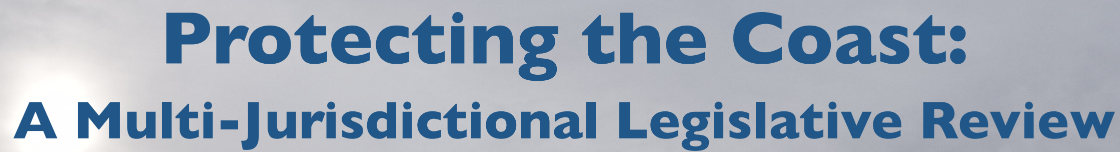

Protecting the Coast:
A Multi-Jurisdictional Legislative Review

Final Narrative Report
August 2018

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1. Executive Summary

This section contains the executive research summary. It includes a brief overview of the research conducted and synopsis of the most common components of coastal legislation and policies found in other jurisdictions.

A. General Principles

Most coastal protection regimes are, in reality, coastal management regimes using an **integrated management approach**. They are usually guided by **principles of sustainable management** and **best-available science**.

In many jurisdictions, generally speaking, coastal management focuses on three kinds of issues: **regulating development** and human activity (both to limit economic and human health hazards from the coastal environment, and to protect the environment from those activities), **identifying and mapping coastal floodplains** and areas vulnerable to sea-level rise erosion, and protecting and enhancing **public access** to the coast and its resources. While most jurisdictions provide some environmental protections to areas that have vulnerable, valuable, or biologically significant species, habitats and ecosystems, these protections do not form a large or significant part of coastal management regimes.

It is also important to note the **role of Indigenous peoples** in coastal management. Traditional and local knowledge are an important component of coastal management regimes, especially since many of the responsibilities for managing coastal areas ultimately fall on local or municipal (or Indigenous) governments. This means that Indigenous Peoples can be, and are, involved in decision-making affecting coasts and all of their ecosystems, parts, and features.

B. Key Components of Coastal Management and Protection

Coastal Development: Coastal development is regulated, and sometimes prohibited, either through local or municipal government (the majority), or through a specialized and authorized advisory or regulatory body (the minority). The regulation of coastal development is achieved through:

- Delineation of the "coastal zone"
- By-law development zoning
- Setbacks, buffer zones, and variances
- Permitting and licencing
- Operational and policy standards
- Environmental assessments

Access to Coast and Coastal Resources: Most Canadian jurisdictions do not focus on coastal access. Those that do tend to discuss or treat coastal access as an ambition, rather than a right or an obligation. Most international jurisdictions are particularly focused on establishing specific public rights of access to the coast and the use of coastal resources. Features of these include:

- Public right of access
- Creation of points of access to coast
- Development of public coastal areas for recreation
- Traditional and customary rights of access and rights of use of traditional resources

Coastal Erosion and Flooding: It may be best to think of coastal erosion and flooding together, outside of those developments that are already regulated via local and municipal governments. Most jurisdictions have legislation and policies that govern the authority over, and responsibility for, preventing human and economic hazards and risk from coastal flooding. Features of these regimes include:

- Floodplain mapping
- Setbacks, buffer zones, and variances
- Climate Change Action Plans (holistic approaches that include protection against storm surges and sea level rise)

Protection of Sensitive Coastal Ecosystems: Most jurisdictions have separate legislation and policies that offer protections to vulnerable and sensitive species and habitats. Many of these jurisdictions achieve this using an ecosystem management approach that considers the best available science, as well as local and traditional knowledge where relevant. Many of the necessary environmental protections come within the purview of other large regulatory regimes (for example: municipal waste disposal, water quality, aquaculture, and fisheries). Some of the types of coastal ecosystems that receive some attention in coastal management regimes include:

- Coastal marshes
- Coastal wetlands
- Rivers, streams, and estuaries (in the context of identifying "coastal zones" and for the purposes of delineation)
- Beaches and dune systems

Monitoring, Compliance, and Enforcement: Jurisdictions vary in the kinds of administrative regimes and mechanisms they use to monitor compliance and enforce the various coastal management and protection systems. Some of these mechanisms include:

- Creation of offences with penalties including fines and imprisonment
- Compliance and enforcement orders
- Restoration orders
- Progress and Monitoring Reports

Administrative Bodies: The administration of coastal management and protection regimes also involves various kinds of management bodies or persons responsible for ensuring effective implementation of legislation and policies. These include:

- Collaborative management bodies or networks
- Ministerial oversight
- Government agencies
- Quasi-judicial bodies
- Coastal Committees
- Advisory Groups

2. Overview

This section is an overview of the structure of the narrative report. It acknowledges the funding provided for the research, explains the research's scope and parameters, and describes the research objectives. It also includes a brief summary of the jurisdiction over the coast (federal, provincial, municipal and Indigenous) and concludes with an outline of the remainder of the narrative report.

A. Research Funding

The funding for this research was made available through a grant provided to the East Coast Environmental Law Association ("**ECELAW**") by the Nova Scotia Department of Environment in support of fact-finding research comparing the extent and manner in which select jurisdictions at the provincial or state and local government levels provide legal protection for their coasts. The research was conducted in anticipation of coastal protection or management legislation to be introduced in Nova Scotia in the future.

B. Methodology: Rationale and Parameters

This research, conducted independently by ECELAW, began with a process to select relevant jurisdictions that are representative of various kinds of coastal protection, whether that protection is embedded in legislation or policy. The selection process was conducted in collaboration with the **Ecology Action Centre** ("**EAC**") and the **Nova Scotia Department of Environment** ("**NSE**"), both of which provided suggestions and input into which jurisdictions would be best suited for review and research.

As part of this jurisdiction selection process, a general jurisdictional scan was conducted of coastal protection regimes, with a focus on English-speaking, common-law jurisdictions as a matter of convenience and practicality.

The scan first identified four key Canadian jurisdictions: British Columbia, New Brunswick, Newfoundland and Labrador, and Prince Edward Island. After further consideration, Quebec was added as another relevant province to be reviewed.

The Atlantic Canadian jurisdictions were selected because they are representative of the kinds of issues and environments most similar to Nova Scotia. Like Nova Scotia, these jurisdictions face similar issues in terms of demographics, climate, and culture. Furthermore, the Atlantic provinces collaborate closely and share many of the same challenges in terms of protecting their coasts.

British Columbia was selected because it is the other major coastal province. It also offers unique insights into how Indigenous peoples may be included in the processes of creating, administering, and enforcing coastal legislation and policies.

Consideration was also given to including international coastal jurisdictions in the research. Four jurisdictions were initially identified: California, the United Kingdom, Australia, and New Zealand. These international jurisdictions were selected based primarily on accessibility. All four jurisdictions are common-law jurisdictions whose primary language is English. Furthermore, the four jurisdictions are representative of a broad range of geography, demographics, and climate.

California was selected because it is generally considered a leader in coastal and marine protection and boasts a comprehensive legal regime and framework offering various levels of protection to coastal residents and habitats.

The United Kingdom was selected because it too offers a comprehensive legal framework for coastal protection and because of its similarities (parliamentary, common law) and differences (unitary state vs. federal state) with respect to Nova Scotia.

For Australia, the territories of South Australia and Queensland were initially identified. Given time and budget restraints, Queensland was selected as being fairly representative of the approaches used for coastal protection in Australia.

New Zealand was selected because of its unique approach to coastal management through a comprehensive natural resources management regime. Additionally, New Zealand has a large Indigenous population, and Indigenous rights, customs, and communities play a large role in coastal decision-making.

After further consultations and discussion between ECELAW, the EAC and NSE, Maine and South Carolina were later added as jurisdictions to be reviewed. Both of these states were selected as being representative of the eastern seaboard in the United States and because their coastal environments are similar to those in Nova Scotia.

C. Jurisdiction over Coastal Areas ("Who Owns the Coast")

Canada's ***Constitution Act, 1867*** recognizes and creates Canada's division of powers between the federal and provincial governments.[1] Section 91 grants the federal government legal authority over navigation and shipping, and seacoast and inland fisheries. Section 92 outlines provincial authority to create laws concerning matters within the provincial or municipal spheres, including local works. Additionally, Section 35 of the ***Constitution Act, 1982*** recognizes and affirms the existing Aboriginal and treaty rights of the Aboriginal peoples of Canada.

The federal authority manages coastal areas from the ordinary low watermark seaward to the 200 nautical mile limit of the Exclusive Economic Zone ("EEZ"). Additionally, the federal government also oversees federally owned properties, land designations under the *Indian Act*, fisheries, and marine navigation.

1 See sections 91, 92 and 35.

The provincial authority manages everything landward from the ordinary low water mark, except privately owned water lots such as private wharves. In Nova Scotia, the Provincial government also governs provincial lands, activities within the province, the regulation of tidal energy development off Nova Scotia, inland waters such as harbours, bays, estuaries, and water bodies between the jaws of land (except canals and public harbours that were transferred to the federal authorities at the time of Confederation).

In Nova Scotia, municipal authority is granted by the province through the ***Municipal Government Act*** ("**MGA**"). It grants municipal governments the power over municipal land-use planning, including the creation of Municipal Planning Strategies and Land Use By-Laws.[2]

Aboriginal peoples in Canada (including Métis, First Nations and Inuit) are accorded rights under section 35 of the *Constitution Act*, 1982. Additionally, the Supreme Court of Canada has held that this section also obliges government to consult Indigenous communities when the Crown contemplates action that may adversely affect their Aboriginal or treaty rights.

D. Outline

This Narrative Report sets out to provide an overview of the jurisdictions that were reviewed and identify the main components of coastal protection regimes.

It begins with a summary of the legislative and policy frameworks in each jurisdiction. This includes identifying the key enabling statutes in each jurisdiction that help to set the stage for regulatory and policy approaches to managing and protecting coasts and coastal areas.

Next, the primary discussion section will highlight the key components that were found in most coastal protection regimes. This starts with a discussion about the delineation of coastal zones in different jurisdictions to establish the kinds of areas that have or do not have legal protection. Then, four key coastal issue areas are reviewed: coastal development, coastal flooding, access to the coast and its resources, and protection of sensitive coastal ecosystems.

Finally, the Narrative Report will conclude with a review of the kinds of administrative models to govern, monitor, and enforce coastal governance regimes. This includes a review of the most used types of mechanisms from issuance of fines and permits to the creation of offences.

For more information, please consult this Narrative Report's companion documents: The **Coastal Protection Jurisdiction Tables**, the **Coastal Protection Jurisdiction Comparative Spreadsheet**, and the **Nova Scotia Municipal Coastal Protection Tables**.[3]

2 East Coast Environmental Law Association, "Who Owns the Coast", 2nd Edition (Aug, 2018).

3 These companion documents are available at the East Coast Environmental Association website: www.ecelaw.ca.

3. Jurisdiction Summaries

This section provides summaries of each of the jurisdictions that were researched and reviewed for the purposes of this Narrative Report. The summaries are not meant to be exhaustive reviews of the applicable legislation pertaining to coastal protection and management within each jurisdiction. Rather, they summarize the key pieces of legislation and policies that provide the framework for coastal management and protection within those jurisdictions.

A. Summary of Select Canadian Provinces

Canadian jurisdictions have taken a strong policy-focused approach to coastal protection and management. In fact, none of the Canadian jurisdictions that were reviewed have a comprehensive coastal protection statute to guide coastal development and management. Instead, the coastal provinces each have a horizontally-structured legal regime that governs aspects of coastal issues. This means that the identified coastal issues (development, access, flooding and erosion, and sensitive ecosystems) are addressed as separate issues by different legislation and policies. Any substantive protections are usually general and broadly-worded within the framework legislation. Regulations and policies are then used to provide the details, if any, for the management of the different issue areas.

Municipalities or local governments do much of the work with respect to determining and managing appropriate coastal land-use and land development, regulating local coastal activities, and carrying out appropriate protections for coastal flooding and erosion.

The provinces vary in their approaches to public access to the coast and coastal resources, including traditional and customary Indigenous access and use. Some are silent on the issue while others provide minimal or broadly worded rights for citizens and businesses to access the coast or extract coastal resources.

Protection of sensitive coastal habitats generally falls within provincial jurisdiction, rather than to municipal authority. All the provinces have legislation and policies that provide various levels of protection for vulnerable or at-risk species, including those along the coast. None of the Canadian coastal provinces reviewed make it a specific priority to protect coastal habitats or species. Most provinces also have legislation protecting, and regulating activities on, beaches and wetlands.

I. British Columbia

British Columbia has no comprehensive coastal protection regime, legal or otherwise. It does have various environmentally and non-environmentally oriented statutes and regulatory regimes to govern various aspects of coastal activities like land-use, resource management and extraction, fisheries and aquaculture, and water use.

The ***Land Act*** is the primary legislation used in British Columbia to govern land-use, including regulation of developments and commercial activities. Many of the powers and responsibilities for land-use are then passed onto municipal governments through the ***Community Charter Act*** ("**CCA**") and ***Local Government Act*** ("**LGA**"). The CCA provides the framework for the province's municipalities (other than Vancouver), including authority to create by-laws and by-law enforcement. The LGA is the primary legislation dealing with regional districts and improvement districts. It is the framework governing building of structure and operations and it gives municipalities and regional districts authority for land-use planning. Municipal governments in British Columbia achieve their work under these statutes through a permitting system for land-use and development.

