BRITISH COLUMBIA COMMUNITIES at the CROSSROADS

Towards
ecological
and
economic
sustainability

GREENPEACE

BRITISH COLUMBIA COMMUNITIES

at the

CROSSROADS

| B.C.'s Unsustainable Logging Industry | 4 |
|--|------|
| Falldown Hits Home | 9 |
| The Great Bear Rainforest | . 10 |
| Spending Our Children's Inheritance | . 12 |
| Adding More Value | .14 |
| Economic Transition | . 15 |
| Tourism | . 17 |
| High-Tech | . 19 |
| Quality of Life | . 20 |
| Policy Recommendations | . 22 |



The demise of BC's resource economy

B.C. has built its economic wealth on the extraction of resources. With the advent of industrial-scale logging in the 1950s, a staggering amount of wood began to be cut. Today the number of trees cut in B.C. each year would fill enough logging trucks to circle the globe one and a quarter times.² Our province has literally been depleting its natural wealth by overcutting our forests.

But the days of relying solely on those natural resources are drawing to a close. The last frontier forests are being cut down by logging companies. As these ancient forests disappear, so do jobs for today's loggers. The B.C. government estimates that 30,000 people will be out of work within the next decade because trees are being cut down faster than they are replaced by new growth. At the same time, this unsustainable logging is eliminating future generations' options for building a sustainable economy.

There is an alternative. The U.S. Pacific Northwest has successfully navigated a course of economic transition from timber dependence to a widely diversified economy. B.C. is already beginning a transition, with high-technology, tourism and other sectors growing rapidly. Furthermore, entrepreneurs around the province are anxious to create more jobs while using less of B.C.'s ancient forests by remanufacturing timber into quality end products.

In this report we present the evidence that B.C.'s logging industry is unsustainable and explore the ramifications for communities around B.C. We point to possible solutions that could get the province back on track, avoiding the massive job losses and degraded environment that are the inevitable result of continued clearcutting as we know it. If we work together we can have sustainable jobs and a healthy environment – something that will benefit all British Columbians.

JUST THE FACTS

- B.C.'s logging industry has been steadily declining in significance, with 9% of the workforce employed in logging in 1980, while only 5.6% are employed in logging today.³
- According to the B.C. government, logging companies are logging 28% above the government's calculation of what is sustainable. There will be an estimated net direct job loss of 30,000 jobs in the logging industry in order to become sustainable by B.C. government definitions.⁴
- B.C. will not be able to compete as successfully in the future global forest economy as tree plantations in warmer climes can be ready for harvest over ten times faster than in B.C.'s slow-growing climate.⁵



- According to ecologists, the B.C. governments estimates of what is sustainable are extremely optimistic and ultimately indefensible. The crash in B.C.'s logging industry will in fact be much greater and with it, we will lose options for future generations.⁶
- Communities around B.C. are already experiencing the reality of timber shortages. For example Tahsis on the west coast of Vancouver Island is predicted to lose 20% of its population in the coming years as the amount of logging and number of jobs in the region are reduced.⁷
- Logging companies are moving into the last frontier forests in order to avoid the impending crash in timber supply:
- Of the 353 rainforest valleys that once existed, 80% have been developed. The majority of valleys left are planned for logging within the next five to ten years.⁸
- Value added products represented 8.5% of all solid wood exports for B.C. in 1997, Meanwhile other Canadian provinces exported 30.6% of its solid wood as value-added products.¹⁰
- B.C. currently gets about 12.3% of its forestry jobs from the value-added sector, whereas Oregon derives 40% of its forestry jobs through value-added remanufacturing.¹¹
- A community-driven ecosystem-based plan in the Slocan valley found that by logging substantially less volume through more labour intensive methods, adding more value to every tree cut and diversifying the local economy, almost three times as many jobs could be created than from denuding the region of ancient forests and replacing them with tree farms.¹²

"We're now trying to get the "guts and feathers" of what's left. Particularly in coastal areas we're logging in the back end of valleys and off the top of mountains."

Reid Carter, forest products analyst for First Marathon Securities and a director of the Forest Alliance of BC ¹

- In 1976, the timber harvest for Oregon was found to be 22% above sustainable according to state definitions. ¹³

 Despite widespread fears of high unemployment and the only alternative being minimum wage jobs, by 1995 it was found that despite a huge crash in their logging industry, there was an 18% increase in jobs in Oregon, and personal income rose 24%. ¹⁴
- As logging declines, tourism and high-tech sectors of B.C.'s economy continue to boom:
 - some 235,000 people are now employed in tourism and related sectors in B.C. 15
 - B.C.'s park system contributes \$400 million to the provincial GDP.¹⁶
 - B.C.'s high-tech sector is currently experiencing growth of 22% a year. While this growth is impressive, it falls far short of the figures in Oregon where the high-tech industry is currently growing by 59% per year.¹⁷
- A 1997 survey of high-tech companies found that 66% of respondents cited B.C.'s quality of life as a factor in deciding to relocate in the province. Meanwhile logging continues to undermine B.C.'s quality of life.¹⁸



BRITISH COLUMBIA'S LOGGING INDUSTRY:

Unsustainable, by anyone's standards

"WHEREAS British **Columbians** desire sustainable use of the forests they hold in trust for future generations; AND WHEREAS sustainable use includes... managing forests to meet present needs without compromising the needs of future generations..."

Forest Practices Code of British Columbia Act 1996

The preamble to the provincial Forest Practices Code defines clearly how our forests should be used—to meet our needs without compromising the needs of future generations. What's happening in B.C., however, is just the opposite. Our logging industry is logging far beyond sustainable levels, no matter whose standards we measure it by.

If we take the B.C. government's standards, for example, logging companies are logging 28% ¹⁹ above the government's calculation of what is sustainable. If it continues at that rate, there will be a net direct job loss of 30,000 jobs.^{20*}

According to many ecologists²¹, even this level of job loss and cut reduction will not sustain the forests on which British Columbians and the natural heritage of B.C. depend. Put simply, in future years when our ancient forests are gone and only tree farms are left to harvest, there will be far fewer jobs in the logging industry. Future generations will never have as much timber as we have today.

For a full explanation of Falldown, Allowable Annual Cut (AAC) and Long Term Harvest Levels (LTHL), see Appendix 1.

Communities Falldown as Logging Corporations Move On

Communities around B.C. are facing a phenomenon known as 'falldown'. To logging companies and government officials, falldown is the inevitable result of cutting down ancient forests and replacing them with tree plantations.

As plantations replace old-growth forests, less wood is available for logging as plantations are cut every eighty to one hundred years, whereas old-growth forests have been growing for centuries. This reduction in the amount of timber is called "falldown."

But this seemingly rational explanation can be a harsh reality to communities around B.C. who have depended on an industry based on logging large volumes of timber and little else. Inevitably logging companies who log far beyond rates that can sustain communities simply move on when the best timber is gone and there is much less timber available. Their cut & run policy has been going on for years around B.C., leaving a legacy of impoverished communities in their wake.



* In the logging industry in the coming years when there are no longer enough trees available to support the present volume of cutting. The 30,000 direct job losses are based on the assumption that a reduction in the amount of logging is proportionately equal to a reduction in logging jobs, all other factors being equal.

Unsustainable, by BC government standards

Presently the Long-Term Harvest Level for B.C. is estimated at 51million cubic metres per year, while the actual amount of logging in B.C. (the Allowable Annual Cut, or AAC) is 71million cubic metres. The amount of timber cut in the province has exceeded the Long Term Harvest Level (LTHL) for 19 years out of the last 20. ²³

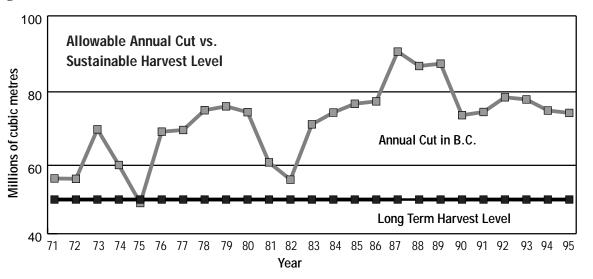
The graph below shows how logging companies have been overcutting B.C.'s forests for years. Instead of addressing the problem, they have successfully pressured government to maintain an unsustainable

level of logging. For example, a 1984 analysis by B.C.'s Ministry of Forests found that the forest resource "cannot, without significant changes in management policies and programs, continue to support current harvest rates and still meet the long-term objectives of sustained yield." ²⁴

Instead of heeding this warning, within three years logging companies escalated the level of logging to an all-time high of 90 million cubic metres—an increase of more than 20% from the 1984 level and 30 million cubic metres over the government's definition of sustainable.

