picking	45	27	40
Picnicking	39	43	40
Camping	37	38	37
Fishing	30	28	37
Access to cabin	28	25	27
Canoeing, kayaking / boating	27	26	27
Access to back country	26	27	26
Hunting	27	18	25
Birdwatching	24	20	23
Photography	22	26	23
Cutting firewood	24	4	20
Fourwheeling / ATVing	21	10	18
Skiing	11	11	11
Employment in woods	8	--	6
Mountain biking	8	10	9
Snowmobiling	6	4	6
Horseback riding	4	8	5
Sugaring	5	1	4
Scientific research	3	3	3
Mineral exploration	3	1	2
Trapping	3	--	2
Other	5	2	5
<i>n</i> =	433	113	546

To follow up on this question, respondents were asked if they had harvested any of a list of items from a Nova Scotian forest in the last three years. The results show that over 60% of respondents had harvested berries; more than a third had harvested firewood, fish, Christmas trees, or plants and flowers; and over one quarter had harvested boughs and brush, or deer, moose, or bear (Table 33). Detailed analyses showed that those more active in harvesting products from the forest were often younger, male, woodland owners, rural residents, and economically linked to the forest.

Table 33: Harvest from Nova Scotia's forest in the last three years

What was gathered or harvested from Nova Scotia's forest over last three years?	NFA area (%)	Metro Halifax (%)	Total (%)
Berries	61	63	61
Firewood	50	26	46
Fish	42	34	41
Christmas trees	39	34	38
Plants & flowers	38	33	37
Boughs & brush	32	24	31
Deer, moose, bear	29	15	26
Rabbits	23	14	22
Handcraft materials	23	15	21
Game birds	20	11	18
Mushrooms	13	13	13
Sawlogs	15	3	13
Pulpwood	15	4	13
Fiddleheads	13	6	12
Peat moss, black earth, soil	11	9	11
Maple sap	8	5	8
Fur animals (mink, beaver)	3	0	2
Other	2	1	2
<i>n</i> =	372	80	452

Further questions asked if the respondent, or any member of the respondent's household, derived income from *timber activities*, such as tree planting, cutting pulpwood, sawlogs, firewood, or Christmas trees, or *non-timber activities*, such as sugaring, trapping, berry picking, guiding, handcrafts, or recreation. Only 10% of all respondents, most residents in the NFA area, gained an income from timber-related activities (Table 34). Those more likely to include younger respondents, woodland owners, rural people, and those economically linked with the forest. Only 6% of the total sample, slightly more in the NFA area, derived an income from non-timber related activities (Table 35). Among these, respondents with a rural background or an economic link to the forest were more likely to be so engaged.

Table 34: Income from timber activities

Do you or any of your household derive income from timber activities such as tree planting, or cutting pulpwood, sawlogs, firewood, Christmas trees, etc. on forested land?	NFA area (%)	Metro Halifax (%)	Total (%)
Yes	12	1	10
No	88	99	90
Total	100	100	100

chi-square = 15.722 $p < .0001$
 $n = 600$

Table 35: Income from non-timber activities

Do you or any of your household derive income from non-timber activities such as sugaring, trapping, berry-picking, guiding, handcrafts, or recreation on forested land?	NFA area (%)	Metro Halifax (%)	Total (%)
Yes	7	2	6
No	93	98	94
Total	100	100	100

chi-square = 5.722 $p < .05$
 $n = 610$

Forest management: The sustainability of Nova Scotia's forests

This section of the questionnaire focuses on forest management and sustainability issues. We should highlight at this point that respondents are members of the general public and were not selected for their knowledge of forests, forest management, or sustainability. The object was to find out how the general public perceives and interprets such concerns.

Respondents were first asked, in an open-ended format, to answer the question: *What does the term sustainable forest management mean to you?* The categorization of the 488 responses is shown in Table 36. In brief, management practices formed the leading set of defining responses (50%), suggesting that the key description of sustainable forest management is the balance of harvesting and reforestation. The second category of responses focuses on ecological issues (33%), emphasizing forest preservation for future generations, and environmental protection. The remaining categories define sustainable forest management as it relates to forest use (8%), economic issues (7%), public roles (2%), and other descriptors (2%). Perhaps the most salient point is that more than half the sample (53%) could not define the term.

Table 36: What does sustainable forest management mean to you?

Category	Sustainable Forest Management means...	Frequency	Percent
<i>Management Practices</i>		246	50.4
Balanced harvest	balancing harvesting and reforestation	64	13.1
Reforestation	replanting trees to replace those taken from forests	42	8.6
Management	having a management plan for the forest	34	7
No clearcutting	prohibiting clearcutting	26	5.3
Limited cutting	preventing over-cutting of trees	18	3.7
Selection cutting	allowing only selection cutting in forests	18	3.7
Increase	planting more than is removed from forests	15	3.1
Maintenance	providing for continuous harvest of a renewable resource	11	2.3
Limited clearcutting	restricting clearcutting	6	1.2
Thinning	cleaning out dead wood / thinning	5	1
Silviculture	practising silviculture	4	0.8
Low impact harvesting	using environmentally friendly methods / equipment	3	0.6
<i>Ecological Issues</i>		163	33.4
Forest preservation	making sure the forest lasts	72	14.8
Protection of the environment / ecosystems	making protection of the environment a priority	30	6.1
Heritage	preserving forests for future generations	26	5.3
Forest health	giving priority to the health of forests	13	2.7
Wildlife preservation	giving priority to protection of wildlife	8	1.6
Biodiversity	ensuring a diversity of species in forests	6	1.2
Balance	balancing harvesting and environmental protection	4	0.8
Forest hygiene	cleaning up the forest	2	0.4
Protection from disease and insects	protecting trees from disease	2	0.4
<i>Uses</i>		39	8
Diversity of use	providing for diverse uses of the forest	37	7.6
Recreation	giving priority to recreational uses of woodlands	2	0.4

Economic Issues		32	6.6
Economic viability	making sure priority is given to economic uses of woodlands	11	2.3
Employment	providing for employment in forest industries	5	1
Profitability	obtaining profit from the forests	4	0.8
Public Roles		8	1.6
Regulated use	having laws / regulations which govern forestry practices	5	1
Responsibility	looking after the forests as a public responsibility	2	0.4
Education	teaching the public / children about forests	1	0.2
Other*		12	2.5
Totals		488	100

* an impossibility; cutting all the trees (including hardwood) and replanting with softwood only to be used as lumber or pulp for the paper industry. We are creating tree farms. ; using our forests as they were planned; very important; when you cut a softwood tree down you let a hardwood tree grow up; This term unfortunately seems to mean how much of the forest we can wreck before it becomes useless for everybody. ; to maintain our forests and control it (sic); Sustainability of the forest means a great deal to me, and it should be used properly. ; This is a P.R. term used to pretend there is a strategy for our forests. There is no such thing. Forests are being destroyed, replaced only to benefit mills. This is one of the new doublespeak hoaxes. ; must distinguish between forest and a plantation, or managed forest. A managed forest is not biodiverse. It is usually monospecific and not a real forest. ; It is how my father and grandfather looked after their woodlots.; It means the forest can take care of itself, without any help from people (either removing or planting trees).

$n = 296$

After respondents defined what sustainable forest management means to them, we asked if they think forest management in Nova Scotia is currently sustainable as practiced on private forest company woodlands, privately owned woodlands, and public (Crown) woodlands. Only those who defined sustainable forest management were given the opportunity to answer the following questions. Eighteen percent of respondents overall, and only eleven percent of Metro Halifax respondents, felt that forest management on private forest company woodland is currently sustainable (Table 37). Slightly more, 26%, thought that forest management on privately owned woodlands is currently sustainable (Table 38). Only 22% think that forest management on Crown woodlands is currently sustainable (Table 39). These are, evidently, pessimistic viewpoints. However, two features of the responses should be noted. First, in the case of each question, no less than 26% and up to 44% of the respondents selected the *Don't know* response option. Second, for all three questions, there are virtually no differences of opinion among the respondent groups, except for residence area. That is, in two out of the three cases, NFA area residents were slightly more optimistic than Metro Halifax residents.

Table 37: Sustainability on company lands

Is forest management on private forest company woodland currently sustainable?	NFA area (%)	Metro Halifax (%)	Total (%)
Yes	21	11	18
No	54	44	52
Don't know	26	44	30
Total	100	100	100

chi-square = 9.198 p < .05
n = 290

Table 38: Sustainability on private lands

Is forest management on privately owned woodlands currently sustainable?	NFA area (%)	Metro Halifax (%)	Total (%)
Yes	27	22	26
No	44	37	43
Don't know	29	41	31
Total	100	100	100

chi-square = 3.58 p = .167
n = 289

Table 39: Sustainability on Crown land

Is forest management on Crown land currently sustainable?	NFA area (%)	Metro Halifax (%)	Total (%)
Yes	22	24	22
No	49	41	48
Don't Know	29	35	30
Total	100	100	100

chi-square = 1.357 p=.507
n = 288

To further develop this theme, we asked respondents to rate eight groups, on a scale of one to ten, from not committed to very committed to sustainable forest management in Nova Scotia. The results as presented include both percentage responses to grouped levels of commitment, and mean scores on the commitment scale (Table 40). Respondents clearly felt that environmental groups, the Nova Forest Alliance, and forest associations are highly committed to sustainable forest management. Woodland owners and forest sector companies are viewed as moderately committed to sustainable forest management. With mean scores below five, the provincial government, the federal government, and the general public are given the weakest commitment ratings.

How do Nova Scotia's forest managers fare with regard to their ability to manage the forest? When asked, *Are Nova Scotia's forest managers doing a good job of managing the forests?* Only 12 percent overall said "Yes," while 39% said "No" and 49% said "Don't know" (Table 41). Significant differences were noted when further analysis was done. Youth, urban people, women, and those not economically dependents on the forest were more likely to say "yes."

Table 40: Commitment to Sustainable Forest Management in Nova Scotia

	<i>n</i> *	Not at all to not very committed (%)	Moderately committed (%)	Very committed (%)	Total (%)	Mean**	Don't know (%)
Environmental groups	290	3	19	78	100	8.5	2
Nova Forest Alliance	292	3	18	79	100	8.3	41
Forest associations	290	4	35	61	100	8	12
Woodland owners	287	12	50	38	100	6.4	6
Forest sector companies	288	28	47	24	100	5.4	11
Provincial government	289	29	55	16	100	5	7
Federal government	290	27	60	13	100	4.9	9
General public	292	29	61	10	100	4.7	3

* Only answered by those who defined term sustainable forest management.

**Scale from one to ten, one is not committed, 10 is very committed.

Table 41: Are Nova Scotia's forest managers doing a good job?

Are Nova Scotia's forest managers doing a good job managing forests?	NFA area (%)	Metro Halifax (%)	Total (%)
Yes	12	11	12
No	40	24	36
Don't know	48	65	52
Total	100	100	100

chi-square = 12.93 $p < .001$

$n = 599$

The next set of questions focuses on attitudes toward forest sustainability by asking respondents to indicate their level of agreement or disagreement with a series of thirty-four statements that reflect a variety of attitudes and perceptions about forests. A number of the statements were paired to check the validity of the responses; for example, a statement would be framed once in a very positive tone, and then further on in the questionnaire the same statement would be phrased in such a way to reflect the opposite viewpoint. This is a frequently used technique in questionnaire design to determine if respondents remain consistent in their responses. Other statements were phrased to reflect one particular

viewpoint, to limit the number of statements respondents had to address.

