



GOVERNMENT OF BERMUDA
The Cabinet Office

Sustainable Development Department

THE FUTURE OF BERMUDA'S EXCLUSIVE ECONOMIC ZONE



OUTCOME OF THE PUBLIC CONSULTATION
SEPTEMBER 3 TO OCTOBER 31, 2013



MAKING THE CONNECTION
**SUSTAINABLE
DEVELOPMENT**



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Sustainable Development Department
Ingham & Wilkinson Building, 3rd Floor
129 Front Street, Hamilton HM12

Bermuda

Email: sdd@gov.bm

Website: sdbermuda.bm

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This public consultation on the Future of Bermuda’s Exclusive Economic Zone (EEZ) has garnered a great deal of attention both locally and overseas. Such interest has generated intense and provocative discussion regarding this vast asset, resulting in a number of submissions that have formed the basis of this report. The Sustainable Development Department is most grateful for the valuable contributions made to this process from Bermuda residents, Government Departments, private sector entities, and non-governmental organizations. They have collectively contributed significant value to this process through their thoughts, our discussions, e-mails and written submissions. The following agencies also made available to the Sustainable Development Department (SDD) representatives who gave their time, their evaluations, or their written submissions:

1. Atlantic Conservation Partnership/Bermuda Zoological Society
2. Bermuda Alliance for the Sargasso Sea
3. Bermuda Anglers Club
4. Bermuda Environmental Consulting
5. Bermuda Institute of Ocean Sciences
6. Bermuda National Museum
7. Bermuda Underwater Exploration Institute
8. Bonnier Corporation
9. Cabinet Office Interns
10. CedarBridge Academy
11. Chamber of Commerce Tourism Division
12. Dellwood Middle School
13. Fisherman’s Association of Bermuda
14. Historic Wrecks Authority
15. Marine EEZ Stakeholder Caucus
16. Ocean Projects Limited
17. Ocean Support Foundation
18. Pew Charitable Trusts
19. Sargasso Sea Alliance
20. Sedgwick Chudleigh
21. Submarine Fibre Optic Submarine Cable Operators – joint submission
22. Challenger Bermuda – Cable Co
 - A. GlobeNet Segment 4 – Brasil Telecom Subsea Cable Systems, Ltd. (Bermuda)
 - B. GlobeNet Segment 5 – Brasil Telecom Subsea Cable Systems, Ltd. (Bermuda)
 - C. Gemini Bermuda – US – Link Bermuda
 - D. CBUS – Link Bermuda
23. Sustainable Development Roundtable
24. Teachers from a number of Middle and High Schools
25. The Association of Bermuda International Companies
26. The Bermuda Environmental and Sustainability Taskforce
27. The Billfish Foundation
28. The Dive Shop Bermuda Limited
29. The Humpback Whale Film and Research Project
30. Waitt Foundation
31. Youth Parliament members

The SDD is also very grateful to the 378 people that attended and provided valuable input at the only public town hall meeting as well as those 720 people that either tuned in via the live stream or reviewed the coverage soon thereafter.

Conducting the process of a consultation requires the coordination of a number of elements and resources. This consultation would not have been possible without the expertise of a number of Government colleagues including members of the following Departments:

1. Cabinet Office
2. Communication and Information
3. Community and Cultural Affairs
4. Conservation Services
5. Corrections
6. Environmental Protection
7. Marine and Ports
8. Post Office
9. Statistics

Assisting the SDD were volunteers including Ms. Kamryn Minors, Ms. Claudie Richardson, Ms. Lori Lee and Ms. Ronika Glasford, as well as summer student Chalae Hill. Their dedication and commitment to the tasks aided greatly in the background work required for an undertaking such as this. Harold Laude, Caitlin Gordon, and the Cabinet Office Interns, Jaleesa Simons, Darius Zuill, Michelle Peichoto and Harry Masters, provided much needed support for the public meeting, the Community Conversation: Bermuda's Exclusive Economic Zone and Its Future.

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4. Chris Flook, Consultant
5. Nick Hutchings, Ocean Projects Limited
6. Glenn Jones
7. Dr. Judith Landsberg, Greenrock
8. Dr. David Saul, former Premier
9. Erica Smith, Bermuda Economic Development Corporation
10. Craig Trott, Department of Health and Commercial Fisherman
11. Dr. Tammy Trott, Department of Environmental Protection
12. Jack Ward, Environmental Consultant

It is important to recognise the role the Pew Charitable Trusts contributed to the discussion on Bermuda's EEZ. Global Ocean Legacy, a project of Pew and its partners, has as its aim "to establish a worldwide system of very large, highly protected marine reserves (MR) where fishing and other extractive activities are prohibited." The Global Ocean Legacy project in Bermuda sought to establish the largest MR sanctuary in the Atlantic Ocean, promoting a MR in Bermuda's EEZ extending from 50nm off the coastline to 200nm. Hiring local consultants and naming this area the Blue Halo, consistent promotion of this concept took place from 2011 through 2013. Arguably, without this heightened awareness, many perhaps would not have contributed their voice to this consultation.

It is also important to recognise the Waitt Foundation, a financial supporter of the Global Ocean Legacy project, for their contribution to local resources that enabled this consultation on the Future of Bermuda's Marine EEZ.

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ABBREVIATIONS

• Automatic Identification System	AIS
• Bermuda Institute of Ocean Sciences	BIOS
• Bermuda Maritime Operation Centre	BMOC
• Cable Protection Zones	CPZ
• Exclusive Economic Zones	EEZ
• Fisherman’s Association of Bermuda	FAB
• Great Barrier Reef	GBF
• International Seabed Authority	ISA
• International Union for the Conservation of Nature	IUCN
• Illegal, Unreported, and Unregulated	IUU
• Marine Reserve	MR
• Marine Protected Area	MPA
• Mariana’s Trench Marine National Monument	MTMNM
• Sustainable Development Department	SDD
• Sargasso Sea Alliance	SSA
• United Nations	UN

1 EXECUTIVE SUMMARY

- a. The sea around Bermuda is vital to our island, and we have a strong tradition of caring for it. To varying degrees, this sea supports our primary industry pillars including both tourism and international business. It is currently the host venue for our valuable commercial, sport and recreational fisheries, and is entrenched in our Bermuda way of life.
- b. The future of Bermuda's Exclusive Economic Zone (EEZ) is the subject of this report which outlines the major findings and conclusions arising from the public consultation that was carried out by the Sustainable Development Department (SDD) over a two-month period ending 31 October 2013.
- c. Planning for the future of our EEZ is probably one of the most complex and capacious opportunities that the Government and people of Bermuda have ever been presented with.
- d. This consultation resulted in significant participation from the public who expressed material support for establishing a marine reserve (MR) as well as strong support for more information that explored and evaluated the economic potential of various proposals. Interests stretched from "protect and preserve" as much of the asset as practical to "fully explore" the commercial value of the resources within the EEZ. Both positions and those in between promoted major financial and social benefits potentially accruing to the Bermuda economy.
- e. Current proposals include diverse opportunities. It has been suggested that Bermuda has the potential to become the "Davos of Ocean Health," whereby massive international attention could result in increased ocean science work/research being conducted along with ocean-focused conferences and additional convention business also emerging. Additionally, the commercial fishing industry believes Bermuda's offshore waters represent the future of local fishing, with the capacity for growth and diversification of the economy. Then there is the view that billions of dollars of valuable minerals are waiting to be sourced and extracted from our sea bed. At this stage the supporting data is too weak to provide the basis for sound long-term decision making.
- f. Based on the range of views submitted regarding the way forward for our EEZ, the level of confidence with current knowledge, and the current data gap, it is premature to establish a firm or definitive position on the future of the EEZ at this time. The forecasted benefits require a more in-depth and

reliable level of due diligence to arrive at a point where benefits, risks and costs can be reasonably quantified and a sustainable position can be taken.