"We are overcutting what is the long-term sustainable yield."

David Zirnhelt, Forests minister, July 1997 ²²



Unsustainable, for the needs of BC communities

ENDANGERED COMMUNITIES

Many logging workers throughout B.C. live in small communities that are heavily dependent on logging. If logging companies reduce the volume of timber they cut each year, either voluntarily to ensure sustainability or because there are no more trees to cut, an estimated 30,000 workers in the industry will lose their jobs.

Such a huge increase in unemployment will cause a crisis of poverty and a depopulation in these rural communities unless alternatives are found. Thousands of these workers and their families may have to move to larger towns and cities to look for new jobs.

With this loss of our forests will come a loss of options for people around B.C. who rely on intact, healthy forests for industries such as tourism and wild-crafting. By logging at unsustainable rates, logging companies are denying such options to our children.

"Each year that we continue down the wrong path we impoverish B.C. by degrading forests... Each tree cut, each paycheck, each job is robbing future generations of British **Columbians** loggers and city dwellers. of opportunities... from healthy forests."

W.A. Henderson, Sunshine Coast logger, 1997 ²⁴



Will plantation forests sustain BC's communities?

"The history of natural resource management often demonstrates a woeful pattern that starts with overharvesting, is followed by complex and fanciful justifications for the overharvesting and then ends with resource collapse. The demise of the Newfoundland cod fishery is a

Jim Smith, registered professional forester,
May 1997 ²⁶

classic example."

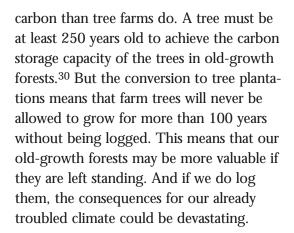
The whole Long Term Harvest Level calculation is based on the assumption that tree plantations will be successful in B.C.—that the farm trees will grow fast enough and big enough to replace the ancient forests that are currently being logged. But numerous studies have come to widely differing conclusions about how much timber will be available to future generations.

For example, independent studies ²⁷ have shown that you cannot keep growing trees and logging them every 100 years without having a severe and damaging impact on the soil the forest is growing in. Forests will simply not grow back as successfully as current estimates predict. Conversely, a recent B.C. government study has shown that tree plantations are growing faster than anticipated.

The bottom line is that the viability of B.C.'s tree plantations is not known; only estimates exist. This means that logging in B.C. is a massive experiment using an unproven model of replacing ancient forests with tree plantations. Nobody really knows if this model will sustain our forests or our communities, yet almost all of B.C.'s land base will be used in the process of trying to make it work.

FNDANGERED ECOSYSTEMS

The conversion of our ancient forests to tree plantations is being carried out on forests that are increasingly recognized as an important carbon "sink." Old-growth forests retain carbon. If they are cut down, they release this carbon, which is one of the gases contributing to global climate change. Old-growth forests store much more



Finally, this experiment with LTHL calculations and tree farms could do irreparable damage to the province's ecosystems and the plants and animals that live in them. The current LTHL is based on the assumption that only 12% of B.C.'s ecosystems need to be preserved in order to assure the survival of the myriad of species that make their home here.

However, a recent report by world-renowned conservation biologist Dr. Michael Soulé ³¹ found that up to 45% of a forest ecosystem needs to be preserved in order to guarantee the survival of all species dependent upon it. Soulé said that by only preserving 10% of an ecosystem, up to 50% of the species in that ecosystem may become extinct. This means that more land base needs to be preserved in B.C. The LTHL needs to be reduced to reflect the preservation of more of the forest base.

Current practice is the exact opposite of this. Once the LTHL is calculated, the government is reluctant to make any reductions that may be necessary to protect B.C.'s vulnerable and threatened species. For example, in 1994 the B.C. government introduced the Forest Practices Code in an attempt to enforce more environmentally



Sustainable, by this community's standards

What is a truly sustainable rate of logging? And does sustainable logging have to mean job losses?

Residents of the Slocan Valley in the B.C. Interior set out to answer these questions when they started to create a land-use plan that aimed to maintain fully functioning forests while supporting the local economy.

Valley residents learned that more trees are being cut in their region than the forest can support in order to be sustainable. This meant that job losses in the region were inevitable under the current management practices. They invited the Silva Forest Foundation, an organization specializing in ecosystem-based planning, to help them find an alternative to the unsustainable rate of logging.

Silva looked at reducing the AAC to a level that would sustain the forests and communities of the region for the long term. The results were shocking: the long-term AAC would have to be reduced to 27% of Ministry of Forests estimations, and the number of logging jobs would have to be halved in order for there to be a sustainable logging industry.

However, the Silva Forest Foundation proposed an ecosystem-based approach to timber management that would create more jobs in the long term than conventional timber management, while cutting less timber. Silva devised a transition strategy as part of the plan. Through a combination of more labour-intensive logging practices and more remanufacturing of every tree cut, more jobs would be available for future generations.

Projected Effects of the Slocan Community Plan vs. Ministry of Forests Plan

| | PLAN | SHORT TERM | LONG TERM |
|----------------------|--------------------------|------------|-----------|
| Allowable Annual Cut | Ministry of Forests Plan | 170,002 | 85,001 |
| (cubic metres) | Slocan Community Plan | 10,288 | 23,002 |
| Number of Jobs | Ministry of Forests Plan | 101-130 | 51-65 |
| | Slocan Community Plan | 67-68 | 149-153 |

Because the people who worked on the plan with Silva included a broad array of the region's residents—from loggers to farmers to recreationalists to village mayors—the plan gained popular support in the Slocan Valley. An Angus Reid survey showed that 75% of respondents who knew about the plan supported it. Despite this support, the Ministry of Forests has so far rejected the ecosystem-based plan.

"The Silva Forest Foundation's study... must be recognized as potentially a very valuable tool for ecologically responsible timber and land management."

Roy C. Carlson, mayor, Village of Silverton ²⁹



sensitive logging practices. In 1998, code provisions to protect wildlife were still not implemented. However, the province's chief forester has already decided that these provisions should not be allowed to reduce the AAC by more than six percent. So, if a rare species is found to exist in a particular region, only a limited amount of its habitat can be protected because the priority of the logging industry and the B.C.

government is to maintain a high level of logging in B.C.

These practices will not sustain our rich heritage of plants and animals. They will undermine efforts to promote the province as a destination for eco-tourists and will degrade the quality of life that British Columbians enjoy.

Unsustainable, in the global forest economy

"The big draw is still the resource.
We can grow a crop of pine trees in 12 years.
You can cut 'em down and pulp 'em in 12 years."

John Bliss, associate professor of Forestry, Auburn University, Auburn, Alabama ³² While both government and industry admit that the logging industry of the future will employ less people, a look at the global forest economy reveals that B.C. government predictions are understated and that the reality is that now more than ever B.C. is facing huge challenges to our traditional markets.

Right now, companies are logging trees that took hundreds of years to grow and are turning over half of them into pulp and paper products. Former forest land is then converted to tree plantations. The trees on these plantations–Douglas-fir, Sitka spruce, and other native species–take more than eighty years to grow before they can be logged.

In the southern U.S., the same process is happening. The difference there is that tree plantations are ready for harvest every twelve years. In South America, eucalyptus plantations are ready every five to seven years. ³³ The slow growing conditions in B.C. mean that we will not be able to compete very successfully in the global forest economy of the future. The years of B.C. dominating the global pulp and paper market are slowly drawing to a close.