The first table deals primarily with fifteen statements that reflect viewpoints about various economic and legislative issues related to the forest industry (Table 42). Respondents clearly agreed that: *more forests should be planted after harvesting* (90%), *timber harvesting contractors should be strictly regulated* (86%), *the government should make it easier for private landowners to establish protected areas on their land* (79%), *ownership of forested land does not give people the right to do whatever they want with it* (77%), *legislation should be enacted requiring forest landowners to adhere to best forest management practices on their own land* (70%), and *Nova Scotia will have very little harvestable wood in 10-20 years* (61%).

There was majority disagreement with the statements: *where forests are privately owned, society should not have any control over what the owners do with them* (71%), *enough harvested trees are being replaced by planting new ones or by natural seeding to meet our future timber needs* (60%), *the provincial government should not regulate private woodlot cutting* (57%), and *harvested areas should be allowed to regenerate naturally* (54%), and *there is sufficient wood in central Nova Scotia for all users including paper mills, saw mills, and domestic firewood cutters* (52%).

Responses to the other statements are generally characterized by neither strong agreement nor strong disagreement, perhaps influenced by relatively high “Don’t know” responses. These include statements which deal with woodland owners’ abilities to manage the forests and the use of ATVs in public forests.

Respondents appear to have definite concerns about the supply of wood available in the future and the ability of forests to regenerate. They firmly believe that society and government have a role to play in how the forests are managed. However, a significant number of people could not respond to the statements, thereby indicating a lack of knowledge about the industry.

Table 42: Level of agreement with environmental / economic statements

	<i>n</i> =	Agree (%)	Disagree (%)	Don't know (%)
There is sufficient wood in central Nova Scotia for all users including paper mills, saw mills, and domestic firewood cutters.	611	12	52	36
More forests should be planted after harvesting.	618	90	4	6
Harvested areas should be allowed to regenerate naturally.	609	29	54	17
Nova Scotia will have very little harvestable wood in 10-20 years.	612	61	12	27
Enough harvested trees are being replaced by planting new ones or by natural seeding to meet our future timber needs.	619	15	60	25
Most woodland owners in Nova Scotia don't know how to look after their forests.	615	47	22	31
Woodland owners in Nova Scotia are good stewards of the forest.	610	26	33	41
I would be willing to accept timber cutting restrictions on my own land.	606	40	15	45*
The provincial government should not regulate private woodlot cutting.	586	27	57	16
Timber harvesting contractors should be strictly regulated.	605	86	4	10
Ownership of forested land does not give people the right to do whatever they want with it.	605	77	14	9
Where forests are privately owned, society should not have any control over what the owners do with them.	603	19	71	10
Legislation should be enacted requiring forest landowners to adhere to best forest management practices on their own land.	609	70	16	14
The government should make it easier for private landowners to establish protected areas on their land.	611	79	4	17
The use of ATVs in public forests should be banned.	613	45	41	14

*Don't know or not applicable

To further explore respondents' perceptions of forest concerns in Nova Scotia, a series of twenty-one statements, designed to reflect different perspectives on environmental issues associated with forest, were given for the respondents to indicate their level of agreement or disagreement (Table 43). Respondents tended to agree or strongly agree with ten of the statements, in rank order:

- 1) *society has an obligation to protect endangered species (91%),*
- 2) *protecting jobs in the forest industry and protecting the forest environment are both possible in Nova Scotia (87%),*
- 3) *the most important objective of forest management should be to protect the environment (85%),*
- 4) *forest companies should do more to protect the environment even if it results in the loss of some jobs (80%),*
- 5) *greater efforts should be made to protect Old Growth forests (78%),*
- 6) *the environment is threatened by consumer demand for forest products (80%),*

7) *the view of a forested hill is more valuable than the timber harvested from it* (63%), and
 8) *there is too little 'designated' wilderness in Nova Scotia* (60%).

A majority of the respondents disagreed or strongly disagreed with eight of the statements (numbers in parentheses represent the percentage disagreeing with the statement):

- 1) *protecting jobs in the forest industry is more important than protecting the environment* (90%),
- 2) *protecting jobs in the forest industry is more important than protecting endangered species* (87%),
- 3) *some existing wilderness areas should be opened to logging* (72%),
- 4) *scenic views are less important than the economic benefits of timber harvesting* (72%),
and
- 5) *the primary goal of forest management in Nova Scotia should be to produce quality wood products* (56%).

The remaining statements generated a certain degree of ambivalence among respondents: the forest industry represents a majority of Nova Scotians when it addresses forest issues (23% agreed/43%disagreed); environmental groups represent a majority of Nova Scotians when they address forest issues (32% agreed/36%disagreed); we are making progress toward sustainable forest management (33% agreed/20%disagreed); and the forest industry is taking a long term interest in maintaining a healthy forest (32% agreed/34%disagreed). The final two statements referred to the current controversy over the use of pesticides in the forest. For all these statements, the numbers agreeing and disagreeing were about the same.

The reaction to statements in this section indicates that the members of the general public surveyed are very concerned with protection of the environment. They do not seem to believe that providing employment in the forest industry should be given priority over environmental protection, and think that providing for employment and protecting the environment are not mutually exclusive. They express a belief that industry should be more cognizant of environmental impacts, and, as a group, appear to have ambivalent feelings about the progress towards sustainable forest management in our province. They have some reservations about the actions of environmentalists, but feel that environmental protection is desirable, and feel even more strongly that society has a responsibility to protect the environment. They are reluctant to say that either environmentalists or industry represents a majority of Nova Scotians.

Although the detailed analysis has not been presented in this report, some differences were noted among groups of respondents. Women, urban residents, youth, and those not economically-dependent on forests were more likely to espouse pro-environmental values. Those who were economically dependent on the forests were less likely to want restrictions on the industry, and feel that we are making progress towards sustainable forest development.

Table 43: Perspectives on a variety of environmental issues

	<i>n</i> =	Agree (%)	Disagree (%)	Don't know (%)
Protecting jobs in the forest industry is more important than protecting endangered species.	606	7	87	6
Protecting jobs in the forest industry is more important than protecting the environment.	607	3	90	7
Protecting jobs in the forest industry and protecting the forest environment are both possible in Nova Scotia.	609	87	4	9
Forest companies should do more to protect the environment even if it results in the loss of some jobs.	615	80	10	10
The primary goal of forest management in Nova Scotia should be to produce quality wood products.	612	37	56	7
The most important objective of forest management should be to protect the environment.	606	85	9	6
I believe woodland not actively managed is wasted.	604	46	38	16
The forest industry is taking a long-term interest in maintaining a healthy forest.	611	32	34	34
We are making progress in Nova Scotia towards sustainable forest management.	611	33	20	47
The view of a forested hill is more valuable than the timber harvested from it.	598	63	25	12
Scenic views are less important than the economic benefits of timber harvesting.	603	15	72	13
Greater efforts should be made to protect Old Growth forests.	616	78	9	13
Society has an obligation to protect endangered species.	612	91	5	4
There is too little "designated" wilderness in Nova Scotia.	606	60	11	29
Some existing wilderness areas should be opened to logging.	553	15	72	13
Environmentalists go too far in trying to restrict logging.	597	34	45	21
The environment is threatened by consumer demand for forest products.	611	80	10	10
Environmental groups represent a majority of Nova Scotians when they address forest issues.	606	32	36	32
The forest industry represents a majority of Nova Scotians when it addresses forest issues.	608	23	43	34
Properly applied, herbicides are an acceptable management tool.	608	42	39	19
Properly applied, insecticides are an acceptable management tool.	613	47	36	17

Having given respondents the opportunity to describe and evaluate issues related to sustainable forest management in different ways, the chance to further this was presented through a question dealing with ten forest management practices. Respondents could rate these as very acceptable, acceptable, not acceptable, very unacceptable (Table 44). Of these, seven emerged as acceptable to the majority of the respondents, and in rank order these are: 1) cutting selectively to maintain wildlife habitat (90%), 2) leaving clumps of trees for wildlife habitat (86%), 3) closing forest access roads to control illegal dumping of garbage (76%), 4) using large harvesting equipment that is designed to reduce its impact on the environment (70%), 5) using selection and other partial harvest techniques (69%), and 6) using specialized equipment to prepare the soil for forest regeneration (65%).

Table 44: Evaluation of management practices

Practice	n =	Acceptable to very acceptable (%)	Not acceptable to very unacceptable (%)	Don't know (%)
Using large equipment to harvest timber	606	33	48	19
Using specialized equipment to prepare the soil for forest regeneration	606	65	8	27
Using large harvesting equipment that is designed to reduce its impact on the environment	610	70	17	13
Using herbicides to control growth of unwanted vegetation to improve survival of planted trees on public (Crown) land	616	33	47	20
Using herbicides to control growth of unwanted vegetation to improve survival of planted trees on private land	613	34	45	21
Closing forest access roads to control illegal dumping of garbage	615	76	17	7
Converting sites from mixed-wood to softwood to increase timber production	611	29	42	29
Leaving clumps of trees for wildlife habitat	611	86	7	7
Using selection and other partial harvest techniques	608	69	5	26
Cutting selectively to maintain wildlife habitat	616	90	4	6

The detailed analyses of the responses indicate various differences of opinion among sample sub-groups, far more than can or need be presented here. Generally, however, those who were economically dependent on the forest industry were more likely to find these practices acceptable. Nevertheless, the focus at this stage is on how the sample as

a whole responded, and the tendency is to articulate opinions that place a very high value indeed on the environment and the need for a variety of government interventions. While economic dimensions of forests are recognized, they are clearly ranked low in relative terms.

Clearcutting

Clearcutting is obviously a major concern for many, and it was imperative to explore attitudes towards clearcutting a bit further. To do so, respondents were given four statements about clearcutting and were asked to indicate which came closest to representing their own opinion towards clearcutting (Table 45). The most often selected choice was *Clearcutting should be allowed only where suitable for the area and tree species* (47%), while others (41%) felt that *Clearcutting should not be allowed anywhere*. Only 1% selected: *There should be no restrictions placed upon clearcutting*, while 14% overall responded that *I am unfamiliar with clearcutting and do not have an opinion at this time*. Detailed assessments revealed that mid-aged respondents (35-54) favour restrictions or a ban, men prefer some restrictions, and those without an economic tie to the forest either favour a ban or express no opinion. The no opinion choice was also preferred by women, non-woodland owners, and those with an urban background.

Table 45: Attitudes towards clearcutting

Classification of attitude	NFA area (%)	Metro Halifax (%)	Total (%)
I am unfamiliar with clearcutting and do not have an opinion at this time.	12	22	14
There should be no restrictions placed upon clearcutting.	1	--	1
Clearcutting should be allowed only where suitable for the area and tree species.	49	37	47
Clearcutting should not be allowed anywhere.	38	41	38
Total	100	100	100

chi-square = 13.268 $p < .005$
 $n = 597$

Respondents were then given the opportunity to express their opinion about clearcutting. All replies to the open-ended question are included in the appendices to this report (Appendix B).

