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Conservation and sustainable use of marine biodiversity beyond national jurisdiction:

capacity building and technology transfer considerations for the Caribbean

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CARICOM

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Executive Summary

The anticipated adoption of a new United Nations treaty (BBNJ Agreement) for the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (ABNJ) could herald a new chapter in international cooperation for ocean governance. Capacity building and the transfer of marine technology are key elements of the treaty and crucial to enable equitable participation and effective implementation. These elements are especially critical to enable small island developing States, such as the Caribbean Community (CARICOM) countries, to address capacity constraints. The aim of this report is to examine how the needs of CARICOM countries to participate in, and benefit from, the conservation and sustainable use of marine biodiversity of ABNJ might be met through the BBNJ Agreement.

Key messages

1. Marine biodiversity beyond national jurisdiction perform environmental functions that underpin many **ecosystem services** (e.g., climate-change resilience, nutrient cycling, the provision of fisheries, genetic resources and tourism, science, education and outreach, and aesthetic, spiritual, emotional and historical value for Caribbean and planetary health, livelihoods, and well-being.

2. Implementing the BBNJ Agreement will require strengthening capacity at regional, sub-regional, national and in some cases sub-national **scales**. Strengthening capacity for implementation is in the best interest of all countries and is required for the success of the BBNJ Agreement.

3. The interlinkages and dependencies between **types** of capacity (e.g. human, institutional, financial, scientific and technological), require consideration of synergies when designing capacity building approaches under the BBNJ Agreement; for example monitoring, control and surveillance requires a range of human, technological, financial and institutional capacities working in synergy.

4. Synergies and interlinkages between **ABNJ and areas within national jurisdiction**, create opportunities to consider how capacity building and transfer of marine technology under the BBNJ Agreement can support CARICOM in the conservation and sustainable use of marine biodiversity in a holistic manner; for example deep- and open- ocean research capacity could be targeted towards areas both within and beyond national jurisdiction.

5. Lessons learned from capacity building efforts in the region highlight the need to recognise that specific needs will vary and change over time, an **enabling environment** for capacity building is required for self-determined needs to be met, including through: sustained financial resources, strengthening existing organisations, networking, and iterative reviews of progress.

6. More information regarding the **existing status** of capacity at regional, sub-regional, national and in some cases sub-national levels would be useful.

7. Consistent, long-term capacity building approaches are important, including financial resources, as **sporadic capacity building is a problem** for building and sustaining capacity in the region. **Networks and regional coordination mechanisms** are examples of approaches that support sustained knowledge-exchange in the region.

8. **Partnerships, both within the region and outside the region, will be important to overcome capacity constraints.** Partnerships can be used to meet capacity needs and build and maintain connections between different capacity types and levels, including through strengthening existing networks, organisations and institutional arrangements.

9. The BBNJ Agreement could support capacity building and the transfer of marine technology (CBTMT) for CARICOM by:

   (i) **A body for CBTMT** that supports implementation of CBTMT.

   (ii) **Acknowledging the special circumstances** of Small Island Developing States **(SIDS).**

   (iii) **Adequate and reliable financial resources** to meet the self-determined needs and aspirations of the region, including through a funding mechanism.

   (iv) **Cooperation and coordination mechanisms** that facilitate partnerships and network building to meet CBTMT needs; further strengthen regional cooperation mechanisms; and facilitate the development of a common understanding of capacity building.

   (v) Ensuring that all **types of capacity building, marine technology and the transfer of marine technology** needed by CARICOM for the implementation of the BBNJ agreement are encompassed in the scope of the Agreement.

   (vi) **Facilitated access to information and technology:** directing the user towards the required information or technology, such as via the Clearing House Mechanism (CLHM), partnership arrangements, and bodies established by agreement.

   (vii) **Resources to support needs assessments, and mechanisms to meet needs and monitor progress.** Needs assessments are used as an enabling tool to understand capacity requirements and form the basis of capacity building strategies in and for the region.

   (viii) **Strategic environmental assessments** that optimise synergies between meeting the CBTMT needs for area-based management tools (ABMTs) and environmental impact assessments (EIAs), and give special attention to regional vulnerability.

Further work will be required to: (i) consult with stakeholders to understand their needs and aspirations and potential role in the implementation of the BBNJ Agreement; (ii) strengthen regional cooperation and coordination in capacity building and the transfer of marine technology.

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1 Introduction

The critical importance of capacity building and the transfer of marine technology (CBTMT) has been highlighted consistently throughout the two decades of developing the new international legally binding instrument for the conservation and sustainable use of marine biological diversity of marine areas beyond national jurisdiction under the United Nations Convention on the Law of the Sea (BBNJ Agreement)[1,2]. Yet while there has been general consensus on the importance of CBTMT—for, inter alia, enabling the equitable participation of developing countries and the effective implementation of the Agreement—questions remain regarding how the framework for CBTMT under the BBNJ Agreement will be operationalised in practice[3].

Continuing capacity constraints worldwide highlight problems stemming from unequal power structures between states but also within organisations, underlying the need for capacity-building mechanisms and measurements[4]. These constraints could hinder developing States from fully implementing, participating in, and benefitting from, the conservation and sustainable use of biodiversity beyond national jurisdiction[5,6]. The challenge of creating effective and lasting capacity building outcomes in the Caribbean for the conservation and sustainable use of marine ecosystems has been highlighted in the CLME+ and Caribbean Natural Resources Institute (CANARI) reports[7,8]. In the BBNJ negotiations, the Caribbean Community (CARICOM) has presented the view that it is essential for CBTMT to be reliable, appropriate and needs-driven. Furthermore, the special circumstances of small island developing states (SIDS) and the challenges faced by SIDS have been emphasised in the context of the BBNJ Agreement[9].

Learning from prior experiences in building capacity for the conservation and sustainable use of biodiversity is critical for the effective development and implementation of the BBNJ Agreement[10]. Identifying synergies whereby CBTMT under the BBNJ Agreement interacts with and supports efforts in areas within national jurisdiction, and vice versa is also critical[5].

This report aims to explore such lessons for and from CARICOM. It draws on a review of the literature, a CARICOM Conversation Series (October - December 2021) which brought together 41 regional experts in four discussions (area based management tools, environmental impact assessments, scientific research and international cooperation), and a Regional CARICOM workshop (April 2022) to address how capacity building and technology transfer can be delivered to enable participation of the region in the BBNJ agreement.

This section introduces the BBNJ Agreement, contextualised in the Caribbean region. Section 2 explores capacity-building considerations for CARICOM. Section 3 discusses the potential role of the BBNJ Agreement in meeting capacity needs.

1.1 The importance of marine biodiversity beyond national jurisdiction to CARICOM

Marine areas beyond national jurisdiction (ABNJ) represent 64% of the global ocean and 46% of the Earth's surface. Caribbean national jurisdictions are directly connected to ABNJ in three main areas: 1) along the entire eastern boundary of the Caribbean island chain from Trinidad and Tobago northwards to The Bahamas, 2) in the center of the Caribbean Sea between Jamaica, Colombia and Nicaragua, 3) between Cuba, Mexico and the United States of America.

Although the majority of ABNJ remains to be explored and understood, the marine ecosystems and species inhabiting these areas are known to be connected to national waters, including coasts, ecologically, economically, and culturally. Marine biodiversity beyond national jurisdiction underpins many ecosystem services (e.g., climate-change resilience, nutrient cycling, the provision of fisheries, genetic resources, tourism, science, education and outreach, and aesthetic, spiritual, emotional and historical value) for Caribbean and planetary health, livelihoods, and well-being [8,11,12,13] (Figure 1.1).

