

Policy Options for a Bermuda Nearshore Marine Spatial Planning Process

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Abbreviations

BIOS	Bermuda Institute of Ocean Sciences
DAB	Development Applications Board
DENR	Department of Environment and Natural Resources
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
ELI	Environmental Law Institute
EEZ	Exclusive Economic Zone
MRB	Marine Resources Board
MSP	Marine Spatial Planning
MoU	Memorandum of Understanding



Executive Summary

Bermuda's nearshore marine environment is a critical economic, environmental, and social resource that supports a wide array of recreational and commercial uses, including but not limited to commercial and recreational fishing, dive tourism, commercial and cruise shipping, and undersea cabling. These uses must coexist, and the challenge of managing the intensive use of the Bermuda Platform and other nearshore waters will increase in the future as new activities, like offshore energy and aquaculture facilities, are introduced.

Bermuda can meet the challenge of ocean management through marine spatial planning, or "MSP." MSP is a public process that organizes human activity in marine areas in time and space to meet environmental, economic, and social objectives. MSP may be used as a decision-making tool for managing human activities in Bermuda waters, or it may be followed by the implementation of an ocean zoning plan that identifies zones prioritized for specific uses. By creating a MSP process, the Bermuda Government can build the foundation for a sound, forward-looking ocean management regime that ensures the long-term health and stability of the marine ecosystem, while supporting Bermuda's economy and providing for its people.

One prerequisite for any MSP process is a legal and policy framework that supports—and, ideally, advances—the goals and implementation of MSP. This report considers policy options whereby Bermuda could undertake MSP, based on our legislative review set out in *Legal Context for Nearshore Marine Spatial Planning in Bermuda* (May 2016), interviews conducted by Environmental Law Institute (ELI) staff, and background research on experiences with MSP elsewhere. These options are intended to support the Government of Bermuda and interested stakeholders if and when a determination is made to move forward with a MSP process. MSP must be led and designed by and for Bermuda, through a political and stakeholder process.

ELI has identified several primary policy options for development and deployment of a marine spatial plan in Bermuda. Option 1 relies on an interdepartmental approach and can be achieved without legislation. It represents a practical first step. Option 2 is legislative and would build on Bermuda's existing planning framework, assigning overall authority for MSP to the Department of Planning (Option 2A) or to the Department of Environment and Natural Resources (Option 2B)—each housed within the Ministry of the Environment.¹ We also present a set of additional, targeted recommendations for areas where the Bermuda legal framework can be amended to better support MSP implementation. These approaches are briefly summarized:

Option 1: Create a new, interdepartmental Marine Spatial Planning Committee, comprised of relevant departments under the leadership of the Ministry of the Environment. The MSP Committee would be tasked with designing a MSP system that could later be more fully

¹ The Ministry of the Environment was split off from the existing Ministry of Health, Seniors and Environment in 2016. The Department of Planning was previously housed in the Ministry of Home Affairs. These very recent changes post-date the publication of ELI's report, *Legal Context for Nearshore Marine Spatial Planning in Bermuda* (May 2016).



operationalized through the passage of MSP legislation conceptualized by the Committee. This option would allow for an interdepartmental process to design a legally robust approach that best suits the Government of Bermuda.

Option 2A: Use the existing Development and Planning Act 1974 as the framework for marine planning, by either including development of the marine plan as part of the Bermuda Plan or adopting only the planning permission components of the Act to provide a structure for interdepartmental and public consultation and input on particular marine development proposals. While the Act could arguably be extended to the ocean *without* new legislation, any modification of the existing process requires legislative action. In any case, the Department of Planning, now housed in the Ministry of the Environment, would require additional resources—most notably, a staff person with marine planning expertise. This option would build on existing, well-regarded Bermuda Government planning processes and expertise, providing a simple and value-neutral mechanism for assuring the forward-looking use of Bermuda’s nearshore waters.

Option 2B: This approach represents a slight variation on Option 2A. It begins with essentially the same legislative amendments to the existing Bermuda terrestrial planning system to explicitly bring marine areas within the coverage of the Development and Planning Act 1974. As with Option 2A, the Ministry of the Environment would be responsible for implementation of the Act. However, recognizing the substantial marine expertise of DENR, this approach would, *at the departmental level*, assign marine area development oversight under the planning law to DENR, the Department with the most substantive knowledge of and experience in management of the marine environment. This would also help minimize the burden on the Department of Planning.

Additional Considerations: In addition to these options, ELI has identified targeted topical areas where amendment or clarification of existing laws may benefit overall management of Bermuda’s nearshore marine environment:

- jurisdiction and control of the seabed;
- protected species;
- maritime cultural heritage;
- water pollution;
- energy;
- seabed mining; and
- aquaculture.

By addressing issues in existing law and selecting an effective mechanism for development and deployment of a marine spatial planning process, Bermuda can proceed in a way that avoids conflicts and is appropriate to the nation’s unique context.

1. Introduction

Bermuda’s nearshore marine environment is a critical economic, environmental, and social resource that supports a wide array of recreational and commercial uses, including but not limited to commercial and recreational fishing, dive tourism, shipping, tourism, and undersea cabling. These uses must coexist now, and the challenge of managing the intensive use of the Bermuda Platform and its surroundings will increase in the future as existing uses expand and new activities, like offshore energy and aquaculture facilities, are introduced.

Bermuda can meet the challenge of ocean management through marine spatial planning, or “MSP”—an approach growing in international usage in places like the UK,² Germany,³ the Netherlands,⁴ Belgium,⁵ China,⁶ the United States,⁷ the Caribbean,⁸ and elsewhere. MSP is a public process that organizes human activity in marine areas in time and space to meet environmental, economic, and social objectives. By engaging in a MSP process, the Bermuda Government can create a foundation for a sound, forward-looking ocean management system that ensures the long-term health and stability of the marine ecosystem while supporting Bermuda’s ocean economy and community well-being. It should be stressed that such a process and plan should be designed and implemented before it is needed—that is, before specific offshore project proposals are offered for discussion.

² A detailed marine plan was released by the Government of Scotland in 2015 (<http://www.gov.scot/Topics/marine/seamangement/national>), which is governed by Marine (Scotland) Act 2010 (<http://www.legislation.gov.uk/asp/2010/5/contents>) and the UK’s Marine and Coastal Access Act 2009 (<http://www.legislation.gov.uk/ukpga/2009/23/contents>). Planning processes have also been initiated for Wales, Northern Ireland, and the Irish Sea (http://www.unesco-ioc-marinesp.be/msp_around_the_world). In addition, EU Directive 2014/89/EU introduced a framework for maritime spatial planning in all EU Member States.

³ *See, e.g.*, the Mecklenburg-Vorpommern State Planning Act of 1998 (http://commin.org/upload/Practical_Examples/Germany/Germany_state-regional_level_Mecklenburg-Vorpommern_practical_example_in_English.pdf) and Germany Federal Spatial Planning Act of 2009 (http://www.bsh.de/en/Marine_uses/Spatial_Planning_in_the_German_EEZ/index.jsp).

⁴ *See* Dutch National Water Plan 2016-2021 (<https://www.government.nl/documents/policy-notes/2015/12/14/national-water-plan-2016-2021>).

⁵ A marine spatial plan for the Belgian part of the North Sea (<http://www.unesco-ioc-marinesp.be/uploads/documentenbank/25ad8a7ad6fbb0a0bd07562e392c382f.pdf>).

⁶ China’s National Marine Functional Zoning (2011–2020) divides China’s territorial waters and EEZ into zones. These zones are also divided into eight different categories, depending on the main activity to be developed within each zone (http://www.unesco-ioc-marinesp.be/spatial_management_practice/china). *See also* “China issues plan for maritime development,” at http://www.china.org.cn/environment/2012-04/26/content_25238317.htm.

⁷ *E.g.*, Massachusetts Oceans Act of 2008 (<http://www.unesco-ioc-marinesp.be/uploads/documentenbank/cfc90bf87d21c6a5357df2852a30160b.pdf>).

⁸ *See, e.g.*, various marine planning actions developed in connection with the Waitt Institute’s Blue Halo Initiative in Barbuda (<http://waittinstitute.org/bluehaloinitiative/barbuda/>), Curaçao (<http://waittinstitute.org/bluehaloinitiative/curacao/>), and Montserrat (<http://waittinstitute.org/bluehaloinitiative/montserrat/>).