To determine more clearly under what circumstances clearcutting would be acceptable, respondents were asked to indicate whether they found the following practices acceptable: 1) using clearcuts to harvest timber on publicly owned (Crown) land (67%), 2) using clearcuts to harvest timber on privately owned land (65%), and 3) using clearcuts to harvest if the area is allowed to regenerate naturally (61%) (Table 46).

Table 46: Agreement with certain clearcutting practices

Practice	<i>n</i> =	Acceptable to very acceptable (%)	Not acceptable to very unacceptable (%)	Don't know (%)
Using clearcuts to harvest dying or damaged stands	613	65	16	19
Using clearcuts to harvest if the area is planted immediately	612	46	36	18
Using clearcuts to harvest if the area is allowed to regenerate naturally	609	19	62	19
Using clearcuts to harvest timber on privately owned land	611	16	65	19
Using clearcuts to harvest timber on publicly owned (Crown) land	607	15	67	18

Generally, the general public appears to be against clearcutting in principle; however, it is considered a viable practice under certain circumstances.

Forest problems and values

This section describes the findings of various questions, found throughout the questionnaire, related to forest problems and issues. These range from the relative importance of forest values, attitudes towards government regulation, and threats to forests.

To assess forest values, respondents were given three things people value about Nova Scotia's forests and asked to rate them on a scale of one to ten, where one was "not important" and ten was "very important." The results are presented with categorized percentage responses, as well as with mean importance scale scores (Table 47). The environmental benefits of forests were clearly perceived as the most important, with social benefits ranked second, and economic benefits ranked third. In each case, the means are statistically significantly different at the 0.001 level, meaning there is only one chance in a thousand that these results occurred by chance. At the same time, while the ranking of the benefits is clear, it is also clear that all three sets of benefits are perceived as very important. In other words, it is not that the economic benefits are seen as unimportant, only that they are seen as less important in relative terms.

Table 47: Relative importance of forest values

	<i>n</i> =	Not to slightly important	Moderately important	Very important	Total	Mean*
Economic benefits such as wealth & jobs	609	7	36	58	100	7.5*
Environmental benefits such as clean air and water and wildlife habitat	610	2	4	94	100	9.5*
Social benefits such as recreation & relaxation	610	2	22	76	100	8.4*

Scale from one to ten; one is not important, ten is very important.

*Significant differences exist between the three values:

Economic Benefits/Environmental Benefits	<i>t</i> = -20.440	<i>p</i> <.001
Environmental Benefits/Social Benefits	<i>t</i> = 16.75	<i>p</i> <.001
Economic Benefits/Social Benefits	<i>t</i> = -8.569	<i>p</i> <.001

Previous research (Sanderson et al. 1999) suggested that more government regulation is needed in relation to forest activities. To assess attitudes towards government regulation, respondents were asked to answer yes or no to a question that began with *Do you believe that the government should regulate...* followed by a series of nine choices (Table 48). Two issues received substantial support (over 80%) for government regulation: *how contractors harvest the forest* and *clearcutting*, and two received modest support (over 60%): *timber purchase by industry* and *protected areas on private land*. While the other items received less support, in all cases the proportion of respondents in favour of government regulation exceeded the proportion against.

Table 48: Attitudes towards government regulation

Should the provincial government regulate...	<i>n</i> =	Yes (%)	No (%)	Don't know (%)	Total
how contractors harvest the forest?	613	86	5	9	100
clearcutting?	611	84	7	9	100
timber purchase by industry?	610	63	17	20	100
protected areas on private land?	613	62	22	16	100
an owner's right to sell land to an out-of-province buyer?	614	55	28	17	100
private forest landowners' activities?	606	50	30	20	100
an owner's right to harvest?	608	45	39	16	100
forest use planning across land ownership boundaries?	597	44	19	37	100
a landowner's right to sell logs for export?	616	45	38	17	100

To examine perceptions of threats to forests, respondents were given a list of twenty-four *issues that some view as threats to our forests in Nova Scotia*, and were asked to indicate how much of a long-term threat each is, ranging from “not a threat” to “a great threat” (Table 49). The top ten perceived threats to Nova Scotia forests are seen as:

- 1) *harvesting occurring faster than forest growth* (90%),
- 2) *too little planting of trees* (82%),
- 3) *lack of long-range planning for the future of Nova Scotia’s forests* (82%),
- 4) *clearcutting* (81%),
- 5) *loss of forested land to development* (79%),
- 6) *inadequate forest management planning* (76%),
- 7) *forest fires* (75%),
- 8) *garbage dumping* (75%),
- 9) *current logging practices* (72%), and
- 10) *lack of protection of Old Growth forests* (68%).

On the other hand, there were four items on the list for which the proportion of respondents who perceived the item to be a slight or no threat was greater than the proportion who perceived a moderate to great threat. These were (percentage response for slight or no threat in parentheses):

- 1) *the amount of recreation use in the forest* (64%),
- 2) *theft, trespass, and vandalism* (50%),
- 3) *construction of oil and gas pipelines* (46%), and
- 4) *negative publicity about forest management* (41%).

Table 49: Threats to forests

Potential threat	n =	Slight to no threat (%)	Moderate to great threat (%)	Don't know (%)
Harvesting occurring faster than forest growth	611	3	90	7
Too little planting of trees	614	8	82	10
Lack of long-range planning for the future of Nova Scotia's forests	615	5	82	13
Clearcutting	615	7	81	12
Loss of forested land to development	615	16	79	5
Inadequate forest management planning	612	8	76	16
Forest fires	617	22	75	3
Garbage dumping	615	22	75	3
Current logging practices	605	8	72	20
Lack of protection of Old Growth forests	610	15	68	17
Lack of regulation by government	611	15	67	18
Having fewer and larger forest companies	607	12	66	21
Loss of forested land to urban sprawl	612	22	65	13
Acid rain	618	26	61	13
Export of timber	614	22	60	18
Insects and diseases	612	32	60	8
Climate change or global warming	597	30	59	11
Amount of pesticide use in the forest	616	28	54	18
Public apathy	597	21	54	24
Construction of oil and gas pipelines	615	46	43	11
Theft, trespass, and vandalism	615	50	42	8
Negative publicity about forest management	605	41	34	24
The amount of recreation use in the forest	609	64	28	8
Other	42	--	45	55

Detailed analyses of the perceived threats reveal relatively few variations among sample sub-groups. For example, there were virtually no differences in perceptions between urban and rural residents, woodland owners and non-owners, or those with or without economic dependencies on the forest. Women and older respondents, for six of the twenty-four items, perceived a higher level of threat, and mainly for items seen as relatively less threatening.

The idea of threat was turned around for another question. This time the respondent was asked if any of six items were threatened by current forest use (Table 50). Wildlife and fish habitat, waterways, the global environment, ecosystems, rare plant species, and Old Growth forests are all perceived as under moderate to serious threat from current forest use by 64 to 80% of the sample. Detailed analyses revealed only that men tended to perceive a greater level of threat to wildlife and fish habitat.

Table 50: Extent of threat from forest use

	<i>n</i> =	Moderately to seriously threatened (%)	Slightly to not at all threatened (%)	Don't know (%)	Total (%)
Wildlife / fish habitat	616	80	14	6	100
Waterways	606	72	18	10	100
Global environment	602	64	22	14	100
Ecosystems	602	65	16	19	100
Rare plant species	609	64	17	19	100
Old Growth	609	66	18	16	100

Suggestions for the Nova Forest Alliance

Since one of the objectives of this study was to obtain feedback for the Nova Forest Alliance, we asked the general public sample to select their top three choices from a list of things that the NFA can do to improve the management of Nova Scotia's forests. They wanted to see the NFA promote reforestation, and to educate and inform the general public and youth about forests. Other areas which ranked highly included promoting sustainable forestry practices and generally improving forest management (Table 51).

Table 51: Potential actions by Nova Forest Alliance

Which of the following do you consider the most important things the Nova Forest Alliance can do to improve the management of Nova Scotia's forests?	Percent of responses	Percent of cases
Promote reforestation	43	16
Inform and educate the public	29	11
Educate young people on the importance of forests	27	10
Promote sustainable forestry practices	25	10
Improve forest management	24	9
Inform and educate woodland owners	19	7
Address environmental problems	12	5
Inform and educate industry	11	4
Promote a code of practice for contractors	10	4
Advocate conservation	9	4
Encourage owners to improve woodlots	6	2
Promote a voluntary code of practice for forest management	6	2
Increase forest research	5	2
Develop demonstration sites for best management practices	5	2
Promote co-operation among stakeholders	4	1
Survey the public on forest issues	2	1
Provide information on woodland planning	2	1
Provide information on market and job opportunities	1	1
Other	2	1
I am not familiar with the Nova Forest Alliance and cannot answer this question.	20	8

$n = 579$

One wish

The last question for respondents to consider, in an open-ended format, was *If you had one wish for the future of Nova Scotia's forest, what would it be?* The results focus on ecological issues, with responses such as *the forest to last* and *forests preserved for future generations*. There is also attention given to forest management practices, with statements like *clearcutting prohibited* and *trees planted to replace those taken from forests*. Fewer respondents identified wishes related to the public roles in forest management, the use of forests for different purposes, and the need to protect forests from exploitation for profit (Table 52). When responses are listed in rank order of frequency, it is clear that most respondents are concerned with environmental, aesthetic, recreational, health, and management issues, particularly in relation to the future well being of the forest.

Table 52: If you had one wish for the future of Nova Scotia's forest, what would it be?

Theme	I want...	Frequency	Percent
<i>Ecological issues</i>		407	51.5
Forest preservation	the forest to last	115	14.6
Heritage	forests preserved for future generations	76	9.6
Forest health	priority given to the health of forests	31	3.9
Wildlife preservation	priority given to protection of wildlife habitat	29	3.7
Sustainability	woodlands sustainable	29	3.7
Environmental protection	protection of the environment / ecosystems to be a priority	27	3.4
Improvement	forests better than they are now / like they used to be	18	2.3
Balanced use	forestry activities balanced with environmental protection	18	2.3
Abundance	forests as abundant as they are now, or more abundant	13	1.6
Forest beauty / peace	aesthetic values given importance	12	1.5
Forest hygiene	the forest cleaned up	11	1.4
Biodiversity	a diversity of species in forests	8	1
Riparian protection	protection of waterways and wetlands	6	0.8
No spraying	spraying of forests stopped	6	0.8
Protection from fire	woodlands protected from fire	4	0.5
Protected areas	access to some areas restricted so that ecosystems are protected	4	0.5
<i>Management Practices</i>		217	27.5
No clearcutting	clearcutting prohibited	57	7.2
Reforestation	trees replanted to replace those taken from forests	32	4.1
Management	a management plan for the forest	23	2.9
Less harvesting	harvesting rates decreased	14	1.8
Selection harvesting	selection cutting only in forests	13	1.6
Balance	cutting and regrowth balanced	11	1.4
Small-scale operations	no large companies working the woodlands	10	1.3
Responsible harvesting	better harvesting practices	8	1
Limited clearcutting	clearcutting restricted	8	1
Low impact harvesting	heavy equipment kept out of the woods	6	0.8
Maintenance	provision for continuous harvest of a renewable resource	5	0.6