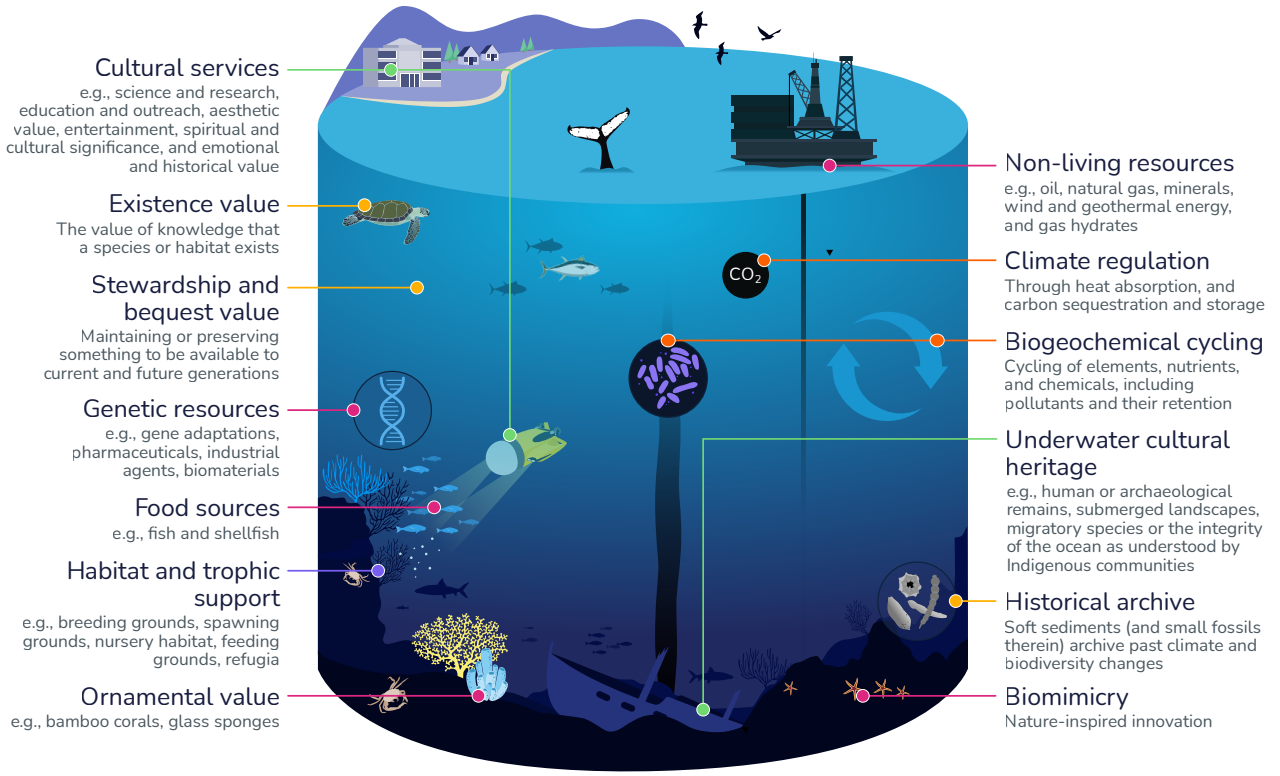

Figure 1.1 Example of ecosystem services for BBNJ.

It is already known that a number of species move between the waters of Caribbean national jurisdictions and ABNJ, and/or are ecologically connected. For example, there are a large number of species that are important to the Caribbean that migrate between the coastal areas and Exclusive Economic Zones (EEZs) of Caribbean countries and ABNJ, including at important reproductive stages. These include five of the seven species of sea turtles globally that nest on the beaches of the Caribbean, with hatchlings swimming hundreds of miles from the Caribbean to the Sargasso Sea and beyond[14,15,16,17] (Figures 1.2A and 1.2F). Similar to turtles, which are ecologically, economically, and culturally important, whales and other cetaceans migrate between jurisdictions[18,19] (Figure 1.2D). Many species of regional and global commercial importance (e.g., European and American eels, sharks and rays, most species of tuna and billfishes, swordfish) are also transboundary[18,20,21,22,23] (Figures 1.2B, 1.2C and 1.2E).

Beyond these iconic species, there are many less well known, or entirely unknown, species and habitats, particularly in the deep ocean, that have ecological and cultural importance, and could be of commercial importance in the future[13]. Some key areas have already been designated as Ecologically or Biologically Significant Areas (EBSA) under the Convention on Biological Diversity (CBD), including the Sargasso Sea, the Atlantic Equatorial Fracture Zone and high productivity System; and the Marine Mammal Sanctuary Banco de la Plata y Banco de la Navidad[24].

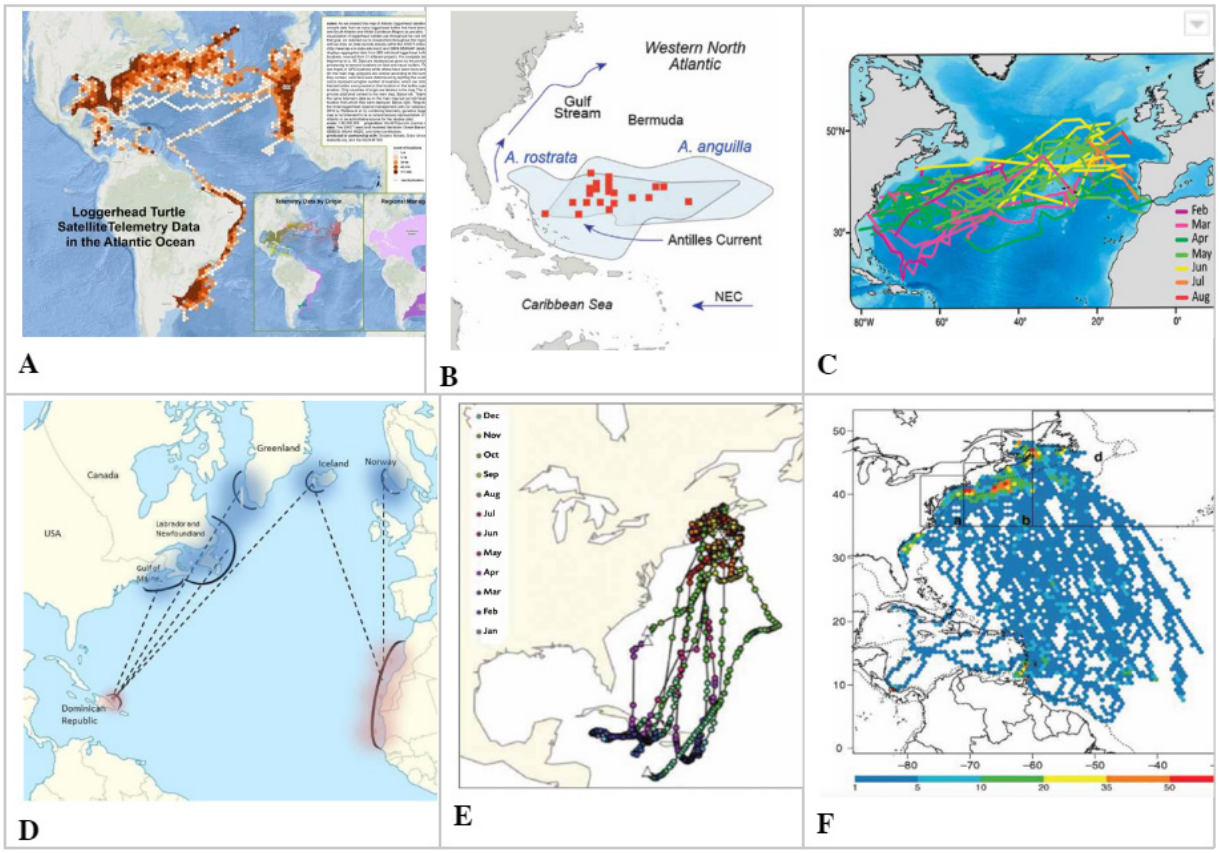

Figure 1.2 Transboundary species that move between Caribbean jurisdictions and areas beyond national jurisdictions in the Atlantic Ocean. A Loggerhead turtle satellite telemetry data demonstrating Atlantic-wide migrations[25]. **B** The life cycles of two Atlantic eel species take place across jurisdictions in the Atlantic. The blue areas are the overlapping spawning grounds in the Southern Sargasso Sea and the red squares indicate where recently hatched larvae of both species were collected together[18]. **C** Cross-Atlantic migration routes of tagged bluefin tuna, colour-coded by month[26]. **D** Migration patterns of humpback whales[19]. **E** Migration routes of tagged swordfish in 2005 and 2006, colour-coded by month[20]. **F** Migration routes of 38 tagged leatherback turtles. Colours represent the number of days turtles were within each hexagon[27].

1.2 The BBNJ Agreement

Negotiations for the BBNJ Agreement are expected to conclude in 2022,[3] after almost two decades of development. The Agreement comprises four elements:

- Area-based management tools (ABMTs), including marine protected areas (MPAs);
- Environmental impact assessments (EIAs);
- Marine genetic resources (MGRs) including the sharing of benefits; and
- Capacity building and the transfer of marine technology (CBTMT).