- g.** The decision on the most appropriate way forward for this asset should reflect a solid understanding of the impact on key economic indicators such as the potential for attracting direct foreign investment; enabling local investment and economic stimulus; spawning local entrepreneurship; creating jobs for Bermudians; contributing to our GDP; diversifying our economic base and model; strengthening our international profile; and increasing our global competitiveness.
- h.** Currently the four major options available for Bermuda’s consideration on the EEZs future are: (i) establish a large no-take MR in about 80% of the EEZ (ii) pursue an offshore commercial fishery, (iii) explore the seabed for precious minerals and (iv) extract precious minerals from our sea bed. However, there are no sound economic profiles available for any of these options and thus the evidence base for future decision on any of them does not exist. A comprehensive economic analysis of each should be the next step and the outcome of that work should form the basis of the second phase of stakeholder consultation.
- i.** It may be that all or none or a combination of these options will be projected as the most beneficial to Bermuda’s long-term welfare. Nonetheless, without a quantitative economic profile of each, it is recommended that no long-term decisions be made about this asset. As the Premier recently indicated in his statement to the House of Assembly “This opportunity is of such significance that perceptions of biased and unreliable information, shallow due diligence and subjective assertions ought not to be relied upon to make such an important decision.”

2 CONSULTATION

2.1 Overview

- a.** The Sustainable Development Department (SDD) was authorised and directed by Cabinet to conduct a public consultation on whether to establish a MR in the offshore waters of our EEZ and if so the size, shape, location and nature of protections. The concept was to protect the more distant waters of our EEZ while allowing for some measure of current and potential marine activities.

- b.** The public consultation extended from 4 September through 31 October 2013; targeted stakeholder discussions took place in November 2013. Respondents were encouraged to support their position with a justification and rationale to substantiate their respective case. The resulting arguments from the public form the basis of this report representing the major issues arising out of the consultation.
- c.** The initial question asked at the outset of this consultation was: “Should Bermuda establish a large no-take marine reserve (MR) within the offshore waters of our EEZ?” It is important to note that the term “marine reserve” indicates a “no-take” zone with a prohibition on all extraction from any component of the reserve. A “no-take” MR therefore means no fishing, no seabed mining, etc. What quickly emerged was that Bermuda wished to view this as a question about the future of Bermuda’s EEZ. This overarching question of “What should we do with our EEZ?” allows for examination of a range of options on how to best use the EEZ. This allowed Bermuda to examine and assess the question of whether or not to establish a MR as well as consider all other options on the future use of our EEZ.
- d.** The information sharing phase of the public consultation included several significant steps designed to reach the broadest possible range of local stakeholders to stimulate interest and participation. It was anticipated that this would secure the views of the residents of Bermuda as well as the views from those outside of Bermuda with a strong interest in the future of our EEZ.
- e.** These steps included a direct mail-out to 2,500 randomly selected households, the administration of an on-line survey, several social media posts, concentrated print, broadcast and web advertising, secondary school workshops, a one-hour televised debate, airing of a 30-minute mini-documentary on TV and a well-attended town hall community conversation. The consultation process sought and attracted strong public and stakeholder input. Consequently, international submissions were combined with Bermuda-based submissions to represent a wide range of disparate interests.
- f.** The consultation resulted in significant public participation from which it can be concluded that there is material support for establishing a MR and there is also strong support for more information that projects and quantifies economic potential. Interests stretched from “protect and preserve” as much of the UN granted (in 1996) asset as practical to “fully explore” the

commercial value of living and non-living resources in the EEZ. Both positions and those in between speak to major financial benefits potentially accruing to the Bermuda economy including direct foreign investment and local stimulus. Submissions also projected social, economic and environmental benefits towards sustainability.

- g.** Notwithstanding the differences, there is good consensus on the need for a made-in-Bermuda approach to a solution. Importantly, there is strong support for more rigorous information to undergird projected financial and social benefits (associated with the proposals for the EEZ's future). This first phase of consultation did not include the level of rigour now understandably being requested by the public.
- h.** The Pew Charitable Trusts should be credited with raising Bermuda's level of consciousness and awareness of a MR and what such a designation would mean for Bermuda. It is the efforts of Pew and their proposal for the establishment of the Bermuda Blue Halo that has arguably inspired the participation of the wider community in the discussion regarding the future of the EEZ.

2.2 *Survey Results*

- a.** The consultation began with the question: "Do you think Bermuda should establish a no-take marine reserve (MR) in the offshore waters of our EEZ?" As the process progressed, it quickly became apparent that Bermuda wished to view this discussion from a broader perspective regarding future prospects, rather than the narrowly defined question of designating a MR in the offshore waters. This broader question of "What should we do with our EEZ?" encouraged consideration of a range of options on how to best utilise the EEZ.
- b.** Nonetheless, at the start the public were provided several survey opportunities, via different mechanisms, to submit a response to the original question. Throughout the consultation, members of the public were encouraged to present a rationale validating their position. Opportunities for submissions included an on-line survey using Survey Monkey, a two-page flyer, available in hard copy at a number of locations and in soft copy on the SDD website and Facebook page, and a targeted household mailout. Submissions could be made in person at the SDD office, via the postal system, and via e-mail to sdd@gov.bm. The results of these submissions are shown in Figure 1.

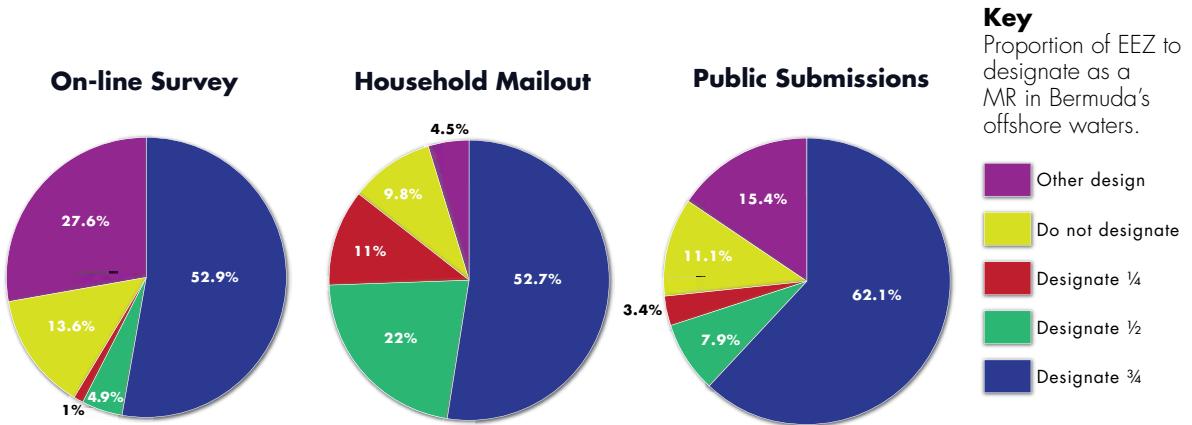


FIGURE 1: Pie charts showing the proportion of responses received for each category via the different survey mechanisms.

- c. 1,461 people completed the on-line survey: 86% supported the establishment of a “no-take” MR in the offshore waters of our EEZ; 14% did not support a MR; 70% presented a reason for their choice.
- d. Overall, 34% (499) of on-line respondents felt that establishing a MR would be beneficial for Bermuda and Bermuda’s future by enhancing fish stocks, commercial fishing, tourism and the economy. Those who did not agree with establishing a MR indicated that the EEZ is already protected, foreign entities may attempt to take ownership of our territory, Bermuda lacks the funding necessary to enforce an area so large and such an endeavour would bring about a decline in our economy.
- e. Of the 1,023 submissions providing reasons for their choice, 381 respondents specifically mentioned a 50–200nm protected area although this was not an option presented by the survey. Of these, 229 submitted responses with the same exact wording.
- f. If responses that refer to 50–200nm and the general response of a MR will “benefit Bermuda in the future” are removed from the analysis, then the remaining on-line responses articulate three major reasons in support of establishing a MR and three major reasons against establishing a MR. Of the 1,023 written submissions, 334 specified one or more of these six distinct reasons, shown in Figure 2.