These two laws also give municipal governments responsibility to regulate developments in areas subject to erosion or flooding. Municipal governments must consider the **Flood Hazard Area Land Use Management Guidelines** when creating by-laws. The guidelines create set-backs for building within floodplain areas that are identified by that municipal government.

Additionally, the ***Water Sustainability Act*** is the primary legislation used to regulate the province's use of water resources, including aquatic ecosystems. It requires the establishment of "water objectives" to maintain water quality.

Perhaps one of the central components of BC's coastal and marine governance is the **Marine Planning Partnership for the North Pacific Coast** ("**MaPP**" or "**MaPP Program**"). This is a collaborative initiative between the provincial government and seventeen First Nations that creates four coastal and marine management sub-regions. A management group governs each sub-region and develops a marine plan to set out policy objectives and strategies to facilitate sustainable economic growth using collaborative management of resources. The agreements are not legally binding.

The MaPP program is perhaps the most substantive coastal protection regime within British Columbia. The objectives of the program are the joint management of coastal resources, identification of marine uses that support sustainable communities, protection and restoration of marine ecosystems, and support of marine economic development through appropriate zoning and regulation.

Each management group creates their respective coastal management plan (the "**marine plan**") using an ecosystem-based ("ESB") approach. These management plans set out a framework for managing resources using best-available science alongside traditional and local knowledge. The management plans provide general management principles and directions, planning priorities for economic development, provisions for spatial zoning and planning, and provisions for implementation, monitoring, and compliance.

II. New Brunswick

New Brunswick does not have a comprehensive legal framework for coastal protection. However, it has a **Coastal Areas Protection Policy** that was developed in 2002 to help guide the management of land-based coastal resources through sustainable development. It was meant to set out minimum standards

for coastal developments, both public and private. The policy includes lists of activities that require an environmental assessment. The policy is comprehensive in the sense that its objectives include reduction of threats to safety and property damage from storm surges and flooding events, protection of coastal ecosystems like wetlands, and maintaining the buffering capacity of coastal areas. It also sets out an operating principle requiring public access for public purposes.

Like many other Canadian and non-Canadian jurisdictions, New Brunswick delegates many of its land-use and development responsibilities to municipal governments. Under the ***Community Planning Act***, the province's municipal governments are responsible to regulate various coastal development and activities.

The ***Clean Water Act*** allows the Minister to create regulations that designate flood hazard areas.[4] Although there is no regulatory regime created under this Act, the province's **Flood Risk Reduction Strategy** was produced in 2014 and is intended to identify flood hazard areas, provide a planning strategy to reduce flood risks, and inform flood risk mitigation.

New Brunswick does not have legislation specifically addressing or protecting sensitive coastal ecosystems. However, both the ***Clean Water Act*** and ***Clean Environment Act*** provide protections for some species and habitats. For example, the *Clean Water Act* allows coastal designation orders to be made to designate certain coastal areas as protected areas.[5] The order will include a schedule of requirements and a plan of the protected area.[6] A similar Wetlands Designation Order under the *Clean Environment Act* can be issued and could target vulnerable coastal wetlands.[7] Both types of designation orders can include prohibitions or restrictions on water use and the kinds of activities allowed. The orders may also create standards to be followed in the course of these activities.[8]

Under its **Water Strategy for New Brunswick**, the province sets out water-related priorities, including wetland protection and management generally. It also calls for the development of a regulatory framework to designate coastal protected areas under the *Clean Water Act*.[9] As of this research, no regulatory framework like that exists.

III. Newfoundland and Labrador

Newfoundland and Labrador does not have a comprehensive statutory regime for coastal protection and management. However, its **Coastal and Ocean Management Strategy and Policy Framework** ("**Framework**") sets out a long-term vision for managing and conserving the province's coastal and ocean areas and resources. Like British Columbia's MaPP program (above), this strategy policy combines coastal and ocean management. The Framework discusses and elaborates on the role of **Coastal Management**

4 *Clean Water Act*, s. 40(r).

5 *Ibid*, s. 14.

6 *Clean Environment Act* s. 6.4(7).

7 *Ibid*, s. 6. The Minister is responsible for keeping a general register of Coastal Designation Orders under s. 6.4(11).

8 *Ibid*, s. 6.1(6).

9 *Clean Water Act*, s. 23. It reads: "Develop a regulatory framework to designate coastal protected areas…".

Areas ("**CMAs**"), which were established by the Department of Fisheries and Oceans ("DFO") together with the provincial government. Five CMA committees currently exist in Newfoundland and Labrador to manage the CMAs. They are comprised of communities, businesses, local industries, and other stakeholders.

The province's ***Water Resources Act*** ("**WRA**") is applicable to the general governance and management of water resources in Newfoundland and Labrador. It sets out regulation-making power for water-related objectives, including land-use and flooding area risk reduction. For example, regulations may be created that undertake mapping and inventory of wetlands, flood plains, shorelines, coastal waters, and other aquatic systems.[10] There are currently no such regulations. The WRA also authorizes the creation of a permitting system to allow for certain activities that require permits pursuant to the regulations. Persons are prohibited from carrying out any activity that requires a permit. There are no regulations under the Act that relate to use or modification of shorelines. The WRA sets out the criteria for issuance of permits.[11]

Under the WRA, the Minister of Municipal Affairs and Environment can issue an order where a party has not complied with the Act, including a condition of a licence or permit. The order can require the non-complying party, at their own expense, to stop an activity and remedy or prevent adverse effects. The WRA also creates offences and penalties for failure to comply with its provisions.

The province also has the **Policy for Development in Shore Water Zones**. This policy instrument must be considered before the Minister can approve any permit for development in any Shore Water Zone. These zones are created under the *WRA*.

It is also important to note that prior to creating a strategy for management of estuarine, coastal, and marine areas within the Labrador Inuit Settlement Area created pursuant to the ***Labrador Inuit Land Claims Agreement***, the provincial government must consult the Nunatsiavut Government about its plan. This consultation includes establishment, and possible participation, of an Aboriginal advisory or management body and establishment of environmental guidelines, objectives and criteria for the quality of those areas affected.[12]

IV. Prince Edward Island

Prince Edward Island does not have a comprehensive legal regime or policy framework dealing with coastal protection. Its ***Environmental Protection Act*** is the general legislation dealing with environmental protection, including non-specific coastal protection and management. It provides power to the Governor in Council to make regulations pertaining to wetlands and watercourses, including wetlands that are found along the coast. [13] Contravention or violations of the Act or its regulations can result in an offence, which is punishable by fines or imprisonment.

10 *Water Resources Act*, s. 30.

11 *Water Resources Act*, s. 48.

12 Newfoundland and Labrador Land Claims Agreement, s. 6.3.3.

13 *Environmental Protection Act*, ss. 25 (m), (m.1), (m.2).

Under the **Subdivision and Development Regulations**, which are created under the province's Planning Act, subdivisions of land that are proposed within a coastal area must have regard to a buffer zone that is a minimum of 60 feet (18.3 metres) or 60 times the annual erosion rate, whichever is greater. This is measured from the top of the bank adjacent to the beach.[14] Variances may be allowed to build within the set buffer zone where the variance does not violate the intent and purpose of the Regulations, there are unique circumstances, and the circumstances do not intentionally disregard the requirements of the Regulations.[15] While the intent and purpose of the Regulations is not set out explicitly within the Regulations, the objectives of the *Planning Act* include protection of the unique environment of the province.[16]

The **Watercourse and Wetland Protection Regulations**, made pursuant to the *Environmental Protection Act*, prohibit anyone without a licence or Watercourse or Wetland Activity permit to alter a watercourse or wetland. This includes coastal watercourses or wetlands.[17] They also establish a buffer zone around the entire island province, in which zone development and activity are restricted or prohibited.

V. Quebec

Quebec does not have comprehensive legislation dealing with coastal protection. Like other Canadian provinces, Quebec has a statute dealing with land-use and development, called ***An Act Respecting Land Use Planning and Development***. It sets out the governance regime for land-use planning and creates a body that is responsible for its governance. Under the statute, the governing body must set out a regional municipal land-use and development plan for each municipality. The plans must identify areas that should be subject to restrictions for public safety, including flood and erosion zones, as well as areas that require environmental protection with respect to wetlands and water bodies.

Quebec's ***Environmental Quality Act*** ("**EQA**") is the key statute dealing with environmental protection. This includes protection of sensitive species and habitats, adapting and responding to climate change, and setting out principles for sustainable development. The EQA is the enabling statute for a number of regulations and policies that impact the coast. The EQA requires the provincial government to create the **Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains** ("**Protection Policy**"). The provincial government must also implement the protection policy and coordinate its application.

The Protection Policy has the force of law and sets out minimum protections for littoral zones and floodplains. This includes coastal areas. Some activities are prohibited within those areas. Under the policy, all structures, undertakings, or works that encroach on the littoral zone must be authorized by a permit before they commence.

Under the EQA, the Minister of Sustainable Development, Environment and Parks may impose monetary administrative penalties in the form of fines on any party, including a municipality, that does not comply with the act or its regulations (that includes the Protection Policy).

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14 *Subdivision and Development Regulations*, s. 16.

15 *Subdivision and Development Regulations*, s. 10.

16 *Planning Act*, s. 2(c).

17 *Watercourse and Wetland Protection Regulations* s. 2.

B. Summary of Select International Jurisdictions

Unlike Canadian jurisdictions, which tend to have no centralized or comprehensive statutory framework or regime for coastal protection, many extra-Canadian jurisdictions do have a more comprehensive statutory framework. One of the reasons for this may be that most of these coastal protection or management regimes are much older than those in Canada. Many have been in place for decades.

Especially in the various state jurisdictions within the United States, the coastal protection or management regimes usually consist of one major statute or Code of Laws, under which various regulations and policies are then created to carry out the objectives of coastal protection and management.

Another distinguishing feature of many extra-Canadian jurisdictions is that their coastal protection or management regimes, unlike those found in Canada, tend to include provisions that set out rights of public access to the coast and public use of coastal resources. Finally, many of the jurisdictions have a separate governing body, usually a committee or advisory body, that oversees or manages, in part or in whole, the coastal regime.

I. California (US)

California has a comprehensive coastal protection regime. At its center is the ***Coastal Act*** ("**CA**") that was created in 1972. The exception to this is coastal protection and management in the San Francisco Bay area, which has its own legislation called the ***McAteer-Petris Act*** ("**MPA**").

The Coastal Act is, in reality, an assortment or collection of various state codes, strung together as an "Act". It is composed of a number of Chapters and sub-sections that relate to different functions or issue areas. The heart of the CA is Chapter Three, which sets out a number of protections for the coast, as well as coastal access rights. The CA makes protection of the coast and its resources a high priority in California.

The CA authorizes the creation of, and is administered by, the **California Coastal Commission** ("Commission"). The Commission has authority to issue administrative orders requiring compliance with the CA, including removal of unpermitted developments or activities, and for orders requiring restoration of disturbed areas.

The CA also creates a permitting regime for all construction and development along the shoreline and coastal zone. This is administered by the Commission, which receives applications for construction or development within affected areas. The CA also has provisions related to mitigating and minimizing effects on the character of the coast, flood and erosion prevention and mitigation measures, and sensitive ecosystem protections.

A key feature of the CA, and one of the primary motivations for its creation, is the establishment and protection of the right of the public to access and use the coast and its resources. Whereas the Coastal Commission is authorized to apply for court enforcement of the CA's other provisions, the Commission has

direct authority to deal with access issues, including issuance of fines where access is unlawfully restricted or prevented.[18] The CA also has provisions that create a balance between accessing a coastal area and that area being overcrowded and overused by the public.

Finally, the CA mandates the creation of **Local Coastal Programs** ("LCPs") by local municipalities.[19] The LCPs set out zoning and zoning restrictions, buyout programs, and development rights, and they also provide for creation of set-back requirements for local developments. The LCPs must be approved by the Commission. Once they are, the local government takes over permitting.

Like the CA, the MPA establishes a commission that is responsible for overseeing and carrying out the objectives of the legislation. The Bay Conservation and Development Commission regulates development around the San Francisco Bay area.

II. Maine (US)

Similar to California and South Carolina, an entire section of Maine's state code is dedicated to coastal protection and management. Part of its Revised Statutes, ***Title 38 – Waters and Navigation*** ("***Title 38***"), is responsible for setting out the various legislative protections and enabling provisions for further regulatory and policy efforts for coastal management. While this section of the state code governs all aspects of water use and management, beyond merely its coastal aspects, certain chapters within *Title 38* exclusively target coastal management.

Sections 435 to 449 of *Title 38* are collectively (and informally) referred to as the "**Mandatory Shoreland Zoning Act**", which creates a permitting and ordinance regime for the state's coastal municipalities. For example, Section 435 subjects the shoreland area to zoning and land-use controls.

Chapter 19 ("Coastal Management Policies") of *Title 38* sets out the policy statements to guide the state's coastal resource management. It directs state and local agencies that have regulatory, planning, development, or management authority for coastal resources to conduct themselves within the bounds of the set "policies".

Chapter 21 ("Coastal Barrier Resources System") of *Title 38* creates protection and conservation measures for certain areas along Maine's coast and places limitations on state funding to affect those areas with respect to development. The section sets out a process for establishing watershed districts, which are governed by a board of trustees for the purpose of natural resource development and sensitive ecosystem protection and rehabilitation.