Owner's responsibility	woodland owners to practice good management	5	0.6
Increase	more trees planted than harvested	5	0.6
Waste control	less waste of forest resources	4	0.5
Corporate responsibility	companies to operate responsibly in the forests	4	0.5
No harvesting	harvesting eliminated	3	0.4
Fewer exports	only value-added products sent out of province	3	0.4
Roadside strips	strips left along roadsides	2	0.3
No exports	no wood sent out of province	2	0.3
Silviculture	silviculture practised	2	0.3
Public's Role		82	10.4
Education	the public / children taught about forests	22	2.8
Regulated use	laws / regulations to govern forestry practices	19	1.1
Stewardship	caring for the forests to be a public responsibility	16	2
Responsible government	government to use tax dollars wisely in the forests	13	1.6
Crown land management	restricted access to Crown lands for loggers	4	0.5
Public awareness	increased public awareness of forestry issues	3	0.4
Public access	unrestricted access to forests	3	0.4
No government	government to stay out of forestry	2	0.3
Use of Forests		50	6.3
Diversity of use	provision made for diverse uses of forests	24	3
Stakeholder cooperation	importance given to promoting cooperation among forest stakeholders	10	1.3
No use	the forest left alone	7	0.9
Restricted recreation	restrictions on ATVs / snowmobiles	3	0.4
First Nations' use	First Nations forest activities regulated	3	0.4
Recreation	priority given to recreational uses of forests	3	0.4
Economic issues		15	1.9
Economic limits	forests protected from exploitation for profit	8	1
Employment	provision of employment in forest industries	5	0.6
Economic viability	priority given to economic uses of woodlands	2	0.3
Don't know / other	don't know / other	19	2.4
Totals		790	100

Summary of Results

- The sample consists of 643 people living in or near the Nova Forest Alliance Project Area. Five hundred and two people responded from the Nova Forest Alliance Project Area and 141 from Halifax/Dartmouth. The response rates were 50% and 39% respectively. This represents a combined margin of error of five percent (19 times out of 20) and a total response rate of 48 percent.
- The sample had equal representation from both genders, and was reasonably well educated (30% with post secondary). All age groups were well represented, except for those under the age of 25. Of those economically active, 20% were employed in blue collar positions and 40% in white-collar occupations. Thirty-seven percent were retired, students, unemployed, or in domestic occupations. About 10% percent were dependent on the forest industry for their economic livelihood.
- Due to the nature of the sample, respondents currently live in and had been raised in rural areas. About a third owned woodland. The distribution of woodland acreage owned mirrors that of the population. A quarter of respondents owned medium to large woodland properties (26% over 50 acres). Few woodland owners (maximum 5%) were members of forest-related organizations.
- A high proportion (83%) of respondents were interested or very interested in forest issues, and 54% felt that they were at least somewhat informed. Few (10%) considered themselves knowledgeable or very knowledgeable about forest management. Relatively few (20%) said that they or members of their household had quite a lot of experience working in the woods. About half (51%) visited the forest one or two times a month.
- Respondents considered the forest an important part of the Nova Scotian economy, and very important to the environment and quality of life. Forest health was tied for fourth place with crime prevention and job creation behind provision of health care, quality of education, and food safety as important issues in Nova Scotia.
- Most respondents (71%) said that little or no opportunity was given for them to express views on the use of forests in Nova Scotia. The majority (90%) indicated that citizen participation in forest decision making was valuable. Eighty-eight percent felt that it was important for them to have a say in directing how the forests of Nova Scotia are used.
- Sources of information important to the general public included environmental groups, woodland owners, various forest professionals, and families and neighbours. Confidence in these sources was high. The preferred media used were television and newspaper. The Internet seems to be increasingly important.
- Respondents were asked what types of information about forests would be useful. Information about ecological issues and management practices, such as forest preservation and reforestation, ranked the highest.

- About three quarters of the respondents to the survey (77%) had not taken any action to express their views on the use of Nova Scotia's forests. Among those who had, key activities involved discussing concerns with friends, neighbours or coworkers, or contacting another landowner.
- Only a small proportion (12%) of the sample had heard of the Nova Forest Alliance Project Area. Respondents considered the following to be the most important things the Nova Forest Alliance can do to improve the management of Nova Scotia's forests: promote reforestation (43%), inform and educate the public (29%) and young people (27%), promote sustainable forest practices (27%), and improve forest management (24%)
- The leading use of the forests by over sixty percent of the respondents was recreational in nature, including walking, hiking, and sightseeing. The key products harvested or gathered in the last three years were berries (61%), firewood (46%), fish (41%), Christmas trees (38%), and plants and flowers (37%). Few (10%) had income from timber activities, and even fewer (6%) derived income from non-timber activities.
- To the respondents, sustainable forest management was defined in terms of two main dimensions: the use or non-use of certain management practices, such as balancing harvesting and reforestation, and clearcutting, and the promotion of ecological values, such as forest preservation and protection of the environment.
- A large percentage of respondents do not believe that forest management is currently sustainable as practiced on private company woodlands (52%), on privately-owned woodlands (43%), or on Crown lands (48%). On average, about 30% said that they did not know. When asked about the commitment of various organizations to sustainable forest management in Nova Scotia, they scored the following as having the highest levels of commitment: the NFA, forest associations, and environmental groups. A third felt that Nova Scotia forest managers are not doing a good job of managing the forests. Over half said they did not know.
- The environmental benefits of forests were seen as significantly more important than social benefits, which were rated more important than economic benefits. However, all were seen as important forest values.
- Attitudes towards forest sustainability are reflected in the level of agreement or disagreement to a series of statements presented to respondents. Statements that ranked the highest level of agreement included: *protecting the environment* (90%) *and endangered species* (87%) *is more important than protecting jobs in the forest industry*; *society has an obligation to protect endangered species* (90%); *forest companies should do more to protect the environment* (80%); *more forests need to be replanted* (90%); *protecting jobs in the forest industry and protecting the forest environment are both possible* (87%); and *the most important objective of forest management is to protect the environment* (85%).

- Support was evident for the regulation of timber harvest contractors (86%), for incentives to develop protected areas (59%), for the protection of Old Growth forests (78%), and for forest management to produce quality wood products (56%). Respondents agreed that *consumer demand for forest products threatens the environment* (80%), and that *Nova Scotia will have little harvestable wood in 10 to 20 years* (61%). They felt that *insufficient planting or natural regeneration was taking place to meet future timber needs* (59%) and that there is insufficient wood for all users (52%). Respondents valued the forest as part of the landscape. They expressed some concern about the abilities of woodland owners to manage the land. They were definitely worried about the long-term health and sustainability of the forest.
- The general public definitely felt that society had a role to play in the management of forest. The following statements reflect this viewpoint. *Ownership of forested land does not give people the right to do whatever they want with it* (77% agreed). *Where forests are privately owned, society should not have any control over what the owners do with them* (71% disagreed). *Legislation should be enacted requiring forest landowners to adhere to best forest management practices on their own land* (70% agreed).
- The general public was in favour of forest management practices such as selection and partial cutting (69%), leaving clumps of trees to protect wildlife (86%), using specialized equipment designed to protect the environment (70%) and closing the forest roads to control garbage dumping (76%). Opinions were divided about the acceptability of the use of herbicides and pesticides.
- Almost half (47%) of respondents felt that clearcutting should be allowed only where suitable for the area and species. However, over a third (38%) felt clearcutting should be banned. NFA residents were more likely to consider the practice acceptable with limitations. Strong opinions were noted when the general public were asked to consider at what point clear cutting was an acceptable practice. They felt that clearcutting should be used to harvest dead and dying stands (65%), and if replanting was to occur immediately after harvesting (46%). Most did not consider clearcutting to be an acceptable practice on publicly owned (67%) or privately owned land (65%).
- The respondents strongly advocated the regulation of various forest activities by the provincial government, especially the activities of contractors and clearcutting.
- Leading threats to the forest as perceived by the general public included: harvesting faster than forest growth, too little planting, lack of long range planning, and clearcutting (indicated by over 80% of respondents). Recreational uses and oil and gas pipeline activity were not considered threats by over 64 percent of users. On the other hand, current forest uses are perceived as threatening wildlife and fish habitat and waterways by over 70% of respondents.

- Overall, the general public sample has a strong wish to preserve the forests for future generations and to manage the forests sustainably.
- NFA residents and Halifax residents did not differ significantly in their views. In fact, people living in the model forest expressed very deep concerns about the future of the forests, particularly with reference to the availability of timber and to current management.
- In general, women espoused stronger pro-environmental positions and men frequently articulated pro-economic attitudes. Youth were more likely to value the recreational use of forests and to have stronger environmental protection values. Those with economic ties to the forest were more in favour of current forest practices than others, but not at the expense of the environment.

Conclusions

Clearly, respondents were worried about all aspects of the forest environment. They expressed concern about the viability of the forest, not only as a productive environment, but as an environment for recreation, as wildlife habitat, and as part of a rural landscape. These views were expressed most emphatically by the residents of the model forest.

They recognized the value of forest industry to the economy of Nova Scotia, and certainly saw the need to have a viable industry. However there were strong reservations about some forest management practices, such as clearcutting, and they articulated a desire for increased government regulation of forest activities. They firmly believe that society has a role to play in the management of Nova Scotia's forests. While they value participation in decision-making processes, few opportunities are perceived to exist for making a real contribution. Related to this, the media, especially television and newspapers, are particularly important venues to reach the public with information about forests. If the NFA and its partners want to get the message out about sustainable forest management to the public, energy must be focussed on using the mass media effectively, including the Internet.

The forests are used by the public mainly for non-economic purposes, including nature-based leisure activities such as walking and birdwatching. This underpins the importance of the forest as an esthetic environment. This sample is very worried about the environmental impact of forest activities, and exhibited a strong desire to preserve and protect the forest. They see the forest as an integral part of the total ecosystem in the province and believe that damage to the forest ecosystem will have a direct impact on the quality of their life. Youth and women express these views more strongly than anyone else, regardless of where they live.

The recurring theme throughout this project is the need to protect and preserve the forests of Nova Scotia, not only for now, but for future generations.

References

- Sanderson, L., et al. 1999. Public perceptions and attitudes towards forestry issues: Public opinion survey in central Nova Scotia, 1999. Nova Forest Alliance and Nova Scotia Agricultural College.
- Sanderson, L., et al. 2000. Woodland owners' perceptions and attitudes towards sustainable forest management: Central Nova Scotia, 2000. Nova Forest Alliance and Nova Scotia Agricultural College.

Appendices

Appendix A: Sample questionnaire

Nova Scotians and Their Forests

Thank you for completing the enclosed questionnaire. It will only take about twenty minutes of your time. Your response is important to understanding how Nova Scotians feel about our forests. At the same time, your participation in the survey is completely voluntary. Individual responses are kept in strictest confidence, and the results are presented only on a group basis. If you find any particular question a problem in some way, please feel free to skip it and go on to the next. We encourage you to write additional comments on any aspect of the survey. Please send us the completed questionnaire in the enclosed postage-paid self-addressed envelope. We would like to thank you in advance for your thoughtful consideration of the questions and for your quick return of the questionnaire.