This report considers how Bermuda could design and implement MSP through the development of informal mechanisms or a legal mandate. It provides several options, based on ELI's study of ocean governance in Bermuda.⁹ These options recognize that a MSP legal framework should do the following:

- Build from an ecological, economic, and social baseline assessment;
- Consider existing and future impacts, tradeoffs, and alternatives;
- Design a map-based planning and coordination system;
- Require robust public participation, including government consultations and engagement with stakeholders;
- Include mechanisms for implementation and enforcement; and
- Require monitoring, evaluation, and adaptation.

Any MSP process must be led by, and developed specifically for the needs of, Bermuda. The policy options identified here are intended to support the Government of Bermuda and interested stakeholders if and when Bermuda decides to move forward with MSP. While this report cannot predict the specifics of future policy, it is hoped that these policy options and the accompanying legal framework report will provide useful information that will inform and help advance consideration of MSP and support a Government-led process.

This report is based on independent research conducted by the Environmental Law Institute (ELI) on behalf of the Bermuda Institute of Ocean Sciences (BIOS). It reflects the views of ELI, not those of BIOS or of the Government of Bermuda. This research builds from an ELI review of laws, regulations, and policies in force in Bermuda, as well as information gleaned from reports and other relevant documents. In addition, ELI staff conducted in-depth in-person interviews with representatives from the Bermuda Government and sought written feedback on draft materials. ELI produced this report on MSP policy options based on its research and the input received through this outreach and consultation.¹⁰

2. Marine Spatial Planning in Context

A successful MSP process for Bermuda must consider and address local conditions and needs. A Bermuda-specific process can nonetheless profit from consideration of experience gleaned from the design and implementation of MSP by other national and subnational governments.

The expanding global marine planning community has developed models and guidance identifying key characteristics of successful MSP processes and steps in MSP development and

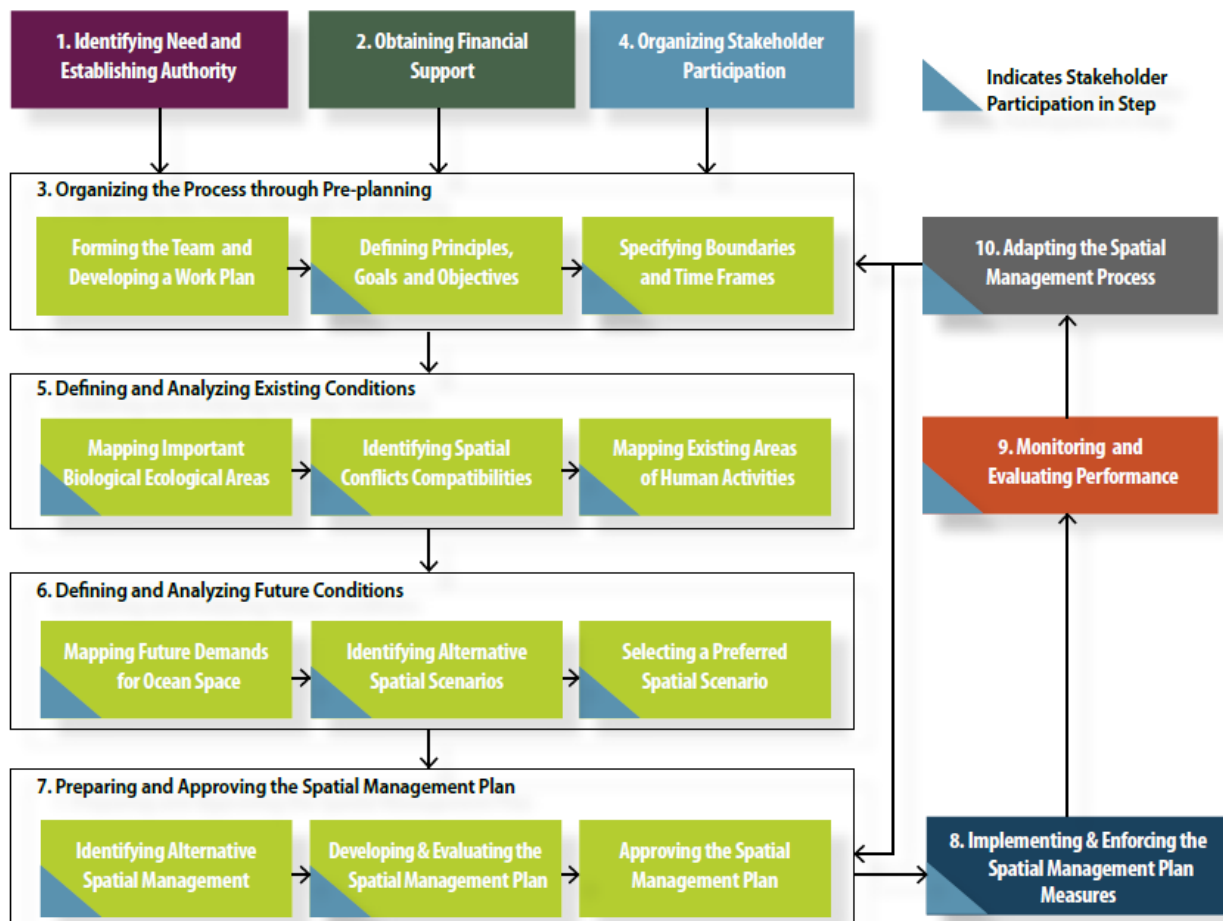
⁹ ELI, *Legal Context for Nearshore Marine Spatial Planning in Bermuda* (May 2016), at <http://www.eli.org/research-report/legal-context-nearshore-marine-spatial-planning-bermuda>.

¹⁰ This report is provided for informational and educational purposes only and does not constitute legal advice. It is intended, but not promised or guaranteed, to be complete and up-to-date. Transmission of this report is not intended to create, and its receipt does not constitute, an attorney-client relationship between the Environmental Law Institute and any other person or entity.



implementation.¹¹ These tools provide a useful overview of MSP development that can help place Bermuda MSP in context (Figure 1). Bermuda may wish to develop a comprehensive MSP structure that incorporates all of the elements of UNESCO’s step-by-step MSP process shown in Figure 1, or it may determine that a more limited system would better meet its needs. Regardless, these elements should be considered when developing MSP in Bermuda.

Figure 1. Steps in MSP process (from Ehler and Douvère (2009)).



In determining how best to implement MSP in Bermuda, the Government may wish to draw from approaches that have been tried and tested in other jurisdictions. While each jurisdiction’s MSP governance differs based on local context and needs, these efforts can be sorted based on their legislative basis and implementation.

- MSP under new comprehensive legislation creating a new entity
 - *Example:* The United Kingdom Marine and Coastal Access Act 2009 created a new framework for MSP to be implemented by a new Marine Management Organisation.

¹¹ See Charles Ehler and Fanny Douvère, *Marine Spatial Planning: a step-by-step approach toward ecosystem-based management*, IOC Manual and Guides No. 53, ICAM Dossier No. 6. (2009).



- MSP under new comprehensive legislation implemented by an existing entity
 - *Example:* Canada created a framework for an ocean management strategy through the Oceans Act, which is implemented by the pre-existing Department of Fisheries and Oceans.

- MSP through expansion of existing authorities and entities
 - *Example:* Germany extended its Federal Spatial Planning Act to apply to the EEZ and applied its land use process to the area through the Maritime and Hydrographic Agency. German states also use existing planning authorities to conduct MSP in its territorial sea, such as by the state of Mecklenburg-Vorpommern in the Baltic Sea, pursuant to the Federal State Regional Planning Act.¹²

- MSP without new legislation
 - *Example:* Belgium carried out MSP activities in the North Sea through application of its Marine Protection Act of 1999, which established licence and EIA requirements for certain activities in the ocean.¹³ A “master plan” was created in 2003 to guide licencing activity. The initial plan was based on zoning processes used in Flanders without new legislative direction. However, Belgium has since legislated authority for MSP in the Marine Environment Act.¹⁴

International MSP experience demonstrates that a wide range of new or existing authorities can form the legal basis to effectively design and implement MSP. On the other hand, experience also suggests that MSP is more likely to achieve its goals where legal requirements provide a sound foundation for the planning process and legal mechanisms require implementation and enforcement of the resulting plan. MSP in Bermuda is most likely to succeed if a legal mandate calls for its development and implementation.

MSP legislation should be crafted in conformance with institutional needs and existing legal requirements, and also with an eye toward technical, capacity, and financial limitations. With an effective structure, a nearshore marine spatial plan will help Bermuda citizens and the government choose an ocean future that is right for Bermuda by minimizing impacts from and conflict within existing and future ocean uses.