Finally, Chapter 1000 ("**Guidelines for Municipal Shoreland Zoning Ordinances**") sets out the ordinances allowed for the state's municipalities to follow. The guidelines prescribe the acceptable land-

18 *Coastal Act*, s. 30212.5 (Access -General).

19 *Ibid*, s. 30500.

uses and activities, and they also deal with non-conforming structures, repairs and maintenance, and the permitting process for granting ordinances. They also divide the state into districts. Different uses and activities are allowed within each district.

Maine's coastal management regime does not have specific provisions to deal with coastal flooding. Coastal erosion is addressed indirectly through the permitting provisions that include buffer areas and set-backs.

Like all other jurisdictions, *Title 38* and Chapter 1000 create a number of prohibitions and offences for failure to comply with their provisions. Enforcement officers monitor and enforce compliance with the code. Fines are also used.

III. South Carolina (US)

Like California and Maine, South Carolina has a state code that provides comprehensive coverage of a range of coastal-specific issues. Chapter 39 ("Coastal Tidelands and Wetlands") of Title 48 of the state's Code of Laws is often referred to as the ***South Carolina Coastal Zone Management Act*** ("**CZMA**").

The CZMA establishes a permanent Coastal Council, requires development and administration of a Coastal Management Program, creates a permitting regime for activities within "critical areas" of the coastal zone, and provides a framework for applying the coastal management program through local and state agencies. Activities occurring within the coastal zone require a permit, which is approved if the activity (including development) meets all the considerations and policies as outlined in the CZMA.[20]

The Coastal Management Program also helps to guide the purposes of the Act by containing policies and procedures to be used for decision making regarding activities within critical areas of the coastal zone. Approval for permits under the state regulations must consider the policies set out in the program.

Chapter 30 of South Carolina's **Code of State Regulations**, which are created pursuant to the CZMA, set out details to accomplish the purposes of the Act. This includes the details of the permitting process and list of activities exempt from requiring a permit. The Regulations also set out the baselines of the coastal zone.[21]

The sections of *Title 48* from section 250 onwards are often referred to as the ***Beachfront Management Act***. It is a part of the state's Code of Laws dedicated to environmental protection that gives guidance and provides state policies related to "beachfront" activities and decision-making. Both the **State Comprehensive Beachfront Management Plan** and the **Local Comprehensive Beach Management Plans** are created under this section of the Code of Laws. The key feature of this is the promotion of public access to the state's coastal features and enhancement of public access points. The management plans also require identification of beach and coastal erosion areas, as well as strategies to deal with that erosion. Finally, they set out guidelines on priority uses of the coastal areas.

20 Coastal Zone Management Act, div. 48, c. 39, s. 150.

21 See regulation definitions (4)(a-c).

IV. New Zealand

In New Zealand, the ***Resource Management Act*** ("**RMA**") provides the statutory anchor upon which laws and policies are created for the management of natural resources in the country, including coastal resources.

The RMA requires the Minister of Conservation to prepare a **New Zealand Coastal Policy Statement** ("**NZCPS**"). This sets out policies that help achieve the purposes of the RMA with respect to the coastal environment. It also requires regional councils to prepare regional policy statements and a regional coastal plan that set out objectives and policies with regard to the coast. The regional policy statements and regional plans must comply with the RMA and be compliant with the NZCPS. The NZCPS must be applied by all persons exercising functions and powers under the RMA.

The NZCPS sets out Policy Statements, each with their own focus. Some of the policy statements focus on the need to create plans that identify areas that would be inappropriate for development and other land-use strategic planning considerations, identify coastal hazards related to flooding and erosion, and set out rights of access to the coast and its resources.

The NZCPS recognizes broad public rights of access to the coastal marine area, for both active and passive recreation. The policy recognizes the need to protect public space for future generations, the need to maintain and enhance access points, and the need to consider of human activity with respect to climate change effects.

The NZCPS recognizes the Indigenous rights, traditions, and cultures of Indigenous peoples. It provides for Indigenous decision-making rights and powers and requires government consultation with Indigenous groups for decisions affecting the coastal environment.

Recognition of Indigenous traditional use and culture within the coastal environment is also provided by the ***Marine and Coastal Area (Takutai Moana) Act***, which creates a sui generis property class for the marine and coastal environment, meaning the land is not vested in the New Zealand Crown; instead, the common marine and coastal areas have special status as a common public resource.[22]

The RMA creates a number of offences for contravention of the Act. It also enables New Zealand's Environment Court to require persons to cease activities in contravention of the Act.

V. Queensland (Australia)

The state of Queensland in Australia has no comprehensive statutory regime governing all aspects of coastal management and protection; however, its ***Coastal Protection and Management Act*** ("**CPMA**") does serve as the framework for the protection and management of some aspects of its coastline. The CPMA sets out and defines the coastal zone and establishes a monitoring, compliance, and enforcement regime.

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22 *Marine and Coastal Area (Takutai Moana) Act* s.11.

Coastal Management Districts are created pursuant to the CPMA for coastal areas that need protection or management. The Minister for Environment and the Great Barrier Reef may require any activity within the district to cease, or may require resumption of any activity, if the activity is causing, or is likely to cause, an adverse effect on coastal resources.[23] The districts are created using mapping processes like sea-level rise projections to determine erosion prone areas. Approval of any development in these districts will depend on the type and nature of the development and may be subject to additional assessments under other legislation like the *Sustainable Planning Act*.

The CPMA also requires the creation of the national **Coastal Management Plan**, which provides policy guidance for the management of coastal resources. It is targeted for use by local governments, which are responsible for managing large areas of public coastal land.

Finally, the CPMA requires the creation of **erosion prone area plans**. These plans are used to develop assessments under other planning schemes like the Planning Act (below). Erosion prone areas have already been identified for all coastal local government areas and are publicly available.[24]

The other key statute in Queensland with respect to the coast is its ***Planning Act***. Under the Planning Act, each local (municipal) government must include an integrated state, regional, and local planning and development policy for the entire area under its jurisdiction.

The **State Planning Policy** ("**SPP**"), which is created under the *Planning Act*, is a policy instrument that supports this integrated state planning scheme by setting out the state interests that apply to and should be given effect by each local planning scheme. The state interests must be incorporated into all planning and development outcomes. One of the state interests is protection of the coastal environment. It includes: protection of coastal processes and resources from infilling and redevelopment; conservation of natural landforms, wetlands and native vegetation; avoidance of development in flood or erosion prone areas; and the creation of opportunities for public use and access of coastal lands and resources.

The **Planning Regulation (2017)** is also created under the *Planning Act*. The Regulations create zones for the local planning instruments (above) and set out which types of development, as defined under the Act, require an environmental assessment.[25]

Coastal development generally requires an assessment under the *Planning Act* to be approved. This process is meant to protect and conserve the coast for environmental, social, and economic reasons. Any activities not defined as "development" under the *Planning Act* must still consider the Coastal Management Plan.

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23 *Coastal Protection and Management Act*, s. 59(2).

24 See: https://www.ehp.qld.gov.au/coastal/development/assessment/erosion_prone_areas.html.

25 *Planning Regulation*, s.28.

VI. United Kingdom

Coastal protection and management in the United Kingdom is provided under three key statutes.

First, the ***Coast Protection Act*** was created in 1949 to provide the framework for protection of the island nation's coast against erosion and encroachment by the sea. It gives powers to local governments within each maritime district to undertake coastal protection work.

Second, the ***Countryside and Rights of Way Act*** ("***CROW Act***") is primarily a statute setting out the public rights of access to the coast, both for recreational use and resource use.

Third, the United Kingdom deals with coastal flooding and erosion through the ***Flood and Water Management Act.*** This legislation governs sustainable management of flood and coastal risks and creates a regulatory regime. It requires the Environment Agency to develop, apply and maintain a strategy for flood and coastal erosion risk management throughout the country. This **National Flood and Coastal Risk Management Strategy for England** includes provisions that the Environment Agency must avoid inappropriate building or redevelopment in areas of high flood or coastal erosion risk.[26] The Act also requires local authorities to develop, maintain, and apply local flood risk management strategies that are consistent with the national strategy.

There are no separate statutory protections for sensitive coastal ecosystems. Many species at risk, sensitive species, and ecosystems are provided protections under the UK's ***Natural Environment and Rural Communities Act***. It identifies "priority" species or habitats to protect. This includes coastal marshes and beach environments.

26 The National Flood and Coastal Erosion Risk Management Strategy for England, s. 3.3.2.

4. Comparative Analysis: Components of Coastal Protection

*This section begins with an introduction on how various jurisdictions delineate and define their coastal zones. Next is a discussion of how Indigenous rights, customs, communities, and language are incorporated into coastal management regimes. It continues with a comparative analysis of the four key coastal "**issue areas**" (development, access, flooding and erosion, and coastal ecosystem protection) by highlighting the different kinds of mechanism used to protect and manage coastal areas in different jurisdictions. It concludes by canvassing the different approaches to administration of coastal protection and management regimes, including monitoring and enforcement.*

A. Delineating and Defining the "Coastal Zone"

Identification of the areas in which coastal protection or coastal management occurs (the "**Coastal Zone**" for the purposes of this Report) is an important first step in determining the kinds of components that coastal protection laws should or will include. Every jurisdiction has some form of Coastal Zone that is both delineated and defined. It should be noted that no jurisdiction is explicit about this distinction.

(i) Delineation:

Many jurisdictions delineate the boundaries of their coastal zones by creating an area within a certain (arbitrary) distance of the **high-water mark** or **low-water mark**. In fact, this is a key component in the delineation of most coastal zones. Some jurisdictions also use maps to provide more precision or detail for decision-makers. The boundaries of coastal zones can have both horizontal and vertical dimensions. Coastal zones may also be further divided to create sub-types of zones or coastal districts.

For example, the "coastal area" under New Brunswick's ***Clean Environment Act*** is defined as the air, water, and land between the lower low water large tide, and one kilometre landward of the higher high-water large tide or one kilometre landward of any coastal feature, whichever extends farther inland.[27] It should be noted that this definition of the coastal area includes a vertical component (the air). Several other jurisdictions also include a vertical limit in their description of their coastal zones.

The state of Queensland, Australia, defines and delineates its coastal zone using a **coastal zone map**. This coastal zone includes both the airspace above the surface of the area and the subsoil below.[28] The coastal zone map is a map that is certified by the chief executive. Queensland's coastal zone includes land and

27 *Clean Environment Act*, s. 1.

28 *Coastal Protection and Management Act*, s. 15.

waters landward of coastal waters and seaward of the coastal zone inner limit.[29] The coastal zone inner limit is further defined as an imaginary line, whose points represent the most landward of either five kilometres of the high-water mark or the point nearest the high-water mark where the land reaches a height of 10 metres (Australian Height Datum).[30]

In Maine, the state's coastal **shoreland areas** are defined as all land areas within its coast that are within 250 feet horizontally of the upland edge of a coastal wetland, including all areas affected by tidal action.[31] Municipalities do have the discretion to extend this area beyond the minimum limits where necessary to protect public health, safety, and welfare, and to avoid problems associated with floodplain development.[32] Similar to Queensland, Maine's shoreland zones are shown on an official Shoreland Zoning Map, which is part of the **Guidelines for Municipal Shoreland Zoning Ordinance**. The shoreland zones are further divided into districts, each with their own objectives and limitations.[33]

California's coastal zone is generally defined in its **Coastal Act**. It includes the marine area extending to the state's jurisdictional limits, including all offshore islands, and extends inland 1000 yards from the mean high tide.[34] The definition leaves flexibility for "significant coastal estuarine, habitat and recreational areas" that extend further than 1000 yards inland, up to five miles landward of the mean high tide line.[35] Unlike the other American states, California's CA requires its Coastal Commission to prepare and adopt a detailed map of the entire coastal area. Further authority for deviations of the boundaries of the coastal zone are provided for clarity for the Commission's work.[36]

(ii) Definition:

In many jurisdictions, defining what is included in the coastal zone is a matter of providing a definition of the "coast" or "coastal area". A definition is usually a broad, non-technical description that encompasses the entire coastline and include a description of one or more of its functional features. Common coastal features used to describe coastal zones include the presence of tides, the saline content of the water, and the presence of unique coastal or marine vegetation, species, or ecosystems. For example, unique coastal ecosystems can include coastal wetlands or salt marshes, as well as beaches or dune systems. Sometimes jurisdictions will offer broad definitions of these features that encompass more than just a part of the coast, but that necessarily include the coast. This usually occurs in jurisdictions where the coastal protection or management provisions offered are part of a broader regime (for example, coastal flooding as part of a broader flood management regime).

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29 *Coastal Protection and Management Act*, s. 18.

30 *Ibid*, section 18(3).

31 Chapter 1000: *Guidelines for Municipal Shoreland Zoning Ordinance*, s. 3.

32 *Maine Code of Laws Title 38*, Chp 3, s. 440.

33 *Maine Code of Laws Title 38*, Chp 3 s. 435. Shoreland areas; see also Maine, Chapter 1000: *Guidelines for Municipal Shoreland Zoning Ordinance*, s. 9. *The district types include* Resource Protection, Limited Residential, Limited Commercial, General Development I & II, and Commercial Fisheries/ Maritime Activities.

34 *Coastal Act* s. 30103.

35 *Ibid*.

36 *Ibid*, s. 30103(b).

