



SOUTHERN B.C.
**MARINE SPATIAL
PLANNING**

| Framework



Fisheries and Oceans
Canada

Pêches et Océans
Canada

Canada



Acknowledgment

Fisheries and Oceans Canada would like to acknowledge the expertise, wisdom, and lasting connections of the Indigenous Peoples that have stewarded waters and lands in the Southern B.C. MSP planning area since time immemorial. We are grateful to those who have contributed their time and knowledge and we look forward to continuing to build relationships and learn from one another as the process evolves.



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Abbreviations and Acronyms

Term	Definition
Atlas	Canada Marine Planning Atlas
B.C.	British Columbia
COS	Canada's Oceans Strategy
DFO	Fisheries and Oceans Canada
FNFC	First Nations Fisheries Council
GoC	Government of Canada
IK	Indigenous Knowledge
IOC	Intergovernmental Oceanographic Commission
IOM	Integrated Oceans Management
LOU	Letter of Understanding
WLRS	(Ministry of) Water, Land and Resource Stewardship
MPA	Marine Protected Area
MSP	Marine Spatial Planning
Plan	Marine Spatial Plan
TWG	Trilateral Working Group (DFO, B.C., and FNFC)
UNDA	United Nations <i>Declaration on the Rights of Indigenous Peoples Act</i>
UNESCO	United Nations Educational, Scientific and Cultural Organization

1. Introduction

The Marine Spatial Planning Framework for the Southern B.C. Planning Area (the 'Framework') has been prepared by Fisheries and Oceans Canada (DFO) to summarize the work undertaken to date on the Government of Canada's (GoC) Marine Spatial Planning (MSP) process in Southern British Columbia (B.C.) and to inform and provide guidance on future phases of MSP in Southern B.C. The Framework has been drafted by DFO with input and advice received from representatives of GoC departments and agencies, the Province of B.C., First Nations, Indigenous organizations, and stakeholders during initial engagement efforts conducted by DFO between 2020 – 2023. Ongoing engagement will be required to provide opportunity for all interested groups to participate in and inform the MSP process.



1.1 Marine Spatial Planning in Canada

MSP is an internationally recognized, collaborative process that brings relevant authorities, partners and stakeholders together to better coordinate human uses across marine spaces to achieve shared ecological, economic, cultural and social objectives.

Led by DFO, MSP is being advanced in five planning areas across the country:

- 1) Southern B.C.;
- 2) Pacific North Coast;
- 3) Newfoundland and Labrador Shelves;
- 4) Scotian Shelf–Bay of Fundy; and
- 5) Estuary and Gulf of St. Lawrence

A key output of MSP is a marine spatial plan or plans (Plan) that identifies existing, expanding, and emerging marine uses, as well as areas that may require special protection measures, and to facilitate the long-term resilience and sustainability of the marine environment. Marine spatial plans provide a tool for governments, Indigenous Peoples, communities, and marine users to ‘plan for the future’ by clearly indicating what uses are suitable and compatible in specific areas, while simultaneously providing a mechanism to monitor, evaluate, and adapt management over the long term in alignment with objectives. In bringing together relevant authorities, partners, and stakeholders, MSP can facilitate a coordinated approach to planning in a shared marine space.

MSP in Canada includes engaging with federal, provincial and territorial governments, Indigenous governments, and stakeholders to coordinate ocean uses, integrate information and knowledge, and advance environmental, economic, social, and cultural objectives. MSP builds on knowledge developed through Integrated Oceans Management (IOM) experiences, initiated under Canada’s *Oceans Act*.

To guide the Government of Canada MSP process in the five planning areas across Canada, DFO has developed the MSP Process Blueprint (Figure 1) that describes the core elements of the process for the advancement of MSP in the Canadian context. The Process Blueprint is based on international guidance for MSP developed by the Intergovernmental Oceanographic Commission (IOC) under the United Nations Educational, Scientific and Cultural Organization (UNESCO) (Ehler and Douvère 2009) and provides DFO and the GoC with a basic frame to support discussions with MSP partners on developing a regionally relevant MSP process.

[DFO’s National Guidance for Marine Spatial Planning in Canada](#) includes 6 phases (Figure 1). These phases may be undertaken in a linear/iterative manner, or in some circumstances, different phases may be undertaken concurrently, or non-sequentially. Planning partners may refer to this guidance as they develop their approach to collaboratively implement MSP.

Collaborative participation of GoC Departments, Provincial governments, First Nations, Indigenous organizations and stakeholders will determine how

MSP will unfold in each planning area as priorities of the aforementioned groups and the regional context are considered.



Figure 1 DFO's process for Marine Spatial Planning in Canada

1.1.1 Government of Canada Legislative Context

The *Oceans Act* provides the Minister of DFO with the authority to lead the development of IOM in collaboration with other GoC departments, provincial governments, First Nations, Indigenous organizations and stakeholders in or affecting Canada's coastal and marine environment.

Section 35 of the *Constitution Act, 1982* recognizes and affirms existing Aboriginal and Treaty rights of the Aboriginal Peoples of Canada. The Supreme Court of Canada has indicated that the purpose of Section 35 is the reconciliation of assumed Crown sovereignty with the pre-existing sovereignty of Indigenous peoples.

On November 2019, the province of B.C. passed the *Declaration on the Rights of Indigenous Peoples Act (Declaration Act)* into law, as the Province's framework for reconciliation. The Declaration Act aims to create a path forward that respects the human rights of Indigenous Peoples, conducting work together with enhanced predictability and transparency. The Act requires the B.C. government, in consultation and cooperation with Indigenous Peoples, to take all measures necessary to achieve consistency between the laws of B.C. and the UN Declaration. This applies to new and existing laws, and policy.

On June 21, 2021, the *United Nations Declaration on the Rights of Indigenous Peoples Act (UNDA)* received Royal Assent and immediately came into force. This legislation advances the implementation of the UN Declaration as a key step in renewing the Government of Canada's relationship with Indigenous Peoples. The purpose of UNDA is to affirm the UN Declaration as an international human rights instrument that can help interpret and apply Canadian law and it also provides a framework to advance implementation of the UN Declaration at the federal level.

On June 21, 2023, the UNDA Action Plan (Action Plan) developed in consultation and cooperation with First Nations, Inuit and Métis from across Canada, was released. The implementation of the Action Plan and the UN Declaration will contribute to the GoC's continued efforts to break down barriers, combat systemic racism and discrimination, close socio-economic gaps, and promote greater equality and prosperity for Indigenous Peoples.



1.1.2 Regulatory Context

The marine regulatory context in Southern B.C. is complex and involves overlapping legislative authorities and policies of federal, provincial, Indigenous, and municipal governments. A delineation of these levels of government and their associated legal tools and responsible authorities has been captured in the table below (Table 1). Indigenous Peoples have been using their own distinct legal traditions since time immemorial to act as stewards of the land.

Despite the regulatory complexity, it is important to note that MSP does not and will not replace single-sector management processes, nor will it replace existing authorities to regulate specific sectors or associated processes. Further to this, MSP does not undermine the rights of Indigenous



Peoples, including First Nations title, as upheld through treaties, government-to-government agreements, and other constructive arrangements. Rather, MSP will enhance intergovernmental collaboration and will ultimately inform decision makers responsible for particular sectors, activities or concerns so decisions can be made in a comprehensive, integrated, and complementary way.