¹² Raum & Energie, *Best Practice in Marine Spatial Planning: Description of Four Case Studies in Europe and Overseas* 26-33, 29 (2007) (“For the Territorial Waters the marine spatial plan is the extension of the regional plan of the federal state of MV to its sea area, regarding the Federal State Regional Planning Act. Therefore, the requirements for the MSP are the same as for terrestrial planning.”); UNESCO Marine Spatial Planning Initiative, *Germany* (Länder or States), at http://www.unesco-ioc-marinesp.be/msp_around_the_world/germany_lander_or_states; UNESCO Marine Spatial Planning Initiative, *Germany* (North/Baltic Seas), at http://www.unesco-ioc-marinesp.be/msp_practice/germany_north_baltic_seas.

¹³ Raum & Energie 17-25.

¹⁴ UNESCO Marine Spatial Planning Initiative, *Belgium*, at http://www.unesco-ioc-marinesp.be/spatial_management_practice/belgium.



3. Current Governance Framework: Challenges and Opportunities

In *Legal Context for Nearshore Marine Spatial Planning in Bermuda*, ELI discusses the existing legal and regulatory framework governing a wide range of uses of and activities in Bermuda's nearshore waters. The analysis of Bermuda's legal and governance framework describes a patchwork of dozens of ocean-relevant laws in which authorities—often independently—make decisions about how to utilize ocean resources. While many existing laws do provide adequate authority for effective implementation, some areas present opportunities for improvement.

- Some existing laws are duplicative, adding little value for management and potentially complicating implementation and increasing associated costs. For example, corals are protected by the Coral Reef Preserves Act 1969, and as of 2016 have been added to the Protected Species Order under the Protected Species Act 2003.¹⁵ Also in 2016, corals were removed from the Fisheries (Protected Species) Order 1978—a current example of how the Government can simplify and consolidate legal protections.¹⁶
- Bermuda has not enacted laws comprehensively governing certain new and emerging activities, including offshore mining, energy development (wind, tidal, wave, current, thermal, and petroleum facilities),¹⁷ and aquaculture. While some legal provisions do apply to these activities, enhancement of existing governance frameworks can improve regulatory effectiveness.
- Existing sector-specific laws in some instances could be strengthened with the support and leadership of relevant Ministries in key areas, which may include authority to enable: area restrictions for particular uses; environmental impact assessment (EIA) and environmental impact statement (EIS) requirements; and consultation provisions. The Development and Planning Act 1974 is unique among relevant legislation because it applies to development generally, rather than to specific types of activities, and because it contains consultation and EIA and EIS requirements.
- Laws sometimes appear to conflict, but most such cases can be resolved by interpreting the laws to work together. The North Channel dredging project provides a recent example.

The project to dredge the North Channel illustrates how the existing regulatory system can be interpreted to enable inter-departmental assessment and decision-making. The project was desired to accommodate larger cruise ships but would have had a range of environmental impacts—most notably, destruction or transplantation of a substantial number of corals.

¹⁵ Protected Species Amendment Order 2016, BR 4/2016 § 2.

¹⁶ Fisheries (Protected Species) Amendment Order 2016, BR 5/2016 § 2.

¹⁷ This is beginning to change with passage of the Electricity Act 2016, as discussed later in this report in connection with Option 3 (Energy).



The Public Lands Act 1984 authorizes the Department of Works and Engineering to conduct the necessary dredging and does not explicitly require consultation with other departments or preparation of an EIA before dredging. The Fisheries Act 1972, however, prohibits harming protected species, including corals, without a licence—and does not specifically reference dredging. In this situation, it was unclear whether Works and Engineering needed to obtain a licence. The question was resolved by interpreting the laws to work together so that both apply—i.e., that the Fisheries Act 1974 did require a licence prior to dredging.

In addition, as a matter of good practice, the Department of Works and Engineering engaged in consultation and collaborated with the Department of Planning in the development of an EIA to address the dredging (which falls outside of Department of Planning authority) and the use of dredge materials for land reclamation (which falls within the Department of Planning's purview, triggering a suite of legal requirements). These processes in fact resulted in modifications to the channel that aimed to substantially reduce the number of corals impacted.

As a consequence of Bermuda's marine governance structure, departments may not be aware of potential cumulative impacts or user conflicts when making sector-specific decisions. Thus, more frequent and more effective interdepartmental collaboration and consultation is needed. Such collaboration and consultation can be achieved informally through personal connections among government staff or formally as a result of legal requirements (consultation mandates, ex officio board membership, etc.). Increasing the frequency and quality of collaboration within the Government on marine issues may be among the most promising first steps Bermuda can take on the path to MSP.

Because Bermuda has a relatively small population and a close-knit community, several interviewees indicated that informal communication across departments does occur on a regular basis. Organizational structure can facilitate and institutionalize these collaborations. For example, the merger of the Department of Environmental Protection (DEP) and Department of Conservation Services (DCS) to create the Department of Environment and Natural Resources (DENR) clearly offers new opportunities for integrated consideration of issues pertaining to fisheries, protected species, and sewage management. The even more recent migration of the Planning Department and the Parks Department to the Ministry of the Environment's portfolio should further enhance opportunities for interdepartmental collaboration. Additionally, marine interests continue to reside in other Ministries, including Tourism, Transport and Municipalities; Public Works; National Security; and Economic Development.

Informal collaboration and information-sharing relationships can be fragile and may be affected by factors such as personality conflicts, staffing changes, evolving departmental priorities, and agency officials' own priorities and incentives, especially in the context of small governments. Formalized consultation requirements can help to overcome these concerns by providing a consistent and structured framework for ensuring that critical consultations will occur, as well as a platform for public input.



4. Options for Nearshore MSP Development in Bermuda

While some of the legal foundations for MSP are already present in Bermuda, additional policy development—and, ultimately, legislation—will likely be required to productively develop and implement a marine spatial plan.

ELI's analysis of Bermuda law and policy suggests that MSP is most likely to succeed in Bermuda if it satisfies four characteristics. MSP should be:

- based on clear legislative authority;
- applicable to all present and foreseeable future activities in the ocean;
- simple and efficient in structure; and
- built on existing capacity and resources.

This section first presents several options that represent, in ELI's judgment, feasible legal and policy approaches that could ultimately lead to an effective MSP system in Bermuda. While the most effective resulting framework would be a legally enforceable marine spatial plan, more limited structures for effective consideration of project proposals also represent practical, reasonable near-term alternatives. Finally, ELI presents a set of "additional considerations" that could lead Bermuda to make targeted amendments to various laws, resulting in a framework that better supports future MSP.

This report does not identify or recommend content for a marine spatial plan, nor does it address specific zoning scenarios. These must be determined based on the priorities of the Government of Bermuda and through an MSP process.

Option 1: Create an Interdepartmental MSP Committee

A successful nearshore MSP process in Bermuda will require participation and input from a variety of Ministries, Departments, Boards, and stakeholders, both in the creation of the marine plan and in the consideration of marine development proposals. Bermuda could ensure that this input is managed effectively over time by creating an MSP Committee¹⁸ to develop and implement an MSP process.

One way to achieve this is through a Memorandum of Understanding, or MoU, which is a written agreement among government institutions that establishes their goal, approach, and responsibilities. A MoU typically creates no rights in third parties, nor does it legally bind anyone in the sense that legislation or regulations would. Certainly a more robust option would be to create an MSP Committee by way of new legislation. But by beginning with a less formal, non-binding interdepartmental process, the Government of Bermuda can work incrementally to build

¹⁸ We use the term "committee" for purposes of this report, but alternative terms might include board, council, caucus, task force, or even team. It will be important to settle on and consistently use a single term to help solidify the interdepartmental committee's role and public identity, and to establish its credibility.



momentum behind an MSP process and vetting various approaches—all of which can later inform the development of MSP legislation informed by practical experience in Bermuda.

Committee structure and function

Any MSP Committee should begin with broad-based membership that includes all relevant government Ministries and Departments (Table 1). This will help to ensure consideration of the widest range of perspectives, issues, and concerns relating to the ocean. While including Ministers as Committee members could maximize political buy-in and control, it may not provide needed opportunities for technical staff to consult together—and Committee cohesion could suffer if busy Ministers are unable to consistently participate. The Committee may therefore be most productive if membership is established at the level of Department heads (or their senior designees).

The MSP Committee should have clear overall goals and scope. This could include creation and implementation of a marine plan. Alternatively, the aim could be more limited: for example, the Committee might consult about and seek coordinated resolution of ocean-related issues as they arise.¹⁹ Committee members, in turn, would also benefit from clearly defined roles and responsibilities. Identification of a permanent lead Ministry would develop institutional capacity in the management and operation of the MSP system and provide consistency in staffing and organization for the Committee.²⁰

The MoU would define general and specific roles and responsibilities for other participants. General duties could include participation in meetings, providing input to the process and plan, and otherwise supporting the work of the Committee, while specific direction would be established on a departmental level based on existing competencies (Table 1). For example, the Department of Planning could be tasked with provision of support for mapping activities, similar to its work on land.

