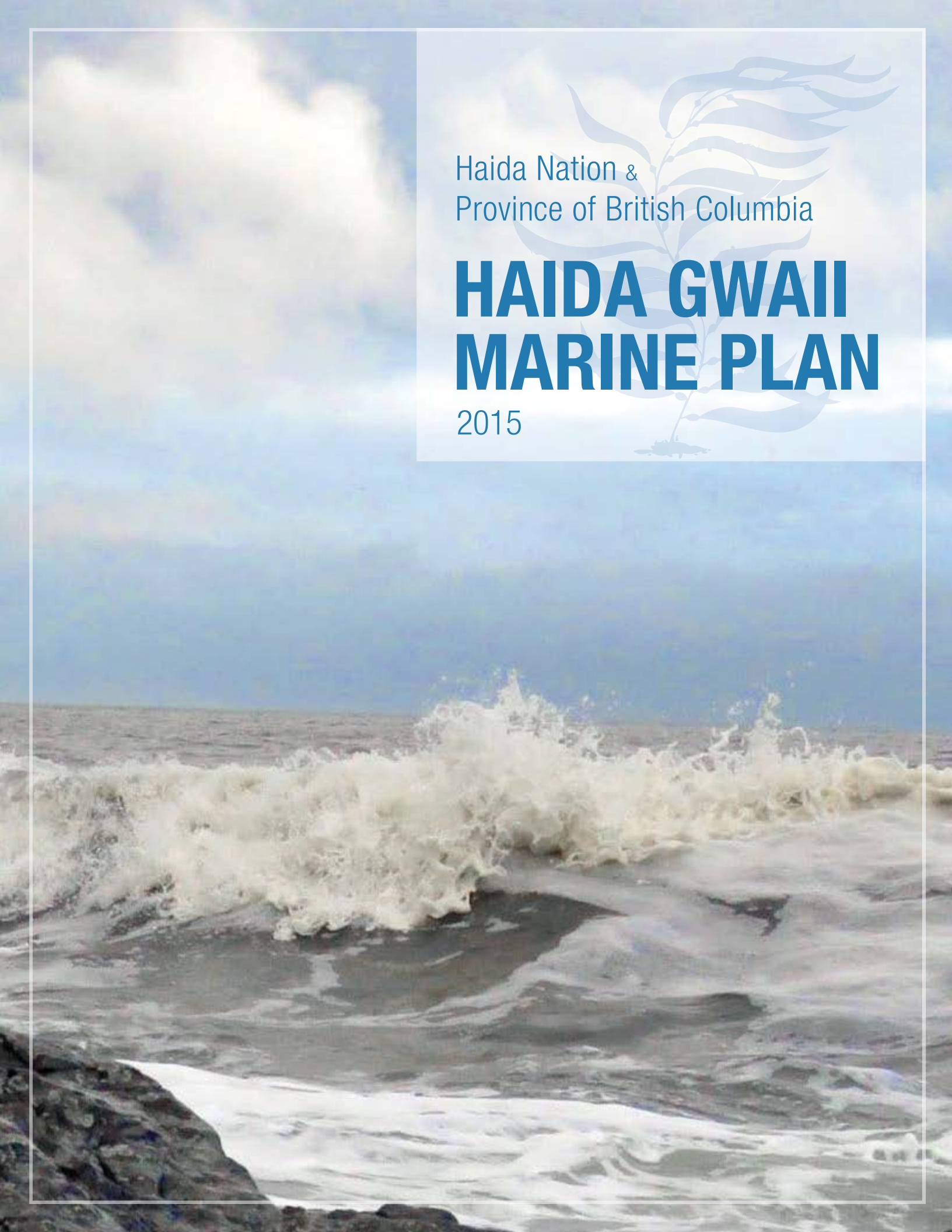

Haida Nation &
Province of British Columbia

HAIDA GWAII MARINE PLAN

2015

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HAIDA NATION

BRITISH COLUMBIA

MaPP

Dear Reader,

On behalf of the Council of the Haida Nation and the Province of BC, we are pleased to present the final Haida Gwaii Marine Plan.

The Haida Gwaii Marine Plan is the result of over three years of collaborative planning by the Haida Nation and the Province of BC, represented by the Ministry of Forests, Lands and Natural Resource Operations. We want to acknowledge the extensive input and work from our respective staff, the Haida Marine Work Group, Haida Gwaii Marine Advisory Committee, local governments, marine stakeholders, and members of the public. This plan reflects a wealth of knowledge and experience.

The Haida Gwaii Marine Plan is founded on an ecosystem-based framework and uses the best available science, traditional and local knowledge. It describes a long-term vision, and outlines objectives and strategies for the protection, conservation and management of Haida Gwaii's coastal and marine areas and resources. This includes recommendations to inform Haida Nation and provincial decision-making on uses and activities in the coastal and marine areas of Haida Gwaii. In the spirit of fully comprehensive integrated marine planning, we also commit to working with the federal government on issues that are of interest to the Government of Canada.

The MaPP planning process demonstrates that diverse interests can effectively work together to plan for healthy marine ecosystems and long-term sustainable use of coastal marine areas. Successful implementation of the Haida Gwaii Marine Plan will require the ongoing participation, support and commitment of the individuals, communities, and organizations who contributed to its development. Their collective involvement will ensure that the Haida Gwaii Marine Plan is adaptive and remains relevant and useful.

Haida Gwaii is a unique and special place, and the Haida Gwaii Marine Plan is a momentous accomplishment in our cooperative effort to sustain, conserve, and manage the lands and waters of Haida Gwaii. Our congratulations to everyone involved.

Sincerely,

kil tlaats 'gaa, *Peter Lantin*
President of the Haida Nation

Steve Thomson
Minister of Forests, Lands and Natural Resource Operations

Photo - Kelly Whitney Squire

Photo - Jags

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We would like to acknowledge the following people for their hard work and dedication to preparation of the Haida Gwaii Marine Plan. *Haawa/Haaw'a*! Thank you!

Haida Marine Work Group

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Haida Gwaii Marine Advisory Committee

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Haida Oceans Technical Team

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MaPP support staff

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MaPP Coordination Team

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The Haida Nation and the Province of BC also wish to acknowledge the financial support of the Gordon and Betty Moore Foundation through the MaPP Support Project at Tides Canada.

PURPOSE OF DOCUMENT

The purposes of the Haida Gwaii Marine Plan are to:

i. Provide a framework for joint or shared management of marine and coastal areas in and around Haida Gwaii through an ecosystem-based approach to management and marine resource decision-making;

ii. Provide policy, detailed planning, and management direction regarding marine uses, activities and values throughout the plan area that are within the jurisdictional authority of BC and/or the CHN;

iii. Identify acceptable marine uses that support sustainable communities while protecting and, where necessary, restoring marine ecosystems;

iv. Support marine economic development and provide direction for encouraging and managing future growth;

v. Provide guidance for tenuring and marine resource use decisions by BC and CHN in Haida Gwaii waters;

vi. Provide valuable information that will make important contributions to future processes between CHN, BC and/or Canada, such as identifying areas for consideration in the development of a marine protected area network; and

vii. Identify changes to existing CHN-BC protected areas including zoning, allowable uses and enhancements to marine protection.

The content of the plan is relevant for matters within the constitutional authority of the Government of British Columbia and Council of Haida Nation, pursuant to Canada's Constitution and the Constitution of the Haida Nation, respectively. The Marine Plan is the result of a cooperative planning process on Haida Gwaii led by the Haida Nation and the Province of British Columbia as part of the broader First Nations-BC Marine Planning Partnership for the North Pacific Coast (MaPP) initiative.

The Marine Plan will complement the implementation of the 2007 *Strategic Land Use Agreement* between the Haida Nation and Province of BC. The plan reflects a shared perspective on how to maintain and, where needed, restore a healthy marine environment and a sustainable marine economy on Haida Gwaii.

The Haida Nation and the Province of BC recognize that implementation of some of the objectives, strategies, and spatial Protection Management Zones (PMZs) in this document will require the support of other organizations through various processes. Many of the strategies reference working with other agencies and linking with other relevant processes to ensure the goals and objectives of the Marine Plan are achieved.

DISCLAIMER

This plan is not legally binding and does not create legally enforceable rights between British Columbia and the Haida Nation. This plan is not a treaty or land claims agreement within the meaning of sections 25 and 35 of the *Canadian Constitution Act, 1982*.

This plan does not create, define, evidence, amend, recognize, affirm or deny any Aboriginal rights, Aboriginal title and/or treaty rights or Crown title and rights, and is not evidence of the nature, scope or extent of any Aboriginal rights, Aboriginal title or Crown title and rights.

This plan does not limit or prejudice the positions British Columbia or the Haida Nation may take in any negotiations or legal or administrative proceedings.

Nothing in this plan constitutes an admission of fact or liability.

Nothing in this plan alters, defines, fetters or limits or shall be deemed to alter, define, fetter or limit the jurisdiction, authority, obligations or responsibilities of British Columbia or the Haida Nation.

Photo - Jags

EXECUTIVE SUMMARY

The Haida Gwaii Marine Plan is the result of a cooperative planning process led by the Haida Nation and the Province of British Columbia as part of the broader First Nations-BC Marine Planning Partnership for the North Pacific Coast (MaPP) initiative. The purposes of the Marine Plan are to:

i. Provide a framework for joint or shared management of marine and coastal areas in and around Haida Gwaii through an ecosystem-based approach to management and marine resource decision-making;

ii. Provide policy, detailed planning, and management direction regarding marine uses, activities and values throughout the plan area that are within the jurisdictional authority of BC and/or the CHN;

iii. Identify acceptable marine uses that support sustainable communities while protecting and, where necessary, restoring marine ecosystems;

iv. Support marine economic development and provide direction for encouraging and managing future growth;

v. Provide guidance for tenuring and marine resource use decisions by BC and CHN in Haida Gwaii waters;

vi. Provide valuable information that will make important contributions to future processes between CHN, BC and/or Canada, such as identifying areas for consideration in the development of a marine protected area network; and

vii. Identify changes to existing CHN-BC protected areas including zoning, allowable uses and enhancements to marine protection.

The Marine Plan complements the 2007 Strategic Land Use Agreement between the Council of the Haida Nation (CHN) and Province of BC by providing management direction and zoning within an ecosystem-based management (EBM) framework for uses and activities in the marine environment. The plan reflects a shared perspective on how to maintain and, where needed, restore a healthy marine environment and a sustainable marine economy on Haida Gwaii. This work was guided by advice from the Haida Marine Work Group and the Haida Gwaii Marine Advisory Committee, significant internal contributions from provincial government agencies and CHN program areas, as well as input from members of the public, stakeholders, and local government. CHN and the Province of BC approved the final Marine Plan in April, 2015.

This executive summary describes the preferred scenario that guided development of the plan and provides an overview of the key sections of the plan related to general management direction, economic development direction, spatial zoning, and plan implementation and amendment.

Haida Gwaii Preferred Scenario

Haida Gwaii's Marine Future: A Conservation and Local Economy Path (Section 3.3) describes the elements of a "preferred" marine future on Haida Gwaii in 20 years. Possible "future scenarios" were the focus of a CHN/BC workshop, held in July 2012, to explore current and future trends, challenges and opportunities for marine areas in and around Haida Gwaii. The "Preferred Scenario" is based on workshop results, as well as direction provided by the Haida Marine Work Group and the Haida Gwaii Marine Advisory Committee. It is a high level summary of the intended outcomes of the General Management Direction, Marine Economic Development Direction and Marine Spatial Zoning for the Haida Gwaii planning area.

Overview of Marine Plan

Along with introductory chapters that include the plan vision, goals, jurisdictional context, description of the plan area and key issues and opportunities (Sections 1 to 5), the Marine Plan has four main sections that provide future management direction and implementable actions on Haida Gwaii:

A. General Management Direction
B. Marine Economic Development Direction
C. Marine Spatial Zoning
D. Plan Implementation, Monitoring and Amendment

A. General Management Direction

General Management Direction (Section 6) sets out objectives and strategies to guide the sustainable management of marine resources captured within eight key subject areas:

1. Governance and Integrated Management
2. Cultural Values and Archaeological Sites and Areas
3. Ecological Values and Significant Features
4. Ecological Issues Related to the Fisheries Economy
5. Human Well-being
6. Marine Pollution and Spills
7. Logging-related Marine Activities
8. Climate Change

General Management Direction is relevant to all resource uses, activities and values within the jurisdictional authority of CHN and/or the Province of BC and applies within all zones in the Marine Plan area, unless otherwise indicated in the conditional statements given for a specific zone.

B. Haida Gwaii Marine Economic Development Direction

Haida Gwaii Marine Economic Development Direction (Section 7) contains objectives and strategies aimed at promoting sustainable growth and marine economic development opportunities on Haida Gwaii. These include:

1. Marine Tourism – positioning Haida Gwaii as a premier tourism destination;
2. Shellfish Aquaculture – producing and marketing sustainable aquaculture products;
3. Community-based fisheries economy – based on sustainable wild fisheries;
4. Marine Research and Monitoring – including documenting baseline data and monitoring changing conditions; and,
5. Marine Renewable Energy – such as new wind or tidal energy projects.

The objectives and strategies for Marine Economic Development in the Marine Plan will inform the development of economic strategies for the MaPP region as a whole.

C. Marine Spatial Zoning

Marine spatial zoning (Section 8) is used to manage the marine environment and economy through area-based zoning of uses and activities. Through the approved plan, these zones are intended to inform decision-makers and potential proponents on recommended allowable uses when considering resource and tenure decisions on activities within the jurisdictional mandate and authority of the provincial and CHN governments. There are three types of zones in the Marine Plan (Figure 8-1):

- The **General Management Zone (GMZ)** comprises the majority of the plan area (72.4 percent). This zone is where the full range of sustainable marine uses and activities occur within an ecosystem-based management framework.
- The **Special Management Zone (SMZ)** allocates space for high priority and/or high potential sustainable marine uses and activities. In the Marine Plan, 0.5 percent of the planning area is identified as Special Management Zones that apply to shellfish aquaculture and marine based alternative energy. These SMZs will help guide decision-makers when making future marine use decisions.
- The **Protection Management Zone (PMZ)** applies to about 19.6 percent of the plan area (Figure 8-2). The PMZ allocates space primarily for conservation purposes, and may serve as a basis for protecting localized ecological or cultural values.

  PMZs include several categories of conservation focus (lower to higher protection), consistent with the *Guidelines for Applying the IUCN Protected Area Management Categories to Marine Protected Areas*.

  - 10.3 percent of the plan area consists of IUCN categories Ib, II and III, which offer a higher level protection due to high concentration of ecological values such as eelgrass, kelp forests, rockfish habitat, seabird colonies, estuaries, herring spawn and salmon rearing habitat. Many of these areas also have high cultural value.
  - 6.3 percent of the plan area is zoned as IUCN category IV, which offers a medium level of protection. These PMZs protect specific species or habitats while allowing a range of marine activities to occur.
  - 3.0 percent of the plan area is to be managed for a mix of human uses and ecological values and consists of IUCN categories V and VI, which offer a lower level of protection.

Gwaii Haanas makes up an additional 7.5% of the plan area but is not included as part of Marine Plan zoning as the area is addressed through a separate planning process.

PMZs will make important contributions to the Marine Protection Area (MPA) network planning process for the Northern Shelf Bioregion and are subject to further consultation and evaluation through that process. The PMZs recommended in this marine plan are not designating MPAs and do not provide recommendations on marine uses and activities outside of provincial regulatory authority.

Each SMZ and PMZ is included in an accompanying table that identifies marine uses and activities that are considered acceptable, conditionally acceptable, or not acceptable within the zone. For every activity that is considered conditionally acceptable, condition statements are provided. Additional considerations are also identified for each area to help inform decision-makers during future designation processes. Haida traditional uses continue for all areas in accordance with legal obligations, including practices for food, social, ceremonial and stewardship purposes.

D. Plan Implementation, Monitoring & Amendment

The Marine Plan is implemented through the application of plan direction to the evaluation and management of marine uses and activities. Implementation of the Marine Plan will be guided and overseen by a Marine Implementation Technical Team (MITT), using best available knowledge and information and innovative practices. An advisory process will provide guidance to the MITT on plan implementation.

Objectives and strategies in this Marine Plan will be implemented on a priority basis, as set out in an implementation agreement and overseen by the MITT. The goal is to implement all strategies in the Marine Plan over the longer term, as funding and other resources permit.

Monitoring will occur to track plan performance and plan effectiveness. The status of performance indicators will be reported each year in an annual report. A Marine Plan Monitoring Strategy will set out priorities, timelines and responsibilities for monitoring EBM indicators. A comprehensive EBM monitoring report on the status of ecological and human well-being indicators will be published every 5 years.

Where appropriate, the plan will be revised over time to reflect changing circumstances and conditions as they arise. This adaptive approach is fundamental to EBM and will allow for improved management and responsible stewardship by the Haida Nation and Province of BC over the short and long term.

Photo - Marlene Liddle

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Tyson Brown

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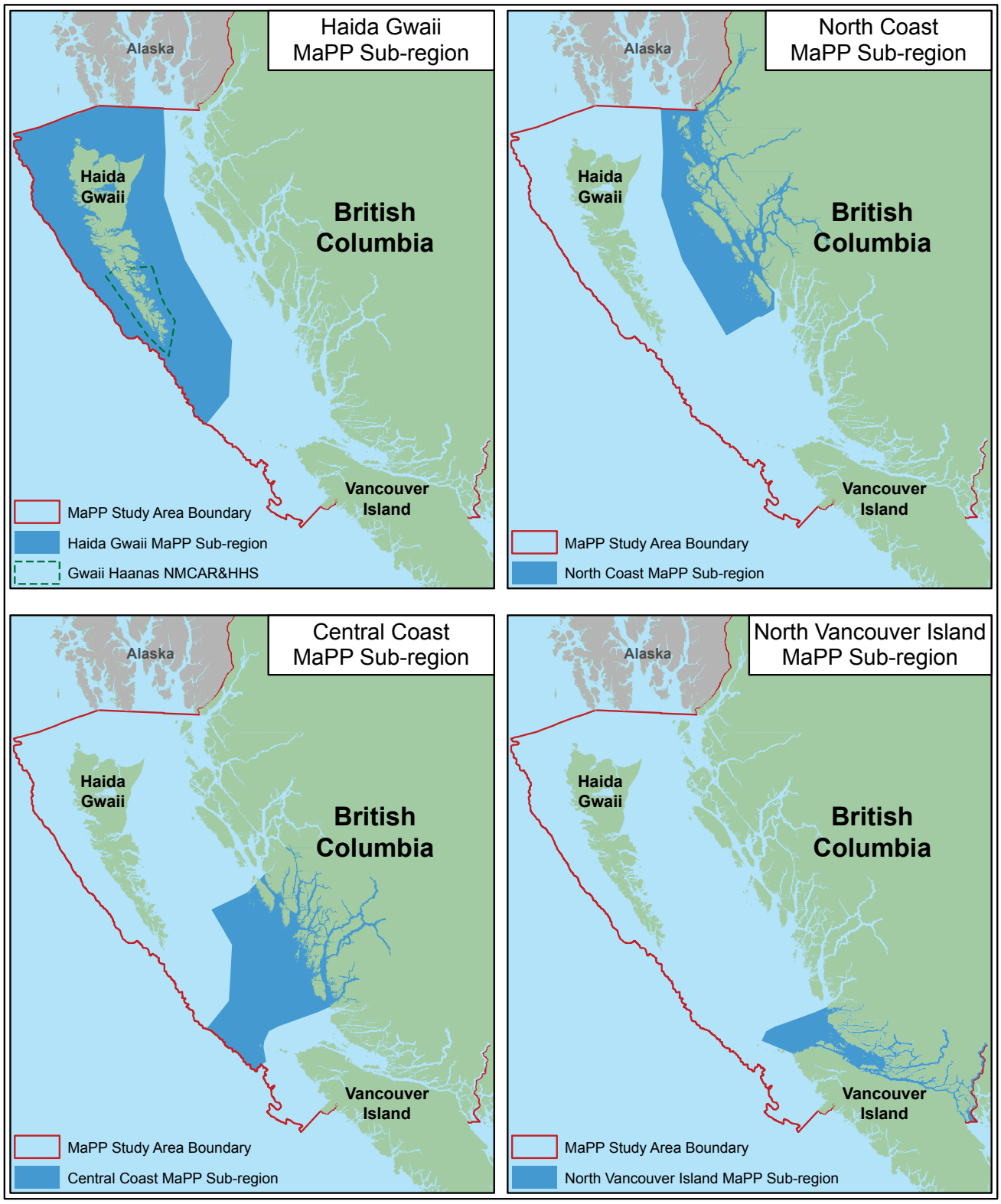
ACRONYMS

AMB	Archipelago Management Board
BCMCA	BC Marine Conservation Analysis
BCMEC	British Columbia Marine Ecological Classification
CFN-GBI	Coastal First Nations – Great Bear Initiative
CHN	Council of the Haida Nation
COSEWIC	Committee on the Status of Endangered Wildlife in Canada
DFO	Fisheries and Oceans Canada (formerly Department of Fisheries and Oceans)
EBM	Ecosystem-Based Management
EBSA	Ecologically and Biologically Significant Area
GMD	General Management Direction
GMZ	General Management Zone
HMWG	Haida Marine Work Group
HMTK	Haida marine traditional knowledge
HOTT	Haida Oceans Technical Team
IUCN	International Union for Conservation of Nature
LNG	Liquefied natural gas
MaPP	Marine Planning Partnership
MITT	Marine Implementation Technical Team
MPA	Marine protected area
MSC	Marine Stewardship Council
PICFI	Pacific Integrated Commercial Fisheries Initiative
PMZ	Protection Management Zone
PNCIMA	Pacific North Coast Integrated Management Area
RapFISH	Rapid Appraisal for Fisheries
RCA	Rockfish Conservation Area
SARA	*Species at Risk Act*
SMZ	Special Management Zone
SK-B MPA	SGaan Kinghlas – Bowie Seamount Marine Protected Area

Figure 1 1. Marine Planning Partnership of the North Pacific Coast (MaPP) sub-regional planning boundaries



1. INTRODUCTION

1.1 BACKGROUND ON THE MARINE PLANNING PARTNERSHIP FOR THE NORTH PACIFIC COAST

The Marine Planning Partnership for the North Pacific Coast (MaPP), which was launched in November 2011, is a collaborative government-to-government arrangement between the Province of BC, the Coastal First Nations Great Bear Initiative, the North Coast Skeena First Nations Stewardship Society, and the Nanwakolas Council. The Council of the Haida Nation (CHN) is a member of Coastal First Nations - Great Bear Initiative.

Through MaPP, the provincial and First Nations governments are undertaking collaborative coastal and marine planning as stated in the *Letter of Intent* to Collaborate on Coastal and Marine Planning in the Pacific North Coast (Appendix 1) and signed by the MaPP partners. The Letter of Intent also establishes a bilateral governance arrangement that operates at three levels through an Executive Committee, a Working Group and sub-regional Technical Teams.

Marine plans were developed with stakeholder input for the sub regions of Haida Gwaii, North Coast, Central Coast and Northern Vancouver Island (Figure 1-1). A Marine Coordination Team, with representation by BC and First Nations, coordinated planning among the four sub-regions.

The Haida Gwaii Marine Plan has been jointly developed by the CHN and the Province of BC and has been endorsed by both governments. Each plan will be accompanied by an implementation agreement that will help define how the planning direction within the plans will be realized (Section 9).

1.2 JURISDICTIONAL CONTEXT

The Marine Plan addresses issues within the constitutional authority of the Government of British Columbia and the Council of the Haida Nation, pursuant to Canada's Constitution and the Constitution of the Haida Nation respectively. Similar to land use plans, the Marine Plan seeks to develop a framework for joint or shared management of marine and coastal areas in and around Haida Gwaii.

The Marine Plan covers a major portion of the territory of the Haida Nation. The Haida Nation Constitution defines Haida Gwaii and the surrounding waters as the mandate of the Haida Nation, and holds the Haida Nation responsible for the establishment of land and resource policies consistent with nature's ability to produce, the regulation of access to resources to ensure self-sufficiency of the Haida Nation, and the perpetuation of Haida heritage and cultural identity.

The *Constitution Act*, 1867 defines the federal-provincial distribution of legislative powers in Canada (also known as the division of powers), including the scope of the power of the federal Parliament of Canada and the powers of each provincial legislature or assembly. Without formal federal government involvement in the MaPP planning process, this division of power limits the Province from endorsing outcomes that it considers to be the jurisdiction and mandate of the federal government under the *Constitution Act*. However, the Province is able to support and implement components of the plan where, as between BC and Canada, the Province has some jurisdiction.

A Supreme Court of Canada decision in 1984 (the Strait of Georgia Reference) held that, when British Columbia entered Confederation in 1871, the Province consisted of all British territories, including dry land, coastal straits and submerged lands. Thus, as between British Columbia and Canada, British Columbia owns the waters and submerged lands of the Strait of Juan de Fuca, the Strait of Georgia, Johnstone Strait and Queen Charlotte Strait and the waters and submerged lands between major headlands (i.e., bays, estuaries and fjords).

Elements of this Marine Plan that relate to the Crown are subject to the authority of the ministers of the governments of Canada and British Columbia, as set out by Canadian law, where applicable. The plan does not provide, imply direction or make recommendations of matters that the Province believes are solely within federal jurisdiction.

This plan and its supporting documentation and appendices do not in any way define or limit the title and rights of the Haida Nation or British Columbia, and will be without prejudice to the positions of the Haida Nation and British Columbia with respect to the rights and title of the Haida Nation and British Columbia in regard to current or future litigation or negotiations.

1.3 ISSUES NOT ADDRESSED IN MARINE PLAN

The main body of the Marine Plan describes areas of agreement between the Haida Nation and Province of BC. There are, however, a number of areas of disagreement between the parties. Discussions are ongoing to resolve these issues.

There are five general areas where the Haida Nation and Province of BC currently have different views:

1. aspects of the recreational fishing industry (including the need for limits on the number of fishing lodges, charter operators and/or client beds);
2. possibility of future salmon aquaculture development through tenures in Haida Gwaii waters;
3. offshore oil and gas development;
4. presence of oil tankers in Haida Gwaii waters and increased presence of large vessel traffic in Haida Gwaii waters; and
5. Haida traditional use, including sale and trade of fish for economic purposes.

COORDINATING MARINE PLANNING IN AND AROUND HAIDA GWAII

The Council of the Haida Nation, Government of Canada and BC have agreed in principle to coordinate marine planning around the archipelago. This is achieved through high-level coordination at a Haida Gwaii Marine Steering Committee where representatives of all three governments have committed to regular communication, allowing for increased understanding across planning initiatives. A Marine Coordinating Committee provides technical support for marine planning initiatives, including providing advice and information to each other on individual agency mandates, policies and regulations.

These are important issues related to Haida Gwaii marine planning and management and both governments recognize the importance of reconciling areas of disagreement wherever possible. In the interim, both parties have supported moving forward on the areas of agreement described in this document.

1.4 CONCURRENT PLANNING PROCESSES IN HAIDA GWAII

The Marine Plan is a key component of the larger planning picture on the BC north coast. The Haida Nation, Province of BC, and Government of Canada are engaged in four marine planning processes in and around Haida Gwaii, several of which overlap to a greater or lesser extent (Table 1-1). Each process involves government-to-government cooperative partnerships, with different partners (and representative agencies) depending on the scope of respective initiatives.

For each process individual plans are being developed; however all partners are committed to developing plans that align with, and complement, each other.

In 2012, a *Letter of Intent* was signed by Fisheries and Oceans Canada (DFO), the Coastal First Nations Great Bear Initiative, and the North Coast-Skeena Stewardship Society regarding the re-engagement of member First Nations, including the CHN, in the Pacific North Coast Integrated Management Area (PNCIMA) initiative. Since that time, member First Nations have worked in partnership with Canada (DFO) and BC to complete the PNCIMA integrated management plan.

Related to all of the aforementioned processes, in 2011, federal, provincial and territorial governments released the National Framework for Canada's Network of Marine Protected Areas. The Framework provides strategic direction for the design of a national network of marine protected areas (MPAs) that will be composed of a number of bioregional networks. The MaPP study area is located within the Northern Shelf Bioregion, one of 13 ecologically defined aquatic bioregions in Canada.

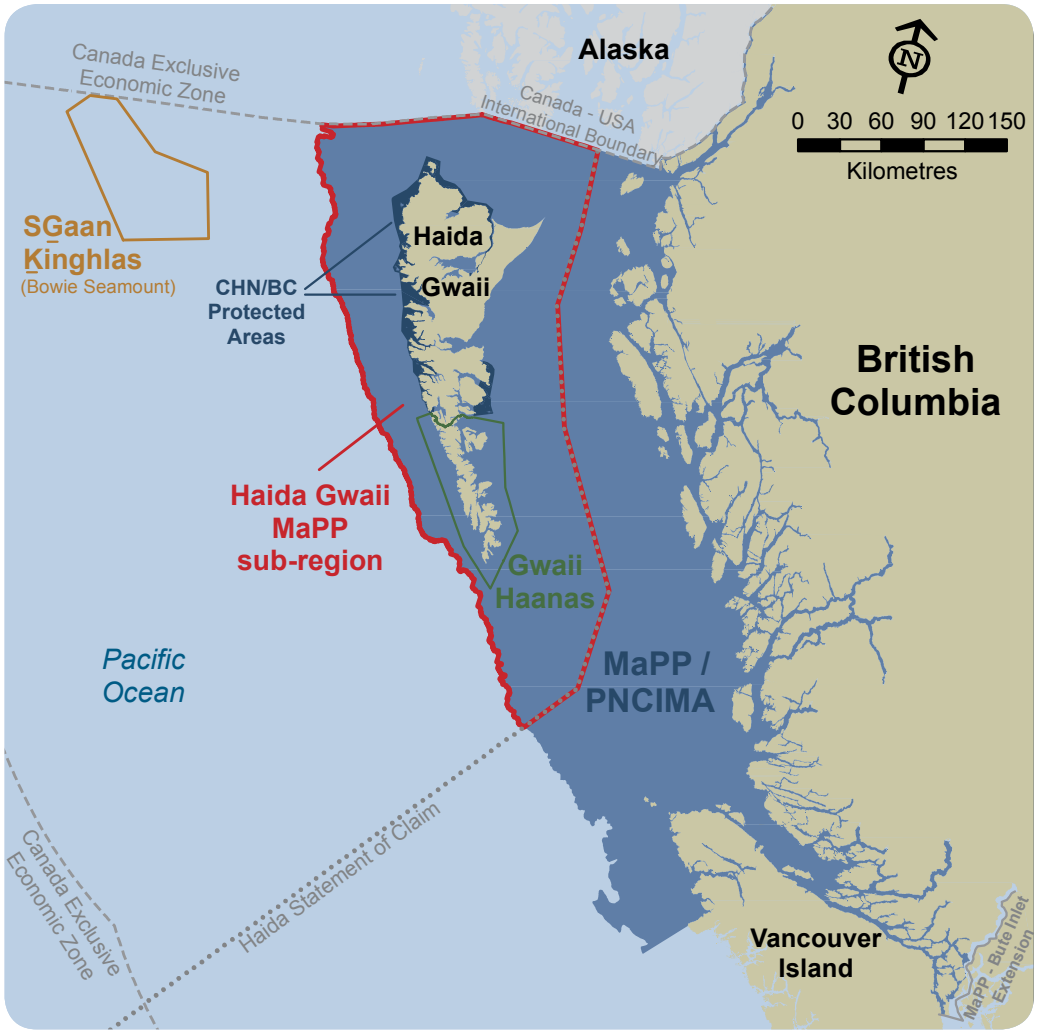
Table 1 1. Summary of concurrent marine planning processes and expected outputs

PROCESS	DESCRIPTION	PARTNERS	EXPECTED OUTPUT(S)
Pacific North Coast Integrated Management Area (PNCIMA)	The PNCIMA initiative focuses on the development of an ecosystem-based framework for the area and is intended to produce high-level marine planning goals, objectives and strategies at a broad regional scale. For more information see http://pncima.org.	First Nations, BC, Canada (DFO)	PNCIMA Integrated Management Plan
Marine Planning Partnership of the North Pacific Coast (MaPP)	MaPP sub-regional plans provide operational and localized direction for marine uses, including General Management Direction for marine activities and a spatial management plan. For more information see mappocean.org and http://www.haidanation.ca/. Terrestrial protected areas with a marine component were jointly established by the CHN and BC through a separate strategic land use planning process. The Haida Gwaii Marine Plan provides additional direction or zoning for these areas.	Haida Nation/ other First Nations, BC	Four sub-regional plans (including the Haida Gwaii Marine Plan) and other regional planning products
Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve and Haida Heritage Site ("Gwaii Haanas")	Since 2010, Gwaii Haanas has operated under an interim marine management plan, and a final integrated land and sea management plan will be completed by 2015. The final plan will outline what activities will be allowed where and at what times of the year. The plan will also describe marine ecosystem monitoring and how change will be measured. For more information see http://pc.gc.ca/pn-np/bc/gwaiihaanas/index.aspx	Haida Nation, Canada (DFO/ Parks Canada) (through Archipelago Management Board	Gwaii Haanas Integrated Management Plan
SGaan Kinghlas – Bowie Seamount Marine Protected Area	The SGaan Kinghlas– Bowie Seamount MPA Management Plan is being cooperatively developed by the CHN and DFO. The plan will identify conservation objectives and define the scope and management of marine activities within the MPA. For more information see http://www.dfo-mpo.gc.ca/oceans/marineareas-zonesmarines/mpa-zpm/pacific-pacifique/bowie-eng.htm	Haida Nation, Canada (DFO)	SGaan Kinghlas – Bowie Seamount MPA Management Plan

In 2014, the Canada-British Columbia Marine Protected Area Network Strategy ("the Strategy") was released. Consistent with the national framework, the Strategy outlines a vision and goals that will guide collaborative efforts to conserve a range of important marine values. Network planning will begin in the Northern Shelf Bioregion and will include formal engagement with MaPP partner First Nations.

The Haida Gwaii Marine Plan provides recommendations for protection management zones (PMZs) within the Haida Gwaii plan area. The PMZs are not designating marine protected areas (MPAs). However, the work undertaken during the planning process to assemble and analyze baseline data, to spatially identify ecological, cultural, and First Nations values, to identify current uses and activities and future economic opportunities, and to recommend management objectives, can make important contributions to the MPA network planning process.

Figure 1.2. Marine Planning processes currently underway in and around Haida Gwaii



2. PLANNING PROCESS, APPROACH AND INFORMATION SOURCES

2.1 PLANNING PROCESS

The MaPP process for Haida Gwaii is co-led by the CHN and the Province of BC. The Marine Plan has been jointly developed by both parties based on the input of the Haida community and other residents of the islands, stakeholders, local government and the broader public.[1]

The planning process was formalized by the MaPP *Letter of Intent* (Appendix 1) that was signed by the Province of BC and partner First Nations in November 2011, to establish a bilateral governance structure. At the sub-regional level, the Marine Plan was developed through the collaborative effort of CHN and the Province of BC, and building on earlier work by the Haida Marine Work Group. The process was supported by CHN and provincial technical staff and executive.

The CHN and the Province of BC consulted with Haida, local government, members of the public and stakeholders at various stages of the planning process. The resulting Marine Plan is a reflection of the knowledgeable and considered input provided by all participants during the planning process.

Prior to plan approval, an assessment of the potential ecological, socio-economic and cultural implications of the plan was completed using a multiple accounts analysis approach that considered both spatial and aspatial planning objectives, strategies and associated recommendations. The results of this assessment were used to further refine planning outcomes and to help inform decision-makers tasked with approving the plan.

Appendix 2 provides a summary of meetings with Haida, public and stakeholder engagement.

Haida Engagement

In 2006, the CHN established the Haida Marine Work Group and charged it with the task of identifying Haida priorities for development of a Marine Plan. The Work Group includes representatives of the CHN, Hereditary Chiefs, Old Massett Village Council, Skidegate Band Council, and members of the Haida public. Since 2006, the Work Group convened more than 40 times to review documents, discuss issues and provide input to the marine planning processes on Haida Gwaii.

The Work Group is supported by the Haida Oceans Technical Team, which assisted the Work Group in providing oversight and direction to the *Haida Marine Traditional Knowledge Study* and the *Haida Gwaii Marine Market Sector Analysis*. Both of these documents are key information sources that fill critical data gaps for marine planning and future management. The Work Group and technical staff also provided updates to the Haida community at public meetings in Old Massett and Skidegate and through presentations at CHN meetings and the annual House of Assembly.

Provincial Engagement

In November, 2011 the Province of British Columbia, as represented by the Ministry of Forests, Lands and Natural Resource Operations, agreed to work with partner First Nations in the MaPP process. Provincial technical planners, located in Haida Gwaii and Victoria, worked closely with the Haida Oceans Technical Team to jointly support the collaborative planning process. For all the MaPP plans, a Provincial Marine Caucus was created, with membership from a broad range of provincial ministries, including Agriculture, Environment, Energy and Mines, International Trade, Jobs, Tourism and Skills Training, Natural Gas Development, Aboriginal Relations and Reconciliation, Transportation and Infrastructure, and the office of the Attorney General.

[1] In this document, “Haida” is used to refer to all people of Haida ancestry and “islands” refers to Haida Gwaii

Members of this caucus, along with numerous other agency staff and executive across government, were tasked with reviewing draft materials, providing advice and input on proposed plan direction, and ensuring the mandate, policies, legislative tools and overarching interests of their respective ministries were duly considered and reflected in final plan outcomes.

Stakeholder Engagement

The content and direction of the Marine Plan was substantively informed by discussions with the Haida Gwaii Marine Advisory Committee and bilateral meetings with stakeholders and local governments. This input was provided at several stages during the process (plan development, plan consultation, and plan review). Stakeholders were encouraged to provide data to help inform planning decisions and achieve a balance of environmental and socio-economic outcomes.

The Haida Gwaii Marine Advisory Committee was established in September 2011 to provide advice to the CHN and Province of BC on the development of the Marine Plan. The Marine Advisory Committee was made up of members with a range of backgrounds related to marine resources, including both local and non-local expertise. Its members were not representative of specific interest groups; rather they were selected based on their collective knowledge and experience, which included marine tourism, marine conservation, marine science, community interests, commercial fishing, recreational fishing, seafood processing and marine transportation. Two members of the Haida Marine Work Group also participated on this committee. Over the course of the planning process, the Marine Advisory Committee met 12 times to review documents and provide valuable input into the Marine Plan.

In addition to the contributions of the Marine Advisory Committee, information meetings with key stakeholders helped inform the development of the plan. These meetings involved representatives of environmental non-governmental organizations, commercial fishing associations, recreational fishing bodies, marine tourism, and shellfish aquaculture operators.

Local governments are also integral to the successful implementation of the Marine Plan. Economic development activities often occur at the local scale and approvals for marine-related activities can involve local government. The planning team sought feedback from representatives of local island communities and the broader Skeena-Queen Charlotte Regional District on the implications of the plan direction for local governments.

Local Communities and Public Engagement

Prior to the initiation of the MaPP process, the CHN and the Province of BC participated in several PNCIMA public forums that provided opportunities to update, and seek input from, Haida Gwaii residents and the general public on marine planning work being done in and around Haida Gwaii. In January 2009, the CHN organized and hosted a 3-day public forum called *Gaaysiigang*: an ocean forum for Haida Gwaii. Presentations by invited and local speakers to more than 200 participants at the Haida Heritage Centre at Kay Llnagaay in Skidegate highlighted the importance of marine planning and ongoing marine initiatives in and around Haida Gwaii.

In April 2014, public meetings were held in four communities (Sandspit, Old Massett/ Masset, Port Clements, and Skidegate/ Queen Charlotte) to seek feedback on the draft Marine Plan. Attendees at the public meetings were able to raise questions and concerns and make planning recommendations to members of the planning team. All comments were recorded for consideration during revisions and completion of the plan. Interested members of the public were encouraged to provide feedback on-line, in writing or in person.

A list of public meetings is provided in Appendix 2. Other tools and strategies for engaging local communities and the general public included: communication through local newspaper articles; circulation of marine planning brochures and other outreach material; promotion and use of the MaPP and CHN websites; electronic distribution of MaPP newsletters; and planning team participation in community events to raise the profile of the Haida Gwaii marine planning process.

2.2 ECOSYSTEM-BASED MANAGEMENT

Ecosystem-based management (EBM) is a fairly new approach to management. Due to various limitations, most management systems focus on single species and do not account for ecosystem relationships. EBM incorporates the principles of ecosystem integrity, resilience, and adaptive management into decision-making, which allows managers to respond to ecosystem changes and establish mechanisms for re-evaluating and redesigning plans, as required (Figure 2-1).

One of the key outputs of the MaPP process is an EBM framework to support management of existing and new marine activities, including the development of EBM indicators and targets. The MaPP EBM framework is built upon ecological integrity, human well-being, and governance and collaborative management, all of which are to be considered in regional and sub-regional planning.

Although the Province of BC has a broad interest in ocean resources, coastal and marine management and related policies (including marine fisheries and seafood industry development), it does not have the legislative responsibility, jurisdiction and/or mandate to implement or pursue the full suite of objectives and strategies required for comprehensive marine use planning. While there is an overall desire to see an ecosystem-based approach to marine resource management that includes stewardship of the marine resources and sustainable human use, it is important to clarify the limitations in which the Province can operate. The Haida Nation will continue to pursue objectives and strategies for comprehensive marine use planning and implementation within an EBM framework.

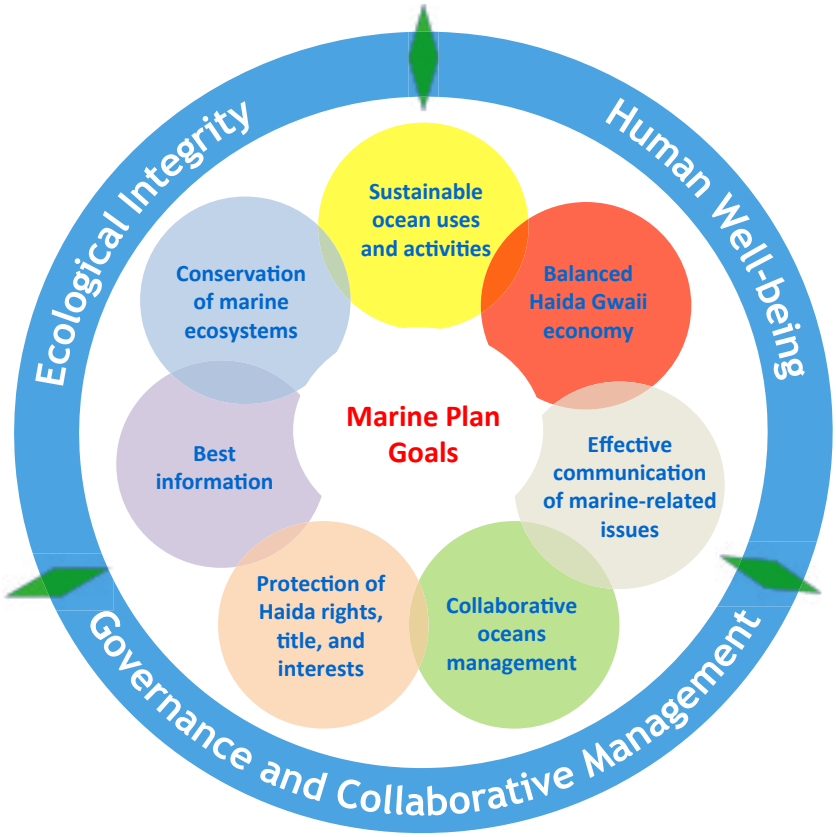


Figure 2 1. An ecosystem-based management framework for marine planning

The application of EBM is not new in Haida Gwaii. The Haida Gwaii Strategic Land Use Agreement between the CHN and the Province of BC, which was signed in September 2007, uses EBM as the basis for sustainable management of the Haida Gwaii terrestrial environment. Building on this foundation, in 2007 the Haida Marine Work Group defined EBM for Haida Gwaii marine planning as follows:

> Respect is the foundation of ecosystem-based management. It acknowledges that the land, sea, air and all living things, including the human community, are interconnected and that we have the responsibility to sustain and restore balance and harmony.

This EBM definition was subsequently endorsed by the Haida Gwaii Marine Advisory Committee and has been carried forward into the MaPP process. In 2012, the PNCIMA initiative also defined EBM as part of a broader EBM framework to support marine planning and management on the Pacific North Coast:

> "Ecosystem-based management is an adaptive approach to managing human activities that seeks to ensure the coexistence of healthy, fully functioning ecosystems and human communities. The intent is to maintain those spatial and temporal characteristics of ecosystems such that component species and ecological processes can be sustained, and human well-being supported and improved."

The two definitions of EBM are consistent. They promote an integrated approach to management that takes into account the ecology of the system and interactions with cultural and socioeconomic realities.

The PNCIMA process has also defined an EBM framework for the entire Pacific North Coast, including the identification of EBM assumptions, principles and goals, and high-level strategic objectives and strategies. In terms of planning scales, the MaPP process nests within the PNCIMA process and the Haida Gwaii Marine Plan nests within MaPP. On Haida Gwaii, application of EBM is achieved by ensuring integrated planning across all these scales. In the Haida Gwaii Marine Plan, the objectives (or "what must be done") and strategies ("how they can be achieved") in Sections 6 and 7 reflect many of the PNCIMA objectives and strategies but in a more applied, Haida Gwaii context. Beyond the PNCIMA EBM framework, application of objectives and strategies in the Haida Gwaii Marine Plan translate many of the PNCIMA higher level objectives into practical management direction that addresses planning and management issues relevant to Haida Gwaii. Applying EBM in the Haida Gwaii Marine Plan also requires:

- consideration of ecological, cultural, social, economic and political values;
- understanding of ecological, cultural, social, economic and political interactions;
- evaluation of activities and impacts at multiple scales;
- balancing marine protection with resource development opportunities; and
- working to achieve effective collaborative inter-government and agency management.

In the context of the Haida Gwaii Marine Plan, work with other marine planning partners, including Gwaii Haanas/Parks Canada, and DFO, has also commenced. Together all parties will determine how to apply the ecological, cultural, social, economic and political aspects of marine EBM at multiple scales: Gwaii Haanas and SGaan Kinghlas–Bowie Seamount specifically, Haida Gwaii generally, and the Pacific North Coast broadly (see also Table 1-1).

2.3 INFORMATION SOURCES

The development of the Haida Gwaii Marine Plan has been informed by multiple data sources, compiled by the Haida Oceans Technical Team and the Province of BC, to support the work of the Haida Marine Work Group, Haida Gwaii Marine Advisory Committee, and Marine Planning Partnership. In general, planning was informed by the following three types of information:

- **Ecological**: large and small-scale datasets and reports that identified nearshore and offshore ecological values in the marine environment *(e.g., oceanographic regions, ecosections, cold water corals and sponges, seal and sea-lion haulouts, nesting seabird colony sites)*
- **Cultural**: information and datasets that identified areas of importance and both current and historical use and stewardship by the Haida Nation and others *(e.g., Haida Marine Traditional Knowledge database, archaeological sites, historical whaling stations, ship wrecks)*
- **Social and Economic**: information and datasets that identified areas of importance and use for a variety of marine activities *(e.g., commercial fishery catch and effort data, sport fishing lodge sites and use areas, vessel traffic information, various tenure types - shellfish aquaculture, log handling/storage, alternative energy)*

Principal data sources include the CHN, Province of BC, DFO, Gwaii Haanas/Parks Canada and the BC Marine Conservation Analysis (BCMCA) project. A number of studies and workshops have been conducted by the Haida Nation to further inform marine planning discussions in and around Haida Gwaii.

For a complete list of spatial data sources, see Appendix 3. For all other sources of information, see References.

Photo - Jags

3. HAIDA GWAII ETHICS AND VALUES, MARINE VISION AND GOALS, AND PREFERRED SCENARIO

The Haida Marine Work Group described Haida ethics and values, drafted a marine vision with associated goals, objectives and strategies, and identified marine areas with significant ecological and cultural values. Recommendations from the Work Group were reviewed and accepted by the CHN and BC in 2011 and 2012, respectively, for inclusion in the Marine Plan. These recommendations were also shared with members of the Haida Gwaii Marine Advisory Committee. These ethics and values are drawn from Haida culture and are applied to all of Haida Gwaii, with support confirmed by local communities, stakeholders, and governments through the Haida Gwaii Marine Plan process.

3.1 HAIDA GWAII ETHICS AND VALUES

Haida ethics and values are fundamental to Haida culture and society – respect, responsibility, interconnectedness, balance, seeking wise counsel, and giving and receiving are all elements that define the Haida world view.

These principles also resonate among broader communities, stakeholders and governments. Accordingly, they underlie the approach to marine planning on Haida Gwaii and are considered to be the foundation of the Marine Plan.

> Over thousands of years our histories have been carefully passed on through the generations through strict protocols in the delivery of knowledge. Through the recounting of our origins, the adventures of Raven, and of the Supernatural among us, we maintain our sense of place and identity.
>
> *Council of the Haida Nation, 2004*

Yahguudang or Yakguudang – Respect

Respect for each other and all living things is rooted in our culture. We take only what we need, we give thanks, and we acknowledge those who behave accordingly.

‘Laa guu ga k̲anhllns – Responsibility

We accept the responsibility passed on by our ancestors to manage and care for our sea and land. We will ensure that our heritage is passed onto future generations.

Gina ‘waadlu̲xan gud ad kwaagiida – Interconnectedness – Everything depends on everything else

The principle of interconnectedness is fundamental to integrated planning and management. This comprehensive approach considers the relationships between species and habitats, and accounts for short-term, long-term and cumulative effects of human activities on the environment. Interrelationships are accounted for across spatial and temporal scales and across agencies and jurisdictions.

Giid tll’juus. Balance – The world is as sharp as the edge of a knife

Balance is needed in our interactions with the natural world. If we aren’t careful in everything we do, we can easily reach a point of no return. Our practices and those of others must be sustainable.

Gina k’aadang.nga gii uu tl’ k’anguudang – Seeking Wise Counsel

Our elders teach us about traditional ways and how to work in harmony. Like the forests, the roots of our people are intertwined. Together we consider new ideas and information in keeping with our culture, values and laws.

Isda ad diigii isda – Giving and Receiving

Reciprocity is a respected practice in our culture, essential in our interactions with each other and the natural world. We continually give thanks to the natural world for the gifts that we receive.

Haida ethics and values are also closely linked to scientific principles that are now considered to be part of EBM. The relationship between specific EBM principles and Haida ethics and values is described in Table 3-1.

Table 3 1. Relationship between Haida ethics and values and scientific principles of ecosystem-based management (EBM)

HAIDA ETHICS AND VALUES	SCIENTIFIC PRINCIPLES OF EBM
Respect	Precautionary approach
Responsibility	Inclusive and participatory
Interconnectedness	Integrated management
Balance	Sustainable use over the long-term
Seeking wise counsel (Intergenerational knowledge)	Adaptive management
Reciprocity (Giving and receiving)	Equitable sharing

3.2 HAIDA GWAII MARINE VISION AND GOALS

The Haida Gwaii Marine Vision describes healthy ocean ecosystems that are managed with a balanced perspective based on respect:

> *We see a future for Haida Gwaii that has healthy, intact ecosystems that continue to sustain Haida culture, all communities, and an abundant diversity of life, for generations to come. We will respect the sea around us and restore a balance between marine resource use and the well-being of life of the ocean.*

Related to this vision, seven overarching goals for integrated marine planning and management provide strategic direction to Haida Gwaii planning:

1. Conservation of marine ecosystems
2. Protection of Haida rights, title and interests
3. Sustainable ocean uses and activities
4. Best information
5. Balanced Haida Gwaii economy
6. Collaborative oceans management
7. Effective communication of marine-related issues

Examples of how these goals could be applied in planning are outlined in Table 3-2.

