Development of a comprehensive forestry strategy for Haida Gwaii

A BACKGROUND PAPER FOR DISCUSSION

Submitted to: Haida Gwaii Management Council

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Executive Summary

This background paper presents an outline for the collaborative development of a comprehensive long-term forestry strategy for Haida Gwaii.

Much has been accomplished in recent years to protect the environmental and cultural values in the forests of Haida Gwaii for future generations and to implement ecosystem-based management. Much more remains to be done to ensure that the diverse resources in the forest are used to generate economic benefits for the communities, to provide employment for residents of the Islands and to ensure a healthy economic future for young people and families in stable, economically diversified communities.

Development of a comprehensive forestry strategy is an essential part of ensuring that, as the land and forest resources are being protected, strategies are also in place to ensure that forest management on Haida Gwaii supports a diversified local economy and delivers social and economic benefits to the Islands communities and the people who live there.

The challenges are substantial and the stakes are high. No individual forest company is large enough to addresses the forest management and local employment challenges alone. They need to work together and they require the assistance of the communities to provide and promote attractive living situations and community amenities to attract workers. Similarly, no community alone can address the population decline or unilaterally create the local employment opportunities that all would like. They need support from the tenure holders in the form of long-term commitments to attractive jobs with stable futures and the provision of work in ways that sustains and grows local populations. All have strong incentives to work together to address the challenges faced by the Islands and to develop a long-term comprehensive forestry strategy.

Thus this Background Paper stresses the need for a collaborative process to bring together the diverse forestry interests on Haida Gwaii – forest companies, community leaders, governments, local businesses and others – in a single process with a "one-Island focus" to develop a comprehensive forestry strategy. By working together to develop a strategy, companies, communities and governments are more likely to achieve and embrace the vision of ecosystem-based management, especially in the areas of generating

economic benefits for the communities, providing employment for Islands residents and ensuring a healthy economic future for young people and families in stable, economically diversified communities. They are also more likely to work together to implement management strategies if they have played a key role in a collaborative process to develop them.

The paper suggests that the Haida Gwaii Management Council (HGMC) can take a lead role as catalyst and initiator for this collaborative process. The HGMC has the authority, potentially in association with other Islands organizations, to initiate a process and encourage the engagement of all parties on the Islands to come together and develop a long-term strategy to achieve a vision that the communities have long expressed.

As a starting point for consideration in a collaborative process, this paper also outlines 12 key strategic areas that are component parts of a comprehensive strategy to address the challenges and exploit the opportunities that exist and to deliver the desired social, economic and environmental benefits. These challenges are associated with transitions from an economy based on harvesting old-growth to one dependent on second-growth, declining local populations, a lack of critical infrastructure, a smaller scale of forestry operations and a need to develop more local manufacturing, more value-added and non-timber products and expanded forest-based tourism.

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1.0 Introduction

The forests of Haida Gwaii generate employment and economic benefits for all the communities on the Islands and they support the cultures, provide the foods and medicines, and sustain the Islands' environment. For years, however, over-exploitation of the forest resources and use of unsustainable forest practices compromised the environmental and cultural resources. This led to conflicts over land use, and in association with the effects of the global economic recession, the land-use conflicts led to a reduction in logging and to less work for Islands residents. The local forestry economy shrank substantially and communities suffered.

Over the last decade, the Council of the Haida Nation, the Province of BC and many Islands residents and businesses have made exceptional efforts to introduce many positive and dramatic changes to the way the Islands' forests are managed. These include

- A commitment to manage forests to achieve the co-existence of healthy, fully-functioning ecosystems and human communities – referred to as "ecosystem-based management" (EBM).[1]

- Establishment of a co-management framework for forest resources on the Islands between the Council of the Haida Nation and the Province of BC to achieve ecosystem-based management.[2]

- Creation of 16 new conservancies, forest reserves, cedar stewardship areas and other forms of protected areas to protect important values.[3]

- Implementation of a Land Use Objectives Order that includes provisions to protect cultural and environmental features in areas where timber harvesting continues.[4]

- Completion of a timber supply analysis for the public lands on Haida Gwaii and establishment of a single rate of harvest for the Islands.[5]

- Establishment of Taan Forest and Misty Isles Economic Development Society (MIEDS) as locally-owned and managed entities now controlling about 58% of the Allowable Annual Cut (AAC) for the Islands.[6]

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[1] Haida Gwaii Strategic Land Use Agreement (SLUA). Council of the Haida Nation and Province of BC. September 2007.

2 The Kunst'aa Guu – Kunst'aayah Reconciliation Protocol. 2009.

[3] New conservancies established in Haida Gwaii Strategic Land Use Agreement, 2007. Forest reserves and Cedar Stewardship areas established in Land Use Objectives Order, 2010.

[4] Haida Gwaii Land Use Objectives Order, Ministry of Natural Resource Operations. December 2010.

[5] Haida Gwaii Timber Supply Analysis Report. Joint Technical Working Group. April 4th, 2012.

[6] Taan controls 460,000 m3 (49% of the total AAC) and MIEDS has an allocation of 80,000 m3 (8.6%).

- Signing of a Protocol Agreement between the Council of the Haida Nation and each of the non-Haida communities to work together in designing a future that will support a healthy environment and create a sustainable Islands economy.[7]

- Certification of Taan Forest by the Forest Stewardship Council (FSC) and early development of initiatives to market a Haida Gwaii brand under the FSC certification of the forests as well-managed and meeting high social, environmental and economic standards.[8]

- Completion of the transfer of control of the Gwaii Forest Charitable Trust funds to the Islands.

With improvements in the global economy, the resolution of local conflicts, commitments to work together, and a greater sense of stability and security locally as a result of these impressive achievements, Haida Gwaii can now move forward to fully achieve ecosystem-based management. In addition to maintaining healthy, fully-functioning ecosystems, this involves ensuring that the diverse resources in the forest are used to generate economic benefits for the communities, to provide employment for Islands residents and to ensure a healthy economic future for young people and families in stable, economically diversified communities.

Moving forward requires a clear vision for the future and a strategy to build on the Islands' strengths and opportunities and to address the major challenges that exist.

This document provides, in the following sections:

- The role of the Haida Gwaii Management Council and the purpose of this paper (Section 2).

- A vision for forestry management on Haida Gwaii, consistent with ecosystem-based management (Section 3).

An analysis of the strengths, challenges and opportunities that provide the context for development of a comprehensive forestry strategy (Section 4).

- An outline of a collaborative process to complete the strategy (Section 5).

- An outline of 12 key strategic areas that will be particularly important in the development of the strategy (Section 6).

[7] See for example Protocol Agreement between The Council of the Haida Nation (CHN) and The Village of Queen Charlotte. November, 2006.

[8] An FSC certificate is internationally recognized and is the highest standard of certification that a forest is well-managed and meets established standards.

2.0 The Role of the Haida Gwaii Management Council

The Haida Gwaii Management Council (HGMC) plays a unique role in representing the Haida Nation and BC provincial governments and all the people on Haida Gwaii. Among other responsibilities, the HGMC is mandated "to undertake development of a comprehensive Haida Gwaii forestry strategy that maintains ecological integrity and supports a sustainable Haida Gwaii economy, for consideration by the Parties."[9]

In December 2012, HGMC commissioned Moore Resource Management to begin the initial phases of developing a forestry strategy consistent with that mandate.[10] This paper is part of that initial phase. It is based on a review of documents and interviews with a broad range of individuals representing senior governments; local governments; government agencies; economic development bodies; forest companies and local forestry businesses; sawmills and value-added businesses; botanical and other non-timber interests; individual citizens; local NGOs; and others with relevant expertise or interest in Haida Gwaii.[11] It is presented to stimulate discussion at the HGMC.

As outlined in the Terms of Reference, this paper does not address issues that are currently under discussion by tenure holders and governments, including possible changes to the Land Use Objectives Order, export policies or administrative changes to reduce operating costs. The document is limited to strategy development within current forest management arrangements and recognizes existing administrative and governance arrangements as well as existing tenures, commercial arrangements, AAC determinations and existing infrastructure. The paper does not address possible tenure changes, revenue sharing arrangements, different forms of governance, or major changes to the islands' infrastructure. It focuses on development of strategies that could be undertaken within current frameworks.

3.0 A Vision for Forest Management on Haida Gwaii

Islands residents are passionate about their forests and their communities and their vision for the management of the forests has been clear and consistent for years. They have expressed a strong desire to protect the forest environment. But they have also clearly expressed a strong view that it is equally important to manage forests to provide cultural, social and economic benefits to Islands communities. They have consistently expressed a desire to participate in decision-making in order to ensure that the forest is used in ways that maintain healthy and resilient communities and environments and that provide economic benefits and employment for the people and communities of Haida Gwaii.

These views have been expressed in many processes that have involved representatives of all the Islands communities and interests, most notably the Islands Community Stability

[9] Section 2.3.1, Schedule B, Kunst'aa guu – Kunst'aayah Reconciliation Protocol, 2009. The Parties are the Council of the Haida Nation and the Province of British Columbia.
[10] Terms of Reference were approved by the HGMC in February 2013, and are included as Appendix 1.
[11] A complete list of persons consulted is included in Appendix 2.

Initiative (ICSI) (1995-1996),[12] the Community Planning Forum (2003-2006),[13] and the Haida Gwaii /Queen Charlotte Islands Community Viability Strategy (2006-2007).[14]

A consistent vision for forest management on Haida Gwaii emerges from the documents completed in these three planning processes. The vision can be expressed as follows:

Forest management on Haida Gwaii is based on a balanced approach that:

- Vigorously protects the environmental and cultural values in the forest for future generations through establishing and managing forest reserves and protected areas and implementing sustainable forest practices;

- Uses the diversity of resources in the forest to generate economic benefits for the communities, to provide employment for Islands residents and to ensure a healthy economic future for young people and families in stable, economically diversified communities; and,

- Engages Islands residents in co-operative planning processes to design a future that will support a healthy environment, resilient communities and a self-sustaining Islands economy.

Strategies to achieve the environmental elements of the vision set out by the community leaders in these three processes have been achieved. These include the implementation of the Land Use Objectives Order, the determination of a single sustainable Allowable Annual Cut (AAC) for all of Haida Gwaii, and the establishment of new Haida Protected Areas and forest reserves within the remainder of the forest to protect environmental and cultural values such as monumental cedar, marbled murrelet habitat and riparian areas.

Some of the desired outcomes related to decision-making have also been achieved. The Kunst'aa Guu – Kunst'aayah Reconciliation Protocol establishes a process for an active co-management approach to forest resource decision-making and creates an independent body (the HGMC) to administer the process. A Community Protocol Agreement signed by the representatives of all the Island communities provides a forum for the communities to participate much more directly than in the past in the decisions that affect them.[15]

[12] The ICSI Consensus. Islands Community Stability Initiative. January 31, 1996.
[13] Haida Gwaii/Queen Charlotte Islands Land Use Plan Recommendations Report. Community Planning Forum. January 2006.
[14] Haida Gwaii/Queen Charlotte Islands Community Viability Strategy, Volume I – Strategic Plan. Lions Gate Consulting Inc., Westcoast CED Consulting, Peak Solutions Consulting. May 17, 2007.

[15] The community "Protocol Agreement" has been signed between the Council of the Haida Nation and each of the non-Haida communities on the Islands. The Agreements recognize that "the people who live on Haida Gwaii have a vested interest in the present and future well-being of

Much remains to be done, however, in relation to expanding economic benefits and employment, creating stable and healthy communities, diversifying the economy and creating a future for Islands' youth. The social and economic goals established in the vision articulated by ICSI, the Community Planning Forum, and the Community Viability Strategy are still far from realization and may now be even more distant than 20 years ago when they were first articulated. Generating more employment and economic benefits from the use of fewer timber resources, processing and manufacturing timber resources on the Islands, and diversifying the Island's economy based on the use of a wide variety of forest resources remain as key elements of a vision for a sustainable future for Islands communities. However, there is little to suggest that current practices or current processes will actually deliver these benefits from the forest to the Islands communities.

To fully achieve the vision, especially those elements related to communities, employment, the local economy, and a healthy future, a coherent and comprehensive forestry strategy is urgently required.