Canfor's Eburne Mill closed down in Vancouver: The future of B.C.'s logging industry?





British Columbia Communities at the Crossroads

Falldown hits BC's logging communities

The impact of falldown is already being felt in communities around B.C. For example, the Strathcona Forest District on Central Vancouver Island has been the site of intensive logging operations since the middle of the century. The 1994 Timber Supply Review found that a 34% reduction in logging is needed just to achieve the Long-Term Harvest Level for the region.

For the community of Tahsis on the west coast of the Island the future looks decidedly bleak. The closure of one sawmill in the region in 1987 and the increased use of less labour-intensive logging methods over the last decade have already resulted in the loss of jobs and a steep decline in the town's population.

A 1995 analysis ³⁵ showed the town could lose a further 20% of its population if more reductions in logging occur as predicted. If the report's conclusions are ignored in the short term, then this loss will be even greater in the long term.

Population of Tahsis, Vancouver Island, B.C. ³⁶

| | 1981 | 1986 | 1991 | After adjusting |
|------------|------|------|------|-----------------|
| Population | | | | to LTHL |
| of Tahsis | 1739 | 1445 | 1053 | 842 |

The report also warned that high logging levels will undermine the region's opportunity to build a more diversified economy. Tourism and outdoor recreational activities draw on environmental attributes, such as old-growth areas for hiking and scenic viewscapes, which are generally damaged or eliminated by logging.

Another example of the consequences of falldown is the situation at Canfor's Eburne sawmill in Vancouver. On November 27, 1997, Canfor announced the permanent closure of the Eburne mill, putting 200 employees out of work. The corporation cited "fibre supply shortages" due to unsustainable logging of its Tree Farm Licence on Vancouver Island as the reason for the closure.³⁷

The reality in British Columbia is that the commitment by government and industry to Long-Term Harvest Level logging has meant that the needs of communities around B.C. have not been supported, and our ancient forests are in jeopardy. All it has achieved is a series of short-term economic booms for large logging corporations followed by economic busts felt primarily by communities around the province. And with the busts come job losses, economic hardship, degraded ecosystems, and the loss of options for future generations.

"Falldown...
is a reality
in several
management
units."

Ministry of Forests, 1994 ³⁴

"I believe there were areas of the coast that were overcut."

> Peter Bentley, Chairman, Canadian Forest Products ³⁸



British Columbia Communities at the Crossroads

Ocean Falls: B.C. has already felt the legacy of boom-and-bust towns. The mill at Ocean Falls in the Great Bear Rainforest closed in the 1980s, and the population of the town subsequently plummeted from over 4000 to 60 today.



The final frontier temperate rainforest

"British
Columbia is...
facing timber
supply limitations.
The days of
expansion of
the B.C. forest
industry by
building new
sawmills and
pulp mills, to
be supplied by
ever-increasing
harvests, are
past."

Ministry of Forests, 1994 39

British Columbia's coastal rainforest is a classic case of what happens when falldown occurs and the timber starts to run out.

Logging companies have responded by carrying on an unsustainable level of logging, seeking out the last remaining frontier forests in order to maintain a supply of timber.

As falldown continues on Vancouver Island, companies have moved up to B.C.'s



British Columbia Communities at the Crossroads

central coast in their quest for timber. The region–dubbed the Great Bear Rainforest by conservationist Ian McAllister–is the last significant piece of intact ancient rainforest left on the B.C. coast. In fact, of the 353 rainforest valleys that once existed, 80% have either been logged or felt the impact of some other form of human development. Most of the remaining undeveloped valleys can be found in the Great Bear Rainforest. 40

While the area is rich in wildlife, offering some of the last refuges for the grizzly bear, goshawk, and other threatened species, it is by no means the most productive rainforest that ever existed on B.C.'s coast. But coastal logging companies have set their sights on it because it is all that is left. In terms of high-quality, valuable, ancient rainforest, this is the final frontier.

Of the few thousand people that live in the region, very few benefit from ongoing and proposed logging. Most jobs are held by loggers from Vancouver Island who fly into the region for 10 day periods to work at the logging camps, but who are not contributing dollars to the local economy.

This is a growing trend for forest workers on Vancouver Island who are already suffering the effects of falldown. They must now look farther from home to find work.

Furthermore, two of the largest logging companies in the Great Bear Rainforest – International Forest Products (Interfor) and Doman/Western Forest Products – do not operate mills within the region. Logs, and therefore jobs, are transported 400 kilometres south to the Vancouver region where millworkers there benefit from processing the logs rather than coastal community workers.



Unsustainable Logging In The Great Bear Rainforest

Even within the Great Bear Rainforest, logging goes on at unsustainable rates. Three logging companies – International Forest Products, Doman/Western Forest Products and West Fraser Timber – are currently logging the region at vastly unsustainable rates. The amount of trees logged in the Great Bear Rainforest is on average 54% above the estimated LTHL rate.

In 1994, staff in the Ministry of Forests calculated how many jobs had to be eliminated to maintain what they thought was a sustainable rate of logging in the three forest districts that encompass most of the Great Bear Rainforest. They found that the number of jobs would have to decrease from 2575 to 1675 – a reduction of 35% of the workforce. And this figure assumes that the ministry's calculation of a sustainable rate of logging is accurate, which is simply not the case.

Take for example the southern portion of the Great Bear Rainforest—the area the B.C. government has named the Mid-Coast Timber Supply Area. The LTHL here is set at 550,000 cubic metres, but logging companies are currently taking 1,000,000 cubic metres annually.

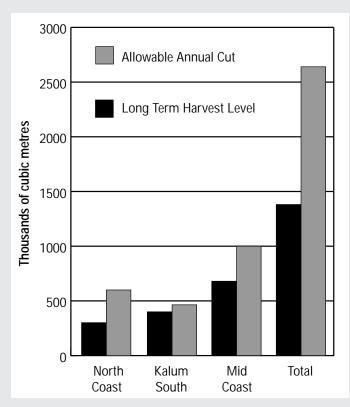
While this in itself is unsustainable, the actual rate of logging on the mid-coast is far higher. This is because the calculation of the LTHL only takes into account one type of forest tenure, the Forest Licence. Another tenure type, the Timber Licence, also exists in the region. Timber licences cover much of the prime rainforest. No LTHL is set for a timber licence as it is an older form of forest tenure, existing before restrictions were established.

International Forest Products (Interfor) owns the rights to most of these timber licences and can simply log them as fast as it likes as long as it abides by the Forest Practices Code and other environmental legislation. Interfor has set its own rate of cut at 400,000 cubic metres

per year for the timber licences. Consequently, all of its timber licences will be logged out in 25 years. Trees in the region take at least 80 years to grow, so there will be a minimum 55-year wait for replacement timber, which means there will be huge job losses on top of the already anticipated decline in logging in the region.

Eventually...these licences will expire as the mature timber is removed and associated forest sector employment will decline.

Socio-economic Analysis of Timber Supply Scenarios for Mid-Coast TSA, 1994 41



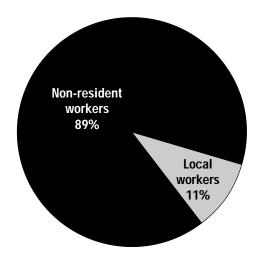
"One in ten species of vertebrate animals and plants are threatened or endangered in British Columbia."

State of the Environment Report, Ministry of Environment, 1996



"If resources continue to leave, if job loss continues due to distant shareholders, if what remains is unmerchantable, then the demise of this community is inevitable within a short period of time."

Patricia McKim-Fletcher, economic development officer, Central Coast Regional District ⁴³



Residency of Forest Industry Workers Relying on the Southern Half of the Great Bear Rainforest

| TSA | Local Employment | Non- resident | % local residents |
|--------------|---------------------|------------------|-------------------|
| Mid Coast | 191 | 1684 | 11% |
| 00001 | | | , 0 |

We are spending our children's inheritance

The B.C. government and the logging industry are saying that:

- if the logging industry converts almost 90% of our ancient forests to tree plantations,
- if the tree plantations grow as well as expected,
- if the tree plantations are able to compete with countries that have better growing conditions,
- if customers around the world still want to buy from B.C.,

- if British Columbians continue to tolerate the degradation of our natural environment, and
- if people around the world accept that some species may be lost

then 30,000 people will lose their jobs.