Table 1. Potential MSP responsibilities by ministry and department.

Ministry (Departments) ²¹	Potential responsibilities
Office of the Premier (Police Service, Bermuda Regiment, Sustainable Development)	<ul style="list-style-type: none"> • Coordinate Committee • Enforcement
Environment (Environment and Natural Resources, Planning, Parks, Marine Resources Board)	<ul style="list-style-type: none"> • Coordinate Committee • Fisheries and biodiversity conservation • Protected areas • Pollution • Marine cultural heritage

¹⁹ An interdepartmental body with more limited aims than MSP might be named accordingly—e.g., Ocean Management Coordination Committee.

²⁰ The Office of the Premier (Cabinet Office) and the Ministry of the Environment both appear to be appropriate choices for Committee lead. Too, the MRB would likely play a key role.

²¹ This Table accounts for recent ministerial and departmental portfolio changes that occurred since the publication of *Legal Context for Nearshore Marine Spatial Planning in Bermuda* (May 2016).



	<ul style="list-style-type: none"> • Planning/public consultation • Mapping
Tourism, Transport and Municipalities (Marine and Ports, Tourism, Shipping and Maritime Authority)	<ul style="list-style-type: none"> • Navigation • Maritime commerce • Urban impacts (Hamilton, St. George)
Economic Development (Energy)	<ul style="list-style-type: none"> • Future industrial uses (energy, mining etc.) • Utility uses
Legal Affairs (Attorney General’s Chambers)	<ul style="list-style-type: none"> • Legal implementation
Public Works (Works and Engineering, Public Lands and Buildings)	<ul style="list-style-type: none"> • Dredging and occupation of seabed (marinas, moorings, mining, etc.)

A MSP Committee would also need operational provisions empowering it to undertake certain functions. Key Committee powers would include, for example, the authority to establish its operating rules and to consult with (and seek assistance and input from) non-members. As currently envisioned, this Committee would operate under existing Bermuda law, with no new legislation. This means that the legal authority of the Committee cannot exceed the existing legal authority of its institutional members.

Given the importance of stakeholder engagement to the success of MSP, public participation and transparency requirements are also important considerations to define. These provisions would identify when Committee activities (such as meetings) would be open to the public, establish how the Committee will consult with other boards and the public, and generally guide adherence to a public process—particularly if the Committee is tasked with creation of a marine spatial plan.

MSP elements

If the MoU tasks the Committee with creating a marine spatial plan, the members will need to agree on the form and effects of that plan to ensure that it can and will be implemented.

Pursuant to an MoU (as opposed to binding legislation), the most effective approach to ensuring the effectiveness of the plan would be to include language stating that the member Ministries and Departments intend to issue no licence, permit, or other authorisation for any activity in the marine environment except in conformance with the plan, or unless the issuance is nondiscretionary or otherwise falls into an exemption set forth by law. Essentially, the signatories to the MoU are agreeing to carry out their legal duties, to the greatest extent possible, consistently with the plan.²²

The MoU would also benefit from adaptive management measures to ensure that the plan can change as needed due to the dynamic nature of the marine environment and emerging ocean uses. Adaptive management measures would include, for example, exemptions for activities not contemplated during planning and periodic review of the plan.

A mechanism to monitor and evaluate implementation is needed to ensure the effectiveness of the plan. Monitoring and evaluation components may consist of, for example, compliance monitoring,

²² In no event can the provisions of the MoU, however, override the existing legal requirements that bind the Ministries and Departments in their official actions.



ecosystem monitoring, and implementation monitoring. All should be part of the adaptive process. Monitoring and evaluation enables government bodies to understand what is successful in the MSP system and what may need improvement, thereby creating a science-based and well-supported mechanism by which adaptive management can occur. In addition, the results of monitoring and evaluation, when published and made widely available, can help to establish the value and effectiveness of MSP. This provides accountability to the public for actions taken regarding the marine plan and can spur ongoing investment and engagement in the MSP process. Furthermore, the monitoring and evaluation carried out in service of the MSP Committee will also help to identify gaps in Bermuda's knowledge base and inform a local agenda for marine science and monitoring.

Finally, sound and consistent enforcement is needed to ensure that processes and plans proceed according to the law and are used as intended to improve long-term economic and environmental outcomes in the ocean. A MoU cannot create new enforcement authority where none previously existed. However, signatories can commit to using their existing enforcement powers to prioritize enforcement related to MSP.²³ Tools are needed to ensure stakeholder compliance, but, again, these tools will be provided by existing law. In other words, stakeholders would be legally obligated to comply not with the marine spatial plan itself, but with licences and permits issued under other laws—in conformity with the plan. For example, limits on occupation of the seabed are set and would be enforced under the Marine Board Act or Public Lands Act, and the marine spatial plan would specify the locations of such limits.

Benefits and drawbacks

Creation of a new interdepartmental MSP Committee and process has benefits and drawbacks. The MoU approach allows for significant flexibility and informality in establishing the Committee, its aims, and its scope. It requires no legislative action, which should make it a more politically feasible option. Although the intent would be for the work of the Committee to lead eventually to a formal MSP process (perhaps through future legislation), the Committee would have the benefit of starting from scratch. Committee members can examine the various approaches used elsewhere in the world, but then tailor their actions to specifically address Bermuda's marine issues and to respond to the particular political needs of the Government.²⁴ The work of the Committee can be used to

²³ If the MSP Committee option were to be implemented by way of legislation, of course, new enforcement provisions specific to MSP could be included. Such provisions could authorize the Government (e.g., police, prosecutors) to enforce against violations of the law and also allow private individuals to challenge planning processes directly—and rely on the contents of the marine spatial plan in disputes over issuance of other licences and permits. MSP legislation, if eventually passed, would offer an opportunity to strengthen or modify inadequate existing enforcement provisions and to ensure that all relevant enforcement personnel are empowered to enforce the full array of laws applicable in the marine environment.

²⁴ The approach taken by Washington State in the United States is instructive. At the heart of MSP in Washington State is the State Ocean Caucus, an interagency forum formed in 2007 that is chaired by the Washington Department of Ecology (the state's environmental department) and "communicates and coordinates their work with local, tribal, and regional governments, federal agencies, business and environmental interests, academic institutions and the general public." See <http://www.ecy.wa.gov/programs/sea/ocean/oceangroup.html> (listing State Ocean Caucus agency members and describing their work). By 2010, Washington State had gone on to enact MSP legislation. See Marine Waters Planning and Management Act, ch. 43.372 Revised Code of Washington. In 2011, the Caucus issued its comprehensive *Marine Spatial Planning in Washington: Final Report and Recommendations of the State Ocean*



signal Government interest in MSP, to rally public support, and to create a public space for dialogue and debate about the use of Bermuda's marine waters. In addition, this MoU option can avoid unnecessary complexity, particularly when compared to the existing planning process (discussed in Options 2A & 2B, below), which was designed for the more complicated and fraught context of land-use planning and development.

On the other hand, the same flexibility and informality that are hallmarks of the MoU approach entail a significant drawback: an MoU is simply an intergovernmental agreement, and it creates no new legal rights in the signatories or in third parties. The MoU draws from existing legal authorities; it breaks no new legal ground. If the parties to the MoU lose interest or lack the time, resources, or will to proceed, the Committee's work can stall. Furthermore, because the Committee structure, goals, and scope are negotiated internally among the signatories themselves—rather than mandated legislatively—there are opportunities for the Committee process to bog down at the outset.²⁵ And if a marine spatial plan is itself a defined outcome, settling on its terms poses a challenge. Finally, the funding and staff time for this option will likely depend on existing budgets, which presents another obstacle to achieving full engagement. Less engaged Committee members could view this as an additional and unwanted burden on their already limited institutional time and resources.

Despite the drawbacks, on balance, this option provides a sound means for moving forward with MSP in a practical, incremental, Bermuda-specific way.

Option 2A: Use the Existing Planning System to Design and Implement MSP (with traditional DAB lead)

Bermuda can design an MSP process by extending its existing terrestrial development and planning framework to cover all or part of the ocean that is subject to Bermudian jurisdiction.