Table 3 2. Planning goals and examples of application

GOAL	EXAMPLE OF APPLICATION
Conservation of marine ecosystems	· Protection of sensitive and unique ecological features · Management of areas for recovery and restoration of important habitat and species
Protection of Haida rights, title and interests	· Incorporation of Haida traditional knowledge to planning and management · Protection of cultural, archeological and spiritual values · Ensuring continued Haida access to marine resources
Sustainable ocean uses and activities	· Application of an integrated, ecosystem-based approach in management of marine uses and activities
Best information	· Application of Haida traditional knowledge and the best science in planning and management · Undertaking inventories, surveys and monitoring for improved and responsive management
Balanced Haida Gwaii economy	· Fostering opportunities for participation of Haida Gwaii residents in all marine and fisheries sectors, including increased local employment · Ensuring healthy coastal communities, including continuous benefits from marine resource use to Haida Gwaii residents
Collaborative oceans management	· Development of a framework for effective collaborative management of marine resources and activities between the Council of the Haida Nation, Canada and the Province of BC · Engage local governments through Protocol Agreements to improve oceans management in and around Haida Gwaii
Effective communication of marine related issues	· Effective internal and external communication, including education and outreach

3.3 HAIDA GWAII PREFERRED SCENARIO

The Haida Gwaii Preferred Scenario is drawn from results of the CHN/BC Haida Gwaii Marine Future Scenarios Workshop (July 17–18, 2012) and direction that was provided by the Haida Marine Work Group and Haida Gwaii Marine Advisory Committee. The purpose of the workshop was to explore

- current and future trends, challenges, and opportunities, and;
- future scenarios, which included scoping and identifying key drivers, trade-offs, uncertainties and risks. The scenario below was jointly developed by CHN and BC. It specifically describes the elements of a "preferred" marine future on Haida Gwaii consistent with the intent of the Marine Plan. It may contribute to, but does not describe, the broader vision for reconciliation of Haida Aboriginal title and rights with Canada and BC.

Photo - D. Gardiner, Parks Canada

HAIDA GWAII'S MARINE FUTURE: A CONSERVATION AND LOCAL ECONOMY PATH

Twenty years from now, Haida Gwaii has followed a path that prioritizes culture, healthy intact ecosystems, and sustainable communities. Marine use and development is balanced by high standards for environmental protection and a comprehensive network of marine protected areas. Marine industries that are supported in and around Haida Gwaii generally have low environmental impacts and are consistent with the distinct islands lifestyle. Community growth is based on diverse activities that tap into a growing global demand for sustainable seafood and a unique visitor experience. Substantial progress in this direction has been made in the realms of environment, economy, community and governance, as follows:

Environment

Haida Gwaii has embraced new conservation efforts by establishing a network of marine protected areas. High environmental standards are required for all developments and activities. New policies and approaches are explored, and fisheries within Haida Gwaii waters are sustainable and include significant levels of local involvement. These actions protect key habitats, marine communities, biodiversity and culturally significant places, and they buffer against climate change and environmental uncertainties. The result is a resilient and productive marine environment that supports sustainable marine industries.

Economy

Economic development in the marine sector focuses on managed growth of tourism and shellfish aquaculture, slow but steady development of new community fisheries initiatives, and support for new sustainable technology initiatives and research. Haida Gwaii has become known as a premier tourism destination and source of sustainable wild fish and aquaculture products due to concerted efforts in marketing and branding. Economic growth has required sustained investment in human resources and key improvements in infrastructure. These improvements included amenities to support tourism-related service industries or facilities to support fishing and upgrades in transportation and telecommunication systems in order to support business development. Focused training efforts prepare island residents and youth for new local opportunities. New partnerships and incentives improve local benefits from recreational and commercial fishing in Haida Gwaii waters. New businesses are successful in part due to strong local leadership, the ability to attract external investment, and sustained government support. Overall the marine sector provides a greater proportion of local benefits compared to earlier years and the number of jobs grows at a modest rate which keeps the islands' population relatively stable.

Community

The Haida's strong cultural attachment to the ocean flourishes while economic opportunities that are a good match to their growing, youthful population are supported. Island residents maintain a high quality of life that results from access to healthy food, fresh air, and the expansive and generally uncrowded inlets and shores. Community cohesion is strong and there is pride in living on Haida Gwaii, particularly with regards to the innovative and progressive management of waters in and around Haida Gwaii. Infrastructure—particularly facilities that support tourism and clean sources of electricity—improves, although it is a struggle to maintain community infrastructure without a large tax base and with a reliance on seasonal jobs.

Governance

Marine and ocean governance systems continue to be refined and improved. The Council of the Haida Nation and provincial and federal governments work together along with industry sectors to meet the Marine Plan objectives, which results in stronger co-management relationships over time. This includes collaborative efforts to manage marine protected areas throughout Haida Gwaii. Stronger relationships between managers, communities and users generate increased confidence in management decisions. The Haida Nation continues to work with local government to support island initiatives. Governance processes and decisions are sometimes slow but provide a stable base for business development, delivery of services, or advocacy on behalf of island communities and other resource users.

4. DESCRIPTION OF THE PLANNING AREA

X̲aadaa Gwaay, X̲aaydaga Gwaay.yaay, or Haida Gwaii ("Islands of the people") is an archipelago on the edge of the continental shelf off the north coast of British Columbia. It is surrounded by several large bodies of water—Hecate Strait separates Haida Gwaii from the mainland, and the islands are bounded by Dixon Entrance in the north, Queen Charlotte Sound to the south and the Pacific Ocean to the west.

The ocean setting of Haida Gwaii is unique: it marks the transition between the Alaskan and the California Currents. The currents around the archipelago are highly seasonal and change from summer to winter. In the summer the west coast is dominated by cool water from the upwelling of nutrient-rich waters along the continental shelf. In the winter, "Haida Eddies" periodically form off the west coast and around Cape St. James; they carry pockets of nutrient and plankton-rich surface water to the North Pacific and Gulf of Alaska.

Highly diverse nearshore habitats and a mix of shoreline types occur along Haida Gwaii. The rocky headlands of Gwaii Haanas, the sand dune beach systems on the northeast coast of Graham Island, and the predominantly rocky shorelines with sheltered pocket beaches and sounds along the west coast provide important habitat for marine species. These shorelines are home to the rich kelp forests on the outer coast, and lush eelgrass meadows in the inlets and bays.

Marine life thrives in this region, as evidenced by the long history of Haida marine resource use. Groundfish such as Pacific Halibut, Sablefish, and various species of rockfish, sole and cod have been targeted for numerous generations by the Haida and more recently by the fishing industry. Halibut spawning and rearing areas have been documented around the islands. Rockfish inhabit areas of high relief including the unique cold water corals and sponge reefs found in Hecate Strait. Herring have provided for generations of Haida and supported very productive fisheries in years past. For years, the BC Dungeness Crab fishery has focused its effort off the north east coast of Graham Island and today it is one of the most valuable fisheries on the coast. This fishery is supported by an ocean gyre off the north coast of Graham Island that retains larvae in the McIntyre Bay area including Rose Spit and Tow Hill.

Kelp forests and other marine algae support invertebrate and fish communities including juvenile Pacific Halibut, Sablefish and numerous rockfish species. Herring spawn in the intertidal zone and shallow waters on eelgrass, kelp, rock and other substrates. The nearshore currently supports Geoduck and Red Sea Urchin dive fisheries. Northern Abalone were once abundant along this coast, but the species has been listed as Endangered under the *Species at Risk Act* due to overharvesting. These valuable fisheries target stocks that the Haida have used for generations and which continue to support important traditional fisheries.

Haida Gwaii is known globally as an area that is rich in marine birds. The islands are home to 13 species of nesting seabirds including provincially blue- and red-listed species, such as Cassin's Auklet, Ancient Murrelet, Marbled Murrelet, Horned Puffin and Tufted Puffin. It is estimated that 1.5 million seabirds breed in colonies on more than 150 islands around Haida Gwaii. Eight of the ten top ranked coastal wetlands for waterfowl in northern BC occur on northern Haida Gwaii. Shorebirds also use Haida Gwaii as a stopover on their migration routes.

Numerous marine mammals are found in Haida Gwaii waters. Grey and Humpback Whales migrate through the region, sometimes stopping to feed for prolonged periods. Many rocky islets are used by Pacific Harbour Seals and Steller Sea Lions as rookeries and haulout sites. Killer Whales from three populations (Northeast Pacific Northern Resident, Northeast Pacific Offshore and Northeast Pacific Transient), Northern Fur Seals, porpoises, and dolphins are sighted regularly throughout the archipelago.

This rich marine environment historically supported a large Haida population, as evidenced by the many villages and fishing and hunting camps located throughout the archipelago. Haida are well known for ocean-going canoes carved from Western Red Cedar and used for travel and trade. The current Haida Gwaii population numbers about 4,400 people, who reside primarily within six communities. Roughly half of the residents are of Haida ancestry. In 2010, about 30 percent of Haida Gwaii residents relied on the marine sector for their living. Economic reliance on the ocean was once much greater but this has changed due to increasing regulation and restrictions on commercial fishing.

Currently, the waters in and around Haida Gwaii support commercial fisheries for all salmon species (troll, seine net and gillnet), Dungeness Crab (trap), Red Sea Urchin and Geoduck (dive), Razor Clam, Pacific Herring roe-on-kelp, prawn (trap), many groundfish species (trawl and hook and line), Albacore Tuna, Pacific Halibut and Sablefish and shrimp (trawl). Fisheries that are not currently active include roe herring, Sea Cucumber, Northern Abalone and Green Sea Urchin (dive). Potential new and emerging fisheries include those for Pacific Sardine, Pacific Hake, Giant Pacific Octopus, Gooseneck Barnacle, offshore prawn and krill.

Recreational fisheries are also popular and recreational activity in Haida Gwaii waters is increasing. Anglers typically target Chinook and Coho Salmon, Pacific Halibut, Lingcod, and rockfish species. Most of this activity is concentrated around Langara Island and along the north and west coast of Graham Island where there are a number of fishing lodges and charter boat operations.

Boundaries for the planning area are defined by the Haida Statement of Claim (east/south), the international boundary with the United States (north), and the toe of the continental slope (west). These boundaries are consistent with the MaPP and PNCIMA processes: the eastern and southern boundaries define the Haida Gwaii sub-region within the MaPP process. Gwaii Haanas is included in the Haida Gwaii sub-region but spatial zoning for this area is being addressed through a separate planning process (Table 1-1).

Photo - Allan Wilson

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5. KEY ISSUES, CONCERNS AND OPPORTUNITIES

The marine environment of Haida Gwaii faces a range of threats, challenges and opportunities. Collaborative marine planning provides an opportunity to address these issues in a holistic and integrated manner, supported by the management direction outlined in Sections 6 and 7. Key issues, concerns and opportunities include the following.

Northern Abalone Now Endangered

- The abalone fishery collapsed and stocks are not recovering despite a coast-wide closure since 1990.
- The Northern Abalone was assessed as Threatened in 1998 and this listing was adjusted to Endangered under the *Species at Risk Act* in 2011.
- Poaching is suspected to be a major factor in the lack of recovery of this species.
- Haida Fisheries is leading a local stewardship group that focuses on public awareness and monitoring of juvenile abalone populations.
- The current recovery plan estimates that rebuilding may take decades.

Pacific Herring Chronically Depressed

- Gwaii Haanas has one of five major spawning stocks of Pacific Herring in BC. A minor stock (one of two in BC) occurs on the west coast of Haida Gwaii. There are gaps in knowledge about herring life history, such as where the fish go when they are not spawning.
- Stock levels in Gwaii Haanas have been chronically low since 1995. Size-at-age has been decreasing since the mid-1980s.
- Commercial roe and k'aaw (spawn-on-kelp) fisheries have been closed in Gwaii Haanas since 2005, and Haida traditional k'aaw catch has been poor. The Council of the Haida Nation blockaded herring roe fisheries in 1998 and 2002. DFO opened commercial fisheries in Gwaii Haanas in 2014 but CHN reached an agreement with the industry not to proceed with a fishery.

Deteriorating ocean health

The world's oceans are experiencing unprecedented change, ranging from the proliferation of anoxic "dead" zones (areas of low oxygen) to increasing pollution and accumulation of marine debris. Deep water in the North Pacific Ocean is already the most acidic in the global ocean and BC's continental shelf might experience negative impacts of acidification sooner than most oceanic waters. Thus far, northern BC remains relatively sheltered from the brunt of these problems; however, their potential effects highlight the need to manage human activities in order to reverse these global trends. Locally, improvements can be made by promoting best practices such as minimizing Haida Gwaii's carbon footprint and implementing sewage treatment and proper waste disposal.

Species at risk

Several marine species that occur within Haida Gwaii waters are listed as Threatened or Endangered under Canada's *Species at Risk Act* and several others are proposed to be listed (see Appendix 4 for a list and definitions). Managing for species at risk requires a broader ecosystem approach.

Declining, collapsed or unsustainable fisheries

BC is experiencing declines in a broad range of fisheries. Causes of these declines are complex and range from overfishing to changes in ocean conditions and productivity. Abalone fisheries have been closed since 1990, and stocks are not currently rebuilding. The Haida Gwaii herring roe fishery was closed in 1998 and has had very limited openings since then, with the last opening in 2002. Commercial spawn-on-kelp fisheries in southern Haida Gwaii have been closed since 2005. The Pacific Cod fishery that once thrived in Hecate Strait has been closed to directed fisheries since 2001. A coast-wide rockfish recovery strategy is attempting to halt rockfish population declines.

Commercial fishing benefits

Commercial fisheries are an important part of the marine economy of Haida Gwaii: they contribute an average annual landed value of more than $80 million to the provincial economy. Historically, commercial fisheries were integral to the Haida Gwaii economy but, over the decades, local participation has declined and the size of the resident commercial fleet on the islands is currently very small. In addition, very few of the fish caught in Haida Gwaii waters are delivered to local seafood processing plants. Increasing the local economic benefits from marine resources is key to developing sustainable island communities. Mechanisms for this may include building participation in specific commercial fisheries, using local processing capacity, and strengthening distribution channels.

Increasing shipping traffic

Northern BC is facing significant increases in shipping traffic over the next 5 years. In 2008, about 500 ships called at the northern BC seaports of Prince Rupert, Kitimat and Stewart. A container facility has been built in Prince Rupert and liquefied natural gas pipelines are proposed for Kitimat and Prince Rupert. The proposed Northern Gateway Pipeline also has the potential to significantly increase the number of large vessels travelling through Haida Gwaii waters. The risks of increased marine traffic include a greater chance of oil spills, an increase in ocean noise, the introduction of exotic species, and increased marine pollution.

Aquaculture development

Nearly half of the seafood produced in the world today is from aquaculture operations. Salmon and shellfish aquaculture have been active in southern BC for decades and the latter is gradually expanding to the Haida Gwaii region. There are currently no salmon farms in and around Haida Gwaii. Concerns related to finfish aquaculture include disease and parasite transfer, the introduction and spread of exotic species, and habitat degradation. BC and CHN have separate moratoria on finfish farming. The position of the CHN is that BC should maintain its moratorium on new salmon aquaculture operations in northern BC (including Haida Gwaii) over the long-term. There is support on the islands for cultivation of shellfish. Oysters and scallops are the focus of several existing or pilot shellfish farms in and around Haida Gwaii. Shellfish aquaculture requires clean waters and reasonably sheltered coastal sites. Development also needs to be consistent with community objectives.

Tourism development

Haida Gwaii has excellent potential as a destination for adventure, ecotourism, and cultural tourism but lacks much of the basic infrastructure for development. Ferry and air transportation to the islands is expensive, takes time, and can be irregular during the winter months. Accommodation options are also limited and there are very few organized activities for visitors. The potential to increase tourism opportunities on Haida Gwaii could be realized through coordinated strategic planning for all communities on the islands and investments in local business development.

Recreational fishery expansion

The number and capacity of privately operated fishing lodges has been expanding for the past 25 years, which has resulted in increased recreational salmon and halibut catch. Management of recreational fishing sector growth and examination of the sector's impact on fish stocks and local communities is important. There is potential to improve recreational fishing practices and increase community benefits including employment of Haida Gwaii residents.

Alternative energy development

Northern BC has potential to generate electric power using wind, wave or tidal energy. This would reduce Canada's reliance on fossil fuels, decrease our ecological footprint and help combat global warming. Northern Hecate Strait has high potential for generating wind energy, as demonstrated by NaiKun Wind Energy Group's proposal to develop an offshore wind-farm in the area. Although the NaiKun project is currently on hold, wind energy may be a viable marine industry in the future. In addition, several sites in Masset Inlet have been identified as having potential for generating tidal energy.

Shellfish Aquaculture has Potential as a Sustainable Industry

- Species with high aquaculture potential in Haida Gwaii include Japanese Scallops and Pacific Oysters.
- One small farm has operated in Skidegate Inlet since the mid-1990s. Two pilot farms have focused on scallops.
- A scallop hatchery is currently being developed in Prince Rupert.
- Challenges include high transportation costs and the development of reliable markets, which make northern BC operations less competitive.
- Farms are typically labour-intensive, require considerable investment and have high operating costs.
- There is a need to set limits on aquaculture development in the early stages to ensure that development is proactively managed and cumulative effects are considered.

Haida Gwaii – A Developing Tourism Destination

- Haida Gwaii has considerable potential as a destination for both ecotourism and Aboriginal tourism.
- Current marine tourism focuses on Gwaii Haanas (2,000 people/yr) and private fishing lodges (14,000 people/yr).
- Gwaii Haanas has a Backcountry Management Plan and capacity limits.
- Communities are concerned about unchecked recreational fishery development and declining visitor experience.
- Haida Gwaii lacks infrastructure including accommodation and services to support development.
- A local tourism strategy highlights the need for development to be consistent with community values.

Climate change

Large-scale effects of climate change are expected to include a rise in sea level, the alteration of ocean circulation, an increase in ocean acidity, and a change in weather patterns. Climate change effects are likely to accelerate erosion of the coastline of Graham Island, which could affect major highway and utility lines. Sea level rise will eventually inundate low lying areas. Communities must find ways to adapt to these changes and/or mitigate potential impacts.

The above issues and concerns are described further in subsequent sections, and proposed objectives and strategies to address them are detailed in Sections 6 and 7.

Photo - Kelly Whitney-Squire

6. HAIDA GWAII GENERAL MANAGEMENT DIRECTION

General Management Direction is provided for the following eight management components:

For each component, issues are identified and objectives and strategies to address those issues are outlined. The objectives and strategies establish guidelines for marine activities in all Haida Gwaii waters and they are linked to the overarching vision and goals outlined in Section 3.2. The General Management Direction is complemented by other components of the Marine Plan that address spatial designations, economic development and plan implementation.

Examples discussed by the Haida Marine Work Group and/or the Haida Gwaii Marine Advisory Committee are provided in connection with many of the strategies. The examples are intended to assist with implementation of the Marine Plan by informing the development of action plans. Not all examples are expected to be implemented.

The objectives and strategies in this section represent a comprehensive vision for integrated marine management. The parties recognize that not all of the General Management Direction can be implemented at once by any one authority. Specific objectives and strategies will be implemented on a priority basis according to available resources (see Section 9). To the extent possible, innovative partnership arrangements will be sought to optimize existing and new opportunities for long-term monitoring of Marine Plan implementation and effectiveness.

All objectives and strategies outlined here are within the purview of the Haida Nation and the Province of BC.

6.1 GOVERNANCE AND INTEGRATED MANAGEMENT

The Marine Plan is the product of a cooperative planning process led by the Haida Nation and the Province of BC and has been endorsed by both governments. As described in Sections 2 and 3, integrated management is integral to the Haida Gwaii marine planning approach. The Haida Nation and Province of BC are working cooperatively to support and sustain healthy marine ecosystems, current and future Haida access to land and marine resources, and diverse economic opportunities in and around Haida Gwaii. The Haida Nation, Canada and the Province of BC have also committed to achieving integrated oceans management through other processes, including the PNCIMA initiative and marine planning for Gwaii Haanas (Table 1-1). Integrated management is planning and managing human activities in a comprehensive manner while considering all factors necessary for the conservation and sustainable use of marine resources and the shared use of ocean spaces.

For the purposes of this plan, the terms ”shared decision-making”, ”joint decision-making” and ”cooperative management” pertain specifically to government-to-government relationships that involve shared responsibilities. Shared or joint decision-making refers to agreements between BC and the Haida Nation to make best efforts to seek consensus on issues related to land and natural resources (e.g, the Kunst’aa guu – Kunst’aayah Reconciliation Protocol Agreement). ”Cooperative management” is consistent with terminology used by the federal and Haida Nation governments in the management of the Gwaii Haanas National Park Reserve, National Marine Conservation Area Reserve and Haida Heritage Site. Similar to shared decision-making, this approach allows for arrangements where the parties can work to address issues and achieve mutually agreed-upon land and marine resource management objectives through cooperative planning and decision-making.

Consistent with these agreements, there are several areas in which cooperative governance relationships exist on Haida Gwaii, including fisheries management, evaluation of marine development proposals or tenure applications, compliance and enforcement, and marine safety and emergency response. Effective implementation of the Marine Plan will be integrated with existing governance structures, such as the Haida Gwaii Management Council and the Solutions Table.

It is recognized that there is a need for local governments, the general public and other stakeholders to have opportunities to contribute meaningfully to marine management. Broad engagement, combined with strong, collaborative government-to-government leadership, has resulted in a Marine Plan that can be applied in effective and practical ways.

Table 6-1 lists objectives and/or strategies related to governance and integrated management.

Photo - Haida Gwaii Watchmen Program

Table 6 1. Governance and integrated management - management issues, objectives and strategies

Issue 1: Management of marine areas in and around Haida Gwaii	
Obj 1.1	Continue to build governance arrangements, consistent with agreements, between the Haida Nation, BC, and Canada based on cooperative management, shared decision-making and/or joint decision making.
	Strategy 1.1A Continue to participate in existing planning and management processes, as appropriate. *Examples – Haida Heritage Sites and marine conservancies, Gwaii Haanas Marine Area, SGaan Kinghlas Bowie Seamount*
	Strategy 1.1B Review existing decision-making processes to assess the level of integration in management across jurisdictions and locations, and improve or develop new processes where necessary. *Examples – Collaborative management of environmental assessment processes*
Obj 1.2	Improve existing and establish new and effective fisheries management relationships.
	Strategy 1.2A Continue to participate in government-to-government technical committees.
	Strategy 1.2B Use reconciliation processes to address issues or disputes where appropriate.
	Strategy 1.2C Participate in coast-wide and/or international integrated fisheries management processes as appropriate.
	Strategy 1.2D Improve communications with stakeholder and industry groups through participation in sector-specific advisory processes.
Obj 1.3	Develop governance structures to implement jointly agreed upon marine plans for Haida Gwaii.
	Strategy 1.3A Refine and/or build upon existing governance arrangements between the Haida Nation, BC, and other jurisdictions where required, based on cooperative management, shared-decision-making and/or joint decision-making. *Examples – Integrated Haida Gwaii Marine Use Planning Framework, Haida Gwaii Management Council, Solutions Table, Gwaii Haanas Archipelago Management Board, SGaan Kinghlas–Bowie Seamount Management Board*
	Strategy 1.3B Establish a stakeholder advisory process that supports the successful implementation of marine plans.
Obj 1.4	Provide for joint evaluation of existing or proposed marine developments and/or projects through appropriate governance arrangements.
	Strategy 1.4A Work with relevant agencies/processes to review or provide input and direction on environmental impact assessments related to marine infrastructure development.
	Strategy 1.4B Collaborate with other processes and organizations, including mainland communities and First Nations, on projects related to regional shipping and transportation activities.

Issue 2: Increased need for effective and coordinated compliance and enforcement	
Obj 2.1	Establish a Compliance and Enforcement Framework between the CHN, BC and other partners, as appropriate.
	Strategy 2.1A Support existing monitoring and compliance programs and expand where appropriate. *Examples – Haida Gwaii Watchmen, CHN Fisheries Guardians, Coast Watch Program (community reporting networks), BC Conservation Officer Service, BC Parks Rangers, RCMP; develop tools with stakeholders*
	Strategy 2.1B Explore opportunities for increased cooperation among enforcement staff including provincial Conservation Officers, CHN staff (including CHN Fisheries Guardians), Parks Canada Wardens, BC Parks Rangers and others. *Example – Expand the existing land-based integrated compliance and enforcement model on Haida Gwaii to include the marine environment*
	Strategy 2.1C Provide incentives for compliance and apply appropriate penalties for non-compliance. *Examples – Develop incentive programs for fishing activities; consider restorative justice and/or financial penalties, where appropriate*
Obj 2.2	Work to secure sufficient resources and capacity to implement the Marine Plan, including monitoring of compliance related to fishing throughout Haida Gwaii.
	Strategy 2.2A Assess needs and identify resources to develop and implement management plans for zoned areas within the Marine Plan.
	Strategy 2.2B Increase CHN participation in monitoring and enforcement as appropriate.
Issue 3: Increased need for coordinated marine safety and response capacity.	
Obj 3.1	Maintain sufficient marine safety and response capacity.
	Strategy 3.1A Work with federal agencies and emergency response organizations to review and make recommendations regarding marine safety and response capacity and emergency preparedness.

Tyson Brown

6.2 CULTURAL VALUES AND ARCHAEOLOGICAL SITES AND AREAS

Haida Gwaii *Yahguudang* – translated as "respecting Haida Gwaii" – refers to respect for the past, present and future. Haida Gwaii has been home to the Haida for thousands of years and will continue to be for generations to come. In the past, sea levels were much lower; archaeological excavations have revealed signs of human use that are now underwater due to rising sea levels. Known coastal archaeological sites support oral traditions of how early Haida lived, and many more sites remain to be found. Core samples from the land and sea bottom could reveal what environmental conditions were like in the past. Haida Gwaii also has a variety of post-contact marine cultural or historical sites, such as shipwrecks and canneries, that may need to be assessed and protected.

Coastal and foreshore developments, including tourism and recreation, logging, and town and industrial site expansion, threaten cultural and archaeological sites and areas. Natural events such as storms can disturb or erode shorelines. In deeper water, bottom trawling and offshore industrial developments could impact sites and areas. To safeguard the cultural heritage of Haida Gwaii, it is imperative to protect known cultural and archaeological sites and areas, as well as those that are found in the future, including spiritual places and locations featured in Haida oral traditions.

Table 6-2 lists objectives and/or strategies related to cultural values and archaeological sites and areas.

Table 6 2. Cultural values and archaeological sites and areas - management issues, objectives and strategies

Issue 1: Sites and/or areas not documented or researched	
Obj 1.1	Document and inventory Haida Gwaii cultural and archaeological sites and areas in a manner that recognizes data sensitivity.
	Strategy 1.1A Identify and protect cultural and archaeological sites and areas in a manner that is consistent with guidelines by the CHN, provincial and/or federal agencies as appropriate. *Examples – Marine areas associated with current and past village sites, spiritual sites, burial places, fish weirs, intertidal middens, intertidal and subtidal lithics, locations of supernatural beings from oral history*
	Strategy 1.1B Prioritize and conduct additional surveys for cultural and archaeological sites and areas.
	Strategy 1.1C Conduct interpretive research, including the use of traditional knowledge, to aid in the identification and understanding of traditional sites and areas.
	Strategy 1.1D Develop a system for reporting new sites and areas to the CHN or designated Haida Gwaii management bodies.
	Strategy 1.1E Build on existing databases or establish a central Haida Gwaii database to record archaeological values and research projects. *Example – Gwaii Haanas report on paleontological resources of Haida Gwaii (2008)*
	Strategy 1.1F Work with other agencies/organizations to develop a central Haida Gwaii registration system for research projects.
Obj 1.2	Identify and develop appropriate management measures for post-contact cultural sites and areas.
	Strategy 1.2A Research, document and inventory cultural and/or historical sites and areas. *Examples – Shipwrecks, whaling station, canneries*
	Strategy 1.2B Support the development of management and protection plans for cultural and/or historical sites and areas.

Issue 2: Risk of damage and loss by human activities, natural disturbances and environmental change	
Obj 2.1	Develop greater awareness and understanding of cultural and archaeological values.
	Strategy 2.1A Develop and implement effective communications and outreach strategies to inform diverse audiences about cultural and archaeological sites and areas and their sensitivity to human activities, natural disturbances and environmental change. *Examples – Interpretive education programs, tourism code of conduct*
Obj 2.2	Minimize damage to cultural and archaeological sites and areas.
	Strategy 2.2A Develop guidelines for human use that may affect intertidal or subtidal sites and areas including potential concerns related to developments, excavation, exploration and any other disturbance of the sea bottom.
	Strategy 2.2B Inventory, prioritize and archive sites and areas that are at risk of damage and/or loss from human activities, natural disturbances and environmental change and protect sites and areas, where appropriate. *Example – Damage or loss due to sea level rise, storm events, wave action, and erosion*
	Strategy 2.2C Ensure that research activities identify local sensitivities prior to commencement and adjust and/or mitigate activities accordingly.
Issue 3: Resources to document, protect and monitor sites and areas	
Obj 3.1	Identify resources to document, monitor and protect cultural and archaeological sites and areas.
	Strategy 3.1A Identify funding sources and opportunities, prioritize and conduct inventories/surveys that document new and existing sites and areas, and establish a program to monitor and protect them.

Photo - Lynn Lee

6.3 ECOLOGICAL VALUES AND SIGNIFICANT FEATURES

Healthy land and marine ecosystems are needed to sustain healthy Haida Gwaii communities; residents rely on these ecosystems for nourishment, art and culture. Haida values teach respect for the land and sea, and responsibility to take care of Haida Gwaii ecosystems. Haida traditional management systems are based on the ethics and values outlined in Section 3.1. By managing according to these principles, healthy ecosystems are sustained for the benefit of present and future generations.

Haida Gwaii is sensitive to the impacts of human activities, and past industrial practices have had an impact on the health of island ecosystems and communities. The link between freshwater and saltwater ecosystems is especially important because "everything is connected to everything else" (Section 3.1). Salmon connect the ocean to the forests. Estuaries link marine and terrestrial ecosystems. Protection of these areas is critical for the survival of many species (including salmon) that are culturally and ecologically important.

An increasing diversity and intensity of marine uses is resulting in increased threats to ecological values and features. Threats include coastal developments, marine-related industrial activities, pollution from land and marine activities, physical damage by fishing gear, over-fishing, and noise pollution. Human activities can have a range of impacts on natural ecosystems, from degradation (gradual changes) to damage (acute change), destruction (loss of marine life or function) and transformation (altered ecosystems).

This Marine Plan contains objectives, strategies and spatial zoning that seek to sustain healthy ecosystems into the future and, where possible, restore areas affected by past and current activities. There are a number of tools to implement both aspatial and spatial components of the plan, including First Nations, provincial and federal legislation and designations and the establishment of zones through future processes between CHN, BC and Canada (Appendix 7).

Table 6-3 lists objectives and/or strategies for ecological values and significant features.

Table 6 3. Ecological values and significant features - management issues, objectives and strategies

Issue 1: Ecological impacts of human activities	
Obj 1.1	Protect and maintain healthy ecological features; identify and restore degraded or damaged ecological features.
	Strategy 1.1A Develop guidelines and standards for monitoring and protection of key ecological features, as required. *Examples – Estuaries, eelgrass meadows, kelp forests, essential habitat for a variety of species, tidal lagoons and sloughs, deep water habitats (e.g., coral and sponge reefs), other specific features*
	Strategy 1.1B Work with relevant agencies to identify priority areas and habitat for restoration; develop, implement and build on existing restoration plans. *Examples – Eelgrass beds, estuaries*
	Strategy 1.1C Develop and implement effective communications and outreach strategies to increase awareness and understanding of natural history values and their sensitivity to human activities, natural disturbances, and environmental change.
	Strategy 1.1D Identify and protect natural history sites and areas in and around Haida Gwaii, including limiting human use and preventing the removal of fossils.

Obj 1.2	Encourage responsible and respectful marine tourism.
	Strategy 1.2A Develop additional guidelines and/or codes of conduct to minimize the ecological, social and cultural impacts of marine tourism activities where necessary. *Examples – Guidelines for recreational fishing, beachcombing, wildlife viewing activities; information on local culture and values, environmentally sensitive practices, appropriate conduct, safety. Some codes of conduct could be site or activity-specific where appropriate.*
	Strategy 1.2B Assess impacts and implement measures as necessary to minimize impacts of motorized vehicles in marine intertidal areas. *Examples – Kagan Bay, East Beach (Tlell to Rose Spit), North and South Beach, Grey Bay, Skidegate Beach*
Obj 1.3	Identify and minimize ecological impacts of marine energy projects.
	Strategy 1.3A Work with federal agencies to minimize impacts of marine-based energy projects and implement best management practices, including mitigation measures.
	Strategy 1.3B Promote marine-based energy projects that increase Haida Gwaii energy self-sufficiency and decrease dependency on imported fossil fuels, as appropriate. *Example –Tax breaks and other incentives*
Obj 1.4	Minimize ecological impacts of shellfish or marine plant aquaculture activities.
	Strategy 1.4A Consider potential ecological impacts when evaluating shellfish or marine plant aquaculture tenure applications.
	Strategy 1.4B Work with relevant agencies as appropriate to minimize potential negative impacts of shellfish or marine plant aquaculture operations. *Examples – Unintended introduction of exotic species, impacts from new and emerging aquaculture products*
Obj 1.5	Minimize ecological impacts of wild marine plant harvesting activities.
	Strategy 1.5A Consider potential ecological impacts when evaluating marine plant harvest tenure applications.

Photo - Lynn Lee

Issue 2: Threats to biodiversity and declines in ecosystem health	
Obj 2.1	Establish a network of marine protected areas that protects representative communities and habitats and special marine areas, and contributes to seascape ecosystem representation and resilience.
	Strategy 2.1A Identify protection management zones based on criteria that may include ecological, scientific, cultural, socioeconomic, historical and/or spiritual significance, and assemble sites into effective networks, including consideration of connectivity, ecosystem resilience and representation. *Example – Implementation of a Marine Protected Area network for the North Pacific Coast, including Haida Nation engagement*
	Strategy 2.1B Implement a network of marine protected areas using Haida, provincial and federal authorities and management systems and with participation and input of local government, stakeholders and other interested parties.
	Strategy 2.1C Apply interim protection measures as tools for temporarily managing protection management zones as appropriate. *Examples – Notations of interest and/or map reserves*
Obj 2.2	Account for cumulative effects of marine activities on the marine ecosystem
	Strategy 2.2A Assess cumulative effects of multiple activities and stressors on marine ecosystems. *Examples – Build on measures recommended in the MaPP Cumulative Effects Framework (2014); Identify information gaps and support research to enable cumulative effects assessment of all marine activities and stressors on the marine environment, including thresholds of change.*
Issue 3: Threats to species of concern	
Obj 3.1	Protect, recover and monitor species of concern.
	Strategy 3.1A Work with relevant agencies to support continued implementation of the Rockfish Conservation Strategy.
	Strategy 3.1B Support ongoing efforts to implement community action plans and recovery plans for Northern Abalone. *Example – Support Haida Gwaii Abalone Community Action Plan and the work of the Haida Gwaii Marine Stewardship Group, including efforts to reduce illegal harvest.*
	Strategy 3.1C Support existing and new research that furthers understanding of potential ecological, social, cultural and economic implications of the natural return of Sea Otter to Haida Gwaii waters.
	Strategy 3.1D Work with relevant agencies, as necessary, to develop and implement recovery plans and review existing regulations to strengthen protection of listed species at risk. *Examples – Great Blue Heron (nesting and feeding areas); Bocaccio; Northern Resident Killer Whale; other marine species listed by COSEWIC and SARA (see list of species in Appendix 4) and by BC and the IUCN.*
	Strategy 3.1E Work with relevant agencies to identify additional marine species of concern and significant habitat, and initiate and/or participate in the development and implementation of recovery plans.
	Strategy 3.1F Work with other agencies/processes to research and assess the occurrence of "whale strikes" by vessels and identify and implement strategies to minimize their frequency.

Issue 4: Impacts of invasive species	
Obj 4.1	Minimize the introduction and impacts of invasive species.
	Strategy 4.1A Review effectiveness of existing regulations, Best Management Practices and/or Codes of Practice related to the provincial tenure or CHN management of aquaculture, such as the BC Aquaculture Codes of Practice, and make changes as necessary to prevent the spread of invasive species to Haida Gwaii. Example – Introduced species of concern include green crab and non-native tunicates
	Strategy 4.1B Work with federal agencies to develop management plans that include monitoring, evaluation and management actions for invasive marine species throughout Haida Gwaii.
	Strategy 4.1C Develop and implement an educational communication and outreach plan to prevent the introduction, establishment and spread of invasive marine species.
	Strategy 4.1D Review the effectiveness of current regulations and guidelines for potential transfer mechanisms (e.g., construction materials, boat trailers) and recommend changes as necessary.
Issue 5: Incomplete knowledge of biodiversity and ecology of Haida Gwaii	
Obj 5.1	Establish and support long-term monitoring programs for ecological health.
	Strategy 5.1A Develop objectives and indicators for monitoring ecological health, and review and assess existing Haida Gwaii monitoring programs or develop new programs as necessary. *Examples – Key species and habitats, support for legacy time series data sets and monitoring programs*
Obj 5.2	Support research initiatives and projects that improve understanding of Haida Gwaii ecosystems.
	Strategy 5.2A Initiate and support collaborative research initiatives.
	Strategy 5.2B Establish a Haida Gwaii database of research projects. *Examples – Ecological and social research, including natural history sites*

Tyson Brown

6.4 ECOLOGICAL ISSUES RELATED TO THE FISHERIES ECONOMY

On a global scale, recent studies have shown clear evidence of overexploitation of fish stocks, changes in ecosystem functioning and damage to fish habitat that threaten the long-term viability of many of the world's fisheries. The Marine Plan focuses on the long-term sustainability of fisheries in Haida Gwaii waters, with the goals of preventing negative trends and restoring degraded fish populations and habitat.

Fisheries must be ecologically sustainable, which means maintaining stocks and species at levels that do not limit future options while ensuring the capacity of ecosystems to maintain their essential functions and processes and retain biodiversity. Overall it requires a precautionary approach to management or *Yahguudang* (see Section 3). Ecological sustainability is critical for social, economic, cultural and political aspects of sustainability including community sustainability that are addressed in Section 6.5 (Human Well-being) and Section 7 (Haida Gwaii Marine Economic Development Direction). On Haida Gwaii, there are three general types of fisheries:

- Haida traditional fishing occurs throughout Haida Gwaii and is an important aspect of Haida culture. Continuity of traditional fishing and cultural fishing practices and activities are critical to the future of Haida communities.
- Recreational fishing is a significant activity in Haida Gwaii. Anglers originate from BC, other parts of Canada, and other countries. Recreational fishing is also an important source of food for many island families throughout the year. Anglers target salmon and halibut but lingcod and rockfish are also targeted in lesser quantities.
- Commercial fisheries have been and continue to be an important part of the marine economy of Haida Gwaii.

Any fishing has the potential to affect ecosystems by disturbing habitat or disrupting food webs, or by causing a variety of indirect effects. Fisheries management in Canada has evolved in recent years in an effort to provide a more precautionary approach to harvest management. Examples include requirements to develop science-based Integrated Fisheries Management Plans and the application of a Sustainable Fisheries Framework to various fisheries, including establishment of thresholds for management.

While many fish stocks in Haida Gwaii are healthy, others are depressed or at risk. A number of third-party assessments of fisheries measure the sustainability and stewardship of specific BC fisheries that occur in Haida Gwaii waters. The methodologies of four such assessments are described in Appendix 5. The review of these fisheries assessments was used, along with local knowledge, to identify objectives and strategies that will address ecological issues related to fisheries sustainability. Species and activities of particular concern that were identified based on the four fisheries assessments include rockfish (longline) and groundfish (trawl). Additional fisheries of concern, identified based on local knowledge and input, are Pacific Herring (seine and gillnet), Geoduck and Red Sea Urchin (dive).

Fisheries assessments based on single-species models and current fishery management plans address some but not all issues associated with sustainable fisheries management. Ultimately, fisheries sustainability requires ecosystem-based fisheries management that considers interactions between species and the impacts of individual fisheries on the Haida Gwaii marine ecosystem as a whole.

Ecological impacts are relative to the size of a fishery and its individual characteristics. Fisheries are listed in Table 6-4 below from largest to smallest (commercial, recreational). Other aspects of fishing are addressed in Section 6.1 (Governance and Integrated Management), Section 6.3 (Ecological Values and Significant Features), Section 6.5 (Human Well-being) and Section 7 (Haida Gwaii Marine Economic Development Direction).

Table 6-4 lists objectives and/or strategies for ecological issues related to the fisheries economy.

Table 6 4. Ecological issues related to the fisheries economy - management issues, objectives and strategies

Issue 1: Ecological impacts of commercial fishing	
Obj 1.1	Minimize negative ecological impacts of commercial fishing activities.
	Strategy 1.1A Continue to participate in science and management discussions with federal agencies including meetings convened by federal agencies to review fisheries assessments and integrated fisheries management plans. *Examples: DFO Centre for Science Advice Pacific meetings to review fisheries, habitat, ecosystem, Species at Risk or integrated oceans management; fisheries sector planning and advisory committees*
Obj 1.2	Promote ecologically, culturally and socially sustainable commercial fishing activities.
	Strategy 1.2A Work with relevant agencies to develop and implement ecosystem-based management objectives.
	Strategy 1.2B Support research to investigate ecosystem effects of fishing.
Obj 1.3	Apply a precautionary approach or *Yahguudang* to new and emerging fisheries.
	Strategy 1.3A Cooperate in assessing potential for new and emerging fisheries that may be considered for Haida Gwaii.
Issue 2: Ecological impacts of recreational fisheries	
Obj 2.1	Work to address conservation, cultural and sustainability concerns.
	Strategy 2.1A Develop and implement a Haida Gwaii recreational fishery management plan for provincially tenured or CHN managed activities that address social, cultural and ecological carrying capacity limits for existing and any new operations or fishing areas. *Examples – Build on existing agreements and relevant documents such as the 1994 Commercial Recreational Fishery Plan and recreational fishery protocol agreements*
	Strategy 2.1B Establish regulations to manage untenured floating lodges and passenger vessels operating as resorts.
Obj 2.2	Document the extent and monitor the impacts of recreational fishing activities.
	Strategy 2.2A Work with relevant agencies and others to support the development of monitoring programs to facilitate implementation of ecosystem-based management initiatives.

6.5 HUMAN WELL-BEING

Human well-being, including cultural, economic and social values, is an integral part of the Marine Plan. For the purpose of this plan, human well-being is considered to be a state of health, happiness and/or prosperity in which individuals, families, and communities benefit from a good quality of life. A brief overview of the importance of Haida traditional use, recreational fisheries, commercial fisheries and marine infrastructure to human well-being on Haida Gwaii is provided below. Other aspects of human well-being are addressed in other sections of the General Management Direction.

Successful Haida traditional use, such as fishing, hunting and gathering, requires access to a range of healthy resources. Traditional use activities are defined by the seasons and are based on the principles of respect and taking only what is needed, which is consistent with the concept of sustainable use and stewardship. Greater awareness is needed of Haida traditional use and stewardship activities and the importance of these activities in Haida communities.

Throughout Haida Gwaii, many residents rely on fishing to feed themselves, their families and other community members. This plan recognizes that local food security is an increasing consideration on Haida Gwaii and that the marine environment is an important source of sustenance for numerous island families.

The recreational fishery is an important part of the fishing sector on Haida Gwaii. The growth of this sector has resulted in a number of social and economic concerns, including limited economic benefits to the people of Haida Gwaii, potential impacts on Haida traditional use of marine resources, and access to marine areas by island residents.

A broad range of commercial fisheries occur in Haida Gwaii waters. However, there are fewer and fewer locally owned and operated commercial fishing licences, and seafood processing plants struggle to access fish and maintain seasonal employment. This plan seeks to reverse this direction by supporting a locally-based fishing economy with meaningful local involvement in the management of those fisheries.

Finally, Haida Gwaii is a remote archipelago, so residents and visitors rely on marine transportation for safe travel to, from and around the islands. Shipping delivers supplies to businesses and households — barges and BC Ferries bring fuel and freight, including groceries and other necessary goods. Close to population centres, docks, marinas, fuel stations and boat ramps are critical marine infrastructure. Maintaining marine infrastructure is necessary to sustain a healthy island economy and enable vibrant and self-reliant communities.

Human well-being in relation to traditional use, fishing and marine infrastructure raises general issues regarding local participation in, and economic benefits from, fishing sectors; traditional and local access to foods; marine-focused education and communication; and the importance of marine infrastructure to day-to-day life on Haida Gwaii. The Marine Plan addresses these issues with the goal of sustaining marine-based livelihoods, lifestyles and culture.

Table 6-5 lists objectives and/or strategies related to human well-being.

Table 6 5. Human well-being - management issues, objectives and strategies

Issue 1: Loss of access to local foods	
Obj 1.1	Ensure access for traditional use activities.
	Strategy 1.1A Identify activities that conflict with traditional use and stewardship and proactively manage to provide for current and future use. *Examples – Access to marine resources, spatial conflicts, tenure application process*
Issue 2: Spatial conflicts between marine uses	
Obj 2.1	Work to resolve spatial conflicts between different marine activities.
	Strategy 2.1A Periodically review and assess existing and potential conflicts. *Examples – Crab traps and ferries, boat traffic, anchorages and sensitive areas*
	Strategy 2.1B Periodically update marine plans to account for changes in marine uses. *Examples – Zoning of marine uses; designation of Particularly Sensitive Sea Areas by the International Maritime Organization*
Issue 3: Conflict between recreational fishing and traditional activities and values	
Obj 3.1	Ensure respectful and responsible recreational fishing activities that consider both local and traditional values.
	Strategy 3.1A Encourage establishment of Protocol Agreements between the Haida, BC and recreational fishery service providers. *Examples – Manage lodge growth rates and commit to sustainable fishing practices; joint management*
Issue 4: Lack of education and communication about Haida traditional use and stewardship, and island values	
Obj 4.1	Increase awareness and understanding of traditional use of marine resources.
	Strategy 4.1A Develop and implement communication and interpretive education programs to inform Haida Gwaii communities and the general public about traditional use activities and stewardship. *Examples – Educational material for public outreach; communicate with fishing lodges and guests about upcoming net fisheries and other traditional use activities*
	Strategy 4.1B Support programs and activities that encourage involvement of youth in traditional activities. *Example – Rediscovery camps*

Obj 4.2	Ensure that commercial and recreational fishing practices are consistent with Haida traditional and island values.
	Strategy 4.2A Establish and implement a Haida Gwaii Code of Conduct for responsible recreational fishing. *Examples – Support development of alternative activities during fishing trips; establish maximum acceptable soak times for trap gear; remove abandoned gear*
	Strategy 4.2B Develop and implement public outreach and education initiatives to promote best practices and Haida Gwaii fishing ethics.
	Strategy 4.2C Support and modify existing recreational fishing guide training programs to promote best practices and Haida Gwaii fishing ethics.
Issue 5: Maintenance of marine infrastructure	
Obj 5.1	Maintain sufficient marine access and infrastructure.
	Strategy 5.1A Assess and identify needs and locations for marine infrastructure and public access. *Examples – Breakwater and piling near Queen Charlotte boat ramp, marine ways*
	Strategy 5.1B Recommend that BC Ferries maintain services at a reasonable cost and regularity to and from Haida Gwaii and between Skidegate Landing and Alliford Bay.

Photo - Jags

6.6 MARINE POLLUTION AND SPILLS

Marine pollution refers to pollutants or substances, such as chemicals, that enter the ocean from human-related sources (including spills) and which may have harmful effects on the marine environment or species. Key contaminants include sewage, plastics and litter, and petroleum spills. Marine pollution can arise from terrestrial run-off, local vessels or facilities, or passing ships, or it can be carried from afar by ocean currents or winds. Management of marine pollution includes regulations to avoid discharges and measures to respond to spills or marine emergencies. Haida Gwaii has virtually no capacity to respond effectively to marine emergencies, such as loss and foundering of vessels, loss of cargo, chemical and oil spills. Building an effective emergency response capability is a high priority for the islands and the overall region.

Haida Gwaii has limited industrial or agricultural development. However, sewage discharges into local waters occur from septic fields, municipal outfalls or floatcamps. This has resulted in sanitary shellfish closures and can affect future economic opportunities, such as shellfish aquaculture. Small vessels are another local source of oily bilge water, sewage and litter.

Ship traffic is increasing in Haida Gwaii waters due to the development of ports in Prince Rupert, Kitimat and Stewart. Cruise ships also regularly pass through Haida Gwaii waters en route to Alaska. Industrial development such as proposed oil pipelines and liquefied natural gas (LNG) facilities could result in a further increase in the number of large vessels transiting Haida Gwaii. Incidental release of oil and other contaminants from ships' bilges can result in chronic and harmful exposure of marine organisms, such as seabirds, to pollutants. There is also the increased risk of oil spills. In addition, cargo from transport vessels is sometimes lost and may drift ashore. Ocean noise due to increases in marine traffic and development of marine infrastructure can have negative impacts on marine life, such as whales and other marine mammals.

Table 6-6 lists objectives and/or strategies related to marine pollution and spills. Pollution from other sources is addressed in Section 6.7 (Logging-related Marine Activities) and Section 6.8 (Climate Change).