This is an optimistic figure given the overwhelming evidence that B.C. faces a crisis in sustainability in the coming years. Job losses will likely be far greater than the B.C. government's staggering predictions unless we make some serious changes in the way we manage our forests.

Interfor ships out approximately 50 fully laden log barges per year. Each barge has, on average, the equivalent of ten full-time, year-long, processing jobs worth of logs on board. 42





British Columbia Communities at the Crossroads

We are denying future generations the chance to enjoy a healthy environment, to experience the magnificence of an ancient forest, to observe a grizzly bear in the wild, or to find a job in tomorrow's forest economy. Right now our generation is spending our children's inheritance.

FUTURE GENERATIONS WILL INHERIT THE DECISIONS WE MAKE

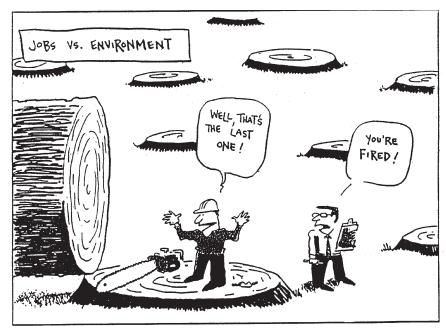
The logging industry always frames the choices for forest-based communities around B.C. as either-

- carry on logging at unsustainable rates for as long as possible to hang on to as many jobs as possible now, or
- stop cutting the last few ancient forests and lose timber-related jobs immediately.

The important point to remember is that by logging in the last few pristine areas of the province and by continuing to log at an unsustainable rate, we are only delaying and exacerbating the huge job losses that are predicted. They will inevitably come, and when they do there will be no intact forests on which to build a different kind of economy. By choosing the first option, logging as usual, we are destroying options for a sustainable economy.

British Columbians *do* in fact have a third choice.

We can build a sustainable economy, using our environment and quality of life as a foundation, while we still have some healthy, intact, ancient forests left.



© Joel Pett, Lexington Herald-Leader. All rights reserved.

The sooner we start making a transition based on this choice, the more options we will leave for our children. We can always log pristine forests in the future, but we cannot go back in time and preserve ancient forests that have been cut down. By choosing to make our economy sustainable now, we can make deliberate efforts to avoid a predictable crisis. On our present course, we have no control over when fall-down will hit us the hardest, and both our communities and our forests will suffer.

We must not delay the transition to a modern economy. The time for B.C. to chart a new course is now.

"There are going to be job losses."

David Zirnhelt, Forests minister, July 1997 ⁴⁴



Adding more value is part of the solution

Logging will always be a part of B.C.'s economy. Our challenge is to determine how much logging can be done without jeopardizing the environment and our quality of life. Right now we log large volumes of timber and ship it out of the province with relatively little processing. Consequently, B.C. gets far fewer jobs for every tree cut than do other parts of North America.

A Comparison of Jobs Per Thousand Cubic Metres of Wood Cut in North America 46

| GUG2 OL MOOO | Cut III North America 40 |
|--------------|--|
| | TIMBER CUT (thousands of cubic metres) |
| B.C. | 0.88 |
| Canada | 1.5 |
| U.S.A. | 3.4 |
| California | 5.2 |

For years there has been broad consensus among labour unions, government, and environmental groups that adding value to every tree cut by remanufacturing it is the best solution for job creation without the need for high rates of logging. The logic is simple. Every time a piece of wood undergoes additional processing, it creates more employment. For example, Jackpine Forest Products in Williams Lake makes door frames and mouldings. To maintain one job at the mill requires 48 truckloads of wood every year. By contrast, to maintain one job for a worker making 2x4s at the nearby sawmill requires 121 truckloads of wood per year. ⁴⁷ This lumber will likely receive additional processing in another province or country, denying British Columbians the possibility of a job.

A recent B.C. government report exposed the province's poor record in the valueadded sector by comparing the amount of solid wood leaving each province as secondary manufactured products. It found that, measured in terms of export dollars, value added products represented 8.5% of all solid wood exports for B.C. in 1997.

Meanwhile the rest of Canada exported 30.6% of its solid wood as value-added products – over three times as many products. 48

In terms of employment, B.C. currently gets about 12.3% of its forestry jobs from the value-added sector. By contrast, 40% of Oregon's forestry jobs add value. B.C. has a long way to go. A 1993 Select Standing Committee on Lumber Remanufacturing estimated that for every job created by a sawmill, an additional 4.55 jobs could be created by value-added remanufacturing. Simmons Consulting's submission to the committee estimated that there is 1.3 billion board feet of remanufacturable lumber exported out of B.C. annually. ⁴⁹ This wood could create as many as 12,000 new jobs in B.C.

There will only be a future for many forestry workers in communities around B.C. if we switch from a volume-based logging economy to one based on adding value. We need to create incentives that will encourage companies to remanufacture timber as much as possible before it leaves the communities where it was cut. Policy makers must investigate and evaluate such ideas as setting minimum "jobsper-cubic-metre" requirements for facilities processing timber, or imposing restrictions on the proportion of unprocessed wood leaving a region. The government needs to put a much greater emphasis on local support programs for the development and marketing of value-added manufacturers.

At present, the government's Forest Renewal B.C. program (set up to restore degraded forests and encourage job



creation through getting more value from our forests) is investing less than 5% 52 of its annual budget in the value-added sector,

yet there is broad consensus that this sector alone has the potential to be the biggest job creator in the forest sector in years to come.

Economic transition is part of the solution

The problems currently facing B.C.'s economy have already been addressed in many other parts of the world. By examining how other regions moved beyond a resource-based economy, we too can set out on a path to stable economic prosperity.

Perhaps the best example is provided by the U.S. Pacific Northwest, which faced exactly the same problems 20 years ago that B.C. faces today. In 1976, researchers at Oregon State University predicted that the state would have to decrease its timber harvest by 22% before the year 2000. Compounding Oregon's problems was its overdependence on logging and its lack of a diverse economy.

"It is clear that it has been a lack of investment on the part of B.C. industry as well as government towards developing markets in other regions locally and globally."

John Brink. President of the B.C. Council of Value-Added Wood Processors 51

"A lot of people were afraid of change. But I see a real future here."

Scott Slaughter, personnel manager, Springfield Forest Products, Oregon 53

Bob Lenci, Little Valley Mill.

International Forest Products: doing less with more

Sauder Industries (owned by Interfor CEO William Sauder) operates a mill in Ferndale, Washington, that remanufactures B.C. hemlock and fir into products such as fingerjointed mouldings and door jambs. The company employs 60 people, effectively denying jobs to 60 workers in B.C. Meanwhile, Interfor recently closed down its Bay Lumber Sawmill in Pitt Meadows.

Little Valley Mill: doing more with less 50

Positioned on the edge of the Great Bear Rainforest, Little Valley Mill in Bella Coola points to the way forward for many rural communities in B.C. It is a small, independently owned sawmill that currently employs between 25 and 30 people. Many of the employees are First Nations people. In a First Nations community where there is 80% unemployment, the mill is a lifeline. Until recently it relied on using scraps of cedar that large logging corporations such as Interfor left behind after clearcut logging. However, the mill owners recently secured the rights to log 300,000 cubic metres of timber over six years, and the mill is currently undergoing an expansion. When completed, it will provide up to 90 jobs for local residents

while using only 4% of the timber that is cut in the region. Interfor, the largest logging company in the region, employs only about 60 people. Little Valley Mill is a classic example of doing more with less. And by using less, there will be more resources and hence more options left for future generations.





"Oregon had to organize itself to become a 21st century economy, not a 19th century economy."

Jeff Tryans, director, Oregon Progress Board, April 1998 ⁵⁴

"The net result is that the region is successfully navigating from being dependent on a few extractive industries to having a modern, widely diversified economy."