Since many of the environmental elements of a vision have been largely achieved or are underway, priority must be given to addressing the social and economic elements. This is not a simple task and there are many reasons that the simple goals of more employment, more diversity, and more local benefits have not been achieved to date. The following sections present a short analysis of the strengths, the significant challenges, and the opportunities facing Haida Gwaii as the Islands continue on the journey to complete the vision set out in those past processes.

4.0 Strengths, Challenges and Opportunities

4.1 Strengths

Haida Gwaii continues to have a magnificent forest environment, capable of supporting a healthy forest industry and a diversity of other forest uses. Despite the isolation of the Islands and the relatively higher costs of living and doing business on the Islands, Haida Gwaii has a number of strengths upon which to build a forest management strategy.

4.1.1 Recent changes in the tenure holders

Until recently, forestry operations on Haida Gwaii were dominated by large corporations (MacMillan Bloedel/Weyerhaeuser, Crown Zellerbach/Fletcher Challenge and Western Forest Products). The corporations all had significant operations elsewhere and the operations on Haida Gwaii were tied to mills in the Lower Mainland or southern Vancouver Island, also owned by those companies. They used large established logging contractors who were based in other communities and generally employed a significant off-island workforce in the remote logging camps. In those days, Haida Gwaii was seen by both government and companies as one small part of a large coastal wood supply area supplying wood and employment to a much larger economy in the south of the province.

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the land waters and people of Haida Gwaii and that we all seek security for our families and homes".

Development of strategies based on local economic benefits was almost impossible in that situation.

With the recent changes, the management of the forest by large corporations with ties to off-island mills and contractors has effectively ended. Taan Forest controls 49% of the Islands cut,[16] and is owned by the Haida Nation. Taan has no other operations, and no long-term commitments to any off-island mills.[17, 18] BC Timber Sales (BCTS) and the Misty Islands Economic Development Society (MIEDS) together account for an additional 18% of the cut.[19] MIEDS is 100% locally owned by the communities and has no commitments to off-island mills or contractors. BCTS has signed a Co-operative Management Agreement with Taan and has agreed to co-ordinate operational planning with Taan and to support Taan's corporate objectives in regards to creating local employment.[20] Both BCTS and MIEDS can be managed locally to meet local objectives although all wood sold through these programs must be sold in competitive bid processes.[21] In addition, Husby Forest Products, with an additional 21% of the AAC, has local roots and operates primarily on Haida Gwaii.[22] Husby is a "market logger" with relative freedom to sell wood to interested mills. Teal Cedar, with 10% of the AAC,[23] is the only tenure holder with a direct connection to an off-island mill, but also owns a small mill in Masset.

The remote logging camps operated by the large off-island contractors have largely disappeared from Haida Gwaii and most logging is now carried out by smaller contractors using a workforce that commutes daily from the communities. Husby, for example, is no longer exclusively a remote camp-based operation, and most of Husby's current workers live in Port Clements while on shift.

These changes in the structure of the industry in terms of who actually has control of the Haida Gwaii tenures, who makes decisions about where wood will be sold, and who does the logging are a strength. Almost seventy percent of the cut (and almost 90% if Husby is included) is now locally controlled and there are significant new opportunities to manage this cut and deliver the logs to local processors in ways that will provide more

[16] The AAC for Taan's TFL 60 is 340,000 m^3 and for FLTC A-87661 is 120,000 m^3 – a total of 460,000 m^3 out of the 931,000 m^3 total for public tenures on Haida Gwaii.
[17] Taan does have one short-term agreement to provide cedar but that is almost completed.
[18] Taan did inherit one Bill 13 contractor who has harvesting rights up to 40% of the cut from the TFL. The Bill 13 status requires that Taan keep the contractors' work force busy before other harvesting contractors can enter the TFL.
[19] The AAC allocation to BCTS is a total of 175,868 m^3 out of the 931,000 m^3 total (18%). 80,000 m^3 (8.6%) of the BCTS total is allocated to MIEDS (8.5% of the island total).
[20] Co-operative Management Agreement signed July 29, 2010.
[21] Both BCTS and MIEDS are required to put up all of their wood for competitive bids to meet "market-based pricing" requirements. This limits their opportunity to direct wood to local businesses.
[22] The AAC allocated to Husby is 200,000 m3 on two forest licences.
[23] The AAC allocated to Teal Cedar is a total of 92,362 m^3 – 79,000 on TFL 58 and 13,632 m^3 on a forest licence.

local social and economic benefits. These have not yet been realized to any significant degree.

4.1.2 High quality wood

The old forests of Haida Gwaii are known to produce wood (especially red and yellow cedar and Sitka spruce) of superior quality with an international reputation. The second-growth forests are healthy and growing rapidly and produce high volumes per hectare. They are expected to produce Sitka spruce and Western hemlock that, while of generally lower overall value than the old-growth forests, is of relatively high quality for manufacturing compared to other second-growth hemlock and spruce stands elsewhere on the coast. The future second-growth forests are also relatively accessible compared to the second-growth forests in many other, more remote parts of the Coast, and, on Haida Gwaii, the weevil that affects coastal spruce is absent. Despite challenges in regard to the economic viability of the second-growth, the volume in these healthy second-growth stands and the high quality of the wood is expected to be a strength.

4.1.3 A known brand

Haida Gwaii is a recognized name and a known forestry brand in many sectors around the world. In combination with the recognition of superior forest management through implementation of the Haida Gwaii Land Use Plan and the FSC certification now in place for all of the volume produced by Taan Forest on the Islands, this is a significant strength.[24]

4.1.4 A world-class tourism destination

Haida Gwaii, Gwaii Haanas and the Haida Heritage Center and Haida Gwaii Museum at Kaay Llnagaay have all won recent international awards and recognition as world-class tourism destinations. In 2014, National Geographic Travel included Haida Gwaii in its list of 20 "Best Trips" for 2015. In 2013, *Outside Magazine* rated Haida Gwaii as "Best Islands" in the world to visit. In 2010, the British Guild of Travel Writers named the Haida Heritage Centre as the best overseas tourism attraction in the world. In 2005 *National Geographic Traveler* magazine rated Gwaii Haanas as the top park destination in North America.

The temperate rainforests of Haida Gwaii are one of the key attractions and one of the elements central to the expansion of the tourism economy on Haida Gwaii. The big trees, mossy forests, peaceful streams, Haida culture and unspoiled coastal waters and beaches are already known around the world. This international recognition is a strength upon which to continue to build a forest-based tourism economy that supports the diversification of the Haida Gwaii economy.

[24] The FSC certified area includes all of TFL 60 and the Forest Licence to Cut (FLTC) A-87661 in TSA 25 managed by Taan Forest.

Tourism is identified in the MIEDS economic development strategy as one of the important growth sectors in the local economy. Forest management activities need increasingly to be integrated with the tourism development plans.

4.1.5 Attractive communities, good services and affordable housing

The communities of Haida Gwaii can offer a comfortable lifestyle in safe communities surrounded by a rich outdoor environment and a rich cultural heritage. These amenities are potential attraction to a particular group of people seeking this type of lifestyle. Housing is affordable. Despite the recent emigration from the Islands, the communities remain an attractive place to live. However, in order to fully benefit from this strength, and to attract and retain residents, communities will have to provide additional services - broadband internet, recreational facilities and strong school programs, for example. If some of these can be provided, the specific lifestyle opportunities on Haida Gwaii are a potential strength when more long-term employment opportunities become available.

4.2 Challenges

4.2.1 Population changes

There have been dramatic changes in the population on Haida Gwaii over the last 15 years, particularly in the working age population.[25] In 2011, the population on the Islands was estimated to be 4,610, a decline of over 1200 people since 1996 when the population was estimated to be 5,829. This is a decline of 21% in 15 years. In 2008/2009 alone, the 2.1% annual rate of decline was the largest in any district in the province. [26]

This overall rate of population decline has been concentrated in the core working age group (25-54) made up of young workers and families in the 20, 30 and 40 age group. This core working population declined from 3003 in 1996 to 1832 in 2011 – a decline of 39% over the last 15 years. The core labour pool is expected to decline by a further 13% in the next 10 years. At the same time forestry and logging operations are expected to face retirements of older workers in many aspects of the business – supervisors, machine operators and forest technicians – and a critical shortage of potential replacements is expected.[27]

The number of young people on the Islands is also declining. In the 2006 census there were 345 residents in the 15-19 age group. However, five years later in the 2011 census there were only 215 residents in the 20-24 age group. This represents a loss of 130 young adults (a 38% decline) who apparently moved away and did not return. This may reflect some residents who moved to attend school or university, but on Haida Gwaii it is widely

[25] Population information from various sources, cited in MIEDS Three Year Economic Development Strategy. Pages 20-30. In 2013/14 the decline in enrollment continued.
[26] Information provided in School District 50 – Haida Gwaii/Queen Charlotte Statistical Profile. Document provided by Angus Wilson Superintendent, SD 50.
[27] Haida Gwaii Labour Market Project – Labour Market Information. Astute Management Consulting Inc. December 2011.

believed to reflect the lack of economic and social opportunities for young people in that period of time.

These significant declines in the young and working-age populations represent a loss of families in the Island communities and a loss of many services, support businesses and organizations. These affect schools, local facilities and the tax base. The loss of services and amenities contributes to more families leaving and further population declines. In forestry terms, the population declines have had significant impact on local contractors who report that it has become very difficult to find local skilled workers to work in the forest, which constrains their ability to complete jobs, and on local forest dependent businesses who report declining sales.

The emigration of workers and their families is most noticeable in school enrollments. Enrollment in the Haida Gwaii School District (SD 50) has declined by 35% in the last 10 years from about 1000 to only 600 students.[28] This rate of decline is much higher than the province as a whole, and SD 50 has been one of the five fastest declining districts in the province over the last 10 years.[29] The decline is greatest in the elementary school and kindergarten age groups. Kindergarten enrollment in 2012, for example, was 37% lower than in 2007. The declining enrollment is projected to continue, with a decline of 2% expected in the 2013/2014 school year. Enrollment in the school system will continue to decline as these lower numbers in the younger grades work their way through the middle and high schools grades.

These population trends are a major concern for all levels of government and for many individuals in the communities and the forestry sector. The reduction in the working age population in the last decade mostly reflects reductions of work in the forest sector or the absence of new or younger people (19-25) moving to the Islands to work. Many of the working age population who left with their families were skilled workers who used to be employed in the forest industry – layout engineers, scalers, silviculture workers, mechanics, fallers, trucker drivers, and equipment operators.

Their loss affects the Islands' ability to provide a work force to sustain a healthy economy now and in the future. Without a working-age population, any work opportunities will be provided to non-local businesses and workers, and the economic benefits largely accrue to those off-island communities. The declining school enrollments and fear of associated cuts in schools and school programs seriously constrain the ability to motivate people to relocate to, or to move back to, the Islands with their families. Without concerted efforts to address the demographic changes, it is likely that the Islands communities will not benefit significantly from the employment opportunities potentially offered by an expanding or changing forest sector in the future.

These demographic changes become a dangerous spiral. Fewer jobs in the recent past led to emigration and fewer people which led to diminished local services. Now that there are jobs and needs by the industry, there is limited local capacity to fill them and

[28] See footnote 22.
[29] Pers. Comm. Angus Wilson, Superintendent, School District 50.

companies move to hiring an off-island work force. This makes it even more difficult for local workers and contractors to participate and the local services continue to diminish. The spiral of population decline continues and it is very difficult to get people (families) to come back or others to relocate even when there are jobs. Thus the population decline continues with the attendant impacts.

Addressing the root causes of the population decline, creating new local employment, and recruiting people to return to the Islands is a very difficult challenge.

4.2.2 Skills, training and other employment attributes

Haida Gwaii has a relatively unskilled workforce. Approximately 27.3% of Haida Gwaii's core labour pool (25 - 54) does not have high school completion and in the period from 2007 to 2010, 52% of 18 year olds did not complete high school. By both these measures, Haida Gwaii lags far behind the provincial average.[30]

The Haida Gwaii Labour Market Project reported employment challenges related to a lack of skills, attitudes to work, reliability, and expectations of high wages. The study points out that "while expansion of employment is expected in the forestry and tourism industries, the jobs that will be available will be of the higher skilled variety such as machine operators, mechanics and those that require strong customer service skills. As such, in several cases employers do not expect to source the majority of their staff from the on-island population."[31] This sourcing of employees from off-island locations has been a strong pattern for the last several years in many aspects of forestry, from layout staff, silviculture workers to machine operators, and supervisors. Providing training and skills in the communities is important to generate local employment but remains a big challenge.