Table 6 6. Marine pollution and spills - management issues, objectives and strategies

Issue 1: Pollution in the marine environment	
Obj 1.1	Minimize pollution and harmful noise from human activities and infrastructure.
	Strategy 1.1A Work with relevant agencies and local governments as necessary to identify, assess and monitor potential marine pollution from sewage, and upland and ocean sources. *Examples – Contamination from septic fields, offal waste from fish processing plants, shellfish aquaculture, electrical fields, marine vessels, lodges, ocean and stream debris, mine sites and log sorts*
	Strategy 1.1B Work with relevant agencies, local governments, and any new or existing processes to promote high environmental standards for the marine industry and infrastructure in BC. *Examples – Review current regulations for dumping/on-board storage/treating of bilge water, waste and ballast water, and recommend amendments, as appropriate; evaluate the use of harmful chemicals in the marine environment by marine vessels (e.g., tributyltin anti-fouling paint) and marine-related infrastructure (e.g., treated wood for docks) and manage, as appropriate; assess and monitor waste disposal and pollution from land-based and floating camps; assess current infrastructure and encourage development of additional waste disposal infrastructure and services, as appropriate; promote the use of cleaner fuels*
	Strategy 1.1C Review existing provincial and federal policies for the assessment of development projects and prevention of pollution, including waste disposal, and work with relevant agencies to implement best practices. *Example – Develop plans for treatment of any raw sewage that is disposed into marine waters*

	Strategy 1.1D Assess and mitigate as necessary the effects of light sources originating from lodges and vessels that attract birds and impact bird survival, especially those light sources in proximity to seabird colonies.
	Strategy 1.1E Require rigorous assessment of proposed geo-engineering projects, including sound scientific rationale and appropriate permitting. *Example – Ocean fertilization*
Obj 1.2	Reduce the amount of waste and garbage in Haida Gwaii waters and shorelines.
	Strategy 1.2A Work with different levels of government and community groups to reduce waste entering the marine environment and develop a coordinated response to the cleanup and disposal of marine debris, including potential hazardous waste. *Examples – Marine debris from Japanese tsunami, garbage from ships, plastic on Haida Gwaii beaches from various sources*
	Strategy 1.2B Work with relevant agencies and others (e.g., local governments, US agencies) to develop emergency preparedness action plans in response to major accidents or events that may result in the release of marine debris. *Examples – Future tsunamis, container spills*
Obj 1.3	Ensure sufficient prevention of, and response capacity for, accidents and marine spills.
	Strategy 1.3A Work with relevant agencies and others to increase marine spill response training, preparation and equipment for effective response to local and regional spills or accidents. *Examples – Haida Gwaii response training, local/regional response equipment*
	Strategy 1.3B Work with relevant agencies and others to identify sensitive locations and develop plans for marine spill and groundings response. *Examples – Sensitive ecological habitats, important harvesting areas; Geographic Response Plans*
	Strategy 1.3C Work with relevant agencies and others to increase measures to prevent accidents or spills. *Examples – Rescue tugs, increased vessel traffic control*
	Strategy 1.3D Work with others to establish an independent fund or augment existing funds to support prevention, response and rehabilitation activities. *Example – Ship-source Oil Pollution Fund*

Photo - Kelly Whitney-Squire

6.7 LOGGING-RELATED MARINE ACTIVITIES

Forestry remains an important part of the Haida Gwaii economy. It is directed by the Haida Gwaii Strategic Land Use Agreement, signed in December 2007, and is regulated by the Haida Gwaii Land Use Objectives Order, signed in 2010. The impacts of logging activities extend from watershed headwaters to the ocean —sedimentation from upland sources and pollution from oil and other contaminants affect marine ecosystems downstream. Log booming activities can result in increased sedimentation, accumulation of bark under booming areas, and physical disturbance due to grounding, propeller wash and other vessel-caused disturbances. The frequency of log barge traffic has decreased in recent years due to reduced forestry operations on the islands, yet log booming grounds and sedimentation continue to affect rivers, streams and estuaries. The visual impacts of coastal forestry activities also affect marine-based tourism activities.

The effects of logging on salmon production in Haida Gwaii's freshwater systems are of concern, although practices have improved. Implementation of restoration initiatives and associated management actions should continue to be a priority for Haida Gwaii land use managers. Effects of land-based operations on the marine environment need to be better understood and addressed.

Table 6-7 lists objectives and/or strategies for logging-related marine activities.

Photo - Anuradha Rao

Table 6 7. Logging-related marine activities - management issues, objectives and strategies

Issue 1: Ecological impacts of logging-related activities	
Obj 1.1	Minimize ecological impacts of logging-related activities on marine areas.
	Strategy 1.1A Assess marine impacts of logging activities such as helidrop sites, log sorts, barging and log booming operations and develop and apply best management practices for potentially impacting activities. *Examples – Siltation of foreshores and estuaries, bark debris, buffers along shorelines*
	Strategy 1.1B Monitor floating camps, barges and land-based facilities for potential marine ecological impacts, and develop best practices and mitigation strategies for their use. *Examples – Fuel and waste pollution, Beattie Camp (Louise Isand), other sites to be identified*
	Strategy 1.1C Ensure that all logging-related activities are authorized through appropriate tenuring processes that consider ecological impacts of proposed activities.
Issue 2: Continuing degradation of sites due to logging-related activities	
Obj 2.1	Improve habitat under and around past and current log sorts, booming areas and other areas impacted by logging and related activities.
	Strategy 2.1A Identify past log sorts, booming areas and other areas affected by logging-related activities, assess sites for habitat restoration, and develop, implement and prioritize restoration plans, as appropriate. *Examples – Log sorts, sedimentation issues in estuaries*
	Strategy 2.1B Maintain a rigorous compliance and enforcement regime to ensure high ecological standards are adhered to at active log sorts and booming sites. *Examples – Masset Inlet–Ferguson Bay; Skidegate Inlet–Queen Charlotte, Jake's Landing, South Bay, Alliford Bay; West Coast–Shields Bay, Newcombe Inlet; regular monitoring of active log sorts*
	Strategy 2.1C Identify funding opportunities for habitat restoration plans on Haida Gwaii. *Example – Explore opportunities for fees levied against logging companies for habitat damage to directly fund local restoration*
Issue 3: Impact of logging in shoreline areas on viewscapes	
Obj 3.1	Maintain the quality of scenic views of the shoreline from the water.
	Strategy 3.1A Consider visual effects and views from the marine environment in the management of logging in the vicinity of marine areas. *Example – Views important to local communities and recreation and tourism activities*

6.8 CLIMATE CHANGE

The continued release of greenhouse gases into the atmosphere is contributing to global climate change. Rising sea levels and changing ocean circulation patterns will lead to regional and localized effects that will have ecological, economic, social and technological consequences. Communities must find ways to adapt to climate change and mitigate its potential impacts.

Changing climates are likely to cause a range of shifting conditions including but not limited to: rising sea levels, increasing ocean temperatures, changing water chemistry (pH, dissolved oxygen), changing precipitation patterns, and more frequent and severe storms. Predictions of future climate and oceanic conditions are difficult to make and they are further complicated by the variable oceanographic conditions in and around Haida Gwaii due to its location near the transition zone between the California and Alaskan Currents.

Some marine species are more sensitive than others to environmental changes and research has shown that whole ecosystems in northern latitudes are relatively more susceptible to temperature changes compared to ecosystems in southern latitudes. This sensitivity may lead to changes in the distribution and abundance of commercially and culturally important species. Current research shows that changes in ocean acidity are not only happening more rapidly, but the consequences may be more dire than first expected. As carbon dioxide concentrations increase in the atmosphere, so does the amount of carbon dioxide that dissolves in sea water, which results in more acidic oceans. This, in turn, has negative effects on shell formation in corals, mollusks and crustaceans. Other effects of acidification on species may include decreased reproductive and recruitment success, shifts in species composition and distribution, changes in timing of growth and development stages, physiological impairment, and altered prey availability. These changes could lead to larger-scale ecosystem effects, such as shifts in food web structure.

These large-scale changes are altering ecosystem dynamics and productivity. Increased stress affects the resilience and health of ecosystems that are already under pressure from a variety of threats, including loss of coastal habitats, loss of wetlands, freshwater diversion, sedimentation, overexploitation of marine resources and pollution. These threats may have cumulative effects on species or ecosystem function. It will be a challenge to manage fish habitat and fisheries given the uncertainty around interacting stressors and climate change.

Haida Gwaii has several low-lying coastal communities that are vulnerable to sea level rise and extreme weather events. All communities on Haida Gwaii depend on goods delivered from the mainland via transportation linkages that are susceptible to interruption due to intense storm events. Similarly, on-island transportation routes and power and communications transmission are affected by weather. The communities of Masset, Old Massett, Tow Hill, Tlell and Sandspit are low-lying and particularly vulnerable to the long-term effects of climate change. Island-wide, communities would benefit from proactive planning to prepare for, mitigate, and adapt to the effects of climate change.

Table 6-8 lists objectives and/or strategies related to climate change.

Table 6 8. Climate change - management issues, objectives and strategies

Issue 1: Climate change resulting in alterations to ocean ecosystem production and dynamics	
Obj 1.1	Prepare and manage for large-scale ecological changes as a result of climate change.
	Strategy 1.1A Establish a network of marine protected areas to increase resilience and protect marine habitats and biodiversity. In particular consider climate change in the siting and design of the network. *Examples – Emphasize network design criteria that promote ecosystem resilience, such as size and connectivity; include protection of ecosystems that are efficient at sequestering "blue carbon" (e.g., eelgrass, wetlands, kelp beds)*

	Strategy 1.1B Conduct a climate change risk assessment for Haida Gwaii to identify and prioritize risks.
	Strategy 1.1C Consider climate change in the selection of ecosystem indicators and development of adaptive management plans.
Issue 2: Changes in fisheries and aquaculture due to climate change	
Obj 2.1	Support collaborative efforts to monitor and manage changes in marine systems due to climate change.
	Strategy 2.1A Consider the effect of climate change on the locally important fisheries economy, particularly in the selection of indicators and development of adaptive management plans.
	Strategy 2.1B Support collaborative efforts to identify, research and evaluate potential new opportunities for the fisheries as a result of climate change.
	Strategy 2.1C Consider the effect of climate change on new and existing shellfish aquaculture operations, particularly in the development of adaptive management plans.
Issue 3: Communities are vulnerable to impacts of climate change	
Obj 3.1	Reduce community vulnerability to climate change impacts and support resilience.
	Strategy 3.1A Support communities in the development of adaptation strategies and actions to prepare for or respond to impacts.
	Strategy 3.1B Using adaptive planning, identify and mitigate the vulnerability of critical marine infrastructure to natural hazards caused by climate change impacts. *Examples – Wharves, erosion protection, docks, emergency facilities*
	Strategy 3.1C Increase public awareness of climate change and future impacts through various forms of community outreach and public education.
	Strategy 3.1D Support the development of community emergency response plans and general household level of preparedness for emergency situations. *Examples – Food/water supplies, power outages, fuel, heating/lighting sources*
	Strategy 3.1E Manage and adjust regional and local stressors to minimize cumulative stress on the ecosystem (e.g., fishing, pollution, coastal development).
Issue 4: Increasing greenhouse gas emissions on a global scale	
Obj 4.1	Contribute to provincial, regional and local efforts to reduce greenhouse gas emissions.
	Strategy 4.1A Support BC's Climate Action Plan to meet greenhouse gas reduction targets and develop regional and local strategies. *Example – Work with communities and local government to develop an energy plan for Haida Gwaii (including local energy targets)*

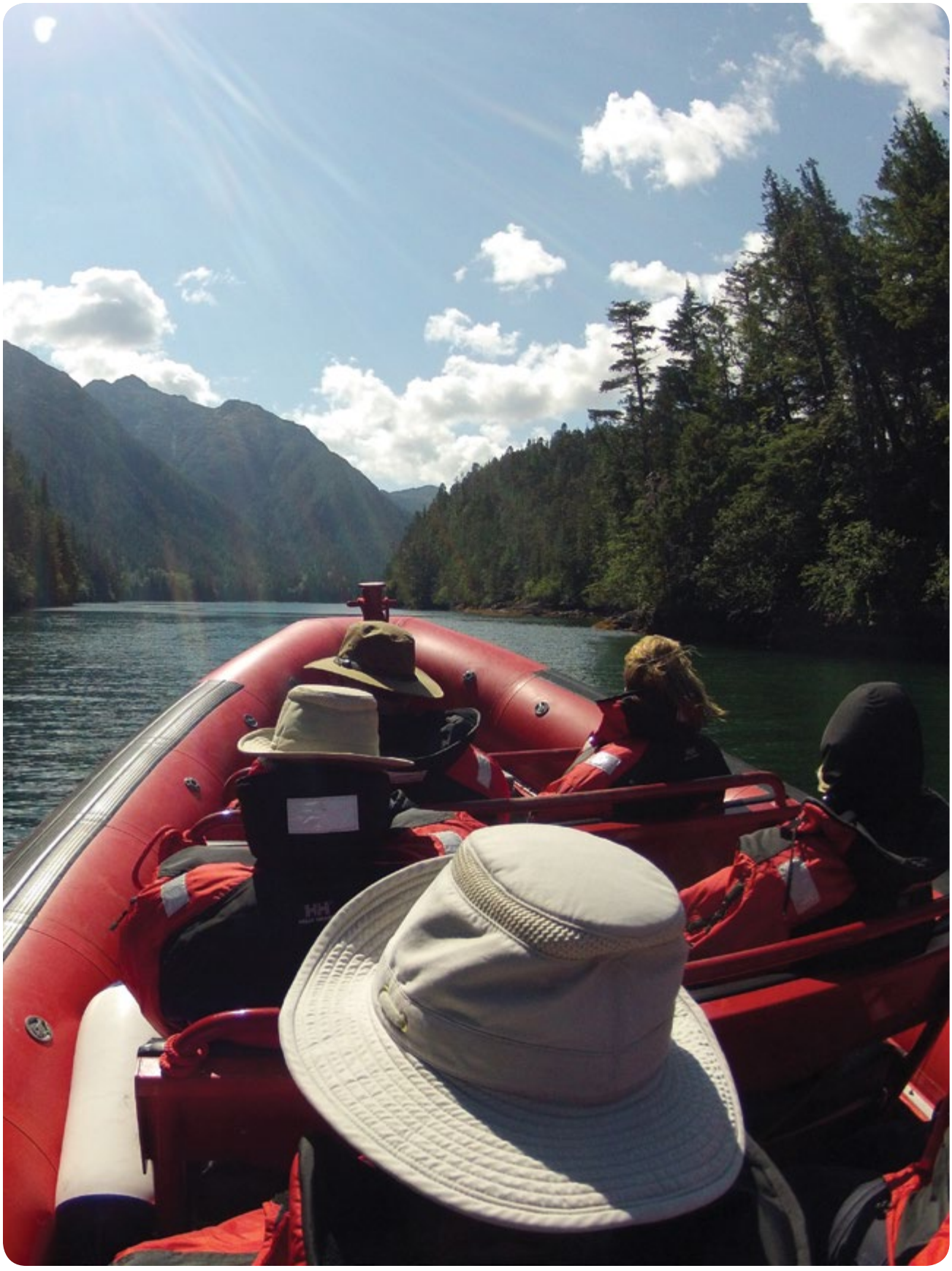


Photo - Haida Style Expeditions

7. HAIDA GWAII MARINE ECONOMIC DEVELOPMENT DIRECTION

Haida Gwaii's island-based economy has always been closely linked to the ocean. In recent decades, the marine economy of Haida Gwaii has declined in importance due, in part, to regional and global market changes. This is generally considered to be a loss to island society. Increasing marine economic development opportunities on Haida Gwaii is a critical element of this plan.

A healthy marine economy would balance traditional and emerging sectors, guided by a clear vision of the future. As described in Section 3.3, different future scenarios were explored in an expert workshop to determine their suitability for Haida Gwaii. The results were synthesized and a preferred scenario was developed which describes a vision for the future that highlights environment, economy, community and governance.

This section focuses on five activities in Haida Gwaii that have potential for future growth:

- **Marine tourism**, positioning Haida Gwaii as a premier tourism destination;
- **Shellfish aquaculture**, marketing sustainable aquaculture products;
- **Community-based fisheries economy**, based on sustainable wild fisheries;
- **Marine research and monitoring**, particularly to support the conservation of marine ecosystems and EBM approaches to management; and
- **Marine-based renewable energy**, such as new wind or tidal energy projects.

The first four sectors were identified during the workshop that evaluated future scenarios for the Haida Gwaii marine economy. They were selected because they were considered to be consistent with the overall vision for Haida Gwaii's future: a conservation and local economy path, taking advantage of sustainable technologies and linking to the global economy where appropriate. They all require sustained investment in infrastructure and human resources.

Marine-based renewable energy was identified as another emerging marine sector by the Haida Marine Work Group and Haida Gwaii Marine Advisory Committee. This sector is also consistent with the overall economic vision for Haida Gwaii, due to its focus on sustainable technologies.

These activities share some common elements, including reliance on transportation and the need to support investment in human resources and strategic partnerships. Marine transportation is essential to all forms of marine economic development on Haida Gwaii; island communities are strongly reliant on marine transportation links to the mainland.

Local employment and training opportunities are vital to healthy island communities. The overall population of Haida Gwaii has declined over the last 20 years and the median age of residents has increased as younger residents and families move off-island for skills training and jobs. Partnerships and capacity building will be critical to ensure local benefits that contribute to a stable population base on Haida Gwaii.

Marine economic development is a priority on Haida Gwaii and at broader regional and coastal scales. One of the key outputs of the MaPP process is the development of integrated economic strategies. This includes recommendations and/or strategies for improving the viability of marine economic sectors at a regional scale, and the identification of opportunities for, and constraints to, increased economic activity, including potential and existing policies and programs within sub-regions, including Haida Gwaii.

The PNCIMA process has also identified integrated economic strategies as a priority issue for marine planning. In particular, the PNCIMA plan commits to an assessment of current and emerging social and and cultural conditions in PNCIMA and the economic opportunities available to PNCIMA sub-regions. Linking Haida Gwaii marine economic objectives and strategies to MaPP and PNCIMA-scale outcomes is another means of rebuilding a robust and healthy marine economy on Haida Gwaii.

Many of the objectives and strategies listed below can be achieved through initiatives that are already underway. Examples include programs such as DFO's Pacific Integrated Commercial Fisheries Initiative, which facilitates the transfer of commercial licences and assets to First Nations. The CHN Fisheries Program and the Coastal First Nations - Great Bear Initiative are also working to coordinate marine training and education opportunities, including programs that may be used by Haida citizens as part of the strategy to increase participation in marine sectors. This is all occuring against the backdrop of ongoing reconciliation talks between the governments of Canada, BC and the Haida Nation—negotiations that aim to confirm government commitments to the Haida Gwaii economy and thereby strengthen sustainable Haida (and broader Haida Gwaii) communities in the future.

7.1 MARINE TOURISM

Marine tourism on Haida Gwaii is comprised of recreational fishing and other eco/cultural/adventure tourism activities. The term "recreational fishing" covers a variety of activities, including those of recreational fishery service providers (such as operators of fishing lodges and charter fishing companies), and self-directed recreational fishing (where the fishermen use their own equipment).

On average, recreational fishing has been increasing since the mid-1980s and is now the largest tourism-related activity on Haida Gwaii. Data from the 2010 Survey of Recreational Fishing in Canada reported approximately 100,000 angler days of recreational fishing on Haida Gwaii, with an estimated angler spending of $56.0 million to the provincial economy, including travel to and from the islands. Two-thirds of this reflects spending on recreational fishing packages, including to fly-in lodges. The main fish species targeted by the recreational fishermen are Coho and Chinook Salmon and Pacific Halibut. Fishing lodges have increased in number and capacity (number of beds) over the last 25 years and are estimated to account for 70-75 percent of reported recreational catches. The number of resort lodges on Haida Gwaii has grown from a single lodge and occasional charter effort in 1985 to 18 lodges and 55 charter operations in 2010. Recreational fishing contributes to the diversity of marine tourism activities available to visitors to Haida Gwaii.

The natural beauty of Haida Gwaii, its remoteness and the sense of wilderness, and the appeal of Haida culture continue to attract visitors from Canada and abroad. The designation of Gwaii Haanas has brought global attention to the archipelago. The area was designated as a Haida Heritage Site by the Haida Nation in 1985 and then by Canada, who established the terrestrial component as a National Park Reserve in 1987, followed by the marine component as a National Marine Conservation Area Reserve in 2010. Although many eco/cultural/adventure tourism operators focus primarily on the Gwaii Haanas area, some also conduct tours in others parts of the islands. Marine tourism activities typically include kayaking, surfing, beachcombing, and visits to cultural areas.

Due to the remote nature of the islands, visitors who come to Haida Gwaii often stay longer than they might at a mainland destination; therefore the spin-off effects within communities are significant. Accommodation, and food and retail outlets benefit from tourism dollars, and facilities such as the Haida Heritage Centre at *Kay Llnagaay* and the other smaller community museums draw visitors by celebrating Haida culture and island heritage.

Table 7-1 lists objectives and/or strategies to support the growth of the marine tourism industry on Haida Gwaii.

Table 7 1. Marine tourism - management issues, objectives and strategies

Issue 1: Opportunities for economic development related to marine tourism	
Obj 1.1	Assess opportunities for marine tourism and encourage tourism development in suitable locations.
	Strategy 1.1A Conduct a marine tourism feasibility and impact assessment that evaluates tourism potential and identifies factors limiting tourism development. *Examples – Consider opportunities for expanding the tourism season past September (e.g., storm watching, wildlife viewing [seals, whales] and adventure tourism [remote west coast trail, scuba diving])*
	Strategy 1.1B Identify locations that are key to the visitor experience and promote and manage opportunities. *Examples – Kayaking, boating/yachting, recreational fishing, beach walking, camping, safe anchorages, road and access points, campsites, trails, surfing, diving*
	Strategy 1.1C Identify appropriate levels of tourism activity in specific locations as necessary. *Examples – Use quotas or business licences; limits on numbers of visitors (per location or per day)*
	Strategy 1.1D Identify opportunities for improvement of local tourism infrastructure. *Examples – Boat launches and marinas*
Issue 2: Quality of visitor experience	
Obj 2.1	Market and promote sustainable products and consistent visitor experiences.
	Strategy 2.1A Support development of more market-ready tours and visitor experiences.
	Strategy 2.1B Promote recognized operator accreditation and certification standards.
	Strategy 2.1C Identify and promote authentic experiences, including support for local special events. *Examples – Organize large special events to draw visitors (e.g., salmon festival, Haida cultural festivals, food festivals, artist exhibitions)*
	Strategy 2.1D Encourage delivery of comprehensive and coordinated visitor services that align with market development. *Examples – Market-ready visitor packages; coordinating visitor centres, websites and social media; destination brochures*
	Strategy 2.1E Develop outreach programs for visitors. *Examples – Tourism education and information packages, orientations*
Issue 3: Limited regional, national and international awareness of Haida Gwaii	
Obj 3.1	Promote Haida Gwaii as a tourism destination.
	Strategy 3.1A Identify a lead group or organization, mandated to represent all island communities, to be responsible for increasing the islands' exposure. *Example – Target marketing at appropriate audiences*

Strategy 3.1B Support development of a Haida Gwaii brand that can be used for marketing tourism and other products.

Strategy 3.1C Identify funding sources, including revenue-generating opportunities that can support tourism destination marketing and development of community services.

Examples – Provincial programs, membership fees for tourism operators, hotel tax, user fees, operator fees such as for potential cruise ship business

Issue 4: Capturing local economic benefits from marine tourism on Haida Gwaii

Obj 4.1 Increase local economic benefits from marine tourism.

Strategy 4.1A Work to provide training opportunities in the marine tourism sector.

Example – Support local recreational guide training programs

Strategy 4.1B Encourage local hiring, purchasing and business opportunities in the marine tourism sector.

Examples – Recreational fishery boats and lodges to preferentially employ persons that are Haida or other island residents; community-based hiring offices; local processing of recreationally-caught fish, local purchasing of supplies by tourism operators where possible

Strategy 4.1C Encourage youth to pursue training and certifications to work in the marine tourism sector.

Examples – Job fairs and presentations to high school students; high school work experience programs

Issue 5: Perception that tourism development could negatively change island communities

Obj 5.1 Build local support for the marine tourism industry.

Strategy 5.1A Conduct local education and outreach to promote the local benefits of tourism.

Examples – Show linkages to maintenance of infrastructure and community amenities; include information about the contributions of tourism to the islands and ways to enhance the visitor experience

Strategy 5.1B Apply the principles and direction of the Heritage Tourism Strategy and other island-supported tourism guidelines.

Photo - Kelly Whitney-Squire

7.2 SHELLFISH AQUACULTURE

The harvesting of shellfish for food and cultural purposes is a long standing Haida practice, but the modern shellfish culture industry is in a fledgling stage in Haida Gwaii waters. Since the mid 1980s, there has been a variety of local trials and pilot projects to culture oysters, mussels and scallops. Currently, there are two active shellfish tenures in Haida Gwaii waters that produce scallops or oysters and a number of tenures that are in good standing but are not being actively worked or are undeveloped or under application.

Shellfish production could expand rapidly in the near future if proposed projects (currently at different stages of implementation) become operational. This includes aquaculture proposals for further production of scallops, Geoduck and Sea Cucumber. Shellfish culture is generally viewed by Haida Gwaii communities as an environmentally sustainable industry that is compatible with Haida and island values. Further, it offers a sustainable economic development opportunity with commercially viable operations providing employment and income.

Ocean acidification is a concern for shellfish aquaculture in BC. During periods of low pH levels, the calcium carbonate in the shells of shellfish larvae dissolves, resulting in mortality and failure in seed production. To date, the effects of ocean acidity on Haida Gwaii shellfish productivity are unknown.

Table 7-2 lists objectives and/or strategies to support the growth of the shellfish aquaculture industry on Haida Gwaii.

Table 7 2. Shellfish aquaculture - management issues, objectives and strategies

Issue 1: Opportunities for shellfish aquaculture development	
Obj 1.1	Assess opportunities for shellfish aquaculture and encourage development in suitable locations.
	Strategy 1.1A Work with relevant agencies to identify and support development of shellfish aquaculture in suitable areas through spatial planning and environmental assessment, including the determination and establishment of capacity limits, as appropriate to guide tenuring. *Examples – Total number and size of operations; capacity limits in shellfish aquaculture adaptive management areas*
Obj 1.2	Encourage investment and enhance economic sustainability of shellfish aquaculture tenure operations.
	Strategy 1.2A Encourage scale of operations that can mitigate the cost and locational disadvantage of locating farms in Haida Gwaii waters.
	Strategy 1.2B Encourage development of infrastructure such as a shellfish aquaculture hatchery to support Haida Gwaii operations.
	Strategy 1.2C Review the regulatory regime for shellfish aquaculture to identify opportunities for streamlining.
	Strategy 1.2D Support development of a Haida Gwaii brand that can be used for shellfish aquaculture and other products.

Issue 2:	**Capturing local economic benefits from shellfish aquaculture on Haida Gwaii.**
Obj 2.1	Increase local benefits from shellfish aquaculture.
	Strategy 2.1A Promote local processing and marketing of aquaculture products.
	Strategy 2.1B Encourage local ownership of tenures and a locally operated aquaculture industry.
	Strategy 2.1C Support training of Haida Gwaii residents for shellfish aquaculture grow-out (hatchery and farm) or processing operations.

7.3 COMMUNITY-BASED FISHERIES ECONOMY

The fisheries economy creates complex networks between fishers, their families, marine ecosystems, and the community at large. It can be viewed as a lifestyle that connects people to each other, to their communities, and to the surrounding environment.Over the last 50 years, the regional and global seafood industry has become increasingly competitive and BC industries have had to adapt and reposition. Traceability and sustainability, through eco-labelling programs, dockside monitoring programs and fisheries vessel observer programs are becoming business requirements in the industry, reflecting a growing environmental ethic and enabling better access to international markets. The ability to serve high-quality, high-value seafood to market requires proper orientation and cooperation by all the elements in the value chain, from fisheries managers and regulators to harvesters and growers to processors and distributors. Additional investments in infrastructure, equipment, product development and human resources (i.e., training) can help to ensure long-term viability of the seafood sector.

Community-based commercial fisheries refer to island-based community participation (including processing, marketing and management) in the various commercial fisheries that occur in the waters in and around Haida Gwaii. Commercial fisheries have been an integral part of Haida Gwaii's history to the present day. Since the 1970s, however, there have been marked declines in local participation in commercial fisheries due in part to limited entry licensing, fleet buyback programs, area licensing and fisheries management and allocation policies. Fisheries have also shifted from an emphasis on salmon and herring to increased fishing effort on groundfish and shellfish and individual quota fisheries that require enhanced monitoring and validation of catch.

In 2010, the estimated annual average value of all commercial fisheries in Haida Gwaii waters was $83.4 million, which accounted for about 22 percent of BC's landed value. The three most economically valuable fisheries are Sablefish ($27.8 million), halibut longline ($23.3 million), and Dungeness Crab ($16.4 million) totalling over 80 percent of the landed value of all Haida Gwaii catch. With the exception of the Razor Clam fishery and the herring spawn-on-kelp fishery, however, there are currently no other fisheries that have high community participation on Haida Gwaii. Only a small percentage of the catch is currently processed on Haida Gwaii.

Due to these low levels of local participation and activity, economic linkages to local businesses are relatively weak compared to the overall contribution to the BC economy. In particular, seafood processors, marine-related merchants and service providers have experienced reduced revenue and employment opportunities in Haida Gwaii communities. Studies show that the benefits of commercial fisheries extend well beyond monetary transactions and play an integral role in the resilience of coastal communities. For example, fisheries contribute to local food security, continuity of lifestyle and cultural identity across generations.

Table 7-3 lists objectives and/or strategies to support development of community-based fisheries on Haida Gwaii.

Photo - Haida Wild Seafoods

Table 7 3. Community-based fisheries economy - management issues, objectives and strategies

Issue 1: Declining local involvement in the fisheries economy	
Obj 1.1	Increase community participation in fisheries processing and marketing.
	Strategy 1.1A Support opportunities for a community-based fisheries economy. *Examples – Infrastructure to support harvesting, marketing, quality standards for Haida Gwaii brand; support of local harvesters*
	Strategy 1.1B Promote local seafood processing opportunities and employment by Haida and other island residents in processing operations. *Example – Local processing of recreationally and commercially-caught fish*
Issue 2: Maximise the value of Haida Gwaii fisheries	
Obj 2.1	Increase opportunities for local value-added products.
	Strategy 2.1A Assess feasibility of local processing and marketing.
	Strategy 2.1B Provide incentives for local fishers to deliver locally and improve quality of the catch. *Example – Local fresh fish markets*
	Strategy 2.1C Support development of a Haida Gwaii brand and other products. *Examples – Support development of feasibility studies; marketing strategies such as standardized logos and packaging (identifiable Haida Gwaii seafood products) and business plans*
	Strategy 2.1D Investigate the potential for new markets and new products for the Haida Gwaii fisheries economy. *Examples – Custom processing; smoked fish products; Haida fish products; custom canning; development of new markets such as supplying high quality Razor Clam products (fresh or frozen) for restaurant industry; investigating new products and markets for Red Sea Urchin*
	Strategy 2.1E Support investment and partnership opportunities related to the development of infrastructure that is essential to the maintenance and growth of local fishing. *Examples – Moorage, fuel (access and cost), processors/buyers, ice and services*

Issue 3: Capturing local economic benefits from fisheries on Haida Gwaii	
Obj 3.1	Increase community participation in, and local economic benefits from, sustainable fishing activities.
	Strategy 3.1A Work with others to encourage sustainable fisheries certification for fisheries originating in and around Haida Gwaii. *Examples – Marine Stewardship Council or locally developed Haida Gwaii certification; other certification or traceability programs (e.g., http://thisfish.info/)*
	Strategy 3.1B Encourage local purchasing and processing by fishing lodges and charter operations.
Obj 3.2	Support salmon enhancement projects on Haida Gwaii if appropriate.
	Strategy 3.2A Work with federal agencies to assess proposed and existing salmon enhancement projects including impacts on freshwater and anadramous fish and habitat.
Obj 3.3	Increase local skill development and capacity in commercial fisheries.
	Strategy 3.3A Work with industry partners and other agencies to identify commercial fishery training needs and provide training opportunities in marine-support industries. *Examples – Upgrading and entry level training; boat operator and deckhand certification; business administration; boat building; shipwrights; diesel mechanics; welding; electronics and refrigeration*
	Strategy 3.3B Develop and seek support from industry associations and others for youth mentorship and apprentice programs with commercial fishermen in Haida Gwaii waters.
	Strategy 3.3C Support business development related to the marine sector. *Examples – Specialty boat-building; marine-related trades*

7.4 MARINE RESEARCH AND MONITORING

Marine research and monitoring consists of services that support the study, management and use of marine resources, and is fundamentally important to the successful application of ecosystem-based management and the implementation of this Marine Plan. Programs conducted by the federal and provincial agencies and the CHN make up most of this sector on Haida Gwaii, specifically the CHN Fisheries Program, Gwaii Haanas/Parks Canada, Fisheries and Oceans Canada, BC Parks, and Canada Coast Guard. This work includes monitoring commercial, recreational and Haida fisheries; conducting fisheries surveys and stock assessments, and recovery planning for species at risk, such as Northern Abalone and Killer Whales; monitoring ship traffic; and implementing emergency response. The Canadian Wildlife Service also conducts seabird research on the archipelago. The sector as a whole employs over 60 people, mostly in part-time positions (most part-time employees work seasonally for the CHN Fisheries Program).

Non-governmental organizations are also involved in research and monitoring. A number of universities from BC and abroad have conducted research programs and studies in the waters surrounding Haida Gwaii. The involvement of local communities and the emergence of citizen science provide further avenues for increasing research and monitoring activities. Interest in research and monitoring activities has prompted discussion about a marine research facility on Haida Gwaii that could play a lead role in marine research and provide research facilities and equipment to Canadian and international scientists, as well as university and public education programs.

Table 7-4 lists objectives and/or strategies to support improved marine research and monitoring on Haida Gwaii.

Table 7 4. Marine research and monitoring - management issues, objectives and strategies

Issue 1:	**Need for diverse opportunities for research and sustained monitoring to meet conservation and EBM mandates**
Obj 1.1	Increase opportunities for research and monitoring on Haida Gwaii.
	Strategy 1.1A Document existing research and ecological monitoring projects to establish a baseline of current activity and provide periodic updates.
	Strategy 1.1B Work with relevant agencies to support the development of monitoring programs to facilitate implementation of EBM initiatives, including the Marine Plan and linkages with terrestrial EBM programs where appropriate.
	Strategy 1.1C Work with relevant agencies to support the development of research projects to facilitate implementation of EBM initiatives, including the Marine Plan and linkages with terrestrial EBM programs where appropriate.
	Strategy 1.1D Assess the feasibility of establishing a Haida Gwaii research institute to improve understanding of Haida Gwaii ecosystems.
	Strategy 1.1E Explore potential for increasing "research tourism" opportunities on Haida Gwaii.
	Strategy 1.1F Explore opportunities to create a fund to support research and monitoring projects.
Issue 2:	**Opportunities to increase local involvement in monitoring and research**
Obj 2.1	Increase local capacity for environmental and activity monitoring.
	Strategy 2.1A Increase local capacity for participating in Haida Gwaii research and monitoring activities. *Examples – Training and skill development; Coastal Watchmen Programs; engagement of local fishing fleet and tourism operators; citizen science; programs to promote youth participation in monitoring*

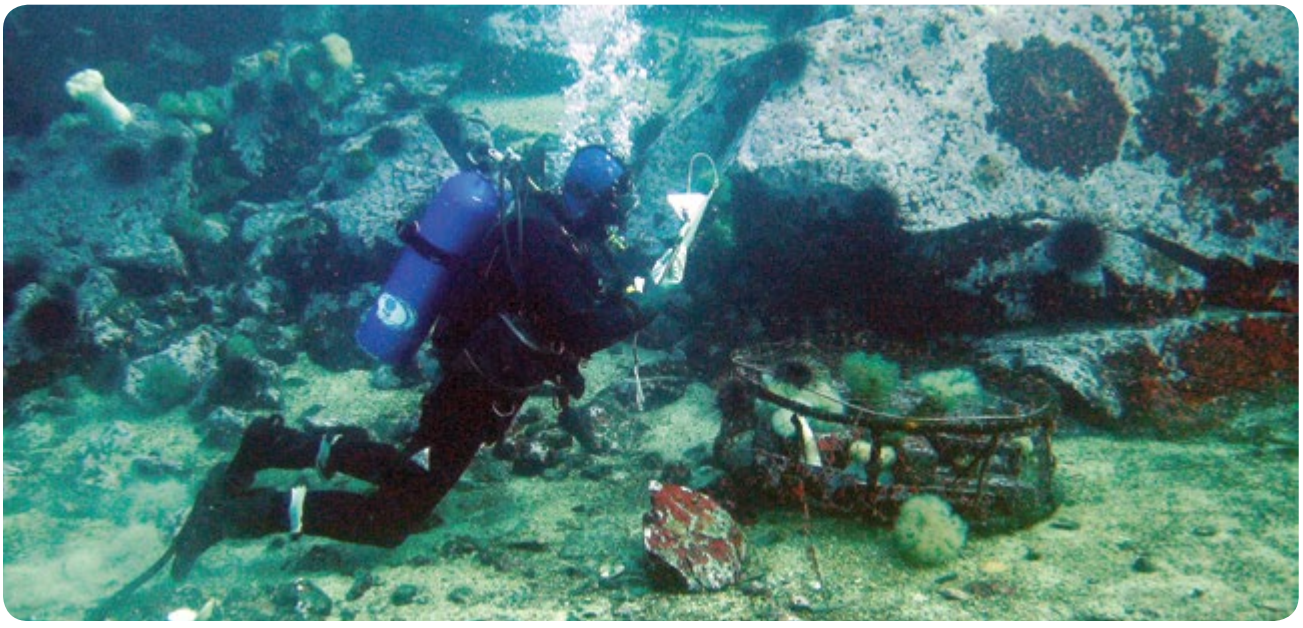


Photo - CHN Fisheries Program

7.5 MARINE-BASED RENEWABLE ENERGY

The ocean provides renewable energy sources, including tidal, wind and wave power. On Haida Gwaii, marine-based energy development may contribute to more sustainable communities and a diversified local economy, and may reduce reliance on fossil fuels. A marine wind-farm project in north-west Hecate Strait was approved through the BC and federal environmental assessment processes but was not successful at securing a contract from BC Hydro (Haida citizens also rejected a proposal to joint venture in the project). Despite this, Hecate Strait has high potential for offshore wind energy development in the future. Tidal energy also has potential in Haida Gwaii waters. In 2008, the BC government completed a feasibility study that identified several potential tidal energy sites in Masset Inlet. Three tidal "ocean energy" licences had been issued as of July 2014 in Masset Sound and Juskatla Narrows.

Coastal First Nations (including the CHN) and the Province of BC signed a reconciliation protocol in 2009 that included a commitment to develop an Alternative Energy Action Plan to advance the development of renewable energy projects on the North Coast, Central Coast and Haida Gwaii. In the CHN–BC Kunst'aa Guu – Kunst'Aayah Reconciliation Protocol (2009), both parties also agreed to continue discussions on sharing of additional emission reduction opportunities for renewable energy on Haida Gwaii. Furthermore, a Haida Gwaii Community Electricity Plan was completed in 2008. It makes nine recommendations, including the creation of an Island Energy Plan to address broad energy issues such as transportation, heating fuel and fuel switching. In 2012, the Island Energy Plan was completed; it focuses on reduced energy use and emissions.

Table 7-5 lists objectives and/or strategies to support development of marine-based renewable energy on Haida Gwaii. A special management zone (SMZ) for marine renewable energy to support offshore wind energy is described in Section 8.5.5 (Hecate North). Tidal energy is a rapidly changing and growing technology in the energy sector; however, the economic feasibility of projects on Haida Gwaii has not yet been demonstrated. As this technology develops and projects move forward, additional management direction, including new zones for marine renewable energy, may be considered (see Section 9.5).

Photo - Tyson Brown

Table 7 5. Marine-based renewable energy - management issues, objectives and strategies

Issue 1: Opportunities for marine-based renewable energy development	
Obj 1.1	Assess opportunities for marine-based renewable energy and encourage development in suitable locations.
	Strategy 1.1A Work with relevant agencies to identify and support suitable areas for marine-based renewable energy development through spatial planning and ecological evaluation.
Issue 2: Capturing local economic benefits from future marine-based renewable energy development	
Obj 2.1	Ensure opportunities and benefits from marine-based renewable energy development for local communities.
	Strategy 2.1A Encourage a comprehensive and integrated process for marine-based renewable energy project selection. *Example – Participation of BC, Haida Nation and BC Hydro in strategic planning and project selection*
	Strategy 2.1B Encourage all new marine-based renewable energy projects to benefit Haida Gwaii communities through job creation, training and commitments to meet local energy demands.
	Strategy 2.1C Implement benefit-sharing agreements with the Haida Nation from all new commercial-scale, marine-based renewable energy generation projects.
Issue 3: Need for an integrated approach to marine-based renewable energy development	
Obj 3.1	Ensure a coordinated and integrated approach to future marine-based renewable energy development.
	Strategy 3.1A Implement the Island Energy Plan for Haida Gwaii.
	Strategy 3.1B Continue to implement recommendations in the Haida Gwaii Electricity Plan as appropriate, including assessment of the feasibility of potential marine-based renewable energy projects.

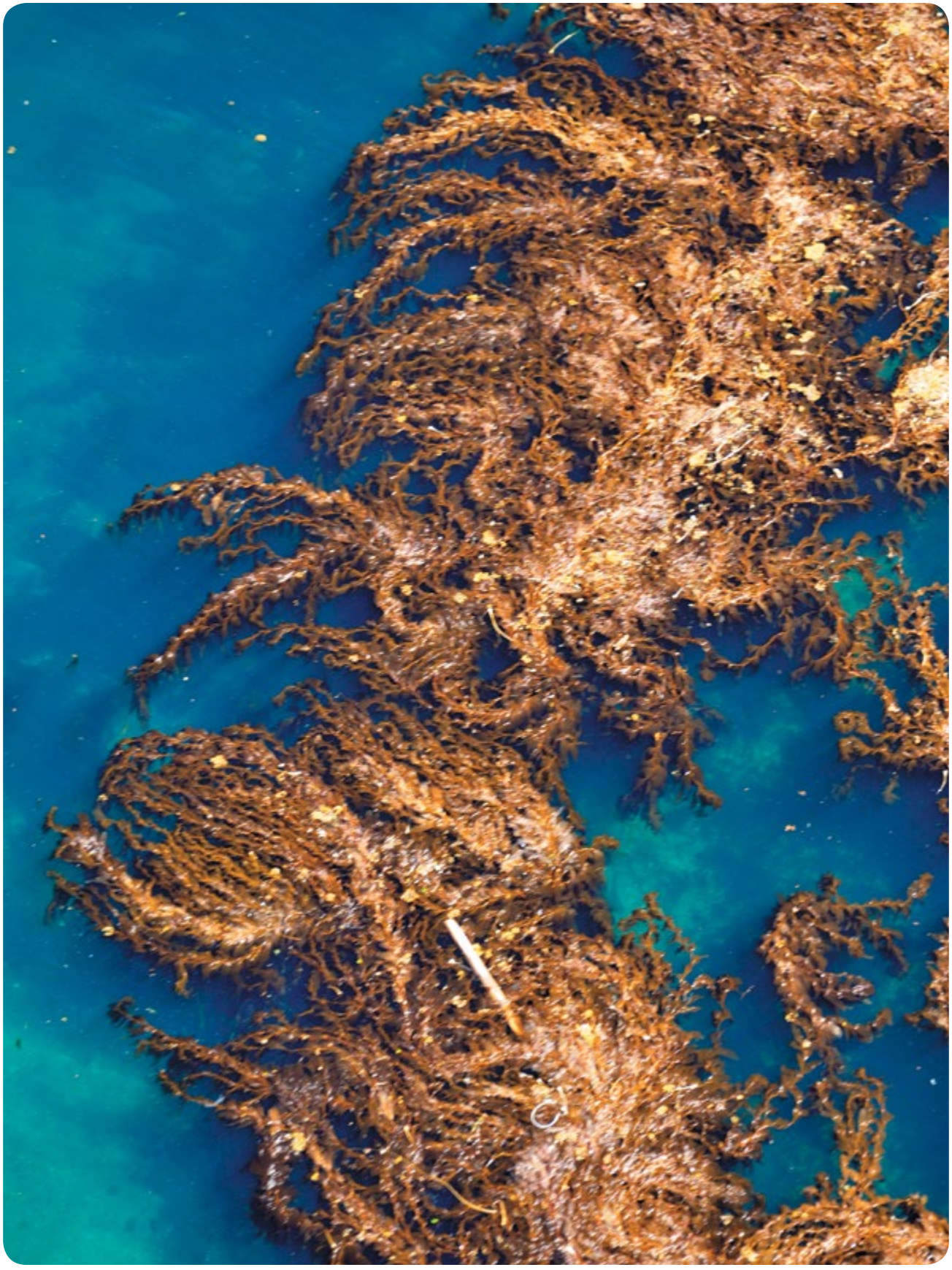


Photo - Allan Wilson

8

8. HAIDA GWAII SPATIAL ZONING

8.1 SPATIAL ZONING OVERVIEW

As part of the Marine Plan process, the CHN and Province of BC have established Special Management Zones (SMZs) and Protection Management Zones (PMZs) that provide policy direction for tenuring and other resource use decisions within the jurisdictional authority of CHN and/or BC. All areas outside of these management zones are within the General Management Zone (GMZ). PMZs will make important contributions to future processes, including the MPA network planning process for the Northern Shelf Bioregion, and are subject to further consultation and evaluation. Existing CHN-BC protected areas will be aligned with the Marine Plan. Tools to implement components of the plan are outlined in Appendix 7.

The CHN has been developing spatial zoning for Haida Gwaii since 2006. Through the Haida Marine Work Group, special features and values, acceptable uses, and existing or potential resource conflicts were evaluated. Work Group members used the best available traditional, local and scientific knowledge to identify areas of importance and concern, including areas that are suited for protection and special management areas that have potential for current or future marine economic development.

As CHN-led planning became a part of the government-to-government MaPP process, the proposed spatial areas from the Haida Marine Work Group process were reviewed by the Province and revised collaboratively with the CHN to create a jointly agreed upon set of SMZs and PMZs for Haida Gwaii. Spatial data sources used during the Haida Marine Work Group process and subsequent analysis and revision by provincial and CHN technical staff are provided in Appendix 3. The sub-regional Haida Gwaii Marine Advisory Committee also reviewed and provided advice on SMZs and PMZs based on their knowledge and expertise.

The overall intent of the zoning exercise was to identify and map a diversity of values, define the relevant activities and recommend appropriate management actions as they relate to provincially-regulated and Haida-managed activities. Further advancement of any zones in the context of MPA or MPA networks will go through the appropriate processes with the relevant agencies.

CHN/BC Protected Areas Incorporated into Marine Plan Zoning

The 2007 Haida Gwaii Strategic Land Use Agreement identified new protected areas for ecological and cultural conservation, spiritual and recreational purposes. These areas were jointly designated under Haida law as "Heritage Sites" and under provincial legislation as "Conservancies" and are jointly referred to as "CHN/BC protected areas." Marine boundaries for each protected area were established and management plans approved prior to the MaPP marine planning process. The intention at the time was to further refine marine zones as part of future marine planning processes.

During development of the Marine Plan, zoning direction in the management plans for the CHN/BC protected areas was considered along with updated and more detailed data in the context of the MaPP zoning framework. Zoning in the Marine Plan is generally consistent with management direction in the management plans for CHN/BC protected areas. Any inconsistencies will be addressed through CHN -BC decision-making structures and management plans will be updated, as necessary.

All spatial recommendations in this Marine Plan provide policy guidance intended to inform the decision-making process regarding uses and activities in the areas identified. The PMZs recommended in this Marine Plan are not designating marine protected areas (MPAs). The appropriate Haida Nation and BC policy and legal instruments for achieving stated zoning objectives will be determined during plan implementation.

A detailed summary of the spatial zoning process for the Marine Plan, including a summary of key values for each SMZ and PMZ, is provided in the companion report: *Haida Gwaii Marine Plan: Delineation, Evaluation and Zoning of PMZs and SMZs* (2015).

8.2 MAPP ZONING FRAMEWORK

Marine spatial zoning for Haida Gwaii is based on the MaPP Zoning Framework, which is applied consistently across all four MaPP planning sub-regions. There are three overarching zone types in the MaPP Zoning Framework: GMZ, SMZ and PMZ (Table 8-1). Within the SMZ and PMZ categories, a range of sub-zones is applied (shellfish aquaculture and renewable energy sub-zones in SMZs, and International Union for Conservation of Nature [IUCN] categories in PMZs).

The IUCN categories were used to:

- Provide a consistent, internationally recognized approach to expressing the range of management approaches required to conserve a diversity of marine values;
- Assist planners and stakeholders in providing recommendations for how uses and activities under provincial and First Nation management/authority should be managed to conserve a range of values in locally specific circumstances; and,
- Assist planners in assessing the implications of the PMZ recommendations in a consistent and comprehensive manner.

Interpretation of the IUCN categories in the Recommended Uses and Activities Tables and/or zoning maps does not imply management direction for marine uses and activities outside of provincial regulatory authority. Additionally, identification of PMZs and the use of IUCN categories are not intended to predetermine the outcome of other related planning processes and should not be interpreted as such.

Spatial zoning for the Gwaii Haanas area is being addressed through a separate planning process; therefore, it is not included in MaPP zone descriptions and analyses.

Photo - Ian Gould

Table 8 1. MaPP zoning framework - zone type, description and objective

ZONE TYPE	DESCRIPTION	OBJECTIVE
General Management Zone (GMZ)	Allocates space for a wide range of sustainable marine uses and activities using an EBM framework. The GMZ recognizes that many coastal or marine areas have no overarching priorities for uses or activities, and that a large number of activities do not have spatial or temporal conflicts. Where conflicts may occur, they can be addressed through proper management prescriptions in combination with the General Management Direction (i.e., general objectives and strategies) including prohibitions and exceptions for activities that occur on the seabed, pelagic or surface areas.	To manage for a variety of co-existing sustainable marine uses and activities that adhere to EBM principles; multiple uses and activities are permitted where compatible in time and space.
Special Management Zone (SMZ)	Allocates space for high priority and/or high potential sustainable marine uses and activities including economic development and/or cultural uses and activities that require specific environmental conditions or locations. To avoid temporal or spatial conflicts and competition with certain other uses and activities, special management prescriptions are applied in addition to the General Management Direction (i.e., general objectives and strategies).	To manage for one or more identified high priority and/or high potential sustainable marine uses or activities. Additional uses and activities are permitted only where compatible in time and space with the high priority and/or high potential use or activity.
Protection Management Zone (PMZ)*	Allocates space primarily for conservation purposes or objectives, and may serve as a basis for protecting localised conservation values. The Protection Management Zones (PMZs) recommended in this Marine Plan are not designating marine protected areas (MPAs) and do not provide recommendations on marine uses and activities outside of provincial regulatory authority. PMZs will make important contributions to the MPA network planning process for the Northern Shelf Bioregion and are subject to further consultation and evaluation through that process.	To conserve and/or protect the range of values that marine environments provide with a primary emphasis on maintaining marine biodiversity, ecological representation and special features (e.g., sponge reefs, seamounts, pinniped haulout sites or rookeries, and significant foraging grounds for seabirds).

* The Haida names for the PMZ designation are *Kagin Diiyagen* (Massett Haida) and *Kuuyada* (Skidegate Haida)

Marine Protected Areas Provide Many Proven Benefits

The benefits of marine protected areas have been demonstrated through numerous scientific studies around the world. Benefits to the marine environment include increased ecological diversity and resilience to climate change and other stressors; increased species richness, biomass and abundance; increased knowledge and understanding of marine systems and their health through the provision of natural benchmarks.

There are important benefits for people as well. MPAs have been shown to improve fishing opportunities; enhance marine tourism; promote cultural heritage; and increase research and monitoring opportunities. Over time, large MPAs with fisheries restrictions and that are carefully managed have been shown to provide a "spillover effect" for adjacent fisheries. By providing refugia for commercial species, these protected areas can reduce the risk of future fisheries collapse.

Examples of scientific literature on benefits of marine protected areas are provided in the References section.

The identification of PMZs was guided by the Haida Gwaii Marine Vision and Goals outlined in Section 3.2, which are consistent with *Towards a Marine Use Plan for Haida Gwaii* (CHN 2007) and the *Canada – British Columbia Marine Protected Area Network Strategy* (2014). The spatial zoning also reflects diverse interests and trade-offs related to current economic, cultural and social uses. PMZs were situated to avoid overlap with any existing tenured activities that are inconsistent with PMZ objectives.