Tom Powers,
Economics Department,
University of Montana,
describing the economic
transition of the Pacific
Northwest states of the U.S.⁵⁶

16

In the early 1980s, Oregon's once-booming timber economy began to hit the wall. As logging companies pushed into the remaining frontiers in their quest for timber, wildlife populations were pushed to the brink of survival. The spotted owl became the flashpoint for what grew to be a national debate around logging. The large logging companies were trying to scare its workers into line, predicting that 100,000 jobs would be lost if changes were imposed on the industry and blaming the spotted owl for the problems. In the end, Oregon's logging industry was forced to contract to make up for years of logging too much, too fast.

But what was framed as a choice between jobs and owls has turned out to be neither. Twenty years later, the changes in the Pacific Northwest serve as an important lesson for B.C.'s ailing resource economy. A report published in 1995 by 35 U.S. economists found that in Oregon between 1988 and 1994:

- there was an 18% increase in jobs, and
- personal income rose 24%.

In fact in 1993 alone Oregon added 100,000 new jobs—the exact number that the timber industry said would be lost due to logging restrictions.

Oregonians rose to the challenge of becoming a 21st-century economy. High-tech and manufacturing industries stepped forward and passed resource industries in importance to Oregon's economy. The remaining forest land turned out to be an asset, as the quality of life associated with a good environment and outdoor activities was a major factor cited over and over again by companies who chose to locate in the Pacific Northwest.

As the economy diversified and reduced its reliance on logging, it became far more resilient. In 1955, logging provided 60% of all manufacturing jobs. Today it is responsible for less than 4% of jobs. ⁵⁵ Oregon workers, unlike those in B.C., are affected to a much lesser degree by fluctuations in the global timber trade.

The one significant problem with Oregon is that communities waited for a crash in the logging industry before change occurred. Consequently, over 95% of there original ancient forest has been lost. B.C. is in a position to change before such serious degradation of our ancient forest occurs.

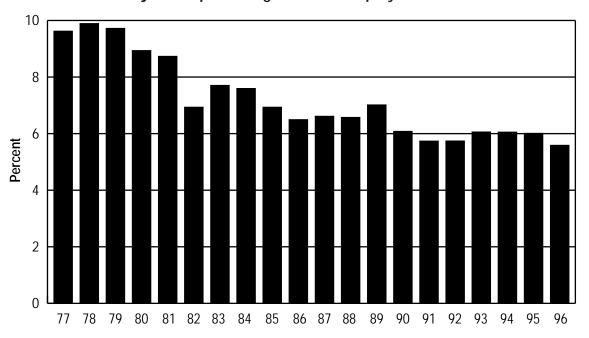
BC: an economy already in transition

While a modern economy emerges in the Pacific Northwest, B.C. is not that far behind and could move beyond a reliance on logging in a relatively short period of time. This is because B.C.'s economy is already in transition.

For example, the logging industry's contribution to B.C.'s economy (GDP or Gross Domestic Product) has declined steadily over the past 25 years, from 11% to 8% today.

The percentage of B.C. workers who are employed in the industry has also dropped steadily as B.C.'s population expands and other sectors of the economy continue to grow. In 1980 when the industry was entering a major economic downturn, logging employed about one out of every ten workers (9% of the labour force).⁵⁷ By 1996 the timber industry employed only 5.6% of the B.C. labour force–almost half the 1980 level.⁵⁸ By 2005, Human Resources Development

Forest sector jobs as percentage of total employment in British Columbia



Source: Statistics Canada

Canada forecasts that timber industry employment in B.C. will drop to a mere 4.8% of the labour force—less than one worker in twenty. ⁵⁹

Logging's continued decline in significance for the provincial economy is more than matched by growth in other sectors, in particular tourism and hightech industries.

TOURISM: A SUSTAINABLE ALTERNATIVE

Tourism can give a considerable boost to a local economy without damaging ecosystems. In fact, tourism is already one of B.C.'s largest employers. Figures released in April 1998 indicate that 235,000 workers are now employed in tourism and related sectors. By the year 2001, 25,000 new jobs are expected to be created. ⁶⁰

Tourism also generates a considerable amount of economic activity. A 1996 study by the Ministry of Environment ⁶¹

found that 77% of British Columbians participated in outdoor activities spending an estimated \$622 million. A 1993 study on the economic benefits of parks in B.C. ⁶² concluded that parks contribute \$400 million to the provincial GDP and that one third of park visitors are from out of province. This is a significant source of income to B.C.

As long as there are some undeveloped places left in the province, B.C. can continue to draw people from around the world. Nowhere is this more true than the Great Bear Rainforest, where in 1996, a summer ferry service began bringing tourists into the region. 1997 was a record year for cruise ships in B.C. with over 800,000 passengers cruising by the Great Bear Rainforest on the way to Alaska. Cruise ships offer a boost to Vancouver's economy, and their passengers are increasingly wanting to stop and spend time in remote regions, which could mean huge support for rural economies.

"So many people were buying the propaganda that the mill was the only glue holding this town together. People have begun to realize, 'Hey, we didn't need that mill.'"

Bill Miller, Sitka resident 67



LIFE AFTER LOGGING: THE SITKA MILL CLOSURE

Sitka is a remote community on the Alaska panhandle with a population of 9000. On September 30, 1993, the Alaskan Pulp Corporation mill in Sitka closed, putting almost 400 people out of work. Four years earlier, a report commissioned by the City of Sitka ⁶⁴ had forecast that the mill closure would lead to:

- a 24% decrease in employment, and
- a 46% decrease in real estate values.

With such a doom and gloom picture, residents were extremely nervous when the mill did close. But five years later, Sitka has turned the report's forecasts upside down.

- The unemployment rate in 1992 before the mill closed was 6.2%. In 1995, unemployment was on average 6.1%.⁶⁵
- The city assessor found that real estate values have risen since the mill closed.⁶⁶

Sitka's recovery can be attributed to its diverse economy. The town's location on the Alaska panhandle makes it an ideal stop for cruise ships and it has invested in

Ecotourism in Bella Bella

Frank and Kathy Brown of the Heiltsuk Nation have already started a successful aboriginal heritage and eco-tourism business based in Bella Bella. They are in the process of constructing the first Heiltsuk Big House that has existed in 165 years and take eco-adventurers on First Nations heritage tours where traditional salmon barbecues are held and where they share Heiltsuk culture with songs and dances being performed.

"We want travellers passing through to understand the history and culture of our land - the mid-coast region that is our home," says Frank who, with his wife Kathy, began See Quest Adventures three years ago. "We have to create something that will sustain us and our children into the next millennia."

Interest in the aboriginal heritage tours is high, with the See Quest experience proving the number one attraction on route 40 of the Queen of Chilliwack ferry service.

Frank and Kathy Brown's longhouse at McLouglin Bay near Bella Bella.



More information on See Quest Adventures can be obtained by logging onto their website at www.seequest.com or by calling 250-957-2611 or faxing 250-957-2619.



Log It or Leave It? 63

Local wilderness guides in the Tutizzi Lake area in northern B.C. commissioned a report in 1990. They wanted to answer the question: If we log the region, how much revenue and how many jobs will be generated compared to the revenue and jobs if we do not log? The study found that more jobs could be sustained by not logging the region:

| | ANNUAL | FULL TIME |
|-------------------------------|--------|-----------------|
| Logging all mature timber and | JOBS | EQUIVALENT JOBS |
| replacing it with tree farms | 6.5 | 4.33 |
| Wilderness Tourism | 13.4 | 5.63 |

The study also found that the combined costs of road construction, logging, silvicultural activities, and administration would exceed the gross timber value by about \$6 per cubic metre. If they cut down all the trees they would lose \$558,263.

In contrast, the net value of tourism was estimated at \$267,500 per year at the time of the study. Tourism would also bring in an additional \$10,000 in annual revenue to the province for hunting and fishing licences.

The study's estimates were extremely conservative: no allowance was made for the falldown in jobs after the mature timber was cleared, nor for the increase in tourism in the future as wilderness settings around the world became increasingly scarce. The message is clear–leave the forest at Tutizzi Lake intact and the local economy will benefit.

services to draw cruise passengers. Some 200,000 tourists stop in Sitka each summer and pump money into the local economy.

