Developing a Forest Strategy for Haida Gwaii: A proposed pathway to defining the LONG TERM future of sustainable forests, communities and the forest businesses on the Islands

A DISCUSSION PAPER

Haida Gwaii Management Council: November 2013

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INTRODUCTION

INTENTION: **To confirm the need for and interest in a Forestry Strategy for Haida Gwaii and, to find a "partnership" to work together.**

As one of its five mandated responsibilities the HGMC is releasing this Discussion Paper to engage the communities and stakeholders on Haida Gwaii and others concerned about the present and long term future of sustainable forests, communities and the forest business on the islands. This paper seeks to explore the potential for development of a coordinated cooperative partnership approach to making short and long term decisions within a FOREST STRATEGY.

The full HGMC Mandate and annual Report on all work by Council can be found on the HGMC Website

SETTING THE SCENE: **Where are we and where have we come from.**

For more than twenty years the forests of Haida Gwaii have been the focus of intense debate. Eventually, in seeking solutions a public consensus was achieved and significant changes have occurred in the allocation and management of those forests and the industry that uses them.

Signing by The CHN and the BC Government of the (KKRP) Reconciliation Protocol, approval of the Land Use Plan, and, the establishment of a new, and significantly reduced, annual allowable harvest level for the islands' provincial forest lands, effectively completes the First Stage of the necessary change to a new approach. Many of the contentious issues have been addressed in a genuine effort to balance the ecological, cultural and economic matters as well as setting a less confrontational climate to move on.

Effectively Stage Two, the implementation of the new approach, is already well underway. Major changes in the industry and in the management of environmental and heritage forest values are occurring. New management bodies and new tenure holders including especially the creation of Haico and Taan Forests are evolving There has been lots of discussion and many good ideas BUT there are many challenges for both business and community and no generally agreed long term vision or plan to inform what is a very complex, challenging and fundamental shift in the way the public forests are managed and in the nature of the business and the benefits it produces to communities as well as the requirements for the businesses and communities to be successfully sustained.

The HGMC has been directed by the Parties to the Reconciliation Protocol to develop a Forest Strategy. The Council believes such a strategy can provide focus BUT will only be successful if it is developed cooperatively in a long term partnership with those key players who will make the decisions that shape the outcomes of such a strategy over the years ahead.

To begin the work Council has prepared this Paper TO INFORM DISCUSSION. It is an initial documentation of the Issues and Opportunities and some ideas about the potential nature of a Strategy and the Pathway to successful adoption and implementation.

WHAT IS A FOREST STRATEGY: **How will it improve things on Haida Gwaii:**

There are few existing examples to help answer this question. However, it could be considered as the next step following Land Use planning, in the design of the future for Haida Gwaii.

Council anticipates that a Forest Strategy would:-
Confirm a Vision and provide long term and coordinated practical guidance to all parties that addresses both the management of the forests AND the development of an effective industry focused on sustaining Haida Gwaii, the lands, the communities and all the peoples**.**

It should benefit all with a stake in the forests by overcoming the current fragmented and uncoordinated approach. It should be limited and targeted scope and provide practical solutions to critical issues like lack of capacity and business viability. It needs to be timely and must complement not compete with existing positive initiatives.

In practical terms this means that a Strategy must address and find answers to key questions of what changes are needed and how to do so: questions such as:-

- What will be the long term nature of the forest business on Haida Gwaii and how can short term actions be taken now to stimulate community and business sustainability.
- What changes will be necessary to achieve this, such as to energy infrastructure and, how will these be undertaken
- What is the way to enhance communities, in particular what capacity development, employment opportunities and skills development will be available and how can key enhancements be delivered in short term.
- What long term forest management practices will be required in order to sustain the business and the other benefits from the forests?
- What is the most effective approach to the delivery of services and decision making and how can these best be delivered.
- How will all this be governed and funded.

Many valuable initiatives that address some of these and many more concerns, at least in part, are already underway and need not be slowed. However, there has been no mechanism or forum to discuss the path ahead or what is required and no well coordinated or integrated approach that ensures all the key players and their needs are considered. There is no single "voice" for the collective interest of Haida Gwaii.

Council has not predetermined either the components of a strategy or whether such work is desired by the community and the forest businesses on the islands.

Council is seeking advice on TWO Questions:-

1) What are the key benefits of a Forest Strategy to key stakeholders?
2) Who can best work with Council to lead development of the strategy?