Each PMZ type aligns with a category in the *Guidelines for Applying the IUCN Protected Area Management Categories to Marine Protected Areas*. There is flexibility in applying these guidelines, which have been applied to suit the MaPP region and the Haida Gwaii sub-region. For example, the guidelines do not require all IUCN categories to be used in a given planning region. Those used in the Marine Plan area are described below. For a complete description of all IUCN categories, see the *MaPP Zoning Framework*.

Category Ib – usually large unmodified or slightly modified areas, retaining their natural character and influence, without permanent or significant human habitation, which are protected and managed so as to preserve their natural condition.

Category II – large natural or near natural areas set aside to protect large-scale ecological processes, along with the complement of species and ecosystems characteristics of the area, which also provide a foundation for environmentally and culturally compatible spiritual, scientific, educational, recreational and visitor opportunities.

Category III – set aside to protect a specific natural monument, which can be a landform, seamount, submarine cavern, geologic features such as a cave or even a living component such as a specific coralline feature. They are generally quite small protected areas and often have high visitor value.

Category IV – aim to protect particular species or habitats and management reflects this priority. Many category IV protected areas will need regular, active interventions to address the requirements of particular species or to maintain habitats, but this is not a requirement of the category.

Category V – areas where the interaction of people and nature over time has produced an area of distinct character and significant ecological, biological, cultural and scenic value and where safeguarding the integrity of this interaction is vital to protecting and sustaining the area and its associated nature conservation and other values.

Category VI – areas that conserve ecosystems and habitats, together with associated cultural values and traditional natural resource management systems. They are generally large, with most of the area in a natural condition, where a proportion is under low-level, non-industrial sustainable natural resource management and where such use of natural resources compatible with nature conservation is seen as one of the main aims of the area.

Many marine uses and activities within Category V and VI are considered acceptable. These designations provide a framework for management planning, consistent with the conservation objectives for the zone.

The *MaPP Zoning Framework* includes Recommended Uses and Activities Tables for each of the SMZs, PMZs and the GMZ. The tables identify activities that are considered to be acceptable, conditionally acceptable or not acceptable for each zone. For every identified activity that is considered to be conditionally acceptable, condition statements are provided (Table 8-2). Recommended uses and activities within SMZs and PMZs will be considered during screening of tenure applications for provincially and Haida-managed marine activities and uses. Existing tenure activities are able to continue in PMZs and SMZs, however, once these tenures expire, renewals and new applications will be evaluated against objectives for each zone. For all areas, Haida traditional uses continue in accordance with legal obligations, including practices for food, social, ceremonial, and stewardship purposes. Definitions for recommended uses and activities are provided in Appendix 6.

Table 8 2. Descriptions of recommendations related to marine uses and activities

RECOMMENDATION *	SYMBOL	DESCRIPTION
Acceptable	✔	Uses and activities are considered to be 'acceptable' subject to applicable laws, policy and relevant agreements between the Parties. Acceptability of any use/activity does not guarantee that a use/activity will be approved.
Conditionally Acceptable/ Special Conditions	**0**	Uses and activities are considered to be 'conditionally acceptable' subject to applicable laws, policy and relevant agreements between the Parties, and provided they are consistent with (adhere to) the plan conditions. Conditional acceptability of any use/activity does not guarantee that a use/activity will be approved.
Not Acceptable	**X**	Uses and activities are considered to be 'not acceptable' and should not be approved.

* Absence of a use or activity in this table does not imply that the use or activity is of no interest or is recommended. The reader should contact the appropriate management body(ies) for clarification in such circumstances.

8.3 BOUNDARY DELINEATION AND ZONE TYPE EVALUATION CRITERIA

A variety of factors were considered and applied when determining proposed spatial zoning boundaries (Table 8-3).

Table 8 3. Evaluation criteria for boundary delineation and zone types

FACTOR	APPLICATION
Existing designations	Aligned with existing CHN, federal and provincial marine zoning/designations where appropriate. *Examples – CHN/BC Protected Areas, BC Ecological Reserves, federal Rockfish Conservation Areas, CHN/federal Gwaii Haanas National Marine Conservation Area Reserve and Haida Heritage Site*
Ecological values	Drawn to capture ecological values and specific ecological features of interest. *Examples – Eelgrass and kelp beds, consistent herring spawning areas, estuaries, areas of high occurrence of coral and sponge, bird colonies*
Cultural and traditional use values	Drawn to capture important cultural and traditional use areas that require spatial protection. Cultural and traditional use data, both spatial and non-spatial (e.g., Haida stewardship knowledge), included the Haida Marine Traditional Knowledge Study and archaeological data sets. *Examples – Sensitive locations, including their cultural and spiritual importance, important food gathering areas, location of village sites*
Current uses and activities	Drawn to minimize conflict and ensure continued economic opportunities based on the evaluation of current uses and activities. *Examples – Available commercial fishing data, existing provincial tenures, known high-value recreational fishing areas*
Future uses and activities	Drawn to facilitate future economic opportunities based on the evaluation of potential future uses and activities. *Examples – High value sites for marine-based renewable energy, shellfish aquaculture capability (some species)*
Adjacent land use	Considered adjacent land use to maximize compatibility between proposed marine zoning and terrestrial areas. *Examples – Private land, existing provincial terrestrial tenures, parks and protected areas*
Results of Marxan analyses	Informed by results from regional and sub-regional Marxan analyses that identified areas of high conservation value and representative areas of biodiversity using British Columbia Marine Conservation Analysis spatial data.
Buffers	Buffer zones– areas of lower restriction surrounding core areas of higher restriction– have been applied in some instances to provide additional protection while still allowing some activities to occur.
Ease of identification, navigation and management	Designed to be user-friendly in order to facilitate identification and navigation on the water and for compliance and enforcement purposes. *Examples – Straight lines, jaws of land (boundary established between two visible terrestrial points), consistent distance offsets (e.g., ribbon boundary – 100m buffer around an island with nesting seabird colonies)*

For each potential SMZ and PMZ, an evaluation process was also undertaken to determine the most appropriate zone type and associated acceptable uses. Table 8-4 describes the evaluation criteria used for each proposed zone.

Table 8 4. Criteria for evaluating SMZs and PMZs.

EVALUATION CRITERIA	DESCRIPTION
Objective	Ecological, cultural, social and/or economic purpose for establishing the zone
Ecological values	Specific ecological values maintained or enhanced by zone establishment
Cultural values	Haida cultural values, including traditional use, maintained or enhanced by zone establishment
Economic values (SMZs only)	Specific economic values maintained or enhanced by zone establishment
Current zoning	Overlap with existing zoning designations (e.g., CHN/BC protected areas, Rockfish Conservation Areas (RCAs), local zoning by-laws)
Fisheries values	Commercial and recreational fisheries activities currently occurring within the area
Existing provincial tenures	Potential impacts on existing tenure holders
Adjacent land use	Adjacent land use/zoning that may be impacted by designation (e.g., existing provincial tenures, private land, park/protected areas)
Adjacent marine designations	Adjacent marine designations/zoning that may be impacted by designation (e.g., RCAs)
Marxan results	Consistency with Marxan results (Protection Management Zones only)
Linkages to Marine Plan objectives and strategies	Consistency and linkages with objectives and strategies identified in the Marine Plan General Management Direction

8.4 MARINE PLAN ZONING SUMMARY

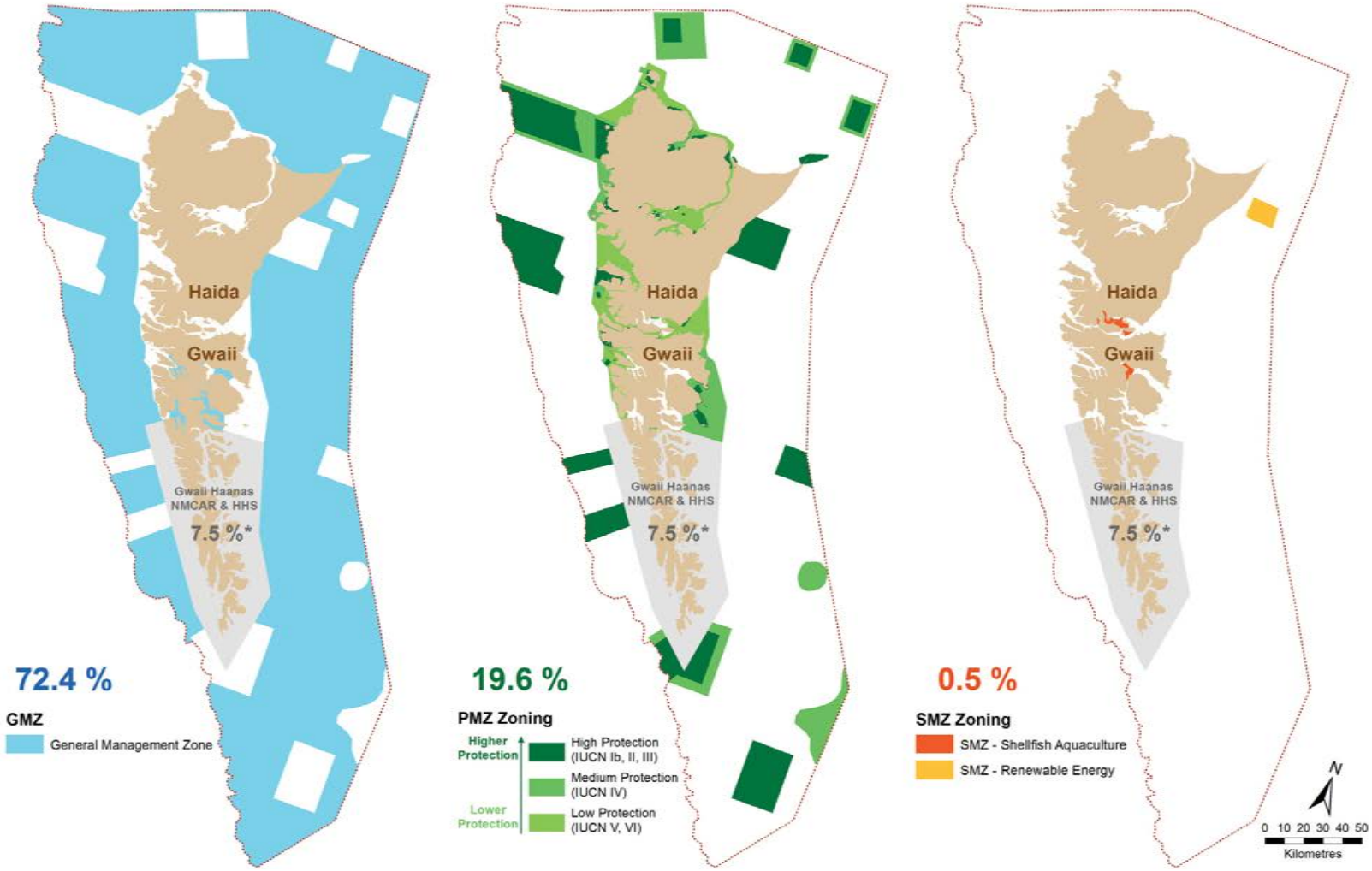
Within the Marine Plan area, 85 PMZs and 5 SMZs are proposed (Figures 8-1 and 8-2). Table 8-5 provides a summary of the proposed areas. Descriptions of IUCN zone categories are provided in Section 8.2 (MaPP Zoning Framework). Information about Gwaii Haanas is separately noted at the bottom of the table because spatial zoning for this area is occurring through a separate planning process.

Table 8 5. Summary of marine zones by category type, length of shoreline and area

ZONE TYPE	CATEGORY	# SITES	TOTAL LENGTH OF SHORELINE (KM)	PERCENTAGE OF SHORELINE	TOTAL AREA (KM²)	PERCENTAGE OF PLAN AREA
PMZ High Protection	IUCN Ib	39	427	9.2%	4562	9.9%
	IUCN II	11	173	3.7%	105	0.2%
	IUCN III	2	12	0.3%	55	0.1%
Subtotal - High		*52*	*612*	*13.1%*	*4722*	*10.3%*
PMZ Medium Protection	IUCN IV	25	539	11.6%	2914	6.3%
Subtotal - Medium		*25*	*539*	*11.6%*	*2914*	*6.3%*
PMZ Low Protection	IUCN V	5	785	16.8%	980	2.1%
	IUCN VI	5	372	8.0%	389	0.8%
Subtotal - Low		*10*	*1157*	*24.8%*	*1369*	*3.0%*
TOTAL PMZ		**87**	**2308**	**49.5%**	**9005**	**19.6%**
SMZ	Shellfish Aquaculture	4	130	2.8%	65	0.1%
	Marine-based Renewable Energy	1	0	0.0%	156	0.3%
TOTAL SMZ		**5**	**130**	**2.8%**	**221**	**0.5%**
GMZ			468	10.0%	33359	72.4%
Gwaii Haanas	NMCAR & HHS		1759	37.7%	3467	7.5%

Zoning does not direct uses or activities outside of provincial regulatory authority
Rounding of % values to one significant digit may result in totals and subtotals that appear high.

Figure 8 1. Marine spatial zoning for the Haida Gwaii sub-region, showing the General Management Zone, Protection Management Zones, and Special Management Zones



General Management Zone (GMZ):
Areas where the full range of sustainable marine uses and activities may occur, subject to existing legislation and policy.

Protection Management Zones (PMZ):
Areas managed to conserve natural values. There are three levels of conservation focus for these zones: High (strong emphasis on natural values), Medium (focus primarily on specific species and ecosystems), and Low (mix of conservation and sustainable human uses).

Special Management Zones (SMZ):
Areas particularly well-suited to specific sustainable marine uses and activities. The Haida Gwaii Marine Plan recognizes areas with high capability for shellfish aquaculture and marine-based renewable energy.

** NOTE: The additional 7.5% of the MaPP Haida Gwaii sub-region falls within Gwaii Haanas, which is addressed through a separate planning process.*

Zoning does not direct uses or activities outside of provincial regulatory authority.

Figure 8 2. Protection Management Zones, showing three levels of protection: high (IUCN 1b, II, III), medium (IUCN IV) and low (IUCN V, VI)

10.3 %

PMZ Zoning

High Protection (IUCN Ib, II, III)

Protection Management Zones - High

Areas of highest conservation value with an emphasis on protecting marine species, ecosystems and ecological processes in their natural state. These areas have significant ecological values, including rare or threatened species or ecosystems.They may also represent marine ecosystem types. Limited activities can occur in these areas provided they do not impact the conservation objectives of each zone. Compatible activities may include: scientific research and some types of public and commercial recreation and tourism.

6.3 %

PMZ Zoning

Medium Protection (IUCN IV)

Protection Management Zones - Medium

Areas primarily identified to protect particular species or habitats. A range of activities can occur provided they do not impact the conservation objectives for each zone. Compatible activities may include: scientific research, some types of public and commercial recreation and tourism, anchorages, small scale infrastructure (e.g. docks, boat ramps).

3.0 %

PMZ Zoning

Low Protection (IUCN V, VI)

Protection Management Zones - Low

Areas that have sensitive ecological values but are also important for sustainable human uses and activities, often in proximity of population centres. There are fewer restrictions on marine uses however, management plans are required to achieve conservation objectives. Compatible activities may include: marine plant and shellfish aquaculture, anchorages, float homes/lodges, marine infrastructure, log storage/handling, research, and public and commercial recreation and tourism.

Zoning does not direct uses or activities outside of provincial regulatory authority.

Table 8-6 summarizes the nearshore ecological values within each PMZ by IUCN category. All of the ecological features listed in this table were considered when identifying PMZs.

Riparian Fish Forest: The Riparian Fish Forest Study created a landscape scale model for the distribution of salmon and other freshwater fish with the riparian forests and floodplains surrounding the streams and lakes of Haida Gwaii. Each stream on Haida Gwaii was given a ranking based on number of fish present, stream order, watershed size and salmon abundance. Estuaries of streams with the top three rankings in this study are identified in the PMZs.

Shorezone datasets: A systematic methodology for mapping the biophysical character of the shorezone by way of low tide aerial surveys for the entire BC coastline. The system involves the subdivision of the shorezone into along-shore units and across-shore components.

- **Kelp and Eelgrass datasets:** The marine flora and fauna visible within a shore unit are described in terms of common species assemblages known as biobands. The biobands are defined by the dominant cover species. In shoreline units where kelp or eelgrass was observed as the dominant cover species, coverage was rated as either 'patchy' (visible in less than 50% of the shore unit) or 'continuous' (visible in greater than 50% of the shore unit).
- **Estuary - Organics and Fines:** This is one of 36 Coastal Classes within the Shorezone dataset. Coastal Classes are groupings of across-shore components that consider substrate, sediment, width and slope. Estuaries commonly have mud or organic sediments and are generally brackish, with low wave exposure.

Harbour Seal Haulouts: Known haulout locations (sites on land where these animals rest and congregate consistently) for Harbour Seals along the coast of Haida Gwaii.

Stellar Sea Lion Haulouts and Rookeries: Known haulout locations (sites on land where these animals rest and congregate consistently) and rookeries (sites on land where these animals breed year after year) for Steller Sea Lions along the coast of Haida Gwaii.

Pacific Estuary Conservation Program: This program mapped estuaries along the coast of British Columbia and ranked them based on their importance for waterfowl using data and metrics of estuary size, habitat type and rarity, herring spawn occurrence, waterbird use, and intertidal biodiversity.

Cumulative Herring Spawn Index: DFO has generated a cumulative spawn habitat index to represent the combined, long-term frequency and magnitude of spawns along each kilometre of coastline over time. Long-term cumulative spawn (from 1928 to the present year) is calculated for each kilometre of coastline. Spawn habitat maps are produced using indices calculated in cumulative spawn tables. These maps are updated annually from data archived in DFO's herring spawn database. The index is utilized as a measure of "habitat sensitivity" as it takes into account both the long-term frequency and magnitude of recorded spawns over time.

Modeled Inshore Rockfish Habitat: The model uses both a bathymetry analysis to delineate complex (rocky) bottom and a rockfish catch density analysis to predict rockfish habitat. A fishery Catch Per Unit Effort (CPUE) analysis was used to identify areas of high rockfish catch density. Base data for this component of the model included inshore rockfish catch (pieces) per set location (1996-2003) from the ZN- and C-licensed fisheries, the recreational fishery and the L-licensed fishery.

Important Bird Areas: This layer represents "generalized" boundaries of Important Bird Areas (IBAs) in Canada. IBAs, in Canada and elsewhere, are evaluated and designated on the basis of internationally recognized and standardized criteria. The polygons in this dataset are significant at the national, continental, or global scale.

Marine Bird Species at Risk – Colonies: Colonies taken into consideration for PMZs include Ancient Murrelet, Cassin's Auklet, Horned Puffin, Tufted Puffin, Common Murre, and Pelagic Cormorant. The colony datasets include active and historic colonies. Colony locations include some of the marine habitat used by these birds adjacent to each colony, based on the distances employed in the Canadian Wildlife Service's Marine Bird Areas of Interest dataset.

Table 8 6. Summary of nearshore ecological values in Protection Management Zones (PMZs)

The column "Total in HG planning space" includes values within Gwaii Haanas, which contains a high percentage of many nearshore values.

		PMZ - IUCN Categories								
	Total in HG planning space	Ib	II	III	subtotal higher protection	IV	subtotal medium protection	V	VI	subtotal lower protection
Estuaries (BC Shorezone and Pacific Estuary Conservation Program)										
Estuary - Organics and Fines, Shorezone (length of shoreline - km)*	281	11.6%	1.5%	0.0%	**13.1%**	14.7%	**14.7%**	6.4%	2.4%	**8.8%**
# higher ranked (1, 2 or 3) - PECP (importance to waterfowl)	26	42.3%	0.0%	0.0%	**42.3%**	3.8%	**3.8%**	15.4%	23.1%	**38.5%**
# lower ranked (4 or 5) - PECP (importance to waterfowl)	21	19.0%	4.8%	0.0%	**23.8%**	19.0%	**19.0%**	23.8%	9.5%	**33.3%**
Herring - Cumultive Herring Spawn Index (DFO)										
length kms	627	4.9%	1.4%	0.3%	**6.7%**	8.1%	**8.1%**	14.2%	3.3%	**17.5%**
length kms of top 30% (Vital, Major, High) BC Rank	223	3.6%	4.0%	0.0%	**7.6%**	6.3%	**6.3%**	4.5%	3.6%	**8.1%**
Salmon River Estuaries - Riparian Fish Forest (Gowgaia Institute)										
# Estuaries - Most Salmon (RFF ranking)	25	48.0%	8.0%	0.0%	**56.0%**	8.0%	**8.0%**	4.0%	0.0%	**4.0%**
# Estuaries - Many Salmon (RFF ranking)	47	14.9%	6.4%	0.0%	**21.3%**	6.4%	**6.4%**	34.0%	12.8%	**46.8%**
# Estuaries - Some Salmon (RFF ranking)	389	6.7%	4.9%	0.0%	**11.6%**	10.5%	**10.5%**	20.6%	11.6%	**32.1%**
Eelgrass and Kelp (BC Shorezone Bioband and BCMCA)										
Eelgrass - Zostera marina										
Priority Eelgrass (polygon) BCMCA - Area km²	18	46.7%	0.0%	0.1%	**46.9%**	9.7%	**9.7%**	30.4%	0.0%	**30.4%**
Eelgrass (polygon) BCMCA - Area km²	25	40.4%	0.8%	0.1%	**41.2%**	7.7%	**7.7%**	23.9%	0.2%	**24.1%**
Eelgrass, Shorezone - Continuous (length of shoreline - km)	414	7.2%	1.0%	0.2%	**8.5%**	14.5%	**14.5%**	28.6%	2.2%	**30.8%**
Eelgrass, Shorezone - Patchy (length of shoreline - km)	574	5.3%	4.2%	0.3%	**9.9%**	12.1%	**12.1%**	22.1%	2.3%	**24.5%**
Bull Kelp - Nereocystis luetkeanaa										
Bull Kelp (polygon) BCMCA - Area km²	16	14.5%	8.6%	0.0%	**23.1%**	21.0%	**21.0%**	9.7%	29.8%	**39.5%**
Bull Kelp, Shorezone - Continuous (length of shoreline - km)	435	6.3%	3.1%	0.0%	**9.4%**	6.6%	**6.6%**	10.2%	6.1%	**16.3%**
Bull Kelp, Shorezone - Patchy (length of shoreline - km)	887	4.4%	6.7%	0.0%	**11.1%**	7.9%	**7.9%**	12.9%	5.3%	**18.2%**
Giant Kelp - Macrocystis integrifolia										
Giant Kelp (polygon) BCMCA - Area km²	11	13.0%	14.9%	0.2%	**28.1%**	5.0%	**5.0%**	3.1%	8.0%	**11.1%**
Giant Kelp, Shorezone - Continuous (length of shoreline - km)	252	4.2%	10.7%	0.0%	**15.0%**	11.6%	**11.6%**	3.0%	2.4%	**5.4%**
Giant Kelp, Shorezone - Patchy (length of shoreline - km)	542	3.6%	4.3%	0.0%	**7.9%**	8.9%	**8.9%**	5.6%	5.6%	**11.3%**
General Kelp										
General Kelp (polygon) BCMCA - Area km²	93	7.2%	5.5%	0.0%	**12.6%**	14.8%	**14.8%**	5.8%	6.7%	**12.5%**
Modeled Inshore Rockfish Habitat (DFO)										
Area km²	2348	4.6%	1.2%	0.1%	**5.9%**	10.4%	**10.4%**	12.7%	3.0%	**15.7%**
Pinnipeds (Parks Canada)										
# Harbour Seal Haulouts	91	5.5%	2.2%	1.1%	**8.8%**	9.9%	**9.9%**	5.5%	3.3%	**8.8%**
# Steller Sea Lion Haulouts	21	23.8%	0.0%	4.8%	**28.6%**	9.5%	**9.5%**	14.3%	9.5%	**23.8%**
Important Bird Areas - IBAs (Bird Studies Canada/Nature Canada)										
Area Captured - Area km²	2939	5.6%	0.4%	1.9%	**7.8%**	21.1%	**21.1%**	10.9%	5.0%	**15.9%**
Marine Bird Species at Risk - Colonies (BCMCA compiled from Parks Canada and Canadian Wildlife Service data)**										
Colony Presence (# species - 6 species considered)	6	5	2	0	**5**	2	**2**	5	1	**5**
Colony Foraging Area Presence (# species - 6 species considered)	6	6	5	0	**6**	5	**5**	6	4	**6**

*Percent length of estuary shoreline from BC Shorezone dataset is underestimated as shorezone data for estuaries extends inland beyond the marine boundary of the planning area in some instances.

**Marine bird colonies included: Ancient Murrelet, Cassin's Auklet, Horned Puffin, Tufted Puffin, Common Murre, and Pelagic Cormorant

Zoning does not direct uses or activities outside of provincial regulatory authority

Table 8-7 summarizes the representation of broad habitat classifications within PMZs, including marine ecosections, oceanographic features, important areas for corals and sponges, Upper Ocean Sub Regions, areas of high rugosity, and areas of high tidal current. These categories are described below.

Marine ecosections are part of the British Columbia Marine Ecological Classification (BCMEC). Ecosections are defined according to physical, oceanographic and biological characteristics.

Oceanographic Features were defined by DFO as part of their work to identify Ecologically and Biologically Significant Areas (EBSAs) in the Pacific North Coast Integrated Management Area. These regional features are identified for their unique characteristics, including high biological productivity.

Coral and Sponge Important Areas are areas identified as aggregations of coral and sponge based on analysis of groundfish trawl bycatch data. Some cold water coral species are habitat-forming and support unique communities of organisms. Cold-water coral communities are typically long-lived, slow growing and highly sensitive to physical disturbance.

Upper Ocean Sub Regions are based on an analysis by Parks Canada using information from satellite imagery, oceanographic simulation models and marine experts. The delineation of the sub-regions is restricted to the upper ocean (~ 20 - 30 m depth) and to oceanographic processes linked to enhancing nutrient supply to surface waters during the summer months (mid-June to mid-September). The waters of Pacific Canada have been subdivided into major Upper Ocean Sub Regions with recurring physical oceanographic processes and potentially different marine plankton production and diversity.

Areas of high rugosity are often indicative of areas of high biodiversity. Rugosity is a measure of the roughness of seafloor terrain, defined as the ratio of surface area to planar area.

Areas of high tidal current are identified based on modelled values representing average tidal speeds. Areas of high tidal current are often associated with areas of high productivity.

Table 8 7. Representation of broad habitat classifications within Protection Management Zones (PMZs).

Note: The column "Area (km2) in HG planning space" includes values within Gwaii Haanas

		PMZ - IUCN Categories									
	Area (km²) in HG Planning Space	Ib	II	III	subtotal higher protection	IV	subtotal medium protection	V	VI	subtotal lower protection	TOTAL in all PMZ
Ecosections - BCMEC											
Dixon Entrance	9598	5.6%	0.3%	0.1%	**6.0%**	9.6%	**9.6%**	3.7%	2.5%	**6.2%**	**21.9%**
Hecate Strait	7589	7.6%	0.1%	0.6%	**8.3%**	7.0%	**7.0%**	3.2%	0.0%	**3.2%**	**18.5%**
Queen Charlotte Sound	10892	6.0%	0.0%	0.0%	**6.0%**	7.3%	**7.3%**	0.0%	0.0%	**0.0%**	**13.3%**
Continental Slope	14598	14.7%	0.4%	0.0%	**15.2%**	4.5%	**4.5%**	2.6%	1.0%	**3.6%**	**23.2%**
Subarctic Pacific	1203	23.3%	0.0%	0.0%	**23.3%**	0.0%	**0.0%**	0.0%	0.0%	**0.0%**	**23.3%**
Transitional Pacific	2037	17.9%	0.0%	0.0%	**17.9%**	0.6%	**0.6%**	0.0%	0.0%	**0.0%**	**18.5%**
Oceanographic Features - DFO EBSA											
Hecate Strait Front	1707	3.7%	0.0%	0.2%	**3.9%**	0.0%	**0.0%**	0.0%	0.0%	**0.0%**	**3.9%**
McIntyre Bay	1410	0.0%	1.1%	1.1%	**2.2%**	0.0%	**0.0%**	0.4%	1.7%	**2.1%**	**4.3%**
Cape St. James	3370	12.0%	0.0%	0.0%	**12.0%**	9.8%	**9.8%**	0.0%	0.0%	**0.0%**	**21.9%**
Dogfish Banks	2401	21.9%	0.0%	1.4%	**23.4%**	3.4%	**3.4%**	3.2%	0.0%	**3.2%**	**30.1%**
Learmouth Bank	232	49.1%	0.0%	0.0%	**49.1%**	46.1%	**46.1%**	0.0%	0.0%	**0.0%**	**95.3%**
Shelf Break	16216	15.7%	0.0%	0.0%	**15.7%**	5.0%	**5.0%**	0.0%	0.0%	**0.0%**	**20.7%**
Corals /Sponges - DFO Important Areas	2776	10.9%	0.0%	0.0%	**10.9%**	37.2%	**37.2%**	0.0%	0.2%	**0.2%**	**48.4%**
Upper Ocean Sub Regions - Parks Canada											
Cape St. James Tidal Mixing	2289	17.7%	0.0%	0.0%	**17.7%**	14.5%	**14.5%**	0.0%	0.0%	**0.0%**	**32.2%**
Coastal Mixing	13136	17.8%	0.0%	0.0%	**17.8%**	5.8%	**5.8%**	0.0%	0.0%	**0.0%**	**23.6%**
SE Alaska Mixing	6729	3.8%	0.0%	0.0%	**3.8%**	11.7%	**11.7%**	1.4%	2.3%	**3.7%**	**19.2%**
Dixon Entrance Coastal Flow	3677	6.8%	0.1%	0.5%	**7.3%**	5.8%	**5.8%**	0.0%	0.1%	**0.1%**	**13.2%**
West Coast QCI Upwelling	5236	7.8%	0.4%	0.0%	**8.2%**	1.5%	**1.5%**	1.8%	0.6%	**2.4%**	**12.1%**
Low Flow Nearshore	2700	3.6%	3.0%	0.0%	**6.6%**	12.2%	**12.2%**	27.3%	7.1%	**34.4%**	**53.2%**
Dogfish Bank Frontal	2367	22.4%	0.0%	0.0%	**22.4%**	3.3%	**3.3%**	2.4%	0.0%	**2.4%**	**28.0%**
Rose Spit Eddy	917	0.0%	0.0%	4.0%	**4.0%**	0.0%	**0.0%**	0.0%	0.0%	**0.0%**	**4.0%**
Hecate Strait	8996	3.1%	0.0%	0.0%	**3.1%**	3.7%	**3.7%**	0.0%	0.0%	**0.0%**	**6.9%**
Other - BCMCA Special Features											
High Tidal Current	1187	19.2%	0.1%	3.5%	**22.7%**	16.3%	**16.3%**	2.2%	0.0%	**2.2%**	**41.3%**
High Rugosity	10027	16.1%	0.3%	0.0%	**16.4%**	3.6%	**3.6%**	2.1%	0.8%	**2.9%**	**22.9%**

Zoning does not direct uses or activities outside of provincial regulatory authority

8.5 INDIVIDUAL MARINE ZONES

For the purposes of presenting the marine spatial plan, the waters in and around Haida Gwaii have been divided into six areas:

- Masset Inlet
- Skidegate Inlet
- Dixon Entrance
- West Coast
- Hecate North
- Gwaii Haanas Offshore and Northwest Queen Charlotte Sound

Additional maps have been included to provide detail views of portions of the six areas where necessary. Figure 8-3 illustrates the extent of zoning maps presented in the spatial plan.

Figure 8 3. Key map showing the extent of individual maps presented in the spatial plan

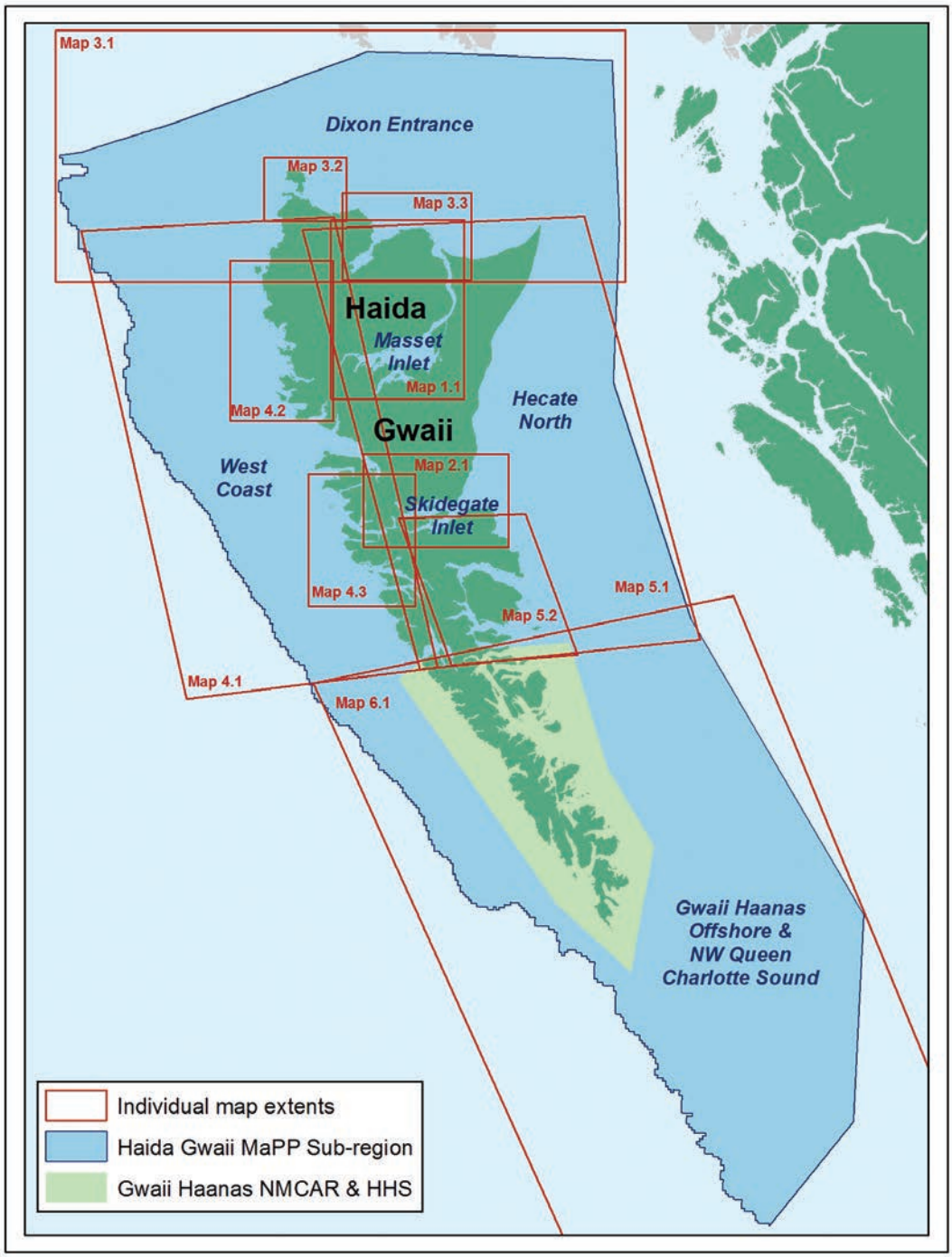


Photo - Kelly Whitney-Squire

8.5.1 MASSET INLET

> *[Herring spawn] Around Juskatla—Juskatla Inlet and Shannon Bay and all through the inlet. I heard the seals follow them in there late June and early July. I used to seal hunt up there ... the seals would surface and their face was just covered with ... with roe, you know, k'aaw. And there was lots for them to eat up there—a lot of herring up there. The water's murky red; you can't see but you see the eagles sitting along the rock just picking the herring out of the water. ... They just sit there, and reach out and grab a herring. Lot of herring go up there. (Percy Williams, 1998)*

Masset Inlet is a place of unique oceanography with important habitat areas for marine birds, waterfowl, and marine fish and invertebrates. Juvenile Sablefish rear in kelp forests, juvenile salmon and Dungeness Crab rear in estuaries and eelgrass meadows, herring spawn along its shores, and it is home to the only endemic run of Chinook Salmon on Haida Gwaii. The inlet is an important traditional fishing and gathering place for Haida. Many villages and seasonal camps are located on the shores of Masset Inlet, and protecting its rich marine resources is important for Haida traditional access and culture. Haida traditional uses and activities are prevalent throughout Masset Inlet, including seasonal activities at many of the important salmon streams in the area.

Due to its proximity to several communities, Masset Inlet experiences a relatively high level of marine traffic, which includes a large recreational fishing fleet, self-loading log barges, fuel barges, supply barges, float planes and commercial fishing vessels. The primary log sorting and loading area for the north end of Haida Gwaii is located in Juskatla, and traffic travels out through Masset Sound to Dixon Entrance.

Map 1.1 presents an overview of Masset Inlet. Masset Inlet, in its entirety, is zoned as a Category V PMZ because it will benefit from an integrated management plan that considers broader ecological interactions and the value and importance of the many human use activities that occur throughout the area. In addition, five IUCN Type Ib, two IUCN Type II, and four IUCN Type IV PMZs have been identified with Masset Inlet. The category and objectives for each zone are described in Table 8-8 and recommended uses and activities are listed in Table 8-9.

Map 1.1. Overview of Masset Inlet, showing marine spatial zoning

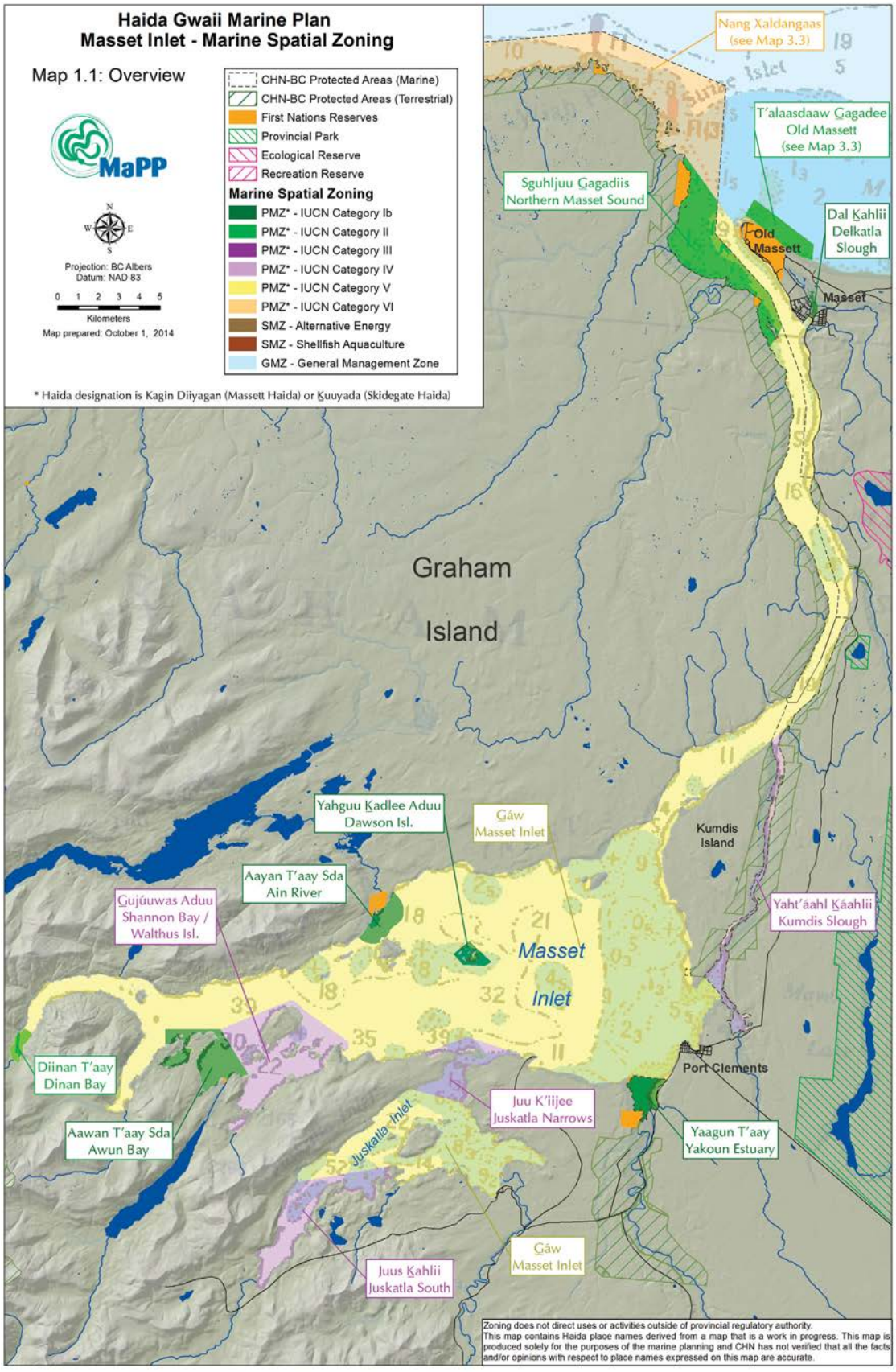


Table 8 8. Management objectives for Masset Inlet PMZs

ZONE NAME	PMZ CATEGORY	SIZE (KM^2)	MANAGEMENT OBJECTIVE(S) FOR PROVINCIAL AND HAIDA VALUES
Aayan T'aay Sda - Ain River	IUCN Ib	2.5	Protection of the Ain River estuary and surrounding waters which are important as staging areas for Chum, Sockeye, Coho, and Pink salmon and an area with important Haida values, including traditional use.
Aawan T'aay Sda - Awun Bay	IUCN Ib	5.8	Protection of Awun Bay and the Awun River estuary which are important Chum and Sockeye Salmon areas and an area with important Haida values, including traditional use.
Yahguu Kadlee Aduu - Dawson Islands	IUCN Ib	1.2	Protection of seal haulouts, nesting seabirds and high value traditional use areas.
Dal Kahlii – Delkatla Slough	IUCN Ib	0.3	Protection of important wildlife area that contains resident and migratory bird habitat.
Yaagun T'aay - Yakoun Estuary	IUCN Ib	2.3	Protection of Yakoun River estuary, containing significant eelgrass habitat, a staging area for all salmon species and an area with important Haida values, including traditional use.
Diinan T'aay - Dinan Bay	IUCN II	0.9	Protection of herring spawn area in need of habitat restoration and an area with important Haida values, including traditional use.
Sguhljuu Gagadiis - Northern Masset Sound	IUCN II	13.5	Protection of area across from the village of Old Massett which is an area with important Haida values, including traditional use.
Juu K'iijee - Juskatla Narrows	IUCN IV	5.0	Protection of kelp beds and eelgrass meadows, critical habitat for a variety of marine species (including herring spawn) and an area with important Haida values, including traditional use.
Juus Kahlii - Juskatla South	IUCN IV	9.0	Protection of important estuary (Datlaman River) and associated bay.
Yaht'áahl Káahlii - Kumdis Slough	IUCN IV	4.9	Protection of eelgrass meadows, wetlands and estuary which provide critical habitat for a variety of marine species and important habitat for resident and migratory birds.
Gujúuwas Aduu - Shannon Bay/ Walthus Isl.	IUCN IV	14.0	Protection of identified Killer Whale rubbing area and representative habitat in Masset Inlet.
Gáw - Masset Inlet	IUCN V	255.4	Protection of important estuaries, herring spawn and Bull Kelp habitat in the unique ecosystem of Masset Inlet, and an area with important Haida values, including traditional use.

Zoning does not direct uses or activities outside of provincial regulatory authority.

Table 8 9. Recommended uses and activities for Masset Inlet marine zones

Category	Marine Uses and Activities	Aayan T'aay Sda - Ain River	Aawan T'aay Sda - Awun Bay	Yahguu Ḵadlee Aduu - Dawson Isl.	Dal Ḵahlii – Delkatla Slough	Yaagun T'aay - Yakoun Estuary	Diinan T'aay - Dinan Bay	Sguhljuu Ḡagadiis - Northern Masset Sound	Juu K'iijee - Juskatla Narrows	Juus Ḵahlii - Juskatla South	Yahr'áahl Ḵáahlii - Kumdis Slough	Ḡujúuwas Aduu - Shannon Bay / Walthus Isl.	Ḡáw - Masset Inlet
Site Name													
Zone Type		PMZ*					PMZ*		PMZ*				PMZ*
Aquaculture	Bottom Culture Aquaculture Siting – Plants, Shellfish, Other Invertebrates	X	X	X	X	X	X	X	X	X	X	X	✓
	Off Bottom Aquaculture Siting – Plants, Shellfish, Other Invertebrates	X	X	X	X	X	X	X	X	X	X	X	✓
	Off-Bottom Aquaculture Siting– Finfish	X	X	X	X	X	X	X	X	X	X	X	X
Energy	Renewable Energy Generation	X	X	X	X	X	X	X	O[2,4]	X	X	X	✓
Industry	Forestry Operations	X	X	X	X	X	X	X	X	X	X	X	✓
	Mining Operations	X	X	X	X	X	X	X	X	X	X	X	X
Infrastructure	Commercial and Recreational Anchorages	O[2,4]	O[2,4]	O[2]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	✓
	Float Homes	X	X	X	X	X	X	X	X	X	X	X	O[2,4]
	Floating Lodges	X	X	X	X	X	X	X	X	X	X	X	O[2,4]
	Level 1 Docks, Wharves & Facilities	O[2,3,4]	O[2,3,4]	X	X	O[2,3,4]	X	O[2,3,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	✓
	Level 2 Docks, Wharves & Facilities	X	X	X	X	X	X	X	X	X	X	X	O[5]
Recreation/ Tourism	Commercial Recreation and Tourism	O[2,4]	O[2,4]	O[2]	O[2]	O[2,4]	O[2,4]	O[2,4]	✓	✓	✓	✓	✓
	Public Recreation and Tourism	O[2,4]	O[2,4]	O[2]	O[2]	O[2,4]	O[2,4]	O[2,4]	✓	✓	✓	✓	✓
Research	Research	O[1,4]	O[1,4]	O[1]	O[1]	O[1,4]	O[1,4]	O[1,4]	✓	✓	✓	✓	✓
Utilities	Linear Utilities	X	X	X	X	X	X	X	O[2]	O[2]	O[2]	O[2]	✓
	Point Source Utilities	X	X	X	X	X	X	X	X	X	X	X	✓

* Haida designation is Kagin Diiyagan (Massett Haida) or Ḵuuyada (Skidegate Haida)

Where a use/activity is outside provincial regulatory authority, the approval of that use/activity is subject to the decision-making process(es) of the responsible authorities. Absence does not imply that the use/activity was not considered or evaluated or is of no interest. The reader should contact the appropriate management authority(ies) for direction on uses/activities in such circumstances. Zoning does not direct uses or activities outside of provincial regulatory authority.

Key:	
Haida traditional uses, including practices for food, social, ceremonial and stewardship purposes, continue in accordance with legal obligations.	
Acceptable: Uses and activities are considered to be 'acceptable' subject to applicable laws, policy and relevant agreements between the Parties. Acceptability of any use/activity does not guarantee that a use/activity will be approved.	✔
Conditionally Acceptable: Uses and activities are considered to be 'conditionally acceptable' subject to applicable laws, policy and relevant agreements between the Parties, and provided they are consistent with (adhere to) the plan conditions. Conditional acceptability of any use/activity does not guarantee that a use/activity will be approved.	O
Not Acceptable: Uses and activities are considered to be 'not acceptable' and should not be approved.	X
Not Applicable: The use or activity could not or would not occur in this zone due to the physical environment or other limitations (e.g. forestry operations in offshore PMZs).	n/a
Note: *This table does not alter the Council of Haida Nation and Province of BC referral obligations under existing agreements.*	

List of Conditional Statements

O[1]: Only research activities that are non-extractive and will not disturb sensitive or critical features and habitat are acceptable.
O[2]: Should avoid disturbance of sensitive or critical features and habitat; further site conditions may be identified in an approved Protection Management Plan.
O[3]: Infrastructure enabling Haida access to adjacent reserve lands permitted.
O[4]: Activity should be compatible with Haida cultural use of the area, including consideration of Haida activities and/or stewardship knowledge; further site conditions may be identified in an approved Protection Management Plan.
O[5]: Infrastructure and associated activities should be compatible with vision and conservation objectives of PMZ or SMZ; further site conditions may be identified in an approved Protection Management Plan.

Additional Considerations

Aayan T'aay Sda - **Ain River**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Aawan T'aay Sda - **Awun Bay**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Yahguu Kadlee Aduu - **Dawson Islands**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Dal Kahlii - **Delkatla Slough**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Yaagun T'aay - **Yakoun Estuary**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels. Local shore-based recreational fishing is an important activity in this area.

Diinan T'aay - **Dinan Bay**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Sguhljuu Gagadiis - **Northern Masset Sound**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Juu K'iijee - **Juskatla Narrows**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels, though it is noted that log barge loading at storage/handling facilities is an important activity in the area.

Juus Kahlii - **Juskatla South**: Commercial value of salmon is high. Ecological and cultural values may be impacted by other commercial fisheries. Sensitive and/or critical features and associated habitats and/or cultural values may be impacted by recreational fishing activity. Sensitive or critical features and habitat may be impacted by large commercial vessels and smaller freight or log boom towing vessels.

Yaht'áahl Káahlii - **Kumdis Slough**: Ecological values may be impacted by commercial fisheries. Sensitive and/or critical features and associated habitats and/or cultural values may be impacted by recreational fishing activity. Sensitive or critical features and habitat may be impacted by large commercial vessels and smaller freight or log boom towing vessels. Ecological values may be impacted by anchoring.

Gujúuwas Aduu - **Shannon Bay/Walthus Island**: Ecological values may be impacted by commercial fisheries. Sensitive and/or critical features and associated habitats and/or cultural values may be impacted by recreational fishing activity. Sensitive or critical features and habitat may be negatively impacted by large commercial vessels, though it is noted that log barge loading at storage/handling facilities is an important activity in the area.

Gáw - **Masset Inlet**: Commercial value of salmon is high. Ecological and cultural values may be impacted by other commercial fisheries. Temporary vessel anchorages by log and container barges have high ecomonic value. Economic value of transportation activities in the area is high.