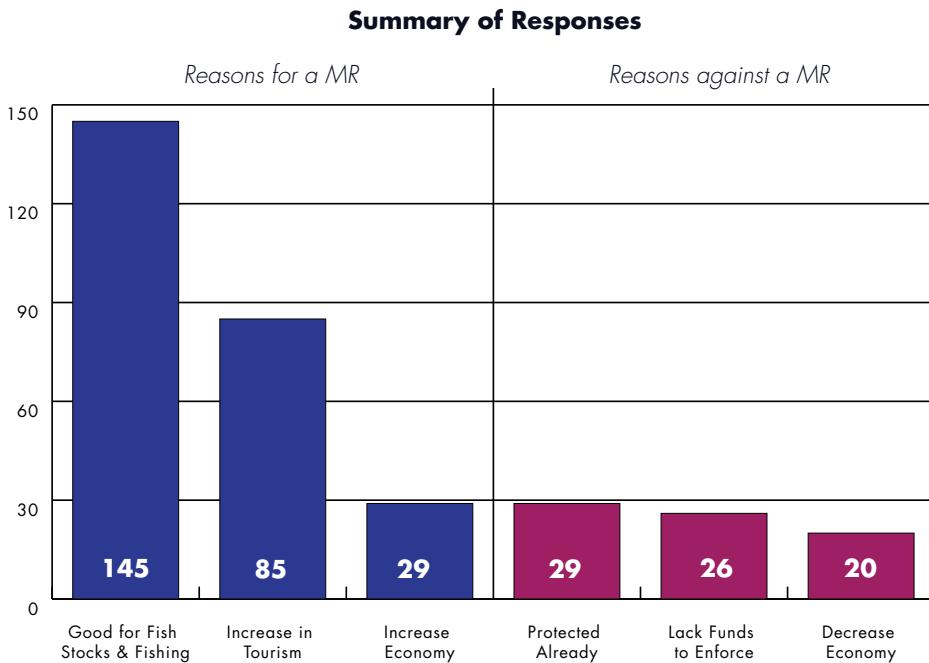


FIGURE 2: Graph displaying the most common categories of defined reasons for and against a MR.

- g. The two-page flyer was included in the Consultation document and as a stand-alone document in both hard copy and soft copy. A total of 1,577 submissions were received; with approximately 1,200 being returned by a concerned citizen who had taken the initiative to assist in the distribution to and collection from designated locations. Of these, 89% supported the establishment of a “no-take” MR in the offshore waters of our EEZ; 11% did not support a MR. Written submissions from individuals validating a particular position have been embedded in this report within the appropriate category.
- h. A mailout of the two-page flyer was sent to 2,500 households to better garner responses from a representative sample of households. A total of 245 flyers were returned. This return showed that 90% supported the establishment of a “no-take” MR in the offshore waters of our EEZ; 10% did not support a MR.
- i. A number of local charities and other agencies promoted a MR from 50–200nm encouraging their membership to support the Blue Halo concept promoted by Pew Charitable Trusts. It is likely this had material impact on the results of these surveys.
- j. In addition to the surveys conducted as part of the consultation process, SDD knows of two petitions to garner support worldwide for a MR from 50–

200nm. By 31 October 2013, 1,128 Avaaz members, 365 from Bermuda, had endorsed an online petition, calling on “a massive MR surrounding Bermuda.” The petition was available at https://secure.avaaz.org/en/petition/An_ocean_of_hope/. After signing, everyone was encouraged to click through to the public consultation form and complete it as well.

- k. A second petition, at www.thepetitionsite.com/takeaction/873/244/063/ and authored by Bermuda Blue Halo, encouraged creation of “the Atlantic’s largest marine reserve.” By 31 October 2013, this petition had garnered 42,294 signatures.
- l. While the survey results may, at first glance, suggest that Bermuda supports the establishment of a marine reserve in the offshore waters, they must be examined in light of the influencing circumstances and the evolution of the discussion through the course of the consultation. While there is substantial support for establishing a MR, there is also strong support for more rigorous information that explores and evaluates the economic potential of various opportunities.

3 BERMUDA’S EEZ

3.1 Context

- a. Under the United Nations Convention on the Law of the Sea, Bermuda has special rights over the exploration and use of the natural resources within our EEZ including managing and conserving those resources. Our EEZ represents an area of ocean within 200 nautical miles of our island, covering 464,940 km² (179,514 m²). Bermuda has a long history of managing its marine resources and regulatory measures are in place for many activities in the EEZ.
- b. This huge, multi-level asset, is larger than the countries of Paraguay, Morocco or Germany and the states of California or Montana. This complex, somewhat unknown asset is viewed by some as offering three layers — (i) the surface, (ii) the water column and (iii) the seabed — as separate economic opportunities. It is also viewed as a multi-faceted single economic opportunity with purported illustrious and financially rewarding global promotion for Bermuda along with social and environmental benefits.

- c. The remainder of this report presents a summary of the major outcomes from the consultation and the diverse factors that require further consideration in any decision moving forward. The resulting arguments from the public are summarised, and the high level issues are presented that ought to be fully assessed when considering the future objectives, the effective management and control for this national asset.
- d. This report also outlines the case for further and necessary work that is required to ensure that Bermuda is seen to have performed adequate due diligence given the holistic and long ranging implications of any future decision on this asset.
- e. The major categories of findings arising from this process are listed as follows:

<ul style="list-style-type: none">• Current Protections and Permissions• Fishing Activity• Monitoring and Enforcement• Telecommunications Cables• Research Profile• Marine Protected Areas• Impact on Fish Stocks	<ul style="list-style-type: none">• Other jurisdictions• Opportunity for Marine Management• Seabed Exploration and Mining• Offshore Fishing• Sea Farming• Convention Business• Sargasso Sea Alliance
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3.2 *Current Protections and Permissions within our EEZ*

- a. The scope of the current regulatory framework governing our EEZ includes a significant number of protections and permissions. In fact, Bermuda has a number of marine management measures in place dating as far back as 1620. Bermuda has regulations that protect all corals, marine turtles, marine mammals, parrot fish, several species of groupers, etc. Protections extend to include a ban on all dynamite fishing, use of gill nets, trawls, fish traps, and spear guns. There are severe restrictions on nets and long-lines. There are selected spawning grounds for protected species that experience

seasonal closures by species and area, limited entry into the fishery industry, bag limits, etc. All local and visiting vessels fishing commercially in our waters must be licensed and a facility exists for licensing foreign, high seas fishing vessels. Currently, no foreign vessels are licensed to fish Bermuda’s waters and significant penalties exist for violations. Bermuda has one of the most restrictive fisheries management regimes in the world.

- b. This regulatory regime covers the full extent of the circular EEZ. However, it should be noted that most of the restricted commercial activity occurs on the inshore platform. A simplified timeline of Bermuda’s major historic protections is shown in Figure 3.

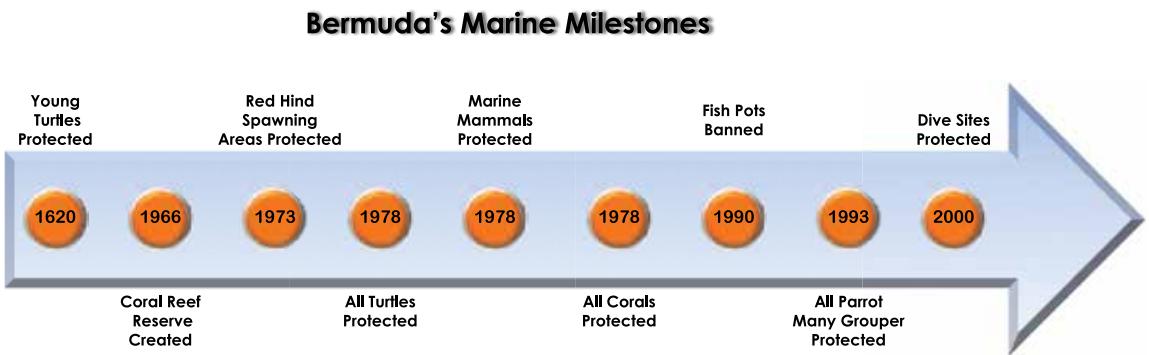


FIGURE 3: Timeline of Bermuda’s major historic marine protections.