4.2.3 The move to an off-island workforce

The forest economy on Haida Gwaii is improving as global markets and lumber prices increase. There are reasons to be optimistic that the expanding operations should provide employment opportunities for local workers and contractors and should start to improve the local economies and reverse some of the recent declines in population.

But, as described in Section 4.2.1, the result of the downturn in the last decade has been the emigration of many workers, equipment operators, and small contractors, retirement of older workers and a generally diminished local capacity on Haida Gwaii. Many of the remaining local companies now report difficulties finding people who have skills or who are available to work in the woods. Without a workforce, it is difficult for them to bid on the contract work that is coming available.

[30] BC Stats, Community Profile Local Health Area 50, reported in Labour Market Study. Astute Management Consulting Inc. December 2011. Also reported in School District Statistical Profile.
[31] Haida Gwaii Labour Market Project – Labour Market Information. Astute Management Consulting Inc. December 2011.

In response to the situation where local contractors are not available any more, companies and BCTS are turning to off-island contractors and consultants and structuring their contracting opportunities in ways that are more appealing to the larger off-island businesses that have access to a larger workforce and much more work over a larger geographical area. Thus, contracts are being provided as larger jobs completed over shorter time frames to make the movement of people and equipment to the Islands from elsewhere on a temporary basis more efficient.

This emphasis on larger contracts and shorter-term work further disadvantages local businesses who would prefer to work over a longer-term in secure contracts to allow them to rebuild the capacity that they have lost. Without some assurance of job stability and security over a period of years, contractors and workers who left the Islands are unwilling to return to work for these local businesses and newcomers are reluctant to move here.

Good information is not available on the extent of this shift to an off-island workforce, but many local observers report that much of the employment now being generated is going to off-island contractors, consultants and workers. This includes forestry consultants who do the timber cruising, operational planning, layout and mapping, waste surveying and scaling and who now predominantly reside off-island and fly in for shifts, and the road construction and logging contractors who mobilize off-island crews and equipment for relatively short times and work seven days a week for those shifts. There are economic benefits to hotels, restaurants and rental accommodation associated with these arrangements, but most wages do not stay on the Islands. The situation does not encourage families to return or contractors to invest in equipment. Long-term locally based employment is not being created.

4.2.4 The small scale of individual tenures

In the period prior to the recent changes in tenure holders, the implementation of the Land Use Plan and the 2012 Timber Supply Analysis, the Timber Harvesting Land Base (THLB) on Haida Gwaii was approximately 244,000 ha[32] and the AAC was 1,780,000 m^3.[33] There were four major tenure holders – Western Forest Products, Teal Cedar Products, Husby Forest Products, and BC Timber Sales.

Today, the THLB is approximately 188,000 ha[34] (a 23% reduction), and the AAC is 931,000 m^3 (a 48% reduction).[35] This much smaller AAC is now divided among 5 major

[32] Haida Gwaii/Queen Charlotte Islands LUP Base Case Analysis, Timber Supply Modeling Assumptions. Cortex Consultants. Nov 9, 2004. Base Case 1, page 14.
[33] Rationale for Allowable Annual Cut (AAC) Determinations for Tree Farm Licence 58, Tree Farm Licence 60, and Timber Supply Area 25. Deputy Chief Forester Jim Sutherland. September 20, 2012. Appendix 4, page 61.
[34] Haida Gwaii Timber Supply Review Data Package. April 2012. Page 7.
[35] Rationale for Allowable Annual Cut (AAC) Determinations for Tree Farm Licence 58, Tree Farm Licence 60, and Timber Supply Area 25. Deputy Chief Forester Jim Sutherland. September 20, 2012.

tenure holders.[36] Taken as a whole, the new AAC of 931,000 m^3 is a significant annual harvest even if, as generally expected by local observers, the actual average annual harvest does not exceed 800,000 m^3 annually. This level of cut could support a sizable local work force of logging contractors and employees, mechanics, independent businesses, supporting supervisory and administrative staff and a significant infrastructure of processing, manufacturing and shipping facilities, for example. It is estimated that it could support 40 to 50 logging layout engineers, timber cruisers, silvicultural staff, scalers, mapping technicians etc in the local community.[37]

However, many of these types of positions now go to an off-island workforce that works here on a periodic basis for each of the individual tenure holders. Each tenure holder does its own operational planning, and undertakes separate negotiations with contractors for work on their tenures. In practice, none of these five tenures individually is large enough to provide the long-term planning and security to support a stable local workforce, generate the investment, and re-establish the needed infrastructure of contractors and services.

In the short term, this hurts the opportunities for local employment on Haida Gwaii and discourages recovery of local infrastructure. In the long term, it significantly compromises the ability to generate capital and support the human resources and the infrastructure needed to make the oncoming second-growth hemlock and spruce forests economically viable.

The relatively small scale of each individual tenure, and the inherent independence of each, presents a big challenge in taking the necessary steps to generate locally-based employment for a resident population. Working collaboratively expands the opportunities.

4.2.5 High operating costs

Haida Gwaii has always been a high cost area for forest companies to operate, but the cost disadvantages have increased dramatically in the last 10 years. Current efforts are directed at reducing local cost structures and disadvantages for the tenure holders. In the long term, two areas of significant cost will need to be addressed – the cost of barge transportation of round logs, and the cost associated with handling waste, both waste in logging operations and waste in manufacturing operations (which have no offsetting revenues). The challenge for Haida Gwaii is to find ways to reduce these costs, or increase revenues through using the waste and finding niche markets for products.

[36] Taan is the biggest tenure holder with 49% of the total AAC (460,000 m^3, including a CHN non-replaceable FLTC of 120,000 m^3), then Husby (200,000 m^3), BCTS (175,868 m^3 including an allocation for MIEDS of 80,000 m^3), and Teal Cedar (92,632 m^3). These figures are based on the AAC determinations of Sept 20, 2012 and the AAC allocation within TSA 25 of August 8, 2013.
[37] Pers. Comm. Cliff Roberts, Chartwell Consultants.

4.2.6 The management of cedar (Tsuuaay)

Red cedar and yellow cedar (collectively referred to cedar, as tsuuaay in Haida) are iconic species on Haida Gwaii, highly valued for many reasons. Cedar is of great cultural and artistic significance,[38] and is an important part of many habitats and ecosystems. It has high economic value and is critically important to the viability of the forest industry on the islands. For the past 20 years, the cedar species have been logged at a much higher rate than they occur in the forest inventory. The return from cedar has supported the harvest of the lower-value species, notably hemlock. Cedar offers the best opportunities for increasing small-scale local sawmilling and developing local value-added wood product manufacturing. Accordingly, the management of cedar is complicated and challenging.

In recognition of the value of cedar and the pressures upon it, a number of provisions were put in place in the Land Use Objectives Order. These included establishment of Cedar Stewardship Areas and 16 new conservancies and requirements to protect monumental cedar trees and stands and areas for ecosystem representation and to re-establish cedar in harvested areas. These provisions protect significant areas of cedar for future generations and for future cultural use.

Despite these measures, several major challenges remain. These are discussed under four separate sub-headings:

i. The harvest rate for cedar
ii. Cultural uses of cedar
iii. The management of fire origin second growth cedar
iv. Regeneration of cedar and the impact of browsing by introduced deer.

i. The harvest rate for cedar

Cedar is a finite and diminishing resource on Haida Gwaii. It has been significantly over-harvested in the last 20 years and there are difficult questions about how much old-growth cedar remains, what the annual harvest of cedar should be, how the harvest should be limited, and what management strategies should be in place.

The Deputy Chief Forester considered these questions in the rationale for the 2012 AAC determination.[39] He reported that cedar accounts for approximately 33% of the total available timber inventory on the timber harvesting land base on Haida Gwaii. In the period between 1995 and 2010, cedar made up 49% of the total volume harvested from all units on public forest land. Forty-one percent (41%) of this was red cedar and 8% was yellow cedar.[40] Between 2000 and 2011, the cedar harvest increased to 52% of the total

[38] Haida Land Use Vision Haida Gwaii Yah'Guudang (respecting Haida Gwaii). Council of the Haida Nation. April 2005.
[39] AAC Rationale for TFL 58, TFL 60 and TSA 25. Deputy Chief Forester Jim Sutherland. September 2012. Pages 24-32.
[40] Haida Gwaii Timber Supply Analysis Report. Joint Technical Working Group. April 4th, 2012. Page 14.

harvest. Recognizing this over-harvest, and concerned about the future availability of cedar, the Deputy Chief Forester suggested limiting the harvest of red and yellow cedar to 38% of the volume harvested in TSA 25, 41% of the harvest in TFL 58, and 39% of the harvest in TFL 60, or approximately 40% of the total annual harvest on Haida Gwaii.

The Deputy Chief Forester described these suggested limits as "reasonable starting points in moving towards levels of cedar harvest that will help ensure the availability of merchantable cedar throughout the transition to the harvesting of second-growth"[41] while recognizing that they continue to allow the over-harvest of cedar in proportion to the inventory. He stated at several points that there is a need for a process on Haida Gwaii to develop strategies that provide targets or limits on the harvest of old-growth cedar to meet local objectives.

It is widely expected on Haida Gwaii that the high rates of cedar harvest will continue into the future and this trend is evident from the annual harvest in 2012. In 2012, red and yellow cedar accounted for 55.9% of the volume harvested from Crown land on Haida Gwaii.[42] Red and yellow cedar made up close to, or in excess of, 60% of the total volume harvested on all major tenures (TFL 25, TFL 39, TFL 60, FL A-16869, FL A-87661 and BC Timber Sales) with the exception of TFL 58, where the harvest was almost exclusively second-growth spruce and hemlock. This rate of cedar harvest is much higher than in the period 1995 to 2011. It is 40% higher than the limit suggested by the Deputy Chief Forester and 69% higher than its contribution to the inventory.

The relative proportions of red and yellow cedar in the harvest have also changed. Red cedar which accounted for 41% in the 1995-2010 has grown to 52% in 2012 and yellow cedar has fallen from 8% to 4% of the harvest in 2012.

There are other reasons for concern about the future availability of cedar. The harvest of old-growth cedar over the last decade has targeted the highest grades and most accessible stands, so the most valuable stands of cedar were harvested at a much higher rate than their proportion of the total cedar inventory. In 2005, the Gowgaia Institute reported that the proportion of high grade logs in the total harvest declined from 10% of the cedar harvest to one percent between 1995 and 2004.[43] The remaining available old-growth cedar is likely of lower volume and lower grade, and less accessible than the cedar that has been harvested in recent years past. The 2012 timber supply analysis points out that low and medium volume growing sites are being avoided in current harvesting and thus, the low volume sites will form an increasing percentage of the profile of cedar in the future.[44]

[41] AAC Rationale, pages 31 and 32.
[42] Information from BC Harvest Billing system based on volume scaled in 2012 with exception of information for BCTS which was provided directly by BCTS. The harvest includes both old-growth cedar (more than 250 years old) and fire-origin second growth cedar (100-250 years old). It compared volume of cedar scaled to total volume scaled on the major forest tenures.
[43] Haida Laas, August 2005. Page 36.
[44] Timber Supply Analysis. Page 14.

These factors all suggest that the high quality old-growth cedar that is so important from many different perspectives may run out much sooner than the 60-80 years suggested by the Deputy Chief Forester based on the Timber Supply Analysis. They add extra urgency to his call for a locally developed management strategy for cedar.

ii. Cultural uses of cedar

Old-growth cedar is also critically important for Haida cultural uses[45] – poles, canoes, buildings and a variety of other uses. The availability of monumental cedar for cultural uses is regulated by the Council of the Haida Nation through the Ministry of Forests, Lands and Natural Resource Operations (MoFLNRO). Currently about 1500 m^3 of cedar a year is used annually for cultural purposes. This wood is all from active logging operations and is harvested in accordance with the Land Use Objectives Order. Based on inventory work undertaken by the CHN, the current supply of cedar available for cultural uses through this process is considered adequate to meet the demand for the foreseeable future, although large diameter logs of the high quality needed for canoes are becoming increasingly difficult to find.[46] At some future time, when there are no more monumental cedar logs available from the harvested areas in the Timber Harvesting Land Base, cedar for cultural uses will need to be found in the Cedar Stewardship Areas, conservancies and forest reserves.

iii. Management of stands of fire-origin second-growth cedar

A significant portion of the cedar harvest on Haida Gwaii is not old-growth. This harvest comes from an area of Graham Island that was burned in a number of fires around 1850. The current stands are referred to as "fire-origin second-growth stands" or "Tlell fire stands" in age classes from 60 to 250 years old. They produce high-value cedar poles and generally high grades of cedar in an area that is relatively accessible and has relatively low logging costs. Some of the younger stands in this "fire-origin second-growth" have already been logged once or twice since the fires by the J.H. Baxter Pole Company in the period from 1920-1929 and around 1960.