Table 1 Coastal and Marine Jurisdiction in B.C.¹

Agreements and Legal tools	International	Indigenous Governments	Federal	Provincial
	<p><i>Convention on Biological Diversity</i></p> <p><i>UN Convention on the Law of the Sea</i></p> <p><i>UN Declaration on the Rights of Indigenous Peoples</i></p>	<p><i>Indigenous Law Constitution Act, 1982</i></p> <p><i>Fish and Wildlife Protection Law Act (Tla'amin)</i></p> <p><i>Fisheries, Wildlife, Migratory Birds, and Renewable Resources Act (Tsawwassen)</i></p> <p><i>Maa-nulth Final Agreement Act (2009)</i></p> <p><i>Resource Harvesting Act (Maa-nulth)</i></p> <p><i>Tsawwassen Final Agreement Act (2008)</i></p> <p><i>UN Declaration on the Rights of Indigenous Peoples Tla'amin Final Agreement Act (2014)</i></p>	<p><i>Canada National Marine Conservation Areas Act</i></p> <p><i>Canada National Parks Act</i></p> <p><i>Canada Shipping Act, 2001</i></p> <p><i>Canada Wildlife Act</i></p> <p><i>Canadian Energy Regulator Act</i></p> <p><i>Canadian Environmental Protection Act</i></p> <p><i>Canadian Navigable Waters Act (2019)</i></p> <p><i>Constitution Act, 1982</i></p> <p><i>Environmental Enforcement Act</i></p> <p><i>Fisheries Act</i></p> <p><i>Fishing and Recreational Harbours Act</i></p> <p><i>Impact Assessment Act</i></p> <p><i>Marine Act</i></p> <p><i>Migratory Birds Act</i></p> <p><i>National Parks Act</i></p> <p><i>Oceans Act</i></p> <p><i>Oil Tanker Moratorium Act</i></p> <p><i>Species at Risk Act</i></p> <p><i>Telecommunications Act (1993)</i></p> <p><i>United Nations Declaration on the Rights of Indigenous Peoples Act</i></p> <p><i>Wrecked, Abandoned or Hazardous Vessels Act (2019)</i></p>	<p><i>Community Charter</i></p> <p><i>Declaration on the Rights of Indigenous Peoples Act</i></p> <p><i>Ecological Reserve Act</i></p> <p><i>Environment and Land Use Act</i></p> <p><i>Environmental Assessment Act</i></p> <p><i>Environmental Management Act</i></p> <p><i>Fish and Seafood Act</i></p> <p><i>Forest and Range Practices Act</i></p> <p><i>Great Bear Rainforest (Forest Management) Act</i></p> <p><i>Integrated Pest Management Act</i></p> <p><i>Interpretation Amendment Act</i></p> <p><i>Islands Trust Act</i></p> <p><i>Land Act</i></p> <p><i>Land Title Act</i></p> <p><i>Local Government Act</i></p> <p><i>Maa-nulth Final Agreement Act (2011)</i></p> <p><i>Oil and Gas Activities Act</i></p> <p><i>Park Act</i></p> <p><i>Protected Areas of British Columbia Act</i></p> <p><i>Tla'amin Final Agreement Act (2013)</i></p> <p><i>Tsawwassen Final Agreement Act (2007)</i></p> <p><i>Vancouver Island Natural Gas Pipeline Act</i></p> <p><i>Wildlife Act</i></p>

¹ Not an exhaustive list

	International	Indigenous Governments	Federal	Provincial
Responsible Authorities	Convention on Biological Diversity Conference of the Parties United Nations International Maritime Organization	Indigenous government	Crown-Indigenous Relations and Northern Affairs Canada Environment and Climate Change Canada Fisheries and Oceans Canada Industry Canada Parks Canada Transport Canada	Ministry of Energy, Mines and Low-Carbon Innovation Ministry of Environment and Climate Change Strategy Environmental Assessment Office Ministry of Forests Ministry of Indigenous Relations and Reconciliation Ministry of Water, Land and Resource Stewardship Islands Trust Municipalities Regional Districts

1.1.3 Federal Policy Context

Canada’s Oceans Strategy (COS) was developed under the *Oceans Act* in 2002 and provides the policy framework for GoC’s approach to oceans management guided by the principles of sustainable development, IOM, and application of a precautionary approach to management. The COS is complemented by an operational framework which recognizes that integrated management must have a collaborative governance model that brings together GoC departments, provincial governments, First Nations, Indigenous organizations, and stakeholders to inform the location and design of conservation sites and to identify their interests in blue economic opportunities (Fisheries and Oceans Canada 2002).

Multiple goals and objectives rooted in the COS can be pursued and supported through the MSP process, including collaboration with provincial and territorial governments, First Nations, Indigenous organizations and stakeholders to continue to support achievement of Canada’s marine conservation targets; advancing reconciliation with Indigenous Peoples; and supporting the growth of the ocean economy.



1.2 Southern B.C. Marine Spatial Planning Area

The Southern B.C. MSP planning area (the ‘planning area’) includes the Southern Shelf Marine Bioregion and the Strait of Georgia Marine Bioregion, estuaries as defined by the Pacific Estuary Conservation Program (Pacific Birds Habitat Joint Venture Technical Team 2019), and a buffer

In Southern B.C., efforts to date have focused on the first three phases of the MSP Process (Figure 1), which are collectively referred to as the *early planning phase*. The key outputs associated with the early planning phase are the MSP framework and the *Canada Marine Planning Atlas* (the Atlas). The Atlas, launched in January 2023, was a milestone achievement for MSP in the Pacific Region. The Atlas is an interactive mapping tool that allows users to view and interact with data relevant to marine spatial planning. It includes data on economic, ecological and socio-cultural activities.

zone of up to 1,000 metres inland to account for the consideration of long term variation along shorelines due to impacts from climate change and to accommodate datasets associated with features, activities, habitats, or species that utilize the transition zones at the marine-land interface (Figure

2). The planning area supports one of the most densely populated regions in Canada and holds cultural, social, ecological, and economic value at local, national and international scales.

The planning area is home to complex and diverse marine ecosystems that support abundant marine species and underpin the cultures and economies of First Nations and coastal



communities. To support MSP and other initiatives in the Pacific region, DFO developed Conceptual models of major ecosystems in Canada’s Pacific Ocean . The conceptual models are a representation of a system, such as an ecosystem, and can be used as a tool to help foster an understanding of the subject they represent. A suite of thirteen conceptual models representing the major ecosystems within Canada’s Pacific Ocean, extending from the B.C. coastline to the boundary of the Canadian Pacific Exclusive Economic Zone, provide a general overview of the components and processes within each ecosystem. For each ecosystem, a series of four illustrations depict: the main ecological components, key interactions between ecological components, main environmental drivers, and most common human activities including climate change stressors.

Indigenous Peoples in B.C. maintain profound cultural, spiritual and, in

some cases, economic ties to the waters, landscapes, and ecosystems of the region. The ocean is central to the cultures and traditions of the 69 First Nations with traditional territories in or adjacent to the planning area. Among these, 49 have territories overlapping with the planning area, including seven Modern Treaty First Nations. Modern Treaty First Nations possess a unique space within the constitutional fabric

of this country for the recognition and expressions of Indigenous rights protected and affirmed by *Section 35 of the Constitution Act, 1982*.

Crown-Indigenous relations are also shaped, among other things, by the Truth and Reconciliation Commission's Calls to Action and the United Nations *Declaration on the Rights of Indigenous Peoples* as implemented by Canada through the *Declaration on the Rights of Indigenous Peoples Act*. In the Southern B.C. MSP planning area, Modern Treaty First Nations such as those signatory to the Maa-nulth First Nations Final Agreement (Huu-ay-aht First Nations, Ka:'yu:'k't'h'/Che:k'tles7et'h' First Nations, Toquaht Nation, Uchucklesaht Tribe and Yuułu?it?atḥ First Nation), Tla'amin Nation and Tsawwassen First Nation coexist with 20 other Nations that may not have traditional territories in the planning area but are members of organizations interested in the Southern B.C. MSP Program. An example is the Lower Fraser Fisheries Alliance, composed of 22 First Nations with traditional territories extending from the mouth of the Fraser River up to the Fraser Valley.

B.C.'s ocean-dependent economic sectors contribute significantly to the cultural and social fabric of the province. Main sectors of this ocean economy include transportation, seafood, tourism and recreation, coastal forestry, research, infrastructure, and marine technology,

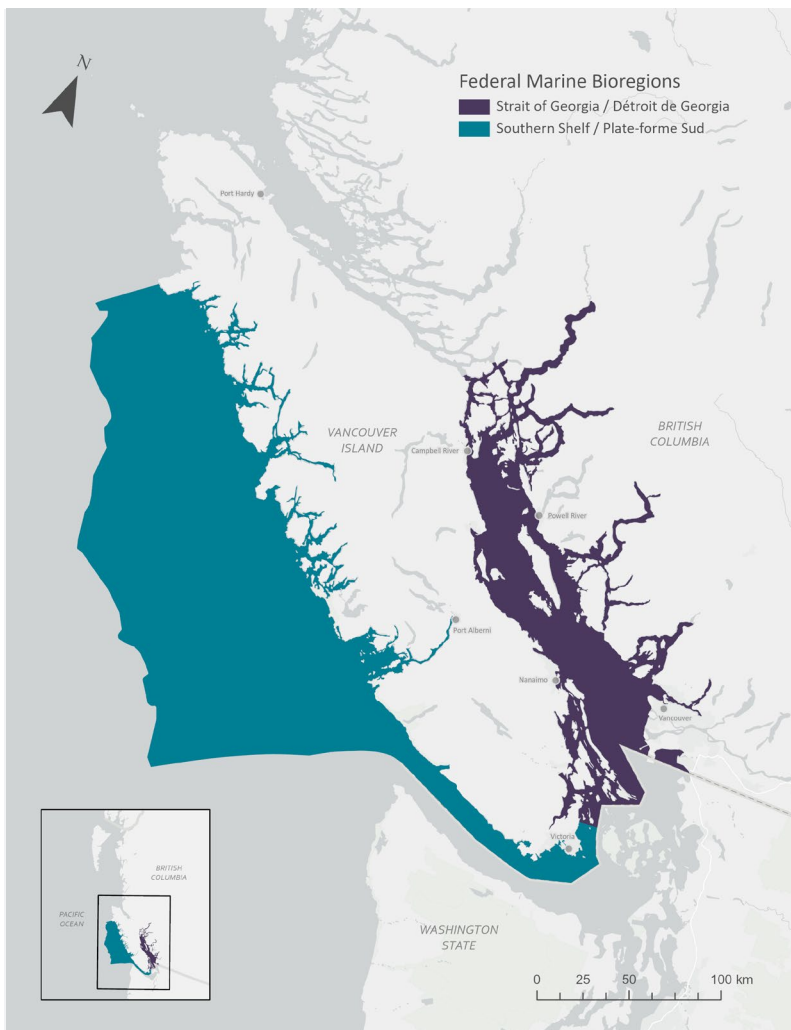


Figure 2 Southern B.C. MSP Planning Area

as well as government activities. In the Southern B.C. planning area, transportation, marine-dependent forestry, and tourism and recreation are the three largest sectors, each generating between \$7B and \$8B in direct output. Seafood (commercial harvesting, aquaculture, and seafood processing) is the fourth largest at \$1.7B (Big River Analytics 2021).