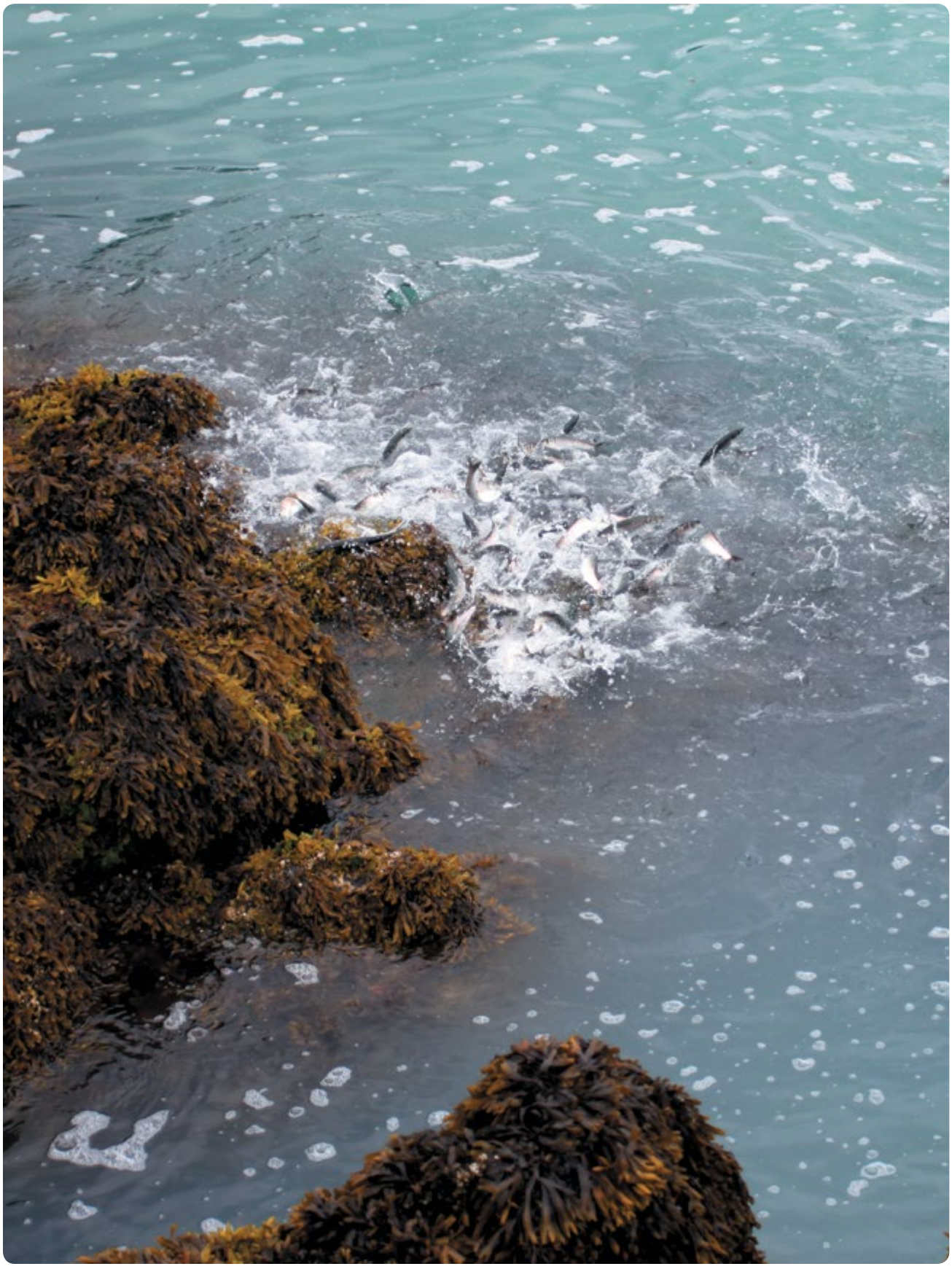


Photo - Kelly Whitney-Squire

8.5.2 SKIDEGATE INLET

> *In the summer, my mother would jig flounders—use k'aaw for bait—either in front of Jag's or off the dock in Skidegate … they rigged up these hooks; I think there were two hooks dangled off a coat hanger that was bent, and then you use dried k'aaw for bait and they would just get all these flounders. And my mother would split them, take all the bones out, and smoke them for maybe a day or so and then dry them above the stove until everything was dry, so that there was a big row of these dried flounders behind the stove. And you would just rip one off and shove it in the woodstove and cook it, or you can eat it the way it was, all dry, and it was really tasty … and in the winter months, the men would fish off of around Balance Rock and get another type of flounder. There's two types; one's called t'aal and the ones we got in the summer, I believe, is called sgan t'aal… it was real fun, you know … especially if you'd walk up to Skidegate, there would be half a dozen ladies and of course a picnic. (Diane Brown, April 2007)*

Skidegate Inlet is a relatively confined waterbody that is separated from Hecate Strait by a prominent spit (Kil Kun or Sandspit). It is well known for its high tidal range, high abundance of herring and salmon, particularly Chum during past decades, and influxes of waterfowl and dogfish and other fish such as Chinook Salmon and halibut at certain times of the year. Due to the proximity of the communities of Skidegate, Queen Charlotte and Sandspit, Skidegate Inlet experiences relatively high marine use. The area has abundant seafood, which historically supported numerous Haida villages and continues to provide for Haida and other island communities today. Extensive intertidal life and productive salmon rivers provide a wide range of shellfish and finfish that are traditionally gathered and fished throughout the entire inlet.

Logging and commercial fishing were very active over the past century, although both have declined in recent decades. Many commercial fisheries have closed within Skidegate Inlet, but over the past decade, charter and lodge-style recreational fishing activities have increased, particularly in Sandspit. Currently, there are active shellfish aquaculture operations within Skidegate Inlet and capability studies have indicated there is high suitability for expanded growth of the industry in the area. As a result, shellfish aquaculture SMZs are proposed in parts of the inlet to reflect the potential for future marine economic development. The area is an important transportation hub for the islands, and includes infrastructure to support ferries and other marine vessels. Skidegate Narrows is also a transportation corridor between the east and west coasts of Haida Gwaii.

Map 2.1 presents an overview of Skidegate Inlet. Skidegate Inlet, in its entirety, is zoned as a Category V PMZ because it will benefit from an integrated management plan that considers broader ecological interactions and the value and importance of the many human use activities that occur throughout the area. In addition, three IUCN Type Ib, one IUCN Type II, one IUCN Type III, and three IUCN Type IV PMZs have been identified within Skidegate Inlet. Three SMZs are identified for shellfish aquaculture to allocate space for scallop culture in areas that are expected to experience development over the next five years. The category and objectives for each zone are described in Table 8-10 and recommended uses and activities are listed in Table 8-11.

Map 2.1. Overview of Skidegate Inlet, showing marine spatial zoning

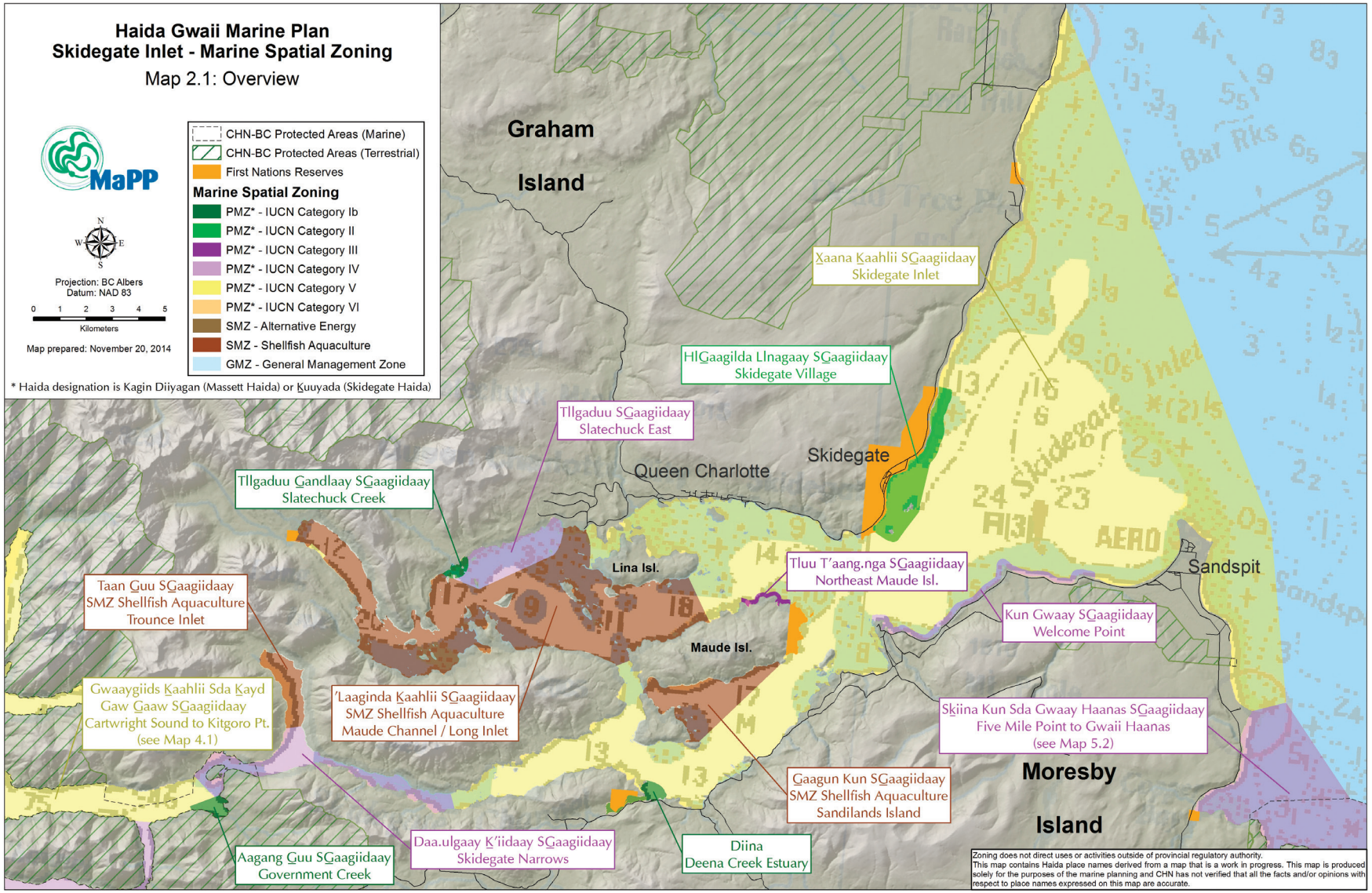


Table 8 10. Management objectives for Skidegate Inlet SMZs and PMZs

ZONE NAME	PMZ / SMZ CATEGORY	SIZE (KM²)	MANAGEMENT OBJECTIVE(S) FOR PROVINCIAL AND HAIDA VALUES
Taan Guu SGaagiidaay - SMZ Shellfish Aquaculture Trounce Inlet	SMZ - Shellfish Aquaculture	2.3	To allocate space and maintain ecological conditions for sustainable shellfish aquaculture activities.
‘Laaginda Kaahlii SGaagiidaay - SMZ Shellfish Aquaculture Maude Channel/Long Inlet	SMZ - Shellfish Aquaculture	36.7	To allocate space and maintain ecological conditions for sustainable shellfish aquaculture activities.
Gaagun Kun SGaagiidaay - SMZ Shellfish Aquaculture Sandilands Island	SMZ - Shellfish Aquaculture	5.9	To allocate space and maintain ecological conditions for sustainable shellfish aquaculture activities.
Diina – Deena Creek Estuary	IUCN Ib	1.0	Protection of Deena Creek estuary, a highly productive salmon stream and an area with important Haida values, including traditional use.
Aagang Guu SGaagiidaay - Government Creek	IUCN Ib	0.7	Protection of Government Creek estuary and a productive salmon stream flowing from the only remaining unlogged watershed in Skidegate Channel West, Skidegate Narrows and Skidegate Inlet and an area with important Haida values, including traditional use.
Tllgaduu Gandlaay SGaagiidaay - Slatechuck Creek	IUCN Ib	0.4	Protection of the Slatechuck Creek estuary, nesting seabird colonies and eelgrass beds and an area with important Haida values, including traditional use.
HlGaagilda Llnagaay SGaagiidaay - Skidegate Village	IUCN II	5.0	Protection of the area adjacent to the village of Skidegate, rich in kelp and eelgrass beds and an area with important Haida values, including traditional use.
Tluu T’aang.nga SGaagiidaay - Northeast Maude Isl.	IUCN III	0.4	Protection of natural history site (unique fossils) and protection of eelgrass and Giant Kelp habitat and significant historic herring spawn.
Daa.ulgaay K’iidaay SGaagiidaay - Skidegate Narrows	IUCN IV	5.9	Protection of Skidegate Narrows – a shallow channel and scenic travel route with unique benthic features and an area with important Haida values, including traditional use.
Tllgaduu SGaagiidaay - Slatechuck East	IUCN IV	4.6	Protection of eelgrass beds, nesting seabird colonies and bird congregation areas and an area with important Haida values, including traditional use.
Kun Gwaay SGaagiidaay – Welcome Point	IUCN IV	2.2	Protection of Sachs Creek estuary, seabird colonies, herring spawning grounds and an area with important Haida values, including traditional use.
Xaana Kaahlii SGaagiidaay - Skidegate Inlet	IUCN V	240.2	Protection of the unique inlet separating Graham and Moresby Islands which contains the estuaries of multiple salmon streams, historical herring spawning grounds, important bird areas, eelgrass and kelp habitat, and an area with important Haida values, including traditional use.

Zoning does not direct uses or activities outside of provincial regulatory authority.

Table 8 11. Recommended uses and activities for Skidegate Inlet marine zones

Category	Marine Uses and Activities (see tabs for details)	Site Name: Laaginda Kaahlii SGaagiidaay - SMZ Shellfish Aquaculture Maude Channel/Long Inlet	Gaagun Kun SGaagiidaay - SMZ Shellfish Aquaculture Sandilands Island	Taan Guu SGaagiidaay - SMZ Shellfish Aquaculture Trounce Inlet	Diina Deena Creek Estuary	Aagang Guu SGaagiidaay - Government Creek	Tllgaduu Gandlaay SGaagiidaay - Slatechuck Creek	HlGaagilda Llnagaay SGaagiidaay - Skidegate Village	Tluu T'aang.nga SGaagiidaay - Northeast Maude Isl.	Daa.ulgaay K'iidaay SGaagiidaay - Skidegate Narrows	Tllgaduu SGaagiidaay - Slatechuck East	Kun Gwaay SGaagiidaay – Welcome Point	Xaana Kaahlii SGaagiidaay - Skidegate Inlet
	Zone Type	SMZ Aquaculture			PMZ*			PMZ*	PMZ*	PMZ*			PMZ*
Aquaculture	Bottom Culture Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	✓	✓	X	X	X	X	X	X	X	X	✓
	Off Bottom Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	✓	✓	X	X	X	X	X	X	X	X	✓
	Off-Bottom Aquaculture Siting – Finfish	X	X	X	X	X	X	X	X	X	X	X	X
Energy	Renewable Energy Generation	O[7]	O[7]	O[7]	X	X	X	X	X	X	X	X	✓
Industry	Forestry Operations	O[11]	O[11]	O[11]	X	X	X	X	X	X	X	X	✓
	Mining Operations	X	X	X	X	X	X	X	X	X	X	X	X
Infrastructure	Commercial and Recreational Anchorages	O[7]	O[7]	O[7]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4,9]	O[2,4]	O[2,4]	✓
	Float Homes	X	X	X	X	X	X	X	X	X	X	X	O[2,4]
	Floating Lodges	X	X	X	X	X	X	X	X	X	X	X	O[2,4]
	Level 1 Docks, Wharves & Facilities	O[7]	O[7]	O[7]	X	O[2,8]	X	O[2,3,4]	X	X	X	O[2,4]	✓
	Level 2 Docks, Wharves & Facilities	O[5, 7]	O[5, 7]	O[5, 7]	X	X	X	X	X	X	X	X	O[5]
Recreation/ Tourism	Commercial Recreation and Tourism	✓	✓	✓	O[2,4]	O[2]	O[2,4]	O[2,4]	O[2,4]	✓	O[2,4]	✓	✓
	Public Recreation and Tourism	✓	✓	✓	O[2,4]	O[2]	O[2,4]	O[2,4]	O[2,4]	✓	O[2,4]	✓	✓
Research	Research	✓	✓	✓	O[1]	O[1]	O[1]	O[1,4]	O[1,4]	✓	O[1,4]	✓	✓
Utilities	Linear Utilities	O[7]	O[7]	O[7]	X	X	X	O[2]	O[2]	X	X	O[2]	✓
	Point Source Utilities	X	X	X	X	X	X	X	X	X	X	X	✓

* Haida designation is Kagin Diiyagan (Massett Haida) or Kuuyada (Skidegate Haida)

Where a use/activity is outside provincial regulatory authority, the approval of that use/activity is subject to the decision-making process(es) of the responsible authorities. Absence does not imply that the use/activity was not considered or evaluated or is of no interest. The reader should contact the appropriate management authority(ies) for direction on uses/activities in such circumstances. Zoning does not direct uses or activities outside of provincial regulatory authority.

Key:	
Haida traditional uses, including practices for food, social, ceremonial and stewardship purposes, continue in accordance with legal obligations.	
Acceptable: Uses and activities are considered to be 'acceptable' subject to applicable laws, policy and relevant agreements between the Parties. Acceptability of any use/activity does not guarantee that a use/activity will be approved.	✔
Conditionally Acceptable: Uses and activities are considered to be 'conditionally acceptable' subject to applicable laws, policy and relevant agreements between the Parties, and provided they are consistent with (adhere to) the plan conditions. Conditional acceptability of any use/activity does not guarantee that a use/activity will be approved.	O
Not Acceptable: Uses and activities are considered to be 'not acceptable' and should not be approved.	X
Not Applicable: The use or activity could not or would not occur in this zone due to the physical environment or other limitations (e.g. forestry operations in offshore PMZs).	n/a
Note: *This table does not alter the Council of Haida Nation and Province of BC referral obligations under existing agreements.*	

List of Conditional Statements

O[1]: Only research activities that are non-extractive and will not disturb sensitive or critical features and habitat are acceptable.
O[2]: Should avoid disturbance of sensitive or critical features and habitat; further site conditions may be identified in an approved Protection Management Plan.
O[3]: Infrastructure enabling Haida access to adjacent reserve lands permitted.
O[4]: Activity should be compatible with Haida cultural use of the area, including consideration of Haida activities and/or stewardship knowledge; further site conditions may be identified in an approved Protection Management Plan.
O[5]: Infrastructure and associated activities should be compatible with vision and conservation objectives of PMZ or SMZ; further site conditions may be identified in an approved Protection Management Plan.
O[7]: Activities or infrastructure may be limited by current shellfish aquaculture operations and/or future shellfish aquaculture opportunities in area.
O[8]: Infrastructure should be limited to that required for service provision of PMZ.
O[9]: Activity should not interfere with existing vessel traffic in area.
O[11]: Temporary log handling sites may be allowed, depending on the state of aquaculture activity in the vicinity of the proposed site, when no other water access sites in that particular watershed are found to be practicable.

Additional Considerations

Diina - **Deena Creek Estuary**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels. Local recreational shore-based recreational fishing is an important activity in this area.

Aagang Guu SGaagiidaay - **Government Creek**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Tllgaduu Gandlaay SGaagiidaay - **Slatechuck Creek**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

HlGaagilda Llnagaay SGaagiidaay - **Skidegate Village**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Tluu T'aang.nga SGaagiidaay - **Northeast Maude Island**: Ecological values may be impacted by commercial fisheries. Sensitive and/or critical features and associated habitats and/or cultural values may be impacted by recreational fishing activity. Sensitive or critical features and habitat may be impacted by large commercial vessels and smaller freight or log boom towing vessels.

Xaana Kaahlii SGaagiidaay - **Skidegate Inlet**: Commercial value of salmon and spawn on kelp in the area is high. Ecological and cultural values may be impacted by other commercial fisheries. Temporary vessel anchorages by log and container barges have high ecomonic value. Economic value of transportation activities in the area is high.

Daa.ulgaay K'iidaay SGaagiidaay - **Skidegate Narrows**: Ecological values may be impacted by commercial fisheries. Sensitive and/or critical features and associated habitats and/or cultural values may be impacted by recreational fishing activity. Sensitive or critical features and habitat may be negatively impacted by large commercial vessels, though it is noted that log barge loading at storage/handling facilities is an important activity in the area. Ecological values may be impacted by anchoring. Periodic dredging of the channel occurs to maintain navigation and safety.

Tllgaduu SGaagiidaay - **Slatechuck East**: Ecological values may be impacted by commercial fisheries. Sensitive and/or critical features and associated habitats and/or cultural values may be impacted by recreational fishing activity. Sensitive or critical features and habitat may be negatively impacted by large commercial vessels, though it is noted that log barge loading at storage/handling facilities is an important activity in the area.

Kun Gwaay SGaagiidaay - **Welcome Point**: Ecological values may be impacted by commercial fisheries. Sensitive and/or critical features and associated habitats and/or cultural values may be impacted by recreational fishing activity. Sensitive or critical features and habitat may be impacted by large commercial vessels and smaller freight or log boom towing vessels.

Photo - Sarah Stevenson

8.5.3 DIXON ENTRANCE

> *Well, from [Massett] as soon as ... the fishing season opens, they all go down to the North Island... all our people living here, they all had fishing cabins down there. So the whole village used to move down there. Nobody left here [in] Massett. They'd move down there, the hand-trollers, and then the other bunch moved into Naden—crab fishermen and their wives working the cannery. And then some from here—whatever left moved out to Tow Hill—razor clam digging. They had a big cannery out there that time. So Massett was empty town when it's summertime. Yeah, that was where I start fishing with my dad ... my dad used to teach me all about how to be on a rowboat—how to take care of the boat, how to take care of myself. He said, 'You're not a good ocean man unless you can stay on the boat.' (chuckling) ... Then once I got a little bit older I worked my way onto the seine boats. I been on seine boats, halibut boats—all of my life ... I think I was twelve years old the first time I went by myself ... I rowed from here to Naden. I spent the night there and then from there I rowed down to Shag Rock. My dad was in the fishing camp there. There was a whole bunch of houses in there at that time. They had fishing cabins everywhere. [At] North Island ... there was a big ... packer. They used to tie all the rowboats behind each others ... and he used to tow everybody down there." (Stephen Brown, Jan. 2009)*

Dixon Entrance is located at the north end of the Haida Gwaii archipelago and the northern extent of the planning area is defined by the international border between Canada and the United States. The bathymetry of Dixon Entrance, along with the influence of freshwater from the mainland (eg, Skeena and Nass Rivers) and strong tidal flows, creates a distinctive set of currents, which delineate Dixon Entrance from the Pacific Ocean on the west coast of Graham Island and Hecate Strait to the east.

Dixon Entrance contains some prominent geophysical features including Learmonth (or Learmouth) Bank, Naden Harbour, McIntyre Bay, Langara Island and Rose Spit. These varied and unique features create an area of high productivity and diverse habitats. Dixon Entrance has provided for the Haida for thousands of years, and the area is still used for traditional and other commercial activities. Over the past half-century there have been significant trawl and longline fisheries in the deeper waters of Dixon Entrance. Currently, there are active Dungeness Crab fisheries in McIntyre Bay and Naden Harbour. A number of recreational fishing lodges and charter companies also operate in the area, which in the past has led to conflicts between users, particularly in the area between Masset, Naden Harbour and Langara Island.

Dixon Entrance is an important transportation corridor and has been so for generations. Learmouth Bank is located on the "Haida highway" from Haida Gwaii to Alaska and features in Haida oral traditions. Today, large container ships travel through the area, transiting from the ports of Prince Rupert and Kitimat en route to Asian markets. Ships are often anchored in the vicinity of McIntyre Bay preceding their arrival in port or their departure to the open Pacific. Proposed industrial projects in mainland ports may result in increased tanker traffic over the next decade, which is raising concerns about the possibility of an oil spill in the region. Additionally, cruise ships regularly transit through Haida Gwaii waters. As a result, the cumulative effects of large vessel bilge and waste water dumping in the area is also a growing concern. The ecological significance of the area is notable on a coast-wide scale, particularly around Langara Island, which supports many seabird colonies, diverse nearshore habitats and abundant marine mammals. There are many culturally significant areas in Dixon Entrance, including places that are important for Haida seaweed harvesting and fishing, as well as villages, shell middens, caves, burial sites, culturally modified trees, and rock shelters. Haida Watchmen camps, located in former village sites in Naden Harbour and at Kiusta, are used as bases for the CHN Fisheries Program to monitor recreational fishing activities in the area.

Map 3.1 presents an overview of Dixon Entrance. Maps 3.2 and 3.3 are more detailed maps of NW Graham Island and Naden Harbour, respectively. Nine IUCN Type Ib, four IUCN Type II, one IUCN Type III, six IUCN Type IV, one IUCN Type V and two IUCN Type VI PMZs are identified. The category and objectives and recommended uses and activities for each zone are described in Tables 8-12 to 8-17.

Map 3.1. Overview of Dixon Entrance, showing marine spatial zoning

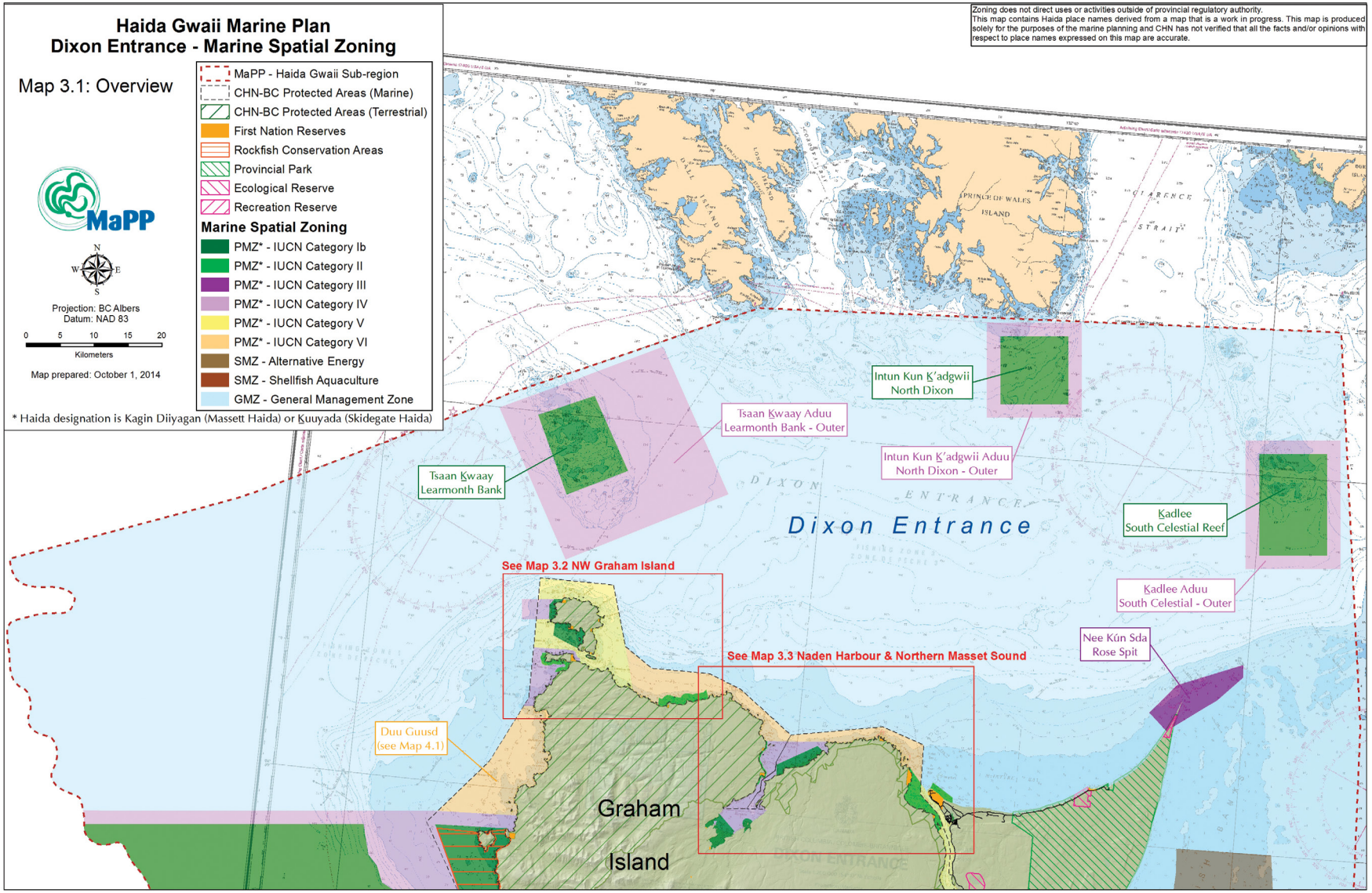


Table 8 12. Management objectives for Dixon Entrance PMZs

ZONE NAME	PMZ CATEGORY	SIZE (KM²)	MANAGEMENT OBJECTIVE(S) FOR PROVINCIAL AND HAIDA VALUES
Tsaan K̲waay – Learmonth Bank	IUCN Ib	113.8	Protection of Learmouth Bank, a unique benthic feature that results in highly productive waters and associated species assemblages.
Intun Kun K̲'adgwii - North Dixon	IUCN Ib	100.0	Protection of representative habitat within Dixon Entrance Ecosection.
K̲adlee - South Celestial Reef	IUCN Ib	150.0	Protection of rockfish habitat and representative habitat within Dixon Entrance Ecosection.
Nee Kún Sda – Rose Spit	IUCN III	54.8	Protection of a unique geologic and benthic feature and an area with important Haida values, including traditional use.
Tsaan K̲waay Aduu - Learmonth Outer	IUCN IV	507.6	Protecting an area with unique oceanographic features as well as cold water corals and sponges.
Intun Kun K̲'adgwii Aduu – North Dixon Outer	IUCN IV	96.0	Provides a buffer for ecological values in the North Dixon PMZ while allowing for appropriate socio-economic activities.
K̲adlee Aduu - South Celestial Outer	IUCN IV	116.0	Provides a buffer for ecological values in the South Celestial Reef PMZ while allowing for appropriate socio-economic activities.

Zoning does not direct uses or activities outside of provincial regulatory authority.

Table 8 13. Recommended uses and activities for Dixon Entrance marine zones

Category	Marine Uses and Activities	General Management Zone	Tsaan Kwaay – Learmonth Bank	Intun Kun K'adgwii - North Dixon	Kadlee - South Celestial Reef	Nee Kún Sda – Rose Spit	Tsaan Kwaay Aduu - Learmonth Outer	Intun Kun K'adgwii Aduu – North Dixon Outer	Kadlee Aduu - South Celestial Outer
Site Name / Zone Type		GMZ	PMZ*			PMZ*	PMZ*		
Aquaculture	Bottom Culture Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	n/a	n/a	n/a	X	n/a	n/a	n/a
	Off Bottom Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	n/a	n/a	n/a	X	n/a	n/a	n/a
	Off-Bottom Aquaculture Siting – Finfish	X	n/a	n/a	n/a	X	n/a	n/a	n/a
Energy	Renewable Energy Generation	✓	X	X	X	X	X	X	X
Industry	Forestry Operations	✓	n/a	n/a	n/a	X	n/a	n/a	n/a
	Mining Operations	X	X	X	X	X	X	X	X
Infrastructure	Commercial and Recreational Anchorages	✓	O[2]	O[2]	O[2]	O[2,4]	O[2]	O[2]	O[2]
	Float Homes	✓	n/a	n/a	n/a	X	n/a	n/a	n/a
	Floating Lodges	✓	n/a	n/a	n/a	X	n/a	n/a	n/a
	Level 1 Docks, Wharves & Facilities	✓	n/a	n/a	n/a	X	n/a	n/a	n/a
	Level 2 Docks, Wharves & Facilities	✓	n/a	n/a	n/a	X	n/a	n/a	n/a
Recreation/ Tourism	Commercial Recreation and Tourism	✓	O[2]	O[2]	O[2]	O[2]	✓	✓	✓
	Public Recreation and Tourism	✓	O[2]	O[2]	O[2]	O[2]	✓	✓	✓
Research	Research	✓	O[1]	O[1]	O[1]	O[1]	O[2]	O[2]	O[2]
Utilities	Linear Utilities	✓	n/a	n/a	n/a	X	n/a	n/a	n/a
	Point Source Utilities	✓	n/a	n/a	n/a	X	n/a	n/a	n/a

* Haida designation is Kagin Diiyagan (Massett Haida) or Kuuyada (Skidegate Haida)

Where a use/activity is outside provincial regulatory authority, the approval of that use/activity is subject to the decision-making process(es) of the responsible authorities. Absence does not imply that the use/activity was not considered or evaluated or is of no interest. The reader should contact the appropriate management authority(ies) for direction on uses/activities in such circumstances. Zoning does not direct uses or activities outside of provincial regulatory authority.

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Not Acceptable: Uses and activities are considered to be 'not acceptable' and should not be approved.	X
Not Applicable: The use or activity could not or would not occur in this zone due to the physical environment or other limitations (e.g. forestry operations in offshore PMZs).	n/a
Note: *This table does not alter the Council of Haida Nation and Province of BC referral obligations under existing agreements.*	

List of Conditional Statements

O[1]: Only research activities that are non-extractive and will not disturb sensitive or critical features and habitat are acceptable.

O[2]: Should avoid disturbance of sensitive or critical features and habitat; further site conditions may be identified in an approved Protection Management Plan.

O[4]: Activity should be compatible with Haida cultural use of the area, including consideration of Haida activities and/or stewardship knowledge; further site conditions may be identified in an approved Protection Management Plan.

Additional Considerations

Tsaan Kwaay - **Learmonth Bank**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels.

Intun Kun K'adgwii - **North Dixon**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels.

Kadlee - **South Celestial Reef**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels.

Nee Kún Sda - **Rose Spit**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Tsaan Kwaay Aduu - **Learmonth Outer**: Sensitive or critical features and habitat, particularly cold water corals and sponges known to occur in the region, may be negatively impacted by bottom contact fisheries. Economic value of transportation activities in the area is high.

Intun Kun K'adgwii Aduu - **North Dixon Outer**: Economic value of transportation activities in the area is high.

Kadlee Aduu - **South Celestial Outer**: Economic value of transportation activities in the area is high.

Map 3.2. Dixon Entrance – NW Graham Island, showing marine spatial zoning

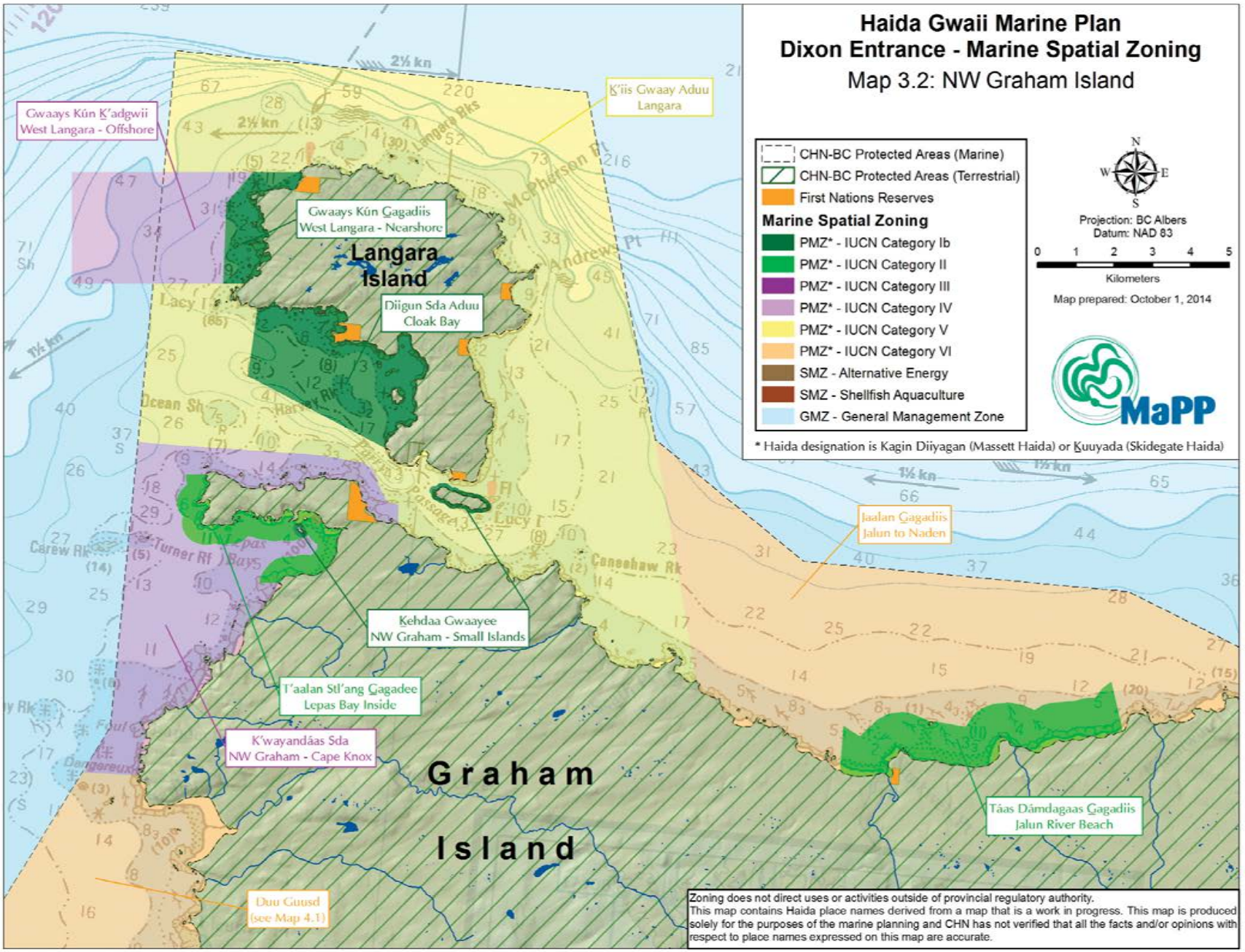

Table 8 14. Management objectives for Dixon – NW Graham PMZs

ZONE NAME	PMZ CATEGORY	SIZE (KM²)	MANAGEMENT OBJECTIVE(S) FOR PROVINCIAL AND HAIDA VALUES
Diigun Sda Aduu – Cloak Bay	IUCN Ib	10.4	Protection of important nearshore kelp beds, rockfish habitat and associated species assemblages, and foraging habitat for marine bird species at risk, and an area with important Haida values, including traditional use.
Kehdaa Gwaayee - NW Graham - Small Islands	IUCN Ib	0.6	Protection from disturbance of nesting seabird colonies and of surrounding waters rich in kelp, and an area with important Haida values, including traditional use.
Gwaays Kún Gagadiis – West Langara Nearshore	IUCN Ib	3.0	Protection of important nearshore kelp beds, rockfish habitat and associated species assemblages, foraging habitat for marine bird species at risk, and an area with important Haida values, including traditional use.
Táas Dámdagaas Gagadiis – Jalun River Beach	IUCN II	8.4	Protection of the Jalun River estuary and surrounding waters and habitats, and an area with important Haida values, including traditional use.
T'aalan Stl'ang Gagadee - Lepas Bay Inside	IUCN II	4.1	Protection of kelp habitat and an area with important Haida values, including traditional use.
K'wayandáas Sda - NW Graham - Cape Knox	IUCN IV	24.2	Protection of nearshore kelp and eelgrass habitat, foraging habitat for marine bird species at risk and an area with important Haida values, including traditional use.
Gwaays Kún K'adgwii – West Langara Offshore	IUCN IV	12.0	Protection of rockfish habitat and associated species assemblages, foraging habitat for marine bird species at risk, identified important area for Gray, Humpback and Killer Whales and an area with important Haida values, including traditional use.
K'iis Gwaay Aduu - Langara	IUCN V	97.9	Protection of nearshore kelp beds, rockfish habitat and associated species assemblages, nesting sites and foraging habitat for multiple marine bird species at risk, identified important area for Gray, Humpback and Killer Whales, and an area with important Haida values, including traditional use.
Jaalan Gagadiis – Jalun to Naden	IUCN VI	78.5	Protection of nearshore kelp beds, rockfish habitat and associated species assemblages, identified important area for Humpback and Killer Whales, and an area with important Haida values, including traditional use.

Zoning does not direct uses or activities outside of provincial regulatory authority.

Table 8 15. Recommended uses and activities for Dixon Entrance – NW Graham marine zones

Category	Marine Uses and Activities	General Management Zone	Diigun Sda Aduu – Cloak Bay	Kehdaa Gwaayee - NW Graham - Small Islands	Gwaays Kún Gagadiis – West Langara Nearshore	Táas Dámdagaas Gagadiis – Jalun River Beach	T'aalan Stl'ang Gagadee - Lepas Bay Inside	K'wayandáas Sda - NW Graham - Cape Knox	Gwaays Kún K'adgwii – West Langara Offshore	K'iis Gwaay Aduu - Langara	Jaalan Gagadiis – Jalun to Naden
Site Name											
Zone Type		GMZ	PMZ*			PMZ*		PMZ*		PMZ*	PMZ*
Aquaculture	Bottom Culture Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	X	X	X	X	X	X	n/a	✓	✓
	Off Bottom Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	X	X	X	X	X	X	n/a	✓	✓
	Off-Bottom Aquaculture Siting – Finfish	X	X	X	X	X	X	X	X	X	X
Energy	Renewable Energy Generation	✓	X	X	X	X	X	X	X	✓	✓
Industry	Forestry Operations	✓	X	X	X	X	X	X	n/a	✓	✓
	Mining Operations	X	X	X	X	X	X	X	X	X	X
Infrastructure	Commercial and Recreational Anchorages	✓	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	✓	✓
	Float Homes	✓	X	X	X	X	X	X	n/a	O[2,4]	O[2,4]
	Floating Lodges	✓	X	X	X	X	X	X	n/a	O[2,4]	O[2,4]
	Level 1 Docks, Wharves & Facilities	✓	O[2,3,4]	X	O[3]	O[2,3,4]	O[2,3,4]	O[2,3,4]	n/a	✓	✓
	Level 2 Docks, Wharves & Facilities	✓	X	X	X	X	X	X	n/a	O[5]	O[5]
Recreation/ Tourism	Commercial Recreation and Tourism	✓	O[2,4]	O[2]	O[2,4]	O[2,4]	O[2,4]	✓	✓	✓	✓
	Public Recreation and Tourism	✓	O[2,4]	O[2]	O[2,4]	O[2,4]	O[2,4]	✓	✓	✓	✓
Research	Research	✓	O[1]	O[1]	O[1]	O[1,4]	O[1,4]	✓	✓	✓	✓
Utilities	Linear Utilities	✓	X	X	X	X	X	X	n/a	✓	✓
	Point Source Utilities	✓	X	X	X	X	X	X	n/a	O[2,4]	O[2,4]

* Haida designation is Kagin Diiyagan (Massett Haida) or Kuuyada (Skidegate Haida)

Where a use/activity is outside provincial regulatory authority, the approval of that use/activity is subject to the decision-making process(es) of the responsible authorities. Absence does not imply that the use/activity was not considered or evaluated or is of no interest. The reader should contact the appropriate management authority(ies) for direction on uses/activities in such circumstances. Zoning does not direct uses or activities outside of provincial regulatory authority.

Key:	
Haida traditional uses, including practices for food, social, ceremonial and stewardship purposes, continue in accordance with legal obligations.	
Acceptable: Uses and activities are considered to be 'acceptable' subject to applicable laws, policy and relevant agreements between the Parties. Acceptability of any use/activity does not guarantee that a use/activity will be approved.	✔
Conditionally Acceptable: Uses and activities are considered to be 'conditionally acceptable' subject to applicable laws, policy and relevant agreements between the Parties, and provided they are consistent with (adhere to) the plan conditions. Conditional acceptability of any use/activity does not guarantee that a use/activity will be approved.	O
Not Acceptable: Uses and activities are considered to be 'not acceptable' and should not be approved.	X
Not Applicable: The use or activity could not or would not occur in this zone due to the physical environment or other limitations (e.g. forestry operations in offshore PMZs).	n/a
Note: *This table does not alter the Council of Haida Nation and Province of BC referral obligations under existing agreements.*	

List of Conditional Statements

O[1]: Only research activities that are non-extractive and will not disturb sensitive or critical features and habitat are acceptable.

O[2]: Should avoid disturbance of sensitive or critical features and habitat; further site conditions may be identified in an approved Protection Management Plan.

O[3]: Infrastructure enabling Haida access to adjacent reserve lands permitted.

O[4]: Activity should be compatible with Haida cultural use of the area, including consideration of Haida activities and/or stewardship knowledge; further site conditions may be identified in an approved Protection Management Plan.

O[5]: Infrastructure and associated activities should be compatible with vision and conservation objectives of PMZ or SMZ; further site conditions may be identified in an approved Protection Management Plan.

Additional Considerations

Diigun Sda Aduu - **Cloak Bay**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Kehdaa Gwaayee - **NW Graham - Small Islands**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Gwaays Kún Gagadiis - **West Langara Nearshore**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Táas Dámdagaas Gagadiis - **Jalun River Beach**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

T'aalan Stl'ang Gagadee - **Lepas Bay Inside**: Sensitive or critical features and habitat may impacted by large commercial vessels and smaller freight or log boom towing vessels.

K'wayandáas Sda - **NW Graham - Cape Knox**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels, though it is noted that barges carrying fuel and equipement/supplies is an important activity occurring in the area. Sensitive benthic habitat and species values may be impacted by trawl activities. Enhanced monitoring and enforcement may be needed for protection of ecological and cultural values.

Gwaays Kún K'adgwii - **West Langara Offshore**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels. Sensitive benthic habitat and species values may be impacted by some commercial fishing activities.

K'iis Gwaay Aduu - **Langara**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels.

Jaalan Gagadiis - **Jalun to Naden**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels.

Map 3.3. Dixon Entrance – Naden Harbour, showing marine spatial zoning

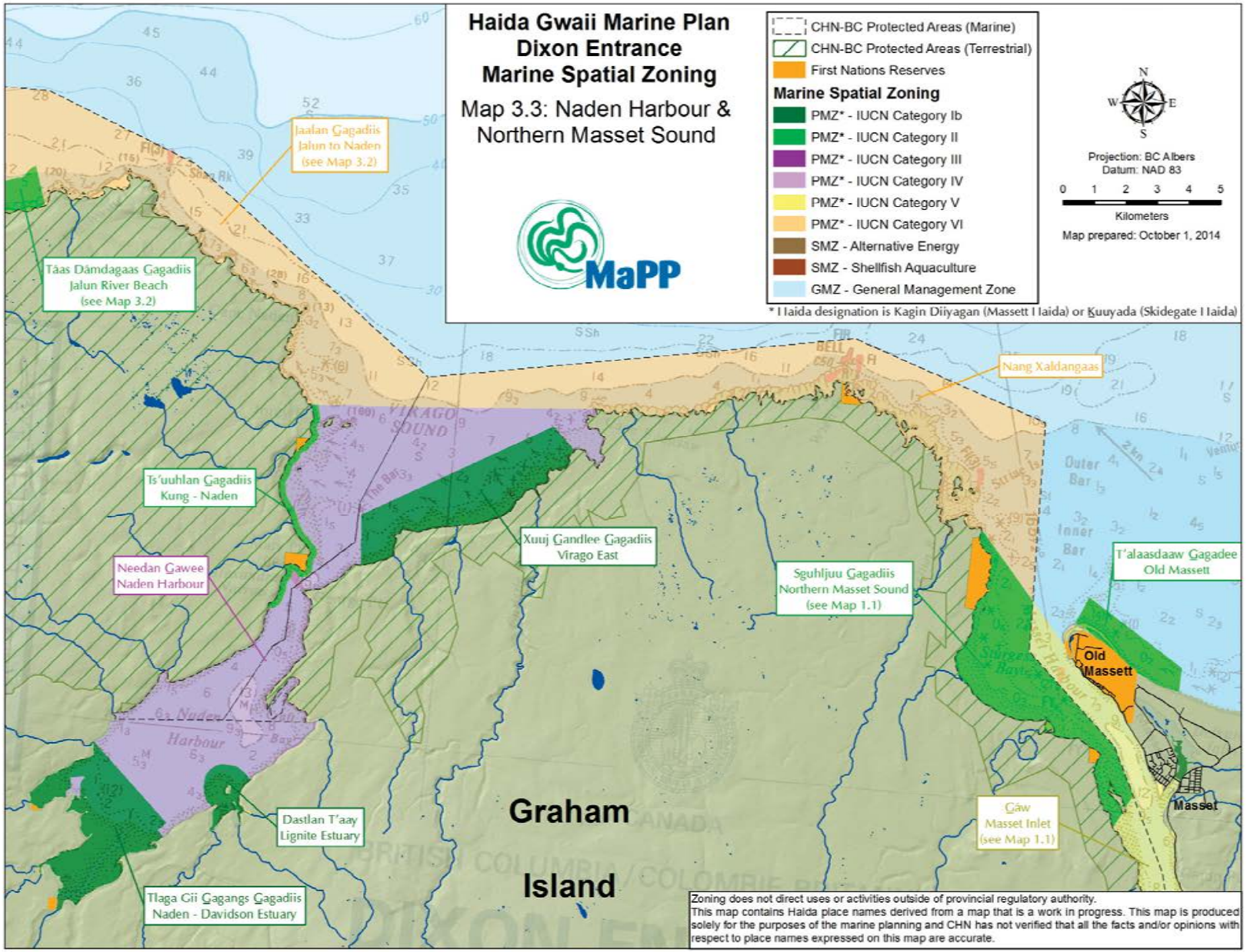

Table 8 16. Management objectives for Dixon – Naden Harbour PMZs

ZONE NAME	PMZ CATEGORY	SIZE (KM²)	MANAGEMENT OBJECTIVE(S) FOR PROVINCIAL AND HAIDA VALUES
Dastlan T'aay - Lignite Estuary	IUCN Ib	1.8	Protection of the Lignite Estuary and surrounding waters, which are important habitat for Chum, Sockeye, Coho and Pink Salmon.
Tlaga Gii Gagangs Gagadiis - Naden/Davidson Estuary	IUCN Ib	10.1	Protection of the Naden River and Davidson River estuaries, important salmon habitat, eelgrass habitat and significant historical herring spawn locations and an area with important Haida values, including traditional use.
Xuuj Gandlee Gagadiis - Virago East	IUCN Ib	10.9	Protection of coastal habitat representative of northern Graham Island, including multiple salmon streams, an important estuary, kelp and eelgrass beds, and an area with important Haida values, including traditional use.
Ts'uuhlan Gagadiis – Kung / Naden	IUCN II	1.7	Protection of productive nearshore area that with important Haida values, including traditional use.
T'alaasdaaw Gagadee - Old Massett	IUCN II	3.6	Protection of area adjacent to the village of Old Massett that contains significant Giant Kelp habitat and an area with important Haida values, including traditional use.
Needan Gawee - Naden Harbour	IUCN IV	48.0	Protection of important estuaries, eelgrass and kelp habitat and locations of significant historical herring spawn and an area with important Haida values, including traditional use.
Nang Xaldangaas	IUCN VI	41.6	Protection of coastal habitat along northern Graham Island including multiple salmon streams, an important estuary, kelp beds and an area with important Haida values, including traditional use.

Zoning does not direct uses or activities outside of provincial regulatory authority.