3.3 Fishing Activity

- a. Bermuda is known in the sport fishing industry as the marlin capital of the Atlantic. The SDD has been informed by the former Department of Tourism that the estimated economic impact of visiting sports fishermen was \$4M in 2010, and over \$4.5M in 2012.
- b. While some suggest that tournament participants fish within 50 miles from shore, the Billfish Foundation indicates that recreational fishing for billfish is typically done by visiting vessels during their transit to Bermuda as well. These tournaments require participants to utilise an agreed set of sustainable fishing practices. An emerging trend in sport fishing is to find new fishing opportunities in unexplored areas like distant seamounts (underwater mountains). This is made easier by advanced satellite

forecasting which assists in finding optimal fishing conditions. The Billfish Foundation has clearly stated that “the establishment of marine reserves is a strong deterrent in choosing a destination for visiting anglers.” It is forecast that sports fishers will simply choose another destination. Nonetheless, they clearly state there is great potential for the growth of fishing and this industry in the waters around Bermuda.

- c. Anecdotally, there are reports of illegal, unreported and unregulated (IUU) fishing in the offshore waters of Bermuda’s EEZ. As a result, some call for full closure of our EEZ to harvesting; arguing that such a no-take area can be properly and effectively enforced, and better than a mixed-use area. Others argue that no reliable research has been done to assess or quantify illegal fishing in Bermuda’s waters. It has also been suggested that historical satellite imagery could assist in verifying the extent of this activity in our EEZ. These varying views point to the current difficulty linked to fishing activity and point to the wider question of how a cost-effective monitoring and enforcement programme is a requirement going forward, particularly if economic activity is increased.
- d. The Fisherman’s Association of Bermuda holds the view that the future of the Bermuda fishery is in the offshore opportunities. While this may be true, what Bermuda does not know, and perhaps should know, is the potential economic strength of this vision. How strong is the potential market? What risks are associated with this? What is the likelihood of success both locally and internationally? How might we quantify this potential success? These and several other questions need to be fully addressed before it is decided to pursue an offshore fishery and, similarly, any consideration of not pursuing this option should be based on solid analysis that identifies and quantifies both risks and benefits.

3.4 *Monitoring and Enforcement*

- a. Currently, the Government of Bermuda authorises the Fisheries Enforcement Section of the Department of Environmental Protection as the agency responsible for enforcing the current Fisheries legislation. The workload associated with primarily inshore work has placed some strain on the capacity of the five fishing wardens given the responsibilities and work hours required. The newer boats used by the wardens can patrol up to 50 miles from shore so any consideration of extending our

enforcement efforts beyond that limit will likely require additional capital and operational resources. Some stakeholders highlighted the apparent lack of success within the judiciary of prosecutions for violating MR law. This perception is seen as representative of the likely resource challenges Bermuda will have with the enforcement of any new regulatory regime, particularly a restrictive regime such as a no-take marine protected area.

- b.** The EEZ is presently monitored by the Bermuda Maritime Operation Centre (BMOC) which uses an Automatic Identification System (AIS) to identify and locate all marine traffic, including registered vessels within our EEZ. In order for this to happen, an AIS must be on board a vessel and functioning correctly. The BMOC is not mandated to conduct enforcements and therefore reports all suspicious activity to the relevant authorities such as the Fisheries Enforcement Section or the Marine Branch of the Bermuda Police Service. These relationships have become strengthened in recent years because of newer technology systems.
- c.** Globally, marine protection activities are moving into more remote areas. Consequently, monitoring and enforcement of isolated places are being discussed. SDD is aware that options such as the use of un-manned aircrafts (drones), manned aircrafts and satellite imagery allow more aggressive monitoring; but establishing and quantifying reliable operating costs are still a work-in-progress. The range of issues associated with these options would have to be assessed for feasibility and implementation. The outcome of the work by the Security and Defence Review Committee will likely contribute materially to this aspect of due diligence on our enforcement discussion since they are considering the implications of a commitment by Bermuda to enforce protection of its EEZ.

3.5 *Telecommunications Cables*

- a.** Most nation states now regard submarine telecommunications cables as critical infrastructure. That is especially relevant for an island-nation like Bermuda where telecoms underpin our two major economic industries and contribute to our residents' high quality of life. Unlike many other large jurisdictions, Bermuda is heavily reliant on just a few underwater cable systems. As such, any decisions about the future of our EEZ ought to give proper consideration to the potential for threat or risk of disruption to any one of those cables, which in turn could likely cause a material and adverse impact on the economic and social fabric of Bermudian society.

- b.** Submarine telecommunications cables are laid on the sea floor and when they come closer to shore they are likely to be armoured. Despite the best efforts of submarine cable companies, submarine cables remain susceptible to external aggression, damage and breakage. Activities that pose the greatest threat are sea-bottom trawl fishing, dumping, sand dredging and anchoring.
- c.** There are two current landing points for telecommunications cables in Bermuda, one in Devonshire Bay, Devonshire, and one in Annie's Bay, St David's.
- d.** The major submarine cable agencies that are based in Bermuda made a submission on behalf of:

 - 1. Challenger Bermuda – Cable Co
 - 2. GlobeNet Segment 4 – Brasil Telecom Subsea Cable Systems, Ltd. (Bermuda)
 - 3. GlobeNet Segment 5 – Brasil Telecom Subsea Cable Systems, Ltd. (Bermuda)
 - 4. Gemini Bermuda – US – LinkBermuda
 - 5. CBUS – LinkBermuda
- e.** Given the potential implications of a proposed marine reserve, the cable operators chose to focus their submission on the possible implications of such a designation. The submission proposed establishing Cable Protection Zones (CPZ) for fibre optic submarine cables within Bermuda's EEZ to protect the cable systems serving the island and to ensure Bermuda maintains and enjoys the uninterrupted benefits of the *de facto* MR that would exist within any CPZ.
- f.** In establishing CPZs, consideration must be given to a framework that supports planning protection regimes and identifies authority and governance, particularly regarding installation and repair, protection and penalties for cables.
- g.** Again, this submission raises questions around the potential implications of pursuing an option to establish a MR within our EEZ. What might this mean for the need to allow cable companies to deploy resources for potential repair and recovery work on a cable? What if major repair work is required, how might the establishment of a MR impact the cable company operations, if at all?

3.6 Research Profile of Bermuda's EEZ

- a. Despite its long existence, its proximity and its intrigue, relatively little is known about our EEZ. Bermuda's geography provides easy access for studying deep water habitats, eco-systems and associated species. Currently our EEZ research profile includes studies on major migratory animals such as whales, tiger sharks, turtles, marine birds, fisheries and near shore habitats. Work has also begun in the Atlantic in relation to the proliferation of plastics and other pollutants. Bermuda's EEZ is a largely unexplored territory, where more scientific information is being gathered and even more remains outstanding. Expanding our knowledge base of this asset should aid our policy makers in their quest to determine its potential and to prepare a future management plan.
- b. The world renowned Bermuda Institute of Ocean Sciences (BIOS) has been studying the ocean (around Bermuda in particular) for almost 100 years and its work noticeably flourished during the 1990s. Since 1954 open ocean properties of the off shore water column have been sampled twice per week for temperature, salinity, and CO₂ content. This database (referred as a time series) can be used to inform and shape policy. This data could be used along with that collected in other jurisdictions to further enhance our collective understanding which should improve our stewardship and management of our oceans. Still, the bottom of the water column and the ocean floor are least understood in the EEZ. It is believed that there are many species, events, and mineral profiles from those depths that have yet to be discovered, analysed and understood. The suggestion that Bermuda identify, quantify and assess the long-term potential value of these unknowns (assets) was raised as a recurring theme throughout the consultation process.
- c. To explore these deep ocean areas, large scale surveys and high-resolution technology are required. The BIOS vessel, *Atlantic Explorer*, is equipped for such excursions but the cost is a significant factor. Preliminary data from this vessel has been collected in some of the offshore waters; video and samples still require full and further analysis. The suggestion that Bermuda give strong consideration to scientists and explorers working together presents a synergistic opportunity. This highlights potential future ways to gather data in our waters and open the door for Bermuda to consider how it will capitalise on its unique research profile.