THE HGMC is not and should not be developing this alone. To be successful Council believes a partnership of key players is required. This includes at very least the forest business interests (eg. tenure holders, local sawmills and other small forest dependent business), the CHN, and the Provincial Government. Many others including Federal government, Band Councils and Local Governments, need to be effectively engaged. Entities such as the Gwaii Forest Trust and Community Futures may also have a potential role as participants.

Unless a critical mass of key players is prepared to form a partnership Council can take this no further.

HOW TO MOVE FORWARD

Council is releasing this Paper and the background work that has informed it, and will now seek meetings with key interests. The intent is to identify IF there is a group with a common perspective and, an agreement to pursue the Development and Implementation of a Coordinated long term Forest Strategy.

By early in 2014 Council intends to make a decision on whether there is a critical mass of partners and funding sufficient to be able to take the next steps in Strategy Development.

SECTIONS A, B & C OF THIS PAPER

Section A: To help answer the two questions, this Section presents information about the current situation (Strengths, Challenges and Opportunities). This has been extracted from a report prepared on contract for the Council by Keith Moore. The full text of that report can also be found at the Council web site http://www.haidagwaiimanagementcouncil.ca

The Terms of Reference for Keith Moore's work called for an outline of a comprehensive forestry strategy, but limited the work to public forest land on Haida Gwaii. Protected areas and private lands were not included. Also not included in the scope of the work were issues related to the Haida Gwaii Land Use Objectives Order or such other current issues as log exports permits, tenure reforms or administrative cost reduction measures. Since the Haida Gwaii Land Use Objectives Order has addressed many of the environmental and cultural dimensions of ecosystem-based management, it was understood that a focus of the forestry strategy would be on community and socio-economic dimensions.

**Sections B and C present a few ideas to fuel discussion about the components of an effective Strategy and path forward to answering the two questions.

SECTION A: The Strengths, Challenges and Opportunities of the Current Situation

An effective strategy first requires a comprehensive survey and assessment of the current conditions. The relevant part of the consultant report to Council is reproduced in whole here to assist the work to determine whether now is the time to establish a Partnership to develop a Forest Strategy.

The Council is NOT YET seeking comments on this Analysis.

1.0 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.

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. 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,[1] and is owned by the Haida Nation. Taan has no other operations, and no long-term commitments to any off-island mills.[2,3] BC Timber Sales (BCTS) and the Misty Islands Economic Development Society (MIEDS)

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[1] 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.

[2] Taan does have one short-term agreement to provide cedar but that is almost completed.

[3] 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.

together account for an additional 18% of the cut.[4] 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.[5] Both BCTS and MIEDS volumes can be managed locally to meet local objectives although all wood sold through these programs must be sold in competitive bid processes.[6] In addition, Husby Forest Products, with an additional 21% of the AAC, has local roots and operates primarily on Haida Gwaii.[7] Husby is a "market logger" with relative freedom to sell wood to interested mills. Teal Cedar, with 10% of the AAC,[8] 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 local social and economic benefits. These have not yet been realized to any significant degree.

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

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[4] 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 BUT not tenured to MIEDS (8.5% of the island total).

[5] Co-operative Management Agreement signed July 29, 2010.

[6] Both BCTS and MIEDS are required to put up all of their wood for competitive bids to meet "market-based pricing requirements. Although this could limit their opportunity to direct wood to local businesses, BCTS has the ability to advertise Timber Sales as Category 2, restricted to bidders with secondary manufacturing facilities on Haida Gwaii.

[7] The AAC allocated to Husby is 200,000 m3 on two forest licences.

[8] 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.

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.

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.[9]

1.4 A world-class tourism destination

Haida Gwaii, Gwaii Haanas and the Haida Heritage Center and Haida Gwaii Museum at K̲aay Llnagaay have all won recent international awards and recognition as world-class tourism destinations. 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 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.

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.

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

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

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.

2.0 Challenges

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.[10] 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. [11]

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.[12]

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 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.

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

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.[13] 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.[14] 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 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

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[13] See footnote 22.
[14] Pers. Comm. Angus Wilson, Superintendent, School District 50.

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.

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.[15]

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."[16] 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.

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

[15] 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.
[16] Haida Gwaii Labour Market Project – Labour Market Information. Astute Management Consulting Inc. December 2011.

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.

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.

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[17] and the AAC was 1,780,000 m^3.[18] There were four major tenure holders – Western Forest Products, Teal Cedar Products, Husby Forest Products, and BC Timber Sales.