As described in detail in ELI's May 2016 report, *Legal Context for Nearshore Marine Spatial Planning in Bermuda*, the Development and Planning Act 1974 requires creation of a land use plan and establishes a planning permission process for developments. While not limited by law to activities on land, the planning process generally does not address marine activities unless they are connected to the shore. However, the planning structure contains all of the elements needed to develop a comprehensive marine spatial plan, including a process for plan development and a planning permission process that includes interdepartmental consultation, EIA, and preparation of an EIS prior to decision. The Department of Planning and the Development Applications Board (DAB) have extensive experience in developing and applying land use plans for the terrestrial environment, and a MSP process that leverages these strengths could be both relatively simple to

Caucus to the Washington State Legislature (Jan. 2011) (discussing the evolution of MSP in Washington State), at <https://fortress.wa.gov/ecy/publications/documents/1006027.pdf>.

²⁵ In addition to disagreements among signatories, there may well be disagreement *within* some Ministries or Departments as to their proper role in an MSP Committee.



implement and effective in integrating input on multiple uses of the nearshore marine environment.²⁶

Overview of development and planning in Bermuda

Bermuda's Development and Planning Act 1974 already provides a close analogue for MSP. The Act's plan development process is the primary mechanism by which Bermuda determines land use, and its planning permission process creates a structure for considering whether and how developments should proceed with regard to that plan.

The Act calls for creation of a land use plan that establishes where different activities and types of development can occur in Bermuda. The Department of Planning must create the plan following procedures set forth by the Act. The process begins with a "survey of Bermuda," after which a development plan is created based on a consideration of multiple issues—a process that includes comment and input from technical staff in other departments. The development plan must include written material (describing zones and overlays and associated restrictions) and maps. Draft plans are open to review, objections, and representations by the public and affected public authorities before final legislative approval. The Bermuda Plan 2008 is the current development plan and contains a range of zones and overlays that govern where and how areas can be used for different types of development or for conservation purposes. The Act specifically provides for conservation areas, and the Bermuda Plan 2008 contains a variety of both zones and overlays where development is restricted or prohibited—including for protection of coastal areas.

The development permission process under the Act builds on the plan. Any "development" covered by the Act requires planning permission from the DAB after consultation with affected government departments, carried out by the Department of Planning. Prior to DAB review, project proponents also must conduct an EIA and prepare an EIS for a major development; a development proposed in a particularly environmentally sensitive and/or vulnerable location (as indicated on zoning maps); or a development with complex and/or potentially adverse environmental effects (**Error! Reference source not found.**). These consultation and environmental assessment requirements are not echoed in any other Bermuda laws relevant to the governance of marine areas. The planning permission process culminates with a DAB decision to approve with or without conditions or to reject the proposal. The decision is based on the plan.

As currently implemented, the Development and Planning Act 1974 has limited application to the marine environment. Under longstanding practice, the Department of Planning applies the Act only to developments that are connected to the land, with the lone exception of floating docks. Case-by-

²⁶ A current example of a developed island nation implementing MSP by way of its planning law comes from Malta. Earlier this year, and pursuant to the broader EU directive on maritime spatial planning, Malta sought public comment on a simple set of draft regulations that would use the country's Development Planning Act to implement MSP subject to oversight from the Planning Authority. *See* Malta (draft) Maritime Spatial Planning Regulations, 2016, at [https://socialdialogue.gov.mt/en/Public_Consultations/OPM/Documents/Maritime Spatial Planning Regulations 2016.pdf](https://socialdialogue.gov.mt/en/Public_Consultations/OPM/Documents/Maritime_Spatial_Planning_Regulations_2016.pdf). *See also* Gozo News, "Establishing a framework for marine spatial planning," July 15, 2016, at <http://gozonews.com/63132/establishing-a-framework-for-maritime-spatial-planning/>.



case consideration is required to determine whether developments in marine waters are adequately connected to the land to trigger planning permission and, if so, to determine the scope of planning review (i.e., whether to review all or only certain aspects of the project).

For example, an offshore energy facility probably would be subject to review because it would be connected to shore by a cable; however, planning review might include only up to the cable landward of the shore, or instead the entire operation of the energy facility. These options would result in substantially different analysis, consultation, and consideration. In the absence of guidance on how such decisions are made, the current permission process leaves substantial room for interpretation as applied to the ocean.²⁷

Application of planning to MSP

The Development and Planning Act 1974 establishes a close analogue for a MSP process. It contains both *planning* and *project review* elements that are consistent with effective nearshore MSP. As a result, it provides a potential model for Bermuda MSP at a minimum—and, more importantly, it could be directly applied to the marine environment with only limited legislative changes.

The Act could be extended in full by clarifying that it applies to all or part of the marine areas under Bermuda’s jurisdiction. This action would require the Department of Planning to apply the Act’s plan development process to create a plan for the ocean. This could supplement the existing land use plan for Bermuda or comprise a separate plan. Once completed, ocean developments would require planning permission, with proposals evaluated by reference to the plan after consultation and (where relevant) EIA and EIS.

Alternatively, the Act could be extended to the marine environment only as relates to planning or to project review. In the former case, the Department of Planning would be tasked with development of a marine spatial plan, but that plan would not be enforceable. In the latter, developments would be subject to a review process that includes consultation and EIA and EIS, but decisions would not be based on a comprehensive plan; this avenue would be analogous to general environmental assessment legislation. Either of these possibilities would represent a step toward a functioning MSP process. However, adopted alone, the first approach would lack an implementation structure; and the second approach, adopted alone, would lack a forward-looking planning process to guide project review. As a result, partial extension of the Development and Planning Act 1974 in either of these ways, while an improvement, would still be inferior to a more comprehensive application of the Act.

The process for extending the Development and Planning Act 1974 to the ocean would include legislation, followed by a plan development process, followed by initiation of project review against the plan. The Bermuda Plan 2008 does not cover the ocean now, and a substantial planning process would be required to create a new marine plan for the area. The planning process laid out in the Act is lengthy, particularly given the likely need to create new zones, overlays, and development

²⁷ Arguably, future regulations issued pursuant to the new Electricity Act 2016 could control this hypothetical example, given the broad stated intention of that law to establish a new regulatory framework for the electricity sector and its references to ocean energy production. See Electricity Act 2016, preamble, §§ 2, 6.



restrictions specific to marine areas. However, it would result in a plan with both public and governmental sanction. In applying new sections of the law—or existing sections to new areas—the Department of Planning may need to develop new policy positions to ensure that law is appropriately and consistently applied and to give guidance to assist project proponents in complying with new provisions of the law and marine spatial plan. Finally, the planning permission process would need scrutiny, including training and other support for the DAB and project proponents.²⁸

Benefits and challenges

Extension of the Development and Planning Act 1974 to the ocean would have substantial positives. It would:

- **Use existing processes:** The Act contains generally robust, transparent processes for both plan creation and project review. Use of these processes, in their existing form or slightly adapted, is efficient, as it allows the Department of Planning to build on existing policies and practice. In addition, it avoids the need to negotiate, develop, and implement new processes specifically for MSP.
- **Leverage existing resources and expertise:** The Department of Planning has important and generalizable planning expertise that can be applied in the ocean. This expertise notably includes stakeholder engagement during plan development and project review; facilitation of consultation; and direction of environmental review. These competencies are not fully duplicated in other Departments, and reliance on the Department of Planning therefore would avoid the potential duplication of resources elsewhere in the Government.
- **Require minimal legal changes:** The Act in its current form can be extended to the ocean with minimal amendments (as illustrated by the model legislation included in Appendix A to this report). Indeed, the Act can arguably be interpreted to apply to the ocean as currently written, without *any* changes: the Act by its terms governs the development of land in Bermuda—with “land” defined to expressly include “land covered by water.” Of course, for more than four decades the law has *not* been so interpreted, and taking this position now seems likely to bring with it litigation risk.²⁹ Equally important, targeted MSP amendments would be very valuable not only in explicitly extending the Act to the ocean, but also in making other minor changes needed for the Act to function most effectively in this new context.

²⁸ Extending the Act’s planning requirement to the sea need not result in a vast, integrated land-sea plan—a potentially unwieldy undertaking. Rather, the marine plan could be developed separately from the terrestrial plan, particularly as it is best practice is for marine plans to be highly adaptive and to have a shorter lifespan than land use plans. Nevertheless, overlap and coordination between land and marine plans would still be necessary.

²⁹ ELI’s review of the Act’s text reveals no insurmountable barrier to applying it, as written, in the ocean context. However, we have reviewed neither the law’s legislative history nor related case law, either of which could be relevant in a future legal challenge. In any event, just because a court *could* rule that the Act is applicable to the ocean does not mean that a court *would* so find. Amending the Act to clearly express the will of Parliament in this regard is the safer path.