Part I Importance of forests

1. How **interested** are you in issues concerning the forests of Nova Scotia? (Circle **one only**.)

Very interested Interested Somewhat interested Not interested Don't know

2. How **informed** are you about the forests of Nova Scotia today? (Circle **one only**.)

Very informed Somewhat informed Not very informed Not at all informed Don't know

3. How important is each of the following to the economy of Nova Scotia? Please check (✓) the appropriate box.

Issue	Very important	Important	Somewhat	Not important	Don't know
Forests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fisheries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mining	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Agriculture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tourism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. How important are **forests** to the following aspects of life in Nova Scotia? (Check (✓) **one box for each**.)

	Very important	Important	Somewhat	Not important	Don't know
Employment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tourism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5. How important do you consider the following issues in Nova Scotia? Please check (✓) the appropriate box for each issue.

Issue	Very important	Important	Somewhat important	Not important	Don't know
Provision of healthcare	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Government debt reduction	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Food safety	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Crime prevention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Job creation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forest health	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quality of education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Part II Information and participation: *the ways people like to participate in decision-making about forests*

1. Which of the following sources and media would you use to get information on forest issues? (Check (✓) **all that apply**.)

Source (the original source of the information)

- federal politicians
- provincial politicians
- local politicians
- government forestry employees
- Elders
- forest industry employees
- forest-work contractors
- forestry consultants
- environmental groups
- school teachers
- college / university professors
- woodland owners
- professional foresters
- independent woods workers
- Nova Forest Alliance
- journalists
- forest associations
- family, friends, and neighbours
- other (please specify): _____

Medium (the means used to receive the information)

- radio
- television
- Internet
- field tours
- newspaper
- magazines
- pamphlets/flyers
- newsletters
- books/reports
- lectures/seminars
- workshops
- one-on-one meetings (in person, by phone, mail, or
- other (please specify): _____

2. What types of information about forests would be helpful to you?

3. In the **past year**, have you taken any action to express your views and opinions on the use of Nova Scotia's forests? (Circle **one only**.)

Yes

No → go to question 5

4. Did your actions include any of the following? (Check (✓) **all that apply**.)

	Yes	No
discussing forest issues with friends, neighbours, co-workers	<input type="checkbox"/>	<input type="checkbox"/>
calling or writing to a politician	<input type="checkbox"/>	<input type="checkbox"/>
calling or writing to a government forestry official	<input type="checkbox"/>	<input type="checkbox"/>
calling or writing to a forest industry representative	<input type="checkbox"/>	<input type="checkbox"/>
attending a public meeting on forest issues	<input type="checkbox"/>	<input type="checkbox"/>
serving on a committee dealing with forest management	<input type="checkbox"/>	<input type="checkbox"/>
calling a 'phone-in' or 'talk-back' show	<input type="checkbox"/>	<input type="checkbox"/>
writing to a newspaper or magazine	<input type="checkbox"/>	<input type="checkbox"/>
joining a forest association	<input type="checkbox"/>	<input type="checkbox"/>
attending a lecture or seminar related to forest issues	<input type="checkbox"/>	<input type="checkbox"/>
joining an environmental or conservation organization	<input type="checkbox"/>	<input type="checkbox"/>
donating money to a conservation or environmental organization	<input type="checkbox"/>	<input type="checkbox"/>
boycotting forest-related consumer products	<input type="checkbox"/>	<input type="checkbox"/>
attending a public rally or protest about a forest issue	<input type="checkbox"/>	<input type="checkbox"/>
calling or talking to a landowner	<input type="checkbox"/>	<input type="checkbox"/>
other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>

5. Please indicate how much confidence you have in the following sources of information in Nova Scotia. (Circle the appropriate number for each information source.)

Source	No confidence										A lot of confidence										Don't know
	1	2	3	4	5	6	7	8	9	10	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>
federal politicians																					<input type="checkbox"/>
provincial politicians																					<input type="checkbox"/>
local politicians																					<input type="checkbox"/>
government forestry employees																					<input type="checkbox"/>
Elders																					<input type="checkbox"/>
forest industry employees																					<input type="checkbox"/>
forest-work contractors																					<input type="checkbox"/>
forestry consultants																					<input type="checkbox"/>

environmental groups	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>
school teachers	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>
college/university professors	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>
woodland owners	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>
professional foresters	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>
independent woods workers	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>
Nova Forest Alliance	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>
journalists	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>
forest associations	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>
family, friends, and neighbours	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>
other (please specify) *	1	2	3	4	5	6	7	8	9	10	<input type="checkbox"/>

* _____

Part III Forest uses and values: how you interact with forests

1. For what purpose(s) did you visit a forest in Nova Scotia's countryside during the **last year**? (Please review the entire list before checking (✓) **all that apply**.)

- I did not visit a forest in Nova Scotia's countryside. (**Please go on to question 3.**)
- | | |
|---|--|
| <input type="checkbox"/> Trapping | <input type="checkbox"/> Picnicking |
| <input type="checkbox"/> Driving for pleasure | <input type="checkbox"/> Four wheeling/ATVing |
| <input type="checkbox"/> Horseback riding | <input type="checkbox"/> Birdwatching |
| <input type="checkbox"/> Walking/hiking | <input type="checkbox"/> Photography |
| <input type="checkbox"/> Canoeing/kayaking/boating | <input type="checkbox"/> Skiing |
| <input type="checkbox"/> Scientific research | <input type="checkbox"/> Access to backcountry areas |
| <input type="checkbox"/> Sightseeing | <input type="checkbox"/> Camping |
| <input type="checkbox"/> Hunting | <input type="checkbox"/> Berry-picking |
| <input type="checkbox"/> Access to cabin | <input type="checkbox"/> Sugaring |
| <input type="checkbox"/> Fishing | <input type="checkbox"/> Snowmobiling |
| <input type="checkbox"/> Firewood cutting | <input type="checkbox"/> Employment in the woods |
| <input type="checkbox"/> Mineral exploration | <input type="checkbox"/> Mountain biking |
| <input type="checkbox"/> Other(s) (please specify)* | |

* _____

2. In the **past year**, roughly how many trips have you made to forests in the Nova Scotian countryside?
 _____ trips don't know / can't recall

3. Please indicate how knowledgeable about forest management you consider yourself. (Circle **one only**.)

Very

Knowledgeable

Somewhat

Slightly

Not at all

knowledgeable

knowledgeable

knowledgeable

knowledgeable

4. Please indicate how much direct experience you or members of your household have had working in the woods. (Circle **one only**.)

A lot of experience

Quite a bit of experience

Some experience

Little experience

No experience

5. Approximately how many acres of woodland do you own? _____ acres. If none, please check this box and go on to question 6.

6. Which of the following, if any, did you or a member of your household gather or harvest from Nova Scotian forests over the **last three years**? (Check (✓) **all that apply**.)

- | | |
|---|---|
| <input type="checkbox"/> Pulpwood | <input type="checkbox"/> Christmas tree(s) |
| <input type="checkbox"/> Mushrooms | <input type="checkbox"/> Sawlogs |
| <input type="checkbox"/> Maple sap | <input type="checkbox"/> Boughs or brush |
| <input type="checkbox"/> Fish | <input type="checkbox"/> Game birds |
| <input type="checkbox"/> Handcraft materials | <input type="checkbox"/> Fur animals (mink, beaver, etc.) |
| <input type="checkbox"/> Berries | <input type="checkbox"/> Rabbits |
| <input type="checkbox"/> Fiddleheads | <input type="checkbox"/> Deer, moose, or bear |
| <input type="checkbox"/> Firewood | <input type="checkbox"/> Peat moss, black earth, or soil |
| <input type="checkbox"/> Plants and flowers | <input type="checkbox"/> Other(s) (please specify) _____ |
| <input type="checkbox"/> I did not harvest or gather anything | _____ |

7. Do you or any of your household derive income from timber activities such as tree planting, or cutting pulpwood, sawlogs, firewood, Christmas trees, etc. on forested land? (Circle **one only**.)

Yes

No

Don't know

8. Do you or any of your household derive income from non-timber activities such as sugaring, trapping, berry-picking, guiding, handcrafts, or recreation on forested land? (Circle **one only**.)

Yes

No

Don't know

9. The following are three things people value about Nova Scotia's forests. On a scale of one to ten, please rate how important you think these are.

	Not important					Very important				
	1	2	3	4	5	6	7	8	9	10
Economic benefits such as wealth and jobs										
Environmental benefits such as clean air and water and wildlife habitat										
Social benefits such as recreation and relaxation										

Part IV Forest management: the sustainability of Nova Scotia's forests

1. What does the term **sustainable forest management** mean to you? If you are **not** familiar with the term, please check (✓) this box and **go on to question 4**.

2. Do you think forest management in Nova Scotia is currently sustainable:

- a) as practised on private forest company woodlands? Yes No Don't know
- b) as practised on privately owned woodlands? Yes No Don't know
- c) as practised on public (Crown) woodlands? Yes No Don't know

3. On a scale of one to ten, please rate how committed you think the following people are to sustainable forest management in Nova Scotia, by circling one number for each.

	Not committed					Very committed					Don't know
	1	2	3	4	5	6	7	8	9	10	
General public											<input type="checkbox"/>
Woodland owners											<input type="checkbox"/>
Environmental groups											<input type="checkbox"/>
Federal government											<input type="checkbox"/>
Forest sector companies											<input type="checkbox"/>
Provincial government											<input type="checkbox"/>
Forest associations											<input type="checkbox"/>
Nova Forest Alliance											<input type="checkbox"/>

4. Do you think Nova Scotia's forest managers are doing a good job of managing the forests?

- Yes No Don't know

5. The following statements reflect how some people feel about forest management in Nova Scotia. Please indicate your level of agreement or disagreement with each statement. Please check (✓) the appropriate box for each.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't Know
Enough harvested trees are being replaced by planting new ones or by natural seeding to meet our future timber needs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Properly applied, insecticides are an acceptable management tool.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmentalists go too far in trying to restrict logging.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forest companies should do more to protect the environment even if it results in the loss of some jobs.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Greater efforts should be made to protect Old Growth forests.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Harvested areas should be allowed to regenerate naturally.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I believe woodland not actively managed is wasted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

I would be willing to accept timber cutting restrictions on my own land.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	N/A <input type="checkbox"/>
Legislation should be enacted requiring forest landowners to adhere to best forest management practices on their own land.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
More forests should be planted after harvesting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Most woodland owners in Nova Scotia don't know how to look after their forests.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The use of ATVs in public forests should be banned.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. Please indicate how acceptable you feel the following forest management practices are in Nova Scotia. Please check (✓) the appropriate box for each item.

	Very Acceptable	Acceptable	Not Acceptable	Very Unacceptable	Don't know
Using specialized equipment to prepare the soil for forest regeneration	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using clearcuts to harvest timber on publicly owned (Crown) land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using clearcuts to harvest timber on privately owned land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using herbicides to control growth of unwanted vegetation to improve survival of planted trees on public (Crown) land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using herbicides to control growth of unwanted vegetation to improve survival of planted trees on private land	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Leaving clumps of trees for wildlife habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Closing forest access roads to control illegal dumping of garbage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Converting sites from mixed-wood to softwood to increase timber production	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using selection and other partial harvest techniques	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using clearcuts to harvest dying or damaged stands	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using clearcuts to harvest if the area is planted immediately	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using clearcuts to harvest if the area is allowed to regenerate naturally	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Using large equipment to harvest timber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cutting selectively to maintain wildlife habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using large harvesting equipment that is designed to reduce its impact on the environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. The following statements reflect some different perspectives on forest issues in Nova Scotia. Please indicate your level of agreement or disagreement with each statement. Please check (✓) the appropriate box for each.