Table 8 17. Recommended uses and activities for Dixon Entrance – Naden Harbour marine zones

Category	Marine Uses and Activities	General Management Zone	Dastlan T'aay - Lignite Estuary	Tlaga Gii Gagangs Gagadiis - Naden/Davidson Estuary	Xuuj Gandlee Gagadiis - Virago East	Ts'uuhlan Gagadiis – Kung / Naden	T'alaasdaaw Gagadee - Old Massett	Needan Gawee - Naden Harbour	Nang Xaldangaas
Site Name									
Zone Type		GMZ	PMZ*			PMZ*		PMZ*	PMZ*
Aquaculture	Bottom Culture Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	X	X	X	X	X	O[2,4]	✓
	Off Bottom Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	X	X	X	X	X	O[2,4]	✓
	Off-Bottom Aquaculture Siting – Finfish	X	X	X	X	X	X	X	X
Energy	Renewable Energy Generation	✓	X	X	X	X	X	X	✓
Industry	Forestry Operations	✓	X	X	X	X	X	O[2,4]	✓
	Mining Operations	X	X	X	X	X	X	X	X
Infrastructure	Commercial and Recreational Anchorages	✓	O[2]	O[2]	O[2]	O[2,4]	O[2,4]	O[2,4]	✓
	Float Homes	✓	X	X	X	X	X	X	O[2,4]
	Floating Lodges	✓	X	X	X	X	X	O[2,4]	O[2,4]
	Level 1 Docks, Wharves & Facilities	✓	X	O[2,3,4]	X	O[2,3,4]	O[2,3,4]	O[2,4]	✓
	Level 2 Docks, Wharves & Facilities	✓	X	X	X	X	X	X	O[5]
Recreation/ Tourism	Commercial Recreation and Tourism	✓	O[2]	O[2]	O[2]	O[2,4]	O[2,4]	✓	✓
	Public Recreation and Tourism	✓	O[2]	O[2]	O[2]	O[2,4]	O[2,4]	✓	✓
Research	Research	✓	O[1]	O[1]	O[1]	O[1,4]	O[1,4]	✓	✓
Utilities	Linear Utilities	✓	X	X	X	X	X	X	✓
	Point Source Utilities	✓	X	X	X	X	X	X	O[2,4]

* Haida designation is Kagin Diiyagan (Massett Haida) or Kuuyada (Skidegate Haida)

Where a use/activity is outside provincial regulatory authority, the approval of that use/activity is subject to the decision-making process(es) of the responsible authorities. Absence does not imply that the use/activity was not considered or evaluated or is of no interest. The reader should contact the appropriate management authority(ies) for direction on uses/activities in such circumstances. Zoning does not direct uses or activities outside of provincial regulatory authority.

Key:	
Haida traditional uses, including practices for food, social, ceremonial and stewardship purposes, continue in accordance with legal obligations.	
Acceptable: Uses and activities are considered to be 'acceptable' subject to applicable laws, policy and relevant agreements between the Parties. Acceptability of any use/activity does not guarantee that a use/activity will be approved.	✔
Conditionally Acceptable: Uses and activities are considered to be 'conditionally acceptable' subject to applicable laws, policy and relevant agreements between the Parties, and provided they are consistent with (adhere to) the plan conditions. Conditional acceptability of any use/activity does not guarantee that a use/activity will be approved.	O
Not Acceptable: Uses and activities are considered to be 'not acceptable' and should not be approved.	X
Not Applicable: The use or activity could not or would not occur in this zone due to the physical environment or other limitations (e.g. forestry operations in offshore PMZs).	n/a
Note: *This table does not alter the Council of Haida Nation and Province of BC referral obligations under existing agreements.*	

List of Conditional Statements

O[1]: Only research activities that are non-extractive and will not disturb sensitive or critical features and habitat are acceptable.
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O[3]: Infrastructure enabling Haida access to adjacent reserve lands permitted.
O[4]: Activity should be compatible with Haida cultural use of the area, including consideration of Haida activities and/or stewardship knowledge; further site conditions may be identified in an approved Protection Management Plan.
O[5]: Infrastructure and associated activities should be compatible with vision and conservation objectives of PMZ or SMZ; further site conditions may be identified in an approved Protection Management Plan.

Additional Considerations

Dastlan T'aay - **Lignite Estuary**: Sensitive or critical features and habitat may impacted by large commercial vessels and smaller freight or log boom towing vessels.

Tlaga Gii Gagangs Gagadiis - **Naden/Davidson Estuary**: Sensitive or critical features and habitat may impacted by large commercial vessels and smaller freight or log boom towing vessels.

Xuuj Gandlee Gagadiis - **Virago East**: Sensitive or critical features and habitat may impacted by large commercial vessels and smaller freight or log boom towing vessels.

Ts'uuhlan Gagadiis - **Kung / Naden**: Sensitive or critical features and habitat may impacted by large commercial vessels and smaller freight or log boom towing vessels.

T'alaasdaaw Gagadee - **Old Massett**: Sensitive or critical features and habitat may impacted by large commercial vessels and smaller freight or log boom towing vessels.

Needan Gawee - **Naden Harbour**: Commercial value of salmon is high. Ecological and cultural values may be impacted by other commercial fisheries. Sensitive or critical features and habitat may be negatively impacted by large commercial vessels, though it is noted that log barge loading at storage/handling facilities is an important activity in the area.Temporary vessel anchorages by log and container barges have high economic value.

Nang Xaldangaas: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels.

Photo - Allan Wilson

8.5.4 WEST COAST

> *... when I was a boy... they used to call [it] Brown's Cabin—that's out the west coast—I used to see old guys, three of them, there was no power there. They used to just paddle out to get some black cod. It was still dark in the morning when you'd hear them starting off, rowing out. And then just before it gets dark you could hear them coming, singing their own song, and they'd be half-full of the black cods. Grandfather told me he was one of them. They used to go outside of Marble Island... 200 fathoms of water... to get those black cods. What I always remember is ... I used to watch my grandmother. They cut the heads off, you know, before they smoke it. And they boil it in a big pot—just the heads. And then they just start scooping all the oil out of it ... just like [eulachon] grease now. Boy, I tell you, that's the best grease I used to taste. (Jack Pollard, Aug. 1998)*

The west coast of Haida Gwaii is a remote and rugged landscape that is battered by powerful winds and waves. The proximity of the west coast to the continental shelf break combined with the prevailing winds, results in an upwelling of deep, cold, nutrient-rich water in nearshore areas. These productive conditions create highly diverse nearshore habitats, including rich Bull Kelp and Giant Kelp forests on the outer coast, lush eelgrass meadows in sheltered inlets and bays, and large California Mussel and Gooseneck Barnacle beds on wave-exposed rocky headlands. The upwelling areas along the continental slope also support unique bottom features, such as the deep-water corals found outside of Rennell Sound and Kindakun Point. Throughout the west coast, abundant forage fish populations support large seabird colonies, some of which are of national and global significance. These include colonies and nesting sites of species at risk, such as Cassin's Auklet, Ancient Murrelet and Tufted Puffins, and important foraging areas for the threatened Marbled Murrelet.

Commercial fisheries for Sablefish and halibut occur offshore and dive fisheries for Geoduck and sea urchins occur in nearshore waters. In addition, salmon and groundfish commercial fisheries occur along the productive west coast (including the area offshore of Gwaii Haanas [see Section 8.5.6]). The area is a known migration pathway for juvenile salmon that migrate north along the continental shelf to rich feeding grounds offshore and for adult fish on their return journey to the large river systems on the mainland and to the south; this attracts both commercial and recreational fishers to the area. Haida continue to traditionally harvest these species as well, as they have for thousands of years.

Map 4.1 presents an overview of the West Coast. Maps 4.2 and 4.3 are more detailed maps of West Coast North and West Coast South sub-areas, respectively. Thirteen IUCN Type Ib, two IUCN Type II, seven IUCN Type IV, two IUCN Type V, and two IUCN Type VI PMZs are identified. The category and objectives and recommended uses and activities for each zone are described in Tables 8-18 to 8-23.

Map 4.1. Overview of West Coast, showing marine spatial zoning

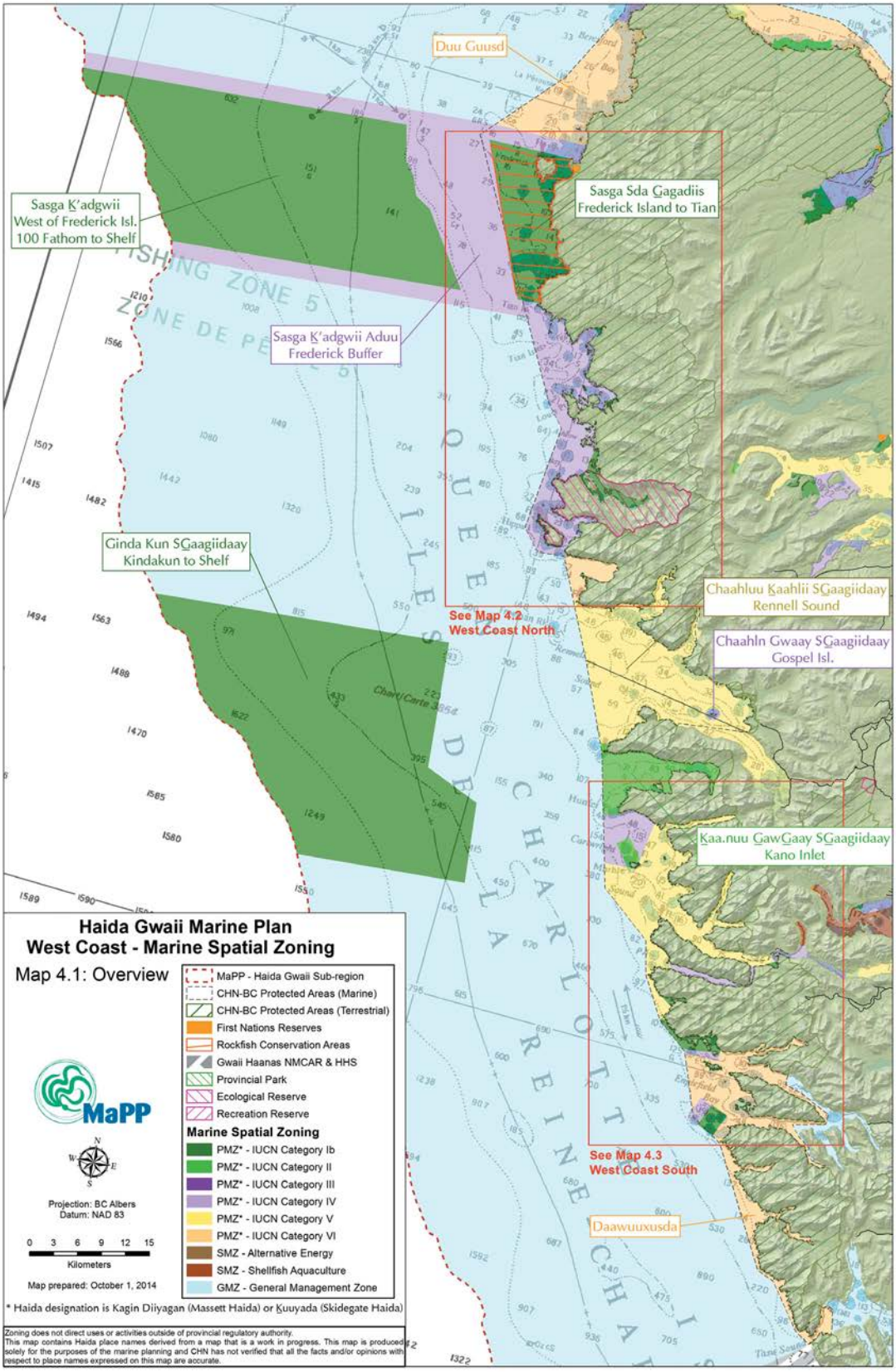

Table 8 18. Management objectives for West Coast PMZs

ZONE NAME	PMZ CATEGORY	SIZE (KM²)	MANAGEMENT OBJECTIVE(S) FOR PROVINCIAL AND HAIDA VALUES
Sasga Sda G̲agadiis - Frederick Island to Tian	IUCN Ib	120.5	Protection of nearshore values, including inshore rockfish habitat and associated species assemblages, a significant estuary, Bull and Giant Kelp habitat, foraging habitat for marine bird species at risk and a Steller Sea Lion haulout.
Ginda Kun SG̲aagiidaay - Kindakun to Shelf	IUCN Ib	830.0	Protection of portion of unique area (Shelf Break EBSA) that contains deepwater species assemblages and representative habitat of the Continental Slope Ecosection, including some cold water coral and sponge habitat.
Sasga K̲'adgwii - West of Frederick Isl. 100 Fathom to Shelf	IUCN Ib	715.2	Protection of a portion of the Shelf Break EBSA (an area supporting the aggregation of macrozooplankton) and the Continental Slope Ecosection and their associated species assemblages.
K̲aa.nuu G̲awG̲aay SG̲aagiidaay - Kano Inlet	IUCN II	55.8	Protection of inshore rockfish habitat and associated species assemblages, kelp and eelgrass beds, and an area with important Haida values, including traditional use.
Sasga K̲'adgwii Aduu - Frederick Buffer	IUCN IV	401.9	Provides a buffer for ecological values within the West of Frederick Island between the 100 Fathom to Shelf PMZ and Frederick Island to Tian PMZ while still allowing for some socio-economic activities.
Chaahln Gwaay SG̲aagiidaay - Gospel Island	IUCN IV	1.7	Protection of inshore rockfish and kelp habitat around Gospel Island in the middle of Rennell Sound and an area with important Haida values, including traditional use.
Chaahluu K̲aahlii SG̲aagiidaay - Rennell Sound	IUCN V	252.3	Protection of multiple ecological values in the only road-accessed region of the West Coast of Haida Gwaii and an area with important Haida values, including traditional use.
Daawuuxusda	IUCN VI	125.4	Protection of west coast nearshore values, including important estuaries, multiple salmon streams, colonies and foraging habitat for marine bird species at risk, and inshore rockfish habitat and associated species assemblages.
Duu Guusd	IUCN VI	141.0	Protection of important nearshore values, including salmon streams, multiple highest ranked estuaries, and nesting sites and foraging habitat for marine bird species at risk.

Zoning does not direct uses or activities outside of provincial regulatory authority.

Table 8 19. Recommended uses and activities for West Coast marine zones

Category	Marine Uses and Activities	Site Name: General Management Zone	Sasga Sda Gagadiis - Frederick Island to Tian	Ginda Kun SGaagiidaay - Kindakun to Shelf	Sasga K'adgwii - West of Frederick Island 100 Fathom to Shelf	Kaa.nuu GawGaay SGaagiidaay - Kano Inlet	Sasga K'adgwii Aduu - Frederick Buffer	Chaahln Gwaay SGaagiidaay - Gospel Island	Chaahluu Kaahlii SGaagiidaay - Rennell Sound	Daawuuxusda	Duu Guusd
	Zone Type	GMZ	PMZ*			PMZ*	PMZ*		PMZ*	PMZ*	
Aquaculture	Bottom Culture Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	X	n/a	n/a	X	X	X	✓	✓	✓
	Off Bottom Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	X	n/a	n/a	X	X	X	✓	✓	✓
	Off-Bottom Aquaculture Siting – Finfish	X	X	n/a	n/a	X	X	X	X	X	X
Energy	Renewable Energy Generation	✓	X	n/a	n/a	X	X	X	✓	✓	✓
Industry	Forestry Operations	✓	X	n/a	n/a	X	X	X	✓	✓	✓
	Mining Operations	X	X	X	X	X	X	X	X	X	X
Infrastructure	Commercial and Recreational Anchorages	✓	O[2]	O[2]	O[2]	O[2,4]	O[2,4]	O[2,4]	✓	✓	✓
	Float Homes	✓	X	n/a	n/a	X	X	X	O[2,4]	O[2,4]	O[2,4]
	Floating Lodges	✓	X	n/a	n/a	X	X	X	O[2,4]	O[2,4]	O[2,4]
	Level 1 Docks, Wharves & Facilities	✓	O[2,3,4]	n/a	n/a	X	O[2,4]	O[2,4]	✓	✓	✓
	Level 2 Docks, Wharves & Facilities	✓	X	n/a	n/a	X	X	X	O[5]	O[5]	O[5]
Recreation/ Tourism	Commercial Recreation and Tourism	✓	O[2]	O[2]	O[2]	O[2,4]	✓	✓	✓	✓	✓
	Public Recreation and Tourism	✓	O[2]	O[2]	O[2]	O[2,4]	✓	✓	✓	✓	✓
Research	Research	✓	O[1]	O[1]	O[1]	O[1]	✓	✓	✓	✓	✓
Utilities	Linear Utilities	✓	X	n/a	n/a	X	X	X	✓	✓	✓
	Point Source Utilities	✓	X	n/a	n/a	X	X	X	O[2,4]	O[2,4]	O[2,4]

* Haida designation is Kagin Diiyagan (Massett Haida) or Kuuyada (Skidegate Haida)

Where a use/activity is outside provincial regulatory authority, the approval of that use/activity is subject to the decision-making process(es) of the responsible authorities. Absence does not imply that the use/activity was not considered or evaluated or is of no interest. The reader should contact the appropriate management authority(ies) for direction on uses/activities in such circumstances. Zoning does not direct uses or activities outside of provincial regulatory authority.

Key:	
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Conditionally Acceptable: Uses and activities are considered to be 'conditionally acceptable' subject to applicable laws, policy and relevant agreements between the Parties, and provided they are consistent with (adhere to) the plan conditions. Conditional acceptability of any use/activity does not guarantee that a use/activity will be approved.	O
Not Acceptable: Uses and activities are considered to be 'not acceptable' and should not be approved.	X
Not Applicable: The use or activity could not or would not occur in this zone due to the physical environment or other limitations (e.g. forestry operations in offshore PMZs).	n/a
Note: *This table does not alter the Council of Haida Nation and Province of BC referral obligations under existing agreements.*	

List of Conditional Statements

O[1]: Only research activities that are non-extractive and will not disturb sensitive or critical features and habitat are acceptable.
O[2]: Should avoid disturbance of sensitive or critical features and habitat; further site conditions may be identified in an approved Protection Management Plan.
O[3]: Infrastructure enabling Haida access to adjacent reserve lands permitted.
O[4]: Activity should be compatible with Haida cultural use of the area, including consideration of Haida activities and/or stewardship knowledge; further site conditions may be identified in an approved Protection Management Plan.
O[5]: Infrastructure and associated activities should be compatible with vision and conservation objectives of PMZ or SMZ; further site conditions may be identified in an approved Protection Management Plan.

Additional Considerations

Sasga Sda Gagadiis - **Frederick Island to Tian**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Ginda Kun SGaagiidaay - **Kindakun to Shelf**: Sensitive or critical features and habitat, particularly cold water corals and sponges known to occur in the region, may be negatively impacted by bottom contact fisheries and trawl (all types). Economic value of transportation activities in the area is high.

Sasga K'adgwii - **West of Frederick Isl. 100 Fathom to Shelf**: Economic value of transportation activities in the area is high.

Kaa.nuu GawGaay SGaagiidaay - **Kano Inlet**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Sasga K'adgwii Aduu - **Frederick Buffer**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels. Economic value of transportation activities in portions of the area is high.

Chaahln Gwaay SGaagiidaay - **Gospel Island**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Chaahluu Kaahlii SGaagiidaay - **Rennell Sound**: Sensitive benthic habitat and species values may be impacted by trawl activities. Enhanced monitoring and enforcement may be needed for protection of ecological and cultural values. Sensitive or critical features and habitat may be negatively impacted by large commercial vessels, though it is noted that log barge loading at storage/handling facilities is an important activity in the area. Temporary vessel anchorages by log and container barges have high economic value.

Daawuuxusda: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels.

Duu Guusd: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels.

Map 4.2. West Coast North, showing marine spatial zoning

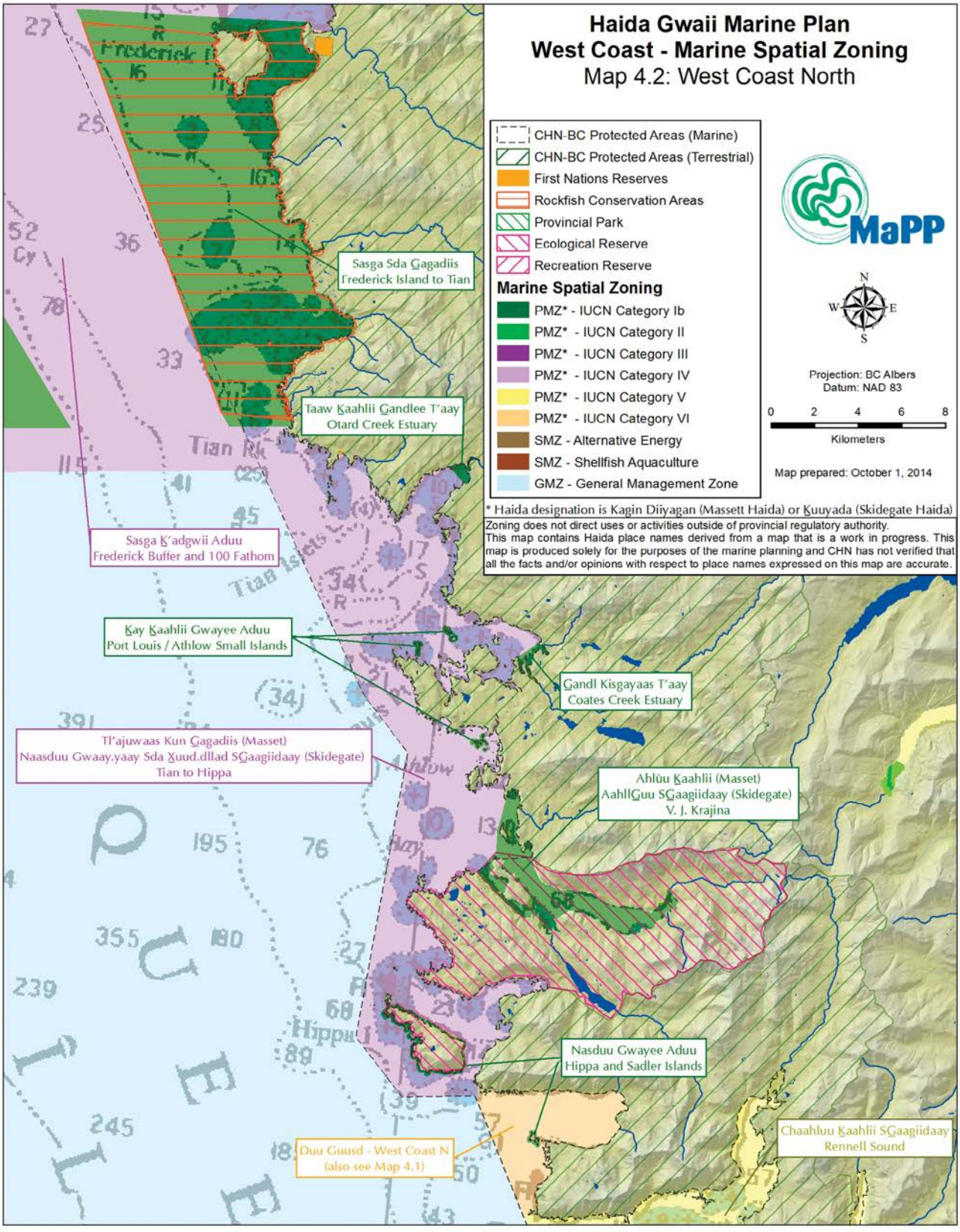

Table 8 20. Management objectives for West Coast North PMZs

ZONE NAME	PMZ CATEGORY	SIZE (KM²)	MANAGEMENT OBJECTIVE(S) FOR PROVINCIAL AND HAIDA VALUES
Gandl Kisgayaas T'aay - Coates Creek Estuary	IUCN Ib	0.7	Protection of significant estuary, locations of historical herring spawn, foraging habitat for marine bird species at risk, and an area with important Haida values, including traditional use.
Nasduu Gwayee Aduu - Hippa and Sadler Islands	IUCN Ib	1.8	Protection of important nearshore habitat, breeding colonies and foraging habitat for marine bird species at risk, and an area with important Haida values, including traditional use.
Taaw Kaahlii Gandlee T'aay - Otard Creek Estuary	IUCN Ib	0.5	Protection of a significant estuary and location of historic herring spawn.
Kay Kaahlii Gwayee Aduu - Port Louis/Athlow Small Islands	IUCN Ib	1.1	Protection of breeding colonies and foraging habitat for marine bird species at risk.
Ahlùu Kaahlii (Masset) AahllGuu SGaagiidaay (Skidegate) - Vladimir J.Krinjina	IUCN Ib	13.7	Protection of significant estuaries, locations of historical herring spawn and important salmon streams.
Tl'ajuwaas Kun Gagadiis (Masset) Naasduu Gwaay.yaay Sda Xuud.dllad SGaagiidaay (Skidegate) - Tian to Hippa	IUCN IV	133.6	Protection of an area containing significant historic herring spawn, eelgrass and kelp beds, foraging habitat for marine bird species at risk, and an area with important Haida values, including traditional use.

Zoning does not direct uses or activities outside of provincial regulatory authority.

Table 8 21. Recommended uses and activities for West Coast North marine zones

Category	Marine Uses and Activities	General Management Zone	Gandl Kisgayaas T'aay - Coates Creek Estuary	Nasdlu Gwayee Aduu - Hippa and Sadler Islands	Taaw Kaahlii Gandlee T'aay - Otard Creek Estuary	Kay Kaahlii Gwayee Aduu - Port Louis/Athlow Small Islands	Ahlùu Kaahlii (Masset) AahllGuu SGaagiidaay (Skidegate) - Vladimir J.Krijina	Tl'ajuwaas Kun Gagadiis (Masset) sGaagiidaay,Yaay Sda Xuud.dllad (Skidegate) - Tian to Hippa
	Site Name							
	Zone Type	GMZ	PMZ*					PMZ*
Aquaculture	Bottom Culture Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	X	X	X	X	X	O[2,4]
	Off Bottom Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	X	X	X	X	X	O[2,4]
	Off-Bottom Aquaculture Siting – Finfish	X	X	X	X	X	X	X
Energy	Renewable Energy Generation	✓	X	X	X	X	X	X
Industry	Forestry Operations	✓	X	X	X	X	X	X
	Mining Operations	X	X	X	X	X	X	X
Infrastructure	Commercial and Recreational Anchorages	✓	O[2]	O[2]	O[2]	O[2]	O[2,4]	O[2,4]
	Float Homes	✓	X	X	X	X	X	X
	Floating Lodges	✓	X	X	X	X	X	O[2,4]
	Level 1 Docks, Wharves & Facilities	✓	X	X	X	X	X	O[2,3,4]
	Level 2 Docks, Wharves & Facilities	✓	X	X	X	X	X	O[2,4]
Recreation/ Tourism	Commercial Recreation and Tourism	✓	O[2]	O[2]	O[2]	O[2]	O[2]	✓
	Public Recreation and Tourism	✓	O[2]	O[2]	O[2]	O[2]	O[2]	✓
Research	Research	✓	O[1]	O[1]	O[1]	O[1]	O[1]	✓
Utilities	Linear Utilities	✓	X	X	X	X	X	X
	Point Source Utilities	✓	X	X	X	X	X	X

* Haida designation is Kagin Diiyagan (Massett Haida) or Kuuyada (Skidegate Haida)

Where a use/activity is outside provincial regulatory authority, the approval of that use/activity is subject to the decision-making process(es) of the responsible authorities. Absence does not imply that the use/activity was not considered or evaluated or is of no interest. The reader should contact the appropriate management authority(ies) for direction on uses/activities in such circumstances. Zoning does not direct uses or activities outside of provincial regulatory authority.

Key:	
Haida traditional uses, including practices for food, social, ceremonial and stewardship purposes, continue in accordance with legal obligations.	
Acceptable: Uses and activities are considered to be 'acceptable' subject to applicable laws, policy and relevant agreements between the Parties. Acceptability of any use/activity does not guarantee that a use/activity will be approved.	✔
Conditionally Acceptable: Uses and activities are considered to be 'conditionally acceptable' subject to applicable laws, policy and relevant agreements between the Parties, and provided they are consistent with (adhere to) the plan conditions. Conditional acceptability of any use/activity does not guarantee that a use/activity will be approved.	O
Not Acceptable: Uses and activities are considered to be 'not acceptable' and should not be approved.	X
Not Applicable: The use or activity could not or would not occur in this zone due to the physical environment or other limitations (e.g. forestry operations in offshore PMZs).	n/a
Note: *This table does not alter the Council of Haida Nation and Province of BC referral obligations under existing agreements.*	

List of Conditional Statements

O[1]: Only research activities that are non-extractive and will not disturb sensitive or critical features and habitat are acceptable.
O[2]: Should avoid disturbance of sensitive or critical features and habitat; further site conditions may be identified in an approved Protection Management Plan.
O[3]: Infrastructure enabling Haida access to adjacent reserve lands permitted.
O[4]: Activity should be compatible with Haida cultural use of the area, including consideration of Haida activities and/or stewardship knowledge; further site conditions may be identified in an approved Protection Management Plan.

Additional Considerations

Gandl Kisgayaas T'aay - **Coates Creek Estuary**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Nasduu Gwayee Aduu - **Hippa and Sadler Islands**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Taaw Kaahlii Gandlee T'aay - **Otard Creek Estuary**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Kay Kaahlii Gwayee Aduu - **Port Louis/Athlow Small Islands**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Ahlùu Kaahlii **(Masset)** / AahllGuu SGaagiidaay **(Skidegate)** - **Vladimir J.Krinjina**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Tl'ajuwaas Kun Gagadiis **(Masset)** / Naasduu Gwaay.yaay Sda Xuud.dllad SGaagiidaay **(Skidegate)** - **Tian to Hippa**: Sensitive benthic habitat and species values may be impacted by trawl activities. Enhanced local monitoring and enforcement may be needed for protection of ecological and cultural values. Sensitive or critical features and habitat may be negatively impacted by large commercial vessels, though it is noted that barges carrying fuel and equipement/supplies is an important activity occurring in the area.

Map 4.3. West Coast South, showing marine spatial zoning

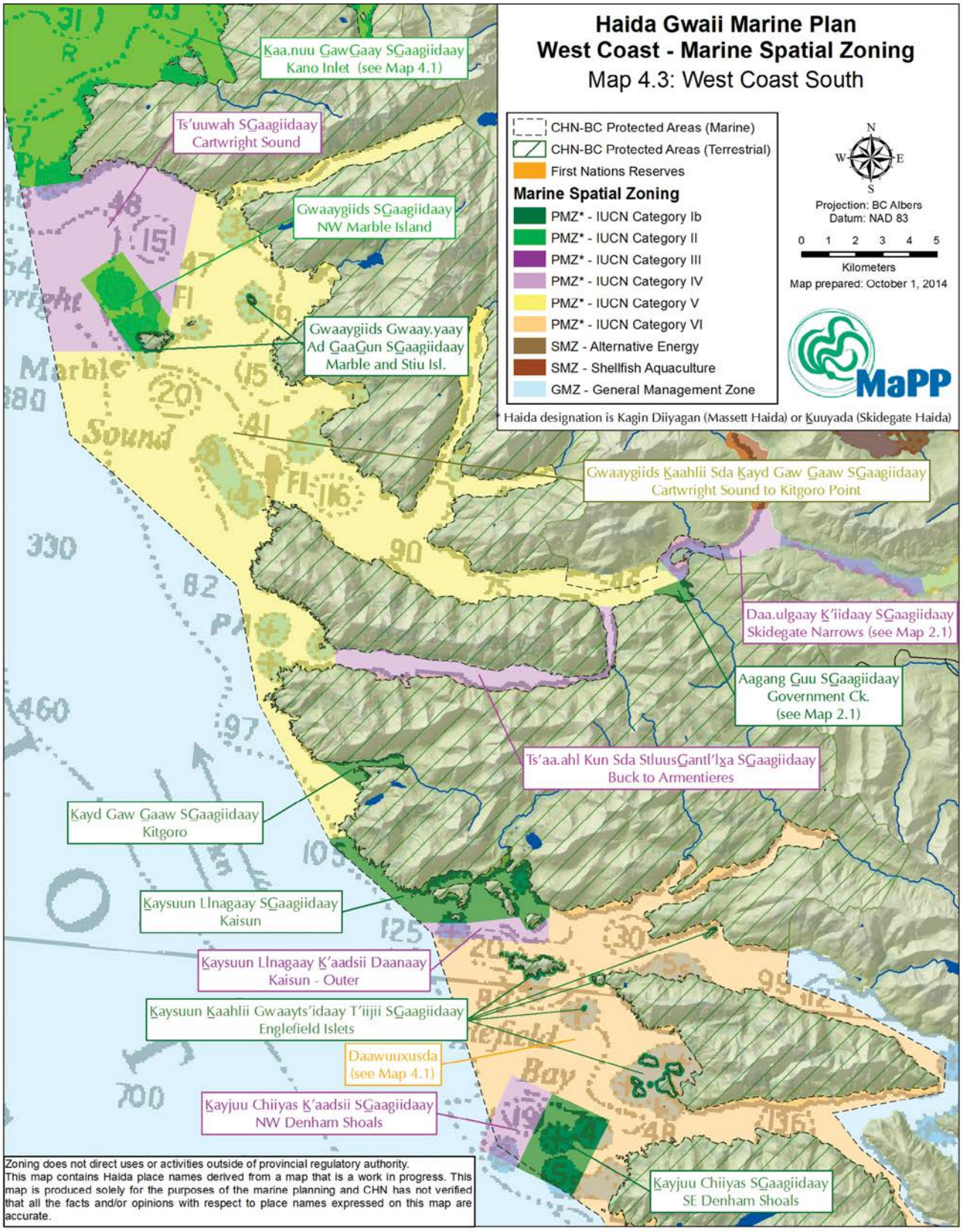

Table 8 22. Management objectives for West Coast South PMZs

ZONE NAME	PMZ CATEGORY	SIZE (KM²)	MANAGEMENT OBJECTIVE(S) FOR PROVINCIAL AND HAIDA VALUES
K̲aysuun K̲aahlii Gwaayts'idaay T'iijii SG̲aagiidaay - Englefield Islets	IUCN Ib	2.1	Protection of nesting colonies and adjacent foraging habitat for marine bird species at risk.
K̲aysuun Llnagaay SG̲aagiidaay - Kaisun	IUCN Ib	8.8	Protection of estuary of a significant salmon stream, inshore rockfish habitat, foraging habitat for marine bird species at risk and an area with important Haida values, including traditional use.
K̲ayd Gaw G̲aaw SG̲aagiidaay - Kitgoro	IUCN Ib	1.4	Protection of multiple salmon streams and an area with important Haida values, including traditional use.
Gwaaygiids Gwaay.yaay Ad G̲aaG̲un SG̲aagiidaay - Marble and Stiu Islands	IUCN Ib	0.6	Protection of nesting colonies and adjacent foraging habitat for marine bird species at risk, and an area with important Haida values, including traditional use.
K̲ayjuu Chiiyas K̲'aadsii SG̲aagiidaay - Southeast Denham Shoals	IUCN Ib	7.2	Protection of inshore rockfish habitat and associated species assemblages, and foraging habitat for marine bird species at risk.
Gwaaygiids SG̲aagiidaay - NW Marble Island	IUCN II	5.8	Protection of inshore rockfish habitat and associated species assemblages, colonies and foraging area for marine bird species at risk, and an area with important Haida values, including traditional use.
Ts'aa.ahl Kun Sda StluusG̲antl'l̲xa SG̲aagiidaay - Buck to Armentieres	IUCN IV	7.8	Protection of multiple salmon streams and an area with important Haida values, including traditional use.
Ts'uuwah SG̲aagiidaay - Cartwright Sound	IUCN IV	30.8	Protection of inshore rockfish habitat and associated species assemblages, foraging area for marine bird species at risk, and an area with important Haida values, including traditional use.
K̲aysuun Llnagaay K̲'aadsii Daanaay - Kaisun – Outer	IUCN IV	2.9	Protection of inshore rockfish habitat and associated species assemblages, and foraging habitat for marine bird species at risk.
K̲ayjuu Chiiyas SG̲aagiidaay - Northwest Denham Shoals	IUCN IV	4.9	Protection of inshore rockfish habitat and associated species assemblages, and foraging habitat for marine bird species at risk.
Gwaaygiids K̲aahlii Sda K̲ayd Gaw G̲aaw SG̲aagiidaay - Cartwright Sound to Kitgoro Pt.	IUCN V	132.8	Protection of inshore rockfish habitat and associated species assemblages, colonies and foraging area for marine bird species at risk, and an area with important Haida values, including traditional use.

Zoning does not direct uses or activities outside of provincial regulatory authority.

Table 8 23. Recommended uses and activities for West Coast South marine zones

Category	Marine Uses and Activities	General Management Zone	Kaysuun Kaahlii Gwaayts'idaay T'ijiji SGaagiidaay - Englefield Islets	Kaysuun Llnagaay SGaagiidaay - Kaisun	Kayd Gaw Gaaw SGaagiidaay - Kitgoro	Gwaaygiids Gwaay.yaay Ad GaaGun SGaagiidaay - Marble and Stiu Islands	Kay'juu Chiiyas SGaagiidaay - SE Denham Shoals	Gwaaygiids SGaagiidaay - NW Marble Island	Ts'aa.ahl Kun Sda StluusGantl'Ixa SGaagiidaay - Buck to Armentieres	Ts'uuwah SGaagiidaay - Cartwright Sound	Kaysuun Llnagaay K'aadsii Daanaay - Kaisun – Outer	Kay'juu Chiiyas K'aadsii SGaagiidaay - NW Denham Shoals	Gwaaygiids Kaahlii Sda Kayd Gaw Gaaw SGaagiidaay - Cartwright Sound to Kitgoro Pt.
	Zone Type	GMZ	PMZ*					PMZ*	PMZ*				PMZ*
Aquaculture	Bottom Culture Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	X	X	X	X	X	X	X	X	X	X	✓
	Off Bottom Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	X	X	X	X	X	X	X	X	X	X	✓
	Off-Bottom Aquaculture Siting – Finfish	X	X	X	X	X	X	X	X	X	X	X	X
Energy	Renewable Energy Generation	✓	X	X	X	X	X	X	X	X	X	X	✓
Industry	Forestry Operations	✓	X	X	X	X	X	X	X	X	X	X	✓
	Mining Operations	X	X	X	X	X	X	X	X	X	X	X	X
Infrastructure	Commercial and Recreational Anchorages	✓	O[2]	O[2,4]	O[2]	O[2]	O[2]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2]	✓
	Float Homes	✓	X	X	X	X	X	X	X	X	X	X	O[2,4]
	Floating Lodges	✓	X	X	X	X	X	X	X	X	X	X	O[2,4]
	Level 1 Docks, Wharves & Facilities	✓	X	X	X	X	X	X	O[2,4]	O[2,4]	O[2,4]	X	✓
	Level 2 Docks, Wharves & Facilities	✓	X	X	X	X	X	X	X	X	X	X	O[5]
Recreation/ Tourism	Commercial Recreation and Tourism	✓	O[2]	O[2,4]	O[2]	O[2]	O[2]	O[2,4]	✓	✓	✓	✓	✓
	Public Recreation and Tourism	✓	O[2]	O[2,4]	O[2]	O[2]	O[2]	O[2,4]	✓	✓	✓	✓	✓
Research	Research	✓	O[1]	O[1,4]	O[1]	O[1]	O[1]	O[1,4]	✓	✓	✓	✓	✓
Utilities	Linear Utilities	✓	X	X	X	X	X	X	X	X	X	X	✓
	Point Source Utilities	✓	X	X	X	X	X	X	X	X	X	X	O[2,4]

* Haida designation is Kagin Diiyagan (Massett Haida) or Kuuyada (Skidegate Haida)

Where a use/activity is outside provincial regulatory authority, the approval of that use/activity is subject to the decision-making process(es) of the responsible authorities. Absence does not imply that the use/activity was not considered or evaluated or is of no interest. The reader should contact the appropriate management authority(ies) for direction on uses/activities in such circumstances. Zoning does not direct uses or activities outside of provincial regulatory authority.

Key:	
Haida traditional uses, including practices for food, social, ceremonial and stewardship purposes, continue in accordance with legal obligations.	
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Not Acceptable: Uses and activities are considered to be 'not acceptable' and should not be approved.	X
Not Applicable: The use or activity could not or would not occur in this zone due to the physical environment or other limitations (e.g. forestry operations in offshore PMZs).	n/a
Note: *This table does not alter the Council of Haida Nation and Province of BC referral obligations under existing agreements.*	

List of Conditional Statements

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O[4]: Activity should be compatible with Haida cultural use of the area, including consideration of Haida activities and/or stewardship knowledge; further site conditions may be identified in an approved Protection Management Plan.
O[5]: Infrastructure and associated activities should be compatible with vision and conservation objectives of PMZ or SMZ; further site conditions may be identified in an approved Protection Management Plan.

Additional Considerations

Kaysuun Kaahlii Gwaayts'idaay T'iijii SGaagiidaay - **Englefield Islets**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Kaysuun Llnagaay SGaagiidaay - **Kaisun**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Kayd Gaw Gaaw SGaagiidaay - **Kitgoro**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Gwaaygiids Gwaay.yaay Ad GaaGun SGaagiidaay - **Marble and Stiu Islands**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Kayjuu Chiiyas K'aadsii SGaagiidaay - **NW Denham Shoals**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Gwaaygiids SGaagiidaay - **NW Marble Island**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Ts'aa.ahl Kun Sda StluusGantl'lxa SGaagiidaay - **Buck to Armentieres**: Commercial value of salmon is high. Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Ts'uuwah SGaagiidaay - **Cartwright Sound**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels.

Kaysuun Llnagaay K'aadsii Daanaay - **Kaisun – Outer**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Kayjuu Chiiyas SGaagiidaay - **SE Denham Shoals**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Gwaaygiids Kaahlii Sda Kayd Gaw Gaaw SGaagiidaay - **Cartwright Sound to Kitgoro Point**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels.

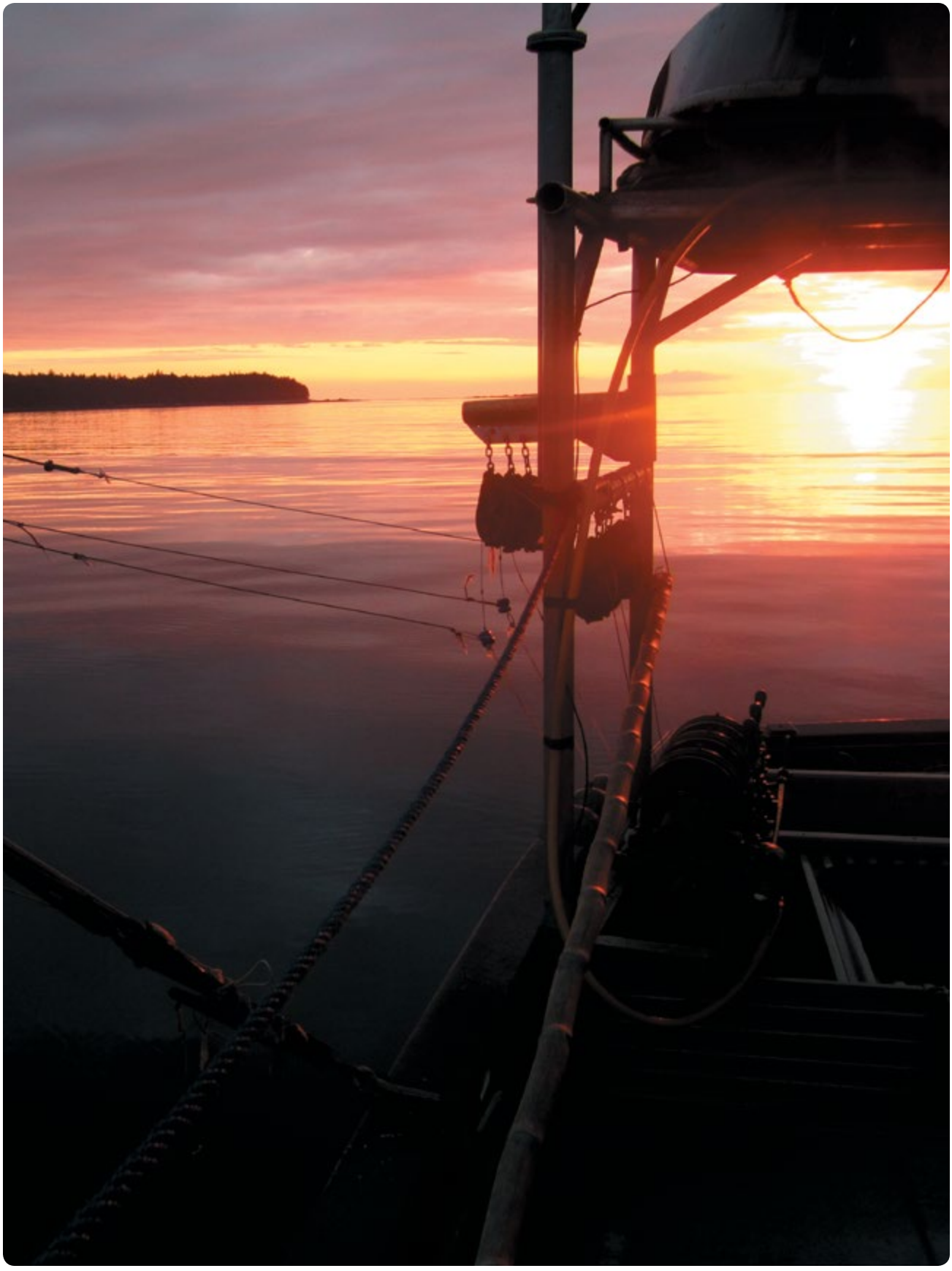

Photo - Sarah Stevenson

8.5.5 HECATE NORTH

> *...all through this whole location here, from Limestone to Skedans, you can pick up all these rock cods and halibut and salmon, when they're running. And coming through here all the time are humpback whales and killer whales ... because this is a place for seals—the killer whales hunt and hunt and hunt. ... Limestone, of course, is the Ancient murrelet ... nightbirds ... there's a few places around here where the food likes to congregate around a reef, and the salmon are there too. And that's why the killer whales come through here; they look for salmon or they look for the seals. Humpback whales and whatnot just cruise through ... Yeah. That's a busy spot. (Captain Gold, Mar. 2009)*

Hecate Strait is a large, shallow, semi-protected strait within the Queen Charlotte Basin. Due to its shallow depth it is susceptible to violent weather during storms. The northern part of the strait is dominated by the shallow Dogfish and Laskeek Banks. The bathymetry and oceanographic features in the area result in high productivity and significant plankton aggregations.

Hecate Strait is important for a number of resident and migrating fish, marine mammals and birds. The shoreline is diverse with a regionally unique coastal beach dune habitat in the north and rocky headlands in the south. Other ecological features include: bird colonies, sea lion haulouts, Humpback and Gray Whale foraging areas, kelp forests and abalone habitat. Many species in Hecate Strait are important to the Haida traditional way of life and continue to be harvested today. The area now supports marine use activities by Haidas and others, including fishing for salmon, halibut, dogfish, crab and forage fish; harvesting of sea asparagus and clams; and hunting for ducks and geese. Hecate Strait is also an important migration pathway for juvenile and adult salmon from rivers through the Pacific Northwest.

Commercial fishing and marine transportation also occur throughout northern Hecate Strait. In recent years, the primary fishing activity in this area has been the commercial Dungeness Crab fishery, one of the most highly valued fisheries on the BC coast. Additionally, the area has been identified as having high potential for offshore wind energy development. Although the recent proposal by the NaiKun Wind Energy Group has stalled (due in part to the lack of an electricity purchase agreement with BC Hydro and limited support within the Haida community), the company maintains an active tenure licence and an Energy SMZ is proposed for the area to allow for the possibility of future development under acceptable conditions.

Map 5.1 provides an overview of Hecate North. Map 5.2 is a more detailed view of Hecate North – Sheldon Bay – Gwaii Haanas. Four IUCN Type Ib, two IUCN Type II and one IUCN Type IV PMZs have been identified as well as two SMZs: one for marine-based reneweable energy and the other for shellfish aquaculture. The category and objectives and recommended uses and activities for each zone are described in Tables 8-24 to 8-27.

Map 5.1. Overview of Hecate North, showing marine spatial zoning

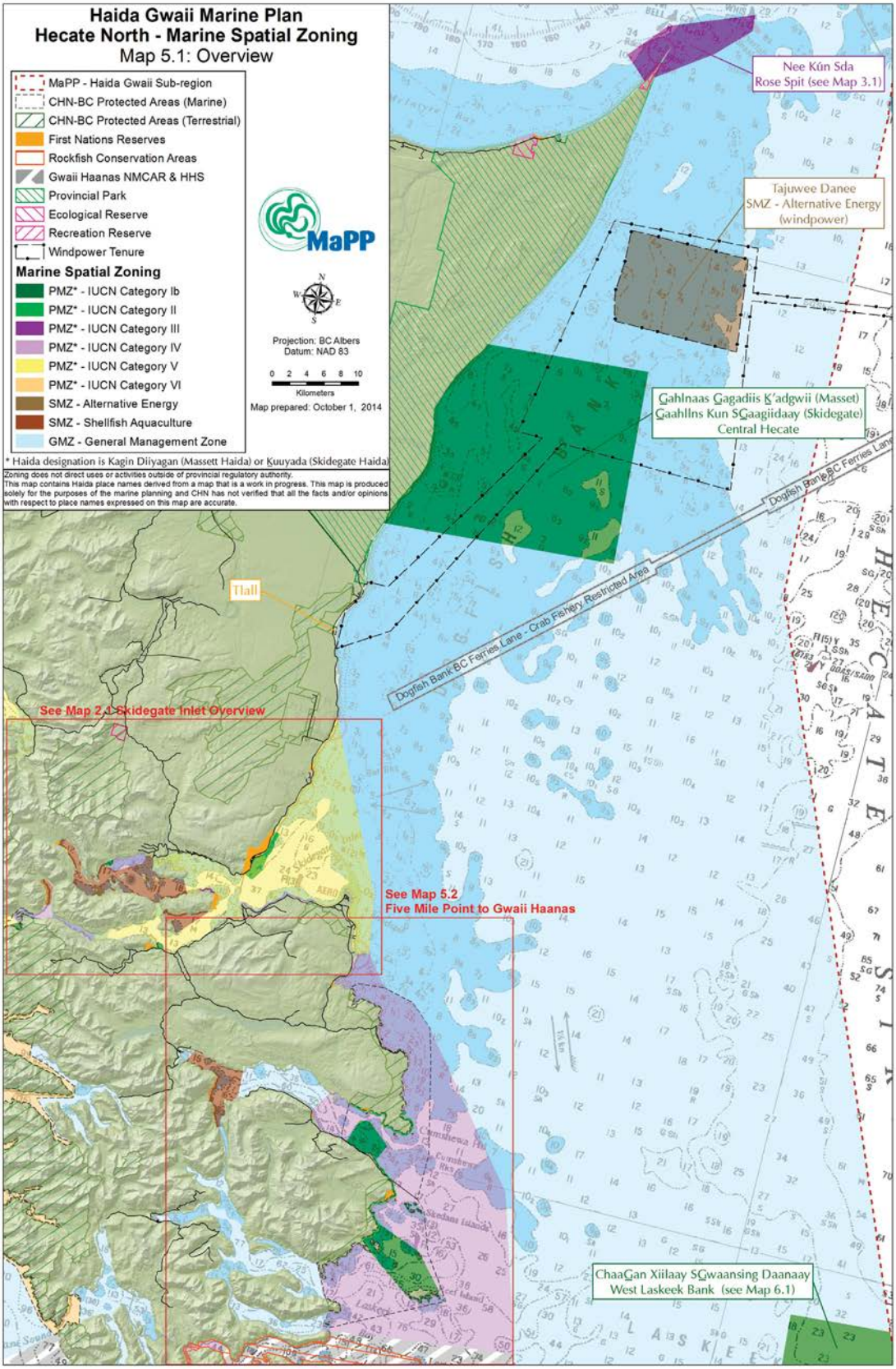

Table 8 24. Management objectives for Hecate North SMZs and PMZs

ZONE NAME	PMZ CATEGORY	SIZE (KM²)	MANAGEMENT OBJECTIVE(S) FOR PROVINCIAL AND HAIDA VALUES
Tajuwee Danee - SMZ Renewable Energy (windpower)	SMZ - Renewable Energy - Windpower	155.7	Prioritization of this area for potential wind-farm development.
Gahlnaas Gagadiis K'adgwii (Masset) Gaahllns Kun SGaagiidaay (Skidegate) - Central Hecate	IUCN Ib	529.7	Protection of a portion of a unique oceanographic area (Dogfish Bank) and associated species assemblages and representative habitat within Hecate Strait Ecosection.
Tlall	IUCN VI	0.2	Protection in the form of a small marine buffer in the foreshore area where the Tlall Haida Heritage Site/BC Conservancy reaches the shoreline.