In Quebec, the high-water mark is the boundary that marks the limit of its **Littoral Zone** and the shoreline. It corresponds to the natural high-water mark, defined as the point where predominantly terrestrial plants succeed predominantly aquatic plants, or, where there are no aquatic plants, the point closest to the water where terrestrial plants no longer grow. The definition also further describes aquatic plants and their potential characteristics.[37] If the above definition cannot be used to determine the high-water mark, the two-year flood limit can be used as a reference point.[38]

South Carolina defines its coastal zone as all the coastal waters and submerged lands seaward to jurisdictional limits, as well as all land and water that contain one or more **critical areas**.[39] Critical areas means coastal waters, tidelands, beaches, and dune systems (an area from the mean high-water mark to the setback line as further defined within the Act).[40] South Carolina's inclusion of tidelands in the description of its coastal area is noted here.

Tidelands in that jurisdiction include all areas that are at or below mean high tide, as well as coastal wetlands, mudflats, and similar areas that are contiguous with or adjacent to coastal waters and that are integral parts of the estuarine systems. Coastal wetlands subsequently include marshes, mudflats, and shallows that are "periodically inundated by saline waters", as well as areas that are "characterized by the prevalence of saline water vegetation capable of growth and reproduction".[41]

In British Columbia, the marine plans created under its collaborative **Marine Plan Partnership for the North Pacific Coast** ("**MaPP Program**") delineate areas based on marine areas and uses. Those areas include the **foreshore** (intertidal zone) and coastal inland waters on the outer coast, as well as lands covered by water. Additional management is achieved through spatial planning (marine mapping).[42]

In Newfoundland and Labrador, the coastal zone is described as a **Shore Water Zone** and includes areas that are intermittently occupied by water as a result of the naturally occurring "fluctuating water level in a body of water". This can include both fresh or salt water bodies. The low- and high-water marks are the edges of this zone.[43] Like several other jurisdictions, Newfoundland and Labrador's coastal zone is a coastal area defined, at least in part, by its tides. These Tidal Zones fluctuate and change depending on the area of the coast and usually require some aspects of floodplain mapping (below).

New Zealand's ***Resource Management Act*** identifies its coastal area as the foreshore, seabed, and coastal water, as well as the air space above the water. The area captured within this zone is that space between the limit of the **territorial sea** (which is generally considered to be 12 nautical miles seaward) and the **mean high-water springs**. A further exception and calculation is provided for areas where that landward line

37 *Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains* s. 2.1.

38 *Ibid*, s. 2.1(d).

39 *Coastal Management Act* (title 38, c. 39), definition section.

40 *Ibid*, definition section. See Section 48-39-280 for the determination of the setback lines.

41 *Ibid*, definition section.

42 See page 13 for criteria for designating zones. There is a full list of existing designations.

43 Newfoundland and Labrador Policy for Development in Shore Water Zones s. 4 (definitions) created pursuant to the *Water Resources Act*.

crosses the mouth of a river: the lesser of either 1 kilometre upstream or the point upstream that is the distance of the width of the river multiplied by five.[44] New Zealand's RMA further defines its **foreshore** by the presence of tides: it is the land that is "covered and uncovered by the flow and ebb of the tide at mean spring tides".[45] This is an example of the way that delineation and definition of the coastal zone are not easily separated.

Prince Edward Island is another one of the jurisdictions that sets out and defines different features of coastal and aquatic areas. Many of the protections in its **Watercourse and Wetland Protection Regulations** are created by limiting and restricting activities within a **watercourse area**. This is a common type of area within many Canadian jurisdictions. In PEI, "watercourse" means an area that has a sediment bed (whether or not it contains water), including the bank and shore of any stream, spring, creek, brook, river, lake, pond, bay, estuary, or coastal body.[46] The features within the definition of a watercourse are then further described in the definition section.[47]

Another common coastal feature that many jurisdictions protect is **wetland areas**. Some jurisdictions will generally designate or identify a coastal wetland as a type of wetland, while others specifically identify the features of a coastal wetland. In PEI for example, a wetland is described as (i) an area which contains hydric soil, aquatic or water-tolerant vegetation, and may or may not contain water, and includes any water therein and everything up to and including the wetland boundary, and (ii) without limiting the generality of the foregoing, includes any area identified in the Prince Edward Island Wetland Inventory as open water, deep marsh, shallow marsh, salt marsh, seasonally flooded flats, brackish marsh, a shrub swamp, a wooded swamp, a bog or a meadow.[48]

(iii) Coastal Districts and Sub-division of Zones:

As stated above, some jurisdictions further divide their coastal zones into specific types of zones that serve specific purposes or encompass certain features. For example, New Brunswick's government adopted a management approach as part of its **Coastal Areas Protection Policy** that is based on the areas' sensitivity to impacts from human activities.[49] The policy creates three **sensitivity zones**: Zone A is the area closest to the water, known as the coastal lands "core" area; Zone B is the area landward of the core zone and is defined as a "buffer" zone; Zone C is the area further landward of the buffer zone and is defined as a "transition" zone. As stated in the policy, this is the same zoning approach taken by the United Nations Educational, Scientific and Cultural Organization ("UNESCO").

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44 *Resource Management Act*, s. 2 (Interpretation).

45 *Ibid.*

46 *Watercourse and Wetland Protection Regulations*, s.1 (ee).

47 In the PEI *Watercourse and Wetland Protection Regulations*, this includes definitions for sediment bed, shrub swamp, watercourse boundary, wetland boundary and wooded swamp.

48 *Watercourse and Wetland Protection Regulations*, s.1 (gg).

49 Coastal Areas Protection Policy, p. 08.

UNESCO has created biosphere zones to offer different degrees or levels of protection to different areas. The core area is provided with the strictest ecosystem protections, with the purpose of conserving the landscapes, ecosystems, species, and genetic variation. The buffer zone is the area surrounding the core zone and is meant for activities that are compatible with the core area's ecological functions. Finally, the transition area is still offered protections, but allows greater human activity for economic development in conjunction with socio-cultural and ecological sustainability.[50]

As a whole, this zoning approach is based on an **ecosystem-based management** ("**EBM**") approach that values ecological diversity and sustainability. Its three interconnected functions are conservation, development, and logistics support. This process is managed through integrated zoning and collaborative management that include the use of traditional (Indigenous) and local knowledge and custom.[51]

British Columbia also uses a degree-of-protection zoning approach similar to New Brunswick, but within the context of combined coastal and marine management. A key component of its MaPP Program is marine spatial planning that is based on the **MaPP Zoning Framework**. This is applied consistently across all four MaPP planning sub-regions. There are three zone types: General Management Zone ("GMZ"), Special Management Zone ("SMZ") and Protection Management Zone ("PMZ"), as set out in Table 8-1 of the Framework. Within the SMZ and PMZ categories, a range of sub-zones is applied: for example, the shellfish aquaculture and renewable energy sub-zones in SMZs, and the International Union for Conservation of Nature ("IUCN") categories in PMZs.

In several jurisdictions (for example, in British Columbia, Newfoundland and Labrador, Quebec, and New Zealand), coastal protection or management is actually part of a larger marine management regime, where the coastal area is one zone within the broader management framework, usually within the content of a specific issue area.

The most common type of broad management regime that was identified in many jurisdictions is floodplain or **flood area hazard management**. These regimes typically identify **flood prone areas** or **flood hazard areas**, which usually have a (sometimes significant) coastal component. There are a variety of terms to describe these areas, but the basis of this type of zone is that it is a coastal area, or includes a coastal area, which is prone to flooding. Some jurisdictions also include coastal erosion as a part of these zones, or may create two separate categories for each. Floodplain mapping is an important part of the process of identifying these areas and is discussed in further detail below in the Coastal Erosion and Flooding section. However, as an example, in British Columbia, a regional floodplain mapping initiative is meant to identify those coastal areas that are flood hazard areas.[52]

50 See: http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/biosphere-reserves/.

51 See also: http://www.unesco.org/new/en/natural-sciences/environment/ecological-sciences/biosphere-reserves/main-characteristics/zoning-schemes/

52 Flood Hazard Area Land Use Management Guidelines, s. 3.5.5.1 – Standard Flood Construction Levels and Setbacks

B. Aboriginal Rights, Laws, Languages, and Communities

In Canada, consideration of Aboriginal rights and the impact of a coastal management or protection regime on coastal resources that are an important part of life, culture, and custom for Indigenous communities is legally important. Under section 35 of the ***Constitution Act, 1982***, government must consult with Indigenous communities when the Crown contemplates action that may adversely affect their Aboriginal or treaty rights.

British Columbia and Newfoundland and Labrador are the only Canadian jurisdictions reviewed that have substantive Aboriginal rights and protections set out specifically with regard to the governance of coastal areas.

In British Columbia, the **Marine Plan Partnership for the North Pacific Coast** ("**MaPP Program**") is a collaboration between the provincial government and seventeen First Nation member communities. The agreement is not legally binding. Each of the four sub-regions created under the MaPP program is governed by a management group that includes Aboriginal representatives. These management groups develop a Marine Plan for their region, which sets out objectives and strategies and attempts to provide Indigenous groups with a method to manage the resources that they use and need.

The planning areas of the four Marine Plans are delineated by the traditional territory of the Indigenous community involved in that area. Some of the criteria for boundary delineation include: existing designations, ecological values, cultural and traditional uses values, cultural uses and activities, and adjacent land-use.[53] Monitoring of the Marine Plans is done by both Indigenous and public sector groups and may occur through a plan Implementation and Monitoring Committee, comprised of First Nations, sector-based interests, and local governments.

The sub-regional Marine Plans also incorporate the language, customs, and values that are fundamental to the Indigenous communities. For example, the general section of the **Haida Gwaii Marine Plan** sets out a vision that is guided by principles and strategies. These principles include the Haida Gwaii First Nation's values, ethics, visions, and goals, using their traditional language:

> **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.

53 See Haida Gwaii Marine Plan pp. 11, 60.

> ***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 kanhllns – 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 'waadluxan 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.[54]

In Newfoundland and Labrador, under the **Labrador Inuit Land Claims Agreement**, the responsible Minister must consult with the Nunatsiavut Government prior to finalizing a strategy for management of estuarine, coastal, and marine areas applying to the relevant area captured by the Agreement.[55] This includes consultation for the development and implementation of plans that will have integrated management of activities or measures directly affecting estuarine, coastal and marine areas within the Labrador Inuit Settlement Area.[56]

Consultation under the Labrador Inuit Land Claims Agreement must also include consultation about establishment, and Inuit participation in, advisory or management bodies, and for the establishment of environmental guidelines, objectives, and criteria with respect to the quality of the estuarine, coastal, and marine areas.[57]

Queensland (as well as other Australian states or territories) and New Zealand also provide for Indigenous participation and decision-making, and protect Indigenous rights and customs, within coastal areas. A key component of the statutes and policies in these jurisdictions, as is highlighted in the British Columbia MaPP Program Marine Plans, is the recognition and use of **Aboriginal languages, values, and principles**.

In Queensland, one of the guiding principles of its **Coastal Management Plan** is that "Aboriginal People and Torres Strait Islanders are the primary guardians, keepers and knowledge holders of their cultural heritage; their connection to coastal and marine resources should be maintained and enhanced".[58] Under

54 Haida Gwaii Marine Plan, p. 11.

55 *Labrador Inuit Land Claims Agreement*, part 6, s. 6.3.1.

56 *Ibid*, part 6 s. 6.3.2.

57 *Ibid*, part 6, s. 6.3.3.

58 *Coastal Management Plan*, p. 11.

the plan, coastal management outcomes should include engagement with Traditional Owners (Indigenous communities) to enable their access to coastal resources for cultural activities.

Similar to Canada, the Crown in Australia owes a duty of care towards Aboriginal peoples. Both the ***Aboriginal Cultural Heritage Act* (2003)** and the ***Torress Strait Islander Cultural Heritage Act* (2003)** recognize, protect, and conserve Aboriginal rights. Under Queensland's Coastal Management Plan, the sustainable management of marine resources for Traditional Owners is attempted through the use of Traditional Use of Marine Resource Agreements and Sea Country Plans.[59]

In New Zealand, the ***Marine and Coastal Area (Takutai Moana) Act*** has the specific purpose of establishing a scheme to ensure protection of the interest of all New Zealanders in the coastal areas of the country, as well as recognizing the mana tuku iho (cultural property or heritage)[60] exercised in the marine and coastal area by iwi, hapū, and whānau (all tribes or nations of Indigenous peoples) as tangata whenua (people born to, or natural to, that place)[61]. Its other purpose is to provide for the exercise of customary interests in the **common marine and coastal area** and to acknowledge Aboriginal treaty rights.[62] The rights and customs of the Aboriginal peoples are also reflected in the use of their language within the legislation.

One unique feature of the *Marine and Coastal Area (Takutai Moana) Act* is that it gives the common marine and coastal area special status. More specifically, this means that neither the Crown, nor any other party, owns or is capable of owning the common marine and coastal area. The Act achieves this by divesting the Crown and every local authority of every title as owner. It supersedes any other enactment.[63]

Additionally, the New Zealand **Coastal Policy Statement** also provides a policy statement regarding the Treaty of Waitangi, *tangata whenua*, and Māori. In taking account of the principles of the Treaty of Waitangi (*Te Tiriti o Waitangi*) and *kaitiakitanga* (guardianship and stewardship)[64], there must be a recognition that the *tangata* whenua have traditional and continuing cultural relationships with areas of the coastal environment. Furthermore, iwi authorities or hapū must be involved in the preparation of regional policy statements and plans regarding management of coastal areas. This requires meaningful consultation and involvement of Māori in decision-making.[65]

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59 *Ibid*, p.11.