	Strongly Agree	Agree	Disagree	Strongly Disagree	Don't know
The primary goal of forest management in Nova Scotia should be to produce quality wood products.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nova Scotia will have very little harvestable wood in 10-20	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Some existing wilderness areas should be opened to	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Protecting jobs in the forest industry is more important than protecting endangered species.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The view of a forested hill is more valuable than the timber harvested from it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The environment is threatened by consumer demand for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The provincial government should not regulate private	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The most important objective of forest management should be to protect the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The forest industry is taking a long-term interest in maintaining a healthy forest.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The forest industry represents a majority of Nova Scotians when it addresses forest issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Properly applied, herbicides are an acceptable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Protecting jobs in the forest industry is more important than protecting the environment.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is sufficient wood in central Nova Scotia for all users including paper mills, saw mills, and domestic firewood cutters.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is too little "designated" wilderness in Nova Scotia.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Timber harvesting contractors should be strictly regulated.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
We are making progress in Nova Scotia towards sustainable forest management.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Where forests are privately owned, society should not have any control over what the owners do with them.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Woodland owners in Nova Scotia are good stewards of	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Protecting jobs in the forest industry and protecting the forest environment are both possible in Nova Scotia.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental groups represent a majority of Nova Scotians when they address forest issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Scenic views are less important than the economic benefits of timber harvesting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Society has an obligation to protect endangered species.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ownership of forested land does not give people the right to do whatever they want with it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The government should make it easier for private landowners to establish protected areas on their land.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. Do you believe that the provincial government should regulate ...	Yes	No	Don't know
private forest landowners' activities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
an owner's right to harvest?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
forest use planning across land ownership boundaries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
timber purchase by industry?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
how contractors harvest the forest?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
clearcutting?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
protected areas on private land?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a landowner's right to sell logs for export?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
an owner's right to sell land to an out-of-province buyer?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9a. Which of the following statements comes closest to describing your attitude towards clearcutting?
(Check (✓) **one only**.)

- I am unfamiliar with clearcutting and do not have an opinion on it at this time.
- There should be no restrictions placed upon clearcutting.
- Clearcutting should be allowed only where suitable for the area and tree species.
- Clearcutting should not be allowed anywhere.

b. Do you have any comments on clearcutting? _____

10. Listed below are issues that some view as threats to our forests in Nova Scotia. Please indicate how much of a long-term threat you think each is by checking the appropriate box.

	Not a threat	A slight threat	A moderate threat	A great threat	Don't know
Forest fires	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Harvesting occurring faster than forest growth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Climate change or global warming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of forested land to development	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Current logging practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Insects and diseases	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The amount of recreation use in the forest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Construction of oil and gas pipelines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Negative publicity about forest management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Acid rain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Amount of pesticide use in the forest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Theft, trespass, and vandalism	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Too little planting of trees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of regulation by government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public apathy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clearcutting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Garbage dumping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of long-range planning for the future of Nova Scotia's forests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Having fewer and larger forest companies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Export of timber	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Inadequate forest management planning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Loss of forested land to urban sprawl	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lack of protection of Old Growth forests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other (please specify) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Do you consider any of the following threatened by current forest use? Please check (✓) **one box for each.**

	Seriously threatened	Moderately threatened	Slightly threatened	Not at all threatened	Don't know
Wildlife / fish habitat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Waterways	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Global environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ecosystems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rare plant species	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Old Growth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. How much opportunity do you believe there is for people like you to express your views on the use of the forests of Nova Scotia? (Circle **one only.**)

A great deal of opportunity Some opportunity Little opportunity No opportunity Don't know

13. How valuable is it to have citizens participate in deciding how the forests of Nova Scotia are used and managed? (Circle **one only.**)

Very Valuable Of little Of no Don't

valuable

value

value

know

14. Is it important for **you** to have a say in directing how the forests of Nova Scotia are used? (Circle **one only**.)

Yes No Don't know

Part V The Nova Forest Alliance

1. Had you heard or read about the Nova Forest Alliance project before receiving this questionnaire? (Circle **one only**.)

Yes No Not sure

2. Which three of the following do you consider the most important things the Nova Forest Alliance can do to improve the management of Nova Scotia's forests? (Check (✓) **three of the following**.)

- | | |
|--|---|
| <input type="checkbox"/> Promote reforestation | <input type="checkbox"/> Encourage owners to improve woodlots |
| <input type="checkbox"/> Develop demonstration sites for best management practices | <input type="checkbox"/> Promote a voluntary code of practice for forest management |
| <input type="checkbox"/> Inform and educate the public | <input type="checkbox"/> Inform and educate industry |
| <input type="checkbox"/> Inform and educate woodland owners | <input type="checkbox"/> Promote co-operation among stakeholders |
| <input type="checkbox"/> Advocate conservation | <input type="checkbox"/> Provide information on woodland planning |
| <input type="checkbox"/> Address environmental problems | <input type="checkbox"/> Improve forest management |
| <input type="checkbox"/> Educate young people on the importance of forests | <input type="checkbox"/> Provide information on market and job opportunities |
| <input type="checkbox"/> Promote a code of practice for contractors | <input type="checkbox"/> Survey the public on forest issues |
| <input type="checkbox"/> Promote sustainable forestry practices | <input type="checkbox"/> Increase forest research |
| <input type="checkbox"/> Other (please specify) * | <input type="checkbox"/> I am not familiar with the Nova Forest Alliance and cannot answer this question. |
- * _____

Part VI Background information: *for statistical and comparative reasons only. All information is kept confidential.*

1. Are you: Male? Female?

2. Which one of the following age groups applies to you?

Under 25 25-34 35-44 45-54 55-64 65+

3. What is your current occupation? _____

4. Which of the following best characterizes your place of residence?

city town village rural non-farm farm

5. When you were growing up did you live primarily in a ...

city? town? village? rural non-farm? farm?

6. Which one of the following categories best represents your level of education?

Some high school or less University or college graduate

- High school diploma Post-graduate study
- Some post-secondary

7. Do you belong to any of the following organizations?

	Yes	No
A natural history or birdwatching club	<input type="checkbox"/>	<input type="checkbox"/>
A hunting or fishing organization	<input type="checkbox"/>	<input type="checkbox"/>
Another environmental or conservation organization	<input type="checkbox"/>	<input type="checkbox"/>
A forest-related organization	<input type="checkbox"/>	<input type="checkbox"/>

8. Do you or does any member of your household depend upon the forest industry in Nova Scotia for his or her economic livelihood? Yes No

9. If you had one wish for the future of Nova Scotia's forest, what would it be?

Appendix B: Comments on clearcutting

Comments with reference to clearcutting question

a terrible waste, usually used for big profits for big companies

After clearcutting it has to be replanted.

After clearcutting, contractors should be made to clean up properly so that the scenery does not look pathetic.

After clearcutting, trees should be planted to allow regrowth so no area looks scalped and dead, and animals have some protection; only small acreages be cleared

After travelling in BC, especially the Queen Charlotte Islands, I detest clearcutting. It totally destroys habitat.

All that I know is what I see, and there seems to be a lot of clearcutting going on lately. This cannot be good for the soil or the rivers.

Amount of clearcutting in northern NS forests has reached almost devastation proportions! Need a replacement policy where clearcutting exists.

an abuse of the land by human technology

Any clearcut I have seen appears as a large scar on the earth. It's not necessary to remove all the trees to obtain the few desirable ones.

Any green areas I've seen are too small to be any good for the wildlife in the area. Without any ground vegetation, erosion becomes an issue for natural reforestation.

Any place that is clearcut should be cleaned and replanted.

Any tree is too valuable to cut without serious evaluation across the total spectrum. Clearcutting does not fall into this category, in my opinion.

Anybody who chooses to clearcut should have to obtain a special licence that also requires that person to plant trees.

Areas of clearcutting should be replanted and managed properly immediately afterwards when suitable.

As I drive through the province, clearcutting is TOO obvious.

Bad, bad, bad! Clearcutting is only beneficial to the company doing it; makes them richer faster.

It is devastating to every other aspect

causes too much damage to the environment

certain stands should be clearcut, but only under the advice of a qualified forester

Clean area up afterwards; replant.

clearcut areas should be small, land protected, immediately replanted and prepared for growth;

better methods should be found to protect the end product - less waste; produce a quality product

Clearcuts are acceptable if all reasonable efforts are made to minimize damage to the surrounding area, streams, lakes, tourist attractions.

clearcutting after forest is damaged (e.g. by fire), then replant or seed

Clearcutting behind our house has stripped the land bare. I think it looks awful, and it leaves many animals without habitat, but I am not sure of the long-term effects of this. My feeling is that it can't be good.

Clearcutting can be acceptable in some areas and for some types of trees, if the health of these areas is poor and trees are in danger of dying out anyway.

Clearcutting causes erosion and loss of habitat, and looks unsightly.

Clearcutting certainly leaves a bad, neglected-looking spot along our highways, especially if it has not been cleaned up after harvesting the logs, etc. Too bad, when we have such a beautiful little province!

Clearcutting damages habitat, environment for a long time, jeopardizes waterways, and looks ugly; should only be used to control damaged or infested stands, to be replanted.

Clearcutting destroys the environment, wildlife habitat, and looks terrible; this is why I feel it should not be allowed anywhere.

Clearcutting destroys the ground, allows erosion, removes protection for animals, destroys streams, lakes, water supplies; if greed for foreign markets was controlled, we would be able to manage our forest

Clearcutting destroys the land, is unattractive, and harms wildlife. It is for fast, easy money, with no thought for anyone or anything else. It's very selfish and they are not being good stewards of the forests. It should not be allowed at all.

Clearcutting destroys the soil by allowing rapid erosion. It is a recipe for long-term destruction.

Clearcutting does not leave enough trees for wildlife and it is very disquieting to look at all that open space.

Clearcutting has its place; it should not be abused but it is a very good timber control.

Clearcutting if done properly in the right areas is fine, but if done just to make money is totally wrong. Clearcuts should only be done to benefit the rest of the forest.

Clearcutting is a bad idea, because it doesn't allow immature trees to grow, and it leaves no place for wildlife to live.

Clearcutting is a dangerous practice, not suitable for any area or tree species; buffer zones are inadequate, the appearance of the land afterwards is disgusting, and damage is done by cutting roads and moving logs.

Clearcutting is a tool of multinationals to increase shareholders' value without regard for local issues. More sustainable economic inputs would be achieved without clearcutting. Its elimination would result in more jobs and greater wealth for landowners.

Clearcutting is a treatment in silviculture and should be applied properly.

Clearcutting is a very acceptable method of harvesting Nova Scotia's forests if need be.

Clearcutting is a very useful harvesting method when used in the proper place, but it can destroy a woodlot if used improperly.