- **Be sector-neutral:** The Department of Planning is largely seen as a neutral arbiter by stakeholders in Bermuda. It has a long history of land use planning that has strong support from the local community and generally is not perceived as taking a “side” in planning permission cases, whether advocating for or resisting particular projects. Other departments are focused on managing for specific purposes (fisheries, energy, etc.) and could be viewed by stakeholders in a MSP process as biased. Use of the Development and Planning Act 1974 as the framework for the MSP process would avoid that concern.

On the other hand, this approach presents several important challenges. It would:

- **Directly regulate only “development”:** The Act’s planning process provides an opportunity to identify in advance where and under what conditions different uses are appropriate. This process—and the project review process that follows—is focused on “development”—defined as “building, engineering, or other operations.” The scope of development applies to many activities, including temporary or permanent installations (e.g., energy facilities, undersea cables) and transient activities (e.g., dredging, land reclamation). However, not all activities may be covered—fishing and diving, for example, may not be interpreted as “operations” subject to planning permission under the Act (though they would be considered during consultation and environmental impact review). The resulting marine spatial plan would therefore directly regulate only a subset of ocean activities—albeit those with the most intensive impacts on other uses and activities in the ocean.
- **Require new resources and training:** The Department of Planning lacks the financial and human resources required to carry out this option, and it may be unlikely to support this path forward unless the needed resources were provided. These most notably include a staff person to serve as marine planning specialist for policy creation and interpretation in the Forward Planning section. The Building Control section may need additional training in marine construction practices. In addition, if the DAB is used as the planning permission body, it would likely require additional training or new members specifically to review marine proposals.³⁰
- **Rely on effective, robust consultation by non-technical experts:** Although the Department of Planning possesses substantial expertise in the planning process, it lacks expertise in the uses of and activities in the ocean, as well as their effects on other uses and activities and on the environment. Thus, a MSP process led by the Department of Planning will only result in an effective plan if technical expertise is incorporated very early in plan development. Fortunately, robust consultation is already part of the professional culture in the Department in creating and carrying out land use plans. Consultation could potentially be further expanded through creation of a task force or interdepartmental advisory group (or even the MSP Committee envisioned in Option 1) to inform initial drafting and

³⁰ An important caveat is that staffing levels would depend upon how many marine development proposals are actually received (and anticipated). If such proposals are few and far between, the Department may wish to consider contracting for at some of the expertise, as needed, including from overseas if necessary.



subsequent amendments. The recent governmental reorganization that moved the Department of Planning into the Ministry of the Environment should also strengthen inter-departmental collaboration.

Action needed to implement

Extension of the Development and Planning Act 1974 to the ocean can best be accomplished by legislation amending the Act to make the ocean coverage explicit and to provide sufficient ocean-specific provisions needed to effectively apply the Act to the marine environment. Annotated model legislation that would make these targeted changes is provided in Appendix A to this report. The model legislation includes the following key elements:

- It **requires that a MSP process be undertaken**, following the survey and development plan preparation requirements set out in the Act. The Department of Planning and DENR are jointly charged with establishing a timeline.
- It **adds new definitions, and modifies existing ones, to clarify application of the Act to marine areas.**
- It **creates a new panel to provide specialist advice** to the Development Applications Board on issues that arise in marine areas but not terrestrial areas.
- It **ensures that actions affecting the seabed will be considered development** (and so require planning permission) even if they do not involve building activity (e.g., seabed mining, channel dredging).
- It **ensures that the Act applies to the Government of Bermuda acting as sovereign**, which otherwise may not be considered equivalent to a property interest in the seabed or subsoil.
- It **establishes a new head of protection specifically for conservation of marine life and key habitats.**
- It **makes explicit the authority of the Minister to enact rules** necessary to ensure the Act's application to marine areas.
- It **clarifies that the special enforcement provisions of the Act apply** to development activities undertaken in the ocean.
- It **clarifies that seascapes and ocean views/vistas can be relevant factors** for development planning and the establishment of special study areas.
- It **adds content for the new proposed head of protection for coral, seagrass, and mangroves.**

By design, the model amendments take a minimalist approach, but Bermuda legislators could go further. For example, there is an open question as to whether any considerations specific to marine



planning should be excluded (pursuant to Section 44 of the Act) from the requirement to pay compensation for denial or conditioning of planning permission (pursuant to the procedures contained in Part VII of the Act). Considerations subject to exclusion might include, for example, planning decisions made to prevent damage to seagrass or corals, where such decisions have adversely affected property interests.³¹

Alternatively, the legislation could be modified to exempt marine areas from particular requirements of the Act that are more applicable to land use planning, and to make other desirable changes specific to marine planning, such as clarifying with more precision the roles for Planning and other Departments and explaining in further detail the process to be followed.³²

Yet another alternative is that legislative action could further refine the boundaries on the geographic extent and scope of marine planning—and address differences in the desired scope and content of marine planning as compared to its terrestrial counterpart. The model legislation, as drafted, extends broadly to cover the EEZ.

Option 2B: Use the Existing Planning System to Design and Implement MSP (with DENR lead on MSP)

Relying on essentially the same amendments proposed in this report with respect to Option 2A, Option 2B would assign to DENR—rather than to the Department of Planning—oversight of development permission in marine areas under the Act. The longstanding architecture of the Development and Planning Act 1974 would remain in place and largely unchanged, with the Department of Planning retaining its traditional role and functions in terrestrial areas. But new development in the ocean would be subject to a process under DENR, in consultation with the Department of Planning.

The institutional backdrop for Option 2B has changed somewhat with the recent government reorganization that not only established a new, standalone Ministry of the Environment, but also moved the Department of Planning into this Ministry. Under current law, the Development and Planning Act 1974 is now (as a legal matter) implemented by the Minister of the Environment, and the model legislative amendments described under Option 2A—and detailed in Appendix A to this report—already speak directly to the Ministry charged with environmental protection.

Option 2B could be implemented with minimal additional changes to existing law beyond what is proposed under Option 2A.³³ Option 2B relies in part on the existing definition of “Board” in the Development and Planning Act 1974:

³¹ Given the general absence of protected property rights in ocean areas, and the fact that leases can be drafted to address such concerns, such a provision may not be of great concern.

³² This latter approach is potentially relevant to Option 2B, discussed below, should Bermuda choose to assign a lead role to DENR under the Planning Act for marine areas.

³³ To be clear, a prerequisite to Option 2B is enacting the sort of legislative amendments to the Act contemplated by the model legislation in Appendix A, which place marine areas expressly within the purview of the planning law.



“the Board” means the Development Applications Board established under section 3 and, in relation to any function *lawfully delegated by them to any other person or body*, including a committee of the Board, means *the person or body to whom such function has been delegated* (emphases added).³⁴

Under the Act as written, provision is further made for the Board to delegate to municipal authorities the power to grant or refuse planning permission.³⁵ In light of the definition of “Board,” together with the clear, existing statutory examples of delegation, a modest additional legislative amendment could be used to make explicit the Board’s authority to delegate to DENR responsibility for oversight of marine area planning and development.³⁶

Option 2B aims to strike a balance. It would allow DENR to move forward with MSP under new, targeted legislative amendments, while at the same time maintaining intact Bermuda’s overall planning and development framework and avoiding placing new burdens—in terms of staff time, financial resources, and scope of responsibilities—on the Department of Planning and DAB. The environmental and planning departments would still continue to collaborate as necessary, particularly where development is proposed at the land-sea interface. Because the planning and environmental departments are housed within the same Ministry, and there is already a strong track record of collaboration, operationalization of this option should not prove particularly challenging.³⁷

³⁴ Development and Planning Act 1974 § 1.

³⁵ *Id.* § 5. As a practical matter, it does not appear that this delegation is happening—though the City of Hamilton and Town of St. George are consulted on applications within their boundaries. A similar option for delegating authority to the Director of Planning was added by amendment in 2014. *Id.* § 5A.

³⁶ For example, in addition to the model provisions contained in Appendix A to this report, a new Section 5B could be added to the Act:

“Delegation to Department of Environment and Natural Resources

- 5B (1) The Minister may, in his or her discretion, effect a delegation of authority from the Board to the Department of Environment and Natural Resources with respect to any power lawfully assigned to the Board pursuant to this Act that pertains to planning for or development of marine areas.
- (2) The Board may by instrument in writing published in the Gazette and subject to such conditions, directions, reservations and restrictions as they think fit, delegate to the Department of Environment and Natural Resources any power lawfully assigned to the Board pursuant to this Act that pertains to planning for or development of marine areas.
- (3) Such delegation may be fully effected pursuant to either subsection (1) or subsection (2).”

This sample provision is simply a starting point to suggest how a delegation of development authority for marine areas to DENR might be provided for under the Act. Further elaboration on DENR oversight for marine area planning is available either through more comprehensive legislative amendment or by way of regulations issued under the Act.