1.3 Draft Goals for Marine Spatial Planning in Southern B.C.

The intent of the Southern B.C. MSP process is to weave together knowledge of the planning area from multiple knowledge systems and provide a spatially explicit planning tool (the Plan) that considers ecological, cultural, social, and economic factors. The process will foster reconciliation and facilitate the long-term resilience and sustainability of the marine environment.

During the early planning phase of MSP in Southern B.C., DFO engaged with GoC departments and the Province of B.C. to develop draft goals that provide a starting point for guiding the MSP process. These draft goals are meant to be collaboratively reviewed, revised, and finalized with MSP Partners who have signed collaborative agreements and with interested groups during the 'Planning Phases'. The draft goals are broad in nature and specific objectives that support MSP goals will be developed as the MSP process



evolves, and as the scope of the Plan is refined in discussion with GoC departments, the Province of B.C., First Nations, Indigenous organizations and stakeholders.

The **following draft** goals are provided as a starting point to guide marine spatial planning in Southern B.C.:

- Goal 1:** Facilitate **collaboration** between federal, provincial, and Indigenous governments, First Nations, and stakeholders
- Goal 2:** Improve the **transparency** of, confidence in, and support for informed decisionmaking
- Goal 3:** Protect, **conserve**, and support resilient marine and coastal ecosystems
- Goal 4:** Reduce **user conflict** and enable safe and responsible access to the marine environment
- Goal 5:** Enhance **ocean-based prosperity** and support a **sustainable** economy
- Goal 6:** Reduce impacts to marine ecosystems and coastal communities

2. Navigating MSP in Southern B.C.

MSP in Southern B.C. is anticipated to be an iterative process with specific outputs required to advance the program through the ‘early planning’ and ‘planning phases’, and eventually working towards the development and implementation of a Plan. A roadmap for MSP in Southern B.C. (Figure 3) has been developed to help guide future planning efforts, based on input received to date from GoC departments, the Province of B.C., First Nations, Indigenous organizations and stakeholders; the National MSP Process Blueprint (Section 1.1); and international MSP guidance (Ehler 2021; UNESCO-IOC/European Commission 2021).

The roadmap is anchored by three core pillars (engagement, communication, and knowledge sharing) which are integral to four MSP pathways, each of which have their own respective inputs and outputs:

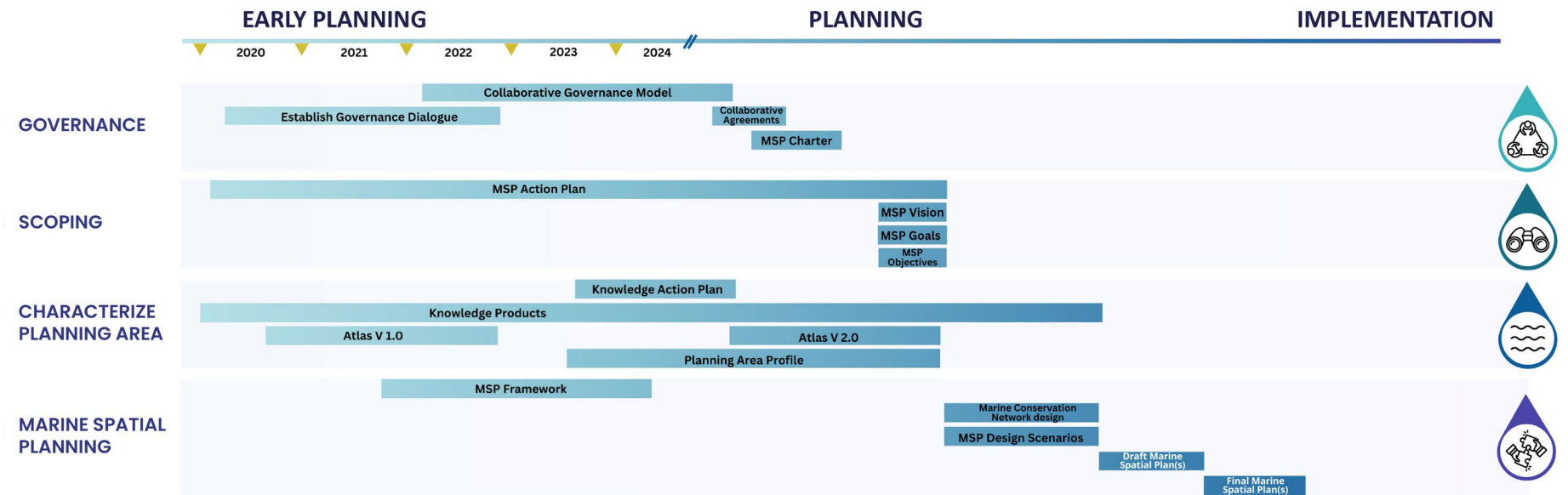
- Governance;
- Scoping;
- Characterize Planning Area; and
- Marine Spatial Planning.

The roadmap is intended to illustrate a practical approach for MSP in Southern B.C. based on information gathered to date in the early planning phase and will continue to evolve as the MSP process proceeds. The roadmap is not intended to be prescriptive or static,

but rather a starting point to guide MSP Partners when working towards a Plan, and to identify the synergies, dependencies, and linkages between the phases, MSP pathways and outputs. The roadmap will continue to evolve as the MSP process proceeds. Given that MSP in Southern B.C. is early in the process, details on the implementation phase are not included in the Southern B.C. MSP roadmap, and will be determined in future phases.



Figure 3 Southern B.C. MSP Roadmap²



² The length of bars in the Southern B.C. MSP Roadmap is not indicative of the time it will take but rather shows the outputs that may overlap in time.

2.1 Core Pillars

2.1.1 Engagement

Meaningful engagement is an integral component of marine spatial planning in the Southern B.C. planning area. As one of the three core pillars, engagement will be woven throughout each of the four MSP pathways and will aim to be inclusive, equitable and diverse by providing opportunities for representatives from the Province of B.C., First Nations, Indigenous organizations, and stakeholders in the planning area to be engaged and involved in the development and execution of the program. Engagement throughout the planning phase will continue to focus on upholding federal and provincial reconciliation commitments, including modern treaties in the planning area, relationship-building, transparency in the process, and information sharing.

Engagement facilitates awareness from parties on ongoing issues and may take the form of long-term, ongoing dialogue, partnership agreements or interacting to build understanding and relationships. Engagement and consultation are closely interlinked in the context of working relationships, often complementing each other. Consultation is a multifaceted form of engagement that can encompass the legal duty to consult as well as seeking feedback from Indigenous Peoples, stakeholders, and federal and provincial governments to inform



decisions, programs or initiatives. Consultation may need to be done to fulfill legal obligations (including the legal duty to consult) related to Aboriginal and treaty rights which are protected under the *Constitution Act, 1982*, and in such cases a determination of the obligation will depend on the specific circumstances.

In 2016, the Government of Canada endorsed the United Nations *Declaration on the Rights of Indigenous Peoples* without qualification and committed to its full and effective implementation. The Action Plan sets out a wide-ranging, whole-of-government and evergreen roadmap to advance the objectives of the UN Declaration, including self-determination, self-government, equality, non-discrimination and harmonious relations, participation in decision-making by Indigenous Peoples and revitalization of languages and cultures. In the short term, the Government of Canada will work with its Indigenous partners to prioritize action plan measures and to develop implementation plans, timelines and metrics.

WHAT WE HEARD...

During the early planning phase of MSP in Southern B.C., DFO focused on building relationships and raising awareness of MSP by engaging directly with other GoC departments and agencies, First Nations, Indigenous organizations, the Province of B.C., and stakeholders. Through these discussions, we heard that engagement must promote equitable involvement and facilitate the ability for all interested parties to collaborate and participate in the MSP process. The key advice we heard includes:

- **Reduce engagement fatigue:** be thoughtful about meeting coordination and leveraging existing relationships;
- **Support capacity:** provide First Nations and Indigenous organizations with funding for engaging on and actively participating in MSP;
- **Facilitate an accountable, responsible, and inclusive process:** No organization within the planning area is representative of all First Nations nor do they necessarily have a mandate to speak on behalf of Nations.