For the implementation of the BBNJ Agreement to be successful, it will be critical that States have the required capacity, including technology, to participate in and benefit from activities related to the conservation and sustainable use of biodiversity in ABNJ. The objectives of CBTMT provisions of the draft text of the BBNJ Agreement are provided in Article 42, and broadly include[28]:

- Assist Parties in implementing the BBNJ Agreement;
- Enable inclusive, equitable and effective participation in the activities under the BBNJ Agreement;
- Develop the marine scientific and technological capacity of Parties to implement the BBNJ Agreement;
- Increase, disseminate, and share knowledge relevant to the BBNJ Agreement;

- Support developing States Parties through capacity building and the transfer of marine technology in:
  - participating in activities under the BBNJ Agreement such as marine genetic resources, including relating to the sharing of benefits;
  - developing, implementing, monitoring, managing and enforcing area based management tools, including marine protected areas;
  - conducting and evaluating environmental impact assessments and strategic environmental assessments.

There are various types of CBTMT envisaged in the BBNJ Agreement (Box 1.1), and the draft Agreement also includes provisions relating to the attainment of the objectives in Articles 43, 44, 45, 46, and 47, including: cooperation in CBTMT; modalities for CBTMT, including guiding principles; monitoring and review; and institutional arrangements. However, the question remains of how operationalisation should occur. In particular, there have been differing views concerning the level of obligation for CBTMT (i.e., whether voluntary and/or mandatory); funding for CBTMT; the role of existing and potential institutional arrangements; and the role of a Clearinghouse Mechanism (Section 3).

Box 1.1

Types of Capacity Building and Technology Transfer envisaged in the BBNJ Agreement*

a) Sharing relevant **data, information, knowledge, and research**;

b) **Information dissemination**, including with respect to traditional knowledge;

c) Development and strengthening of relevant **infrastructure, including equipment and capacity for maintenance;**

d) Development and strengthening of **institutional capacity and national regulatory frameworks or mechanisms;**

e) Development and strengthening of **human resources and technical expertise;**

f) Development and sharing of **manuals, guidelines, and standards;**

g) Development of **technical, scientific, research, and development programmes.**

h) Development and strengthening of capacities and technological tools for effective **monitoring, control and surveillance of activities within the scope of the Agreement.**

* Summarised from Article 46 of the President's Draft Text (May, 2022)[28]

Box 1.2

Terminology and definitions

Capacity building is not defined in the BBNJ caveat (current text), nor in UNCLOS, and the meaning of the term is subject to a range of interpretations, conceptualisations, and uses[3,4]. Capacity building and capacity development are sometimes used interchangeably, and usually refer to a process or activity. For example, capacity development is defined by UNESCO-IOC as "the process by which individuals and organisations obtain, strengthen, and maintain the capabilities to set and achieve their own development objectives over time"[29]. Related terms refer to a particular outcome, for example, 'adaptive capacity' refers to the ability to adjust to a challenge such as climate change, and may include, inter alia, assets, flexibility, social organisation, learning, and agency[30]. Capacity can be considered at different levels, including but not limited to individual, organisational, or societal[31].

The **transfer of marine technology** is defined in the draft text of the BBNJ caveat (current text) (Article 1(18) May 2022) as "the transfer of the instruments, equipment, expertise, vessels, processes and methodologies required to produce and use knowledge to improve the study and understanding of the nature and resources of the ocean"[28].

While recognising that Capacity Building and Transfer of Marine Technology are in some instances distinct, this report considers **CBTMT** together, noting the interlinkages between the two terms as reflected in the BBNJ Agreement and the importance of a holistic approach. We consider CBTMT to include a range of types of capacities (including human, institutional, technological and financial) at several scales (individual, organisational, subnational, national, sub-regional, regional and global).

1.3 Relevance of the BBNJ Agreement to CARICOM

The ocean is paramount to livelihoods, social wellbeing, environmental sustainability, and economic security in the region[8]. With climate change and other pressures affecting the ocean, securingthe conservation and sustainable use of marine biodiversity is identified as a priority for the Caribbean[7,32]. There exists a complex of ocean governance arrangements in the region connecting a diverse range of institutional frameworks, stakeholders and relationships[33]. Challenges stemming from capacity constraints are well documented in the region, including in relation to ocean governance generally[33,34,35], BBNJ in particular[8], and specific issues such as the blue economy[32], deep- and open- ocean science[36] (Box 2.2), and transboundary ecosystem-based approaches[7].

Since capacity constraints are a key factor in the effectiveness of biodiversity conservation and sustainable use, it is imperative that the CARICOM acquires the capacity needed to participate fully in the Agreement. Capacity building and the transfer of marine technology under the BBNJ Agreement could have synergistic effects in the region considering the range of human, financial, institutional, scientific and technological needs that have already been identified in the region[37,38,39,40,41,42]. According to the CARICOM, EIAs and ABMTs could be linked together via Strategic Environmental Assessments (SEA), which takes specific geographical and ecosystem features into account when assessing human activities[43].

2 Capacity-building considerations

The critical importance of CBTMT for CARICOM to participate in, and benefit from, the implementation of the BBNJ Agreement has been emphasised in regional stakeholder consultations[8]. This need is illustrated, for example, by the existing capacity constraints in managing human activities in Exclusive Economic Zones such as monitoring, control and surveillance (MCS) in coastal areas (Box 2.1), marine scientific research (Box 2.2), marine protected area management (Box 2.3) and transboundary ocean governance (Box 2.4.). This section illustrates the range of different capacity needs that may be required to implement the BBNJ Agreement, with particular reference to ABMTs and EIAs and presents lessons learned from CARICOM relating to CBTMT by outlining the importance of an enabling environment for CBTMT under the BBNJ Agreement.

2.1 Lessons learned for building capacity in CARICOM

Important lessons can be learned from experiences in the Caribbean to identify effective approaches for CBTMT under the BBNJ Agreement and contribute to sustaining a healthy ocean future for the region. Specific needs will vary between countries, initiatives, stakeholder groups and sectors[8,37,39,44,45]. For example, the capacity building needs and approaches of an organisation will be influenced by factors such as: worldview, culture, structure, adaptive strategies, skills, material resources, and linkages[46,47]. Where capacity building involves international partnerships, it is critical that such approaches are co-designed, co-developed and equitable. This section discusses lessons in five general categories (resources for needs assessments and cooperation, financial, human, institutional, and scientific and technological) to illustrate the breadth of capacity needs consistent with the framework for CBTMT in the BBNJ Agreement, noting that the categories are not mutually exclusive, exist on all levels, and there are different ways of conceptualising capacity building (Figure 2.1).

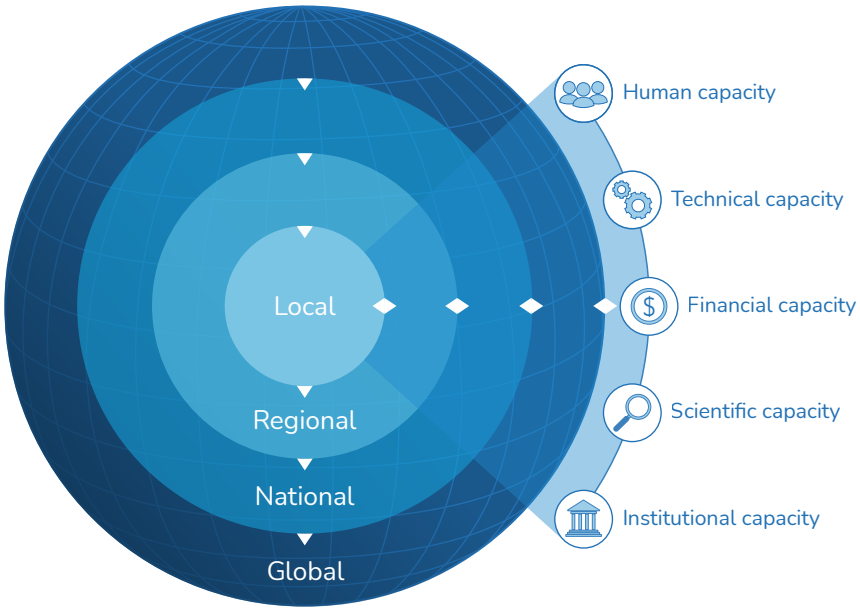

Figure 2.1. Need for an enabling environment for capacity building on all levels across all different types of capacity.