These fire-origin second-growth stands are also a finite resource, and much more limited in extent than the old-growth cedar. In 2004, the area of cedar dominated fire-origin second-growth was estimated to be 4800 ha.[47] More recent analysis in the TSA analysis suggests that the area of the 60-250 age classes mature and immature stands associated with the "Tlell fire" are in the order of 25,000 ha, of which about 8000 ha is cedar-leading fire-origin stands.

Because of their high-value and low logging cost, these second-growth cedar stands have been targeted for significant harvest in recent years. In 2012 for example, 45% of the

[45] Cultural use includes domestic and community uses, as well as use by individual Haida carvers and artists who use cedar for poles, canoes and other cultural objects that they sell.
[46] Pers. Comm. Percy Crosby, Cultural Wood Program.
[47] Second-Growth Timber Opportunities on Haida Gwaii. Cortex Consultants and HiMark Forest Consultants Ltd, June 21, 2004.

BCTS volume came from these fire-origin second-growth stands.[48] Taan reports that about 30% of their total harvest in 2012 came from these stands.[49] In total, approximately 28% of the total harvest on Haida Gwaii came from the fire-origin second growth stands which comprise only about 12% of the THLB.[50] Like the old-growth, the fire-origin stands are being harvested at rates that are in excess of their proportion of the inventory. The fire-origin second-growth stands that remain are also likely to be of lower volume and lower value than the stands that have been logged to date.[51]

There are concerns about the silvicultural systems and logging methods being used in the fire-origin stands. Some observers report that because of the mixed ages and sizes of the trees in some of these stands and the logging methods used, an excessive number of smaller immature trees are logged that should be left to grow to a larger pole size, which would be of higher grades with more value. There are concerns about the amount of waste, and the effects of a pattern of strip cutting that was utilized. Extensive blow-down occurs along the edges of these uniform dense stands when they are harvested.

The Council of the Haida Nation has expressed a view that some portion of these fire origin stands should be left to become the next generation of old monumental trees.[52] Others feel that the stands are being logged at too young an age.

Thus, the same questions exist for the fire-origin second-growth as for the old-growth. How much remains? What should the annual harvest rate be to ensure they can continue to contribute significant values into the future? How can the harvest be limited? And what management strategies should be in place for these valuable resources?

iv. Regeneration of cedar and the impact of browsing by introduced deer

In addition to the challenges posed by the diminishing supply of old-growth and fire-origin second-growth cedar stands, there are significant challenges related to cedar regeneration.

Browsing by introduced Sitka black-tailed deer effectively eliminated cedar regeneration in cut blocks until requirements were put in place in the mid-1990's to require that cedar is re-established in cut areas and protected from browsing. Thus, there is very little cedar in the logging-origin second-growth stands younger than 120 years old and virtually all of the second-growth cedar that does exist is in the 0-20 year age class. When the remaining inventory of the fire-origin cedar and old-growth cedar is removed, there will be a lengthy gap before any more cedar of harvest age is available, and forest harvesting during that period will depend entirely on the economic viability of hemlock and spruce.

[48] Data provided by Tom Johnson, BCTS.
[49] Pers. Comm. Bob Brash, supported by information from BCTS.
[50] Harvest Information for BC government Harvest Billing System, Tom Johnson, BCTS and Bob Brash, Taan Forest Products. THLB information from Nick Reynolds, CHN.
[51] Pers. Comm. Nick Reynolds, CHN.
[52] Haida Land Use Vision Haida Gwaii Yah'Guudang (respecting Haida Gwaii). Council of the Haida Nation. October 2005.

This is the period of time when monumental cedar will need to be found in Cedar Stewardship Areas and forest reserves. This further underlines the challenges associated with managing the remaining old-growth and fire-origin stands.

The lack of cedar regeneration as a result of deer browsing is dramatic in the old-growth cedar stands that are now protected in Parks, Park Reserves, Conservancies, Cedar Stewardship Areas and other reserves. Regeneration is restricted to stumps, roots wads and cliff faces. Even in situations where trees blow down and create forest openings where cedar should regenerate in these reserves, it is largely absent. Thus, while the old-growth protected areas are effectively set aside to provide cedar for future generations, there is no long-term assurance that there will be any cedar because there is essentially no young cedar in the stands to replace those that die or blow over. This also represents an enormous challenge. It is being considered within the management plan presently being developed for the Cedar Stewardship Areas.

In summary, current pressures on cedar from on-going over-harvesting, deer browsing and a lack of mid-age second-growth cedar stands, present enormous challenges from many perspectives.

4.2.7 The transition to a second-growth spruce and hemlock forest

Second-growth forest appears to make up approximately 100,000 ha or just over 50% of the long-term Timber Harvesting Land Base (THLB) of about 188,000 ha.[53] Approximately 80,000 ha of this second-growth is "logging-origin second-growth" in the 0-80 year age class,[54] dominated by stands of Western hemlock and Sitka spruce.

The time frame for a transition from old-growth harvesting to second-growth is not clear, but will likely occur as many other parts of the Coast are also moving into second-growth. The timber supply analysis base case projects that harvesting in the 81-100 age class will begin in the TSA in about 10 years; in TFL 58 in about 20 years; and in TFL 60 in about 30 years.[55] This is based on an expectation of continued old-growth harvesting for as long as possible and a transition to second-growth only when the second-growth is in the older age classes. However, second-growth harvest has already been underway in TFL 58 for several years and is in 41-60 and 61-80 age classes, not the 81-100 age class. In 2012, all of the harvest in TFL 58 was in these second-growth stands because of harvesting constraints from the LUOO and the financial viability of the second-growth. In 2011, Taan had significant success harvesting a 58 year old spruce-leading second-growth stand, and expects to continue to harvest in these high-volume spruce-leading second-growth stands. BCTS reports that it will soon be planning harvest of logging-origin second-growth stands.

[53] Information from Timber Supply Analysis Report and Data Base.
[54] Information from Timber Supply Analysis Report, provided by Nick Reynolds.
[55] AAC Rationale for TFL 58, TFL 60 and TSA 25, Deputy Chief Forester Jim Sutherland, September 2012. Page 23.

Thus, the relatively young, logging-origin second-growth forests are already important. In the not-too-distant future, at a time when virtually no old cedar remains and none of the young cedar stands are old enough for harvest, logging-origin second-growth spruce and hemlock-leading stands will be the entire basis of the forest economy on Haida Gwaii. A 2004 study indicated that 64% of the logging-origin second-growth was hemlock-leading stands and 29% was spruce-leading stands. Only 2% was cedar-leading. The hemlock stands are predominantly in the younger age classes and the spruce stands tend to be in the older age classes reflecting the harvest of accessible old-growth spruce stands on the Islands during the war years and transition to cedar- and hemlock-leading old-growth stands in later years, which have regenerated to hemlock-leading stands.

Initially, the second-growth harvest will be predominantly spruce stands. These are the older stands and are already economically valuable because they are of high volume with a very high spruce (low hemlock) content and have low logging costs because they tend to be on gentle terrain and close to roads with easy access. Some of these stands were spaced and thus have relatively fewer trees per hectare. Some were fertilized. They also can be exported and bring a higher price than in domestic markets. In the short term, harvest of spaced and un-spaced spruce stands is economically viable.

It is not known how many of the spruce-leading stands have been spaced and fertilized, or how much is lower value un-spaced stands which have higher logging costs because of the greater number of trees per hectare. Similarly it is unclear how much of the spruce-leading second-growth may be currently constrained by LUOO provisions on flood plains and for Type 1 and 2 streams where much of the older second-growth spruce is located. Like the current situation with old cedar, high-value second-growth spruce appears to be harvested at a rate that is disproportionate to its contribution to the second-growth inventory. It is not known how long the higher value spruce-leading stands can carry the bulk of the second-growth harvest.

In the near future, the viability of industrial forestry operations on Haida Gwaii will depend heavily on the viability of second-growth hemlock-leading stands that, in 2004, comprised 64% of the total second-growth, and a higher proportion of the younger age classes. That study considered the economic operability of second-growth hemlock stands as "questionable". The economic viability of the second-growth stands becomes more questionable as harvesting increasingly relies on hemlock-leading stands (considered a lower-value species) that were not spaced, and that will be more remote and on generally steeper slopes with increased access and logging costs. The fact that many of these hemlock stands are located in remote areas – Sewell Inlet and Tartu Inlet for example – with very high access costs further challenges economic operability. Sewell Inlet, for example, contributes 20% of the annual AAC in the timber supply area (about 105,000 m^3 out of 512,000 m^3) but there are no current operations in Sewell Inlet.[56] The longer operations in Sewell are delayed, the more pressure is put on other areas, and the more the future depends on the very remote second-growth.

[56] Information provided by Tom Johnson, BCTS.

It has been suggested that the only way to make these hemlock stands economically viable is to add value on Haida Gwaii in a hemlock sawmill, and to ship finished or semi-finished products rather than round un-processed logs. The hemlock is thought to be of relatively good quality, and local manufacturing would allow it to compete in a world market. Without this value added, second-growth hemlock may be uneconomic because of the cost of transporting round logs off the islands to mills elsewhere. However, addressing this possibility requires information, analysis and long-term planning and may require substantial capital investment and consolidation of the tenures to supply such a mill. There appears to be little precedent of a successful sawmill to produce hemlock products in coastal BC.

There may still be opportunities to increase the value of the second-growth growing stock. In the 1980's and 1990's considerable funds were spent on silviculture activities on the Islands to enhance second-growth volumes and values per hectare. These included fertilization, spacing, pruning, mounding and other activities. There do not appear to be any recent analyses of these treatments to determine if they provide any guidance about whether they would offer benefit in the future. There has been no spacing, fertilization or other incremental silviculture since the late 1990's when funding programs were cancelled.

Making second-growth hemlock economically viable may depend on product development and research, and identification of markets, and niches for a value-added Haida Gwaii hemlock product produced on Haida Gwaii.

4.2.8 A lack of critical infrastructure

Any investigation of the potential to expand the capacity to process and manufacture logs into lumber or other wood products on any significant scale on Haida Gwaii raises three infrastructure issues.

First, manufacturing creates a lot of waste in the form of bark, sawdust, broken wood, trim ends, etc. In most places these by-products have some value and can be sold to other users. On Haida Gwaii every by-product represents a cost for disposal, rather than a source of additional revenue. Development of manufacturing facilities depends in part on finding ways to generate revenues, not create extra costs, from these processing by-products. The preferred solution is to use the wood waste products in co-generation facilities and convert them into electricity or heat for use in manufacturing of the wood.

Second, manufacturing requires a lot of energy – either in the form of heat or electricity to run drying kilns and mill equipment. This energy is not available at present on Haida Gwaii and has been cited as a barrier to development of sawmills for years. BC Hydro is presently reviewing proposals for energy production. From the perspective of a comprehensive forestry strategy, the use of wood waste from manufacturing facilities is the most attractive energy option.

Third, manufacturing requires facilities that efficiently transport products to markets. The lack of facilities where products can be loaded directly onto ships or barges has limited

the development of mills to date. Proposals for dock facilities that would allow containers to be loaded on land and transferred directly onto barges for delivery to container ports in Prince Rupert and Vancouver are being reviewed at present.[57] These are controversial but some observers believe that a barge loading facility could reduce the delivered cost of wood products significantly and could open up new direct markets for Haida Gwaii products in Asia (via container ships) or in the United States (in containers via rail).

These three issues – use of waste, energy, and transportation – have been and continue to be major challenges that significantly influence future opportunities on Haida Gwaii. Addressing them may be absolutely essential to addressing the questions of how the second-growth forests dominated by Western Hemlock can be economically viable.

As with other issues on Haida Gwaii, they cannot be addressed or resolved individually or in isolation from other challenges. They require a coordinated approach so that waste, energy and shipping are addressed collectively as part of a long-term forest industrial strategy.