2.1.2 Communication

Transparent communication is fundamental to the development, delivery, and implementation of a Plan in Southern B.C. Effective communication will be essential to facilitating information exchange, an understanding of the process, and broad awareness of the MSP outputs and outcomes. Communications tools that can be developed and used to facilitate engagement and knowledge sharing may include the DFO MSP website, an online collaborative space, social media platforms, print materials, workshops and outreach forums.



EARLY PLANNING KEY COLLABORATION STRUCTURES

During the early planning phase of MSP in Southern B.C., DFO engaged through various forums such as bilateral meetings with representatives from First Nations, meetings with stakeholders, and collaborative workshops. As well, these three collaborative structures provided a regular mechanism for preliminary engagement:

A **Federal Government Coordinating Table** includes pacific region representatives from federal departments and agencies (Transport Canada, Natural Resources Canada, Environment & Climate Change Canada, Canadian Coast Guard, and Parks Canada).

The **Southern B.C. MSP Collaboration Teams** includes DFO representatives from various programs and sectors such as Science, Policy and Economics, and Fisheries Management.

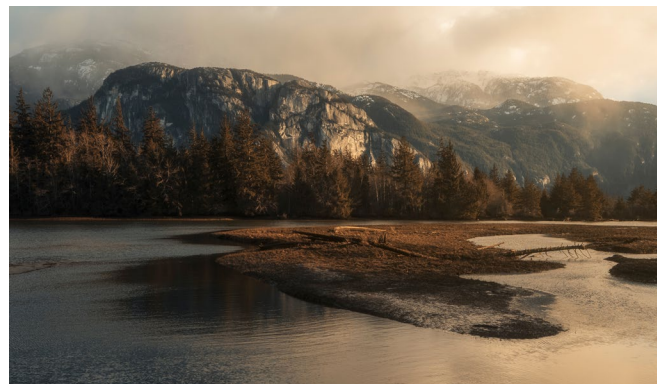
A **Trilateral Working Group (TWG)** includes representatives from the Province of B.C. Ministry of Water, Land and Resource Stewardship (WLRS), Fisheries and Oceans Canada (DFO), and the First Nations Fisheries Council of BC (FNFC). The TWG collaborates on jointly identified work in support of the early planning phase of MSP in Southern B.C. as indicated in a Letter of Understanding that was signed in the fall 2022.

2.1.3 Sharing Knowledge

MSP efforts in Southern B.C. will use an evidence-based process where decisions are supported by robust data and information. At the core of this process is spatial data and information relevant to the planning area that provides the knowledge to build an understanding of the current conditions, to identify future needs, and to support assessments and decision-making on spatial allocation and future use of marine space.

Knowledge sharing is an ongoing collaborative process of gathering and analysing data and information, and the interpretation and communicating of assessment outcomes with partners and stakeholders throughout the planning process. Effective knowledge sharing requires an enabling environment that includes:

- effective working relationships and trust between MSP partners and stakeholders;
- clear roles, responsibilities, agreements and protocols for the sharing, management, and stewardship of data, information, and knowledge;
- common understanding of what knowledge products and MSP tools are required/agreed with MSP partners; and,
- adequate resources and capacity building for all MSP partners.



Indigenous knowledge (IK) is integral to developing a robust knowledge base that supports the development of a marine spatial plan. There is no universal or singular definition of IK since it is tied to Indigenous worldviews and ways of life which are unique to each knowledge holder. IK can be community specific, place based and rooted in the diverse histories, experiences and perspectives of the individual holder. Recognition of Indigenous ways of knowing can enhance DFO's understanding of aquatic ecosystems, including the impacts of activities on these ecological and socio-economic systems. DFO is committed to working with First Nations to build respectful relationships and meaningfully include Indigenous Knowledge into planning activities, knowledge products and processes in a transparent manner that is informed and guided by communities and their respective knowledge holders.

Input data and information requirements for Southern B.C. MSP includes spatially explicit data and other relevant, supporting information on:

1. oceanographic and other physical features, such as seasonal ocean temperatures, bathymetry, predominant currents and wave patterns, predicted sea level change scenarios;
2. biological and ecological characteristics, including distributions of key species, biological communities and ecosystems, vulnerable ecosystems;
3. human populations and activities, including demographics, distribution of areas of recreational, cultural and spiritual importance, current activity for key commercial sectors;
4. governance and regulatory environment, including regulatory, administrative and protected area boundaries and management measures within those boundaries; and,
5. projections of future trends in oceanographic, ecological, biological, and/or human dimensions.

This knowledge will be used to develop initial assessments and knowledge products that comprehensively describe current conditions in the *characterize planning area pathway* (Section 2.2.3) and support the development of preferred scenarios as the process moves towards a Plan (Section 2.2.4).

In the early planning phase, information gathering for Southern B.C. has relied primarily on federal and provincial open data sources and interdepartmental collaboration. Government data sources and interdepartmental working groups will continue to be pivotal to knowledge sharing throughout the MSP process. DFO will also seek to broaden the scope of data and information gathering in order to establish a robust evidence base through diverse sources and multiple ways of knowing.

2.2 Marine Spatial Planning Pathways

The Southern B.C. MSP Roadmap (Figure 3) identifies the pathways and pillars that are essential to the development of a Plan. Four ‘pathways’ have been identified for the MSP

process; 1) governance; 2) scoping; 3) characterize the planning area; 4) marine spatial planning. Each of these pathways includes several specific outputs that support MSP, and each pathway is rooted in the three core pillars of MSP (Section 2.1).

WHAT WE HEARD...

To support the early planning phase of MSP in Southern B.C., a Letter of Understanding (LOU) between the First Nations Fisheries Council of BC (“FNFC”), Fisheries and Oceans Canada (“DFO”), and the Province of B.C. Ministry of Water, Land and Resource Stewardship (“WLRS”), was signed in September 2022. The LOU established a trilateral working group (TWG) to collaborate during the early planning phase on jointly identified trilateral work objectives including identifying interests and considerations for trilateral governance in the planning area. The TWG identified that there is a common interest to design a feasible, efficient and adaptable governance arrangement that is anchored in each party’s jurisdictions, authorities, and mandates. The LOU Parties expressed clear interest for governance arrangements to:

- Be clear, transparent, and inclusive.
- Advance reconciliation in a manner consistent with federal and provincial legislation enacted to implement the UN *Declaration on the Rights of Indigenous Peoples*.
- Enable collaborative development and implementation of a Plan for Southern B.C.
- Provide mechanisms for collaboration and engagement with stakeholders and local governments.
- Reflect efficient, practical, and feasible processes that minimize engagement fatigue, and align with capacity and funding.
- Identify and build on other existing processes where possible.

2.2.1 Governance

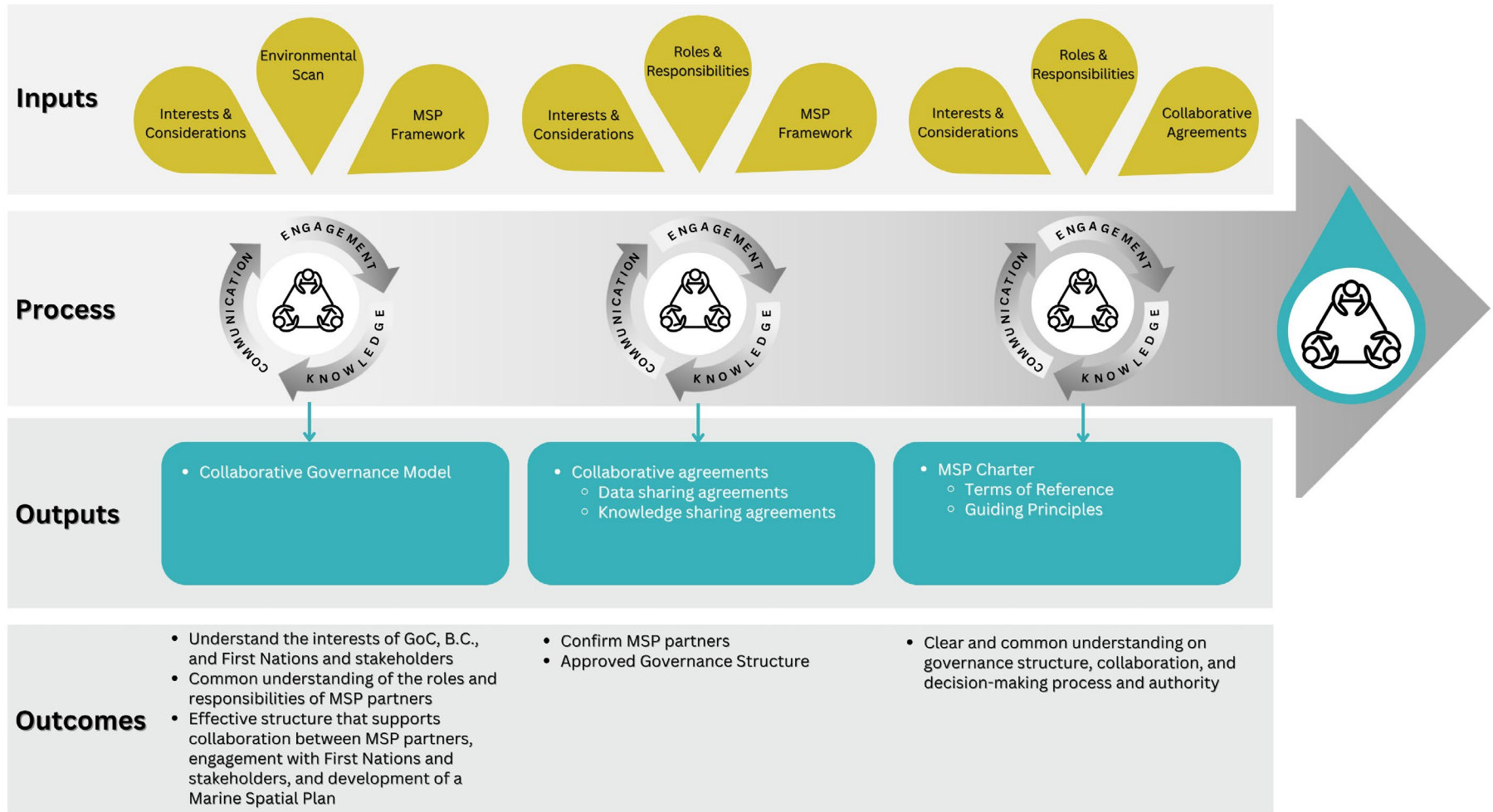
Governance for MSP refers to the structures and processes to work collaboratively on MSP in Southern B.C. The governance structure will provide oversight and direction on the development of goals and objectives (see Scoping Section 2.2.2), knowledge products (see Characterize Planning Area Section 2.2.3), and the Plan (see Marine Spatial Planning Section 2.2.4).