Clearcutting is acceptable if trees are replanted immediately after the cutting.

Clearcutting is aesthetically and environmentally unacceptable and should be prohibited if economically possible.

Clearcutting is alright in certain areas, but it is happening in some areas where trees are just starting to grow. It dries the land out and nothing can grow there for a long time.

Clearcutting is an end to the forest.

Clearcutting is dangerous; too many trees are wasted; they take what they need and leave a path of destruction; wildlife habitat, lakes, and rivers are destroyed, affecting fish and aquatic life; we and future generations suffer from the greed of a few.

Clearcutting is destructive to the forest and wildlife.

Clearcutting is detrimental to the wildlife inhabiting the forested area.

Clearcutting is devastating, and no matter how you do it, or the condition of the area, it has many short- and long-term consequences, and should be vigorously challenged, if not shut down completely; make all concerned consider its effects.

Clearcutting is driven by greed only.

Clearcutting is probably not regulated properly. Heavy equipment is used. It is not pretty to look at (impact on tourism). It is usually a money grab.

Clearcutting is rape of the land! Clearcutting causes erosion. In many cases, the land is not properly cleared of brush, so that proper replanting can be done. Selective cutting is one way to ensure that multiple species survive.

Clearcutting is raping the forest. Large areas are left as an eyesore, much wasted timber left behind, and sometimes areas are polluted; a disgusting way to harvest wood; should be outlawed.

Clearcutting is ruining our forests, as they do not clean up the mess they make. They should replant if they clearcut, but I'd rather they did not (sic).

Clearcutting is sick and shouldn't be allowed; it does absolutely nothing for the forest, and the idiots waste half the wood anyway. It makes everything look ugly too

Clearcutting is the most asinine way to clear forest! In certain areas, like dying forest, it could be acceptable. Not only is it disgusting to view, but it totally messes up the ecosystem. Leave some life for the animals.

Clearcutting is thoughtless to the environment, wrong, intrusive; it should be illegal! I have seen its effects and find it unbelievable that such methods are tolerated.

Clearcutting is unsightly and should not be allowed. It destroys the habitat of wildlife and the beauty of the forest. If it is necessary to clearcut, trees should be replanted and protected immediately.

Clearcutting makes for a very messy and very large piece of land that cannot be used for much once it is clearcut.

Clearcutting makes it hard for wildlife. Animals have rights too. That's their home.

Clearcutting must be regulated. Saplings should be planted after an area is clearcut. There should be areas left for wildlife. Before a company clearcuts, an independent consultant should study effects on wildlife.

Clearcutting not only affects the people around; it takes a great toll on the land, such as erosion caused by clearcuts, and effects on wildlife in the area.

Clearcutting not only destroys the forest, but also waterways, and endangers tourism and destroys wildlife habitat. It should be banned.

clearcutting only if trees are dead, spruce budworm

Clearcutting scars the land and should be in areas not in the eye of the public, in areas not open to the tourist trade.

Clearcutting seems to be a destructive practice, since clearcutters may not be terribly selective and may waste trees. I feel clearcutting robs our land.

Clearcutting should be allowed if everything that's cut is being used, and not wasted as is usually the case.

Clearcutting should be allowed only where the timber is at the same level of maturity; more than a forty-acre area within a five-year time period. Replanting should be done after cutting.

Clearcutting should be done on dead wood and fir, plus hardwood lots to replant with spruce.

Clearcutting should be done when it can be controlled, and when it does not have an environmental effect on land erosion or effect run-off into waterways such as rivers, brooks, and lakes.

Clearcutting should be monitored more closely, so that not so much waste is left lying in the cut area and seedlines are protected.

Clearcutting should be regulated by the government agencies most appropriate. However, companies should be held accountable for renewing resources, i.e. replanting and maintaining clearcut areas.

Clearcutting should be up to the landowner, whether private, big industry, or Crown land.

Clearcutting should be used only on diseased or infected areas, or possibly burned areas.

Clearcutting should never be used around our lakes, rivers, and streams.

Clearcutting should not be allowed for obvious reasons. We must protect our environment for the survival of our species, as well as keeping the balance of nature.

Clearcutting should not be allowed in areas where there are trees that are too small to harvest, as 20 to 30 years' growth is being trampled & destroyed.

Clearcutting should not be allowed, as it is too damaging to the environment (erosion, wildlife habitat, etc.). Clearcutting is the most unnatural way to harvest.

Clearcutting should only be allowed by contractors when reforestation immediately follows; if rules unadhered to a strong fine for the company.

Clearcutting should only be allowed if the company will do a clean-up afterwards, and then plant trees to protect the wildlife.

Clearcutting should only be allowed where development happens, new homes, etc.

Clearcutting should only be done if absolutely necessary.

Clearcutting should only be done on burnt-over land or aged timber that will not survive the years to come.

Clearcutting should require a permit which pays for the owner to replant trees.

Clearcutting to me is destruction.

Clearcutting will ruin the land, and it looks ugly.

clearcutting without proper reforestation, poor regeneration and unsightly for passers-by

Contractors encroach on rivers and lakes, too close to roadways. They leave token shelter belts, that usually blow down, deep ruts - can't walk through.

destroys habitat, an eyesore. They are only doing it for the money. Selective cutting is more labor-intensive and

costly, but everyone would benefit in the long run, and it's frustrating that clearcutting is still going on.

Don't cut it all down. I don't know anything about woods.

don't know enough facts to comment

don't like it

don't think it's a very good idea, based on my limited knowledge of it

dying forest only; replanting

Every tree cut down should be replaced with another.

eyesore, usually left in a mess

fish gone; steel plant gone; coal mines gone; forest going. Everyone can't get little brown envelopes if no-one is working.

For forests that are scrub or dying, clearcutting is probably the best thing for them.

Frankly, when I see clearcutting, I worry that the trees won't last my lifetime.

Handled properly it is one of many forest harvesting tools.

harvesters are leaving areas in a terrible mess of scrub that could be a fire hazard, and leaves a terrible view. If harvesters are clearcutting, the scrub should be cleaned up and the area replanted

horrible, wasteful, damaging way to create eyesores; looks worse than burnt area; some areas damaged with no buffer zones around roadways, no replanting

How long does it take for a tree to grow back, to be harvested for lumber? Also, what protection is in place for swampy areas?

I'm against it.

I am not familiar with forest management practices, but completely cutting down an area leads me to believe that

wildlife and smaller plants will no longer have a home, and soil erosion will result.

I am not in agreement with clearcutting at all.

I am not qualified to argue in detail.

I am not very knowledgeable about the subject, just know what I see as I drive on the highways in this province. Some areas are disheartening to drive by. Someone is not thinking about the beauty of our province!

I am very concerned about clearcutting as it is obviously changing the forest environment for plants and wildlife, and it appears to be leaving no new growth; appears to be damaging the forest area; no standards to follow; too much removed or damaged

I am very much against clearcutting. There is no need for all the trees to be cut down. To me this is for monetary gain only.

I believe clearcutting destroys our forests and is simply bad for our environment.

I believe clearcutting is anti-environment, and it is not in the best interest of forest industry jobs, forest management, or the environment.

I believe in cutting only the larger trees (and fir) and leaving the smaller ones to mature.

I believe it is ruining our forests and should be done only if the area is replanted immediately, and this should be strictly enforced.

I believe that clearcutting is harmful to waterways and upsets the balance of nature.

I believe that if they clearcut, they should replant what they've cut down.

I believe that it takes longer for the forest to come back after clearcutting, and it can cause severe washouts. I believe there are places where clearcutting is the most practical method. Cleanup and replanting should follow this type of harvesting unless the land is being developed for agriculture, Christmas trees, etc.

I believe there has been too much clearcutting already.

I believe there is a time when clearcutting is good, but only in a management plan.

I believe this is not monitored carefully.

I believe we should try to emulate nature by selective cutting (sic). The natural habitat of wildlife in all forms in changed too drastically by overcutting.

I cannot believe it is a sensible, healthy option for timber harvesting; not only are all the trees cut, habitat for animals is eliminated, soil stability compromised, and an unnatural growing climate created.

I cannot completely disagree with clearcutting, as in nature areas are periodically cleared (e.g. by fire) allowing more growth to start. I do disagree with the way I see it being practised, large areas, no preserved "islands", etc.

I could agree with clearcutting of small areas that are replanted immediately.

I do not believe in raping our God-given environment for the sake of clearcutting.

I do not know.

I do not think all the information is in on clearcutting.

I don't know alot about its effect on the environment.

I don't like the look of the land after it has been clearcut; it does not look as if a proper job has been done.

I feel it is mass destruction of habitat and we cannot afford the environmental costs.

I feel it should be in an area where trees are infected or dying.

I feel that clearcutting is not the best alternative. Selective cutting would be best for the future of our forests.

I feel there is too much clearcutting. Only God and the big companies know how much damage has already been done. It scares me to even think of it.

I feel there is too much of it going on.

I feel these large clearcuts turn a living forest into a lifeless desert, ruining fishing, hunting, and the pleasure of travelling in these areas.

I fell it's environmentally irresponsible

I hate it, but realize that it is a cost-effective method of harvesting. Strict regulations need to be applied to ensure consideration is given to the local environment and habitat of wildlife.

I hate seeing an area that has been left torn up by clearcutting; in some areas I see the road eroding because of clearcutting. I can't help but wonder what happens to the poor animals and birds. I'm dead set against clearcutting.

I hate the sight of it. I believe it leads to the pollution of lakes, rivers, and streams, and it hurts wildlife.

I have been travelling in the woods all my life, and I have never seen a clearcut that grew back to look even remotely like it did before it was cut. In short, clearcuts are a mess and do not work.

I have seen clearcuts in the summer when heat is unbearable and in winter when the wind blows you off your feet. I've seen streams that were mailles in the woods left in ruins by clearcutting.

I have seen clearcutting on the BC mountainsides; it is so destructive that it should be banned.

I have seen the effects of clearcutting and I find them disheartening. I would like to see the practice stopped, even if there are social and economic costs.

I have worked on Vancouver Island and seen the devastation caused there by clearcutting and erosion. This should be a lesson to us all.

I know that clearcutting is often the most economical way of cutting, but I feel that it is often not best for the environment and for the future.

I might add that clearcutting should only be allowed if it is regulated.

I personally dislike clearcutting and feel it is unattractive to see and is not necessarily beneficial to the forest.

I personally hate clearcutting as it leaves only a mess of nothing.

I strongly disagree with clearcutting and feel it serves no purpose

I strongly disagree with the practice of clearcutting. I get very upset when I drive by an area that has been clearcut.

I think clearcutting should be stopped, as in most cases it destroys everything around: land, streams, rivers, fish, wildlife.

I think clearcutting should only be allowed in reasonable, government-approved sizes and areas of land, and only if contractor is obligated to replenish trees through planting.

I think it's the worst thing they have done to our forest; it's unfair to wildlife and looks ugly.
I think it is a waste.

I think tearing out all the trees at one time is harmful to the environment. I think cutting out only diseased or damaged trees and planting new ones in their place is better.

I think that the environmental impact of clearcutting has not been fully addressed, and should reflect more on the environment than production.

I would like to know who's responsible for clearcutting between Gaetz Brook and Musquodoboit Hbr: it's deplorable. It has been there for 18 mos. No reason for such an eyesore. What is the motive beyond clearing for subdivisions?