- d. Our knowledge about the extent to which marine animals, offshore migratory fish stocks or pelagics reside in or traverse through our EEZ is not well established. Our knowledge of the EEZ's biodiversity is also limited. Our clarity and understanding of the current status of this asset can translate into a major challenge to our confidence levels with respect to potential future growth of any offshore commercial endeavours. It is noteworthy that the Government of Bermuda commissioned a study (in 2009 and 2010) to project the future viability of an offshore fishery. The outcome and implications of that work is mentioned later. It should be noted that the strength of the fish stock in our EEZ is probably not as well known as it could be given the relatively limited fishing activity that has been permitted within the offshore waters of our EEZ.

4 MARINE PROTECTED AREAS (MPA)

4.1 Definitions and Designations

- a. About 12% of the terrestrial surface (land mass) of earth is conserved or protected. In comparison, less than three per cent of the ocean has protective status. The oceans are under a number of threats. These include but are not limited to pollution, habitat destruction, overfishing and the impacts of climate change. Consequently, many economically developed world governments have agreed to protect at least 10% of the world's marine and coastal zones by 2020.
- b. The International Union for the Conservation of Nature (IUCN) defines a Marine Protected Area (MPA) as a "protected area [that] is a clearly defined geographical space, recognised, dedicated and managed, through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values." IUCN recognises six MPA categories ranging from mixed use to stringent no-take areas. MPAs are accepted international management tools that help jurisdictions manage their terrestrial waters and promote ocean health.
- c. Under the widely adopted IUCN guidance, a MR is the most stringent type of MPA, i.e. the highest level of protection available. It is important to note that the term MR indicates a "no-take" zone with a prohibition on all extraction of resources from any component of the reserve. A "no-take marine reserve" therefore means no fishing, no seabed mining, no algae

harvesting, etc. It is typically part of a larger system of MPAs, at times it is incorrectly used interchangeably with the term MPA.

Distribution of permissions and restrictions over the seven categories designated by the IUCN

IUCN category	Long term and sustainable local fishing/collecting practices	Recreational fishing/collecting	Traditional fishing/collecting	Collection for research
Ia	No	No	No	No*
Ib	No	No	Yes**	Yes
II	No	No	Yes**	Yes
III	No	No	Yes**	Yes
IV	Variable#	Variable#	Yes	Yes
V	Yes#	Yes	Yes	Yes
VI	Yes#	Yes	Yes	Yes

Key:

*	any extractive use of Category Ia MPAs should be prohibited with possible exceptions for scientific research which cannot be done anywhere else.
**	in Categories Ib, II and III MPAs traditional fishing/collecting should be limited to an agreed sustainable quota for traditional, ceremonial or subsistence purposes, but not for purposes of commercial sale or trade.
#	whether fishing or collecting is or is not permitted will depend on the specific objectives of the MPA.

FIGURE 4: Guide to activities in to the IUCN MPA Categories

- d. One of the predicted benefits of a country declaring a very large portion of its oceanic resource as a MR is the global media and organisational attention and recognition for continued good stewardship of oceans. It is further predicted that such a designation, with enhanced international scientific credibility, would lead to material improvement in niche tourism with spin-offs to satellite commercial activity. This suggests positive economic, social and environmental benefits accruing to a community.

- e. SDD has not yet reviewed a jurisdiction which has declared a MR and demonstrated measurable success aligned with predictions. To date MRs have generally not yet shown direct improvement for tourism numbers. Notwithstanding, SDD was provided with an impressive range of documented publicity in the form of newspaper articles, scientific publications and exclusive niche publications that were produced as a result of a jurisdiction declaring a MR in its marine environment. It has been suggested that Bermuda would likely benefit from a similar scale of

positive publicity. It is not clear how long the publicity lasted, the extent to which it continues, the measurable benefits that might have accrued to the country, or the sustainability of the impacts of such promotion. There is evidence of increased MR-tourism in some jurisdictions but it is difficult to be certain if the MR traffic is directly related to the declaration or if the tourism increases stem from a visit to the MR after being in the country, then learning of its existence and deciding to visit. Obviously, this is materially different from being motivated to visit a country because it has declared a MR.

- f. It is noteworthy that most large MRs considered by SDD are located in uninhabited or very low populated regions. For Bermuda, the sustainability of predicted incremental increases in niche visitors as a result of a MR designation in the offshore waters of our EEZ at this time is uncertain. At present, there are no comparable areas within the Atlantic Ocean that have been declared a MR, thus adding to the unique value of a proposed Bermuda MR. Although there are smaller no-take areas that are either part of a larger MPA system (such as the North Sea MPA network) or consist of a series of several MPAs in the Caribbean and along the coasts of various countries, none are quite similar to the proposal for Bermuda.
- g. It has been suggested that Bermuda draw reference to the impact in Australia of the protections established for the world renowned Great Barrier Reef (GBR) as an example of a marine protected area that generates revenue for its jurisdiction. Importantly and pivotally is that the GBR is a coastal area that is easily accessible, i.e. not off shore, and it has multiple IUCN designations in place to support various management objectives including recreational and “no-take” zones in one marine park.

4.2 Marine Reserve - Impact on Fish stocks

- a. The designation of MPAs have been widely reported as having positive effects on the health of ecosystems, their biodiversity and the recovery of previously depleted populations for some fish species in near shore habitats. This is particularly noticeable where plant and animal communities are intact. There remains considerable discussion over the efficacy of spatial management for the conservation of pelagic species in offshore waters. It is generally known that deep water habitats are home to highly

migratory pelagic species (i.e those fish inhabiting the upper layers of the ocean waters) that transverse our oceans. As such, there is concern that Bermuda's EEZ may not be a significantly protected portion of the oceans that these species migrate through during the course of their life cycle.

- b.** Of the submissions received, there was a clear distinction on views of how a MR in Bermuda's EEZ would impact fish stocks. The Bermuda Institute of Ocean Sciences (BIOS) stated "Based on the currently available scientific information, the establishment of such a reserve will yield direct, positive impacts on the fragile ecosystem of the Sargasso Sea and, in turn, the health of Bermuda's near shore environment." The Pew Charitable Trusts and other proponents of establishing a MR in the outer waters of the EEZ echoed this sentiment and also suggested that such a reserve would help protect many endangered and threatened species that migrate to and through our EEZ to feed and breed.
- c.** In contrast, others, mainly individuals, cited science reports on the uncertain short and long term value of MPAs in offshore waters. One submission suggested that "if the Bermuda reserve does not promote fish survival [and provide evidence to demonstrate this] it will be a black mark against high seas reserves. In that way it could actually harm global conservation efforts." To some stakeholders, the currently available information on our deep water habitats is apparently not as extensive as needed. It is not clear how high or low either confidence or scepticism is. This uncertainty has contributed to a desire, for some stakeholders to obtain more intelligence on this aspect of the broad question on our EEZ's future.