Zoning does not direct uses or activities outside of provincial regulatory authority.

Table 8 25. Recommended uses and activities for Hecate North marine zones

	Site Name	General Management Zone	Tajuwee Danee - SMZ Alternative Energy (windpower)	Gahlnaas Gagadiis K'adgwii (Masset) Gaahllns kun SGaagiidaay (Skidegate) - Central Hecate	Tlall
	Zone Type	GMZ	SMZ Alt. Energy	PMZ*	PMZ*
Category	**Marine Uses and Activities**				
Aquaculture	Bottom Culture Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	n/a	n/a	✓
	Off Bottom Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	n/a	n/a	✓
	Off-Bottom Aquaculture Siting – Finfish	X	n/a	X	X
Energy	Renewable Energy Generation	✓	✓	X	O[2,4]
Industry	Forestry Operations	✓	n/a	n/a	✓
	Mining Operations	X	X	X	X
Infrastructure	Commercial and Recreational Anchorages	✓	O[6]	O[2]	✓
	Float Homes	✓	n/a	n/a	O[2,4]
	Floating Lodges	✓	n/a	n/a	O[2,4]
	Level 1 Docks, Wharves & Facilities	✓	n/a	n/a	O[2,4]
	Level 2 Docks, Wharves & Facilities	✓	n/a	n/a	O[5]
Recreation/ Tourism	Commercial Recreation and Tourism	✓	✓	O[2]	✓
	Public Recreation and Tourism	✓	✓	O[2]	✓
Research	Research	✓	✓	O[1]	✓
Utilities	Linear Utilities	✓	O[6]	O[10]	✓
	Point Source Utilities	✓	n/a	X	O[2,4]

* Haida designation is Kagin Diiyagan (Massett Haida) or Kuuyada (Skidegate Haida)

Where a use/activity is outside provincial regulatory authority, the approval of that use/activity is subject to the decision-making process(es) of the responsible authorities. Absence does not imply that the use/activity was not considered or evaluated or is of no interest. The reader should contact the appropriate management authority(ies) for direction on uses/activities in such circumstances. Zoning does not direct uses or activities outside of provincial regulatory authority.

Key:	
Haida traditional uses, including practices for food, social, ceremonial and stewardship purposes, continue in accordance with legal obligations.	
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Conditionally Acceptable: Uses and activities are considered to be 'conditionally acceptable' subject to applicable laws, policy and relevant agreements between the Parties, and provided they are consistent with (adhere to) the plan conditions. Conditional acceptability of any use/activity does not guarantee that a use/activity will be approved.	O
Not Acceptable: Uses and activities are considered to be 'not acceptable' and should not be approved.	X
Not Applicable: The use or activity could not or would not occur in this zone due to the physical environment or other limitations (e.g. forestry operations in offshore PMZs).	n/a
Note: *This table does not alter the Council of Haida Nation and Province of BC referral obligations under existing agreements.*	

List of Conditional Statements

O[1]: Only research activities that are non-extractive and will not disturb sensitive or critical features and habitat are acceptable.
O[2]: Should avoid disturbance of sensitive or critical features and habitat; further site conditions may be identified in an approved Protection Management Plan.
O[4]: Activity should be compatible with Haida cultural use of the area, including consideration of Haida activities and/or stewardship knowledge; further site conditions may be identified in an approved Protection Management Plan.
O[5]: Infrastructure and associated activities should be compatible with vision and conservation objectives of PMZ or SMZ; further site conditions may be identified in an approved Protection Management Plan.
O[6]: Activities or infrastructure may be limited by future wind energy development opportunities in area.
O[10]: Existing investigative licence tenure for windpower exists over portions of this PMZ and any future wind energy project development would result in lower IUCN designation for portions of area affected by associated infrastructure.

Additional Considerations

Gahlnaas Gagadiis K'adgwii (Masset) / Gaahllns Kun SGaagiidaay (Skidegate) - Central Hecate: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels.

Tlall: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels.

Map 5.2. Hecate North – Five Mile Point to Gwaii Haanas showing marine spatial zoning

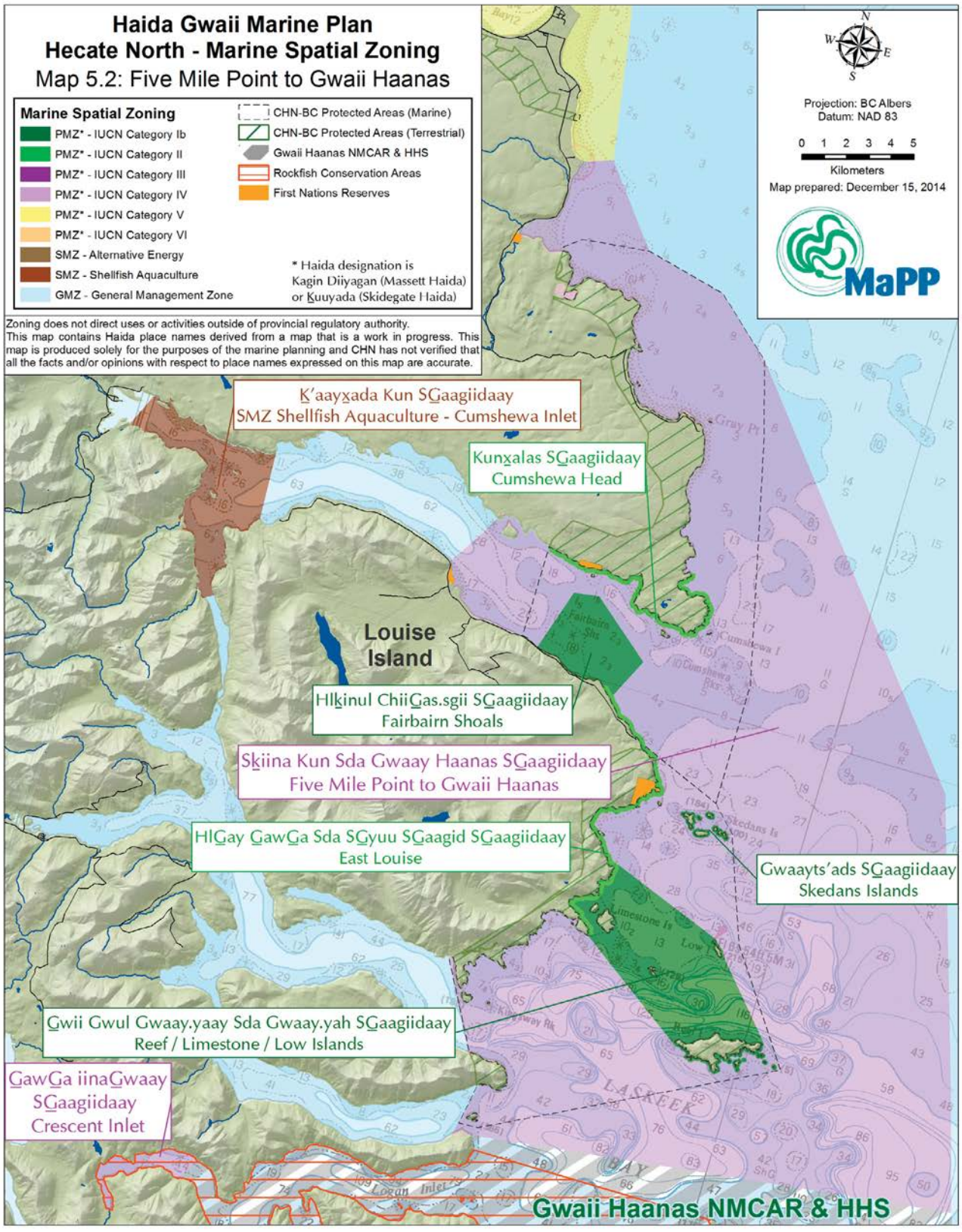

Table 8 26. Management objectives for Hecate North – Five Mile Point to Gwaii Haanas SMZ and PMZs

ZONE NAME	PMZ CATEGORY	SIZE (KM²)	MANAGEMENT OBJECTIVE(S) FOR PROVINCIAL AND HAIDA VALUES
K'aayxada Kun SGaagiidaay - SMZ Shellfish Aquaculture Cumshewa Inlet	SMZ - Shellfish Aquaculture	19.9	To allocate space and maintain ecological conditions for sustainable shellfish aquaculture activities.
Hlkinul ChiiGas.sgii SGaagiidaay - Fairbairn Shoals	IUCN Ib	11.8	Protection of unique benthic features, including an extensive kelp bed on substrate dominated by boulders.
Gwii Gwul Gwaay.yaay Sda Gwaay.yah SGaagiidaay - Reef/ Limestone/Low Islands	IUCN Ib	33.0	Protection of nearshore ecological values, inshore rockfish habitat, colonies of marine bird species at risk and adjacent foraging areas, and an area with important Haida values, including traditional use.
Gwaayts'ads SGaagiidaay – Skedans Islands	IUCN Ib	0.8	Protection of nearshore ecological values, colonies of marine bird species at risk and an area with important Haida values, including traditional use.
Kunxalas SGaagiidaay - Cumshewa Head	IUCN II	2.9	Protection of important nearshore ecological values and an area with important Haida values, including traditional use.
HlGay GawGa Sda SGyuu SGaagid SGaagiidaay - East Louise	IUCN II	3.6	Protection of significant salmon stream, eelgrass and Bull Kelp habitat, foraging habitat for marine bird species at risk, and an area with important Haida values, including traditional use.
GawGa iinagwaay SGaagiidaay – Crescent Inlet	IUCN IV	3.5	Protection for Crescent Inlet, a small inlet accessible by water only through Gwaii Haanas NMCAR & HHS. The inlet contains a number of minor salmon streams, modeled inshore rockfish habitat and kelp beds.
Skiina Kun Sda Gwaay Haanas SGaagiidaay – Five Mile Point to Gwaii Haanas	IUCN IV	520.7	Protection of significant salmon streams, locations of historical herring spawn, foraging areas for marine bird species at risk, inshore rockfish habitat and an area with important Haida values, including traditional use.

Zoning does not direct uses or activities outside of provincial regulatory authority.

Table 8 27. Recommended uses and activities for Hecate North – Five Mile Point to Gwaii Haanas marine zones

Category	Marine Uses and Activities	Site Name: General Management Zone	K'aayxada Kun SGaagidaay - SMZ Shellfish Aquaculture Cumshewa Inlet	HlKinul ChiiGas.sgii SGaagidaay - Fairbairn Shoals	GwiiGwul Gwaay.yaay Sda Gwaay.yah SGaagidaay - Reef/Limestone/Low Islands	Gwaayts'ads SGaagidaay Skedans Islands	KunXalas SGaagidaay - Cumshewa Head	HlGay GawGa Sda SGyuu SGaagid SGaagidaay - East Louise	GawGa iinaGwaay SGaagidaay – Crescent Inlet	Skiina Kun Sda Gwaay Haanas SGaagiidaay – Five Mile Point to Gwaii Haanas
	Zone Type	GMZ	SMZ	PMZ*			PMZ*		PMZ*	
Aquaculture	Bottom Culture Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	✓	X	X	X	X	X	X	X
	Off Bottom Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	✓	X	X	X	X	X	X	X
	Off-Bottom Aquaculture Siting – Finfish	X	X	X	X	X	X	X	X	X
Energy	Renewable Energy Generation	✓	O[7]	X	X	X	X	X	X	X
Industry	Forestry Operations	✓	O[11]	X	X	X	X	X	X	X
	Mining Operations	X	X	X	X	X	X	X	X	X
Infrastructure	Commercial and Recreational Anchorages	✓	O[7]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	O[2,4]
	Float Homes	✓	X	X	X	X	X	X	X	X
	Floating Lodges	✓	X	X	X	X	X	X	O[2,4]	X
	Level 1 Docks, Wharves & Facilities	✓	O[7]	X	X	O[2,4,8]	O[2,3,4]	O[2,3,4]	O[2,4]	O[2,4]
	Level 2 Docks, Wharves & Facilities	✓	X	X	X	X	X	X	X	X
Recreation/ Tourism	Commercial Recreation and Tourism	✓	✓	O[2]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	✓	✓
	Public Recreation and Tourism	✓	✓	O[2]	O[2,4]	O[2,4]	O[2,4]	O[2,4]	✓	✓
Research	Research	✓	✓	O[1]	O[1]	O[1]	O[1,4]	O[1,4]	✓	✓
Utilities	Linear Utilities	✓	O[7]	X	X	X	X	X	X	X
	Point Source Utilities	✓	X	X	X	X	X	X	X	X

* Haida designation is Kagin Diiyagan (Massett Haida) or Kuuyada (Skidegate Haida)

Where a use/activity is outside provincial regulatory authority, the approval of that use/activity is subject to the decision-making process(es) of the responsible authorities. Absence does not imply that the use/activity was not considered or evaluated or is of no interest. The reader should contact the appropriate management authority(ies) for direction on uses/activities in such circumstances. Zoning does not direct uses or activities outside of provincial regulatory authority.

Key:	
Haida traditional uses, including practices for food, social, ceremonial and stewardship purposes, continue in accordance with legal obligations.	
Acceptable: Uses and activities are considered to be 'acceptable' subject to applicable laws, policy and relevant agreements between the Parties. Acceptability of any use/activity does not guarantee that a use/activity will be approved.	✔
Conditionally Acceptable: Uses and activities are considered to be 'conditionally acceptable' subject to applicable laws, policy and relevant agreements between the Parties, and provided they are consistent with (adhere to) the plan conditions. Conditional acceptability of any use/activity does not guarantee that a use/activity will be approved.	O
Not Acceptable: Uses and activities are considered to be 'not acceptable' and should not be approved.	X
Not Applicable: The use or activity could not or would not occur in this zone due to the physical environment or other limitations (e.g. forestry operations in offshore PMZs).	n/a
Note: *This table does not alter the Council of Haida Nation and Province of BC referral obligations under existing agreements.*	

List of Conditional Statements

O[1]: Only research activities that are non-extractive and will not disturb sensitive or critical features and habitat are acceptable.
O[2]: Should avoid disturbance of sensitive or critical features and habitat; further site conditions may be identified in an approved Protection Management Plan.
O[3]: Infrastructure enabling Haida access to adjacent reserve lands permitted.
O[4]: Activity should be compatible with Haida cultural use of the area, including consideration of Haida activities and/or stewardship knowledge; further site conditions may be identified in an approved Protection Management Plan.
O[7]: Activities or infrastructure may be limited by current shellfish aquaculture operations and/or future shellfish aquaculture opportunities in area.
O[8]: Infrastructure should be limited to that required for service provision of PMZ.
O[11]: Temporary log handling sites may be allowed, depending on the state of aquaculture activity in the vicinity of the proposed site, when no other water access sites in that particular watershed are found to be practicable.

Additional Considerations

Hlk̲inul ChiiG̲as.sgii SG̲aagiidaay - **Fairbairn Shoals**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

G̲wii Gwul Gwaay.yaay Sda Gwaay.yah SG̲aagiidaay - **Reef/Limestone/Low Islands**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Gwaayts'ads SG̲aagiidaay - **Skedans Islands**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

Kunx̲alas SG̲aagiidaay - **Cumshewa Head**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

HlG̲ay G̲awG̲a Sda SG̲yuu SG̲aagid SG̲aagiidaay - **East Louise**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels.

G̲awG̲a iinagwaay SG̲aagiidaay - **Crescent Inlet**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels and smaller freight or log boom towing vessels

Skiina Kun Sda Gwaay Haanas SG̲aagiidaay - **Five Mile Point to Gwaii Haanas**: Sensitive or critical features and habitat may be negatively impacted by large commercial vessels, though it is noted that log barge loading at storage/handling facilities is an important activity in the area. Sensitive benthic habitat and species values may be impacted by trawl activities. Enhanced monitoring and enforcement may be needed for protection of ecological and cultural values.

Photo - Parks Canada

8.5.6 GWAII HAANAS OFFSHORE AND NORTHWEST QUEEN CHARLOTTE SOUND

> *My dad and them used to fish black cod. But they'd just salt it. ... For them, everything salted. ... [They fished it with] longline ... on a little boat ... they used to get regular groundline, only it's heavy-tarred ... They used to whip it on with fine twine ... [they used steel hooks with] shanks, on the back. Like dogfish hooks. Only these were smaller, for cod. ... You use herring [for bait]. There's lots of herring around ... because the herring comes in then, around ... the summer time here. That's when they used to get all the halibut and the black cod and things ... just [for] the family. (Roy Jones Sr., Aug. 1998)*

This area borders Gwaii Haanas National Marine Conservation Area Reserve and includes southern Hecate Strait, part of the west coast, part of Queen Charlotte Sound, and the area south of Cape St. James—an area known for extreme weather, wind and waves. It is also a place of unique bathymetry, oceanographic features and high productivity, and supports spawning and rearing grounds for many fish species, including Sablefish, Pacific Halibut and various species of rockfish. This is in part due to the large gullies and canyons that cut across the continental shelf and bring nutrient-rich waters into the Queen Charlotte Basin. At the head of the gullies and canyons are globally unique reef-forming sponges and corals; their formation is believed to be linked to the upwelling of offshore waters. These complexes are important habitat for many invertebrates and fish species, including commercially and culturally important species. The region south of Cape St. James has also been identified as a nutrient "transport hub"; Haida Eddies passing by the cape carry concentrations of plankton that are transported up the coast into the Gulf of Alaska. The abundance of the area also attracts large concentrations of marine birds and mammals.

The high productivity of this area has resulted in intense fishing pressure over the years. Sablefish, halibut and rockfish are caught using multiple gear types including traps, long lines and trawl. The area's ecological values are significant at a coastwide scale and protection of these values, while also allowing for ongoing and future economic opportunities, requires balancing protection with responsible fisheries management strategies.

Map 6.1 presents an overview of Gwaii Haanas Offshore and Northwest Queen Charlotte Sound. Five IUCN Type Ib, and three IUCN Type IV PMZs have been identified. The category and objectives for each zone are described in Table 8-28 and Table 8-29 lists recommended uses and activities.

Map 6.1. Overview of Gwaii Haanas Offshore and NW Queen Charlotte Sound, showing marine spatial zoning

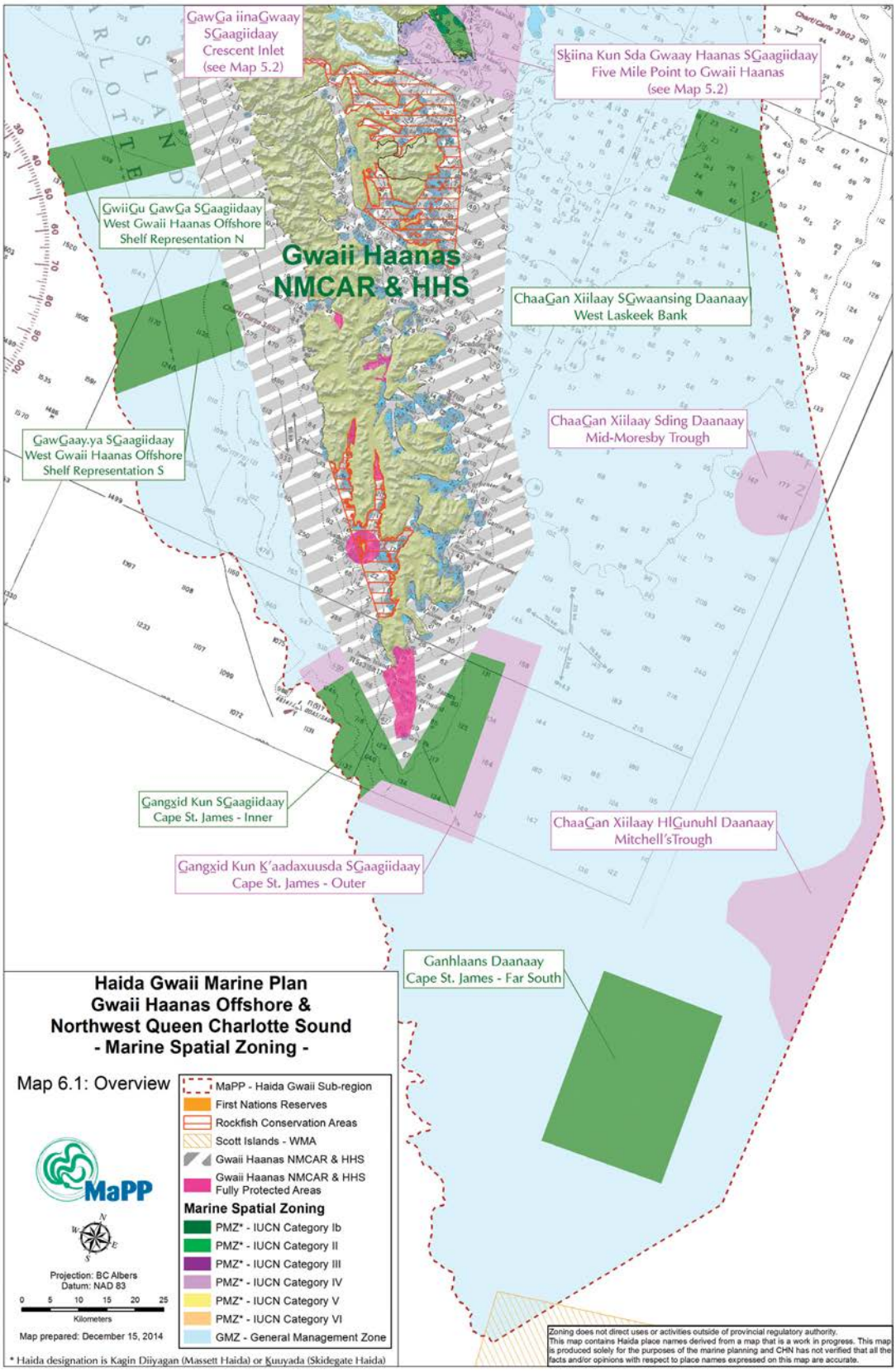

Table 8 28. Management objectives for Gwaii Haanas Offshore and NW Queen Charlotte Sound PMZs

ZONE NAME	PMZ CATEGORY	SIZE (KM²)	MANAGEMENT OBJECTIVE(S) FOR PROVINCIAL AND HAIDA VALUES
Gangxid Kun SGaagiidaay - Cape St. James	IUCN Ib	405.7	Protection of portions of unique areas and associated species assemblages in the Shelf Break and Cape St. James oceanographic regions (EBSAs).
Ganhlaans Daanaay - Cape St. James Far South	IUCN Ib	710.2	Protection of representative habitat of the Continental Slope and Queen Charlotte Sound Ecosections.
GwiiGu GawGa SGaagiidaay - West Gwaii Haanas Offshore Shelf Representation N	IUCN Ib	205.4	Protection of representative habitat of the Continental Slope Ecosection and unique shelf break habitat with associated species assemblages.
GawGaay.ya SGaagiidaay - West Gwaii Haanas Offshore Shelf Representation S	IUCN Ib	290.0	Protection of representative habitat of the Continental Slope Ecosection and unique shelf break habitat with associated species assemblages.
ChaaGan Xiilaay SGwaansing Daanaay - West Laskeek Bank	IUCN Ib	256.4	Protection of representative habitat of the Continental Slope and Queen Charlotte Sound Ecosections.
Gangxid Kun K'aadaxuusda SGaagiidaay - Cape St. James Outer	IUCN IV	330.9	Protection of portions of unique areas and associated species assemblagesin the Shelf Break and Cape St. James oceanographic regions (EBSAs), and protection of cold water corals and sponges.
ChaaGan Xiilaay Sding Daanaay - Mid-Moresby Trough	IUCN IV	187.2	Protection of cold water corals and sponges.
ChaaGan Xiilaay HlGunuhl Daanaay - Mitchell's Trough	IUCN IV	443.4	Protection of cold water corals and sponges.

Zoning does not direct uses or activities outside of provincial regulatory authority.

Table 8 29. Recommended uses and activities for Gwaii Haanas Offshore and NW Queen Charlotte Sound marine zones

Category	Marine Uses and Activities	General Management Zone	Gangxid Kun SGaagiidaay - Cape St. James	Ganhlaans Daanaay - Cape St. James Far South	GwiiGu GawGa SGaagiidaay - West Gwaii Haanas Offshore Shelf Representation N	GawGaay.ya SGaagiidaay - West Gwaii Haanas Offshore Shelf Representation S	ChaaGan Xiilaay SGwaansing Daanaay - West Laskeek Bank	Gangxid Kun K'aadaxuusda SGaagiidaay - Cape St. James Outer	ChaaGan Xiilaay Sding Daanaay - Mid-Moresby Trough	ChaaGan Xiilaay HlGunuhl Daanaay - Mitchell's Trough
Site Name										
Zone Type		GMZ	PMZ*					PMZ*		
Aquaculture	Bottom Culture Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Off Bottom Aquaculture Siting – Plants, Shellfish, Other Invertebrates	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Off-Bottom Aquaculture Siting – Finfish	X	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Energy	Renewable Energy Generation	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Industry	Forestry Operations	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Mining Operations	X	X	X	X	X	X	X	X	X
Infrastructure	Commercial and Recreational Anchorages	✓	O[2]	O[2]	O[2]	O[2]	O[2]	O[2]	O[2]	O[2]
	Float Homes	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Floating Lodges	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Level 1 Docks, Wharves & Facilities	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Level 2 Docks, Wharves & Facilities	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Recreation/ Tourism	Commercial Recreation and Tourism	✓	O[2]	O[2]	O[2]	O[2]	O[2]	✓	✓	✓
	Public Recreation and Tourism	✓	O[2]	O[2]	O[2]	O[2]	O[2]	✓	✓	✓
Research	Research	✓	O[1]	O[1]	O[1]	O[1]	O[1]	✓	✓	✓
Utilities	Linear Utilities	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
	Point Source Utilities	✓	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

* Haida designation is Kagin Diiyagan (Massett Haida) or Kuuyada (Skidegate Haida)

Where a use/activity is outside provincial regulatory authority, the approval of that use/activity is subject to the decision-making process(es) of the responsible authorities. Absence does not imply that the use/activity was not considered or evaluated or is of no interest. The reader should contact the appropriate management authority(ies) for direction on uses/activities in such circumstances. Zoning does not direct uses or activities outside of provincial regulatory authority.

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Conditionally Acceptable: Uses and activities are considered to be 'conditionally acceptable' subject to applicable laws, policy and relevant agreements between the Parties, and provided they are consistent with (adhere to) the plan conditions. Conditional acceptability of any use/activity does not guarantee that a use/activity will be approved.	O
Not Acceptable: Uses and activities are considered to be 'not acceptable' and should not be approved.	X
Not Applicable: The use or activity could not or would not occur in this zone due to the physical environment or other limitations (e.g. forestry operations in offshore PMZs).	n/a
Note: *This table does not alter the Council of Haida Nation and Province of BC referral obligations under existing agreements.*	

List of Conditional Statements

O^1: Only research activities that are non-extractive and will not disturb sensitive or critical features and habitat are acceptable.

O^2: Should avoid disturbance of sensitive or critical features and habitat; further site conditions may be identified in an approved Protection Management Plan.

Additional Considerations

Gangxid Kun SGaagiidaay - **Cape St. James**: Economic value of transportation activities through the area is high.

Ganhlaans Daanaay - **Cape St. James Far South**: Economic value of transportation activities through the area is high.

GwiiGu GawGa SGaagiidaay - **West Gwaii Haanas Offshore Shelf Representation N**: Economic value of transportation activities through the area is high.

GawGaay.ya SGaagiidaay - **West Gwaii Haanas Offshore Shelf Representation S**: Economic value of transportation activities through the area is high.

ChaaGan Xiilaay SGwaansing Daanaay - **West Laskeek Bank**: Economic value of transportation activities through the area is high.

Gangxid Kun K'aadaxuusda SGaagiidaay - **Cape St. James Outer**: Sensitive or critical features and habitat, particularly cold water corals and sponges known to occur in the region, may be negatively impacted by bottom contact fisheries. Economic value of transportation activities through the area is high.

ChaaGan Xiilaay Sding Daanaay - **Mid-Moresby Trough**: Sensitive or critical features and habitat, particularly cold water corals and sponges known to occur in the region, may be negatively impacted by bottom contact fisheries. Economic value of transportation activities through the area is high.

ChaaGan Xiilaay HlGunuhl Daanaay - **Mitchell's Trough**: Sensitive or critical features and habitat, particularly cold water corals and sponges known to occur in the region, may be negatively impacted by bottom contact fisheries. Economic value of transportation activities through the area is high.

Photo - Lynn Lee

9. PLAN IMPLEMENTATION, MONITORING AND AMENDMENT

The Marine Plan provides policy, detailed planning and management direction regarding marine uses, activities and values throughout the plan area. The objectives and strategies outlined in Sections 6 and 7 apply to all marine resource uses, activities and values, including within the General Management Zone, Protection Management Zones and Special Management Zones, unless otherwise indicated in the direction given for a specific zone.

During implementation, some of the spatial and aspatial aspects of this plan will be established as legal direction under provincial legislation and Haida laws. The Province and/or the CHN may bring other topics related to marine planning forward for tripartite discussion between CHN, Province of BC and Government of Canada, including discussions that may occur related to the Canada-BC MPA Network Strategy. Options for enacting various components of the plan are outlined in Appendix 8.

Goals, objectives and strategies will be put into action following the development of an implementation work plan. The general approach for implementation of the plan will be set out in an implementation agreement, to be signed by the Haida Nation and BC. The implementation agreement is anticipated to include a work plan and associated commitments to plan implementation, review and amendments. Conflict resolution mechanisms will also be identified and applied, as appropriate.

The Haida Nation and BC recognize that effective implementation of the Marine Plan will require human resourcing and long-term funding. Both parties are working together to identify resourcing requirements and establish implementation funding mechanisms. To the extent possible, implementation will occur within existing programs and resources. Implementation of some components of the plan may require incremental increases in funding. Innovative funding arrangements and partnerships will be explored, as appropriate.

9.1 MARINE IMPLEMENTATION TEACHNICAL TEAM

Implementation of the final Marine Plan will involve the creation of a technical coordinating body that is assigned to guide and oversee the implementation process. The proposed Haida Gwaii Marine Implementation Technical Team (MITT) will be comprised of representatives from the CHN and the provincial government. A joint Terms of Reference will clearly outline the roles, scope of responsibilities, and engagement schedule of the MITT. Its linkages to existing (or modified) governance structures on Haida Gwaii are currently under discussion by the CHN and Province of BC.

The work of the MITT will be guided by the priorities identified in Section 9.2 and the implementation work plan that will be developed by the Haida Nation and BC. The work plan will describe the actions associated with each strategy, identify the parties involved, outline the funding required and define general timelines to achieve implementation. It will respect jurisdictional authorities and will include the development of mechanisms to engage stakeholders in plan implementation as appropriate.

The MITT will be responsible for coordinating the various parties involved in planning and implementation. Specific agencies or departments will be tasked with carrying out parts of the plan as appropriate, depending on funding and staff availability. Similarly, other organizations and individuals may assist with plan implementation.

9.2 MARINE PLANNING PRIORITIES

While all of the objectives and strategies identified in the plan are important elements of an integrated EBM approach for Haida Gwaii waters, the Haida Nation and Province of BC have identified a number of key outcomes and priority actions to implement the plan (Table 9-1). These priorities were identified with input from the Haida Gwaii Marine Advisory Committee and the public review process. Priorities will be described in further detail in the implementation work plan and will be the focus of plan implementation in the short-term, with a review in 2 years. This list does not preclude the identification of additional priorities as the need or opportunity arises.

The goal is to implement all strategies described in the plan, as funding and other resources permit. Continued collaboration and integration will be essential as plan strategies are implemented.

Table 9 1. Key outcomes and priority actions for implementation of the Haida Gwaii Marine Plan

KEY OUTCOMES	PRIORITY ACTIONS
A. Integrated Governance Framework	
Government-to-Government Frameworks	1. Build on existing relationships and structures to establish a Haida Gwaii Governance Framework to implement the Marine Plan and address marine issues. 2. Establish a Regional Governance Framework to oversee implementation of all marine plans at a regional scale and MPA network planning.
Ongoing stakeholder engagement	3. Prepare an engagement plan and establish a stakeholder advisory process to provide input into Marine Plan implementation.
B. Marine Economic Development	
Successful Haida Gwaii marine economy	4. Work with others to promote Haida Gwaii as a tourism destination and encourage development of sustainable tourism products that support the local economy. 5. Continue to encourage appropriate business development related to shellfish aquaculture. 6. Support Haida Gwaii opportunities for community-based fisheries, including local fish processing and marketing and development of local brands. 7. Support opportunities for research and monitoring to meet conservation and EBM mandates. 8. Continue to assess opportunities for marine-based renewable energy and encourage development in suitable locations. 9. Undertake a needs assessment for marine infrastructure and encourage transportation services to support economic development. 10. Promote Haida Gwaii training and business programs, including for youth. 11. Develop strategic partnerships to support Marine Plan implementation.
Sustainable recreational fishery	12. Prepare a Haida Gwaii Recreational Fishing Code of Conduct. 13. Prepare a Haida Gwaii Recreational Fishery Management Plan, including a recreational fishing capacity study, to guide decision-making by CHN and BC related to tenuring.
Sustainable shellfish aquaculture	14. Prepare a Shellfish Aquaculture Management Plan, including a study of shellfish aquaculture capacity limits, to guide decision-making by CHN and BC related to tenuring.

KEY OUTCOMES	PRIORITY ACTIONS
C. EBM Monitoring and Research	
Increased monitoring and research	15. Identify Haida Gwaii performance and plan effectiveness indicators and implement an EBM monitoring plan. 16. Support baseline research and monitoring activities (e.g., in PMZs). 17. Assess the feasibility of establishing a Haida Gwaii research institute.
Enhanced management and restoration of marine resources	18. Update management plans for existing CHN/BC protected areas to be consistent with the Marine Plan. 19. Initiate pilot projects for integrated management e.g., develop and implement management plans for Masset Inlet and/or Skidegate Inlet. 20. Undertake restoration and mitigation activities, such as initiatives related to management of sewage discharge, habitat impacts of log booming, and management of invasive species (e.g., tunicates in Masset Slough and Sandspit).
D. Compliance and Enforcement	
Coordinated terrestrial and marine compliance and enforcement	21. Prepare a Haida Gwaii Compliance and Enforcement Framework that integrates marine and terrestrial management and addresses capacity development and funding.
E. MPA Network planning	
Designation of candidate marine protected areas	22. Continued development and establishment of a marine protected area network, including working with other First Nations and the federal government (e.g., the Canada-BC MPA Network Strategy and any revised governance process).
F. Communication and Education	
Increased awareness and understanding of the marine plan	23. Undertake coordinated CHN/BC outreach and education regarding the Marine Plan.
G. Geographic Response Planning	
Preparedness for marine emergencies	24. Prepare and implement a Haida Gwaii Geographic Response Plan for priority areas.

9.3 INDICATORS AND MONITORING

Two measures are important to consider when reporting on plan implementation: plan performance and plan effectiveness.

Plan performance indicators track progress towards effective implementation of the work plan. Examples of performance indicators include the number of projects completed, number of requests for variance, number of reports of non-compliance with plan zoning, and number of agency staff actively using the Marine Plan as part of planning and decision-making. The status of performance indicators will be reported each year in the annual report (see Section 9.5).

Adaptive Management

Adaptive management is "learning by doing." It is a systematic approach to monitoring that allows decision-makers to learn from the outcomes of implemented management strategies and improve the approach to managing marine resources over time. It allows for informed decision-making despite ecological uncertainties and data limitations. In adaptive management, monitoring is deliberately designed to study the effectiveness of strategies in achieving plan objectives and to inform amendments to those strategies, as needed. An adaptive management approach can also be used to test alternative strategies and compare outcomes.

Plan effectiveness is determined by EBM indicators and associated monitoring. EBM indicators track how effectively the desired EBM-related outcomes (objectives) in the Marine Plan are being achieved.

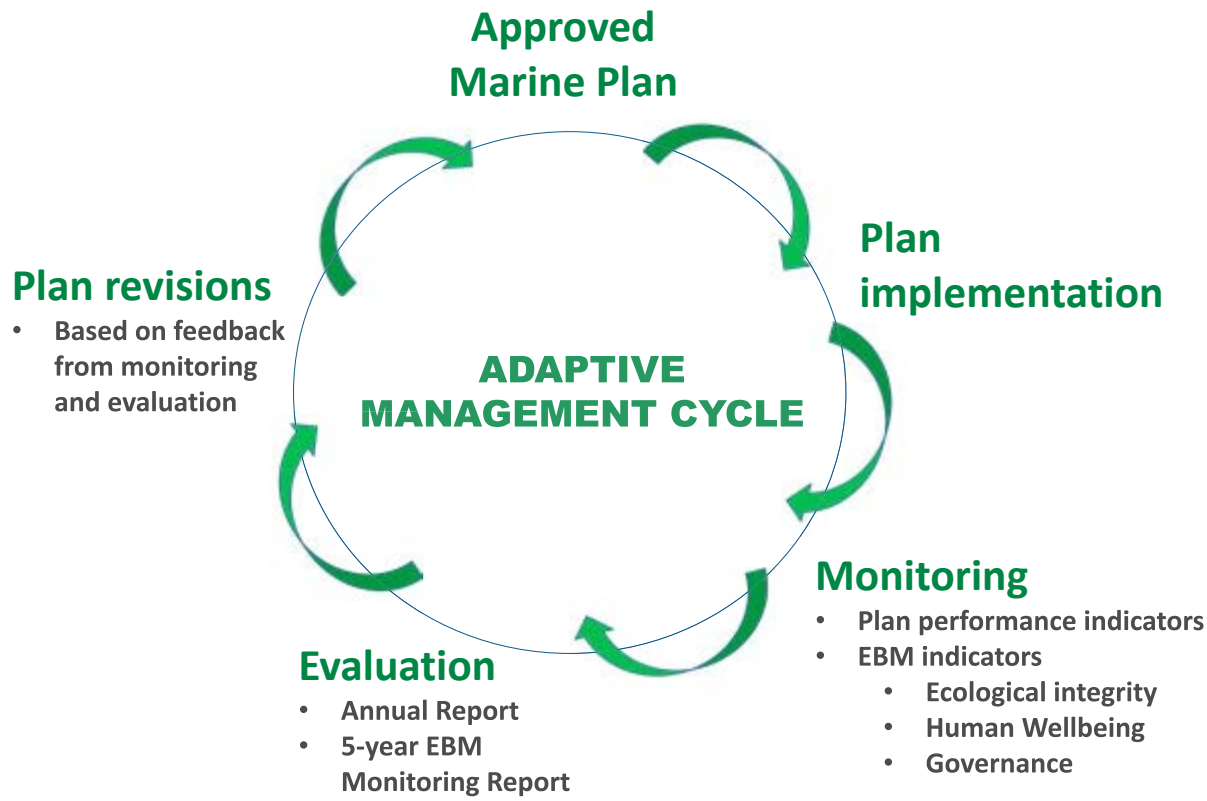
EBM monitoring tracks the state of ecological and human well-being on Haida Gwaii. Indicators measure changes in ecological, social, cultural and economic values over time, and the magnitude of drivers or stressors on each value. Trends in indicators indicate whether plan objectives are being achieved and they provide warning signs about potential or growing threats to marine resources.

Indicators for the Marine Plan will be selected for key EBM components based on the MaPP report on *Marine Ecosystem-Based Management Indicators for Canada's Pacific North Coast Region* (2014). Indicators are organized under four categories: Social (including Cultural), Economic, Governance (Institutional), and Physical/Technological.

A Marine Plan Monitoring Strategy will set out priorities, timelines and responsibilities for monitoring EBM indicators. A comprehensive EBM monitoring report on the status of ecological and human well-being indicators will be published every 5 years. The report will inform the review, amendment and updating of the plan by tracking measurable changes in ecological and human well-being values.

Monitoring helps decision-makers to detect and evaluate changes and provides a basis for adjusting decisions or actions. This adaptive management approach also increases plan effectiveness over time (Figure 9-1).

Figure 9 1. The adaptive management cycle



9.4 PLAN COMPLIANCE

As elements of an approved plan are implemented it will be necessary to ensure that plan objectives are adhered to. Supporting documents, such as regulations or management plans, may need to be revised to be consistent with planning objectives. Marine Plan objectives and recommended uses and activities within SMZs and PMZs will be considered during screening of tenure applications for provincially-regulated and Haida-managed marine activities and uses. As part of the authorization process, all land- and marine-based activities that affect the intertidal, nearshore or offshore waters in the plan area will need to be consistent with the Marine Plan. In addition, the approach to compliance and enforcement of the plan must be flexible enough to be applied in individual permits, licences or variances as required.

The general public will also need to be made aware of any regulations, zoning designations or permit/licensing requirements associated with plan compliance. Increased levels of compliance will be achieved if resource users understand what "the rules" of the plan are and how decisions are made. Specifically, users should be able to clearly understand:

- user requirements and any exceptions or variances;
- how compliance will be determined (clear procedures); and
- deadlines for compliance.

There will be an outreach component to plan implementation to ensure that information on the plan and its requirements are readily available to all resource users.

9.5 PLAN EVALUATION, REVIEW AND AMENDMENT

The Marine Plan is, inevitably, a snapshot in time. It is intended to be a living document that will be updated over time so it remains relevant as issues, priorities and conditions change. Where improved knowledge or monitoring results indicate that different strategies or management approaches would be better suited to achieving goals and objectives, the Haida Nation and BC are committed to being responsive to those needs.

The MITT will prepare an annual report that summarizes the status of performance indicators. A list of implementation issues, achievements, plan variation requests, and any public comments received during the reporting period will be recorded in the annual report. The report will be used to assess progress towards plan implementation and overall compliance with the Marine Plan. It is anticipated that a comprehensive re-evaluation of the plan will be conducted collaboratively by the MITT every five years. The review will consider emerging management needs and priorities, and results from annual reports and the 5-year EBM monitoring report.

Any request for a variation to a zoning requirement will be reviewed by the Haida Nation and BC. The MITT will receive notice of any tenure application containing a request for a variation to a specified zoning category in the Marine Plan and will make recommendations to the Haida Nation and the Province of BC. Applications for variance will be assessed based on criteria determined by the Haida Nation and Province of BC. The criteria may include consideration of new technologies/methods of operation, new activities or ventures, and/or new information that was not available when the Marine Plan was developed. A successful application containing a request for variation will not automatically result in a change to the recommended uses and activities in the Marine Plan for specific zones. Changes to such recommended uses and activities may, however, be considered during periodic reviews, if there has been a number of successful applications containing variation requests.Where appropriate, the plan will be revised to reflect changing circumstances and conditions as they arise. This adaptive approach will allow for improved management and responsible stewardship by the Haida Nation and BC over both the short and long-term.

Photo: Jags

DEFINITIONS

Aboriginal Aquatic Resource and Oceans Management Program (AAROM) – A program implemented by DFO that provides funding to qualifying Aboriginal groups to form aquatic resource and oceans management organizations capable of hiring or contracting skilled personnel, in order to allow them to effectively participate in decision-making and advisory processes. The AAROM program is comprised of three main components: collaborative management, capacity building and economic opportunities.

Aboriginal Fisheries Strategy – A DFO program established in 1992 that aims to provide for the effective management of the Aboriginal fishery in a manner consistent with the Sparrow decision. It also serves as a bridging arrangement in matters, specifically including First Nations capacity building, during the negotiation of land claims or treaties.

Adaptive management – A monitoring and management approach that assists in decision-making related to science-based processes. It is a prescriptive, formalized, systematic method that enables management to learn from the outcomes of implemented management actions.

Benefit-sharing agreements – A written agreement that provides First Nations communities with a return of economic benefits derived from activities occurring in their traditional territory.

BC Marine Conservation Analysis (BCMCA) – A collaborative endeavour, active from 2006-2013, which developed products to inform marine planning and management initiatives. Products include a *Marine Atlas of Pacific Canada, A Series of Marxan Scenarios for Pacific Canada* and an interactive on-line Marine Atlas. The Project Team included representatives from First Nations, Federal government, Provincial government, environmental non-government organizations, user groups, and academia.

Carrying capacity (social, ecological, cultural) – The upper limit of a specific activity that may occur before causing unacceptable change to the natural ecosystem or to valued social and cultural systems in a particular area or location. Capacity can be measured by a number of units (anglers, visitors, lodges, bed-nights, visitor-days, aquaculture farms, aquaculture production by species, etc.), crowding tolerance, percentage of an area dedicated to a particular use, or other characteristic of an activity, value or feature that may be affected.

Commercial fisheries – Harvest of wild finfish and invertebrates for commercial purposes.

Community-based fisheries – Island-based community participation in commercial fisheries that occur in the waters in and around Haida Gwaii, including harvesting, processing, marketing and management.

Cumulative effects – Environmental, social and economic changes caused by the combined and incremental effects of past, present and proposed activities and events.

Cumulative effects assessment – An assessment of the incremental effects of an action on environmental, social and economic values when the effects are combined with those from other past, present and foreseeable future actions or events in the environment.

Ecological integrity – A condition of ecosystems that are self-sustaining and self-regulating. For example, they have complete food webs, a full complement of native species that can maintain their populations, and naturally functioning ecological processes (e.g., energy flow, nutrient and water cycles).

Environmental assessment – A review of proposed major projects to assess their potential impacts on the environment, culture, economy, social, and health. In order for a major project to proceed, an environmental assessment must be completed and the proposed project approved.

Fisheries economy – All of the direct and indirect social, cultural and economic benefits derived from current commercial fishing, recreational fishery service providers, recreational fishing and shellfish and marine plant aquaculture. The province and partner First Nations have a vital interest and role in this economy, including fish and seafood processing, distribution, retailing, business development and skills training, disposition of tenures, and maintenance of associated infrastructure.

Geo-engineering – The deliberate manipulation of an ecosystem process.

Geographic Response Plan – Geographic-specific response plans for marine-related incidents. They include response strategies tailored to a specific beach, shore or waterway, and are meant to avoid or minimize impact.

Governance – Interactions between government, other social organizations and citizens and the structures (formal and informal) through which decisions are made.

Gyre – An oceanographic term referring to any large system of rotating ocean currents, particularly those involved with large wind movements.

Haida eddies – Large anti-cyclonic vortices (waters spiraling outward clock-wise from a warmer, less saline center) that form off the west coast of Haida Gwaii and transport warmer, nutrient and plankton-rich coastal water out into the north Pacific Ocean.

Haida Gwaii Marine Stewardship Group – A group of community and conservation organizations, individuals, and government agencies working collaboratively to promote the survival of northern abalone and other marine species at risk in and around Haida Gwaii (formerly called the Haida Gwaii Abalone Stewards).

Heli-drop sites – Colloquial term for 'helicopter log drop sites.' Areas where logs are released from the air into the marine environment.

Indicator – Quantitative/qualitative statements or measured/observed parameters that can be used to describe existing conditions and measure changes or trends over time.

Integrated management – A continuous process through which decisions are made for the sustainable use, development and protection of areas and resources. Integrated management acknowledges the interrelationships among different uses and the environments they potentially affect. It is designed to overcome the fragmentation inherent in a sectoral management approach, analyze the implications of development and conflicting uses, and promote linkages and harmonization among various activities.

International Union for Conservation of Nature (IUCN) – A global environmental organization providing a neutral forum for governments, non-governmental organizations, scientists, business and local communities to find practical solutions to conservation and development challenges.

Intertidal area – The area above water at low tide and under water at high tide. Also called the littoral zone.

Marine ecosections – Marine ecosections are part of the hierarchical ecological mapping system called the *British Columbia Marine Ecological Classification* (BCMEC). Ecosections are defined according to physical, oceanographic and biological characteristics. There are four ecosections in the waters in and around Haida Gwaii: Dixon Entrance, Hecate Strait, Queen Charlotte Sound, and Continental Slope.

Marine protected area – An area legally established to protect all or a portion of the sea surface, water column, seabed and/or associated flora, fauna and recreational, scientific, cultural and historical features, and may include an area established under Canada's Oceans Act, National Marine Conservation Areas Act, National Parks Act, Canada Wildlife Act, Migratory Birds Convention Act, or British Columbia's Park Act, Protected Areas of British Columbia Act, Ecological Reserve Act, Environment and Land Use Act, Land Act or Wildlife Act.

Marine protected area network – A collection of individual marine protected areas operating cooperatively and synergistically, at various spatial scales, and with a range of protection levels that are designed to meet objectives that a single reserve cannot achieve.

Marxan – A decision support tool software designed to aid systematic reserve design of protected areas for conservation planning. Marxan generates options for protected area networks that achieve particular biodiversity representation goals while minimizing costs, such as the area required.

Northern Shelf Bioregion – One of five marine ecoregions in Pacific Canada identified by DFO based on geological, physical, oceanographic and biological criteria. The overall MaPP Planning Area is defined by the boundaries of the Northern Shelf Ecoregion.

Pacific Integrated Commercial Fisheries Initiative (PICFI) – A DFO initiative to support BC First Nations in integrated commercial fisheries; to develop sustainable fisheries enterprises; and to increase First Nation participation in fisheries management decision-making processes. PICFI has four key elements: (1) increased First Nations access to commercial fisheries; (2) capacity building; (3) co-management; and (4) enhanced accountability.

Protocol Agreement – An agreement between a First Nation and another party that outlines rules or procedures including commitments, actions or business arrangements.

Recreational fisheries – Recreational angling, collecting of shellfish, harvesting of finfish and invertebrates by residents and visitors for personal use.

Recreational fishery service provider – A person or business engaged in providing services such as a fishing lodge and/or carrying passengers on a charter vessel for the primary purpose of recreational fishing, whenever valuable consideration passes directly or indirectly to the person or business.

Rockfish Conservation Area (RCA) – Area established under the *Fisheries Act* to conserve inshore rockfish species.

Shellfish aquaculture – The cultivation and harvesting (farming) of aquatic invertebrates.

Species of concern – Species that are not formally listed through provincial, national or international processes as being 'at-risk' but that are nonetheless of concern due to observed declining trends, local scarcity, cultural, social or economic value, or Haida and/or locally recognized need for action.

Stakeholder – A group or individual that has an interest in Haida Gwaii and/or provided input or comment on aspects of the Haida Gwaii Draft Marine Plan or otherwise contributed to the marine planning process. Identification of a group or individual as a stakeholder is without prejudice to Haida title and rights.