60 Definition found at website: http://maoridictionary.co.nz/search?idiom=&phrase=&proverb=&loan=&keywords=taonga+tuku+iho&search=

61 Definition found at website: http://maoridictionary.co.nz/search?idiom=&phrase=&proverb=&loan=&histLoanWords=&keywords=tangata+whenua

62 *Marine and Coastal Area (Takutai Moana)* Act ss. 4, 7.

63 *Marine and Coastal Area (Takutai Moana)* Act, s. 11.

64 Definition found at website: http://maoridictionary.co.nz/search?idiom=&phrase=&proverb=&loan=&histLoanWords=&keywords=kaitiakitanga

65 Coastal Policy Statement, pp. 11-12.

C. Coastal Development & Land-Use

This section provides an overview of the breadth and scope of land-use and development that is regulated along the coast. It then reviews some of the most prominent and important features of coastal land-use and development rules, including those set out in legislation and policy.

I. Regulatory Regimes: Permits and Licences

Coastal activity, including development, industrial activity, and various other land-uses are governed and managed using regulations and by-laws. These are usually overseen by local or municipal governments. This typically involves the creation of regulations under a broad statutory power (usually a state or provincial land-use law) that sets out the specifics of the regime. This can include setting out lists of developments, activities, and land uses that are allowed or prohibited, as well as various exceptions to those allowances or prohibitions. The objective of these regimes is a balance of sustainable economic development and environmental protection, achieved through the use of permits and licences.

(i) Proscription-Based Approach:

All jurisdictions reviewed for this Report have some form of municipal or local government by-law system governing aspects of coastal development, activity, and land-use. The specific forms these systems take can vary in both their scope and detail. One of the more common mechanisms used to regulate development and activity is the creation of lists of activities that are prohibited or restricted in the coastal zones. Certain activities are then authorized following an application process. Approved applications receive conditional permits or licences for that activity.

For example, in Newfoundland and Labrador the **Policy for Development in Shore Water Zones**, created under the ***Water Resources Act***, sets out the types of developments allowed (requiring permission) or not allowed in its Shore Water Zones. Prohibited activities include infilling, drainage, dredging, channelization, and removal of surface or underwater vegetation, where those activities could cause aggregate flooding or unmitigable adverse water quality, impact water circulation, or result in sediment deposition or removal.[66]

Additionally, the policy prohibits developments that place, discharge, or deposit certain kinds of materials or waste into shore water zones where those materials or wastes would impair the water quality or affect the **intrinsic character** of the shore water zone.[67] The key types of development allowed, with written permission from the Minister of Environment and Climate Change, are the kinds of activities that are **functionally connected** to the coastal area, such as development or removal of wharfs, marinas, boathouses, and other docking facilities.[68]

66 Policy for Development in Shore Water Zones, s. 5.2.

67 *Ibid*, s. 5.2.4 and 5.2.5.

68 *Ibid*, s. 5.3.

Prince Edward Island has one of the more detailed regulatory regimes for permitting of the Canadian jurisdictions reviewed. Under its **Watercourse and Wetland Protection Regulations**, a number of activities are prohibited in or on a watercourse or a wetland (including coastal waters and coastal wetlands). This includes a general prohibition on any activity that alters, fully or in part, the water flow of that watercourse of wetland. Some of the prohibited activities include: drainage, pumping, and excavation or removal of soil, water, mud, sand, gravel, stones, or other types of aggregate, as well as the construction, placement, repair or replacement, and demolition of all manner of structures (this list is not exhaustive).[69]

The Watercourse and Wetland Protection Regulations also provide broader protections throughout the province's entire coastline with the creation of a buffer zone (discussed in more detail in this section below),[70] and they prohibit any person to alter or disturb the ground or soil within 15 metres of a watercourse or wetland boundary without a **Buffer Zone Activity Permit**. The Regulations set out a list of activities requiring this permit.[71]

In South Carolina, **Chapter 30 of the Code of State Regulations** (dealing with coastal divisions) sets out the process for applying for a permit. The process starts with a potential preliminary review of the development application or development plans by the Department of Health and Environmental Control to review or assist the applicant.[72] The Regulations then require that any party wishing to alter a critical area (including a coastal area) must receive a permit from the aforementioned Department.[73]

A list of activities that do not require a permit is also set out in the South Carolina Regulations, and includes: following emergency orders; otherwise permitted hunting, fishing, and trapping; conservation activities; maintenance of drainage and sewer facilities; maintenance of major utility facilities; upkeep of piers and walkways; and recreational activities that do not cause material harm to flora, fauna, or real or aesthetic resources in the area (this list is not exhaustive).[74]

Chapter 39 of South Carolina's ***Code of Laws Title 48*** (Coastal Tidelands and Wetlands) sets out further considerations for permit applications for developments within a coastal tideland or coastal wetland. The chapter lists a number of considerations that the Department must make in considering whether to approve an application. Considerations include: the activity's impacts on the natural flow of navigable water and marine wildlife, whether it would cause erosion or create stagnant water; the activity's effect on public access to the coastal area including beaches or other recreational resources; the economic and conservation benefits of allowing the activity; any adverse impacts the activity may have on public safety; and the activity's effect on the value and enjoyment of adjacent property owners.[75] Additionally, the chapter requires public hearings for activities that would effect a critical area.[76]

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69 For a full list see: *Watercourse and Wetland Protection Regulations* s. 2.

70 *Watercourse and Wetland Protection Regulations* s. 3.

71 *Ibid*, s. 3(4).

72 South Carolina Code of State Regulations – Chapter 30: Department of Health and Environmental Control – Coastal Division, s. 30-2.

73 See above for description of "critical areas"; see also *Coastal Zone Management Act* in definition section.

74 *Ibid*, s. 30-5.

75 *Ibid*, 48-39-150.

76 *Ibid*, s. 48-39-150 (b).

<u>(ii) Performance-Based Approach and Standards:</u>

Queensland uses a different type of regulatory scheme. Rather than having proscriptive regulations, it assesses development using a **performance-based approach**. This is achieved using the **State Development Assessment Provisions** ("**SDAPs**"), which are mandated by the ***Planning Act*** and created under the **Planning Regulations**. The SDAPs set benchmarks (outcomes that must be met).

This process begins with an application for a development. The applicants must demonstrate that the development will appropriately manage any of its impacts on a matter of state interest (which are set out in the **State Planning Policy**).[77] Protection of the coastal environment is one of Queensland's state interests.

The **State Assessment and Referral Agency** ("**SARA**") uses the SDAP to assess each application. SARA is guided in its assessment by both the *Planning Act* and the Planning Regulations. The Planning Act creates categories of assessment. The Planning Regulations prescribe the matters that SARA must consider as part of its assessment.

Each **state code** within the SDAP contains assessment criteria in the form of a purpose statement, performance outcomes, and acceptable outcomes. If the application for development complies with all of the performance outcomes, it complies with its purpose statement and can therefore receive approval. If the application does not meet all of the performance outcomes, but SARA determines that the purpose statement is still achieved, the application will still receive approval. The acceptable outcomes are non-essential assessment criteria.[78]

An application for development in a coastal area that triggers an assessment would need to fulfil the purpose section in **State Code 8**, which reads:

> *State Code 8: Coastal Development and Tidal Works*
>
> *The purpose of this code is to ensure that development is designed and located to:*
>
> 1. *protect life, buildings and infrastructure from the impacts of coastal erosion*
> 2. *maintain coastal processes*
> 3. *conserve coastal resources*
> 4. *maintain appropriate public use of, and access to and along, state coastal land*
> 5. *account for the projected impacts of climate change; and*
> 6. *avoid impacts on matters of state environmental significance and, where avoidance is not reasonably possible, minimize and mitigate impacts, and provide an offset for significant residual impacts where appropriate.*[79]

77 State Development Assessment Provisions ("SDAP"), p. 06.

78 SDAP, p. 06.

79 SDAP at s. 8.1 at p. 8-1 (p. 97/261 on PDF version).

An example of a performance outcome in a coastal area under the SDAP is as follows:

> *PO1 – Development does not occur in the erosion prone area unless the development:*
>
> *1. is one of the following types of development:*
>
> 1. *coastal-dependent development; or*
> 2. *temporary, readily relocatable or able to be abandoned; or*
> 3. *essential community infrastructure; or*
> 4. *redevelopment of an existing permanent building or structure that cannot be relocated or abandoned; and*
>
> *2. cannot feasibly be located elsewhere.*[80]

The state of Maine uses a somewhat hybrid system. Chapter Three of its ***Revised Statutes Title 38: Waters and Navigation*** (protection and improvement of waters) sets out standards which a development application must meet in order to receive a permit for that development or proposed activity. Four of the standards are related to coastal areas: the activity must not interfere with scenic, aesthetic, recreational, or navigational uses, must not cause unreasonable soil or sediment erosion or transfer soil into the marine environment, must not interfere with natural water flow, and must not unreasonably cause or increase flooding of the area or its adjacent properties.[81]

(iii) Certifications

Some jurisdictions have additional requirements in order for development applications to be approved. This additional requirement is the approval or certification of the development by a licenced professional, usually an engineer.

For example, in British Columbia, municipal governments have authority under the ***Community Charter (Act)*** to issue building permits for construction, including in its coastal areas. However, the *Community Charter (Act)* also requires that where a municipal by-law regulates construction of a building, and a building inspector determines that that construction is on land subject to flooding or erosion, a **geotechnical report** is required.[82] Without the approval (via the report) of a qualified professional, a permit cannot be issued.[83] Under the Community Charter (Act) a qualified professional is either a professional engineer or a professional geoscientist with experience or training in geotechnical study and geo-hazard assessments.[84]

80 *Ibid*.

81 §480-D. (Standards).

82 *Community Charter (Act)*, s. 56(1).

83 *Ibid*, s. 56(2).

84 *Ibid*, definition section.

In Prince Edward Island a different system of certification is used. Under the Watercourse and Wetland Protection Regulations, the Minister may grant a **Watercourse, Wetland and Buffer Zone Activity Certificate** upon the successful completion of a training course. The training course must be approved and accepted by the Minister.[85]

II. Coastal Set-backs, Buffers, and Variances

In addition to permitting, some jurisdictions have an additional layer of regulatory protections in the form of coastal **setbacks** or **buffer zones**, as well as complimentary variances to those setbacks and buffers. Coastal setbacks can be both vertical and horizontal, or both. A note on language: "**set-back**" generally implies that it can be varied, while "**buffer**" is concrete and allows for no variance.

As previously stated, Prince Edward Island has one of the more comprehensive buffer zone systems. Under its **Watercourse and Wetland Protection Regulations**, a buffer zone is created within 15 metres of any watercourse or wetland boundary. Because the definition of a watercourse includes the sediment bed and bank or shore of a bay, estuary, or coastal body, this effectively creates a 15-metre buffer zone around the entire coast of the province. A **Buffer Zone Activity Permit** is required for any activity within the buffer zone.

Additionally, Prince Edward Island's **Subdivision and Development Regulations** set out a buffer zone for property subdivisions. Subdivision means either the division of one parcel of land or consolidation of two or more contiguous parcels of land. Under the Regulations, any subdivision within a coastal area must include a buffer zone that is a minimum width of the greater of either 18.3 metres (60 feet) or 60 times the annual erosion rate in the area. This buffer zone is required where the subdivision property is adjacent to a beach or sand dune.[86]

British Columbia also has a comparable system of setbacks. Local governments in that province must consider a number of provincial development setbacks that are set out in its **Flood Hazard Area Land Use Management Guidelines**. The setbacks are both horizontal and vertical. For instance, the standard setback for any building is 30 metres from the natural boundary of any watercourse.[87] Recently, the guidelines were amended to better account for updated sea-level rise projections.[88] Variances can be issued for activities to be situated within the setback area.[89]

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85 *Watercourse and Wetland Protection Regulations* s. 4.

86 Subdivision and Development Regulations s. 16.

87 Flood Hazard Area Land Use Management Guidelines s. 3.2.1.

88 Refer to the Flood Hazard Area Land Use Management Guidelines sections 3.5 and 3.6 for detailed guidelines for areas affected by coastal erosion and coastal flooding.

89 Chapter 1000 – *Guidelines for Municipal Shoreland Zoning Ordinance*, s. 12(b)(1).

III. Existing Structures, Expansions, and Re-building ("Grandfathering")

Perhaps one of the more controversial issues with the creation of coastal setbacks or buffer zones, or, more generally, any prohibition against development or construction within the coastal zone, is that structures can already exist within those areas. Jurisdictions can deal with this issue by either **grandfathering existing structures** (allowing them to remain, unaltered and in non-compliance) or requiring them to be brought into compliance (rare). The nuance of this system is determining under what conditions a grandfathered structure must become compliant with new by-laws, setbacks, or buffer zone requirements. This consideration is usually triggered when a grandfathered structure must be renovated, repaired, expanded, or re-built.