A final piece of critical infrastructure might be a large sawmill to process second-growth hemlock. That is discussed in Section 4.2.6.

4.2.9 A deteriorating infrastructure of roads, bridges and trails

An infrastructure of passable roads and safe bridges and culverts is critical to future silviculture and logging operations and log salvage, as well as to many forest users – recreationists and tourists, firewood cutters, hunters and fishermen, mushroom pickers, forest researchers, cultural cedar users, medicinal plant collectors, mineral prospectors, joggers and cross-country skiers, among others. As the Haida Gwaii economy diversifies, and as communities focus on providing amenities and services that appeal to residents, the maintenance of a road infrastructure to access the forest for multiple users will be increasingly important.

Over the last 20 years, many roads, bridges and culverts have not been maintained and are in significant disrepair to the point of not being safe or passable. Some of them create barriers to fish passage or other environmental problems. Current government and company initiatives are directed to deactivating currently unused roads by removing the bridges and culverts and allowing the roads to brush in with alder, or to simply abandoning or closing roads where risks are low. This addresses safety issues associated with unmaintained roads, limits legal liability, and avoids the costs of on-going maintenance wherever possible and is a cost-effective approach in the short-term. Roads are deactivated when money is available and the priority is to minimize liabilities and future maintenance costs. However, the long-term impacts of this program on the many recreational and non-industrial users and many other forest values are not properly

[57] Port of Haida Gwaii and Short Haul Inter-Coastal Barge Services. Business case prepared for Misty Islands Economic Development Society and Village of Port Clements. March 21, 2013.

accounted for. Without access, many of these activities are no longer possible and opportunities are lost.

The loss of road access into the remote areas of second-growth has significant cost implications for future harvest opportunities in these areas, because removing access now necessitates huge investment in roads, bridges and culverts in the future and may make a whole watershed inoperable. In remote areas like Sewell Inlet and Tartu Inlet, the cost of re-establishing roads, bridges and dryland sorts may make re-opening operations uneconomic.[58]

A program of on-going maintenance in some areas may be more effective in addressing and protecting the multiple values and maintaining the long-term cumulative economic benefits associated with access.

Roads provide the access to important feature sites that are key to growth in a forest-based tourism economy – Rennell Sound, Moresby Camp, and Sleeping Beauty for example – and to some of the new conservancies Yaaguun Suu (Yakoun Lake) and Kunxalas (Cumshewa Head). Access to all of these sites has periodically been difficult in recent years because of lack of road maintenance or road closures and lack of interest or responsibility by government and the companies. Maintaining long-term access to the forests for future logging and log salvage, recreational uses such as hunting, jogging and firewood cutting, and tourism development is a significant challenge but is important to local communities and many user groups.

In addition to roads, a network of recreational trails and campsites that provide recreational access in the forest environment is important to tourists and residents alike. A network of trails is considered an important element of expanding a forest-based tourism economy and many have been developed on the Islands over the years.

Development of an Islands-wide strategic plan for trail development was initiated in 2007 and 2008. This included a preliminary inventory of trails which identified approximately 40 existing trails in 2007[59] and a Gap Analysis Report[60] for an all-Islands trails strategy based on extensive public consultation in 2010 and initiation of a strategy in 2011. Approximately 50 existing trails are now identified from various sources, and new ones are proposed but the development of a coordinated strategy has stalled for lack of funds and overall coordination.

Local observers report that trail use has increased since that time, and new trails have been developed, especially in the Queen Charlotte area. Trails are still considered an important part of an overall tourism strategy but most trails on Haida Gwaii are not maintained and some are in poor condition (Riley Creek trail in Rennell Sound and Sleeping Beauty Trails, for example). MoFLNRO and BC Parks maintain approximately

[58] Pers. Comm. Tom Johnson, BCTS.

[59] Haida Gwaii/QCI Trail Inventory Initiative Mount Moresby Adventure Camp Society, Report submitted to Gwaii Forest Charitable Trust, Jonathon Ebbs. 2007.

[60] k'yuwaatl'aagee / k'yuwaatl'aagaaya. The Haida Gwaii Trails Strategy Gap Analysis Report. Karen Church. December 7, 2010.

6 of the identified trails and have plans to initiate maintenance on 4 more trails.[61] Some others are maintained by local volunteers, alone or with non-government organizations. There are numerous unofficial suggestions for improvement of existing or former trails and development of new ones (in the lower Yakoun/Mamin, Jungle Creek/St Mary's Spring, upper Bonanza Creek, or along the length of Graham Island, for example) to stimulate visitor use and recreational tourism.

Maintenance of the existing trails and campgrounds and development of new ones is important for many forest users, including the forest-based tourism sector but funding the maintenance has been a challenge on Haida Gwaii for years and most have little maintenance. At the moment there is no co-ordination of trail development and management or strategic planning even though trails are seen as an important part of an overall tourism strategy.

4.2.10 The impacts of introduced species

Introduced species are the biggest environmental threat still facing the forests of Haida Gwaii and are not addressed in the Strategic Land Use Agreement or the Land Use Objectives Order. There are more introduced mammal species on the Islands than native species. All of the mammal introductions have had impacts but the introductions of deer, raccoons, beaver, rats and squirrels have been the most dramatic. Their impacts on red and yellow cedar regeneration, medicinal plants, berries, native species of birds and insects as well as freshwater, shoreline and forest ecosystems are numerous and widespread.

Approximately 25% of the plant species are introduced and some like the thistles, broom, burdock and gorse are invasive. Recently the introduction of knotweed species has impacted building projects in several communities and has the potential to spread into the forest. Periodically, there are proposals to introduce non-native tree species. An introduction of Sitka spruce weevil could have very serious consequences.

Like islands around the world, Haida Gwaii is experiencing the serious unintended consequences from introductions, both planned and accidental, of non-native species. Our forests are beautiful but most scientists consider them highly unnatural, and not the "healthy fully functioning ecosystems" desired by the Islands vision for ecosystem-based management.

In 2002 a joint project initiated by the Council of the Haida Nation (Forest Guardians) and the Province of BC (Terrestrial Ecosystem Restoration Program) outlined a comprehensive strategic plan to address introduced species.[62] Also in 2002, the Research Group on Introduced Species held a major symposium on Haida Gwaii to address the

[61] Information provided by Lucy Stefanyk, BC Parks and Larry Duke, MoFLNRO.

[62] Restoration Priorities Associated with Introduced Species Impacts on Haida Gwaii/Queen Charlotte Islands: Perspectives and Strategies. Alula Biological Consulting. Four part report including Introduction, Species Accounts, Local Perspectives and a Strategic Plan. May, 2002. Prepared for Council of the Haida Nation (Forest Guardian Program) and Province of BC (Terrestrial Ecosystem Restoration Program).

impacts of introduced deer and other species.[63] In 2004, the report of the Community Planning Forum (CPF) concluded that introduced species "has become one of the most significant issues in managing the natural resources of the Islands, and a fundamental source of ecosystem change". The CPF recommended the development of "a comprehensive strategy for managing introduced species on the Islands".

The impacts have been well-documented and significant work has been done to identify the necessary strategic approaches to addressing the problem. But with the exception of some specific programs to address a number of introductions – deer on several islands; rats and raccoons on seabird colonies; beaver in some lakes; and gorse, broom and knotweed in communities, parks and along roads – no coordinated or systematic programs exist to address introduced species on Haida Gwaii. Introduced species are the most important remaining challenge to the achievement of the "healthy fully functioning ecosystem" aspects of ecosystem-based management on Haida Gwaii.

4.2.11 A history of conflict

A final challenge is a long history of conflict and competition between forest tenure holders and between different forestry businesses on the Islands. There has also been a long history of division, even animosity, between "the north end" and "the south end" communities. The MIEDS Economic Development Strategy[64] identifies the "political climate and lack of collaboration", the "Islands infighting and history", and "lack of cohesion, co-operation among stakeholders" as major weaknesses on the Islands.

There are some exceptions. The Gwaii Trust Board, the Community Planning Forum and the Community Protocol Agreements have successfully brought representatives of the Island communities together in common purpose. The 2010 Forest Stewardship Plan brought the forest tenure holders together in a single plan. But in general, the Islands history has been one of internal conflict, discord, division and a lack of collaboration on strategic Islands-wide initiatives. This may present the biggest challenge to the collaborative development of a comprehensive forest management strategy.

4.3 Opportunities

Despite the challenges, there are significant opportunities to build on the strengths on Haida Gwaii and to generate more employment, more economic return, and more benefit from the forests for the Islands communities

4.3.1 An expanding forest sector

With the much more secure situation on Haida Gwaii and the improvement of global lumber markets, it is expected that the amount of harvesting on Haida Gwaii will increase and stabilize in the coming years. With a long-term sustainable level of harvest set at

[63] Lessons from the Islands – Introduced Species and What They Tell Us About How Ecosystems Work. Canadian Wildlife Service Special Publication, 2008.
[64] MIEDS Three Year Economic Development Strategy

931,000 m^3, most observers think a stable rate of harvest in the order of 800,000 m^3 is a reasonable expectation.

This level of harvest (compared to the 300,000 - 600,000 m3 over the last 4 years) provides opportunities for direct local employment in the logging sector – machine operators, truck drivers, supervisors, etc – as well as in the many supporting sectors – planning, layout, silviculture, scaling, mapping, equipment repair, etc. However, as noted in Section 4.2.2, the challenge is to ensure that this employment is generated on-island, rather than benefitting off-island contractors and other communities.

4.3.2 Opportunities for local manufacturing

Local manufacturing of the logs produced on Haida Gwaii into lumber, decking or other construction products has long been an objective of local communities, and appears to have broad community support. Local manufacturing provides more local jobs per cubic metre than harvesting. For example, one local sawmill reported that with a secure annual wood supply of 50,000 - 60,000 m^3 it could operate one shift of approximately 35 people on a year-round basis. On a steady basis, this would be a significant contribution to local employment and the local economy.

Over the years many small sawmills have operated on Haida Gwaii and even today about 20 mills ranging from small one person operations to a mid-size mill operate to one degree or another. However, in 2006 was reported that up to 97% of the timber harvested on the Islands is processed elsewhere.[65] The lack of a stable, vibrant manufacturing sector is usually attributed to the lack of long-term availability of a supply of high quality logs, the inability to secure capital and lines of credit, the small local market, the lack of a stable trained work force, energy and waste issues, and the lack of information about, and access to, off-island markets.

With the transition to local control of the majority of the annual harvest, especially with Taan Forest, as described in Section 4.1.1 there appears to be more opportunities to retain more wood on the Islands to supply local sawmills. Taan has expressed interest in supporting local manufacturing, and small mills report that Taan has recently been willing to make good quality logs available to them. The Skidegate Band Council has started a plant manufacturing cedar poles in a joint venture with Taan Forest. This mill employs 6 to 7 people on a periodic basis when a suitable volume of pole-quality cedar can be accumulated. A recent joint venture agreement between the Old Massett Village Council and Abfam Enterprises[66] has created new employment opportunities in Old Masset. This venture is based on manufacturing cedar products from logs supplied by Taan Forest. These are signs of the opportunities potentially available. The combination of the known very high quality raw materials (particularly red and yellow cedar and spruce) and a Haida Gwaii brand, now supported by a Forest Stewardship Council

[65] Haida Gwaii/QCI Land Use Plan Recommendations Report. Community Planning Forum. January 2006. Page 80. More recent data has not been located. It is likely that this percentage is slightly higher with the recent processing of cedar poles on the islands.
[66] The new venture is called Haida Gwaii Forest Products.

certificate of Taan's managed forests[67] offers the potential for a viable local manufacturing sector producing significant local economic benefits.

4.3.3 Opportunities for value-added businesses

In addition to manufacturing, there has long been interest in secondary production of lumber and logs into high-value finished products, ranging from small boxes and handicrafts to large monumental art, boardroom furniture, doors, windows and flooring and musical instrument components. A variety of small finished wood products, for example cutting boards, boxes, and arrow shafts, have been successfully produced on Haida Gwaii over the years. At present, there is some sale of spruce wood to guitar makers and Taan is seeking to expand that market substantially. A number of Haida carvers produce large monumental poles for sale.