2.1.1 Resources for needs assessments and cooperative capacity-building strategy development

For capacity-building programs to be designed and delivered to meet country-specific needs, an important first step is understanding what capacity exists, is needed and by whom[39,46]. However, a lack of information regarding the initial status of capacity, and the national and regional needs for capacity building, is a common problem hindering the conception, delivery, continuity and evaluation of capacity-building programs such as in ocean science[3,48]. Coordination of capacity-building projects is important to avoid projects acting in isolation and support sustaining, not duplicating, efforts[49]. Such coordination requires financial, human, technical, and knowledge capacity[50] - such capacity is also required for undertaking needs assessments. In the region, guided self-assessment processes have been undertaken already; e.g., a management capacity assessment for MPAs, see Box 2.1, and an investment needs feasibility study and Strategic Action Plan for ecosystem-based management, see Box 2.4.

2.1.2 Financial capacity

Sustainable and reliable financial resources, as well as the ability to manage them, are crucial to meet capacity needs for the implementation of the BBNJ Agreement. Financial capacity is a critical enabler of all types of capacity, including to hire and retain staff, conduct science, undertake stakeholder consultations, ensure continuous access to knowledge and data, equipment and resources, monitoring, control and surveillance, and removing dependencies on foreign aid. Financial tools need to build up mechanisms for independent financing schemes (e.g. blended finance approach, impact investment, and sustainable granting) to avoid total dependency on grants and concessional aid. Some of these financial tools are already deployed in the region. International partnerships also have a role in funding, e.g., for science and enforcement. However, there have been mixed experiences (see Section 3)[37,40,45,49,51,52,53,54].

2.1.3 Human capacity

Human capacity (i.e. the availability of trained, retained, sustained, connected, and supported workforce) spanning public and private sectors in local, national, regional and global organisations, is imperative to implement the BBNJ Agreement. The region already faces a number of challenges in this regard, including (i) numerous existing roles and requirements on individuals; (ii) persisting problems of 'brain drain', confounded by resource constraints to hire and retain talented people and short-term approaches (such as a training course) rather than long-term support (such as for employment)[38,55]; and (iii) requirements for furthering technical expertise to implement the BBNJ Agreement, such as evaluating proposals for EIA or the use of technology for managing ABMTs.

Lessons learned from existing approaches to training and sustaining skills highlight the role of 'training trainers' programs (e.g. CAMPAM), networking initiatives that enable peer-to-peer knowledge exchange (e.g. for joint law enforcement training involving fisheries officers, government agencies, and rangers in monitoring control and surveillance, Box 2.1; and MPA management capacity, Box 2.3) and facilitated mentoring relationships in sustaining capacity and learning opportunities. Raising awareness and education of the public[45,56,57] and a range of stakeholders[47] will be a further important aspect of capacity building. In addition to training, certification programs, and university degrees[41,56], there is a need to support long-term capacity through research or postgraduate studies[56,58] and networking initiatives that add value to short-term approaches.

2.1.4 Institutional capacity and regional cooperation

Institutional capacity is critical to successfully acquire and apply financial, scientific and technical, and human capacity. Institutional capacity needs may include:

- comprehensive legal, policy and regulatory frameworks and bodies suited to integrated ocean management and adaptation to climate change[41], including the availability to participate and cooperate;
- resources and expertise to adapt to changing governance arrangements for implementing ecosystem based-management including with respect to transboundary issues (Box 2.4);

- common principles, standards and methodologies including for EIA[43]; mechanisms for information sharing, data access and knowledge exchange including at regional levels (Box 2.3);
- organisations and resources for stakeholder engagement and platforms to give voice to local community needs; collective capacity for scientific research and education (Box 2.3); and
- resources for coordination, for example in addressing opportunities and challenges associated with the blue economy[32].

Given the small land sizes, large ocean areas, close proximity and stage of development of most CARICOM countries, a joined-up multilevel (local, national, subregional, regional, global) perspective is needed. Several stakeholder groups could play a role in the implementation of the BBNJ Agreement in CARICOM, including government, private sector, civil society and regional organisations[8] at multiple levels, noting there is a diverse range of organisations and governance frameworks that already exist[33]. Further strengthening of existing organisations and increasing their capacity for collaboration and cooperation is an important consideration for institutional capacity building[41,48,56,57]. For example, partnerships and communication between policymakers and science can support implementation of MPA management plans and incorporation of scientific knowledge[37]; stakeholder engagement can increase the effectiveness of new regulations, including for MPAs and EIAs[59]; and improvements in capacity have also been reported from improved transfer of information through increased education and collaboration among different stakeholders such as representatives from NGOs and government agencies[60]. Considering the full range of stakeholders and enabling the strengthening of mechanisms for cooperation and coordination between the national, sub-national, regional, sub-regional, and global level will be important for the BBNJ Agreement (examples of networks, Caribbean Network of Fisherfolk Organisations (CNFO), Caribbean Marine Protected Area Management Network and Forum (CAMPAM), University of the West Indies, MPAConnect). Further strengthening the role of universities and other organisations in the region to contribute to capacity building[50] is another area for consideration.

Regional organisations have an important role to play in capacity building; however, a mechanism for the coordination and collaboration among these organisations is needed. For example the CLME+ action plan identified "strengthening the capacity of the regional and sub-regional arrangements to support countries in becoming parties to relevant international and regional agreements and complying with their global and regional commitments towards the conservation of the marine environment (including the support to update and harmonise national legislation and regulations)" as one of the important capacity-building needs[7] (Box 2.4). Additional needs may include, for example, further communication of scientific results for regional, sub-regional and national decision-making; strengthening of capacity needed to undertake assessments of ecosystem services to better inform regional, subregional and national decision-making and policy development[7]. The establishment and operationalisation of regional cooperation mechanisms has been identified as key to improving ocean governance in the region, as demonstrated by the finalisation of a memorandum of understanding for the establishment of an "Ocean Coordination Mechanism" for the wider Caribbean, that had been finalised at the UNDP/GEF CLME+ Project Steering Committee Meeting held on 11-12 October 2021 following five year regional negotiations on the matter (Box 2.4)[61].

2.1.5 Scientific and technological capacity

The ability to have the equipment, infrastructure and expertise to undertake and utilise scientific research and technology is important for the implementation of the BBNJ Agreement. This includes MCS, managing and implementing MPAs and EIAs, and benefitting from a sustainable Blue Economy including for conservation applications[62]. Capacity is needed to develop regional science programs to collect, assess and use information and data of the region[41], to increase the prevalence of equitable science collaboration and capacity building partnerships[4,36,63], and to share relevant data, information, and knowledge. For example, capacity-building areas identified for the Wider Caribbean Region are data and knowledge creation, management and sharing, as well as the use of findings from science in practical decision-making and resource management[7,64].

Context-appropriate capacity building is needed to address capacity constraints of Caribbean stakeholders. For example, relevant research cruises should be co-designed with CARICOM countries from the start to ensure that there is meaningful, safe and equitable participation[36,65]; and furthermore financial, human and institutional capacity requirements for use and maintenance of equipment should be considered to ensure that technology transfer provides genuine benefits rather than burdens[36].