As an example, in Maine, the **Guidelines for Municipal Shoreland Zoning Ordinance** states that its purpose is the promotion of land-use conformities (new setbacks), with the exception of non-conforming conditions existing before the effective dates of the Ordinance or subsequent amendments. The exception is that the non-conforming condition "shall not be permitted to become more non-conforming". In Maine, non-conforming structures, lots, and activities may be transferred to a new owner, and the new owner may be permitted to continue being non-compliant, subject to the conditions of the Ordinance. The Ordinance also allows for normal upkeep and maintenance of the non-conforming use or structure. This includes repairs and renovations but does not include expansions to the use or structure.[90]

In California, under the ***Coastal Act***, industrial facilities are encouraged to remain and expand within existing sites, where their continued operation is consistent with the Act. Where new or expanded facilities cannot be accommodated in a way that is consistent with the other policies of the CA, they can be permitted to remain regardless, if no alternative location is feasible or if movement is more environmentally damaging or would adversely affect public welfare, and if adverse environmental effects are mitigated to their maximum extent.[91]

IV. Coastal Development Triggering Assessments

In some jurisdictions, developments or activities that are planned to occur within a coastal zone may trigger an environmental assessment.

Under Queensland's **Planning Regulations**, certain activities (called "operational work") must undergo an assessment if the work is tidal works, or if the activity is one of the designated works and is being carried out in a coastal management district. The designated works include: (i) interfering with quarry material, as defined under the *Coastal Act*, on state coastal land above the high-water mark; (ii) disposing of dredge spoil, or other solid waste material, in tidal water; (iii) constructing an artificial waterway; and (iv) removing or interfering with coastal dunes on land, other than state coastal land, that is in an erosion prone area.[92]

90 *Ibid*, s. 12(b)(2).

91 *Coastal Act*, ss. 30260, 30261, 30262.

92 *Planning Regulation*, s. 28.

In New Brunswick, the **Coastal Areas Protection Policy (2002)**, which helps guide the management of land-based coastal resources for sustainable development, sets out the minimum standards for coastal development. As part of this framework, the Policy has two appendices which list activities that require, or do not require, respectively, an environmental assessment. Coastal activities that require a formal environmental review include permanent wharves, docks and piers, coastal road infrastructure, activities that impact beaches, and "any coastal works not otherwise addressed".[93]

D. Coastal Erosion & Flooding

This section reviews the management regimes for coastal flooding and erosion. Many of the jurisdictions reviewed have a statutory regime that deals with management and mitigation of coastal flooding and/or coastal erosion. Usually, these regimes are dedicated to identifying flood plain areas or areas that will be at future risk of flooding disasters, usually related to sea-level rise caused by climate change and warming ocean temperatures. Mitigation of the risks to public health and safety, and to properties, is usually dealt with through other mechanisms (for example: setbacks and buffer zones, and municipal zoning).

I. Floodplain Mapping

A great deal of the law and policy dealing with coastal flooding focuses on mapping areas that are prone to flooding. The use of LiDAR mapping for the subsequent use of by-law and land-use management policy designs is common, albeit sometimes difficult due to a variety of factors, including cost and capacity. Some districts require flood mapping, while others make it a policy priority or enable it through funding initiatives (usually funded collaboratively and jointly with the federal government). One of the common ways to identify and categorize flood plain areas is through the use of "**return periods**" that use scientific modeling to show which coastal areas will be affected in a certain period (for example, an 1:100 year storm event).

South Carolina has adopted a forty-year policy of retreat from the shoreline. Under this "policy", which is set out in the state's ***Coastal Zone Management Act*** ("**CZMA**"), the Department of Health and Environmental Control uses best available science and historical data to establish a baseline, running parallel to the shoreline for each of the established standard erosion zones and inlet erosion zones. This baseline cannot move seaward from its position after December 31, 2017. The baseline is a reference point beyond which no development is allowed.[94] The baseline was adopted following prior use of a flexible baseline, which was re-configured by the Department every eight to ten years.[95]

South Carolina's CZMA also requires the Department to develop and institute a comprehensive beach erosion control policy that identifies critical erosion areas, evaluates erosion control mechanisms and structures to be funded by the state, and considers littoral and offshore drift systems, sand dunes, and other coastal features.[96]

93 Coastal Areas Protection Policy, p.14.

94 *Coastal Zone Management Act*, s. 48-39-280 (Forty-year retreat policy)

95 See also: https://coastalconservationleague.org/news/the-latest/house-bill-4683/; and https://www.postandcourier.com/opinion/protect-s-c-coast-no-retreat-from-line-in-the/article_2d5c54e4-fb2b-5e5c-aa44-17102ffa95ce.html.

96 *Coastal Zone Management Act*, s. 48-39-120.

In Quebec, each regional county municipality must maintain a **Regional County Municipality Land-Use Planning and Development Plan** ("**RCM Plan**"), as mandated by ***An Act Respecting Land Use Planning and Development***.[97] The RCM Plan must identify zones like flood zones and erosion zones where land occupation is subject to special restrictions due to reasons of public safety.[98] Furthermore, the province's ***Watercourses Act*** requires each municipality to pass a by-law prohibiting or governing construction within any floodplain recognized by regulation. Until such a by-law is passed, the municipality cannot issue a permit to build in that floodplain.[99]

In British Columbia, the **Flood Hazard Area Land Use Management Guidelines** ("**Guidelines**") call for a qualified professional engineer (with experience in coastal engineering being an asset) to establish the year 2100 Flood Construction Level ("FCL") for specific coastal areas, as part of a regional floodplain mapping initiative.[100] The FCL is the appropriate level at which development can occur with significant risk of a flooding event. Municipalities or local governments must consider the Guidelines, including the FCL, when creating by-laws; however, the Guidelines are not binding on municipal governments and are more aspirational in practice.[101]

The Guidelines also state that building requirements for buildings, sub-divisions, and zoning should allow for a sea level rise ("SLR") to the year 2100 (at minimum), meaning that the appropriate point for development would be at a point whereby it would be unaffected by projected SLR in the year 2100.[102] Where no FCL has been established or determined, the Guidelines call for a FCL of no lower than three metres above the natural boundary of any nearby watercourse.[103] The Guidelines further state that land-use adaptation strategies in Official Community Plans and Regional Growth Strategies should allow for SLR to the year 2200 and beyond.[104]

Under its *Local Government Act*, British Columbia also allows a municipal government to designate land which it considers at risk to flooding as a flood plain; however, this is left to the discretion of each municipality.[105] If a municipality does designate an area as being at risk of flooding, it can create development setbacks.[106]

Newfoundland and Labrador also has no legal requirement to identify or mitigate the effects of coastal flooding. Its ***Water Resource Act*** gives the Minister discretion to undertake an inventory and mapping of wetlands, floodplains, shorelines, coastal waters, and other aquatic systems.[107]

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97 *An Act Respecting Land Use Planning and Development*, s. 3.

98 *Ibid*, s. 5.

99 *Watercourses Act*, s. 8.

100 Section 3.5.5.1 – Standard Flood Construction Levels and Setbacks

101 *Local Government Act*, s. 910.

102 Flood Hazard Area Land Use Management Guidelines, s. 3.5.2.

103 *Ibid*, s. 3.2.1.

104 *Ibid.*

105 *Local Government Act*, s. 910(1.1).

106 *Local Government Act*, s. 524(2).

107 *Water Resources Act (2002)* at s. 30(1).

Likewise, Queensland's ***Coastal Protection and Management Act*** gives the Chief Executive discretion to declare an area within its coastal zone as an erosion prone area, and only where the Chief Executive is satisfied that the area may be subject to erosion or tidal inundation.[108] However, once such an area is identified, the Chief Executive is required to ensure that the erosion prone area is shown on a document describing the area and that the document is publicly available.[109]

In New Zealand, the **Coastal Policy Statement** requires the identification of coastal areas that are potentially affected by "coastal hazards", with those areas at highest risk having priority. Policy 24 (Identification of coastal hazards) sets out a comprehensive list of factors to be considered in this identification process.[110] Hazard risks within a period of at least 100 years must be assessed with consideration of factors such as: sea level rise, short- and long-term coastal erosion and accretion, geomorphology, storm surges, human influences on the coast, and effects of climate change (this list is not exhaustive).

The United Kingdom has one of the most comprehensive coastal flood and erosion management regimes of all the jurisdictions reviewed. The Environment Agency is required under the ***Flood and Water Management Act*** **(2010)** ("**FWMA**") to develop, maintain, apply, and monitor a strategy for flood and coastal erosion risk management for the country.[111] The Agency must submit regular reports to the Minister about flood and coastal erosion risk management.[112]

The FWMA sets out a number of components required in the strategy, including but not limited to: the creation of **coastal erosion risk management authorities**, the creation of the objectives for the strategy, an assessment of flood and coastal erosion risk, and a discussion of the current and predicted impact of climate change on flood and coastal erosion risk management.[113]

The FWMA gives the risk management authorities broad powers for the maintenance and repair of its coastal protection works.[114] The Act also requires the local flood authorities for an area to develop, maintain, apply, and monitor a **strategy for local flood risk management**.[115]

Under the **National Flood and Coastal Erosion Risk Management Strategy**, the Environment Agency is further tasked with working with local authorities and developers to avoid inappropriate building or redevelopment in areas of high flood or coastal erosion risk.

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108 *Coastal Protection and Management Act*, s. 70(1).

109 *Ibid*, s. 70(2). See also the following website for Queensland's Erosion Prone Area Mapping: https://www.ehp.qld.gov.au/coastal/development/assessment/erosion_prone_areas.html

110 Coastal Policy Statement, at p. 23.

111 *Flood and Water Management Act*, s.7(1).

112 *Ibid*, s. 18. The Minister can make regulations about the requirements for the contents of the report and the times the reports must be filed with the Minister (subsection 3).

113 *Ibid*, s. 7(2).

114 *Ibid*, s. 12.

115 *Ibid*, s. 9.

Additional protections are offered under the UK's ***Coast Protection Act***, which was created in 1949 to provide a framework for protecting the country's coast against erosion and encroachment by the sea. The Act gives local authorities power to undertake coastal protection works. This is unlike many other jurisdictions, which usually assess coastal protection works (sea barriers, sea walls, etc.) within the parameters of proscribed coastal development (usually prohibiting these sorts of works unless they are otherwise exempt or necessary). The *Coast Protection Act* makes the council of each maritime district the **coast protection authority** for that district.[116]

The coast protection authorities have broad powers under the Act to carry out coast protection work. The authorities must believe that the work is desirable, having regard to the national flood and coastal erosion strategy.[117] The authorities must create a work scheme for the coast protection work, to be approved by the Minister in accordance with the Act.[118]

E. Coastal Access

This section discusses the types of access rights that many (mostly extra-Canadian) jurisdictions have set out in their coastal protection and management regimes. This includes both an overview of the varying degrees of public access rights to the coasts and its resources, and an overview of the breadth of some of the rights that the regimes establish.

Coastal access or use of coastal resources is usually managed at the provincial, territorial, or state government level rather than at the local or municipal government level. Municipal governments do regulate aspects of access related to emergency access, historical and cultural sites, and some local industrial resource use (usually through zoning).

I. Public Rights of Access to the Coast

Canadian provinces that were reviewed for this Report do not provide many rights of access to the coast, nor do they provide rights for the use of coastal resources. Any rights of access are mostly related to Aboriginal Rights (see above, in Aboriginal Rights, Laws, Languages and Communities).

Under its **Coastal and Ocean Management Strategy and Policy Framework** ("**Framework**"), Newfoundland and Labrador has a policy direction which encourages support for the "promotion and preservation of the province's natural and cultural history". The Framework identifies its cultural, historic, and archaeological sites (on land and underwater) as important components of coastal and ocean management. The Framework also notes both the importance of traditional activities and the importance of maintaining and providing opportunities for access and recreation.[119]

116 *Coastal Protection Act,* ss. 1, 2, 2A.

117 *Ibid*, s.4.

118 *Ibid*, s. 6.

119 Coastal and Ocean Management Strategy and Policy Framework, at p. 12.

As was already canvassed, New Zealand has a unique legal environment, in that the ***Marine and Coastal Area (Takutai Moana) Act*** makes the common marine and coastal area a unique, un-owned space. Under the Act, every individual has a right to enter, stay in, or leave that area, to pass through and over the area, and to engage in recreational activities in or on the area.[120]

Additionally, New Zealand's **Coastal Policy Statement** has several policies that relate to accessing the coast. Policy 18 (Public Open Space) recognizes the need for a public open space within and adjacent to the coastal marine area, for public use and for recreational purposes. The Policy calls for ensuring that the public space is compatible with the natural character and features of the coastal environment, as well as maintenance and enhancement of access points to the coastal area.[121] Policy 19 recognizes the public expectation and need for walking access to and along the coast, free of charge and safe to use. It calls for maintenance and enhancement of those access points, as well as limitations to any restrictions to that access (it imposes a list of those activities that may be necessary).[122]

Other jurisdictions also call for, or provide, access rights. Queensland's state interests for the coastal environment, as set out in its **State Planning Policy**, call for opportunities for public use of and access to, and along, state coastal land, and is maintained or enhanced in a way that protects or enhances public safety and coastal resources.[123]

In South Carolina, it is a policy of the state, under its Coastal Tidelands and Wetlands Chapter (39) of its Code of Laws, to "preserve existing public access and promote the enhancement of public access to assure full enjoyment of the beach by all our citizens including the handicapped and encourage the purchase of lands adjacent to the Atlantic Ocean to enhance public access".[124] In order to achieve its public access, the state's Environment Department is responsible for the creation of a long-range and comprehensive beach management plan for its shoreline. The management plan must include development guidelines and development of a **beach access program**.[125]

The United Kingdom has a comprehensive legal regime governing public access rights called the ***Countryside and Rights of Way Act*** ("**CROW Act**"). This lengthy statute sets out many rights of the public to enter and access land known as "open country", as defined within the Act. Under the Act, any person may enter and remain on any access land for the purpose of open-air recreation. The Secretary of State (for England) or National Assembly of Wales may amend the definition of "open country" to "include a reference to coastal land or to coastal land of any description".[126]

120 *Marine and Coastal Area (Takutai Moana) Act*, s. 26(1).