[17] Haida Gwaii/Queen Charlotte Islands LUP Base Case Analysis, Timber Supply Modeling Assumptions. Cortex Consultants. Nov 9, 2004. Base Case 1, page 14.
[18] 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.

Today, the THLB is approximately 188,000 ha[19] (a 23% reduction), and the AAC is 931,000 m^3 (a 48% reduction).[20] This much smaller AAC is now divided among 5 major tenure holders.[21] 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.[22]

However, many of these types of positions now go to an off-island workforce who work 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.

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

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[19] Haida Gwaii Timber Supply Review Data Package. April 2012. Page 7.
[20] 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.
[21] 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.
[22] Pers. Comm. Cliff Roberts, Chartwell Consultants.

collaborative 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.

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,[23] 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.

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

The Deputy Chief Forester considered these questions in the rationale for the 2012 AAC determination.[24] 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.[25] Between 2000 and 2011, the cedar harvest increased to 52% of the total 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"[26] 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.[27] 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.

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

[25] Haida Gwaii Timber Supply Analysis Report. Joint Technical Working Group. April 4th, 2012. Page 14.

[26] AAC Rationale, pages 31 and 32.

[27] 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.

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 to 2004.[28] 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 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.[29]

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[30] – 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.[31] 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

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[28] Haada Laas, August 2005. Page 36.
[29] Timber Supply Analysis. Page 14.
[30] 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.
[31] Pers. Comm. Percy Crosby, Cultural Wood Program.

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.[32] 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 BCTS volume came from these fire-origin second-growth stands.[33] Taan reports that about 30% of their total harvest in 2012 came from these stands.[34] 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.[35] 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.[36]

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.[37] Others feel that the stands are being logged at too young an age.

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[32] Second-Growth Timber Opportunities on Haida Gwaii. Cortex Consultants and HiMark Forest Consultants Ltd, June 21, 2004.
[33] Data provided by Tom Johnson, BCTS.
[34] Pers. Comm. Bob Brash, supported by information from BCTS.
[35] Harvest Information for BC government Harvest Billing System, Tom Johnson, BCTS and Bob Brash, Taan Forest Products. THLB information from Nick Reynolds, CHN.
[36] Pers. Comm. Nick Reynolds, CHN.
[37] Haida Land Use Vision Haida Gwaii Yah'Guudang (respecting Haida Gwaii).

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. 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.

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

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Council of the Haida Nation. October 2005.

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.[38] Approximately 80,000 ha of this second-growth is "logging-origin second-growth" in the 0-80 year age class,[39] 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.[40] 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.

Thus, the relatively young, logging-origin second-growth forests are already important. In the not-to-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

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

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 2004 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.[41] 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.

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

[41] Information provided by Tom Johnson, BCTS.

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.

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 byproducts 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.[42] 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).

[42] 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.

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 co-ordinated 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.

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 where ever 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 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 area, 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.[43]

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[44] and a Gap Analysis Report[45] 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 co-ordinated strategy has stalled for lack of funds and overall co-ordination.

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 6 of the identified trails and have plans to initiate maintenance on 4 more trails.[46] Some others are maintained by local volunteers, alone or with non-government organizations. There are numerous unofficial

[43] Pers. Comm. Tom Johnson, BCTS.
[44] Haida Gwaii/QCI Trail Inventory Initiative Mount Moresby Adventure Camp Society, Report submitted to Gwaii Forest Charitable Trust, Jonathon Ebbs. 2007.
[45] k'yuwaatl'aagee / k'yuwaatl'aagaaya The Haida Gwaii Trails Strategy Gap Analysis Report. Karen Church. December 7, 2010.
[46] Information provided by Lucy Stefanyk, BC Parks and Larry Duke, MoFLNRO.

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.

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.[47] Also in 2002, the Research Group on Introduced Species held a major symposium on Haida

[47] 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).

Gwaii to address the impacts of introduced deer and other species.[48] 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.

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[49] 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.

3.0 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

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

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 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.

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.[50] 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

[50] 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.

a suitable volume of pole-quality cedar can be accumulated. A recent joint venture agreement between the Old Massett Village Council and Abfam Enterprises,[51] 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 certificate of Taan's managed forests[52] offers the potential for a viable local manufacturing sector producing significant local economic benefits.

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 sales 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.[53] 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.

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[51] The new venture is called Haida Gwaii Forest Products.

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

[53] 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.

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.