Outputs along the governance pathway (Figure 4) provide the collaborative

foundation and operational structure for achieving outputs and outcomes identified in the other three pathways. *Governance pathway outputs* (i.e., collaborative governance model, collaborative agreements, and MSP charter) are intended to be completed before initiating work on the remaining pathways and outputs for the planning phase. Each output is derived from key inputs and supported by processes driven by the core pillars of engagement, communication, and knowledge sharing.



Figure 4 Governance Pathway



2.2.1.1 Collaborative Governance Model

Ocean governance is represented across many different sectors with a broad spectrum of regulations and government bodies (i.e., federal, provincial, and First Nations). Regional planning processes face challenges as socio-economic systems operate and are managed at different spatial and temporal scales by different authorities. The vast geographic scale of the Southern B.C. planning area results in a large number of interested parties and possible MSP partners. This creates challenges around capacity for all MSP partners to be involved.

Preliminary feedback received during the early planning phase illustrates a common interest in establishing a feasible, efficient and adaptable governance arrangement that is anchored in appropriate jurisdictions, authorities, and mandates, and that would provide the structures

(steering committees / technical working groups) through which MSP partners work collaboratively in the planning and implementation of a Plan for Southern B.C.

2.2.1.2 Collaborative Agreements

Once Southern B.C. MSP partners have been identified through preliminary engagement and a governance model has been agreed upon, a governance structure would be formalized through a trilateral (First Nations, GoC, Province of B.C.) collaborative governance agreement. The collaborative governance agreement will be negotiated by participating parties and will outline purpose, principles for working together; the governance structure, including roles and responsibilities; decision-making processes; dispute resolution; and any other provisions agreed to by the parties.





2.2.1.3 MSP Charter

An MSP charter may be collaboratively developed by MSP partners for the Southern B.C. planning area to provide a clear and common understanding on governance structure, collaboration, and decision-making process and authority. It is anticipated to include the terms of reference and mechanisms important to inclusive and transparent engagement on planning in Southern B.C., including a stakeholder engagement approach, risk and mitigation strategies, guiding principles, clarity on the scope of the program, the deliverables and resources required.

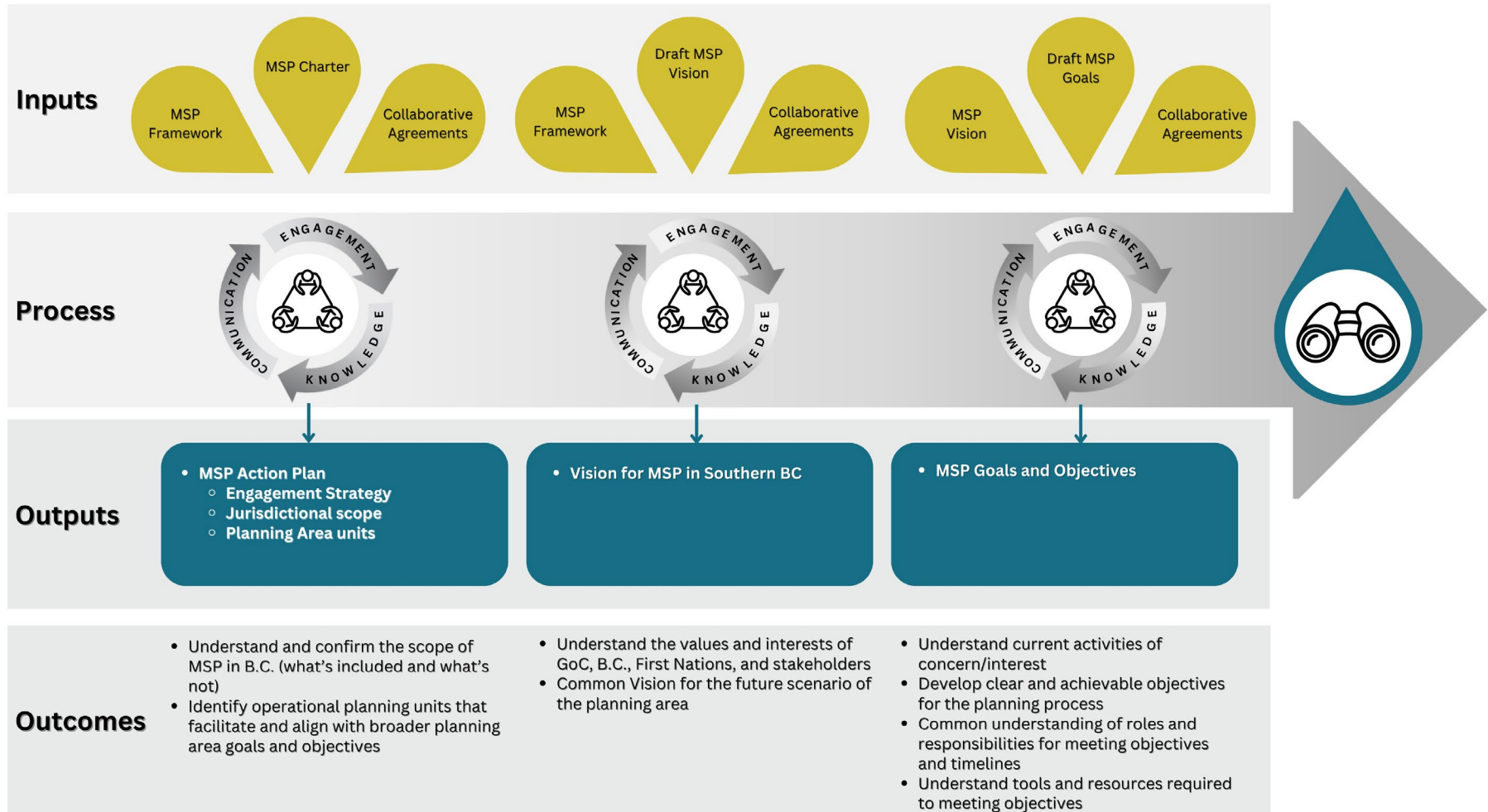
Clear and transparent guiding principles provide a frame for establishing MSP goals and objectives, and a foundation by which Southern B.C. MSP partners can engage constructively. While MSP is being advanced uniquely in planning areas

around the world, the processes typically align with a number of guiding principles. These can include widely accepted and general principles for collaborative planning, but also others that align with specific regional issues.

2.2.2 Scoping

Determining the scope of MSP in Southern B.C. is fundamental to establishing clear workplans and completing outputs under realistic timelines. The complexity of the planning area requires a clear vision and common understanding of the goals and objectives of MSP in Southern B.C. Outputs along the *scoping pathway* (Figure 5) are focused on providing strategic direction for the MSP process in Southern B.C. and the respective outcomes will influence the outputs in the *characterize planning area and the marine spatial planning pathways*.