Sub-tidal zone – Area submerged most of the time but exposed briefly during extreme low tides.

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APPENDICES

APPENDIX 1. MAPP LETTER OF INTENT

Doug Konkin
Deputy Minister
Ministry of Forests, Lands and Natural Resource Operations

Date: NOV 2 5 2011

Re: Letter of Intent to Collaborate on Coastal and Marine Planning in the Pacific North Coast

Further to our discussions regarding the recent decisions of Fisheries and Oceans Canada to reduce the scope and funding of its Pacific North Coast Integrated Marine Area (PNCIMA) planning initiative, this letter confirms the intent of the First Nation organizations represented below to collaborate with the Province of British Columbia, as represented by the Ministry of Forests, Lands and Natural Resource Operations on:

a) preparation of coastal / marine plans for the Haida Gwaii, North Coast, Central Coast and Northern Vancouver Island "sub-regions"; and,

b) preparation of a broader regional planning document that may serve, subject to the parities' individual involvement in the PNCIMA Initiative, as a basis for informing the ongoing PNCIMA initiative.

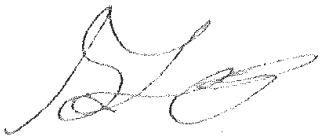
The nature of our collaboration is identified in Attachment 1 of this letter. If the Province is in support of this letter of intent please initial the pages of Attachment 1, sign in the signature block provided below, and return a copy of this letter to the following:

Sincerely
Art Sterritt, Executive Director
Coastal First Nations-Great Bear Initiative

November 17, 2011

As directed by:

Council of the Haida Nation	Gitga'at First Nation-Hartley Bay	Haisla First Nation
Old Massett Village Council	Metlakatla First Nation-Metlakatla	Heiltsuk Nation
Skidegate Band Council	Kitasoo-Xaixais First Nation	Wuikinuxv Nation
Nuxalk Nation		



Date: Nov. 18, 2011

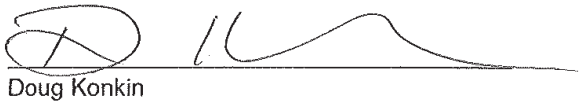
G. Les Clayton, Executive Director
North Coast First Nation Governance Committee
North Coast-Skeena First Nations Stewardship Society
As directed by:

Gitga'at First Nation-Hartley Bay	Metlakatla First Nation-Metlakatla	Kitselas First Nation
Gitxaala First Nation-Kitkatla	Kitsumkalum First Nation-Kitsumkalum	Haisla First Nation

Date: Nov 25 / 2011

Dallas Smith, President
Nanwakolas Council
As directed by:

Kwakiutl First Nation	Mamalilikulla-Qwe'Qwa'Sot'Em First Nation	'Namgis First Nation
Tlowitsis First Nation	Da'naxda'xw Awaetlatla First Nation	Gwa'sala-'Nakwaxda'xw First Nation
Kwiakah First Nation	K'omoks First Nation	



Date: Nov 28/11

Doug Konkin
Deputy Minister
Province of British Columbia
Ministry of Forests, Lands and Natural Resource Operations

ATTACHMENT 1 to Letter of Intent

COASTAL FIRST NATIONS-BRITISH COLUMBIA COLLABORATIVE COASTAL AND MARINE PLANNING

1.0 PURPOSE

This document outlines the context and intended nature of collaborative coastal and marine planning to be undertaken by the Coastal First Nations-Great Bear Initiative, the North Coast-Skeena First Nations Stewardship Society, and the Nanwakolas Council and the Province of British Columbia, as represented by the Ministry of Forests, Lands and Natural Resource Management ,collectively ("the Parties") for the Pacific North Coast Region and for its four marine sub-regions as identified in section 2.2.

2.0 CONTEXT

2.1 In September 2011 Fisheries and Oceans Canada (DFO) announced changes to the process, structure and outputs that had been developed with the First Nations and the Province in accordance with signed collaborative governance and funding agreements for an integrated ocean plan for the Pacific North Coast Integrated Management Area (PNCIMA).

2.2 The Parties intend to undertake collaborative planning efforts for coastal and marine areas in four identified "sub-regions" of the Pacific North Coast, namely Haida Gwaii, North Coast, Central Coast and Northern Vancouver Island (planning areas to be confirmed).

2.3 The Parties intend to develop a broader regional planning document that may serve as a basis for informing the ongoing PNCIMA planning process. The Parties acknowledge that not all of the Parties may be involved in the ongoing PNCIMA planning process.

2.4 The Parties intend to enter into agreements to jointly manage external funds that may be available to develop coastal and marine sub-regional plans, and the broader regional planning document.

2.5 Notwithstanding and without prejudice to diverging viewpoints regarding ownership and control over coastal and marine lands and resources, the Parties intend to undertake coastal and marine planning for marine ecosystems and human well-being.

DM

2.6 For the purpose of collaborative planning, the Parties intend to work together, irrespective of jurisdiction, treaty, rights and title issues, in the interests of arriving at the best decisions regarding the planning and management of coastal and marine ecosystems and activities.

2.7 Neither this document, nor any acts performed in connection with it, are to be used, construed or relied on by anyone as evidence, acceptance or admission of the existence, nature, scope or content of any Treaty or Aboriginal Rights or Title and Crown Rights or Title; and,

2.8 This Letter of Intent, and the implementation thereof, is to be informed by the following: Coastal First Nations Reconciliation Protocol (2010), Kunst'aa Guu – Kunst'aayah Reconciliation Protocol (2009), the Nanwakolas / British Columbia Framework Agreement (2009) & the Nanwakolas Reconciliation Protocol (2011).

3.0 COLLABORATION PRINCIPLES

3.1 The Parties intend to:

a) integrate collaborative marine planning with the protocols and agreements identified in section 2.8 (above);

b) collaborate on all planning products in terms of their development, review and future implementation, for both the sub-regional plans and the broader regional planning document; and,

c) share information relevant to the planning process and outputs, where appropriate.

3.2 The Parties will respect each others' decision making structures and authorities, and intend to extent possible, make joint recommendations to their respective executive/leadership.

3.3 Where areas of disagreement exist, the Parties intend to seek appropriate conflict resolution processes or agree to disagree.

4.0 STRUCTURES

The parties intend to establish the following joint management structures to govern and manage the Parties' collaborative marine planning efforts.

A. Executive Committee[1]

- The Executive Committee will be comprised of a senior representative(s) from the Province and senior representatives from each of the Coastal First Nations-Great Bear Initiative, North Coast Skeena First Nations Stewardship Society and the Nanwakolas Council.
- The role of the Executive Committee is to exchange information and resolve strategic issues as necessary.
- Executive Committee members will either be Provincial ministers or deputy/assistant deputy ministers and chiefs, or executive level representatives of the Coastal First Nations-Great Bear Initiative, North Coast Skeena First Nations Stewardship Society and the Nanwakolas Council.
- If any of the Parties continue to engage in the PNCIMA planning process, then the Executive Committee representatives of those Parties will be responsible for liaising with federal ministers and/or senior officials related to the PNCIMA planning process.
- The Executive Committee will meet when required.

B. Marine Working Group[2]

- The Marine Working Group will be comprised of a senior representative from the Province and one representative from each of the Coastal First Nations-Great Bear Initiative, North Coast Skeena First Nations Stewardship Society and the Nanwakolas Council.
- The role of the Marine Working Group is to oversee and resolve issues related to joint planning work.
- Marine Working Group members will be either Provincial directors or senior staff and senior staff or appointees of the boards of the Coastal First Nations-Great Bear Initiative, North Coast Skeena First Nations Stewardship Society and the Nanwakolas Council.

[1] Consistent with Coastal First Nations Reconciliation Protocol (2010), Kunst'aa Guu – Kunst'aayah Reconciliation Protocol (2009), the Nanwakolas / British Columbia Framework Agreement (2009) & the Nanwakolas Reconciliation Protocol (2011).
[2] Consistent with working groups in Reconciliation Protocols and Framework Agreements.

- If any of the Parties continue to engage in the PNCIMA Initiative, then the Marine Working Group representatives of those Parties are responsible for representing the Province and the Coastal First Nations-Great Bear Initiative, North Coast Skeena First Nations Stewardship Society and the Nanwakolas Council on the existing PNCIMA Steering Committee, or similar PNCIMA oversight group. The Marine Working Group will meet at a minimum of once every two months.

C. Sub–Regional Technical Teams

- A sub-regional Technical Teams will be created for each of the four sub-regions set out in 2.2 and be comprised of technical staff from the Province's ministries and the Coastal First Nations-Great Bear Initiative, North Coast Skeena First Nations Stewardship Society and the Nanwakolas Council.
- The role of the four sub-regional Technical Teams will be to develop individual sub-regional plans and participate in the review and comment of a broader regional plan and any PNCIMA plan products.

D. A Marine Coordination Team

- A Marine Coordination Team will be created and comprised of up to four senior technical staff; two senior technical staff from the Province and two from the Coastal First Nations-Great Bear Initiative, North Coast Skeena First Nations Stewardship Society and the Nanwakolas Council collectively.
- The role of the Marine Coordination Team is to promote consistency in the work of the four sub-regional teams, manage the integration of sub-regional plans, manage the overall budget and work plan for sub-regional and regional collaboration, direct contracted staff on associated tasks, ensure coordinated input to the PNCIMA planning process, and identify issues for Marine Working Group resolution.

5.0 FUNDING ARRANGEMENTS

5.1 The Parties intend to work with external funders to modify the original, existing PNCIMA funding agreement and work plan to reflect this letter of intent.

5.2 The intent of the revised funding agreement and work plan is to continue to provide for common administrative support, technical and scientific support, stakeholder support and

public communications programs for sub-regional and regional planning and for PNCIMA engagement.

6.0 STAKEHOLDER AND PUBLIC ENGAGEMENT

6.1 The Parties intend to undertake stakeholder and public engagement with respect to sub-regional coastal and marine planning.

6.2 Public and stakeholder engagement will:

a) be based on the principles of openness, transparency, inclusiveness, responsiveness, and informed input; and,

b) may include tools such as advisory committees, open houses, bilateral sessions, and a central website.

7.0 SCIENCE AND TECHNICAL INPUT

7.1 The Parties intend to establish an independent marine science and technical committee.

7.2 The role of the science and technical committee would be to provide advice, upon request, on sub-regional, regional and PNCIMA reports, studies, and draft products.

8.0 ANTICIPATED KEY OUTPUTS

8.1 Key outputs of the collaborative planning process could include:

a) Sub-regional coastal and marine plans for Haida Gwaii, North Coast, Central Coast and Northern Vancouver Island, including recommended marine protection areas and implementation strategies;

b) Recommendations with respect to endorsing some or all aspects of the sub-regional coastal and marine plans;

c) The Parties' endorsement of some or all aspects of the sub-regional coastal and marine plans;

d) A broader, regional marine planning document that may be used to inform the ongoing PNCIMA process; and,

e) Coastal and Marine Plan Implementation Agreements which would include the identification of adequate implementation funding mechanisms.

APPENDIX 2. SUMMARY OF HAIDA, PUBLIC AND STAKEHOLDER ENGAGEMENT

The following table lists meetings held with members of the Haida Nation, members of the public, stakeholders, and local government at three stages of marine planning on Haida Gwaii:

xxv. During the PNCIMA process, when Fisheries and Oceans Canada (DFO) was a partner in the process (2010 - 2012);

xxvi. Prior to the release of the public review draft of the Marine Plan, developed by CHN and BC as part of the MaPP process (2012 - 2014);

xxvii. During and after public review of the draft Marine Plan (April to May 2014).

Haida engagement occurred through various Haida Nation processes. These included: more than 40 meetings of the Haida Marine Work Group occurring from July 2006 to the date of plan completion; regular reporting through internal Haida Nation processes; and periodic public meetings in Haida communities.

Planning team members also met on an informal basis with individual stakeholders, members of the public and representatives of interest groups.

Table 1. List of meetings related to marine planning on Haida Gwaii since 2010

Date	Location	Group	Agency / Staff in attendance
i. CONSULTATION AS PART OF THE PNCIMA PROCESS			
March 29, 2010	Skidegate	PNCIMA Sub-regional Community Meeting	CHN, DFO
March 30, 2010	Masset	PNCIMA Sub-regional Community Meeting	CHN, DFO
March 10, 2011	Skidegate	PNCIMA Sub-regional Community Meeting	CHN, DFO
June 14-15, 2011	Skidegate	Integrated Oceans Advisory Committee (Meeting #5)	CHN, DFO, BC
June 3, 2013	Old Massett	PNCIMA Sub-regional Community Meeting	CHN, DFO, BC
ii. CONSULTATION PRIOR TO PUBLIC REVIEW OF THE MARINE PLAN			
January 23-24, 2009	Skidegate	Gaaysiigang – an ocean forum for Haida Gwaii	CHN
March 16, 2010	Port Clements	Community/Stakeholder Meeting	CHN
November 21, 2012	Tlell	Haida Gwaii Tourism Service Providers	CHN, BC
July 29, 2013	Vancouver	ENGO Caucus	CHN, BC
August 22, 2013	Old Massett	Haida Hereditary Chiefs	CHN

August 28, 2013	Vancouver	Commercial Fishing Caucus	CHN, BC
October 2, 2013	Masset	Community Leaders (Protocol Table)	CHN, BC
October 4, 2013	Vancouver, Skidegate, phone	Recreational Fishing Representatives	CHN, BC
October 19, 2013	Tlell	Skeena Queen Charlotte Regional District	CHN, BC
November 13, 2013	Tlell	Community Leaders	CHN, BC
November 20, 2013	Tlell	Haida Gwaii Tourism Service Providers	CHN, BC
iii. CONSULTATION DURING AND AFTER PUBLIC REVIEW OF THE MARINE PLAN			
April 7, 2014	Vancouver	ENGO Caucus	CHN, BC
April 14, 2014	Sandspit	Open House and Public Meeting	CHN, BC
April 15, 2014	Old Massett	Open House and Public Meeting	CHN, BC
April 16, 2014	Skidegate	Open House and Public Meeting	CHN, BC
April 17, 2014	Port Clements	Open House and Public Meeting	CHN, BC
April 17, 2014	Skidegate	Haida Hereditary Chiefs	CHN
April 23, 2014	Vancouver, Queen Charlotte	Commercial Fishing Caucus	CHN, BC
April 23, 2014	Vancouver, Queen Charlotte	Recreational Fishing Representatives	CHN, BC
April 24, 2014	Tlell	Community Leaders	CHN (representing the Haida Gwaii planning team)
April 26, 2014	Queen Charlotte	Skeena Queen Charlotte Regional District	CHN (representing the Haida Gwaii planning team)
April 30, 2014	Skidegate	Shellfish Aquaculture Sector Representatives	CHN, BC

Table 2. List of meetings of the Haida Gwaii Marine Advisory Committee. Meetings were open to the public.

Meeting #	Date	Topics discussed
1	Sept 12 – 13, 2011	Introduction and goals of the marine planning process and the MAC. Review background on the planning area, planning approach, seascape unit map and concurrent processes. Review MAC terms of reference
2	Oct 27 – 29, 2011	Overview and discussion of Haida Gwaii archaeology and paleoecology. General Management Direction on cultural values and archaeological sites, ecological values, marine conservancies, logging-related marine activities.
3	Dec 5 - 7, 2011	Presentation on Marine Planning Partnership (MaPP). Overview of Haida Gwaii fisheries and community marketing. Discuss preferred future scenarios workshop.
4	Jan 30 - 31, Feb 1, 2012	Review General Management Direction on climate change, transportation, marine tourism and governance. Next steps and work planning.
5	March 13 – 15, 2012	Review General Management Direction. Introduction to Haida Gwaii marine zoning. Discussion of Haida Gwaii Areas of Interest, shellfish aquaculture zones, marine sanctuaries.
6	May 28 – 30, 2012	Finalization and adoption of MAC terms of reference. Update and discussion of General Management Direction. Overview and discussion on Marine Protected Areas.
7	Sept 11 – 13, 2012	Review changes to General Management Direction. Review introductory section to marine plan. Overview and discussion of Future Scenario Workshop. Review of spatial elements of plan and MaPP zoning approach.
8	Dec 3 – 5, 2012	Review of economic, environmental, community and governance targets. Review of BC Marine Conservation Analysis. Discussion of Haida Gwaii Marine Economic Development Project: Strengths, Weaknesses, Opportunities and Strengths (SWOT) Analysis.
9	March 26 – 27, 2013	Review of zoning framework. Presentation and discussion of methods and approaches for identifying Haida Gwaii areas of interest – presentation and discussion.
10	June 3 – 5, 2013	Review of Spatial Zoning Framework and Areas of Interests. Guidelines for sharing of draft Haida Gwaii Marine Use Plan. Review of Approach to SMZs. Discussion of Haida Gwaii Economic Development Strategy.
11	Sept 24 - 26, 2013	Review of specific Areas of Interest. Review of Haida Gwaii Marine Economic Development. Discussion of communications and future public engagement (including SeaSketch).
Tele-conference	Feb 21, 2014	Overview of recent process and key changes to the draft Marine Plan. Engagement and next steps, including role of Haida Gwaii Marine Advisory Committee.
12	May 12 – 14, 2014	Review of specific concerns and comments from public and stakeholder consultation.
Tele-conference	Oct 20, 2014	Update on recent changes to the Haida Gwaii Marine Plan. Review of next steps for implementation of Marine Plan.

APPENDIX 3. SPATIAL DATA SOURCES FOR HAIDA GWAII MARINE PLANNING

British Columbia Marine Conservation Analysis Project Team. 2011. Marine atlas of Pacific Canada: a product of the British Columbia Marine Conservation Analysis (BCMCA). Available from http://bcmca.ca/wp/wp-content/uploads/BCMCA_Atlas_Intro_Appendices.pdf.

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Day J., Dudley N., Hockings M., Holmes G., Laffoley D., Stolton S. and Wells, S. 2012. Guidelines for applying the IUCN Protected Area Management Categories to marine protected areas. IUCN, Gland, Switzerland.

Fisheries and Oceans Canada (DFO). Amalgamated 4 km grid commercial fisheries catch and effort data (various fisheries): Geoduck 2003–2009; Red Sea Urchin (RSU) 2000–2008; prawn trap 2001–2009; crab trap 2000–2009; Schedule II including dogfish 1996–2004; shrimp trawl 1996–2004; Sablefish longline/trap 1996–2004; ZN (rockfish) licence 1993–2004; halibut 2006–2011 (25 km grid).

Fisheries and Oceans Canada (DFO). 2006. Inshore rockfish habitat model.

Haida Gwaii Marine Advisory Committee. Meetings occurred from September 2011 to October 2014 in Masset and Skidegate, Haida Gwaii.

Haida Marine Working Group. Meetings occurred from August 2006 to August 2014 in Masset and Skidegate, Haida Gwaii.

Haida Marine Traditional Knowledge Study participants, Janet Winbourne, and Haida Oceans Technical Team. 2011. Haida marine traditional knowledge study. Volume 1: Methods and results summary; Volume 2: Seascape unit summary; Volume 3: Focal species summary. Prepared for Haida Oceans Technical Team, Haida Fisheries Program, August 2011.

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Kenyon, J.K., Amey, K., Moore, K. and Dunn, M. 2007. British Columbia marine bird Area of Interest database. Canadian Wildlife Service, Pacific and Yukon Region, Delta, BC. Technical Report Series No. 479.

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Pacific North Coast Integrated Management Area Initiative. 2011. Atlas of the Pacific North Coast Integrated Management Area. Available from http://pncima.org/site/atlas.html

Province of British Columbia. 2013. Crown tenures WHSE_TANTALIS.TA_CROWN_TENURES_SVW Available from http://www.for.gov.bc.ca/pScripts/isb/idd/isddmain.asp

Ryder, J.L., Kenyon, J.K., Buffett, D., Moore, K., Ceh, M. and Stipec, K. 2007. An integrated biophysical assessment of estuarine habitats in British Columbia to assist regional conservation planning. Canadian Wildlife Service, Pacific and Yukon Region, Delta, BC. Technical Report Series No. 476.

APPENDIX 4. SPECIES AT RISK LISTED BY FEDERAL AND PROVINCIAL AGENCIES

Species at risk in the Marine Plan area (SARA, COSEWIC, BC MOE) are listed in Table 1. These species breed or regularly occur in the area, or likely migrate through Haida Gwaii waters (e.g., salmon and Eulachon). Definitions of acronyms and terms follow the table.

Table 1. Species at risk in the Haida Gwaii planning area as of January 29, 2014.

Species	Population	COSEWIC Status	SARA Schedule	SARA Status	BC Prov. Status
Mammals					
Blue Whale	Pacific	Endangered	1	Endangered	Red
Fin Whale	Pacific	Threatened	1	Threatened	Red
Grey Whale	NE Pacific	Special Concern	1	Special Concern	Blue
Harbour Porpoise	Pacific	Special Concern	1	Special Concern	Blue
Humpback Whale	N Pacific	Special Concern	1	Threatened	Blue
Killer Whale, offshore	NE Pacific	Threatened	1	Threatened	Red
Killer Whale, resident	NE Pacific	Threatened	1	Threatened	Red
Killer Whale, transient	NE Pacific	Threatened	1	Threatened	Red
Nth Pacific Right Whale	N Pacific	Endangered	1	Endangered	Red
Northern Fur Seal		Threatened	None	No Status	Red
Sea Otter		Special Concern	1	Special Concern	Blue
Sei Whale		Endangered	1	Endangered	Red
Steller Sea Lion		Special Concern	1	Special Concern	Blue
Birds					
Ancient Murrelet		Special Concern	1	Special Concern	Blue
Bald Eagle		Not at Risk			Yellow
Black-footed Albatross	Pacific	Special Concern	1	Special Concern	Blue
Brandt's Cormorant					Red
Buller's Shearwater					Blue
Caspian Tern		Not at Risk			Blue
Cassin's Auklet		Candidate			Blue
Common Murre					Red
Double-crested Cormorant		Not at Risk			Blue
Flesh-footed Shearwater					Blue
Horned Puffin					Red
Long-tailed Duck					Blue
Marbled Murrelet		Threatened	1	Threatened	Blue
Northern Fulmar					Red
Pelagic Cormorant (ssp pelagicus)					Red
Peregrine Falcon (ssp pealei)		Special Concern	1	Special Concern	Blue
Pink-footed Shearwater	BC	Threatened	1	Threatened	

Red-necked Phalarope		Candidate			Blue
Short-tailed Albatross	BC	Threatened	1	Threatened	Red
Surf Scoter					Blue
Tufted Puffin					Blue
Western Grebe		Candidate			Red
Yellow-billed Loon		Not at Risk			Blue
Fish					
Basking Shark	Pacific	Endangered	1	Endangered	
Bluntnose Sixgill Shark	Pacific	Special Concern	1	Special Concern	
Boccaccio Rockfish		Endangered		No Status	
Canary Rockfish		Threatened	None	No Status	
Chinook Salmon	Okanagan	Threatened	None	No Status	Yellow
Coho Salmon	Interior Fraser	Endangered	None	No Status	Yellow
Cutthroat Trout (clarkii)					Blue
Darkblotched Rockfish		Special Concern	None	No Status	
Dolly Varden					Blue
Eulachon	Central Pacific Coast	Endangered	None	No Status	Blue
Eulachon	Nass/Skeena Rivers	Special Concern	None	No Status	Blue
Green sturgeon		Special Concern	1	Special Concern	Red
Longspine Thornyhead		Special Concern	1	Special Concern	
North Pacific Spiny Dogfish		Special Concern	None	No Status	
Pacific Sardine		Not at Risk	3	Special Concern	
Quillback Rockfish		Threatened	None	No Status	
Rougheye Rockfish Type I		Special Concern	1	Special Concern	
Rougheye Rockfish TypeII		Special Concern	1	Special Concern	
Sockeye Salmon	Cultus Lake	Endangered	None	No Status	Yellow
Sockeye Salmon	Sakinaw Lake	Endangered	None	No Status	Yellow
Tope (Soupfin Shark)	Pacific	Special Concern	1	Special Concern	
Yelloweye Rockfish	Outside waters	Special Concern	1	Special Concern	
Yellowmouth Rockfish		Threatened	None	No Status	
Reptiles					
Leatherback Turtle		Endangered	1	Endangered	Red
Invertebrates					
Northern Abalone		Endangered	1	Endangered	Red

Species at Risk Act Definitions (from SARA Public Registry – www.sararegistry.gc.ca)

Species at Risk Act (SARA)*:* The Act is a key federal government commitment to prevent wildlife species from becoming extinct and secure the necessary actions for their recovery. It provides for the legal protection of wildlife species and the conservation of their biological diversity.

No Status: Species not included on SARA schedule.

Committee on the Status of Endangered Wildlife in Canada Definitions (from *COSEWIC's Assessment Process and Criteria, April 2010* –http://www.cosewic.gc.ca/pdf/Assessment_process_and_criteria_e.pdf)

Committee on the Status of Endangered Wildlife in Canada (COSEWIC): A federal committee of experts that assesses and designates wildlife species that are in some danger of disappearing from Canada.

- *Species at risk:* Extirpated, endangered, threatened species, or a species of special concern.
- *Endangered species:* A wildlife species that is facing imminent extirpation or extinction.
- *Threatened species:* A wildlife species that is likely to become endangered if nothing is done to reverse the factors leading to its extirpation or extinction.
- *Special concern:* A wildlife species that may become threatened or endangered because of a combination of biological characteristics and identified threats.
- *Not at Risk:* A wildlife species that has been evaluated and found to be not at risk of extinction given the current circumstances.
- *Schedule 1:* The list of species under SARA that are formally classified as Extirpated, Endangered, Threatened, and Special Concern based on recommendations by COSEWIC.
- *Schedule 2:* Species listed under the SARA that had once been designated as Endangered or Threatened and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1.
- *Schedule 3:* Species listed under the SARA that had once been designated as Special Concern, and have yet to be re-assessed by COSEWIC using revised criteria. Once these species have been re-assessed, they may be considered for inclusion in Schedule 1.

BC Provincial Definitions (from BC Ministry of Environment http://www.env.gov.bc.ca/atrisk/red-blue.htm**)**

Red List: A provincial designation that includes any ecological community, and indigenous species and subspecies that is extirpated, endangered, or threatened in British Columbia.

Blue List: A provincial designation that includes any ecological community, and indigenous species and subspecies considered to be of special concern (formerly vulnerable) in British Columbia.

Yellow List: A provincial designation that includes species that are apparently secure and not at risk of extinction. Yellow-listed species may have red- or blue-listed subspecies.

APPENDIX 5. COMMERCIAL FISHERIES SUSTAINABILITY ASSESSMENTS

Four fisheries assessment methods were consulted to assess the social and ecological sustainability of the local fisheries in and around Haida Gwaii. In the context of this plan, fisheries assessment is relevant for seafood marketing and distribution and promoting sustainable livelihoods. This qualitative review was combined with local knowledge to provide the Haida Marine Work Group and Haida Gwaii Marine Advisory Committee with a list of local fisheries. These fisheries were then discussed at length with the Haida Marine Work Group and Marine Advisory Committee to create a prioritized list of fisheries of greatest concern. Species and activities of particular concern that were identified based on the four fisheries assessments include rockfish (longline) and groundfish (trawl). Additional fisheries of concern, identified based on local knowledge and input, are Pacific Herring (seine and gillnet), Geoduck and Red Sea Urchin (dive).

The four assessments consulted were SeaChoice, The Safina Center (formerly Blue Ocean Institute), Rapfish, and Marine Stewardship Council (MSC) certification. Currently the only assessment that is recognized by the Province of BC is the MSC certification. These techniques assess a fishery using a number of criteria to determine a rating of sustainability. The following sections provide a non-technical overview of each fishery assessment rating scheme.

A. SeaChoice Ranking

http://www.seachoice.org/

SeaChoice defines sustainable seafood as fish or shellfish that are caught or farmed with consideration for the long-term viability of harvested populations and for the oceans' ecological balance as a whole.
Seachoice uses a science-based assessment methodology that was developed by the Monterey Bay Aquarium's Seafood Watch program (Monterey Bay Aquarium 2014).

SeaChoice/Seafood Watch use four sustainability criteria, each corresponding to a set of guiding principles, to evaluate capture fisheries for the purpose of developing recommendations to guide consumers in their purchase of seafoods. These criteria are:

1. impacts on the species under assessment
2. impacts on other species
3. management effectiveness
4. impacts on the habitat and ecosystem

Factors associated with criteria for impacts on species under assessment or other species include inherent vulnerability, abundance, fishing mortality, and discards and bait use as a modifying factor.

Factors associated with management effectiveness include harvest strategy and bycatch management strategy.
Factors associated with impacts on habitat and ecosystem include impact of fishing gear on habitat/substrate, ecosystem-based fisheries management and the modifying factor of mitigation of gear impacts.

Each criterion is evaluated and ranked against its factors using a detailed scoring system. Guidelines are applied to synthesize these factors and assign a resulting colour rank for that criterion. The final score is the geometric mean of the four scores (Criterion 1, Criterion 2, Criterion 3, Criterion 4).

A species receives an overall recommendation of "Best Choice" if:

- Final Score >3.2, **and** no Red Criteria, **and** no Critical scores

A species receives a recommendation of "Good Alternative" if:

- Final score >2.2 **and** neither Harvest Strategy (Factor 3.1) nor Bycatch Management Strategy (Factor 3.2) are Very High Concern, **and** no more than one Red Criterion, **and** no Critical scores, **and** does not meet the criteria for Best Choice (above)

A species receives a recommendation of "Avoid" if:

- Final Score <2.2, **or** either Harvest Strategy (Factor 3.1) or Bycatch Management Strategy (Factor 3.2) is Very High Concern, **or** two or more Red Criteria, **or** one or more Critical scores.

Best Choice (Green): This species is currently fished /harvested sustainably and represents a best choice. Enjoy, while supporting responsible fishing and coastal livelihoods.

Good Alternative (Yellow): Seafood that should be consumed infrequently, or when a green choice is not available. There are conservation concerns with the current populations or practices in this fishery.

Avoid (Red): Do not purchase these fish for now. They come from sources that have a combination of problems—habitat damage, discard of unwanted species, poor management, low populations, can be easily harmed by fishing or may be listed by governments as Endangered.

B. The Safina Center Ranking

http://safinacenter.org/programs/sustainable-seafood-program/seafood-choices/

The Safina Centre (formerly the Blue Ocean Institute) developed a comprehensive seafood analysis and ranking methodology with its *Guide to Ocean Friendly Seafood*, an approach that was quickly adopted by other marine organizations. This methodology, which was used by the Haida Marine Work Group and Haida Gwaii Marine Advisory Committee to determine fisheries of concern, is described below. The Safina Centre and Seafood Watch are now using the same science-based criteria and methodology to rate seafood species (see Monterey Bay Aquarium 2014).

The quantitative approach considers a number of criteria, depending on whether the fish is wild caught or farm-raised. For wild-caught fish, the core points considered are:

1. **Life history**, including how fast the fish grows and how quickly it reproduces.
2. **Abundance** compared to natural or un-fished levels.
3. **Habitat quality and gear impacts** — Does the catch method damage the habitat for fish that are left behind?
4. **Management** — Are there regulations in place that effectively protect the fish and their ecosystem?
5. **Bycatch**— Are other fish or wildlife accidentally caught when fishing for the target species?

For farmed fish, the core points considered are:

1. **Inherent operational risks** apply to the layout of the farming system— Can waste and fish freely move from the farm to the surrounding environment?
2. **Feed** examines the diet of the farmed fish, with a particular focus on the reliance of wild-caught seafoods to supply fishmeal and oil.
3. **Pollution**— Is the water being discharged from the farm enclosure treated to minimize impact to the surrounding habitat?
4. **Risk** to other species considers whether the farmed species is able to escape and have a negative impact on the local environment (e.g., competing for food).
5. **Ecological effects** consider the ecological sensitivity of the area surrounding the fish farm.

For each seafood species, scientific and governmental publications are examined to obtain the necessary information to answer the five core points. Each core point has eight additional questions, or "points of adjustment," that help refine the ranking and generate a report. All reports are peer-reviewed for scientific accuracy and then displayed online for public viewing. For a full list of the point values that can be assigned and a description of each point of adjustment, see the Wild Caught Fish and Farmed Fish documents.

Point values are averaged to determine the final ranking for each seafood species. Scores range from 0 to 4, which are then used to generate a "fish colour."

Final score:

2.60–4.00: Green
2.20–2.59: Light Green
1.80–2.19-: Yellow
1.40–1.79: Orange
0.00–1.39: Red

C. Rapfish

http://www.rapfish.org/

Rapfish is a simple, rapid-appraisal, semi-quantitative policy tool that evaluates fisheries sustainability along multiple performance modalities—e.g., ecological, technological, economic, social, ethical and institutional. The tool is mathematically robust, scalable, includes uncertainty, and provides a holistic account of specific fisheries, while also providing a platform to test hypotheses on coupled human and natural systems. In addition to sustainability, Rapfish is easily adaptable to varied cross-disciplinary human issues.

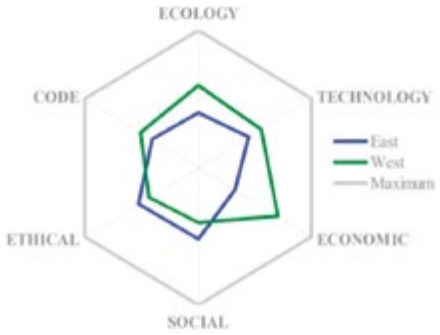
Rapfish was invented in the late 1990s. It has undergone several rounds of improvement, and become quite widely adopted by the international community. In 2011 Rapfish was updated to better account for the human dimensions of fisheries. By comparing fisheries performance with stated goals or compliance in various separate evaluation fields simultaneously, Rapfish can provide a semi-quantitative substrate for narratives of policy and an accessible tool for conflict resolution. Moreover, it can help in conceptualising fundamental, but typically implicit values, and the Rapfish research framework can inform policy decisions by making the values of diverse stakeholders explicit and part of the decision-making process.

How Rapfish works

Each modality is termed an "evaluation field" (e.g., ecological) and within it, 5–9 indicators ("attributes") are scored between 0 and 10 on how well they match the goal (a perfect match scores 10/10). Scoring is obtained from experts (perhaps using a Delphi process), published work or models. For each attribute, upper and lower scores out of 10 are assigned to reflect uncertainty (e.g., "score must be at least 4/10 but not more than 6/10"). Using these scores, within each evaluation field, Rapfish uses a normatively constrained form of multi-dimensional scaling, and results are expressed on a scale of 0 to 100 percent (100 percent represents perfect compliance with the goal, which can be sustainability or compliance with a Code of Conduct). Computations for Rapfish have been programmed in "r," available from http://www.rapfish.org/. The users data may be submitted to the web site and the computations are performed remotely with results, including confidence limits and graphs, sent back to the user.

Example results

One simple way of presenting Rapfish results is in a “kite diagram” (as shown left), which compares the sustainability performance of east and west coast Canadian fisheries in six modalities (evaluation fields), labelled around the rim of the hexagon. It is clear that east coast fisheries do better in ethical and social aspects, but west coast fisheries score better ecologically, technologically and economically, and are more in compliance with the Code of Conduct. Note that this diagram does not show the uncertainty around each of the scores, but these values are available from the results so that differences may be tested statistically.



D. Marine Stewardship Council Certification

http://www.msc.org

The Marine Stewardship Council (MSC) is an independent, international, non-profit organization that has developed a science-based set of environmental standards to certify sustainable fisheries. The ecolabel and fishery certification program promotes sustainable fisheries by rewarding sustainable fishing practices and influencing the choices people make when buying seafood. The MSC program is open to all wild-capture fisheries, and promotes equal access for fisheries from the developing world.

The MSC established its fishery sustainability standard collaboratively with fishers, the seafood industry, scientists, academics, and marine conservation organizations from around the world. The MSC standard has three overarching principles that every fishery must prove it meets:

- **Principle 1: Sustainable fish stocks**
  The fishing activity must be at a level that is sustainable for the fish population. Any certified fishery must operate so that fishing can continue indefinitely and is not overexploiting the resources.
- **Principle 2: Minimizing environmental impact**
  Fishing operations should be managed to maintain the structure, productivity, function and diversity of the ecosystem on which the fishery depends.
- **Principle 3: Effective management**

The fishery must meet all local, national and international laws and must have a management system in place to respond to changing circumstances and maintain sustainability.

These three high-level principles are applied to fisheries through performance indicators. Fisheries are scored against 31 performance indicators by independent third party experts. These indicators measure the impact of a fishery, not just on the stock itself, but also on key elements of the ecosystem. A passing score indicates the fishery does not compromise any key components such as habitat, productivity and biodiversity. The fishery must score above the minimum level in all indicators to achieve certification. In some instances, when an indicator is scored only slightly above minimum levels, conditions are placed on the fishery. This then requires that a fishery develop a plan of action to raise its performance indicator to a higher level.

The MSC itself does not assess fisheries but uses a third-party certification program. Certificates are issued by third party certifiers who are independently accredited to perform fisheries assessments and determine if they meet the MSC standard. Fisheries that want to get MSC certified employ an independent, accredited certifier to assess their fisheries against the MSC

standard. Fisheries go through pre-screening to prepare for a full assessment. If a fishery goes through a full assessment, the process becomes open to any stakeholder with an interest in the fishery. When assessing fisheries, certifiers use the MSC certification requirements that establish how to assess fisheries against the MSC standard:

1. General requirements for all certifiers: Sets out the steps that accredited certifiers must take to assess a fishery against the MSC standards for sustainable fishing.
2. Fishery certification requirement: Sets out how the MSC standards for sustainable fishing should be interpreted when assessing fisheries for MSC certification. These include the steps in the assessment process as well as the assessment tree used to score fisheries.

When a fishery becomes certified it must complete annual audits to maintain the certification. This ensures that there have been no changes in the sustainability of the fishery.

APPENDIX 6. MAPP DEFINITIONS OF MARINE USES AND ACTIVITIES

Table 1 provides a common set of definitions of marine uses and activities for the MaPP planning region (Final Version, Oct 31 2014). These definitions are applied in all MaPP outputs, including the Recommended Uses and Activities Tables in the marine plans for Haida Gwaii, North Coast, Central Coast and Northern Vancouver Island. These definitions are not intended to define thresholds and/or acceptable intensity of use; thresholds/density and intensity vary from place to place and they will be determined as part of more detailed management planning during implementation of the marine plans.

Activities and uses outside of provincial regulatory authority are identified in a separate section of the table. Harvest of marine uses by First Nations is considered a separate use, and is not described in this table.

Table 1. MaPP definitions of marine uses and activities

Category	Marine Use or Activity	Description
Aquaculture	Bottom Aquaculture Siting – Marine Plants, Shellfish, Other Invertebrates	Selection of areas suitable for the cultivation and harvesting of marine plants, shellfish and other invertebrates for commercial purposes. Culture activity occurs on the sea floor and/or between the high water mark and the low water mark in a natural or manufactured environment. Includes associated facilities and infrastructure such as accommodation, rock walls, fencing and anti-predator netting. Note: Also includes associated licensing for plants.
	Off-Bottom Aquaculture Siting – Marine Plants, Shellfish, Other invertebrates	Selection of areas suitable for the cultivation and harvesting of marine plants, shellfish and other invertebrates for commercial purposes. Culture activity occurs on the surface or within the water column using grow-out structures such as bags, nets, strings, trays or tubes suspended from longlines or rafts anchored to the seabed. Includes associated facilities and infrastructure. Note: Also includes associated licensing for plants.
	Off-Bottom Aquaculture Siting – Finfish	Selection of areas suitable for the cultivation and harvesting of finfish for commercial purposes. Culture activity occurs on the surface or within the water column using net cages anchored to the seabed or closed pens. Includes associated facilities and infrastructure such as anchor blocks, feed barges and sheds, accommodation, navigational markers, net storage and mooring lines.
Energy	Renewable Energy Generation	Energy generation from wave, tidal and/or other renewable marine sources as well as offshore wind energy. Includes facilities and infrastructure such as generation structures fixed or anchored to the seabed or foreshore, accommodation, and industrial facilities such as maintenance buildings. Does not include transmission or distribution lines on land or in the sea, which are included under the definition of linear utilities.

Industry	Forestry Operations	Marine operations associated with the deposition, sorting and processing of harvested timber. Includes related facilities and infrastructure, log dumps, log sorts, heli-log drop sites, as well as physical structures such as anchor devices, fill, pilings, permanent ways or ramps and accommodation. Does not include log transportation.
	· Log Handling and Storage	Marine operations associated with deposition, sorting, and processing of harvested timber. Includes related facilities and infrastructure, log dumping, log sorts and physical structures such as anchor devices, fill, pilings, permanent ways or ramps and accommodation. Does not include helicopter log drop sites and log transportation.
	· Helicopter Log Drop Sites	Marine operations associated with helicopter log drop sites. Includes related infrastructure such as anchor systems, chains and boomsticks.
	Mining Operations	Marine operations associated with extracting minerals, including sand and gravel mined from foreshore, nearshore and offshore areas, as well as related facilities and infrastructure. Does not include wharves or docks used for loading and transporting mined products from upland mining operations because these are included under the definition of Level 2 docks.
Infrastructure	Commercial and Recreational Anchorages	A natural sheltered area or harbour used for temporary and untenured public or commercial boat anchorage Note: Anchorage restrictions do not apply to commercial towboat reserves and provincially designated boat havens, nor do they apply to vessels in distress or other emergency situations.
	Float Homes	Structures built on a flotation system, which are used for permanent or seasonal residential habitation and are not intended for navigation or as a navigational craft. Does not include floating structures used for commercial or industrial purposes (e.g., accommodations for workers).
	Floating Lodges	Floating structures and facilities used for accommodation associated with commercial tourism purposes, including floating lodges or “mother ships” moored on the seabed. May include access to camps on adjacent upland. Does not include pocket cruisers or private commercial tourism vessels
	Level 1 Docks, Wharves and Facilities	Facilities designed to accommodate commercial, community, public, or private marine use. Facilities generally do not include a concentration of marine services. Includes private and public moorage facilities, commercial and community boat ramps, docks associated with upland lodges and base camps, boat haulouts, and associated structures such as boat lifts and anchor lines. Permanently affixed to the foreshore or seabed.
	Level 2 Docks, Wharves and Facilities	Facilities designed to attract and accommodate commercial vessels or ships, or multiple vessels for commercial, industrial, community, public or private marine uses. Includes docks, wharves, piers, ramps, breakwaters, and related structures in harbours, marinas and ferry terminals, and associated marine services (e.g., ways, repairs, food services, pump-out sites, fuel). Structures may be affixed to the foreshore and seabed by pilings or floats, or involve foreshore fill. Includes commercial ports.

Recreation & Tourism	Commercial Recreation and Tourism	Non-extractive commercial recreation involving a paid service component such as crewed boats, guiding and interpretation, cultural tourism to interpret cultural heritage, nature-based adventure and ecotourism.
	Public Recreation and Tourism	Non-extractive self-guided uses and activities include birding, boating, jet skiing, kayak staging and landing areas, motor boating, sailing, scuba diving, snorkelling, stand up paddle boarding, surfing, swimming, temporary anchorage, water skiing, whale watching, wildlife viewing and windsurfing. Public recreation does not involve a paid service component.
Research	Research	Activities designed to establish or expand knowledge of the marine environment and undertaken by educational institutions, research institutions, surveyors, research companies or consultants. Also includes citizen science, nonprofit activities and locally based research and monitoring activities.
Utilities	Linear Utilities	Underwater lines and structures including, but not limited to those used for flow, transit, distribution or broadcast of water, electricity and telecommunication services for public and/or private purposes. Generally on or under the seabed or anchored to the seabed but may also be suspended in the water column. Includes associated infrastructure and rights-of-way.
	Point Source Utilities	Outfalls and discharge points, including but not limited to those used for sewage, wastewater and stormwater for public, private, commercial and/or industrial purposes.

APPENDIX 7. IMPLEMENTATION TOOLS RELEVANT TO THE MARINE PLAN

The following is a summary of some of the existing tools relevant to implementing the spatial and aspatial components of the Marine Plan. Other implementation mechanisms may be used and/or become available in the future, including international designations such as UNESCO World Heritage Sites.

a. Haida Nation designations

Spatial Designation Options	Management Direction
· Haida Heritage Sites · Indigenous Community Conserved Areas (ICCA)*	The Council of the Haida Nation will implement the aspatial components of the Marine Plan consistent with and under the authority of the *Haida Constitution*.

* IUCN program

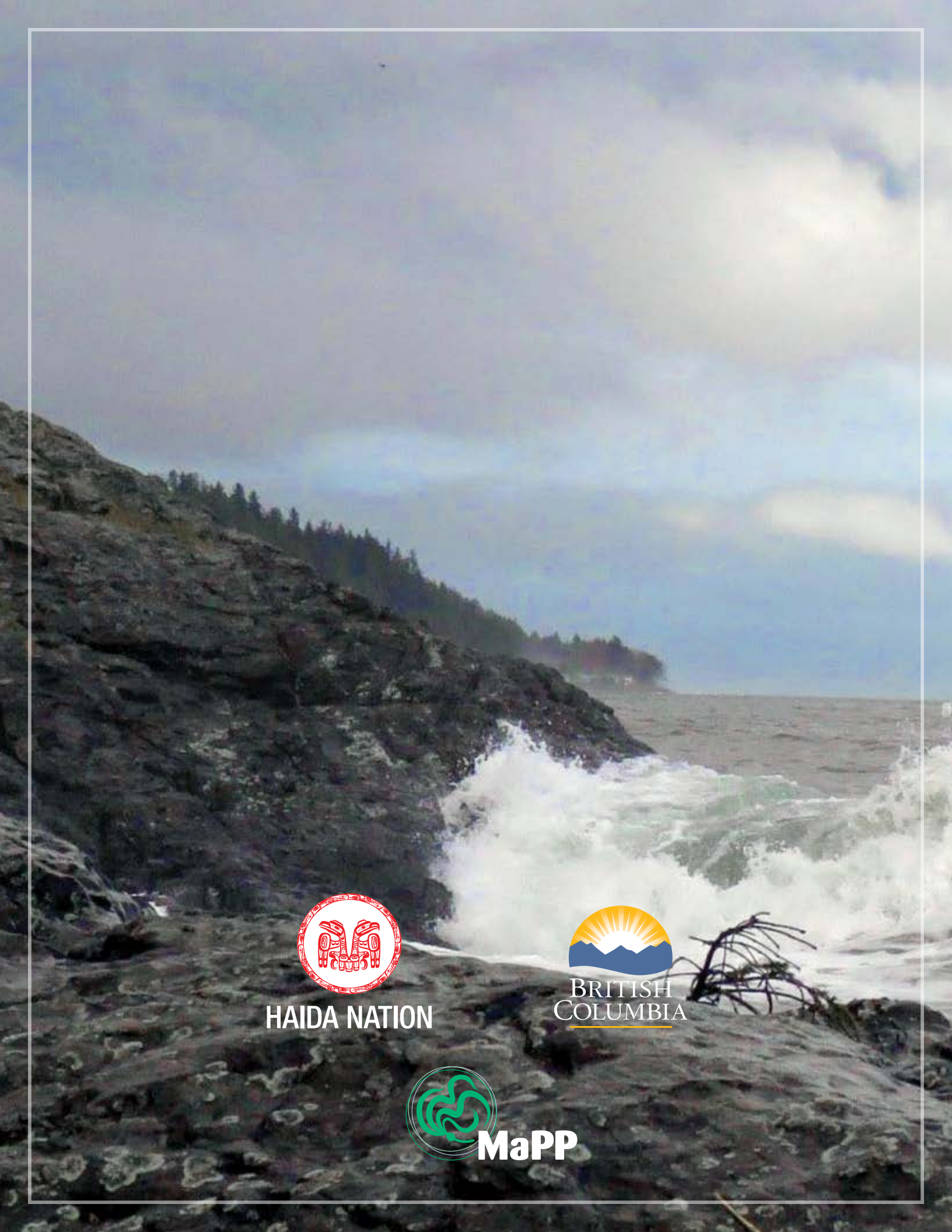
b. Provincial designations

Spatial Designation Options	Management Direction
· Park / Protected Area, Recreation Area (*Park Act*, 1996) · Conservancy (*Protected Areas of BC Act*, 2000) · Ecological Reserve (*Ecological Reserve Act*, 1996; *Protected Areas of BC Act*, 2000) · Protected Area, Conservation Study Area (*Environment and Land Use Act*, 1996) · Wildlife Management Area (*Wildlife Act*, 1996)	The Province of BC will implement the aspatial components of the Marine Plan under the authority of one or more of the following legislation/regulations: *BC Fisheries Act* and Regulations*; Fish Inspection Act* and Regulations*, Ministry of Energy and Mines Act, Mines Act, Clean Energy Act, Utilities Commission Act, Greenhouse Gas Reduction Acts* and amendments*, Mineral Tenure Act, Oil and Gas Activities Act, Petroleum and Natural Gas Act, BC Hydro Authority Act, Environmental Assessment Act* and Regulations*, Environmental Management Act, Fish Protection Act, Carbon Tax Act, Park Act, Ecological Reserve Act, Environment and Land Use Act, Water Protection Act, Land Act, Wildlife Act* and Regulations, *Forest and Range Practices Act* and Regulations*, Tourism Act, Transportation Act, Coastal Ferry Act, Public Works Agreement Act, Emergency Program Act.*

c. Federal designations

Zoning in the Marine Plan will be brought forward to future processes between CHN, BC and/or Canada related to marine protected area establishment. The following is adapted from the draft PNCIMA plan and lists federal designations and legislation/regulation that may be relevant to the spatial and aspatial aspects of the Marine Plan in the future.

Spatial Designation Options	Management Direction
· Marine Protected Area (*Oceans Act,* 1996) · National Marine Conservation Area (*Canada National Marine Conservation Areas Act*, 2002) · National Park (marine component) (*Canada National Parks Act*, 2000) · National Wildlife Area (*Canada Wildlife Act*, 1985) · Migratory Bird Sanctuary (*Migratory Birds Convention Act,* 1994)	The following are key pieces of federal legislation that may have a role in the aspatial implementation of the Marine Plan: *Department of Indian Affairs and Northern Development Act, Indian Act, First Nations Fiscal and Statistical Management Act, First Nations Jurisdiction Over Education in British Columbia Act, First Nations Land Management Act, Oceans Act, Canada Shipping Act* and Regulations*, Canadian Environmental Assessment Act, Cultural Property Export and Import Act, Migratory Birds Convention Act, Canada Wildlife Act, Species at Risk Act, Canadian Environmental Protection Act, Fisheries Act* and Regulations*, Coastal Fisheries Protection Act, Fisheries Development Act, Department of Fisheries and Oceans Act, Fishing and Recreational Harbours Act, Telecommunications Act, National Defence Act, Canada Petroleum Resources Act, Department of Natural Resources Act, Resources and Technical Surveys Act, Canada Oil and Gas Operations Act, Canada Transportation Act, National Energy Board Act, Canada National Marine Conservation Areas Act, Canada National Parks Act* and Regulations*, Navigable Waters Protection Act, Pilotage Act, Canada Marine Act, Marine Transportation and Security Act, Marine Liability Act, Transportation of Dangerous Goods Act,* International Conventions (including the *Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter,*the *Convention for the Prevention of Pollution from Ships* and the *United Nations Convention on Law of the Sea*)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