In the 1990's and early 2000's there was a concerted effort through wood shows and support from Community Futures to empower and expand the value-added sector to produce furniture, bowls and other wood products.[68] Successful wood shows were organized and training courses were offered. Several entrepreneurs were briefly successful but most have now left the Islands. Others have chosen to remain as very small operations.

Forest communities around the world sell a great variety of products produced by local artisans – wood carvings, masks, boxes, bowls, furniture, and handicrafts of many kinds. Haida Gwaii artisans have developed silver and argillite jewelry and artwork to a significant extent, but, with the exceptions of major poles, there is presently relatively little in the way of wood products. For the right entrepreneurs and with a supply of wood and community support, there appear to be significant opportunities to use the high quality wood and the known Haida Gwaii brand to develop new wood products and new markets based on the craft and artisanal skills available on the Islands.

In a future second-growth economy, if hemlock is processed locally, there may be opportunities for manufacturing flooring, window and door components and other products on the Islands. Manufacturing and adding value locally to the hemlock might be a critical part of making second-growth hemlock economically viable.

4.3.4 Opportunities for an expanded tourism sector

The strengths of Haida Gwaii as a world-class tourism destination are noted above and tourism-related employment and economic activity has been growing on Haida Gwaii. Between 1999 and 2009, for example, the number of employees in the tourism sector

[67] An FSC certificate is internationally recognized and is the highest standard of certification that wood comes from a well-managed forest.

[68] See for example, Value Added Sector Strategy for the Queen Charlotte/Haida Gwaii Wood Manufacturers Association: a Sustainable Model for Development and Expansion. The Queen Charlotte/Haida Gwaii Wood Manufacturers Association. March 1998. And Market Review of and Recommendations for the Queen Charlotte/Haida Gwaii Value-Added Sector. The Queen Charlotte Islands/Haida Gwaii Wood Manufacturers Association. January 1998.

quadrupled,[69] and in 2009, exceeded the number in the forestry and logging sector,[70] which had declined by 50% over the same period.

Island residents have stated that there are significant opportunities to expand the tourism economy by attracting additional visitors and encouraging them to stay longer based on the forest-based tourism opportunities. This requires the development of trails and campgrounds and the maintenance of good road access to recreational sites. It also requires protection of the viewscapes around communities and management along recreational access corridors, including the roads to Rennell Sound and Moresby Camp, and waterways including Skidegate Narrows and Cumshewa Inlet.

The MIEDS Three Year Economic Development Strategy identified support for the growth of the tourism industry as one of its five objectives to increase employment. There have been various initiatives over the years to encourage responsible tourism development. With interest in tourism growing world-wide and the growing international recognition of the exceptional Haida Gwaii experience, there are significant opportunities for an expanded forest-based tourism sector.

4.3.5 Opportunities for non-timber forest products[71]

The forests of Haida Gwaii provide many other potential products and services, in addition to wood and timber products. A report in 2000 identified "10 Best Picks" for development of botanical products and other forest products on Haida Gwaii.[72] These included mushrooms, venison, salal, conifer oils for production of aroma therapy and soap products, and plants and berries for teas and jams. There is a large seasonal fresh mushroom industry involving resident and off-island pickers and buyers and there was a recent attempt to develop a co-operative business venture to process and dry mushrooms. Although this was not successful, it offers important lessons about the potential opportunities in this area.

Recently, the Old Massett Village Council was involved with the Turning Point initiative and other coastal First Nations communities in a joint venture to develop soap, aromatherapy and other products from conifer oils from boughs collected in logging sites. These products were successfully tested in hotels in pilot locations, and are expected to be economically viable at the right scale of production. Other First Nations are moving

[69] MIEDS Business Directory 2010 and MIEDS Community Investment Profile, 2010 reported in Haida Gwaii Labour Market Project – Labour Market Information. Astute Management Consulting Ltd, December 2011. The number includes full-time, part-time seasonal and self-employed.

[70] The forestry and logging sector includes logging and after-logging activities such as milling, pole peeling and squaring logs.

[71] Some Islanders do not like the term non-timber products, and would prefer the term "botanical products". However, this is not broad enough to cover the full range of potential products from the forest. Non-timber is reluctantly used as a convenient "catch-all" term.

[72] Seeing the Forest Beneath the Trees: The Social and Economic Potential of Non-Timber Forest Products and Services in the Queen Charlotte Islands/Haida Gwaii. Sinclair Tedder, Darcy Mitchell and Ramsey Farran. March 2000.

ahead and are working on transitioning from a pilot project into a start-up business, but Old Massett's participation has stalled due to the lack of a local champion to drive the project forward and a shortage of funding.[73]

An opportunity to harvest deer for commercial venison production for local and off-island markets has been discussed for many years. This would both create employment, and potentially reduce the deer browsing problems. However, there are a number of regulatory and logistical problems relative to hunting deer commercially and processing wild animals for commercial food production that would need to be addressed.

Opportunities continue to exist for the economic use of all of these non-timber forest products and for local businesses to develop them. Business plans, start-up funds, committed entrepreneurs and in some cases legislation changes are needed.

4.3.6 Opportunities for education programs

The Haida Gwaii forests provide an opportunity to develop and market education programs to students and educational tourists built on the forests, marine environments and communities of Haida Gwaii. The Haida Gwaii Higher Education Society (HGHES)[74] has successfully pioneered one specific educational area. It runs a very successful program through an affiliation with the University of BC, offering full-semester programs for upper-level undergraduate students studying in fields of natural resource management. Two separate programs are offered every year, each with a different academic focus; one semester runs from September to December, and the other from January to April. Since it began in 2009, the Haida Gwaii Semester has brought a total of 137 students from 21 different Canadian universities to the Islands for four-month semesters. HGHES provides six jobs in the community, and economic activity associated with the development and delivery of the program has produced well over $1 million in direct revenues to the community over the past six years. The program is fully subscribed for upcoming semesters and is continuing to grow, with plans to expand in future years.

The response to the HGHES program suggests that there are many other possibilities for presenting the forests of Haida Gwaii and the cultural, socio-economic and political aspects of forest management on Haida Gwaii to enthusiastic audiences to generate community economic benefits. These could include professional development courses for community and business leaders already working in the natural resources field, or short field courses in a variety of natural sciences aimed at visitors interested in temperate rainforests, streams and vegetation communities on Haida Gwaii.

Educational tourism is a very large business in some places. The American-based Road Scholar program, for example, offers education-based tours to seniors and retired teachers and university professors in over 150 countries and has brought tours to Haida Gwaii in the past. The Islands appear to have many of the key attributes for expanded educational tourism development.

[73] Pers. Comm. Johanna Helbig. Turning Point Initiative.
[74] Information available from www.haidagwaiisemester.com.

5.0 The Task Ahead - Developing a Comprehensive Forestry Strategy

5.1 A collaborative process

The scale, depth and complexity of the challenges and opportunities facing Haida Gwaii require a collaborative approach. No single player acting alone – company, community or government – is big enough to address these challenges or deliver a comprehensive strategy. Each requires assistance of all the others and it will take a focused, collaborative "one-Island" or "Haida Gwaii Inc." approach involving all the parties and built around a common vision of the role of forest management on the Islands. By working together to develop a strategy, companies, communities and governments are more likely to achieve and embrace the vision of ecosystem-based management, especially in the areas of generating economic benefits for the communities, providing employment for Islands residents and ensuring a healthy economic future for young people and families in stable, economically diversified communities.

To reverse the current trends, and to find ways to deliver long-term benefits from the changing forest management environment to the residents, communities and companies that live and work here, collaboration is critical. This view has been expressed recently in other documents, notably the Three Year Economic Development Plan for MIEDS based on the wide consultation. "Increased collaboration and communication within industry and between governments" is identified as Goal #1 and top priority in the MIEDS economic development strategy.

The key steps to initiating a collaborative process are:

- The Haida Gwaii Management Council should take a leadership role by inviting senior representatives from the tenure holders, Island communities, Haida and Provincial governments, and the Island logging contractors and milling sectors to come together in a collaborative process to develop a forestry strategy for the Islands. The HGMC has the moral standing to initiate this process and to request that these parties join the process. The HGMC role can be seen as that of a catalyst.

- The HGMC should seek partnerships with, or support from, other organizations, such as Community Futures, MIEDS and Gwaii Trust, who have representation from all the Islands communities, similar interests in community economic and social development, awareness of the challenges, and a neutral position.

- The process should engage senior representatives from each of the five tenure holders, each of the six Islands communities, the Haida and Provincial governments, and senior representatives of Islands logging contractors and milling sectors in face-to-face dialogue supported by technical information periodically provided by staff within those organizations or independent consultants.

- The process should be considered a regular on-going process over a period of time and requires on-going senior level commitment. It should be a "forest-based process" and should confine discussions to a forestry strategy and the vision for forestry. Once the process is established, the HGMC could become less involved, or simply offer to monitor and provide high level guidance.

- At the outset and for the near term, the process should be professionally facilitated.

- At the outset, all parties should be provided with an analysis of the trends, challenges, strengths and opportunities identified in this Background Paper.

- Once an on-going collaborative process is formally established, specific elements of the comprehensive strategy, as outlined in Section 5.2, could be handed off by the HGMC to committees.

- The HGMC should investigate the BC Forest Sector Strategy from the early 1990's as a potential model for developing a successful structure for the process.

To initiate the process all parties can be reminded that all are aware of the significant challenges and the need for collaboration, but no one agency is presently taking a lead.

5.2 The Components of a Comprehensive Forestry Strategy[75]

The following 12 strategies are proposed as components of a comprehensive forest management strategy. They are presented to complement many other initiatives implemented or underway on Haida Gwaii. Collectively, these strategies are directed to protecting the environmental and cultural values in the forests of Haida Gwaii for future generations and to ensuring that the diverse resources in the forest are used to generate economic benefits for the communities, employment for Islands residents and a healthy economic future for young people and families in stable, economically diversified communities. The individual strategies are equally important components of the comprehensive strategy.

Some strategies (for example, a local employment strategy) are explicitly directed to increasing local employment and community benefits. Other strategies (for example a forest-based tourism strategy, a forest access strategy, and an introduced species strategy) address forest management issues but also have important indirect benefits in also creating and increasing local employment.

5.2.1 A Local Employment Strategy

A Local Employment Strategy[76] establishes performance targets and identifies measures to ensure that:

[75] The following strategies are presented as starting points to stimulate discussion in a collaborative process as proposed in Section 5.1.

- A significant portion of the total workforce employed in forest management, logging, road construction, silviculture and other related activities associated with the Allowable Annual Cut from Haida Gwaii tenures are residents of Haida Gwaii.

- A portion of the goods and services used to support the management and harvesting of the Allowable Annual Cut from Haida Gwaii is purchased from local businesses. This supports secondary employment.

- Haida Gwaii residents and communities benefit directly from forest management and harvesting activities on Haida Gwaii.

This strategy should include:

- Establishing local employment targets and milestones for forest management, logging, road construction and related support activities on Haida Gwaii. Targets should be established by each tenure holder and could be expressed as a total number of local employees, or as a % of their workforce, or as a number of local employees per m^3 logged annually on Haida Gwaii. Emphasis can be placed on creating employment opportunities for Haida communities.

- Establishing local procurement targets and milestones. Targets should be established by each major tenure holder and could be expressed as percentages of the total dollar amount of goods and services purchased to support the Allowable Annual Cut on Haida Gwaii.

- Monitoring and publically reporting progress to meet employment and procurement targets.

- Working with communities to provide incentives or benefits to contractors and workers who relocate to Haida Gwaii and establish offices or residences in the communities.

- Coordinating operations on a geographical basis so that harvesting in areas tributary to individual communities supports a consistent volume of wood available to workers and contractors in that community. For example, Teal Cedar, Taan Forest and BCTS all have tenures on Moresby Island. Working separately, each will employ a workforce but the annual harvest on each tenure is not sufficient to provide any contractor or worker with any long-term security or consistency of operation and the workforce will be transient. Working together, the combined harvest on Moresby Island could be managed to deliver a secure supply of wood over a longer period which would be much more attractive to

[76] A Local Employment Strategy is directed to the management, harvesting and related activities associated with the AAC. Strategies to generate local employment in local manufacturing, tourism, value-added and non-timber product sectors are outlined in the specific strategies 5.2.2, 5.2.8, 5.2.9 and 5.2.10.

local contractors and workers. This would provide more secure local employment and provide greater benefit to the local community.