The town is the hub for Alaska's commercial salmon trolling fleet. A fast-growing First Nations hospital now employs as many people as the pulp mill did. Cash is also flowing into the economy as wealthy retirees flock to the town, attracted by its quality of life.

THE HIGH-TECH SECTOR: DIVERSIFYING OUR ECONOMY

B.C.'s high-tech sector is currently experiencing growth of 22% a year. If it continues to grow at this rate, the high-tech industry could employ more people than the forest sector within five years. But while this growth is impressive, it falls far short of the figures in Oregon where the high-tech industry is currently growing by 59% per year.⁶⁸

The secret to the boom in high-tech industries in Oregon is the state's commitment to diversify its economy by putting less emphasis on logging and more on other industries. The government

| High Technology's Contribution to the Economy: B.C. and Oregon | | | | | |
|---|-------------------|--------------------|--|--|--|
| FACTOR | B.C. | OREGON | | | |
| Median wage for high-tech employees | \$40,627 CDN | \$63,365 CDN | | | |
| Estimated total industry employment | 41,130 | 54,000 | | | |
| Estimated number of new employees to hire, 1998 11,000 15,000 | | | | | |
| Total industry revenue, 1995 | \$5.1 billion CDN | \$23.2 billion CDN | | | |
| Revenue growth of high-tech companies-19 | 995 22% | 59% | | | |
| U.S. dollar figures were converted using exchange of 1.45 as of 19/5/98 | | | | | |

"\$329 million of the public's money is at risk to keep one antiquated pulp mill operating for four years. That's more money than the government has spent on high tech in years."

Jock Finlayson, economic analyst with the Business Council of B.C., commenting on the B.C. government's bailout of the Skeena Cellulose pulp mill in northern B.C. ⁶⁹ implemented an action plan to encourage this transition, and Oregon is now reaping the benefits from this forward thinking.

Here in B.C. the biggest obstacle to change is the ability of large logging companies to dominate the provincial political agenda and maintain a disproportionate influence over public policy. While there is a young and growing high-tech component in B.C.'s economy, it receives relatively little support as logging companies continue to hold the government's attention.

As the pro-logging lobby is always quick to point out, high-tech industries are generally located in cities or close to good transportation facilities, not in remote communities. But what lobbyists neglect to mention is that places like the Lower Mainland and southern Vancouver Island are home to a high proportion of the forest-sector workforce, men and women who fly into remote regions to work for short periods of time or who work in mills that benefit from logs coming from distant forests.

For example, 90% of the people employed due to logging in the Central Coast region live in southwestern B.C. These are people who could be retrained to work in high-tech and other new industries close to their homes. Residents of remote communities could then work in their own area at jobs like sustainable logging or fishing, tourism, and value-added processing of both trees and fish. If we diversify the economy, there will be jobs for everyone instead of the current situation where unemployment in rural areas is much higher than in the province's cities.

Quality of life: British Columbia's greatest asset

Logging continues to threaten B.C.'s last significant stands of ancient forest and the province's image as a natural environment. Wilderness and the West Coast lifestyle were major attractions for many high-tech companies thinking of moving to the region–66% of respondents to a recent survey 72 cited them as factors in the decision to relocate. Oregon realized the importance of this back in the 1980s and began to preserve and emphasize its quality of life in order to attract high-tech capital. Maintaining wilderness paid off for Oregon. It could pay off for B.C. too.

In fact there is already a growing trend of people retiring to rural communities around B.C., attracted by their quality of life. More people who would previously have been urban-based are also seeking out rural areas as information technology evolves and there is less of a need to be based in a large city. Again this attracts a significant amount of money to the local economy.

Montana State University economist Ray Rasker clearly states the argument for preserving our wild country: "If people and businesses move to (and stay in) rural communities for reasons that have to do with a high quality of life, then protecting and enhancing those qualities is good for the local economy. The frequently heard lament of 'jobs versus the environment' becomes a false dichotomy."

The real question is "jobs vs jobs." What kind of jobs will sustain a region and is it possible to have a fully functioning, healthy environment as well as employment? British Columbia must now answer this question. There is still time to protect the rainforest ecosystem and enjoy a healthy economy. But time is running out.

"Owls versus jobs was just plain false. What we've got here is quality of life. And as long as we don't screw that up, we'll always be able to attract people and business."

Bill Morrisette, mayor of Springfield, a former timberdependent town in Oregon ⁷⁰



Greenpeace is part of the solution

THE FOREST STEWARDSHIP COUNCIL

Greenpeace International was a founding member of the Forest Stewardship Council in the fall of 1993. Working with governments, logging companies and conservation groups around the world, the Forest Stewardship Council seeks to independently certify sound forest management practices based on acceptable ecoforestry principles. Greenpeace continues to participate in the process on an ongoing basis around the world, as well as in British Columbia where regional standards are currently being developed and implemented.

B.C.'S FIRST ECO-CERTIFIABLE LOGGING

In 1995, Greenpeace Canada teamed up with Ministry of Forests staff and Registered Professional Forester Herb Hammond to produce the first certifiable forest products in B.C. A single-tree selection harvesting method of ecoforestry was employed near Vernon, B.C., producing timber that is not only certifiable, but also creates up to 8 times as many jobs as conventional clearcutting.76

THE ECONOMIC TRANSITIONS WORKING GROUP

Greenpeace Canada was a founding member of the Economic Transitions Working Group in 1997. The goal of the working group is to develop a comprehensive overview of the steps that must be taken in British Columbia to diversify rural economies and decrease the pressure and dependence on B.C.'s old growth forests.

IN THE COASTAL TEMPERATE RAINFOREST, GREENPEACE IS CALLING FOR:

- no logging in the remaining pristine valleys
- no new roads in the temperate rainforest
- an end to clearcutting

In the longer time, Greenpeace is seeking a phase-out of industrial logging in ancient forests, and a shift toward logging in second-growth forests according to ecological principles.

Greenpeace supports First Nations' cultural use of the temperate rainforest and local community-controlled ecoforestry in second-growth forests and areas where some logging has already occurred.

GREENPEACE CANADA INDIGENOUS PEOPLE'S POLICY

Greenpeace Canada recognizes the inherent sovereignty of indigenous peoples and their governments as defined under public international law.

We acknowledge that the federal and provincial governments of Canada continue to disregard the titles and corresponding rights of indigenous peoples and their governments.

We believe that all governments, including those of indigenous peoples, have an obligation and responsibility to preserve the integrity of the natural environment and the diversity of life on Earth.



Greenpeace forest policy recommendations

The following policy recommendations have been developed to guide B.C. in its transition from a resource-based economy that harms ecosystems, to a modern economy aimed at protecting ecosystems.

It is acknowledged that a fair & just resolution of the land question must be addressed with regard to First Nations rights and title in B.C., and that adequate resource protection must be afforded while the land question is being addressed.

ECOSYSTEM-BASED PLANNING

- Establish and implement a comprehensive ecosystem-based planning process that is driven primarily by First Nations and other forest-dependent communities. An ecosystem-based approach to planning and development requires a legislative and land use strategy that formally protects the integrity and functioning of forest ecosystems as the prior basis for the designation of zones for resource development, and for the allocation of tenure rights.
- Such a plan should include adequate protection for biodiversity through a matrix of core reserves, buffer zones and wildlife corridors, and must be large enough to cope with all natural disturbance regimes at all scales through time. All land use decisions must be guided by the plan.

ALLOWABLE ANNUAL CUT

- Substantially lower the Allowable Annual Cut (AAC) over an agreed time period to a level which sustains long-term ecosystem functioning, with the AAC determination to be based on the outcome of an ecosystem-based plan.
- In the interim, implement an immediate reduction of the AAC to Long Term

Harvest Level under current methodology of determining rate of cut.

PROTECTED AREAS

■ Lift the current limit of preserving 12% of B.C.'s ecosystems and base protected areas on the outcome of an ecosystem-based plan.