If an area is clearcut, all debris should be chipped, not left in piles. No clearcuts should be allowed on Crown lands.

If clearcutting goes on then they should replant before they leave the area, instead of leaving it bare with no chance at all.

If clearcutting is going to take place, cut one and plant one.

If clearcutting must occur, it should have to be replanted immediately. The only excuse for clearcutting would be to improve forest life.

If clearcutting needs to be done, it should be done by men instead of heavy equipment (feller bunchers). As long as these are used in our forests, the people responsible are not credible as forest managers

.

If it is done, new trees should be planted.

If it must be done, gov't should supply new trees for low cost as replacement to landowners, or rebate cost of new trees to companies cutting trees in province

If they are going to clearcut, then they should be made to replant within one year.

If they have to clearcut, the land should be replanted.

In general, I do not like to see clearcutting, but understand it may be the only solution in certain areas only.

In my opinion, the aftermath of clearcutting is a colossal mess.

involves large machines, leaves an ugly mess, ruts, causes siltation of neighboring streams, loss of wildlife habitat, mostly replaced by hardwoods, on Crown lands profits only the leasee and not the public

Is there any way of planting quickly renewable forest, yet still selectively cut?

It's almost impossible to walk in the woods safely, because harvesting machines damage soil and destroy walking trails; I am thoroughly disgusted that this is allowed to happen.

It's grotesque.

It's raping the forest, animals, and birds, and does harm to the water.

It's ruination to the forest, and there will never be anything worthwhile back on it in 100 years!

It's ugly and destructive.

It's unattractive to the eyes of Nova Scotians and tourists (who are now a large percentage of our economy), and it gives a feeling of recklessness and irresponsibility to our province's government and people. Our province is beautiful!

It's usually just a big mess after they're gone and then they just leave it.

It appears that in the past two years more clearcutting has been done, but this is just from casual observation.

It causes erosion, run-off; it is not the best method of harvesting the forest.

It destroys forests and it kills wildlife. Clearcutting also does not allow new trees to grow in their place.

It destroys the forests, forces animals to relocate or perish.

It destroys the land, causes the soil to wash away from the hills and mountainside. Trees are needed to hold back the soil.

It destroys wildlife and changes the way things work; it's like a country boy in the city (lost).

It doesn't only wipe out large areas of the forest, but the harvesting damages the outlying areas as well. It erodes lands and is responsible for flooding in N.B. It brings a lot of silt into rivers.

It gives the wildlife less place to live and find shelter.

It is a good method to use, but with restrictions.

It is a harvesting method that, properly done, is an acceptable and sustainable forest practice.

It is a necessary and valid management option, especially in NS forests that have been high-graded over the years. But in suitable forest types, selection or partial cuts could be implemented. Overall, I feel that allowable clearcut size should be reduced

It is a terrible thing to walk by a once-beautiful forest only to find empty land. I seem to be seeing this more and more.

It is a waste.

It is an environmental shock - too much in such a short time; displaces wildlife, upsets the water table, causes soil erosion, leaves dead, dry material that is a fire hazard.

It is damaging our forests and in the long term will be regretted.

It is destructive and the ecosystem will never come back.

It is necessary to plant new trees as soon as possible. Regeneration on its own is not sufficient.

It is necessary.

It is ugly and depressing to see; causes problems along roads in winter with blowing snow; causes drops in the water table and displaces wildlife.

It is ugly, pervasive, and with us for a lifetime. I do not like it, but I understand it. It has ruined many of my favorite views - gone for life.

It is unnecessary and inappropriate, and should be illegal; it destroys our environment and habitat. I believe that humans are greedy and don't stop to think of the future.

It is wrong and makes the forest look very ugly.

78

It kills wildlife and plant life. Selective cutting should be used.

It leaves an awful mess.

It leaves an eyesore.

It looks like hell; I'm not informed enough to know if it is the best or not; there must be a better alternative.

It looks like we are raping our forests. It is sad to see the mess and devastation left behind.

It looks terrible. If the area could be replanted quickly it would look better faster: erosion might not be a problem and the water table could be maintained.

It makes a mess of the area and looks bad, and causes ecological problems.

It ruins wildlife habitat, destroys the soil, encourages erosion, and prevents natural regeneration.

It should be banned.

It should be stopped.

It should stop altogether.

It would appear that clearcutting practices have been improving in the past 10 or 15 years - reforestation is now common.

It would be like spring cleaning your house by burning it down with your family inside it. It kills all interest in the forest and destroys wildlife. Selective cutting would be a safer policy for everyone and everything concerned.

Its appearance is absolutely devastating.

Large areas have been devastated over the last 50 years by companies such as Scott Paper, which has affected the water table, wildlife habitat, fish stocks, and mixed varieties of trees.

Government mishandling is obvious.

Large companies eliminate jobs with harvesters; they are foreign-owned and profits leave Canada; forests are depleted to satisfy foreign demands.

Living on North Vancouver Island for 3 years, thought Nimkish Valley was a disgrace; bare where there were forests before; I thought things were supposed to be better managed.

Logging should be done on mature trees, and not clearcut, and if possible done with horses or small tractors.

looks really ugly; I have a concern for wildlife and land erosion; I'm told it's sometimes necessary for a healthy forest (?)

Many scenic areas have been destroyed by clearcutting, especially on major highways - seems to be no control at all.

Most areas that have been clearcut appear not to have been reforested.

Most of the time it destroys the forest.

My initial feeling about clearcutting is a negative one, with hillsides left bare and erosion, and wildlife left without habitat; however, if done properly there is probably a time for it.

My wife often uses the term "murdering the forest" when she looks at land that has been clearcut. I do agree with that sentiment.

need more information to have an educated opinion; have heard both sides of argument, but remain unconvinced about its benefits or hazards

No! It is purely destructive on every level.

No, can honestly say I don't know anything about it.

none other than that it should be strictly regulated and these regulations strictly enforced
not a sustainable practice; complete destruction of habitat; should not be allowed
not necessary or appropriate to ever use clearcutting

Nova Scotians in general do not realize the extent of clearcutting, because of green belts being left to cover it up. It can be shocking when seen from the air or from a high rise of land

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NS's forests are too quickly disappearing and not regenerating or being replanted because of greedy landowners and more greedy contractors

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80

okay if best for particular area, done in patches rather than huge areas

On occasion clearcutting may be acceptable, but since the dollar speaks so loudly, to allow it only opens the door to manipulation by the power brokers involved in anything profitable.

One of my favorite fishing spots was clearcut - I have not been back since. In my opinion this clearcutting destroyed a beautiful area of Nova Scotia.

One only has to compare a neglected clearcut to a managed cut to form an opinion.
only disgust

only in cases where an independent panel of scientists and experts deem it acceptable under the circumstances, and greater harm is avoided by clearcutting than allowing the stand to remain
People doing clearcutting should be responsible for leaving areas tidy.

Planting should be done after clearcutting, and it should not be done if it is going to effect property values.

Planting should be mandatory following clearcutting, by company or contractor doing cutting.

Please stop clearcutting because it is destroying our beautiful Nova Scotia.

Providing harvesters observe established planting practices and restrict clearcutting to areas that have no detrimental effect on the environment and neighbours, it is acceptable.

regulate

removes protection for wildlife - deer, moose, etc.

Replanting is necessary.

Replanting is needed ASAP.

Replanting must take place.

selective cutting only

should be controlled

should be done only to regenerate poor woodlots, and should be replanted right away

should be kept to a minimum; only used to remove damaged areas and replanted immediately to prevent erosion; clearcutting as the exception rather than the rule

should be more public awareness of practices through media, etc.

should be regulated

should be replanted at once

should be strictly prohibited on healthy woodlands

should never be allowed

should not be allowed

should not be allowed anywhere, especially with heavy equipment that causes major damage to all aspects of the environment

Should not be allowed. It destroys everything. Why would they do that and not put anything back for the future? Why not select and care for the forest? They like to use their great big machines and kill what they don't cut.

Smaller trees should not be clearcut. If clearcutting is practised, sections should be un-cut to protect wildlife and encourage natural regeneration.

So much of Nova Scotia has been high-graded and hacked at for so long, sometimes clearcutting is the only thing to do, but if the forest site offers any other options, clearcutting is my last choice.

Some landowner clearcut on an area that was once filled with trees. It looks like a forest fire happened there. It's disgusting. If we get a massive amount of rainfall I guess we should brace ourselves for flooding.

Stay away from clearcutting. It will kill a forest. Just look at forests in other parts of the world.
stop

Stop now.

The area should be prepared for seeding and seeded as soon as possible.

The forest should be replenished right away.

The only advantages I see to clearcutting are seen only by the logging companies: it's faster and more efficient and boosts their profit margins.

There's too much clearcutting going on. Clearcutting sets back the environment, wildlife, and plants. To clearcut many acres it's got to affect the ecosystem and take quite a few years for regrowth mature enough to replace what was cut.

There's too much clearcutting, no place left for the deer and bear. That's why there's so much talk about bears being out in the open; they're being kicked out of their natural habitat.

There are many for and against this; I would like to hear from a professional forester on it.

There are no areas suitable for clearcutting. Clearcutting even where monocultures exist still reduces wildlife habitat, erosion control, biodiversity of soil, and is an aesthetic blight (adversely affecting tourism, naturalists, and public enjoyment).

There are ways of cutting forests in order to get required trees and also leave a neat and healthy forest.

There must be other ways!

There should be alternatives to clearcutting. Why not selective logging? Clearcutting if absolutely necessary.

There should be laws in place to ensure the immediate reseeding/ replanting of any clearcut.
they should choose cut, not clearcut

This allows slow regrowth, I think because of all the bush that covers; it also causes a lot of wind to damage existing trees. Also it looks awful.

This also includes private landowners.

This happens much too often, in too many places, and much too close to the water table.

This practice should be forbidden on watershed land.

This way of cutting makes the most unsightly mess you will ever see, besides forest fires. Where do they think the animals are going to live?

To protect jobs in the industry, selective cutting should be the only method used. Clearcutting does not make sense unless destruction of our forests and greed are the main objectives.

too damaging to the land and streams

too much of it; it should only be used in diseased areas to keep disease from spreading
ugly / devastating looking

unsightly mess

very strictly regulated and not allowed near waterways or roadways

very unsightly

very unsightly when driving around these areas; everyone you talk to thinks it's terrible
waste materials left to add to littering and dumping of other materials and an added danger of fires

We clearcut for agricultural land.

What I have seen of clearcutting is this: ruts everywhere, all the small growth trampled into the ground, a complete mess, and nothing can grow back for years. Nothing under a six-inch stump should be cut.

What is left?

When a person sees an area that is clearcut it looks like a cold sore on an otherwise beautiful face.

When the clearcutting is finished, the area should be cleaned up and replanting done.

Where I live, I watch day after day log trucks driving loaded with logs and watch the land gradually being stripped away with only little stumps remaining. It's an ugly sight.

wildlife must take top priority

wildlife, ground ecosystems, birds, animals die; lizards, toads, and turtles need a certain environment and when

84

clearcutting takes place they suffer big time

yes, as part of a defined management plan

yes, there should be shelterwood