³⁷ That said, DENR will lack expertise with respect to certain technical aspects of development planning and permitting and will certainly need to draw, at least informally, on the experience and advice of Planning (*e.g.*, within Building Control, etc.).



Additional Considerations: Enact Targeted Amendments to Existing Legislation to Facilitate MSP

Establishment of a successful MSP process for Bermuda's nearshore waters through any approach requires not only creation of the framework for the process and use of the plan, but also certain changes to existing substantive laws to ensure that they do not conflict and to clarify and strengthen their application in the marine environment. Such clarifications can be helpful even in the absence of MSP legislation, as they may serve a gap-filling function. In this sense, changes may be built into other legislative initiatives if desired, included in a package of reforms centred on MSP (for example, legislation to implement Option 2A or 2B), or taken on independently by individual Ministries. These reforms would be unlikely to produce a systematic, interdepartmental MSP process, however, unless aligned with an overarching MSP governance framework set forth in other legislation or launched through a MoU process (Option 1).

ELI's review identified several areas where clarification may be worthwhile in the development of Bermuda nearshore MSP processes.

Jurisdiction and control of the seabed and foreshore

Control of the seabed and foreshore is an issue for consideration in developing MSP legislation. While the Crown controls the seabed and foreshore of Bermuda and Section 8 of the Public Lands Act 1984 requires a lease to occupy these areas, Bermuda law does not codify the statutory basis and guidelines for the operation of this system. MSP legislation could clarify when and how a lease or other authorization is required to occupy the seabed, either through an amendment to the Public Lands Act 1984 or provision of independent authority.³⁸

Protected species

The Protected Species Act may require amendment to clarify DENR's authority to allow activities that may harm protected species. The recent North Channel project has highlighted the limited circumstances under which the Minister is explicitly authorized to issue a licence or permit for such an activity; activities like dredging are not included and require finding an implicit authority for such authorisation. By clarifying when a licence or permit may be issued and the conditions for issuance (e.g., avoidance and minimization of harm, limiting the categories of species for which a licence or permit may issue, requiring that the activity be in accordance with the MSP to receive a permit), legislation can improve the transparency and clarity of the law, as well as making it more consistent with the species protection provisions of the Fisheries Act. Also, a MSP process could help to identify ocean and coastal areas that can be used to maintain the required habitats for protected species through compensatory mitigation actions or other processes. This would streamline the implementation of the Protected Species Act.

³⁸ There is an analogy here to the process of subdividing land, as provided for by Part VI of the Development and Planning Act 1974. Nevertheless, the authors do not necessarily see that process as conducive to allocating seabed leases.



Maritime cultural heritage

The Historic Wrecks Act 2001 authorises the Custodian of Wrecks to designate wrecks as open or closed to recreational diving and to issue licences for research on wrecks and other marine heritage sites. The Act does not, however, authorize creation of protected areas around wrecks and marine heritage sites where restrictions on entry and use may be required to protect the resource. Instead, these areas have been established under the Fisheries Act 1972.

An amendment to authorize creation of wreck protection areas under the Historic Wrecks Act 2001 would be consistent with the kind of in-depth analysis of human activities at sea that an MSP assessment affords. The legal instruments used for the designation of marine areas of historical value, such as shipwrecks and submerged archeological sites, can be employed to fulfill the objectives of MSP. This is particularly relevant should Bermuda decide to use MSP as a decision-making tool for interagency coordination (see Policy Option 1). The Custodian of Wrecks would need to coordinate across ministries and departments to ensure that designations comply with the overall objectives of the national MSP, including ocean protection.

If such an approach is taken, it may be important to consider whether all or some historic wrecks and dive sites should be eligible for protection. Distinctions could be made on the basis of historical, recreational, or ecological value (e.g., vessels scuttled intentionally could be excluded even once old enough to be subject to the Historic Wrecks Act 2001); fragility or susceptibility to damage by diving or other uses; or other criteria.³⁹ An amendment could leave such determinations to the Custodian of Wrecks and the Minister, or it could provide specific criteria or requirements for area protections intended to protect marine cultural heritage. The designation of wreck protection areas can also provide enhanced positive conservation effects when combined with other, compatible human activities (e.g. touristic activities on submerged historical sites and recreational diving for marine wildlife). On the other hand, such an amendment might also authorize the Custodian to withhold listing of wrecks on the register for conservation reasons.

Water pollution

Bermuda law lacks comprehensive water pollution control permitting legislation, such that discharge of water pollution into the ocean is primarily controlled by including conditions in permissions issued under other applicable laws—notably the Clean Air Act 1991 and Development and Control Act 1974. Development of comprehensive water pollution control requirements to address discharge from outfalls or seepage from cesspits is likely too ambitious to be feasible as a component of nearshore MSP legislation—particularly if the topic is the focus of separate efforts to

³⁹ Bermuda law already contains a terrestrial example of such an approach. The Development and Planning Act 1974 contains provisions for listing buildings of special architectural or historical interest (§ 30) and provisions for regulating development in and otherwise protecting areas of historic, architectural, or cultural character or importance (§ 31). Listed buildings are designated as historical monuments (HM), or on a numerical scale from Grade 1 to Grade 3—from most exceptional interest and value (and with the greatest corresponding restrictions on alterations and additions), to least interest and value (with reduced restrictions on modification). See Bermuda Dep't of Planning, "Alterations or Additions to Listed Buildings and/or Buildings Located Within Historic Areas" § 1.3 (The Grading System), ref. GN203, Oct. 26, 2012, at [http://www.planning.gov.bm/Documents/Final Bermuda Plan 2008/Guidance Notes/GN203 Listed Buildings Restoration.pdf](http://www.planning.gov.bm/Documents/Final%20Bermuda%20Plan%202008/Guidance%20Notes/GN203%20Listed%20Buildings%20Restoration.pdf).



reduce nutrient and other pollution discharges. However, it may be reasonable to take limited permitting measures focused specifically on other forms of discharge into the ocean, such as brine discharges from desalination plants. Absent a permitting system, Bermuda may consider expanding on or further clarifying the existing legal authority of the Minister of Health and Seniors to protect public health on bathing beaches and in place of entertainment and resort.⁴⁰

Energy

Energy provisions for the offshore environment are limited under Bermuda law, and additional legislative authority is warranted to ensure that new forms of energy production (e.g., offshore wind, tidal) and importation (e.g., liquefied natural gas terminals) are appropriately regulated.

Recently, Bermuda took a significant step in this direction with the enactment of the Electricity Act 2016, which establishes a new regulatory framework for the electricity sector. An express purpose of the Act is to promote the use of renewable energy, which is defined to include “energy produced by solar, wind, biomass, landfill gas, municipal solid waste, ocean (including tidal, wave, current, and thermal), geothermal, or hydro resources.”⁴¹ Although the Act is in the early stages of implementation, it opens the door to further legal development on offshore energy production—renewable or otherwise.⁴² And the Department of Energy has previously indicated that offshore energy production or facilities are on the table for Bermuda’s future energy needs. Future energy projects could become a significant driver for implementation of MSP in Bermuda.

The Liquefied Petroleum Gases Regulations may require amendment to effectively regulate offshore LNG terminals and to ensure that such facilities effectively integrate input from the Departments of Energy, Environment and Natural Resources, Marine and Ports, Planning, and other relevant entities.

Seabed mining

As Bermuda lacks seabed mining legislation, adoption of provisions specific to the seabed mining sector may be appropriate as Bermuda decides how, or even whether, such mining is to take place. A variety of provisions, including those contained in the Public Lands Act 1984 and UK Environment Protection (Overseas Territories) Order 1988, do apply to mining, such that the regulatory system for this sector differs based on whether the activity is proposed within or outside the 12-mile limit of the Territorial Sea.

Future legislation could clarify and provide transparency for the authorisation process and establish any mining-specific provisions that may be needed to appropriately regulate the sector. Such provisions could include, for example, allocation of mining rights in areas of the seabed, revenue and royalty generation, environmental management, and operational practices.

⁴⁰ See Public Health Act 1949 § 167. This authority could be interpreted to provide for closure of areas to swimming, diving, and fishing—including offshore areas—where necessary to protect public health.

⁴¹ Electricity Act 2016 §§ 6(c), 2. This new law repeals the Energy Act 2009. *Id.* at § 65(1).

⁴² The Act provides for the promulgation of regulations (by the Minister of Economic Development, as the Minister responsible for energy) to further the purposes of the law. Electricity Act 2016 § 54.