- Coordinating forest management planning so that professional foresters and technicians (layout engineers, cruisers, silviculture staff, scalers, GIS technicians, mappers) live on the Islands. A cut of 600,000 - 800,000 m3 per year should support between 40 and 50 of these permanent full-time support staff. In the recent past, most of these positions were resident in the communities; currently most of this work goes to off-island consultant groups. With stable operations, a collaborative approach could support the return of a significant number of professionals and technicians to the communities to work locally in the forest sector.

- Ensuring that supervisory and administrative personnel live on Haida Gwaii. In the recent past, most of these positions were resident in the local communities, but now most are non-resident.

- Establishing job shadowing or team learning in situations where skilled or trained people are not available locally.

- Supporting the development of competitive, economically viable local contractors through managing contracts compatible with contractor capacity, assisting with financing arrangements, etc. Contracts that are for multiple years and provide for a steady flow of wood allow contractors to invest in equipment, hire and train staff, and build local capacity and resident operations.

- Assisting and supporting specific forest employment oriented skills development and training for Island residents though participating with agencies like Northwest Community College, Hecate Strait Employment and others.

- Supporting local business development and encouraging the development of entrepreneurial skills.

Related Documents

MIEDS Three Year Economic Development Strategy, Heather Adel, MIEDS, March 4, 2013.

Haida Gwaii Labour Market Project, Labour Market Information, Astute Management Consulting Inc, December 7, 2011.

Human Resource Development on Haida Gwaii: Strategies and Action Plan. Project Initiated by the Skidegate Band Council. 2012.

5.2.2 A Local Manufacturing Strategy

A Local Manufacturing Strategy establishes performance targets and supports, strengthens and expands the local sawmill and wood-manufacturing sector.

This strategy should include:

- Establishing an initial current target for the amount of wood to be provided annually on Haida Gwaii for manufacturing in a local sawmill sector. The targets can be expressed either as an annual volume of wood, or as a percentage of the total annual harvest on the Islands.

- Determining the capacity and demand for wood for local manufacturing as a basis for a current target.

- Identifying barriers that currently face the local manufacturing sector and implementing solutions.

Establishing targets and milestones to expand the amount of wood provided annually for manufacturing on Haida Gwaii in five and ten years.

- Monitoring and publically reporting progress to meet local manufacturing targets.

- Implementing mechanisms that specifically tie a portion of the harvesting opportunities on Haida Gwaii to local manufacturing. This could include Category 2 Timber Sales or other mechanisms.

- Developing the appropriate contractual arrangements or wood supply agreements that ensure a secure wood supply for local processors. This could include weighting contracts proposals so that local manufacturing is preferred.

- Providing assistance to the local manufacturing sector in the form of training, technical advice or financing.

- Encouraging and supporting manufacturing facilities to obtain FSC Chain of Custody certification in cases where wood is destined for off-island markets.

- Identifying ways to collaborate in undertaking market research and product development, and identifying market opportunities.

- Implementing a "Wood First Policy" for local public building projects and encouraging Islanders to use wood in buildings.

A Local Manufacturing Strategy is aimed at supporting a diversity of local small- to medium-scale facilities in different communities, likely using higher value species – red cedar and yellow cedar, Sitka spruce and potentially lodgepole pine. This strategy does not address the potential need for a single sawmill to process second-growth hemlock on the Islands.

5.2.3 A Skills, Training, Education and Employment Readiness Strategy

A Skills, Training, Education and Employment Readiness Strategy addresses the immediate development and implementation of a range of programs that are necessary to

provide technical skills and employment readiness so that Island residents can be employed in the modern forest industry, including harvesting and manufacturing.

Skills development programs are outlined in detail in a 2012 report – "Human Resource Development on Haida Gwaii" - that provides strategies and an action plan for human resource development on Haida Gwaii. That is an excellent, comprehensive document prepared by a large team of professionals in this field. Unfortunately, with the exception of two small unconnected projects, further work to implement the strategies and the action plan outlined in that document has stalled because of a lack of funding and a champion to move it forward.

This strategy should include:

- Reviewing and re-activating the 2012 report "Human Resource Development on Haida Gwaii: Strategies and Action Plan" and implementing this strategy in a way that is specifically directed to forestry employment. This strategy should be implemented by a single agency with an Islands leadership group involving Band Councils, Hecate Strait Employment and Northwest Community College and including strong involvement from tenure holders and government. The First Nations Forestry Council may also provide assistance for skills development and training.

- Stressing entrepreneurial development skills, in addition to employment readiness.

In addition to technical skills training and employment readiness programs, the strategy should focus on encouraging students in local high schools and younger grades to appreciate the forests and to consider future employment in the forest sector. This part of the strategy should include:

- Providing opportunities like the Youth Stewardship Program for local high school students to get hands-on experience.

- Supporting the Forestry 11 courses being offered in local high schools.

- Establishing "future logger training" programs in the high schools as is happening in schools on Vancouver Island and the central interior.

- Using Gwaii Trust educational grants to encourage more local school students to enter the resource management field at the university or college level.

- Encouraging local university students to participate in the Haida Gwaii Semester programs for advanced education in natural resources management.

Related Documents

Human Resource Development on Haida Gwaii: Strategies and Action Plan. Project Initiated by the Skidegate Band Council. 2012.

5.2.4 A Cedar Management Strategy

A Cedar Management Strategy secures the long-term presence of red and yellow cedar in the Haida Gwaii forest to serve economic, cultural and environmental needs.

This strategy should take a very long-term view, consistent with the concept of a 1000 Year Cedar Strategy, endorsed by the 2001 Annual House of Assembly.

This strategy should include:

- Determining:
    - How much operable old-growth red and yellow cedar and fire-origin second-growth cedar remains within the timber harvesting land-base;
    - The value, grade and economic operability of the remaining cedar-leading stands;
    - The impact of current rates of harvest (55-60% red cedar; and 4% yellow cedar) and current grade profile on the remaining available supply; and,
    - The length of the gap between the end of operable old-growth and the availability of logging-origin second-growth cedar (currently estimated at 60 years and likely longer).

- Identifying measures to stretch out the supply of old-growth and fire-origin second-growth cedar stands to shrink the gap between the end of old-growth cedar and the availability of logging-origin second-growth cedar.

- Specifying enforceable limits on the volume of red and yellow cedar harvested annually on Haida Gwaii and on each tenure for both old-growth and fire-origin second-growth.

- Determining if stands of fire-origin second-growth can be retained to reach old-growth characteristics and provide a supply of monumental cedar for the future.

- Identifying silvicultural interventions that will enhance growth or value in the logging-origin second-growth stands. This may include mounding or fertilization on low sites, as was undertaken in the past.

- Identifying opportunities for ecosystem restoration work to create old-growth attributes in mature stands with a cedar component. Begbie Peninsula has been suggested as a candidate area.

- Reviewing silvicultural systems and logging methods in the fire-origin second-growth cedar stands to determine the optimum ways to manage and enhance the remaining value in these mixed-age stands.

- Completing the management plan for Cedar Stewardship Areas.

- Identifying methods, including fences, repellents, deer culls and other methods to protect young cedar from deer browsing and encourage regeneration in reserves and Cedar Stewardship Areas.

Related Documents

Resolution of the House of Assembly, 2001. Reported in Haida Laas, August 2005.

Proceedings of The Cedar Symposium: Growing Western Red cedar and Yellow-cypress on the Queen Charlotte Islands / Haida Gwaii. Greg G. Wiggins (editor). May, 1996.

Haida Gwaii Timber Supply Review: Timber Supply Analysis Report. Submitted by Joint Technical Working Group. April 4th, 2012.

AAC Rationale for TFL 58, TFL 60 and TSA 25, Deputy Chief Forester Jim Sutherland, September 2012. Pages 24-32.

5.2.5 A Second-Growth Strategy

A Second-Growth Strategy provides for the transition from an economy dominated by the harvest of old-growth forests that include significant amounts of cedar, to one dominated by harvest of young Western hemlock and Sitka spruce second-growth stands with virtually no cedar. This strategy can be referred to as a "hemlock strategy" since hemlock will be the dominant species in this future economy. The challenges related to this transition relate to the economic viability of hemlock.

The strategy should include:

- Identifying the appropriate age to begin harvest of second-growth stands. The age of second-growth currently being harvested may be too young and based on current value, not the future value of these stands.

- Identifying the expected periods of the transition from the harvest of old-growth and fire-origin stands through a period of second-growth harvest dominated by high-value/low cost second-growth Sitka spruce stands to the period of harvest dominated by lower-value/higher cost Western hemlock stands.

- Implementing a transition strategy so that the current harvest of higher value old-growth and second-growth stands is managed in ways that assist the transition to predominantly lower-value and higher operating cost second-growth hemlock stands.

- Determining measures to improve the future operability of remote areas of second-growth (Sewell Inlet, Tartu Inlet, for example) that contribute significantly to the inventory but may be so remote and require such high start-up investment that they are uneconomic.

- Identifying opportunities to increase the value of second-growth (fertilization or spacing, for example) and implementing incremental silviculture programs.

- Identifying opportunities to create new products from second-growth hemlock (for example cross-laminated timbers, windows and door panels, or cabinets).

- Identifying likely markets for new hemlock products.

- Removing hemlock from the "hem-bal" group in the lumber grading standard and establishing a separate grading standard for hemlock. The hem-bal grouping misrepresents and undervalues hemlock.

- Beginning to market a Haida Gwaii FSC certified hemlock brand.

Related documents

Second-Growth Timber Opportunities on Haida Gwaii. Cortex Consultants and HiMark Forest Consultants Ltd. June 21, 2004.

Haida Gwaii Timber Supply Review: Timber Supply Analysis Report. Submitted by Joint Technical Working Group. April 4th, 2012.

AAC Rationale for TFL 58, TFL 60 and TSA 25, Deputy Chief Forester Jim Sutherland, September 2012. Pages 23-24.

5.2.6 A Critical Infrastructure Strategy

A Critical Infrastructure Strategy addresses the needs for large and capital intensive infrastructure on the Islands.

This strategy should include:

- Facilities to economically use wood waste associated with processing and manufacturing.

- Facilities to provide energy to support expansion of sawmill capacity.

- Facilities to reduce the costs of transporting logs and finished products to markets.

- A plan to centrally locate this infrastructure. The needs are not independent – for example a large modern mill will require energy, likely produced in an adjacent facility using the waste, and a facility to load the products onto ships or barges, likely in containers. The Islands cannot support these facilities in every community or for every tenure holder.

- Assessment of the need and potential for a single large modern and efficient sawmill designed and built to process second-growth hemlock on Island for off-island markets.

Related Documents

Port of Haida Gwaii and Short Haul Inter-Coastal Barge Services. Business case prepared for Misty Islands Economic Development Society and Village of Port Clements. March 21, 2013.

5.2.7 A Forest Access Strategy

A Forest Access Strategy provides for the maintenance of a network of roads and bridges throughout Haida Gwaii.

The strategy should include:

- Identifying and maintaining a designated network of roads throughout the Islands to provide access for multiple uses – including future forestry operations, on-going salvage, hunting and fishing, harvest of botanical products like mushrooms, and others - and especially to ensure recreational and tourist access to identified recreational destinations and trailheads throughout the Islands.

- Reviewing current decision-making criteria and policies related to road deactivation and abandonment and incorporating consideration of the long-term benefits and opportunities that may be associated with a long-term maintenance program to keep roads open.

- Identifying mechanisms to fund on-going maintenance of designated roads.

- Reviewing dryland sorts, boat ramps and booming ground infrastructure from a long-term perspective. These facilities may be critical to the future economic viability of remote areas of second-growth forest.

5.2.8 A Forest-based Tourism Strategy

A Forest-based Tourism Strategy provides for specific active programs to expand the use and management of the forest to support a growing tourism economy on Haida Gwaii.

The strategy should include:

- Coordinating the opportunities for and the promotion of forest-based tourism and recreational opportunities for the whole of Haida Gwaii, including opportunities in protected areas and areas managed for timber harvesting.

- Coordinating the maintenance and improvement of the existing network of recreational trails and campgrounds throughout the islands to provide for recreational use by residents and by visiting tourists.

- Developing new trails – in the lower Yakoun/Mamin, Jungle Creek/St Mary's Spring, and Bonanza Creek areas, for example – to stimulate tourism and recreational use.

- Using interpretative signs, including appropriate signage for culturally modified trees and other features, along some trails focused specifically on tourist use.