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 quadrupled,[54] and in 2009, exceeded the number in the forestry and logging sector,[55] 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.

3.5 Opportunities for non-timber forest products[56]

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"

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[54] 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.

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

[56] 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.

for development of botanical products and other forest products on Haida Gwaii.[57] 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.

There is an on-going project to develop soap, aromatherapy and other products from conifer oils from boughs collected in logging sites. This is being undertaken through the Turning Point initiative and involves Old Massett and other coastal First Nations communities.[58] At present these products are being tested and marketed in hotels in pilot locations and an evaluation of the economic viability is underway.

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.

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)[59] has successfully pioneered one specific educational area. It runs a very successful full semester of five courses for 3rd year undergraduate students interested in natural resource management through an affiliation with the University of BC. Since it began in 2009, HGHES has brought a total of 79 students from 18 different universities to the Islands for four-month semesters. One semester is delivered from September to December; a second semester is delivered from January to April. The program currently provides six jobs in the community and has produced over $1 million in direct revenues to the community. The program has doubled in size in 2012, is fully subscribed for upcoming semesters, and is planning to expand.

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57 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.
58 Information provided by Johanna Herbig. Turning Point Initiative.
59 Information available from www.haidagwaiisemester.com.

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.

SECTION B: Potential Components of A Strategy

Looking beyond the analysis of Strengths, Challenges and Opportunities, a Forest Strategy will potentially have a number of components that are intended to respond to that analysis.

These could include components, such as a Vision and Guiding Principles, an examination of Funding Sources, Governance, Roles and Responsibilities, Short Term actions that support Long Term Directions, etc.

The report prepared for Council by Keith Moore identifies twelve key elements of sub-strategies. These are included in the full report found on the council website at http://www.haidagwaiimanagementcouncil.ca The suggested sub-strategies are:

1 A Local Employment Strategy
2 A Local Manufacturing Strategy
3 A Skills, Training, Education and Employment Readiness Strategy
4 A Cedar Management Strategy
5 A Second-Growth Strategy
6 A Critical Infrastructure Strategy
7 A Forest Access Strategy
8 A Forest-based Tourism Strategy
9 A Value-Added Strategy
10 A Non-Timber Products Strategy
11 An Introduced Species Management Strategy
12 An Information, Research, Product Development and Market Place Initiatives Strategy

Clearly there are differing needs and priorities among the items in this list, not all of them need to be tackled at once.
In fact a Strategy might not be a "document or plan" but simply be a "Living Process" whereby various interested stakeholders agree to work together, to meet regularly to share information and talk about approaches!

Agreement on Strategy Components will be an important consideration amongst the partners undertaking further work as well as an agreement on the analysis of the underlying current socio-economic and forestry situation and future prospects and a mutual sense of priorities.

Council foresees considerable discussion on the "inter-play" between various potential elements and partners for development AND delivery of a Strategy as well as the best approaches and the relative priorities. The balance of costs and benefits of both developing and implementing such a Strategy will also be of concern to potential partners and will be front and centre to the discussions. However, Council notes significant funds are already being assigned to many of these issues and it may well be that a more strategic approach will not require as much new resources as some might fear.

SECTION C: The Path Ahead- Assessing the Preparedness to undertake the Strategy development

Council cannot and should not do this work alone, it is releasing this paper now to inform communities and stakeholders with the express intent of assessing whether now is the time to take development of a Strategy to the next step AND seeking partners to do so.

Over the next months Council will discuss the analysis of the current situation with key businesses, governments and others and seek answers to the two questions raised in the Introduction:-

1) What are the key benefits of a Forest Strategy to key stakeholders?
2) Who can best work with Council to lead development of the strategy?

THE HGMC is not and should not be developing this alone and will be seeking potential partners who are prepared to work together to carry the development of the Strategy forward.

Once Council has received feedback on these questions Council will report publicly (hopefully early next year) on Council's assessment of the components of and prospects for funding the further Development and Implementation of a Forest Strategy as well as a potential timetable and process for completion of the work. If the answers to the two questions are negative Council will take this work no further at this time.

This paper is intended to inform all people as Council pursues this path and any comments on the approach are welcomed.

Council thanks Keith Moore for the underlying analysis that informs this Discussion Paper and also wishes to acknowledge all those who have worked long and hard to make it possible to begin work on a future Forest Strategy for Haida Gwaii. Work on this strategy is only possible because of the hard work already completed on putting in place, among other things, the Reconciliation Protocol and Strategic Land Use Plan agreement.