4.3 *Select Jurisdictional Comparisons*

- a.** Even though Bermuda is considering a fairly unique MR proposal it is nonetheless useful and appropriate, as mentioned earlier, to consider the experiences of other jurisdictions. Currently, much of the available data tends to combine the respective sizes of terrestrial and marine protection areas as a single unit — this adds complexity when making a comparative analysis of marine protected areas. Varied reports show that about 2% of the UK's territorial ocean has some measure of protection, while the US ranges between 1 and 3.5% and Australia about 10%, comparatively.

- b.** The World Bank International assigns ratings to countries for comparative purposes (as a percentage, with 100% being ideal) regarding nationally protected areas (terrestrial and marine). This organisation shows Bermuda (rated at 5.1%) to be on the low end when compared to countries such as the US (15.1%), UK (23.4%) and Australia (15.1%). Most of Bermuda's conservation efforts do not qualify for the international standard as the qualifying level for consideration is at least 10km² (1000 hectares). Additionally, our marine preservation is locally governed and without international designations. Jurisdictions that have a limited land mass, such as Bermuda, would need to allocate greater percentages of their waters to qualify for protection under the guidelines of governing bodies such as IUCN in order to receive world-wide recognition. The national percentage of protected areas for selected other small island jurisdictions are the Bahamas with 1.1%, Cayman Islands with 1.5%, Jamaica with 7.1% and Cuba with 9.9%, for comparison.
- c.** Large internationally recognised MPAs have varying and distinguishing characteristics including the process adopted to designate an asset, the respective (required) physical attributes, the objectives and their respective management plans. Some of the more high profile jurisdictions are listed below.
- d.** The Chagos Islands is a British territory in the Indian Ocean that is largely uninhabited due to the removal of the Chagossians in 1971. The UK Government created the largest no-take MR (640,000 km²) in 2010 with a five-year guarantee of management funding from the Bertarelli Foundation. The benefits of this declaration are not yet clear and it has been reported that the resources for effective management have not always been available particularly for monitoring, compliance and enforcing restrictions when required.
- e.** The North-western Hawaiian Islands and Midway Atoll make up the Papahānaumokuākea Marine National Monument which is 340,000 km². This mostly unpopulated World Heritage Site has mixed use under the IUCN Category IV. US President George W. Bush proclaimed its existence in 2006 and funding for the operations is provided by State and Federal agencies.

- f.** In 2012, Australia created the Coral Sea Commonwealth Marine Reserve which is 989,842 km². This designation more than tripled the level of water protections to over 30% in Australia. Despite this valiant accomplishment, the government announced in late 2013 that it was not going to enforce the more restrictive zones because the process was very divisive and the scientific evidence used in developing the policy needed review. The economic value of the ocean around Australia was estimated at \$42 billion in 2010 and thus a significant contributor to the region.
- g.** The Marianas Trench Marine National Monument (MTMNM) is a US Territory spanning some 246,000 km². Although this asset has restrictions on the seabed, the water column is open for fishing. This area is over 100 miles from the nearest shorelines and SDD understands that additional funds were not set aside for its management. MTMNM was set up in 2009, just prior to the contraction of the global economy. The U.S. Fish and Wildlife Service has advised that much of the hope arising from this declaration in generating economic and social benefits and the other expectations and predicted benefits were negatively impacted because of a lack of funding. The management plans are still being developed and the tourism prospects have not yet been realised.
- h.** In 2012 the Cook Islands declared their intention to establish the world's largest marine park for multiple uses measuring just over one million square kilometres. It is likely that it will take some years to officially establish the MPA because legislative requirements, management objectives, funding and governance still need to be determined. Additionally, it is understood that the Cook Islands, although planning to establish a large marine park, are also planning to eventually mine the huge deposits of manganese nodules that lay on the bottom of the sea at great depths in their EEZ. Other island nations, e.g. the Maldives and Pitcairn, have also declared intentions to establish MPAs.
- i.** Bermuda has the opportunity to learn and benefit from the introduction of best practices through the prior leadership efforts of other jurisdictions in their quest for creating protections in their EEZ or territorial waters. It is important that we maximise the opportunity of making an informed decision.

5 OPPORTUNITIES

5.1 *How Should Bermuda Approach Marine Management?*

- a. SDD received a number of submissions endorsing the largest “no-take” MR possible while other similar submissions made the case for removing likely threats to existing and potential economic activity such as cabling, shipping, sport fishing and seabed exploration. These conflicting proposals illustrate the need for further clarification of the potential benefits and risks of this asset’s future given the choices available. The UN University Institute for Water states that no-take zones that are well-managed are more likely to have the most persuasive evidence of benefits.
- b. A few submissions proposed a multi-disciplinary resource management plan to achieve community objectives to be agreed through stakeholder consultation and some went so far as to provide detailed suggestions for management goals including maintaining the ocean ecosystem while providing sustainable use of resources.
- c. This consultation has highlighted the need to explore the efficacy of designating MPAs in our EEZ, i.e. to consider designating various portions of the EEZ with a suite of varying protections. The choice of protection for a specified area should consider the current state of biodiversity and ecology of the area, potential current and future activities, threats and desired outcomes.
- d. Moving forward, it is imperative that any future opportunities within our EEZ be identified and assessed so that a comprehensive management plan, encompassing environmental, social and economic goals and objectives to achieve agreed outcomes, be implemented. Such a plan could include the projected sustainability and viability of both offshore and inshore activities and protections.

5.2 *Possibly the Largest Marine Reserve*

- a. Given the current legislation and Bermuda’s history of managing its marine resources, it has been suggested that the next logical extension would be to consider the designation of a MR. Such a designation would signal to the wider international community our proactive approach to

protecting a significant portion of the Sargasso Sea ecosystem within our jurisdiction and commitment to a larger conservation initiative within the greater Sargasso Sea. This is potentially a remarkable opportunity for Bermuda to contribute to the global coverage of the world’s oceans benefitting from such protection. It is likely that setting aside a large MR where nothing would be taken from the sea will help maintain the health of this important part of the ocean. And this would greatly enhance our reputation as a leading global steward for the protection of the high seas.

5.3 *A Made-in-Bermuda Proposal*

- a.** A group, self-entitled the Marine EEZ Stakeholders’ Caucus, advocated “for a comprehensive, effective, and adaptive resource management plan for realizing sustainable socio-economic benefits without compromising our responsibility for the protection of the marine environment throughout our EEZ.” The goals proposed included: support of the world target of conserving 10% of coastal and marine areas by 2020, development of an adaptive and comprehensive plan with effective governance, strategic funding and consideration for commercial seabed activities and sustainable fishing.
- b.** The Billfish Foundation endorsed Bermuda conducting “its own comprehensive ecological and socio-economic impact assessment for a potential marine protected area” and finding a solution based on scientific findings. Still other submissions endorsed this position of evidence-based decisions, with full analysis of the issues so that objectives can be clearly defined and the options assessed for the future of the EEZ.

5.4 *Cultivating a Market for Seabed Exploration and Mining*

- a.** Seabed exploration and mining are touted as potentially emerging industries, which have been facilitated by growing global interest and by advances in technology specific for this industry. Current available information indicates that the potential (marketable) mineral resources in Bermuda’s EEZ include polymetallic sulphides, manganese nodules and cobalt-rich crust, hydrocarbons and gas hydrates. SDD is also advised that Bermuda also has cobalt, nickel, manganese, tellurium, platinum and other rare earth elements in its EEZ. Many of the metals contained in seabed

deposits are considered “technology metals” and are increasingly required by high technology industries for use in cell phones, computers, etc.