- Expanding interpretative tours of forest management operations including active logging.

- Supporting new adventure tourism initiatives in the forest – ziplines, canopy platforms and tours, trail biking on old roads or railroad grades, for example.

- Actively managing the viewscapes around communities and along recreational travel corridors to high visual quality standards. Landscape management was addressed in recommendations from the 2006 Community Planning Forum report and 8 priority areas were identified. These included all the communities as well as the boat access corridors to Gwaii Haanas, the passage through Skidegate Narrows to the west coast, the highway between Port Clements and Masset, and the roads to Gray Bay, Moresby Camp and Rennell Sound, for example.

- Maintaining good recreational road access to the recreational destinations and feature sites on the Islands, including Gray Bay, Moresby Camp, Sleeping Beauty, Massett Inlet and Rennell Sound, for example.

Development of this strategy should build on recommendations from the Community Planning Forum and the Heritage Tourism Strategy. It should be coordinated with the "k'yuwaatl'aagee / k'yuwaatl'aagaay Haida Gwaii Trails Strategy", the trail inventory and strategy work of the Mount Moresby Adventure Camp and the Three Year Economic Development Strategies developed by MIEDS.

Related Documents

Haida Gwaii/Queen Charlotte Islands Land Use Plan Recommendations Report. Community Planning Forum. January 2006.

Haida Gwaii/QCI Trail Inventory Initiative Mount Moresby Adventure Camp Society. Report submitted to Gwaii Forest Charitable Trust. Jonathon Ebbs. 2007.

Haida Gwaii/Queen Charlotte Islands Heritage Tourism Strategy, Haida Gwaii Heritage Tourism Strategy Working Group. January 2003.

k'yuwaatl'aagee / k'yuwaatl'aagaay The Haida Gwaii Trails Strategy Gap Analysis Report. December 7, 2010.

k'yuwaatl'aagee / k'yuwaatl'aagaay The Haida Gwaii Trails Strategy Interim Report for Stage 1, Misty Isles Economic Development Society February 17. 2011.

k'yuwaatl'aagee / k'yuwaatl'aagaay The Haida Gwaii Trails Strategy Report on the Public and Stakeholder Consultation Process for Stage 1: Parameters and Results. Misty Isles Economic Development Society. March 15 2011.

Three Year Economic Development Strategy, Misty Islands Economic Development Society, Heather Adel. March 4, 2013.

5.2.9 A Value-Added Strategy

A Value-Added Strategy supports the development of businesses based on creating finished wood products for local sale and for export to markets in Canada and abroad.

The work undertaken by Community Futures in the late 1990's and early 2000's to establish local entrepreneurs and artisans producing wood carvings, masks, boxes, bowls, furniture, and handicrafts of many kinds provides an excellent starting point. It should be re-visited.

This strategy should include:

- A re-evaluation of the work of Community Futures and an identification of the current opportunities for value-added businesses.
- Supporting businesses to develop local handicrafts or finished products including small products like wood carvings, masks, boxes, cutting boards, bowls, furniture for local sale and other markets and larger products such as cedar strip canoes.
- Supporting businesses to develop markets for specialty wood products – piano and guitars, large decorative panels, pre-fabricated house or cabin kits, arrow shafts.
- Evaluating the feasibility of producing windows, doors and flooring using hemlock.
- Developing a marketing program promoting the Haida Gwaii brand of FSC certified wood products.

Related Documents

Market Review of and Recommendations for the Queen Charlotte/Haida Gwaii Value-Added Sector. Queen Charlotte Islands/Haida Gwaii Wood Manufacturers Association. January 1998.

Value-Added Sector Strategy for the Queen Charlotte/Haida Gwaii Wood Manufacturers Association: a Sustainable Model for Development and Expansion. Queen Charlotte/Haida Gwaii Wood Manufacturers Association. March 1998.

5.2.10 A Non-Timber Products Strategy

A Non-Timber Products Strategy supports the development of businesses based on the use of non-timber products from the forest.

This strategy should include:

- Re-evaluating the 2000 report by Tedder, Mitchell and Farran and an identification of the current potential for developing businesses in non-timber products and services.

- Reviewing the recent mushroom-drying co-operative and supporting continued development of businesses processing wild mushrooms on the Islands.

- Supporting the on-going business developments based on the collection of boughs and production of conifer oils, aromatherapy products, and soaps currently underway through the Turning Point Initiative and Royal Roads University.

- Supporting the on-going business developments of tea products (Labrador tea and licorice fern) currently underway through the Turning Point Initiative.

- Supporting a feasibility study to address the commercial opportunities and potential regulatory barriers associated with commercial venison production.

- Supporting the expansion of programs that use the forest for educational purposes, involving university students and tourists interested in learning.

Related Documents

Seeing the Forest Beneath the Trees: The Social and Economic Potential of Non-Timber Forest Products and Services in the Queen Charlotte Islands/Haida Gwaii. Sinclair Tedder, Darcy Mitchell and Ramsey Farran. March 2000.

5.2.11 An Introduced Species Management Strategy

An Introduced Species Management Strategy provides a coordinated, well-funded approach to systematically implement programs to prevent new introductions to the islands, and to control and eliminate existing introduced species based on identified priorities.

Much of the background work to identify and implement an Introduced Species Management Strategy throughout the Islands has been done. Research on the impacts continues and there is a considerable body of knowledge on the islands. A framework for a strategy has been presented in the work of the CHN and the Province of BC but has never been implemented.

The Strategy should include:

- Reviewing the CHN/Province reports from 2002 and the Community Planning Forum in 2006 to update those documents.

- Bringing all interested parties together to create a single coordinating body to set priorities and initiate programs across the island to address introduced species.

The ecosystem restoration associated with control of introduced species could be a significant economic development activity creating local employment.

Related Documents

Haida Gwaii/Queen Charlotte Islands Land Use Plan Recommendations Report, Community Planning Forum, January 2006.

Lessons from the Islands – Introduced Species and What they tell us about how ecosystems work. Canadian Wildlife Service Special Publication, 2008.

Restoration Priorities Associated with Introduced Species Impacts on Haida Gwaii/Queen Charlotte Islands: Perspectives and Strategies. Alula Biological Consulting. Four part report including Introduction, Species Accounts, Local Perspectives and a Strategic Plan. May, 2002. Prepared for Council of the Haida Nation (Forest Guardian Program) and Province of BC (Terrestrial Ecosystem Restoration Program).

A conceptual framework for introduced species management in Haida Gwaii. Todd Golumbia and Barb Rowsell. In Lessons from the Islands.

5.2.12 An Information, Research, Product Development and Market Place Initiatives Strategy

An Information, Research and Product Development and Marketing Strategy provides good information, research, product development and market place information for most of the component strategies included within a comprehensive strategy.

This strategy should include:

- Identifying all the information necessary to support development of the other strategies.

- Coordinating and prioritizing the work.

- For cedar management, obtaining better and more specific information and analyses about the state of the forest resource, particularly in regard to exactly how much high quality, economically valuable old-growth and fire-origin cedar remains and where it is located. Cedar is key to so many elements of a comprehensive strategy – including the economics of current and future harvesting, the development of opportunities for manufacturing and value added, and the future availability of monumental cedar trees for cultural uses. In order to address the recommendations of the Deputy Chief Forester for a cedar management strategy made in Haida Gwaii, and to establish an appropriate rate of harvest for cedar, better and more specific information is required.

- For the transition to second-growth management, obtaining better and more specific information and analyses related to the timeline for the transition and

about the extent, quality and economic viability of the logging-origin second-growth forest resource.

- For wood product and market development, identifying new products and potential new markets for a Haida Gwaii brand of FSC certified products.

6.0 List of Related Documents

Haida Gwaii Labour Market Project – Labour Market Information. Astute Management Consulting Inc. December 2011.

Haida Gwaii Land Use Objectives Order, Ministry of Natural Resource Operations. December 2010.

Haida Gwaii Strategic Land Use Agreement (SLUA). Council of the Haida Nation and Province of BC. September 2007.

Haida Gwaii Timber Supply Review Data Package. April 2012.

Haida Gwaii Timber Supply Review: Timber Supply Analysis Report. Joint Technical Working Group. April 4th, 2012.

Haida Gwaii/Queen Charlotte Islands Community Viability Strategy, Volume I – Strategic Plan. Lions Gate Consulting Inc., Westcoast CED Consulting, Peak Solutions Consulting. May 17, 2007.

Haida Gwaii/Queen Charlotte Islands Heritage Tourism Strategy, Haida Gwaii Heritage Tourism Strategy Working Group. January 2003.

Haida Gwaii/Queen Charlotte Islands Land Use Plan Base Case Analysis, Timber Supply Modeling Assumptions. Cortex Consultants. Nov 9, 2004

Haida Gwaii/Queen Charlotte Islands Land Use Plan Recommendations Report. Community Planning Forum. January 2006

Haida Gwaii/Queen Charlotte Islands Trail Inventory Initiative Mount Moresby Adventure Camp Society. Report submitted to Gwaii Forest Charitable Trust. Jonathon Ebbs. 2007.

Haida Land Use Vision Haida Gwaii Yah'Guudang (respecting Haida Gwaii). Council of the Haida Nation. April 2005.

Human Resource Development on Haida Gwaii: Strategies and Action Plan. Project Initiated by the Skidegate Band Council. 2012.

The ICSI Consensus. Islands Community Stability Initiative. January 31, 1996.

k'yuwaatl'aagee / k'yuwaatl'aagaay. The Haida Gwaii Trails Strategy Gap Analysis Report. Karen Church. December 7, 2010.

k'yuwaatl'aagee / k'yuwaatl'aagaay. The Haida Gwaii Trails Strategy Interim Report for Stage 1. Misty Isles Economic Development Society. February 17. 2011.

k'yuwaatl'aagee / k'yuwaatl'aagaay. The Haida Gwaii Trails Strategy Report on the Public and Stakeholder Consultation Process for Stage 1: Parameters and Results. Misty Isles Economic Development Society. March 15, 2011.

Kunst'aa Guu – Kunst'aayah Reconciliation Protocol. 2009.

Lessons from the Islands – Introduced Species and What they tell us about how ecosystems work. Canadian Wildlife Service Special Publication, 2008.

Market Review of and Recommendations for the Queen Charlotte/Haida Gwaii Value-Added Sector. Queen Charlotte Islands/Haida Gwaii Wood Manufacturers Association. January 1998.

Port of Haida Gwaii and Short Haul Inter-Coastal Barge Services. Business case prepared for Misty Islands Economic Development Society and Village of Port Clements. March 21, 2013.

Proceedings of The Cedar Symposium: Growing Western Red cedar and Yellow-cypress on the Queen Charlotte Islands / Haida Gwaii. Greg G. Wiggins (editor). May, 1996.

Protocol Agreement between The Council of the Haida Nation (CHN) and The Village of Queen Charlotte. November, 2006.

Rationale for Allowable Annual Cut (AAC) Determinations for Tree Farm Licence 58, Tree Farm Licence 60, and Timber Supply Area 25. Deputy Chief Forester Jim Sutherland. September 20, 2012.

Resolution of the House of Assembly, 2001. Reported in Haida Laas, August 2005.

Restoration Priorities Associated with Introduced Species Impacts on Haida Gwaii/Queen Charlotte Islands: Perspectives and Strategies. Alula Biological Consulting. Prepared for Council of the Haida Nation (Forest Guardian Program) and Province of BC (Terrestrial Ecosystem Restoration Program). May, 2002.

School District 50 – Haida Gwaii/Queen Charlotte Statistical Profile. Document provided by Angus Wilson Superintendent, SD 50.

Second-Growth Timber Opportunities on Haida Gwaii. Cortex Consultants and HiMark Forest Consultants Ltd, June 21, 2004.

Seeing the Forest Beneath the Trees: The Social and Economic Potential of Non-Timber Forest Products and Services in the Queen Charlotte Islands/Haida Gwaii. Sinclair Tedder, Darcy Mitchell and Ramsey Farran. March 2000.

Three Year Economic Development Strategy. Misty Islands Economic Development Society. Heather Adel. March 4, 2013.

Value-Added Sector Strategy for the Queen Charlotte/Haida Gwaii Wood Manufacturers Association: a Sustainable Model for Development and Expansion. Queen Charlotte/Haida Gwaii Wood Manufacturers Association. March 1998.