2.2 Key considerations for creating an enabling environment

Implementing the BBNJ Agreement will require building capacity in a suite of categories including human, financial, scientific and technological, and institutional[8]. In considering capacity needs and capacity-building approaches, it is important that these capacity areas are addressed together and not in isolation. For example, many countries have reported serious barriers regarding EIAs, including staffing and technical expertise to undertake, review, and assess EIAs to meet international standards, as well as the required resources for effective stakeholder engagements and outreach[66,67,68]. Capacity is needed at all levels (local, national, regional, and global) and there is also a need for tools to facilitate cooperation and coordination (Box 2.3). For example, different types of capacity are required to work together for monitoring, control and surveillance; and partnerships at subnational, national and regional levels can help with meeting capacity needs (Box 2.1). Thus, an enabling environment for capacity building is needed (Figure 2.1).

i) **Acknowledge and cultivate synergies**: It is crucial to recognise the interlinkages and synergies between capacity types[8]. Capacity building can also be applied in ways that address national and regional priorities[5] highlighting the need to ensure synergies between new and existing initiatives[69]. For example, efforts to strengthen science capacity for the implementation of the BBNJ Agreement could include strengthening science capacity nearer to shore. This could address and track pressing regional ecological issues that are transboundary in nature such as the sargassum influx and coral disease. Building long-lasting capacity for implementation of the BBNJ Agreement will require further understanding of the connections and capacity building needs of the Caribbean in relation to the conservation and sustainable use of biodiversity beyond national jurisdiction.

ii) **Consistency is crucial**: sporadic CBTMT is a problem for building and sustaining capacity in the region. Long-term approaches are needed, rather than ad hoc approaches, including for financial resources. Networks and regional coordination mechanisms are examples of mechanisms that support sustained knowledge-exchange in the region.

iii) **Partnerships, within, outside and between regions, will be important to overcome capacity constraints**. Partnerships can be used to meet capacity needs, build and maintain connections between different capacity types and levels, including through strengthening existing networks, organisations and institutional arrangements, and to facilitate sharing of information and exchange of lessons learned (see Boxes 2.1 - 2.4).

Box 2.1
Monitoring, control and surveillance (MCS) and enforcement

Capacity for MCS and enforcement is critical for management of MPAs, whether near shore or in ABNJ. This may include for example MCS technology, financial and human resources for implementation, and the development and implementation of laws. Yet constraints in capacity pose a hurdle to effective MCS in ABNJ, including: skills, human resources and technology for data interpretation and storage; financial resources; infrastructure and equipment[51]. In the Caribbean, enhancing compliance and enforcement capacity at regional, sub-regional, national levels has been identified as a need for the region[7]. Examples of initiatives to build capacity for MCS in the region include partnerships for joint enforcement (e.g. coastguard, sufficient vessels, radar); and the use of a Spatial Monitoring And Reporting Tool (SMART), a software platform that enhances data collection for patrols and also identifies ways to best use existing resources, and supports the writing of reports, allowing greater transparency[70]. Recognising that there are already capacity constraints in the region for MCS in near-shore MPAs, there is a need to understand and consider options and needs for ABNJ as well as synergies with coastal areas in looking ahead to the implementation of the BBNJ Agreement.

Box 2.2

The BBNJ Agreement and deep-sea exploration and research

The deep sea (>200m) is not only the largest ecosystem in ABNJ, but also present in the national waters of the Caribbean and SIDS. The ability to explore, study and potentially utilise the deep sea in ABNJ could lead to significant opportunities and benefits within Caribbean State waters. These include sustainable exploitation and more effective stewardship of this vast realm as well as the varied and important ecosystem services derived from it.

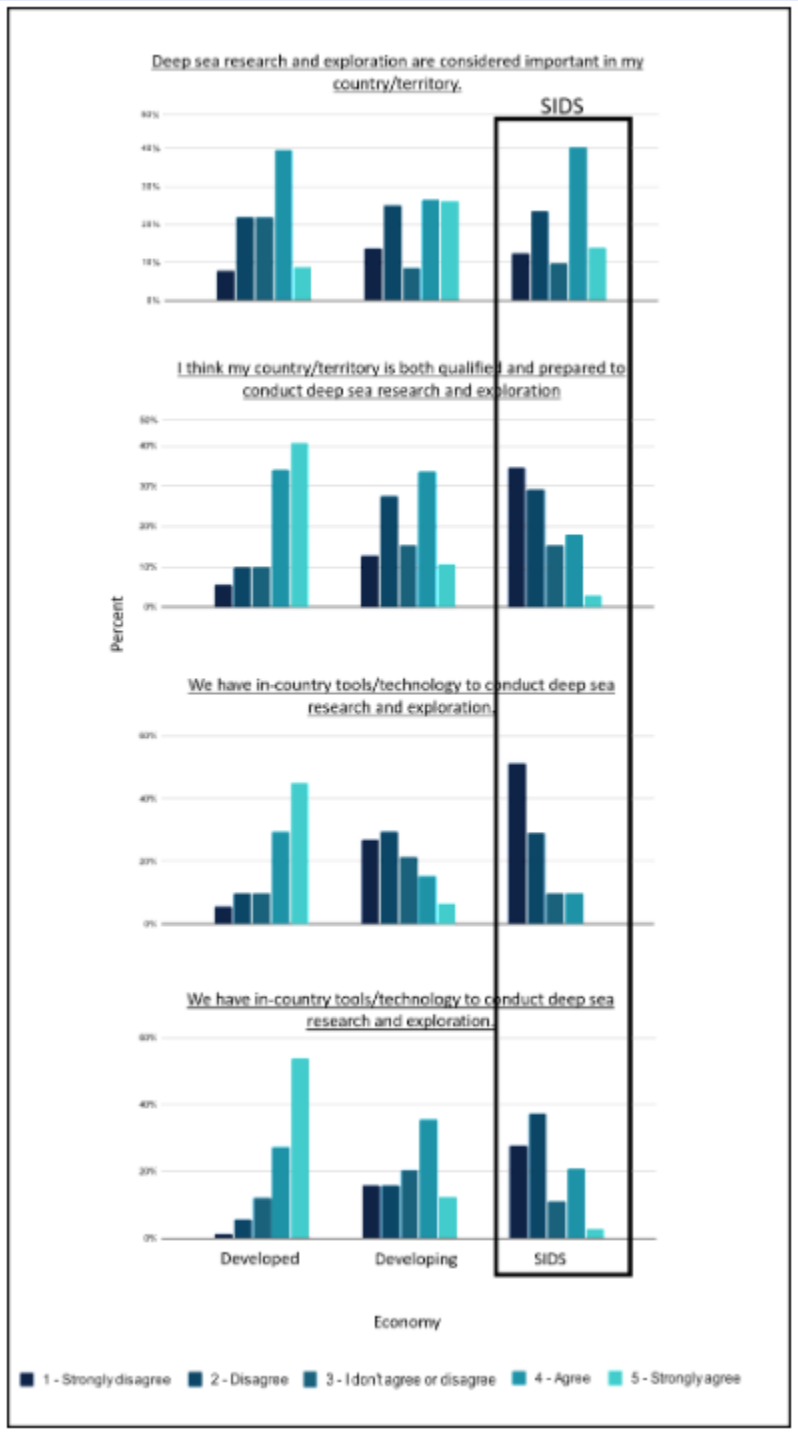

Figure 2.2. As part of the Global Deep-Sea Capacity Assessment, survey respondents were asked how strongly they agreed or disagreed with the statements related to the question "How would you assess the status of deep sea research and exploration in the country you responded for?". The full report will be released in mid 2022.

However, given that deep-sea research has been historically very costly and not a priority, deep-sea expertise and equipment, as well as the financial resources to support these, have remained largely inaccessible and limited in the Caribbean region and most SIDS. The barriers and glaring inequities for SIDS in participating in deep-sea research have recently been illustrated by "The Global Deep Sea Capacity Assessment", which undertook a baseline survey of the technical and human capacity for deep-sea science and exploration in every coastal nation with deep sea around the world[71] and Figure 2.2.). The surveys undertaken found that even though deep-sea research and exploration is important for SIDS, many do not, as of yet, have the in-country capacity, including tools and technologies, to undertake such research. Furthermore, when compared to responses from developed countries, very few SIDS respondents indicated that their country had sufficient capacity to conduct deep-sea research and exploration, raising questions about the adequacy of existing and past CBTMT efforts targeting SIDS.

There is a need to understand and consider options and needs for deep-sea exploration and research in ABNJ as well as synergies with State waters in looking ahead to the implementation of the BBNJ Agreement. Initiatives to build deep-sea capacity within the Caribbean could rest on the shoulders of regional organisations such as the University of the West Indies, which already participates in creative collective approaches to building and sustaining capacity, as well as international equitable partnerships i.e. active approaches to prevent tokenism and technology 'dumping' but rather meaningful transfer.