TENURE REFORM

- Shift from corporate to communitybased and controlled tenures. The proportion of B.C.'s forests allocated to various forms of corporate tenure should be reduced, and tenures should be reallocated to community-based forest tenures.
- Enact new legislation that will allow for a transition to more community based tenures, such as the proposed 'Community Forest Trust Act'.
- Logging in all tenures should embody ecosystem-based principles.

LOGGING PRACTICES

Within the next two years the government should introduce an improved Forest Practices Code that:

- bans clearcutting and other destructive logging methods;
- ends roadbuilding into the remaining intact pristine valleys;
- protects landscape and ecosystem networks;
- requires mandatory biological inventories and wildlife assessments prior to any logging or roading approvals;
- has larger riparian reserve zones to bring them in line with buffer zones required by the US Forest Service in the Pacific Northwest;



- bans clearcut logging on class IV and class V slopes;
- is based on the recommendations of the Clayoquot Sound Science Panel;
 and
- requires logging companies to meet a minimum lumber recovery rate and achieve a minimum employment rate for their operations.

CERTIFICATION

- All forest products must be eco-certifiable, the certifier being independent from industry and government control, which incorporates stringent environmental criteria and is based on performance standards assessed in the forest. Currently, these principles are supported by the Forest Stewardship Council, an independent international certification body.
- Facilitate the creation of independent national and international marketing programs for ecoforestry products (timber and non-timber).

COMPETITIVE LOG MARKETS

- Regional open log markets should be expanded throughout the province, and administered by a socially accountable body. Price should reflect the ecological cost of harvesting.
- Stumpage rates should reflect the prices obtained in competitive log markets.

ECONOMIC TRANSITION

- Convene an independent Economic Transitions Advisory Panel which will explore the options for economic transition and make recommendations directly to cabinet.
- Establish a comprehensive and sustainable community economic strategy for First Nations and non-indigenous communities aimed at facilitating the transi-

- tion to a lower volume of timber premised on ecosystem-based community forest management. Strategies should focus on worker retraining, cooperative development and economic diversification.
- Establish a retraining, placement and financial support program for displaced workers and members of communities undergoing economic transition.
 Programs would be defined by communities, and give preference to displaced workers in the entitlement to new community-based forest tenures and in the establishment of new secondary manufacturing business.
- Develop programs and services for non-timber forest uses, including tourism and non-timber products, and traditional Aboriginal uses.

VALUE NOT VOLUME

- Set minimum "jobs-per-cubic-metre" requirements for facilities processing timber.
- Impose restrictions on the proportion of unprocessed wood leaving a community. This regulation should ensure that the majority of timber logged in a community stays in the community where there is existing, or proposed secondary manufacturing facilities. Where communities can ensure a higher net return to the community by the export of unprocessed logs, the excess stumpage from such exports shall be reinvested in forest-related resources and activities.
- Establish local and provincial export controls and fees on undermanufactured lumber.
- Establish local support programs for the development and marketing of value-added manufacturers.



Appendix: definitions of terms

"The region is perceived as providing a superior, attractive environment in which to live, work, and do business. The natural environment appears to be especially important."

Tom Powers, Economics
Department, University of
Montana, describing the U.S.
Pacific Northwest 71

SUSTAINABILITY TERMS

Three terms that are used in discussions of sustainability are:

Allowable Annual Cut (AAC)

Government definition: "The annual rate of timber harvesting specified for an area of land by the chief forester." ⁷³

Layperson's definition: The amount of trees (measured in cubic metres) that can be logged in parts of B.C. annually. The AAC is set by the chief forester, a provincial government employee. (Due to the complex system of logging rights in B.C., the AAC does not cover all of the province but applies only to Crown land, which encompasses the vast majority of the province's forest.)

Long-Term Harvest Level (LTHL)

Government definition: "A harvest level that can be maintained indefinitely given a particular forest management regime (which defines the timber harvesting land base and includes objectives and guidelines for non-timber values) and estimates of timber growth and yield." ⁷⁴

Layperson's definition: The amount of trees that can be cut down each year if we want to keep logging at the same rate into the future. The LTHL is set based on the projected growth of trees on tree farms. This figure is also set by the chief forester.

Falldown

Government definition: "'Falldown' is the amount by which harvest levels must decline to meet long-term harvest levels. It is the difference between the existing rate of harvest [AAC] and the rate of harvest that can be sustained over the long term [LTHL]." ⁷⁵

Layperson's definition: A tree farm produces far less timber than an ancient forest. As tree farms are planted where old-growth timber used to stand, less wood is available for logging—the annual growth does not replace the annual cut, so the annual cut must be reduced. This reduction is called "falldown." As a result of falldown, the number of people working in the logging industry must also be reduced.

Ecosystem-based Planning²⁸

Government definition: 'The goal of Ecosystem-Based Planning is first to protect, maintain, and, where necessary, restore fully-functioning ecosystems at all spatial and temporal scales, and then to design human activities that fit within those constraints.'

Layperson's definition: Put simply, it means that our natural heritage must first be safeguarded before human activities such as logging are considered.



Footnotes:

- Reid Carter, Forest Products Analyst, First Marathon Securities and Director, Forest Alliance of B.C. in a press conference on March 11, 1998
- 2 Canada's Future Forest Alliance, Brazil of the North. April, 1997
- 3 Ministry of Finance and Corporate Relations. 1997. *British Columbia employment by industry,* 1977/1996. (Data provided by Statistics Canada, Labour Force Survey). Victoria: B.C. Stats. January 1997.
- 4 Based on an overcut of 28%, 1995 direct employment according to B.C. stats of 106,000, and assuming that a reduction in the amount of logging, all other factors being equal, will proportionately reduce the amount of employment in the forestry sector, then approximately 30,000 people will lose their jobs.
- 5 Patricia Marchak, Logging the Globe. 1995.
- 6 Herb Hammond, Seeing the Forest Among the Trees: The case for holistic forest use. 1992
- 7 G.E. Bridges & Associates, Strathcona Timber Supply Area Socio-Economic Analysis. January 1995
- 8 Sierra Club of B.C., Conservation Areas of Interest on the Mainland Coast of B.C. 1997
- 9 Environment Canada, The State of the Canadian Environment. 1994
- 10 Lori Culbert, B.C. ranks last in exports of manufactured wood products. *Vancouver Sun*. Monday, June 15, 1998
- 11 Ibid.
- 12 Silva Forest Foundation, Economics and Forest Use in British Columbia (unpublished draft). July 1998.
- 13 Timothy Egan, 'Oregon thrives as it protects owls.' *New York Times.* October 11, 1994.
- 14 Tom Power (Ed.), Economic well being and environmental protection in the Pacific Northwest: A consensus report by Pacific Northwest economists. December 1995.
- 15 B.C. Stats. April, 1998
- 16 Coopers & Lybrand, Economic Benefits of British Columbia Parks. Consulting to the B.C. Ministry of Environment, Lands & Parks. April 1995.
- 17 Ernst & Young. Technology Industries in B.C. A 1997 Report Card.
- 18 Ibid.