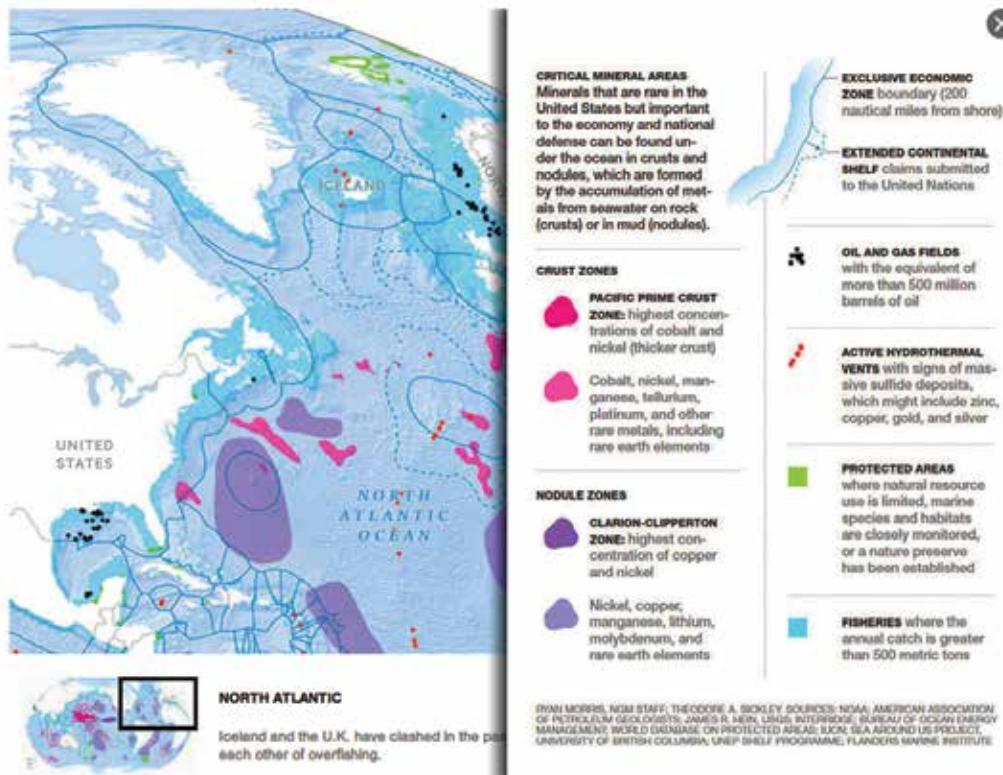


FIGURE 5: Map of the eastern Atlantic Ocean showing presence of critical mineral areas. (<http://ngm.nationalgeographic.com/2013/11/new-america-map/boundary-treasure-map>).

b. Deep seabed mining beyond a country’s national jurisdiction is regulated by the International Seabed Authority (ISA), which was established by the United Nations Convention on the Law of the Sea. Mining within the limits of the jurisdiction of a country necessitates the development of a contractual relationship between the miner and the government of the coastal state. While a number of entities have been granted exploratory licences, there are only a few actual mining operations. These operations are in the shallow seabed, including diamond mining in Namibia and tin mining in

Indonesia. A licence has been granted to Nautilus Minerals Inc. to mine the deep seabed in Papua New Guinean offshore waters. It is expected that the outcome of this venture, the challenges encountered and the lessons learned will influence the future structure and content of a global model to pursue deep sea mining.

- c.** A Bermuda-based company, Ocean Projects Limited has an exclusive 10-year exploration licence (expiring in 2016) to commercially explore Bermuda's territorial waters. However, as stated earlier, there is very little known about deep-sea habitats in general and Bermuda's in particular, or the impact that mining operations could potentially have on ecosystems, habitats and the wider functioning of our oceans. This is one reason why interested governments and prospective sea bed mining operators are perhaps anxiously awaiting the outcome of the work planned and in process in Papua New Guinea.
- d.** Those in favour of this activity posit great potential economic gains in the future and suggest the creation of a sovereign account to safeguard earned financial resources far into the future. In contrast, others suggest legislation can be changed if needed (should Bermuda adopt the Blue Halo proposal) in favour of commerce in the event viable concentrations of resources are present, attracting foreign investment. This could be problematic as a MR would likely prevent any exploration to determine or confirm the presence or location of valuable resources.
- e.** It should also be noted that this step would only happen if permitted exploration confirmed the presence of commercially viable resources that would then be the target of mining/extraction. One should make a distinction between exploring to confirm the presence of minerals (valuable resources) and actually removing them from their location. The exploration and extraction are two separate activities. Bermuda could structure contracts with potential seabed mining corporations that would fully fund the tasks associated with these activities, including mapping the sea bed, determining the viability of mining, exploring for valuables and eventually extracting them for commercial gain. Under such circumstances Bermuda would agree a percentage of the sales value that would accrue to the government and people of Bermuda.

- f.** Seabed exploration and mining are not compatible with MR. Ocean Projects Limited endorsed the view that “a multi-use resource management plan designed to achieve community objectives that have been identified through key stakeholder consultation and which balance[s] the social, economic and conservation needs of Bermuda is the most rational way to successfully achieve that end.” They further stated “It is quite clear to us that the [current] science and economic reports are not comprehensive enough to adequately inform a regulatory decision about an issue as important as the management of Bermuda’s sovereign rights over the natural resources in 465,000 square kilometres of new ocean territory.”

5.5 *Designing, Resourcing and Developing a Bermuda Offshore Fishery*

- a.** The Fisherman’s Association of Bermuda (FAB) indicated that they currently represent 450 jobs in an industry that contributes in excess of \$20 million annually to Bermuda’s economy. The Association has indicated that Bermuda should give strong consideration to the need to increase Bermuda’s capacity to sustain this industry, stating that development of a long line fishery gives the ability to justify shore side facilities and the necessary volume to bring shipping costs down. The FAB considers the EEZ to have within it, a renewable commodity that if managed properly will keep renewing. They add that the offshore fishery could justify shore side facilities that in turn benefit the inshore fishery. It is also their view that an expanded offshore fishing industry has the potential to diversify our economy, create jobs, earn foreign currency and reduce our reliance on foreign imports as they have indicated that over 70% of seafood consumed in Bermuda is imported.
- b.** The FAB, in their advocacy for the development of an offshore fishery, indicate that threats to this opportunity that need further consideration include: other countries’ overfishing by unsustainable methods; the perception of no-take zones negatively impacting tourism (including recreational fishing enthusiasts); a need for adequate resource allocation to support effective and proactive monitoring and enforcement within our entire EEZ; the supply of fish inventory exceeding on-island demand; fisherman not operating at capacity; and exploring opportunities for

sustainable economic growth through fishing. The FAB proposed a number of solutions including: creating a plan for the EEZ that allows opportunities for diverse and possible conflicting/compatible interests; enhancing the current fishing regulatory strategy; implementing a well-managed long line fishery; ensuring a viable export facility; putting in place aquaculture programmes; assessing and implementing embargos on selected imported fish; strengthening enforcement of the current scope of regulations; and considering the economic and social benefits that can be gained from creating a growth model for our fishery.

- c. A report entitled *The Pelagic Long Line Fishing In Bermuda's Exclusive Economic Zone* analysed results of experimental long lining efforts during the period 2007–09. It concluded that “significant offshore fishery resources exist within Bermuda’s EEZ, and that small-scale long lining from the type of vessel already owned by many local offshore fishermen is not only feasible, but can yield results on par with those achieved by larger international operations. This expands the opportunities open to local fishermen, as well as expanding the range of fresh fish available to the local market. In addition, the record on by-catch demonstrates that it is possible to fish in this manner without having undue negative impacts on the wider oceanic ecosystem.” It went further to recommend that “the proposed shore side facility could be an important element in the marketing of product, whether locally or overseas.”
- d. Despite this, SDD has been advised that there is currently only one long liner fishing in Bermuda’s offshore waters. This operator advises that on the very few trips undertaken per year to pursue this method of fishing, the quota allocated to Bermuda for deepwater pelagic is comfortably met. SDD has been further advised that there is a high level of confidence in Bermuda’s ability to increase its capacity for this method of fishing and that it could have positive impacts on the supply of fish and thus reduce dependence on imports.
- e. In contrast, Pew Charitable Trusts submitted that “From a commercial perspective, studies by the Government of Bermuda, as recently as 2010, on the potential for generating revenue and jobs through the development of a long lining industry determined that such an industry would not have an economic future in Bermuda’s economy.”