121 Coastal Policy Statement (2010), Policy 18.

122 *Ibid*, Policy 19.

123 State Planning Policy, State Interest – Coastal Environment (5) at p. 41.

124 *South Carolina Code of Laws Title 48 – Environmental Protection and Conservation Chp 39: Coastal Tidelands and Wetlands*, s. 48-39-260.

125 *South Carolina Code of Laws Title 48 – Environmental Protection and Conservation Chp 39: Coastal Tidelands and Wetlands*, s. 48-39-320(a)(2).

126 *Countryside and Rights of Way Act*, ss. 2, 3.

However, of all the jurisdictions reviewed, California has the most expansive rights and protections for coastal access, coastal resource use, and coastal recreation. California's ***Coastal Act*** ("**CA**") prioritizes preservation of public access to the coast and enhancement of access where possible; access to the coast and its resources is a central component and objective of the CA.[127] This can be inferred by the first provision of Article 2 of the CA, which sets out the Public Access rights. It reads:

> *In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.*

California's CA has numerous provisions dealing with public access. The Act prevents development from interfering with public rights of access to the sea, requires public access to be provided in new development projects, requires appropriate and feasible public facilities (including parking) to be distributed throughout an area to mitigate against impacts of overcrowding or overuse, and provides safeguards against visitor and recreational facilities from becoming costly.[128]

California's CA also sets out rights of recreation. For example, "[c]oastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses".[129] The Act also provides protection for oceanfront land suitable for recreational uses, including land-based recreation, aquaculture, and recreational boating.[130]

F. Coastal Ecosystems

Generally speaking, conservation of sensitive ecosystems is a provincial jurisdictional matter, not a municipal matter. Municipalities really can best deal with disturbances to ecosystems and the natural environment through the use of nuisances and public safety by-laws. Note, however, that municipalities may regulate activities if they complement provincial efforts or further those efforts with more restrictive measures.

I. Coastal Wetlands

As mentioned above, sensitive ecosystem protection usually falls under the jurisdiction of the provincial or state government of the jurisdictions reviewed. And, generally, none of the jurisdictions reviewed offer comprehensive or specific protections for a wide range of coastal ecosystems, species, or habitats. However, one particular coastal ecosystem does seem to garner attention of various coastal protection or management regimes.

127 Jordan Diamond, Holly Doremus and Mae Manupipatpong, "The Past, Present, and Future of California's Coastal Act: Overcoming Division to Comprehensively Manage the Coast", pp. 05, 09-10.

128 *Coastal Act*, ss. 30210, 30211, 30212, 30212.5, 30213, and 30214.

129 *Ibid*, s. 30220.

130 *Ibid*,, ss. 30221-30224.

In Canada, New Brunswick has an expansive policy framework focused on wetlands protection, including coastal wetlands (i.e. salt marshes).

Under New Brunswick's **Wetlands Conservation Policy (2002)**, the government makes a policy statement that it will prevent the loss of **Provincially Significant Wetland Habitat** and achieve a goal of no net loss of wetland functions for all other wetlands. Under the Policy, all coastal marshes are considered provincially significant, and, thus, they receive the highest degree of protection.[131] Additionally, under the Policy, the Provincially Significant Wetlands will be listed and mapped, and the data will be made available to the public.[132] There is also a 30-metre buffer around these wetlands, and government will not support proposed activities within the wetlands or buffer zone (the exception being rehabilitation efforts or activities following an environmental assessment).[133]

In New Brunswick's new **Water Strategy for New Brunswick (2018-2028)**, the government has made a commitment to improve wetland protection and management by releasing new, more accurate online wetland mapping, releasing an implementation guide to ensure better, more consistent decision-making with respect to its Conservation Policy, and amending its Watercourse and Wetland Alteration Regulations to extend protection to Provincially Significant Wetlands under 1 hectare in size.[134]

Other jurisdictions also have protections in place for wetlands. As discussed above, in many jurisdictions, coastal wetlands are included within the definition or description of coastal zone. Coastal wetlands are then dealt with in these jurisdictions through the regulatory mechanisms mentioned earlier, rather than specifically under their own legislation.

II. Other Sensitive Ecosystems and Biologically Significant Species

More general coastal environmental protection can be found in several of the jurisdictions. Perhaps the most comprehensive protections for the coastal environment, including its biologically significant species and sensitive ecosystems, are provided by California.

Under California's ***Coastal Act***, the state's Coastal Commission (discussed in greater detail below) has authority to make civil claims against those parties who conduct activities in sensitive areas that are contrary to the intentions and objectives of the Act. Under the CA, a coastal area can receive designation as a **sensitive coastal resource area**.[135] To receive such a designation, the Commission must prepare and adopt a separate report.[136]

131 Wetlands Conservation Policy (2002), Policy Statement.

132 See website for wetland mapping: http://www.snb.ca/geonb1/e/apps/wetlands-E.asp

133 *Ibid*,

134 A Water Strategy for New Brunswick, s. 16 (Preserving wetland protection and management in New Brunswick).

135 *Coastal Act*, s. 30502(b).

136 *Ibid*, s. 30502.

Furthermore, the CA requires that marine resources be maintained, enhanced, and, where feasible, restored. Additionally, special protection is given to areas and species of special biological or economic significance.[137] Under the CA, the marine environment must be used in such a way that it will sustain the biological productivity of coastal waters and maintain healthy populations of species for long-term commercial, recreational, scientific, and educational purposes.[138] Other protections offered under the CA include protection for biological productivity and quality of coastal waters, streams, wetlands, estuaries, and lakes, as well as protection for environmentally sensitive habitat areas against disruptive practices.[139]

In Maine, watershed districts may be created pursuant to Title 38 of its Revised Statutes. These watershed districts, composed of representatives of the relevant regions, are meant to protect, restore, and maintain the natural functions and values of several key coastal areas, including coastal wetlands, coastal harbours, bays, estuaries, and marine waters. They are also meant to manage and conserve the land and water resources of those watersheds within their respective district.[140] Some of the activities that the watershed districts can do include conducting research and surveys to gather information on their watersheds, planning natural resource restoration projects, coordinating with municipal officials and state agencies for the purpose of enacting and enforcing ordinances and regulations to further the purposes of the districts, and adopting natural resource protection, management, and restoration plans.

In New Brunswick, the Minister under the ***Clean Environment Act*** can issue either a **Wetland Designation Order** or a **Coastal Designation Order** to designate all or a portion of a coastal area as a protected area.[141] This area can include any land or water adjacent to the coastal area that the Minister believes is necessary for the protection of the environment of the coastal area.[142] This means that many of the sensitive species or habitats that form part of a coastal ecosystem could be protected using a Coastal Designation Order. Under such an Orders, the Minister may restrict or prohibit certain activities that might impact the protected area, or place terms and conditions on any activities. The Minister can also impose standards for the purpose of protecting the environment of the protection area.[143]

Finally, in New Zealand, the **Coastal Policy Statement** recognizes the important of indigenous biological diversity. Protecting the indigenous biological diversity of the coastal environment requires the avoidance of adverse effects of activities on a number of species and habitats.[144] Some of the species that are offered protection include indigenous ecosystems and habitats found only in the coastal environment, which are particularly vulnerable to modification, like estuaries, lagoons, coastal wetlands, dunelands, intertidal zones, rocky reef systems, eelgrass, and saltmarshes.[145]

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137 *Ibid* s. 30230.

138 *Ibid*, s. 30230.

139 *Ibid*, ss. 30231 and 30240(a).

140 *Maine Revised Statutes Title 38: Waters and Navigation, Ch.21 – Coastal Barrier Resources System*, §2001.

141 *Clean Environment Act*, ss. 6.1(6), 6.4(2).

142 *Ibid*, s. 6.4(3).

143 *Ibid*.

144 Coastal Policy Statement, Policy 11.

145 *Ibid*, Policy 11(b)(iii).

G. Administration

This section canvasses the varying kinds of administrative structures that different jurisdictions use to administer their coastal protection and management regimes. It also reviews the various mechanisms used by those administrative structures to monitor and enforce compliance with legislation and policies.

I. Administration Structures (Committees and Ministers)

Because many of the jurisdictions (especially the Canadian ones) do not have a comprehensive coastal management or protection regime, very few of the jurisdictions have a comprehensive administrative structure that governs all aspects of the coast.

(i) Consultation Groups:

In Newfoundland and Labrador, the **Coastal and Ocean Management Strategy and Policy Framework** sets out the establishment of **Consultation Committees** or structures that can help address conflicts in areas where multiple users need a forum to share information.[146]

In South Carolina, the **Coastal Zone Management Program** is managed by the Department of Health and Environmental Control's office of Ocean and Coastal Resource Management ("OCRM"). As the General Assembly of South Carolina's House of Representatives declared in its legislative declaration of findings (rough equivalent to a preamble): "A variety of federal agencies presently operate land use controls and permit systems in the coastal zone. South Carolina can only regain control of the regulation of its critical areas by developing its own management program. The key to accomplishing this is to encourage the state and local governments to exercise their full authority over the lands and waters in the coastal zone".[147]

Subsequently, it seems that the OCRM has attempted to work with state and local governments to achieve priority issues within its coastal zone. For example, the OCRM must develop strategies under its CZMA, including the creation of living shorelines. This includes the development of successful criteria for evaluating the living shorelines performance, monitoring current shorelines, and establishing standards to permit living shoreline projects. The OCRM created the **Living Shorelines Working Group** to guide and inform the strategy implementation process for this priority area. The Working Group coordinates and develops the process to implement the strategy.[148]

South Carolina also has a **Coastal Zone Management Appellate Panel**, which consists of fifteen members.[149] The panel serves as an advisory council to the Department. Its members are elected representatives from each of the coastal zone counties.

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146 Coastal and Ocean Management Strategy and Policy Framework, p. 14.

147 *Coastal Zone Management Act* , s 48-39-20(c).

148 See: http://www.scdhec.gov/HomeAndEnvironment/Water/CoastalManagement/LivingShorelines/

149 Created under s. 48-39-40 of the South Carolina *Coastal Zone Management Act*.

(ii) Municipal and Local Governance:

As mentioned above, many jurisdictions leave much of the regulatory and permitting work to municipal or local governments. For example, in New Zealand, any application for a coastal permit to carry out an activity within a regional coastal plan must be made to the regional council for the region concerned. The regional council is the consent authority for the application process.[150]

In the United Kingdom, there are several responsible authorities for governing the legislative framework for coastal management and protection. Under the ***Coast Protection Act***, the council of each maritime district will be the **coast protection authority** for the district, with all the powers to perform coast protection work and set out work schemes in pursuit of its mandate.[151] The coast protection authority is composed of representatives of every maritime district, as well as other relevant bodies, as necessary.[152]

In Queensland, development within the Coastal Management District is overseen by the State Assessment Referral Agency ("SARA"). SARA assesses development applications and determines whether they meet the various state interest and policy directives required by the Planning Act and Planning Regulations.

(iii) Coastal Commissions:

In Maine, permit-granting authority is granted to the Maine Land-Use Planning Commission.[153] The Commission is responsible for issuance of all permits for activities located within its jurisdiction. The Commission is not subject to review or approval by any Department under any other article of the Maine Statutes.

California has perhaps the most unique administrative body of all the jurisdictions reviewed. Its Coastal Act creates the **California Coastal Commission**, which is a quasi-judicial administrative body.[154] The Commission has broad jurisdiction over matters including permitting, federal consistency review, appeals, local coastal programs, master port plans, public work plans, long-range development plans, and other quasi-judicial matters requiring its attention.[155] Thus, the Coastal Commission is the primary vehicle for monitoring, compliance, and enforcement. It has authority to issue permits and administrative orders to require compliance with the CA, including for removal of unpermitted development or restoration of sites. The Commission also has the ability to seek judicial remedies and can impose fines in cases involving violations of public access provisions. The Commission also has authority to conduct hearings, as appropriate.[156]

150 *Resource Management Act*, s. 117.

151 *Coast Protection Act*, s.1.

152 *Ibid*, s.2.

153 Maine Revised Statutes *Title 38: Waters and Navigation, Ch.3 – Protection and Improvement of Waters*, §480-E-1.

154 *Coastal Act*, s. 30320.

155 *Ibid*, s. 30321.

156 *Ibid*, s. 30325.