- 19 Based on B.C.'s government 1997 figures of annual cut of 71 million cubic metres, and the B.C. Chief Foresters estimate that the Long Term Harvest Level is 51 million cubic metres.
- 20 Based on an overcut of 28%, 1995 direct employment according to B.C. stats of 106,000, and assuming that a reduction in the amount of logging, all other factors being equal, will proportionately reduce the amount of employment in the forestry sector, then approximately 30,000 people will lose their jobs.
- 21 Herb Hammond, Seeing the Forest Among the Trees: The case for holistic forest use. 1992
- 22 'Report says logging firms wasting tonnes of wood'. *Times Colonist*. July 30, 1997
- 23 Canadian Council of Forest Ministers. 1997.
 Compendium of Canadian forestry statistics 1996
 (National Forestry Database). Ottawa: Natural
 Resources Canada, Canadian Forest Service.
- 24 Ministry of Forests, *Forest, Range and Resource Analysis,* 1984.
- 25 Henderson, W.A. 1997. Reader's viewpoint: Why forestry in B.C. must change. *Business Logger*, VII:6, (September 1997)
- 26 Jim Smith, 'Emperor Symbolic'. Published in Registered Professional Forester Journal. May/June 1997
- 27 Utzig, G. & Walmsley, M, Evaluation of soil degradation as a factor affecting forest productivity in British Columbia: a problem analysis. Phase I. Prepared for the Canadian Forestry Service. 1988
- 28 Herb Hammond, *Ecosystem-based conservation* plans a practical process. March, 1998
- 29 Open letter from Roy C. Carlson, Mayor, Village of Silverton, Slocan Valley. 1997
- 30 M. E. Harmon, W.K. Ferrell, J.F.Franklin, Effects on carbon storage of conversion of oldgrowth forests to young forests. *Science* 247:699-702. 1990
- 31 Dr. M.A. Sanjayan & Dr. M. E. Soulé, *Moving Beyond Brundtland: The Conservation Value of British Columbia's 12 Percent Protected Area Strategy.* June 1997.
- 32 B.C. Wild. A Tale of Two Forest Cities: Pine Hill, Alabama & Port Alberni, B.C. 1998
- 33 Patricia Marchak, Logging the Globe. 1995.
- 34 Ministry of Forests *Forest, Range and Recreation Resource Analysis.* 1994.
- 35 G.E. Bridges & Associates, *Strathcona Timber Supply Area Socio-Economic Analysis*. January 1995.



- 36 Ibid.
- 37 Canfor to shut down Eburne mill, putting more than 200 out of work. *Vancouver Sun.*November 27, 1997
- 38 Ibid.
- 39 Forest, Range and Recreation Resource Analysis. 1994. Ministry of Forests
- 40 Sierra Club of B.C., *Conservation Areas of Interest on the Mainland Coast of B.C.* 1997.
- 41 G. E. Bridges & Associates, Socio-economic Analysis of Timber Supply Scenarios for Mid-Coast TSA, 1994.
- 42 Based on Interfor's claim of an AAC of 650,000 cu. m., MoF socio-economic assessment detailing number of non-TSA direct forestry employment jobs derived from the mid-coast TSA AAC (1992), and assuming the average log barge contains 12,000 cu. m.
- 43 Patricia Mckim-Fletcher. *Bella Coola Valley Community Forest Tenure discussion paper* (First Draft). November 1996.
- 44 'Report says logging firms wasting tonnes of wood'. *Times Colonist.* July 30, 1997.
- 45 Environment Canada, The State of the Canadian Environment. 1994
- 46 M'Gonigle & Parfitt, Forestopia. A practical guide to the new forest economy. 1994.
- 47 Ibid.
- 48 B.C. Stats *Infoline* report, British Columbia falling behind in export boom for secondary manufactured wood. June 12, 1998.
- 49 Simmons Consulting Group, referenced in *B.C.'s Value-Added Strategy,* Forest Renewal B.C., 1997.
- 50 Sierra Club of B.C., Cut and Run: The story of B.C.'s Central Coast. 1997
- 51 Lori Culbert, B.C. ranks last in exports of manufactured wood products. *Vancouver Sun.* Monday, June 15, 1998
- 52 Forest Renewal B.C., 1997/98 Business Plan.
- 53 Timothy Egan, Oregon thrives as it protects owls. *New York Times.* October 11, 1994
- 54 Jeff Tryans, Oregon's high-tech economy. Interview on CBC Radio–The afternoon show. Catherine Gretsinger. April 1, 1998
- 55 Oregon Economic Development Commission *Biennial Report. 1995-1997.*
- 56 Tom Power (Ed.). Economic well being and environmental protection in the Pacific Northwest: A consensus report by Pacific Northwest economists. December 1995

- 57 Canadian Council of Forest Ministers. 1997.
 Compendium of Canadian forestry statistics 1996
 (National Forestry Database). Ottawa: Natural
 Resources Canada, Canadian Forest Service.
- 58 Ministry of Finance and Corporate Relations. 1997. *British Columbia employment by industry,* 1977/1996. (Data provided by Statistics Canada, Labour Force Survey). Victoria: B.C. Stats. January 1997.
- 59 Human Resources Development Canada. 1997. NOC Employment statistics for B.C. Data source: Canadian Occupational Projection System (COPS) Estimates (3 years moving annual averages).
- 60 B.C. Stats. April, 1998
- 61 Ministry of Environment, Lands and Parks Wildlife Branch. *Economic Value of Wildlife Activities in British Columbia.* 1996.
- 62 Coopers & Lybrand, Economic Benefits of British Columbia Parks. Consulting to the B.C. Ministry of Environment, Lands & Parks. April 1995.
- 63 Herb Hammond R.P.F. & Tom Bradley, *Tutizzi Lake Forest Use Study Comprehensive Summary.* May 2, 1990.
- 64 Analysis of Impacts and Potential Reparations Due to APC Closure. *McDowell Report*, 1989.
- 65 Jay Sweeney, Director of Finance, *Unemployment* in Sitka -Presentation to Moody's Investor Services.

 City and Borough of Sitka, Alaska. March 6, 1995.
- 66 Letter to property owner from Richard Anderson, City Assessor. March 11, 1996
- 67 Anchorage Daily News. Sunday August 13, 1995
- 68 Ernst & Young. Technology Industries in B.C. A 1997 Report Card.
- 69 Miro Cernetig, B.C.'s boom goes bust. *Globe & Mail.* March 21st, 1998.
- 70 Timothy Egan, 'Oregon thrives as it protects owls.' *New York Times.* October 11, 1994.
- 71 Tom Power (Ed.), Economic well being and environmental protection in the Pacific Northwest: A consensus report by Pacific Northwest economists.

 December 1995.
- 72 Oregon Economic Development Commission *Biennial Report.* 1995-1997.
- 73 Ministry of Forests, Forest, Range and Recreation Resource Analysis. 1994.
- 74 Ministry of Forests, Timber Supply Review. 1994
- 75 Ministry of Forests, Forest, Range and Recreation Resource Analysis. 1994.
- 76 Greenpeace, Clearcut-free?-Just Did It. 1995.



This Greenpeace report to the Economic Transitions Working Group is the first in a series of reports which will explore a variety of socioeconomic issues relating to the economy & ecology of British Columbia.

The Economic Transitions Working Group was founded in 1997 to explore the range of options open to British Columbia in the face of dwindling supplies of natural resources. We believe that B.C. can have both a healthy economy and a healthy environment, and support the following five steps to encourage the transition of B.C.'s economy:

CONSERVATION OF B.C.'S RICH NATURAL HERITAGE

Maintenance of diverse, fully-functioning ecosystems which can provide ecological, economic and spiritual values over the long term.

2. VALUE NOT VOLUME

Extensive value-added processing of B.C.'s natural resources that employs and encourages a skilled local workforce, doing more with less.

3. SUSTAINABLE RESOURCE USE AND INTERGENERATIONAL FOULTY

Rates and methods of resource use that do not prejudice ecological integrity or the needs of future generations.

4. INCREASED COMMUNITY CONTROL OF RESOURCE USE

The long term needs and goals of communities are priorities for resource planning (and balanced with principle #1).

DIVERSE LOCAL ECONOMIES

A diverse economy is a strong and resilient economy.

Current members of the Economic Transitions Working Group are:

BC Wild

Greenpeace Canada

Sierra Club of B.C.

EcoResearch Chair of Environmental Law & Policy



NOTES



The information in this report has been peer reviewed and endorsed by the following institutions: Silva Forest Foundation, EcoResearch Chair of Environmental Law and Policy, University of Victoria.

Photos: Map, log barge,

Bob Lenci & long house: Sierra Club

Design & production: Eye Design Inc.

Printing: Marine Printers

GREENPEACE CANADA

1726 Commercial Drive, Vancouver, B.C. V5N 4A3

Phone: (604) 253-7701 Fax: (604) 253-0114

Suite 605, 250 Dundas Street West, Toronto, Ontario M5T 2Z5

Phone: (416) 597-8408 Fax: (416) 597-8422

GREENPEACE INTERNATIONAL

Keizegracht 176, 1016 DW Amsterdam, The Netherlands

Phone: 31 20 523 6222

www.greenpeace.org