5.6 Exploring Potential Interest in Sea Farming

- a. The exploration of the viability of a sustained aquaculture programme in Bermuda has been investigated for several decades. Studies from the Bermuda Institute of Ocean Sciences and others have focused on a few species as candidates for commercial purposes including the Bermuda sand scallop and the calico scallop. While initial results of studies were positive, the movement from study to business opportunity has not yet transpired. More recently, *A Strategy for the Sustainable Use of Bermuda's Living Marine Resources*, 2010, included a focus on Increasing Local Seafood Production Through Aquaculture, Theme 6, to improve local food security, and potentially enter the export market, while reducing pressure on wild stocks and assisting conservation initiatives. New business, employment, investment opportunities and a reduction in our dependence on imported seafood are seen as potential long-term benefits. Similar to the other proposals referred above on the future use of our EEZ, this initiative should also be the subject of an economic feasibility study to test its long-term viability and its value to our economic and social sustainability.

5.7 Strengthening Tourism Convention Business

- a. Bermuda has a potentially valuable opportunity to build on its solid history, experience and reputation for oceanic research and conservation. Our “special” location offers relatively easy access to deep water habitats. This easy access is considered a major factor for growing niche tourism tied to our EEZ.
- b. Currently business visitors attend meetings and conferences that are organised by companies and organisations in partnership with our local hotels. These niche tourism events are well supported by our on-island products, services and amenities which are complemented by our strong infrastructure and airlift with direct connections to gateway cities. Through this consultation work, it became evident that there is strong support for intentional efforts to market our marine resource management for the benefit of tourism. SDD is aware of private sector efforts to encourage and sensitise the newly established Bermuda Tourism Authority (BTA) to endorse the Blue Halo initiative.

- c. It has been suggested that Bermuda could become the “Davos of Ocean Health” which is a reference to the role that Davos, Switzerland, plays in hosting primarily financial conventions and other meetings with global attendance. It has been suggested that Bermuda could benefit similarly by establishing a MR in our EEZ and that this designation could translate into growth in on-island scientific and oceanic convention business with global appeal. This proposal has the added forecast of creating convention-related jobs and major economic spin-offs.
- d. The sea is sometimes called the “new frontier” and sustainable industry, exploration and recreation are topics that have been receiving attention. Marine convention business can also provide platforms for the development of policy initiatives, such as those articulated in the *Sustainable Use of Bermuda’s Living Marine Resources*. Careful marketing and planning can also reduce the seasonality of the larger marine product known as the Offshore Bermuda Hub in the National Tourism Strategy.
- e. It is recommended that Bermuda consider the feasibility of encouraging marine conferences and groups to our shores. Relevant stakeholders will have to be open to the idea and participate in this discussion. The U.S. Bureau of Labor and Statistics and the International Conference and Convention Association project growth in professionally planned meetings due to the increase in globalisation and business. With the increasing world-wide interest in ocean management Bermuda has an advantage to be a leader in this area.

5.8 *The Role for the Sargasso Sea Alliance*

- a. The Sargasso Sea Alliance (SSA) is a partnership led by the Government of Bermuda, in collaboration with scientists, international marine conservation groups and private donors, who all share a vision of protecting the unique and vulnerable ocean ecosystem of the Sargasso Sea, recently identified as the “golden floating rainforest of the Atlantic Ocean.” The Sargasso Sea is the world’s only sea without coasts; only the islands of Bermuda have direct coastal frontage. The aim of the SSA is to mobilise support from a wide variety of international organisations and governments to ensure legal protection for this critical ecosystem. This is consistent with the agreement by most of the world governments to protect at least 10% of the world’s marine and coastal zones by 2020.

- b.** The Sargasso Sea is a unique and important ecosystem. Floating mats of seaweed provide a home for more than 100 species of fish and 145 types of invertebrates such as crabs, shrimp and sea slugs. Young turtles hide in the seaweed, eels and marlins come to breed, and humpback whales pass through during their yearly migrations. Abundant plant life plays an important role in regulating the global climate.
- c.** This ecologically unique and important place is at risk, threatened by climate change and ocean acidification as well as more immediately by fishing and shipping pressures, and by the accumulation of plastic and other pollutants.
- d.** In March 2014, the Government of Bermuda welcomed representatives from foreign governments for the adoption of what has been described as the Hamilton Declaration on the Collaboration for Conservation of the Sargasso Sea. This Declaration confirmed multi-national support for stronger stewardship of the Sargasso Sea with Bermuda expected to continue its leading role advancing the mandate of the Sargasso Sea Alliance. The Hamilton Declaration is a political agreement amongst the governments bordering the Sargasso Sea and the Range States of important species that spawn or migrate through the Sargasso Sea. The Declaration elaborated the ways in which these governments can voluntarily collaborate in such an effort. It also established the Sargasso Sea Commission.
- e.** Bermuda has made it absolutely clear that the signing of the Declaration did not in any way impede Bermuda's ability to retain full responsibility for the management and control and future decision making over its own EEZ. Bermuda has a long and impressive record of marine and terrestrial conservation and has both partnered with and led small island jurisdictions over the decades on a number of important issues.
- f.** As Bermuda seeks to determine the potential of the EEZ and its future, the extent to which decisions and developments of the SSA influence the decisions and developments in the consideration of the future of Bermuda's EEZ must be carefully assessed and weighed.

6 CONCLUSION

- a.** Planning for the future of our EEZ is probably one of the most complex and capacious opportunities that the Government and people of Bermuda have ever been presented with. Our EEZ offers an array of opportunity for economic development. However, the forecasted benefits require a more in-depth and reliable level of due diligence to arrive at a point where benefits, risks and costs can be reasonably quantified and a sustainable position can be adopted. This EEZ opportunity has no equal and how it is assessed and managed ought to be sensitive to our reputation as a leading steward of the ocean around us.
- b.** There is strong support for more information to undergird projected financial and social/employment benefits of this asset and the opportunities it may represent. This first consultative phase did not include the level of rigour now understandably being requested. There are other economic considerations that have yet to be fully explored. Based on the range of views regarding the way forward for our EEZ, the level of confidence with current knowledge, and the current data gap, it is premature to establish a firm or definitive position on the future of the EEZ at this time.
- c.** All opportunities must be assessed with regards to their economic feasibility, long-term viability and the value to our economic, social and environmental sustainability. The decision on the most appropriate way forward for this asset should reflect a solid understanding of the impact on key economic indicators such as the potential for attracting direct foreign investment; enabling local investment and economic stimulus; spawning local entrepreneurship; creating jobs for Bermudians; contributing to our GDP; diversifying our economic base and model; strengthening our international profile; and increasing our global competitiveness.
- d.** Notwithstanding the differences in the issues and the varied stakeholder submissions, there is good consensus from the public on the need for a made-in-Bermuda approach to the EEZ and its future.

7 NEXT STEPS

- a.** Cabinet has considered and signed off on the contents of this report. This publication forms the outcome of what can be considered as the first phase of the required public/stakeholder consultation. This report captures a diverse range of interests on potential future opportunities for the EEZ and will form the basis for the second phase of consultation.
- b.** Cabinet has approved the issuance of a “request for quote” (RFQ) to determine the cost of an independent feasibility study which will assess, forecast and quantify the potential economic activity within Bermuda’s EEZ. This step will ensure a more rigorous evaluation of the identified options and should provide the Government and people of Bermuda with a reliable economic profile to inform future decision making.
- c.** In continuing the consultation, the RFQ will govern the predominant activities and opportunities in the offshore waters of this important national asset. Activities and opportunities in the nearshore waters will be considered in a separate endeavour and will be captured in the developing Marine Spatial Plan.