Box 2.3

An example of the importance of networking to build and sustain capacity for MPAs/ABMTs

One approach that has been implemented in the region to address the specific capacity needs of individual MPAs is the establishment of "a learning network of MPA managers and professionals in the Caribbean - MPAConnect"[72]. The network "works to increase the effectiveness of MPA management through a variety of means, including regional peer to peer workshops, site-specific technical support, learning exchanges and direct grant funding"[72]. MPAConnect is a partnership that includes institutions and governments such as the Gulf and Caribbean Fisheries Institute, NOAA's Coral Reef Conservation Program, and 11 Caribbean countries/territories. Thirty-two coral reef MPAs are included in the partnership. The approach used by MPAConnect is described as "ground-up, practical, locally relevant and needs-driven capacity building to support effective MPA management". Since 2011, MPA managers have engaged in eight knowledge sharing and regional peer-to-peer learning exchanges. These efforts have addressed urgent capacity-building needs, which include "financing, enforcement, monitoring, fisheries management, and emerging threats such as stony coral tissue loss disease"[72].

Lessons learned from the MPAConnect capacity building approach include:

i) **A sustained flow of activities, impacts and support**, over the long term - this is necessary to establish a meaningful network with extensive connectivity and depth of interactions;

ii) A cadre of **specialist MPA peer-mentors** - this plays an important role within the network to share experience, advise and build capacity among peers within the network;

iii) The **MPA management capacity assessment tool** - this is fundamental in translating day-to-day management challenges into targeted capacity building activities and support.

The network also provides for the identification of key capacity challenges, for example: (i) despite various regional initiatives to address sustainable financing, the financing issue is still far from resolved for Caribbean MPAs and **financing requires creative solutions** tailored to individual sites;

(ii) while Caribbean MPAs are making progress in building their capacity for law enforcement and establishing crucial links with local enforcement partners, the reality of limited resources limits the application of enhanced **enforcement capacity**; (iii) effective communication is central to all aspects of MPA management and increasing **demands of communications** are weighing more heavily on Caribbean MPA managers.

Box 2.4

An example of strengthening transboundary and cross-sectoral governance arrangements for implementing ecosystem based management in the Caribbean

The UNDP/GEF CLME+ Project aims to enhance governance arrangements and capacity building in the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+ region). The CLME+ region includes globally significant levels of biodiversity, including reef continental shelf and pelagic ecosystems that provide important socio-economic benefits and ecosystem services. This region is geopolitically and culturally diverse spanning 44 States and territories. According to an analysis by the CLME+ project, limited human and financial capacity and inadequate knowledge are among the root causes of problems facing the region (overfishing, pollution, habitat degradation)[7]. Capacity building at all levels is paramount in the CLME+ Strategic Action Plan, alongside actions for structural change, and management interventions and investments[7].

Identified key needs for capacity building in the CLME+ region included, for example[7]:

i) mainstreaming scientific findings in decision-making;

ii) effective implementation of ecosystem-based management;

iii) compliance and enforcement;

iv) effective and coordinated implementation of capacity building in the region;

v) community resilience;

vi) valuation of ecosystem services.

To address these identified needs, a memorandum of understanding for the establishment of an "**Ocean Coordination Mechanism**" was finalised in 2021 to create a multi-stakeholder platform to: support regional collaboration; strengthen coordination and interactive ocean governance; mobilise actions to achieve long-term vision for CLME+ and other international goals; promote partnerships[7]. Reducing regional disparities in capacities for the sustainable ocean governance and resource management is one of the core objectives of the proposed "**Global Partnership for the Sustainable Management, Use and Protection of the living marine resources of the CLME+/wider Caribbean region**", in addition to strengthening consensus on approaches and strategies, building confidence through collaborative initiatives, and supporting intergovernmental organisations in implementation of mandates for the protection and sustainable use of marine environment in the region[7].

Noting that the CLME+ region is transboundary in nature and adjacent to marine ABNJ, it is useful to consider synergies and how the CBTMT under the BBNJ Agreement might interface with and strengthen such regional initiatives and vice versa.

3 The BBNJ Agreement: options for meeting capacity needs

CARICOM have highlighted the need for CBTMT to (i) be included across all aspects of the BBNJ Agreement,(ii) take into account evolving needs and developments in scientific knowledge and new impacts, and (iii) to be implementable, needs-driven, and immediately operationalised, with periodic monitoring and review to assess needs and progress towards meeting those needs. This section briefly reviews lessons learned from existing international agreements and discusses options for meeting capacity needs under the BBNJ Agreement with a focus on the special circumstances of SIDS and CARICOM in particular.

3.1 Lessons learned

The way in which CBTMT has been incorporated into the text of international environmental treaties has evolved over time. For example, UNCLOS does not include a specific article on capacity building, although many aspects of CBTMT are provided for in Part XIV[73] on the Development and Transfer of Marine Technology, including Articles 266 (Promotion of development, transfer of marine technology) and 202 (scientific and technical assistance to developing States). Since then, some treaties, such as the Nagoya Protocol, have included measures for providing early assistance to Parties in regard to CBTMT. The Nagoya Protocol Implementation Fund which started providing early enabling and implementation support soon after the protocol opened for signature. There are several ways the implementation of capacity building have been facilitated by different agreements at the global level, including via the establishment of specific committees, action plans, clearing-house mechanisms, E-learning platforms, specific web platforms, or specific annual events to discuss capacity building. The financing available for CBTMT, as well as the strategies, processes and tools put in place to facilitate it, is a critically important aspect of implementation.

Several environment conventions have special funds for CBTMT. Examples include UNFCCC, CBD, CITES, Ramsar Convention, the UN Fish Stocks Agreement, the World Heritage Convention, and others. While a majority of the existing CBTMT-oriented funds rely on voluntary contributions, there are some examples where the funds are replenished either from assessed contributions of States Parties or some other form of mandatory contributions. For example, the Montreal Protocol's Multilateral Fund relies on mandatory fundings from member parties "based on the United Nations scale of assessment" and also on voluntary contributions[49]. Another example of combined mandatory and voluntary funding is the World Heritage Fund, which is replenished from a combination of assessed contributions, voluntary contributions and the sale of publications. The Fund supports activities by Parties in need of international assistance[49]. The compulsory or assessed contributions give these funds a stable and predictable operating budget.

The four UNFCCC funds managed by the GEF (Special Climate Change Fund, Least Developed Countries Fund, Adaptation Fund, and Capacity-building Initiative for Transparency), have maintained relatively high levels of funding, which are replenished as part of the GEF cycle. Out of the four funds, the Capacity-building Initiative for Transparency (CBIT) is the newest and was established under the Paris Agreement. It relies on voluntary contributions during the replenishment cycle, but has seen high levels of donor support. According to the GEF, as of September 2021, the CBIT project portfolio consisted of 81 projects amounting to a total of $130.8 million[74]. This relatively high level of funding indicates a degree of priority afforded by donors to climate change-related activities. However, even with the relative success of some voluntary funds, their predictability is not as good as that of funds replenished from assessed contributions. For example, the GEF Independent Evaluation Office Report of the Least Developed Country Fund (LDCF) - a voluntary trust fund which has provided US$1.4 billion in grants between 2001 and 2020- states that the LDCF is suffering from unpredictable funding which creates uncertainty to implementing agencies and recipient countries alike[75]. It seems evident, then, that voluntary funds alone cannot guarantee a stable level of funding, and in the case of most conventions, the voluntary trust funds are relatively small and the success of voluntary funds varies greatly (for example, the UNCLOS voluntary trust funds have often been very low or depleted).

The Montreal Protocol and its Multilateral Fund have often been hailed as success stories in addressing ozone depletion[76]. The Fund's purpose was to provide financial and technical assistance to developing country parties to transition away from ozone-depleting chemicals. The Multilateral Fund uses a country-driven approach to budget allocations and intervention planning. It is based on partnerships, allowing for adjustments as conditions change. The operations have been cost-conscious, and there are compliance obligations for countries receiving funding[77]. The Fund was established in 1991, pioneering new approaches,

and has moved away from project-based approaches towards long-term funding approaches that are tied to performance monitoring. The Multilateral Fund has also allowed finance for institutional strengthening via finance for National Ozone Units and regional networks, and demonstrated that adequate financing to meet developing countries' national needs for implementation is an important prerequisite for protecting a global commons. In fact, the establishment of the Multilateral Fund was a strong incentive for some countries to join the Montreal Protocol[78].