Alternatively, legislation could be used to prohibit seabed mining in part or all of the ocean areas subject to Bermuda's jurisdiction.

Aquaculture

While no well-established marine aquaculture exists in Bermuda at this time, some producers have expressed interest in developing the emerging sector through integrated shellfish and kelp farming and, potentially, other species, and research and pilot projects have been undertaken. Despite the absence of comprehensive legislation on aquaculture, several laws do apply, including the Fisheries Act and regulations, Protected Species Act, and Public Lands Act. Aquaculture is not currently covered by the Development and Planning Act 1974, as it does not touch the shore. As such, planning permission is not required to install an aquaculture facility. If and when aquaculture becomes a reality in Bermuda, comprehensive legislation governing this set of activities will prove far preferable to piecemeal oversight through scattered legal authorities.



Appendix A: Model Legislation

Following is an example of model legislation that would amend the Development and Planning Act 1974 to accommodate marine spatial planning. It is intended to assist the Attorney General's Chambers, which would ultimately prepare amendments best tailored to the needs of Bermuda, both substantively and stylistically.



BERMUDA

DEVELOPMENT AND PLANNING (EXTENSION TO MARINE AREAS) ACT 2016

2016: XX

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12	Amends Third Schedule
13	Amends Fourth Schedule



WHEREAS it is expedient to amend the Development and Planning Act 1974 to apply to the marine areas of Bermuda as a means of enabling marine spatial planning;

Be it enacted by The Queen’s Most Excellent Majesty, by and with the advice and consent of the Senate and the House of Assembly of Bermuda, and by the authority of the same, as follows:

Citation

1 This Act, which amends the Development and Planning Act 1974 (“the principal Act”), may be cited as the Development and Planning (Extension to Marine Areas) Act 2016.

Application to Marine Areas

2 (a) The principal Act shall apply to the marine areas of Bermuda, subject to the specific provisions contained herein.

(b) The Minister shall, without undue delay, carry out a survey of and prepare a development plan for the marine areas of Bermuda, which shall be incorporated as an addition to the Bermuda Plan 2008 or as an associated local development plan.

(c) Within six months after the effective date of this Act, the Minister, through the joint efforts of the Department of Planning and the Department of Environment and Natural Resources, shall produce a plan and timeline for how the principal Act, as amended, will be applied to marine areas.

This section requires the Minister to carry out a marine spatial planning process, following the survey and development plan preparation requirements set out in the Act. The Department of Planning and DENR are charged jointly with establishing a timeline.

Amends Section 1

3 Section 1 of the principal Act is amended—

(a) by inserting the following definitions in the appropriate alphabetical order—

“exclusive economic zone” means the area defined in the Proclamation of June 10, 1996 Establishing an Exclusive Economic Zone for Bermuda;

This section inserts new definitions and modifies existing ones as necessary to clarify application of the Act to marine areas.

The amended definition of “land” to include marine areas ensures that the planning provisions using that term apply to the ocean.



“marine areas” means the territorial sea and exclusive economic zone of Bermuda;

“territorial sea” means the area defined in the Bermuda (Territorial Sea) Order In Council 1988, SI 1988/1838, as amended by The Bermuda (Territorial Sea) (Amendment) Order 1997, SI 1997/1578;

(b) by amending the definition of “building” by, after “nature”, inserting “, including structures or erections on or beneath the ocean surface or on the seabed,”; and

(c) by amending the definition of “land” by, after “water”, inserting “and marine areas”.

Inserts Section 4A

4 The principal Act is amended by inserting after Section 4 the following—

“Marine Advisory Panel

4A (1) There shall be established a Marine Advisory Panel consisting of a Chairman and not fewer than two or more than eight other members appointed by the Minister on the basis of their knowledge and experience in marine affairs, any two of who together with the Chairman shall constitute a quorum.

(2) At least one position on the Panel is reserved for a staff member from the Department of Environment and Natural Resources.

(3) The Marine Advisory Panel shall, with a view to the proper carrying out of the provisions and objects of this Act, advise the Board on any matter within their knowledge or on which the Board (either of their own volition or at the instance of an aggrieved party) may seek their advice.”.

This section creates a new panel to provide specialist advice on issues that arise in marine areas but not terrestrial areas. Its specific provisions are based on Section 4 of the Act, which creates an Advisory Architectural Panel.

This section ensures that actions affecting the seabed will be broadly considered development (and so require planning permission), even if they do not involve building activity (e.g., seabed mining, channel dredging). However, anchoring and other actions required for normal operation of a vessel are excluded from the definition of development.

Amends Section 14

5 Section 14 of the principal Act is amended—



(a) by deleting the period at the end of subsection (3)(c)(ii) and inserting “; and”; and

(b) by inserting after subsection (3)(c)(ii) the following—

“(iii) any act in a marine area, including for the purpose of inspecting, repairing, or renewing sewers, mains, pipes, cables, or other apparatus (but not including activity incidental to the normal navigation, operation, and anchoring of vessels or to fishing for naturally occurring fish), that includes dredging or breaking up the seabed; deposition of waste, spoil, or any other material; or that may affect species designated for protection under the laws of Bermuda.”.

Amends Section 16

6 Section 16 of the principal Act is amended by inserting prior to the period at the end of subsection (4) the following—

“, and, in marine areas, includes the Government of Bermuda on behalf of the Crown as sovereign”.

Amends Section 28

7 Section 28 of the principal Act is amended by replacing the period in subsection (1)(f) with a semicolon and inserting after subsection (1)(f) the following—

“(g) coral, seagrass, or mangrove protection.”

Amends Section 54

8 Section 54 of the principal Act is amended by—

(a) inserting in subsection (a) a new paragraph as follows—

“(vii) temporary and permanent structures attached to the seabed;”; and

(b) amending subsection (i) by inserting after “flowers” the following—

This section ensures that the Act applies to the Government of Bermuda acting as sovereign, which otherwise may not be considered equivalent to a property interest in the seabed or subsoil. This amendment requires Government departments to submit planning applications for developments they plan to carry out in the ocean.

This section establishes a new head of protection specifically for conservation of certain marine life and key habitats.

This section ensures that the Minister has the power to issue regulations that may be needed to clarify application of the Act to marine areas. Additional subsections (beginning with a new subsection (r)) could be added to further refine this regulatory authority.



“, including marine flora and fauna”.

Amends Section 63

- 9 Section 63 of the principal Act is amended by—
- (a) deleting “or” in subsection (2)(b);
 - (b) deleting the period in subsection (2)(c) and replacing it with “; or”; and
 - (c) inserting after subsection (2)(c) the following—
 - “(d) any construction, excavation, or dumping activities carried out on or under the surface of the sea, including on the seabed.”.

This section clarifies that the special enforcement provisions of the Act apply to development activities undertaken in the ocean.

Amends Section 78

- 10 Section 78 of the principal Act is amended by inserting before the period in subsection (h) the following—
- “, including with respect to how the processes established and implemented by the Minister under this Act apply to activities undertaken in the ocean.”.

This section makes explicit the authority of the Minister to enact rules necessary to ensure the Act’s effective application to marine areas.

Amends Second Schedule

- 11 The Second Schedule of the principal Act is amended by inserting after “lines” in Section 11 the following—
- “, seascapes,”.

Sections 11 and 12 clarify that seascapes and ocean views/vistas can be relevant factors for purposes of development planning and special study areas.

Amends Third Schedule

- 12 The Third Schedule of the principal Act is amended by inserting after “vistas” in Section 2(b) the following—
- “, including ocean views and vistas”.

This section adds content for the new proposed head of protection for coral, seagrass, and mangroves. The Fourth Schedule to the Act offers a key opportunity to detail development protections for ocean areas and the flora and fauna they contain.

Amends Fourth Schedule

- 13 The Fourth Schedule is amended by inserting after Part F the following:

G: CORAL, SEGRASS, AND MANDROVE PROTECTION



1 Subject to paragraph 2, willfully destroying, removing, disturbing, or otherwise altering coral, sea grass, or mangroves is forbidden.

2 The Board may, after consultation with the Marine Advisory Panel, grant planning permission for the doing of any act forbidden by paragraph 1—

(a) if the doing of the act is otherwise consistent with the laws of Bermuda;

(b) to the extent allowed by the development plan in the circumstances specified in that plan; and

(c) if of the opinion that the doing of the act is necessary to the survival and continuation of the coral, seagrass, or mangroves.

3 The word “alter” in paragraph 1, in relation to coral, seagrass, or mangroves, means to change the existing state of these organisms by cutting, burying, or relocating them, changing them in any way, or so disturbing their surrounding habitat as to make their destruction likely.

[Assent Date: XX]

[Operative Date: XX]