Figure 5 Scoping pathway



2.2.2.1 MSP Action Plan

The first step in the *scoping pathway* will be to identify planning efforts that were undertaken or are underway in the planning area, understand what scale these efforts apply to, and determine how they relate to the Southern B.C. planning area. MSP is applied across various geographic scales and jurisdictions, which can present challenges when inputs generated at different scales must be consolidated to support outputs required for the broader planning area. Smaller scale planning efforts, including marine use plans led and developed by First Nations and/or local communities, provide specific goals and objectives for the use of marine resources at the local scale. These inputs take different forms ranging from high level strategic plans to comprehensive plans with detailed implementation tactics. In addition, existing management regimes

and overlapping jurisdictions do not always align with how a Plan allocates use in space and time.

Once planning area units have been determined, MSP partners can develop an *MSP Action Plan* for Southern B.C. to guide the planning phase. Main elements of the action plan could include specific guidance on the development of:

- Clarity on roles and responsibilities of MSP partners;
- First Nations engagement and consultation;
- Stakeholder engagement and communications;
- Process for developing knowledge products and the marine spatial plan(s);
- Implementing the marine spatial plan; and,
- Monitoring and evaluating the planning process.

WHAT WE HEARD...

Any scoping of geographical scale should support and enhance the work being done at a community level. Under this approach, the governance structure would be established at a manageable geographical scale and would expand to meet broader Southern B.C. MSP regional objectives as the planning process advances and as resources become available. This approach also reflects a key characteristic identified for the governance structure which is the need to consider the inherent uncertainty of an iterative process, while remaining committed and focused on the core goals and objectives for MSP in Southern B.C. over the long term.

2.2.2.2 MSP Vision

A common vision for MSP in Southern B.C. sets the intention for what the marine space will look like in the future. The vision should reflect the diverse values and interests in the Southern B.C. planning area. The vision is the cornerstone for setting goals and objectives for the MSP process and the marine spatial plan. One of the outputs of the early planning phase was a draft vision for MSP in Southern B.C., developed by DFO to provide preliminary direction for the MSP process. DFO's draft vision for MSP in Southern B.C., which will be discussed and refined with MSP partners and collaborators, is *'a healthy and resilient marine ecosystem that supports vibrant and diverse coastal communities and is actively sustained through collective understanding, mutual respect, and collaborative stewardship'*. Once collaborative agreements are fully executed and the MSP Charter has been developed, it is anticipated that one of the first tasks to be completed by the MSP partners will be to develop a common vision that represents the broader values and interests in the planning area.

2.2.2.3 MSP Goals and Objectives

The development of common goals and objectives for MSP in Southern

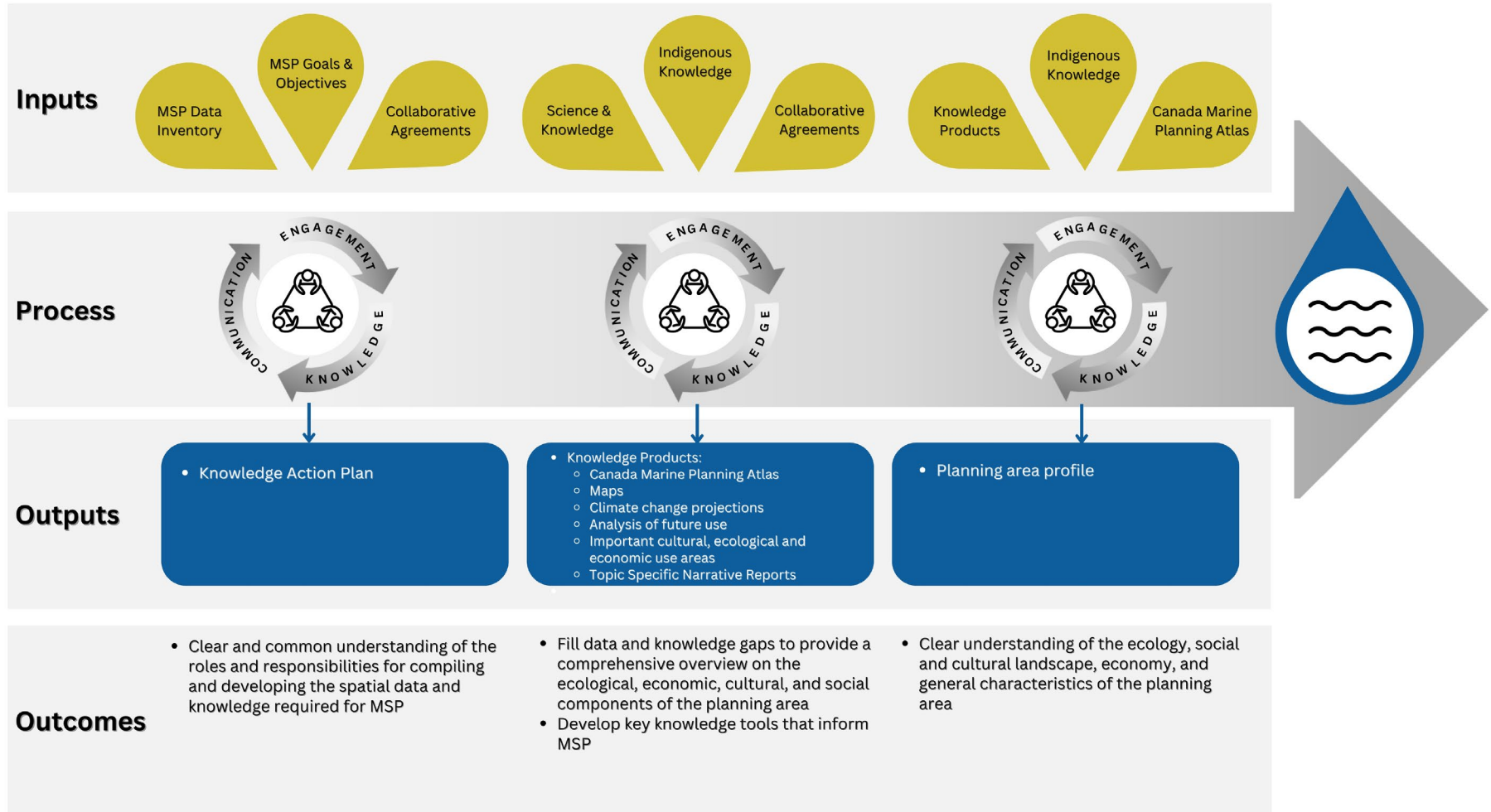
B.C. is an essential step in ensuring MSP will remain focused and aligned with the vision and guiding principles. Using the draft goals as a starting point (Section 1.3), partners will collaboratively develop common goals that drive the MSP process in Southern B.C. and form the basis of the marine spatial plan(s). MSP goals are broad, abstract statements that speak to general intentions of the program. The objectives associated with each of the goals will be focused, tangible and measurable.

2.2.3 Characterize Planning Area

Characterizing the southern B.C. planning area provides the foundation for exploring potential future scenarios of marine use in the planning area. In this pathway (Figure 6), data and knowledge about existing conditions and activities are mapped. The outputs from this pathway will support engagement and analysis in the MSP process for the development of alternative future scenarios and the development of the marine spatial plan(s).

'A **goal** is a statement of general direction or intent. They are high-level statements of the desired outcome that you hope to achieve. Goals provide the umbrella for development of all other objectives and reflect the principles upon which subsequent objectives are based' (Ehler and Douvère 2009)

Figure 6 Characterize the planning area pathway



2.2.3.1 Knowledge Action Plan

The first key output of this pathway is a Knowledge Action Plan that builds on initiatives developed in the early planning phase (including the Atlas) to outline a data creation and compilation strategy defining:

- data and knowledge requirements and gaps prioritized in relation to MSP goals and objectives (*scoping pathway*);
- data providers and knowledge holders at the national, regional and local levels, including existing data applications in the region;
- data quality requirements for the different data and knowledge categories (e.g., validation processes, etc.);
- data acquisition and knowledge sharing processes/protocols specific to the different MSP partners and stakeholders;
- strategies to address key data and knowledge gaps and dealing with uncertainties; and,
- tools and processes for access, storage and management of data and knowledge.

The southern B.C. Knowledge Action Plan is intended to reflect the goals and objectives for the planning area as determined through the *scoping pathway*. First Nation partners will be invited to determine if and how they would like to share Indigenous Knowledge, including any IK sharing processes, conditions and agreements as part of, or separately from the

Southern B.C. Knowledge Action Plan. The outcome of this step is a robust understanding of the data and knowledge requirements, knowledge gaps, and knowledge products that must be developed to support the development of a marine spatial plan.

2.2.3.2 Knowledge Products

The next step in this pathway is the compilation and analysis of relevant data and knowledge to develop knowledge products for MSP. Knowledge products developed for the southern B.C. planning area may include:

- a. inventory, supporting reports and summary maps to describe the current distribution of important biological/ecological and cultural areas, and human activities and sectors in the planning area; and,
- b. assessments for planning, including assessments on:
 - i. future projections/trends of marine spatial use for different sectors;
 - ii. impacts of key environmental drivers on the planning area, including impacts of climate change, demographic changes and innovative technologies;
 - iii. potential conflicts and compatibilities among existing human uses and between existing human uses and the natural environment;
 - iv. cumulative effects; and,

- v. environmental carrying capacity and suitability analysis of marine areas for sector development.