UNCLOS, which was adopted in 1982, does not, however, have a standing financial mechanism, but has several voluntary funds that aim to provide assistance to countries, including travel to meetings. Each of the Rio conventions that were adopted in 1992 or later (UNFCCC, CBD, and UNCCD) has a standing financing mechanism, which includes the GEF, and in the case of UNFCCC, also the Green Climate Fund. While funding from philanthropic sources has supported specific CBTMT activities under UNCLOS, particularly training and fellowships, the scope of philanthropic funds has been generally limited.[49] It is clear that the BBNJ Agreement will require sufficient, reliable and long-term financing for its CBTMT programs, and it is very unlikely that voluntary funding alone will be sufficient.

In summary, some of the lessons learned in financing other environmental agreements that could benefit the BBNJ Agreement include the following: 1. Funds replenished from assessed contributions have been more predictable in their support to countries than those relying on voluntary contributions; 2. Long-term funding approaches, such as undertaken by the Montreal Protocol have been more efficient and less resource intensive than project-based approaches; and 3. Providing funding for institutional strengthening is important for leaving a lasting legacy.

3.2 The BBNJ Agreement: Considerations for negotiation and implementation

3.2.1 Establish mechanisms for implementation

For the BBNJ Agreement, existing environmental treaties provide a variety of different models for CBTMT implementation, and these could be further studied and incorporated if deemed appropriate. It is important that CBTMT activities under the BBNJ Agreement start as early as possible to avoid delays and support meaningful participation and effective implementation.

Some lessons from other environmental treaties include the following:

- **Mechanisms**: The establishment of committees or specific mechanisms for stakeholder involvement, the development of strategic actions and/or frameworks, as well as review processes should also be considered as early as possible.
- **Tools**: Tools to facilitate CBTMT, including a clearinghouse mechanism, should also be initiated early.
- **Needs assessments**: It is likely that the first substantive task to be undertaken is that of national needs assessments, but this should not delay the other tasks described above. In fact, concurrent activities at the global level, such as a gap analysis of existing global CBTMT initiatives that could be further built upon, and the development of appropriate global strategies and tools could commence through a CBTMT body, if established (see 3.2.2.).
- **CBTMT Body**: A CBTMT body would give a dedicated workspace for CBTMT issues, and could be established by the COP, as a committee or working group[28]. Alternatively, it could also be established under the Implementation and Compliance Committee. However, if a CBTMT body is not established, related activities would need to be undertaken through other means (e.g. potentially with the help of advisory committees or other bodies - although these may not be mutually exclusive from a CBTMT body).

3.2.2 Resources to support needs assessments, and mechanisms to meet needs and monitor progress

SIDS, as custodians of large ocean areas that connect ecologically with adjacent ABNJ, urgently require the capacity and technology for the joint management of their EEZs and the ABNJ beyond. This capacity and technology is still lacking in the majority of SIDS, and is a pre-requisite for the successful implementation of the BBNJ Agreement.

Needs assessments are used as an enabling tool to understand capacity requirements and form the basis of capacity building strategies in the region (Section 2.2.1). Similarly, needs assessments under the BBNJ Agreement could be a useful enabling measure for CBTMT (rather than a prerequisite for accessing CBTMT).

The BBNJ Agreement can recognise and help to address the special circumstances of SIDS through support for needs assessments by:

i) providing for **resources** to support the conduct of needs assessments and related gap analyses (such as financial, informational and human resources where required) at national, regional and where applicable sub-regional scales, to be deployed in context-appropriate, noting the important role of locally based experts[79]

ii) allowing for, and facilitating consideration of, **synergies** in relation to CBTMT needs for BBNJ, areas within national jurisdiction and related transboundary considerations (including to support integration of implementing the BBNJ Agreement with national and regional workplans and policies).

iii) facilitating, promoting and/or undertaking **global level** overviews of existing CBTMT initiatives that could be built upon, as well as capacity needs and progress in meeting needs, enable sharing of experiences and lessons-learned, and promoting best-practice approaches such as through guidelines;

iv) actively promote partnerships to meet needs, such as by convening forums to **share the findings** of needs assessments, including synergies between ABNJ and areas within national jurisdiction, and spaces/tools to facilitate identification of potential partners;

v) establish **reporting, and review** mechanism(s), track needs, review effectiveness of measures to meet needs and outcomes over time.

Bodies such as the COP and other bodies could have a role to facilitate, fund, undertake, monitor and/or review such processes and amplify the voices of SIDS. Providing a forum to communicate needs could help guide donors and international organisations in providing resources and facilitate building partnerships between diverse organisations to co-design long-term CBTMT initiatives.

3.2.3 Coordination and cooperation

Cooperation and coordination mechanisms are critical for functional polycentric systems such as the evolving regime complex for BBNJ. Mechanisms are needed under the BBNJ Agreement that allow States and other stakeholders to interact and work together in a participatory way across areas such as integrating ecosystem and precautionary approaches, biodiversity conservation or enhancing regional resilience[80]. Acknowledging that cooperation and coordination is already a recognised critical priority for improving ocean governance in the region (Section 2.2), the BBNJ Agreement could facilitate cooperation and coordination by:

i) **Facilitate partnerships and network building to meet CBTMT needs**: Leadership is critical to create a supportive environment for capacity building and partnership building[45]. For example, the BBNJ Agreement could connect CARICOM with opportunities to identify and meet potential partners, including through the clearinghouse mechanism (if conceptualised, in part, as a human network connecting people and organisations) in addition to bodies established under the Agreement such as a Secretariat, CBTMT Committee and/or ad hoc expert groups. This could also include facilitating cooperation with the various NGOs and IGOs that provide CBTMT in the region, for example the FAO Project on Sustainable Management of Bycatch in Latin America and Caribbean Trawl Fisheries[81].

ii) **Further strengthen regional cooperation mechanisms for CBTMT**: The implementation of the BBNJ Agreement in the region may require facilitated access to resources for strengthening regional and national organisations as agents of cooperation, coordination and knowledge exchange. One option for CARICOM could be a structured approach or guidance at CARICOM level for example to provide clear agendas to guide university and NGO contributions to capacity building, and develop regional level strategies to meet capacity needs including through partnerships within and beyond the region, and fill capacity gaps to undertake and evaluate EIAs in ABNJ. A second (though not mutually exclusive) option could be the use of new/emerging coordination regional mechanisms such as the forthcoming 'Ocean Coordination Mechanism' (Box 2.4) which is envisaged to have a role in achieving long-term vision for CLME+ and other ocean-related international goals . In turn the BBNJ Agreement might support the achievement of the complementary functions such as: coordinating knowledge

management and facilitating data and information sharing; coordinating outreach, awareness raising and stakeholder engagement; strengthening science-policy interfaces; and exploring new areas for collaboration. Since these issues are complementary to the BBNJ Agreement and the framework CBTMT, and vice versa, it would be useful to consider synergies.

iii) **Facilitate the development of a common understanding of capacity building**: one of the problems arising from the loosely defined nature of CBTMT is that there is room for a wide range of interpretation and ambition; CBTMT could be used to refer to activities ranging from a short-term initiative (such as a one-time workshop or funding for travel to a meeting) to long-term outcome (such as developing a regional research hub). Since CARICOM seeks to ensure high-ambition long-term outcomes from CBTMT, it would be useful to ensure that the discussions that take place under the CBTMT framework (and relevant definitions) of the BBNJ Agreement leave room to align objectives and build a shared understanding of CBTMT ambitions. The BBNJ Agreement could promote a common understanding of CBTMT through the types of CBTMT included in the definitions in Part V of the Agreement, and the institutional mechanisms established under the Agreement for continued discussion.

3.2.4 Facilitated access to and transfer of information and data, equipment and infrastructure

Facilitated access to information implies open access to scientific and other relevant information, but also goes beyond it. Not only is the information freely accessible to all users, but there is an additional element, either human or automated, that seeks to direct the user towards the information or data that is most relevant to them, and explain to them how it can best be accessed and under what conditions.

i) **The Clearing House Mechanism** is expected to play a role in facilitating access to information and data, and a strong human component is required to help the users in finding and accessing the most appropriate information and associated resources. Some components might be automated, an additional component might incorporate tutorials, webinars or other relevant CBTMT tools on how to best use the data or information for a variety of BBNJ-relevant applications.

Where the data or information itself cannot be made openly accessible, metadata could be made available through the clearinghouse mechanism instead. Attention should be paid to creating interoperability between regional and global databases. Some data and information, for example, private sector data or traditional knowledge, is often confidential.