The Executive Director of the Commission has broad powers and responsibilities for the management of the CA. As the sections on the enforcement of the Coastal Act read:

> *Violation of a permit or any term, condition, or provision of a permit is grounds for enforcement under this Section and under Chapter 9 of the California Coastal Act of 1976. Whenever the executive director of the commission determines that a violation of a permit or term, condition, or provision of a permit has occurred or is threatened, the executive director shall refer the matter to the Attorney General for appropriate action. Where such a violation has occurred or is threatened, the Attorney General may file an action in the name of the commission for equitable relief to enjoin such violation of, or for, civil penalties, or both, or may take other appropriate action pursuant to Chapter 9 of the California Coastal Act of 1976.*[157]
>
> *Whenever the executive director of the commission determines that any violation of the provisions of the California Coastal Act of 1976 has occurred or is threatened, the Attorney General may file an action in the name of the commission for equitable relief to enjoin such violation, or for civil penalties, or both, or may take other appropriate action pursuant to Chapter 9 of the California Coastal Act of 1976.*[158]

The Commission is composed of 15 members, which include the Secretary of the Natural Resources Agency, the Secretary of Transportation, the Chairperson of the State Lands Commission, six representatives of the public from the state at large, and six representatives selected from its six coastal regions (selected by the Governor, speaker of the Assembly and Senate Committee on Rules).[159]

II. Monitoring and Compliance

Beyond the administrative bodies that hold or share responsibility for the various statutes, regulations and policies, many of the jurisdictions have additional mechanisms in place to help ensure that their coastal management and protection regimes continue to function.

(i) Reporting:

Monitoring reports are a valuable tool used in several jurisdictions. These reports are usually created for the benefit of the elected house of representatives.

In the United Kingdom, for example, the Environment Agency must report to the Minister about flood and coastal erosion risk management. The Minister has the authority to create regulations that set out the manner of content and timing of the reports.[160] Similarly, Queensland's **Coastal Protection Management**

157 *Coastal Act*, s. 13172.

158 *Ibid*, s. 13173

159 *Ibid*, s. 30301.

160 *Flood and Water Management Act,* s.18.

Act requires that the Chief Executive prepare and publish a report on the state of the coastal zone at least every four years. The report must: include an assessment of the condition of major coastal resources; identify significant trends in coastal values; review significant programs, activities, and achievements in relation to the protection, restoration and enhancement of the coastal zone; and evaluate the efficiency and effectiveness of the object of coastal management strategies implemented to achieve the objectives of the CPMA.[161]

In British Columbia, the marine plans created under the MaPP Program include plan performance indicators to track the plan's progress. These performance indictors include the number of projects completed, the number of requests for variances, the number of reports of non-compliance with plan zoning, and the number of agency staff using the Marine Plan as part of planning and decision-making. The status indicators are reported each year in an annual report.[162]

The plan's effectiveness is determined using ecosystem based management (EBM) indicators, which track how effectively outcomes under the plan are being achieved.[163] A comprehensive EBM monitoring report on the status of ecological and human well-being indicators will be published every five years. This report will inform the review, amendment, and updating of the plan by tracking measurable changes in ecological and human well-being values.[164]

In the North Vancouver zone, the Marine Plan for the region notes that the primary issue for compliance and enforcement of marine uses and activities is the lack of resources for maintaining an on-water presence, and because of the size of the area and its remoteness. However, advancements in technology have led to new opportunities for wireless observation and monitoring.[165]

In the North Coast zone of British Columbia, the Marine Plan highlights that compliance and enforcement involve a number of things, including inspections, investigations of reported violations, enforcement actions to compel compliance, warnings and tickets, compliance orders, and even court actions (injunctions, prosecutions).[166] The region also has high costs for surveillance and compliance monitoring, and the area's Marine Plan notes several difficulties facing compliance and enforcement that need to be addressed, including: inadequate training for enforcement officers, lack of adequate laboratory testing to verify compliance, and follow-up with perpetrators. The Marine Plan notes the importance of information and education programs to increase awareness and understanding of the laws and regulations.[167]

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161 *Coastal Protection and Management Act*, s.166.

162 For example, see Haida Gwaii Marine Plan, at s. 9.3.

163 *Ibid*.

164 *Ibid*.

165 North Vancouver Marine Plan, s. 4.3.12 – Regulatory Compliance and Enforcement.

166 See North Coast Marine Plan, at p. 30-31.

167 *Ibid*.

III. Enforcement Mechanisms and Offences

Each jurisdiction has multiple kinds of enforcement mechanisms at its disposal. As might be expected, because of the multiplicity of statutes, regulations, and policies that most jurisdictions use to govern different aspects of their coasts, enforcement mechanisms can be found in a number of different places. The mechanisms can vary widely, from generic or general offences and penalties to more specific enforcement mechanisms created for specific purposes.

Typically, the creation of offences for failure to comply with any number of statutes, regulations or even policies (if incorporated into the law) can result in penalties (fines and imprisonment) or revocation of permits and licences. Additionally, court orders are used quite frequently to cause a party to cease their activity, or to force a party to restore part of the coastal area that they damaged.

(i) Orders:

In Newfoundland and Labrador, under the ***Water Resources Act***, if the Minister believes on reasonable grounds that a person has not carried out a directive of the Minister, an inspector, or another official made under the Act, or has contravened the Act, or terms or conditions of a licence or permit, the Minister may issue an Order for that person to either (a) stop or shut down their use or undertaking immediately, permanently, or temporarily, or (b) do all things and take the necessary steps to control, manage, eliminate, remedy, or prevent an adverse effect from taking place as a result of their use or undertaking. These actions must be taken at the person's own expense.[168]

In New Zealand, an **enforcement order** can be made under the ***Resource Management Act*** by the Environment Court, which may require a person to cease, or prohibit them from commencing, anything that is a contravention of the RMA, or any of its regulations, rules, plans, or requirements.[169] Where the enforcement order is made against a person, they must comply with the order and pay all costs of compliance. If the person fails to comply with the order, any person may, with permission by the Environment Court, comply with the order on that person's behalf, including entering on land, selling or otherwise disposing of any structures or materials salvaged in complying with the order, and recovering all costs and expenses of doing so as a debt due from the person who was not in compliance with the RMA.[170]

An application can be made to the Environment Court for an enforcement order by any person at any time. This includes a local authority or consent authority.[171]

168 *Water Resource Act*, s. 76(1).

169 *Resource Management Act*, s. 314(1).

170 *Ibid*, s. 315.

171 *Ibid*, s. 316.

(ii) Offences and Penalties:

The following are the kinds of offences and penalties some jurisdictions have created:

Under its **Watercourse and Wetland Protection Regulations**, Prince Edward Island has an offence for any person who is in violation of the Regulations, or who is in violation of a term, condition, or provision of any certificate, permit, licence, etc that is made under the act or regulation. An offender is guilty of an offence and liable to face a fine of no less $3,000, up to $10,000, as well as pay restitution as the court sees fit to the person aggrieved.[172]

Under the ***Environmental Quality Act***, Quebec's Minister may impose monetary administrative penalties on any person or municipality failing to comply with the Act or its regulations. A monetary administrative penalty of $500 for a natural person, or $2,500 in any other case, may be imposed.[173]

Under the ***Water Resources Act***, a person in Newfoundland and Labrador can be found guilty of an offence and face fines of not less than $1,000 and no more than $10,000 for a first offence, and no less than $4,000 and up to $1,000,000 for a subsequent offence.[174]

Under the ***Resource Management Act***, a person in New Zealand who commits an offence by contravening the Act, or a permit authorized under the Act, faces fines of up to $300,000 for a natural person, or imprisonment not exceeding a two-year term.[175]

Under the *Coastal Act*, a person in California who is in violation of a permit issued under the Act is referred by the Coastal Commission to the Attorney General for appropriate action. The Attorney General may then file for equitable relief, or commence a civil action, or both.[176] The Commission can also assess administrative penalties against a party for any violations of the public access provisions of the CA under its Enforcement Program. The fines can reach as high as $11,250/day.[177]

172 *Watercourse and Wetland Protection Regulations*, s.14.

173 *Environmental Quality Act*, s. 115.

174 *Water Resources Act*, s. 91.

175 *Resources Management Act*, ss. 338, 339.

176 *Coastal Act*, s. 13172.

177 *Ibid*, s. 30821.

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Appendix A - Table of Canadian Sources

The following are all Canadian statutes, regulations and policies that were cited for the purposes of this narrative report.

Jurisdiction	Legislation or Policy
British Columbia	• *Land Act* RSBC 1996 c. 245 • *Water Sustainability Act* SBC 2016 c. 15 • *Community Charter* SBC 2003 c. 26 • *Local Government Act* RSBC 2015 c. 1 • *Park Act* RSBC 1996 c. 344 • *Land Title Act* RSBC 1996 c. 250 • Ministry of Water, Land and Air Protection, *Flood Hazard Area Land Use Management Guidelines* (Province of British Columbia: 2004, Amended by Ministry of Forests, Lands, Natural Resource Operations and Rural Development: 2018). • Marine Plan Partnership for the North Pacific Coast, British Columbia (General)
New Brunswick	• *Clean Water Act* SNB 1989 c. C-6.1 • *Clean Environment Act* RSNB 1973 c. C-6 • Department of Environment and Local Government, *Coastal Areas Protection Policy for New Brunswick* (Province of New Brunswick, 2002) • Department of Environment and Local Government, *A Water Strategy for New Brunswick: 2018-2028* (Government of New Brunswick, 2017) • Department of Natural Resources & Department of Environment and Local Government, *Wetlands Conservation Policy* (New Brunswick, 2002) • Minister of Environment and Local Government, Flood Risk Reduction Strategy (Province of New Brunswick, 2014)
Newfoundland and Labrador	• *Water Resources Act* SNL 2002 c. W-4.01 • Department of Fisheries and Aquaculture, *Coastal and Ocean Management Strategy and Policy Framework* (Province of Newfoundland and Labrador, 2011) • Municipal Affairs and Environment, *Policy for Development in Shore Water Zones* (Province of Newfoundland and Labrador, 2001) • Land Claims Agreement Between the Inuit of Labrador and Her Majesty the Queen in Right of Newfoundland and Labrador and Her Majesty the Queen in Right of Canada ("Labrador-Inuit Land Claims Agreement") (2005)
Prince Edward Island	• *Environmental Protection Act* RSPEI 1988 c. E-9 • *Subdivision and Development Regulations* PEI Reg c. P-8 • *Watercourse and Wetland Protection Regulations* PEI Reg c. E-9

Quebec	• *Environmental Quality Act* RSQ c. Q-2 • *Watercourses Act* SQ 1996 c. 37 • *Water Withdrawal and Protection Regulation* Q Reg c. Q-2, r35.2 • Regulation respecting the water property in the domain of the State Q Reg c. R-13, r.1 • *An Act Respecting Land Use Planning and Development* RSQ c. A-19.1 • *Protection Policy for Lakeshores, Riverbanks, Littoral Zones and Floodplains* CQLR c. Q-2, r.35 • *Water Withdrawal and Protection Regulation* Q Reg c. Q-2, r35.2 • Regulation respecting the water property in the domain of the State Q Reg c. R-13, r.1 • Minister for Transport and the Implementation of the Maritime Strategy, *Strategie Maritime: The Maritime Strategy by the Year 2030* (Province of Quebec, 2015)

Appendix B - Table of International Sources

The following are all international statutes, regulations and policies that were cited for the purposes of this narrative report.

Jurisdiction	Legislation or Policy
California (USA)	• California Public Resource Code, Division 20 ("*Coastal Act*") • California Title 7.2, Government Code, § 66600 et seq. § 31000 et seq ("*McAteer-Petris Act*") • California Code of Regulations Title 14, Natural Resources, Division 5.5 ("*California Coastal Commission*")
Maine (USA)	• *Maine Revised Statutes Title 38: Waters and Navigation, ("Ch.3 – Protection and Improvement of Waters, Ch.19 – Coastal Management Policies, Ch.21 – Coastal Barrier Resources System")* • *Chapter 1000: Guidelines for Municipal Shoreland Zoning Ordinances* made pursuant to the *Mandatory Shoreland Zoning Act*, 38 MRSA (sections 435-449)
South Carolina (USA)	• *South Carolina Code of Laws Title 48 – Environmental Protection and Conservation* (*Chp 39: Coastal Tidelands and Wetlands*) (also: "South Carolina Coastal Zone Management Act") • South Carolina Code §48–39–10 et seq. ("*Chapter 30: Department of Health and Environmental Control – Coastal Division*")
New Zealand	• *Resource Management Act* Public Act 1991 No. 69 • *Marine and Coastal Area (Takutai Moana) Act* Public Act 2011 No. 3 • Department of Conservation, *New Zealand Coastal Policy Statement* (Government of New Zealand, 2010)
Queensland (Australia)	• *Planning Act* QCA 2016 • *Coastal Protection and Management Act* QCA 1995 • Planning Regulation Reg 78 of 2017, made pursuant to the *Planning Act* • Department of Infrastructure, Local Government and Planning, *State Planning Policy* (Queensland Government, 2017) • Department of Infrastructure, Local Government and Planning, *State Development Assessment Provisions*, Version 2.3 (Queensland Government, 2018) • Department of Environment and Heritage Protection, *Coastal Management Plan* (Queensland Government, 2013)
United Kingdom	• *Coast Protection Act (1949)* c. 74 • Department for Environment, Food and Rural Affairs, *The National Flood and Coastal Erosion Risk Management Strategy for England* (United Kingdom, 2011) • *Flood and Water Management Act* (2010) c. 29 • Countryside and Rights of Way Act (2000) c. 37