Future versions of the Atlas are intended to be developed collaboratively with MSP partners and collaborators. It will seek to expand the data scope and functionality of the Atlas to achieve an interactive mapping tool that can support knowledge sharing and other decision support tools anticipated to be used throughout the MSP process, while adhering to established principles and protocols.

2.2.3.3 Planning Area Profile

The knowledge products described in the previous step will be analysed with MSP partners and collaborators, and selected products will be collated to form a Planning Area Profile. The main output of this step is a summary report with relevant maps.

2.2.4 Marine Spatial Planning

Developing a Plan is the final pathway to be completed for the planning phase with the ultimate outcome being an approved Plan for Southern B.C. (Figure 7). The Plan is anticipated to support coordination of marine use by considering the breadth of activities over time in an area, potentially including socio-cultural uses, economic uses, and/or conservation planning.

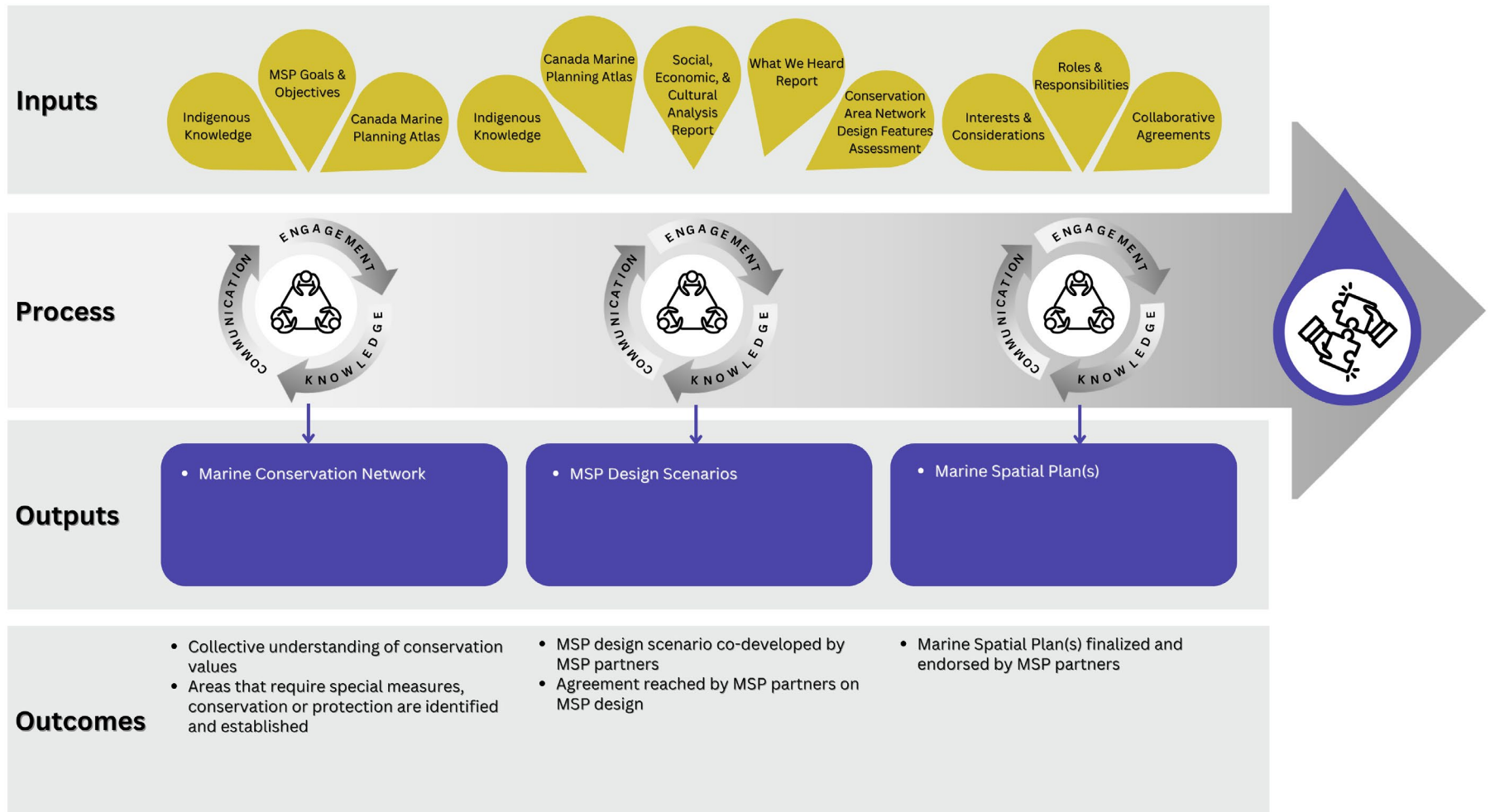
Key outputs along this pathway will be derived and supported by outputs completed within the other three pathways. Each output is derived from key inputs and supported by the core pillars of engagement, knowledge sharing and communication.

2.2.4.1 Conservation Network

The term conservation network refers to a collection of Federal Marine Protected Areas (MPAs) and other conserved areas that are designated and managed to safeguard important ecological components of the ocean and marine biodiversity as a whole. A clear understanding of the spatial extent of areas that require some level of conservation or protection is a key element that informs the MSP process. A coordinated approach for the establishment of a conservation network has not been considered or initiated for the Southern B.C. planning area.



Figure 6 Characterize the planning area pathway



2.2.4.2 MSP Design Scenario

A draft MSP design scenario(s) for the planning area would consider current uses, suitable areas for future marine activities, areas where human use should be avoided, monitored or managed, or areas where special measures should be put in place for conservation or protection. The process that examines a scenario (or scenarios) involves the creation of alternative images of the future and evaluating them against the MSP vision and goals.

'A spatial scenario provides a vision that projects the future use of marine space based on a core set of values (reflected as principles, goals, objectives, and assumptions) about the future' (UNESCO-IOC/European Commission 2021)

The MSP design scenarios will be developed collaboratively with MSP partners (see Section 2.1.1). The steps for developing MSP scenarios include:

1. identify criteria for MSP scenario development and agree on MSP tool(s);
2. based on information from previous phases and existing spatial plans, develop MSP design scenario(s) illustrating current uses, suitable areas for future marine activities, as well as areas that need to be avoided or special measures put in place for conservation or protection;

3. consider existing information on threats/risks assessments and adjust design scenario(s) as needed; and,
4. identify objectives for areas within the MSP design scenario.

The intended outcome is to design the optimal MSP design scenario that achieves the vision and goals for MSP in Southern B.C. and has broad support from MSP partners and collaborators.

2.2.4.3 Marine Spatial Plan

A Plan is the primary document that results from the MSP process and identifies specific management measures designed to achieve the vision (or desired future) for the planning area. The Plan will identify suitable areas and/or timing of human activities, as well as areas that should be avoided or that may require special protection measures.

The Plan will not create or direct legislative authority regarding the use or protection of marine resources. Rather, it is intended to serve as a tool to inform the planning and management of marine activities in the planning area and link marine uses to existing legislative and management instruments.

The Plan will be the final output for the planning phase of the MSP process, but the Plan itself is a starting point and is meant to be reviewed and amended periodically to reflect any shifting values, goals, or challenges that may arise in the planning area over time.



3. MSP in a Changing Environment

Socio-ecological systems are dynamic systems that change over time and space in response to environmental and economic drivers. While it is important for the MSP process to consider the different elements of change throughout the planning process, this remains a challenging task (Gissi et al. 2019).

The Southern B.C. planning area has seen rapid population growth in recent decades, which in turn has exerted pressure on ecosystems and resources. Climate change impacts on marine ecosystems and communities are likely to be augmented by other environmental and demographic trends projected for southern B.C. Changes in the abundance and distribution of marine resources combined with increased demand could escalate conflicts and competition for scarce resources (Bush and Lemmen 2019). These drivers of change must be considered throughout the MSP process so that the Plan can facilitate resilient ocean management measures.

3.1.1 Climate Change

Climate change impacts in Canada are consistent with global trends and include more extreme weather events, changes in seasonal rainfall patterns and hydrological cycles, thinning glaciers, thawing permafrost and rising sea levels (Bush and Lemmen 2019).