Where the use of traditional knowledge is desired, a mechanism or process could be put in place through which the appropriate holders of the knowledge, or their representatives, could be contacted. For example, the UNFCCC has created the Local Communities and Indigenous Peoples Platform (LCIPP)[82], which facilitates Indigenous Peoples engagement and integration of diverse knowledge systems, practices and innovations.

ii) **Partnership arrangements**: Facilitated access to technologies for the BBNJ Agreement would likely be undertaken through international partnership arrangements. The CBTMT needs assessments are likely to include an assessment of technology needs and priorities for implementation. Such technology needs assessments have, for example, been conducted in the context of the UNFCCC[83], and are considered a starting point for effective action. Support, in terms of financial and technical assistance is available for the technology needs assessments under UNFCCC, and this would also be useful for the CBTMT needs assessments under the BBNJ Agreement. With country needs identified, both in regard to technology and associated capacity, the formation of partnerships to fill these needs could be facilitated. This partnership-building facilitation might be undertaken through the clearinghouse mechanism, but will likely not be successful without a strong human element undertaking the facilitation of bringing together potential partners - for example a national and/or regional focal point. Funding could be made available for the initial formation of partnerships to meet identified national needs.

iii) **Bodies established by the Agreement**: Access to technologies could also be facilitated through a body established under the BBNJ Agreement, such as a CBTMT committee, and/or advisory group or committee under another body of the BBNJ agreement. These bodies could provide guidance and support for conducting the needs assessments and assess the effectiveness of capacity building measures. It will be critical to operationalize the delivery of capacity building and the established bodies could significantly increase the successful implementation of the agreement.

iv) **Regional and local experts**: In making data and information available, and in forming partnerships that meet identified technology and capacity needs, it is important to build on existing local resources and expertise, including local scientists and scientific networks, and existing information repositories, such as those at universities (e.g. UWI and others), CARICOM, the CLME+ project and others. Linking existing regional and national experts and information to efforts under the BBNJ Agreement will also support further development of endogenous capacity, facilitate regional sharing of expertise and technologies, and provide for taking into account ecological connections within and beyond national jurisdiction in the design of management measures.

3.2.5 Financial resources

Adequate and reliable financial resources are critical for effective and sustained CBTMT. To meet the self-determined needs and aspirations of the region this will require much more than funding for short-term individual-level CBTMT (for example travel funds to attend a meeting) but funding for medium to long-term ambitious approaches to lift national/regional capacity. Noting the existing demands in the region for sustained funding for CBTMT (Section 2.2), and learning from the limitations of previous approaches to funding CBTMT (Section 3.1.2), the BBNJ Agreement should promote adequate funding for CBTMT in the following ways:

i) **Funding for needs assessments and CBTMT strategies**: For the BBNJ Agreement to be implemented almost immediately, early funding will be required to support national (and regional) needs assessments. Because needs assessments are essential to determine the needs and priorities of developing country Parties for implementing the Agreement, they should be considered an essential priority and should be funded through assessed contributions. Not having identified funding for needs assessments right from the beginning will delay the implementation of needs assessments and of the BBNJ Agreement as a whole.

   The results of the needs assessment would then determine what activities would require priority funding as a prerequisite for national implementation. This would mean that the needs assessment process would undertake a degree of prioritization to determine which needs are essential to be addressed immediately, and which could be fulfilled at a later date. Priority funding from mandatory sources (e.g. assessed contributions or other stable sources) should be made available for the priority activities.

ii) **Dedicated funding mechanism**: A dedicated fund to support CBTMT, or a special fund for SIDS, could provide assistance for undertaking the priority activities identified through the needs assessment. It is important that such a fund has adequate and reliable financing available, preferably from assessed contributions or other mandatory sources. Activities that are not immediate national priorities, but that would need to be undertaken in the medium or long-term, could be financed through voluntary contributions and/or through the development of international partnerships.

   Regardless of the type of funding, it is important that the process of accessing funding not be made prohibitive. It may be desirable to have multiple funding sources to ensure that resources are available to deliver the different types of capacity building required for effective implementation of the BBNJ agreement. CBTMT could also be delivered in such a way that it assists with implementation of activities within national EEZs where those are ecologically connected with ABNJ, or where specific features for protection or management straddle jurisdictions. Keeping ecological connectivities in mind can help with joint implementation of the BBNJ Agreement and SDG 14, and also be interlinked with the achievement of other SDGs, including those on economic development, decent work, no hunger and gender equality.

3.2.6 Strategic environmental assessment

EIAs and ABMTs could be linked together via Strategic Environmental Assessments (SEA), which is, according to CARICOM, a proactive approach, which takes specific geographical and ecosystem features into account when assessing human activities[43]. Although the processes for implementing SEA's via the BBNJ agreement are still open, Hassanali & Mahon (2022) provided an approach that would pay great attention to regional vulnerability and prioritisation[43]. SEA's can not only be used to connect EIAs and ABMTs, but are generally an important component of Marine Spatial Planning. As such, SEAs could be a useful focus for implementing CBTMT in a way that optimises synergies between the capacity needed for ABMTs and EIAs, and provides an implementing mechanism that gives special attention to regional vulnerability and supports prioritisation.

4 Conclusion

Marine biodiversity beyond national jurisdiction perform environmental functions that underpin many ecosystem services (e.g., climate-change resilience, nutrient cycling, the provision of fisheries, genetic resources and tourism, science, education and outreach, and aesthetic, spiritual, emotional and historical value for Caribbean and planetary health, livelihoods, and well-being.

It is imperative that CARICOM has the capacity needed to participate fully in the implementation of the BBNJ Agreement. Capacity needs for the conservation and sustainable use of marine biodiversity can be broadly considered in four categories: financial, human, institutional, scientific and technological. There are, however, different ways of considering and conceptualising capacity building. Implementing the BBNJ agreement will require deploying a suite of capacity categories in a coordinated manner.

Prior experiences in the region can identify effective approaches for CBTMT to ensure that CARICOM can fully and fairly participate in, and benefit from, the implementation of the BBNJ Agreement and contribute to the overall effort to sustain a healthy ocean future for the region. including:

- resources for needs assessments and cooperative capacity building strategy development;
- sustainable and reliable financial resources;
- networking to facilitate knowledge exchange;
- institutional capacity to successfully acquire and apply financial, scientific and technical, and human capacity;
- science and technology;
- acknowledging and cultivating synergies;
- consistent approaches;
- partnerships, both within the region and outside the region;
- regional coordination and cooperation.

Lessons should also be drawn from existing international agreements, including:

- the limitations of voluntary funding mechanisms, and the advantages of compulsory and/or assessed funding;
- the trend over time towards establishment of more concrete and dedicated mechanisms for CBTMT in international environmental treaties;
- the problems caused by long-time frames for implementation and tokenistic approaches to CBTMT;
- the existence of examples where CBTMT has been funded through mandatory assessed contributions, or a combination of voluntary and mandatory contributions
- at least one example (the Montreal Protocol) where the existence of a financing mechanism was not only a critical factor in the success of the treaty, but also provided an incentive for some countries to initially join the treaty.

The BBNJ Agreement could help to create an enabling environment, and meet the needs of CARICOM for CBTMT, by:

i) **A body for CBTMT** that supports implementation of CBTMT.

ii) **Acknowledging the special circumstances** of Small Island Developing States **(SIDS).**

iii) **Adequate and reliable financial resources** to meet the self-determined needs and aspirations of the region, including through a funding mechanism.

iv) **Cooperation and coordination mechanisms** that facilitate partnerships and network building to meet CBTMT needs; further strengthen regional cooperation mechanisms; and facilitate the development of a common understanding of capacity building.

v) Ensuring that all **types of capacity building, marine technology and the transfer of marine technology** needed by CARICOM for the implementation of the BBNJ agreement are encompassed in the scope of the Agreement.

vi) **Facilitated access to information and technology**: directing the user towards the required information or technology, such as via the Clearing House Mechanism (CLHM), partnership arrangements, and bodies established by agreement.

vii) **Resources to support needs assessments, and mechanisms to meet needs and monitor progress**. Needs assessments are used as an enabling tool to understand capacity requirements and form the basis of capacity building strategies in and for the region.

viii) **Strategic environmental assessments** that optimise synergies between meeting the CBTMT needs for area-based management tools (ABMTs) and environmental impact assessments (EIAs), and give special attention to regional vulnerability.

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