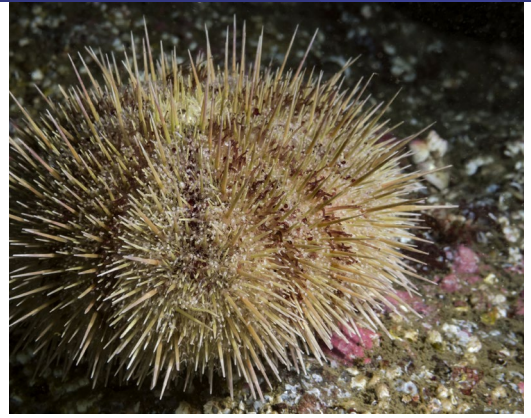


Canada's oceans are becoming increasingly warm, increasingly acidic and less oxygenated as a direct effect of climate change. In British Columbia, a warming trend for upper ocean waters has been observed over the last 80 years (Fisheries and Oceans Canada 2021). The Northeast Pacific Ocean has seen consistent observed impacts from extreme high temperature in recent decades and it is also one of the regions that is projected to experience the highest intensity of annual extreme warming events (Cheung and Frölicher 2020; Cheung et al. 2021).

All these changes can lead to negative impacts on the stock biomass and projected catch of key commercial species in B.C.'s Pacific region. B.C. has also recorded sea level rise along most of its coastline, including in southern B.C., with exceptions in areas experiencing land uplift (e.g., Tofino, West Vancouver Island) (Bush and Lemmen 2019).

Local sea levels are projected to rise along extensive stretches of the Canadian coastline due to warming temperatures and increased water discharge from melting land-ice. Sea level rise will lead to an increase in frequency and magnitude of extreme high water-level events and catastrophic flooding (Bush and Lemmen 2019).

The ecological complexity of the marine environment in southern B.C. makes it difficult to project climate change impacts on marine ecosystems (Okey et al. 2014). However, there are some recent studies showing that warmer temperature and changes in other ocean characteristics would affect the growth, survival, abundance and distribution of many key commercial species in southern B.C. including salmon and shellfish (Shelton et al. 2020; Talloni-Álvarez et al. 2019). It is anticipated that climate



change will continue to drive significant changes in ecosystem structure and function; however, the observed effects may be differential, with many marine species shifting their distribution range due to changing temperature and some species suffering catastrophic declines in response to decreasing oxygen levels and increasing acidity,



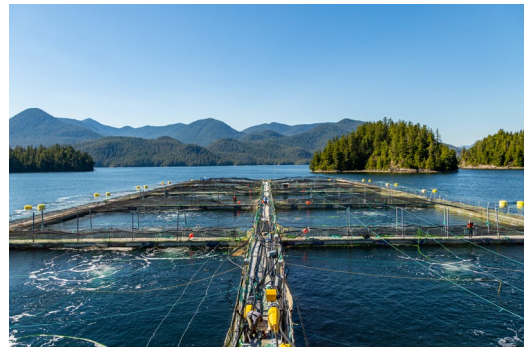
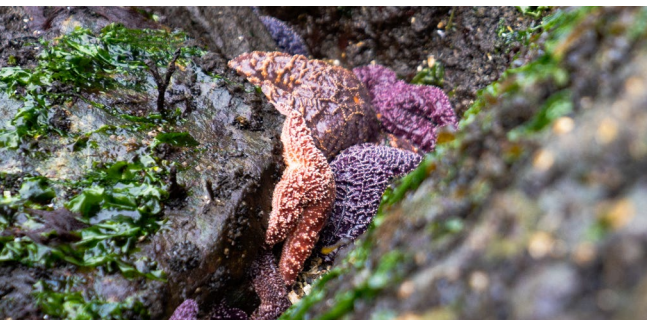
while other species and ecosystems experience positive change (e.g., increased abundance in response to higher nutrient availability) (Okey et al. 2014). While there is a high degree of uncertainty on the implications of climate change to species distributions, these changes are likely impact sectors that depend on these natural resources, including fisheries, tourism and recreation activities.

Despite the far-reaching effects of climate change, there is still a major gap in climate change integration within ocean management plans worldwide (Magris et al. 2013; Santos et al. 2020). Many existing cases which incorporated climate change adaptation into MSP have focused on regions with coral reefs, therefore future work should be focused on climate-adaptive MSP in regions with other ecosystem types (Wilson et al. 2020).

MSP is a relatively new concept that may facilitate the adoption and implementation of climate change mitigation and adaptation strategies for oceans (UNESCO-IOC/European Commission 2021). Its integrated, ecosystem-based and cross-sectoral approach allows for building ecological, social and economic resilience for

climate change throughout the process (Santos et al. 2020).

Integrating climate change considerations



into MSP contributes to large-scale global ocean governance goals, including the UN Sustainable Development Goals (SDGs) 13 “Climate Action” and 14 “Life Below Water” of the 2030 Agenda for Sustainable Development (UNESCO-IOC/European Commission 2021). However, there are still some limitations for embracing climate change adaptation in MSP including a lack of scientific information at appropriate scale and the uncertainties of the impacts and in the frameworks. These limitations make the process for incorporating climate change adaptation in MSP challenging.

The Southern B.C. marine spatial planning process may consider climate change effects, mitigation and adaptation measures in core pillars and MSP pathways by:

- identifying lessons learned and best practices in other MSP processes within and outside of Canada that integrate climate change mitigation and adaptation into their planning process;
- considering national, provincial and local policies and plans to address mitigation of and adaptation to climate change;
- integrating climate change projections for Southern B.C. in knowledge products and future planning scenarios using the best available science and knowledge;
- promoting resilience to climate change through the planning process;
- assessing the application of adaptive and dynamic planning approaches, including planning at different scales; and,
- implementing meaningful and consistent engagement and knowledge sharing with MSP partners, other First Nations not currently partnering in the process, and stakeholders throughout the planning process.

3.1.2 Population Growth

Southern B.C. is experiencing one of the highest growth rates in population across Canada (Statistics Canada 2022). The population of B.C. is expected to increase by over 1.5 million people from 2020 to 2041 (Ip and Lavoie 2019) with the majority of this growth happening in coastal areas within the Metro Vancouver

Regional District and in the Capital Regional District in southern Vancouver Island (Environmental Reporting B.C. 2018). In contrast to B.C.'s north coast, Southern B.C. is seeing more residential and commercial projects either in progress or being proposed, signalling that density and population numbers will likely climb (Philibert and Bodtker 2018).

The high population growth projected for B.C. is likely to exert increased pressure on the coastal socio-ecological systems in the planning area through increased coastal urbanization and demands for marine resources. Coastal urbanization has direct and indirect impacts on marine ecosystems and can result in changes in marine





circulation patterns, coastal erosion, increased pollution, degraded habitats and reduced biodiversity (Bindoff et al. 2019; Philibert and Bodtker 2018). Increased demands on natural

resources can lead to degradation and increased vulnerability of marine ecosystems, loss of ecosystem services, increased competition for marine space and more conflict between users. Indigenous and coastal communities have close cultural, social and economic ties to the marine environment and are likely to be the most impacted by these changes.

The Southern B.C. MSP process can collaboratively develop an understanding of population changes and implications to future demand for marine resources and marine space in the planning area. This could be integrated into relevant knowledge products developed through the knowledge sharing pathway and underpin alternative MSP future scenarios to support the decision-making process.

3.1.3 Technological Innovation and the Ocean Economy

Southern B.C. has a vibrant marine economy that includes Canada's largest port, domestic and international marine transportation, commercial fisheries, tourism and recreation. The planning area also supports land-based economic activity. For example, about 85% of forestry activities are supported by marine spaces for either the transportation or storage of goods (Big River Analytics 2021). B.C.'s marine sector provides employment to about 22,000 people in 2022 (Government of British Columbia 2022). B.C.'s Economic Plan StrongerBC was released in 2022

and outlines the province's plan for the economy in the next few years. Following the COVID-19 pandemic, floods, wildfires, and several other social and environmental hardships, the plan focuses on clean economic growth that supports B.C.'s population. Key goals in the plan include significant investment in trades and technology training, supporting a shift to clean emissions and, in the spirit of meaningful reconciliation, partnering with Indigenous communities in developing economic initiatives.

Advances in technological innovations and digitization have the potential to transform ocean economies, improve the efficiency, environmental performance and productivity of existing oceanbased activities and to open new frontiers for ocean development (e.g., offshore renewable energy, carbon storage and deep-sea mining). New digital technologies are also being applied to develop enhanced knowledge and understanding of marine ecosystems, their functions and sustainable management, by improving data quality, data volumes, connectivity and communications (OECD 2023). Examples of such technologies include artificial intelligence, big data, complex digital platforms, sophisticated arrays of sensors, small satellites, genetics and acoustics.

The Southern B.C. MSP process can consider innovations in ocean technologies and plans and policies for economic development of the region by:

- working with relevant agencies, Indigenous partners and stakeholders to identify key sectors where technological innovation will provide future sustainable economic opportunities in the planning area;
- identifying priority research areas where more in-depth studies are required to have a better understanding of potential future scenarios of ocean use;
- supporting and promoting innovative research initiatives and digitization to improve scientific data quality and coverage for a better understanding of marine ecosystems and processes in the planning area;
- considering marine space requirements of new sectors in the development of future scenarios for the spatial plan; and,
- promoting a dynamic, flexible and adaptive approach to the MSP process that can accommodate emerging technologies.

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