How can we manage shared biodiversity in international waters?

What Caribbean stakeholders need to know about the new legally binding global treaty being negotiated:

The BBNJ Agreement
- Every country with a coast has territory in the ocean that belongs to that country called Exclusive Economic Zones (EEZs)

- Beyond this lies Areas Beyond National Jurisdiction (ABNJ) which are not owned by any nation – they belong to us all!

- ABNJ include the water column as well as the ocean floor.

- ABNJ cover 64% of the ocean’s area and include ecosystems and species which contain genetic material. These bring many benefits to our planet – and to humans.

The dark blue areas of the map represent Areas Beyond National Jurisdiction (ABNJ). Credit: Wikimedia Commons
Biodiversity in Areas Beyond National Jurisdiction (ABNJ) includes:

- **Highly migratory species**: including important commercial species for human consumption (e.g. tuna, salmon, cod), as well as species such as sharks, whales and turtles.

- **Unique deep-sea ecosystems**: many different ecosystems exist which support a variety of life including:

  **Seamounts**
  Underwater mountains that are home to unique species of fish, corals and sponges and are regularly visited by tunas, swordfish, sharks, rays, eels, whales and turtles.

  **Hydrothermal vents**
  The first ecosystem on Earth found to not use the sun as an original source for energy. Bacteria and primitive microbes convert sulphur-rich emissions from the vents into energy – supporting a unique community of worms, crabs, shrimps and other animals found nowhere else.

  **Sponge reefs and fields**
  These provide habitat, hunting grounds and refuge for species, including those important for human consumption (e.g. red fish, cod).

Interested in more information on ocean ecosystems? Check out: [https://wedocs.unep.org/bitstream/handle/20.500.11822/13602/rsrs178.pdf?sequence=1&isAllowed=y](https://wedocs.unep.org/bitstream/handle/20.500.11822/13602/rsrs178.pdf?sequence=1&isAllowed=y)
Ocean ecosystems regulate global climate and weather.

- The ocean generates nearly half the oxygen in the atmosphere, absorbs carbon dioxide, and governs our climate and weather.
- Phytoplankton, kelp and algal plankton in the ocean produce more than half of the oxygen we breathe as a by-product of photosynthesis.
- Oceans regulate global temperature.

Billions of people depend on the ocean for food and income.

- Two-thirds of fish stocks in ABNJ are being fished beyond sustainable limits. Overfishing in ABNJ disrupts marine communities and affects the ability of commercially important species to replenish their stocks.

Ocean biodiversity provides medicines and supplements.

- Species found in the deep sea are as the source of medicines to fight cancer, arthritis, heart disease and Alzheimer’s.
The BBNJ Agreement is a global, legally binding agreement which focuses on conservation and sustainable use of biodiversity in Areas Beyond National Jurisdiction (ABNJ).

The BBNJ Agreement is being developed under the UN Convention on the Law of the Sea. It aims to fill the gap in international ocean law for regulation of activities in international waters that affect biodiversity in the water and on the ocean floor.

Other global agreements address parts of the problem (e.g. unsustainable fishing, pollution from ships). However, these agreements cover only their specific sectors (e.g. fishing, shipping) and cannot address the combined impact of all activities and the different ways these interact in the ocean. The BBNJ Agreement will fill this gap to protect biodiversity in ABNJ.
What does the BBNJ (Biodiversity Beyond National Jurisdiction) Agreement cover?

The Agreement will focus on four main topics:

- Area Based Management Tools (ABMTs)
- Marine Genetic Resources (MGRs)
- Environmental Impact Assessments (EIAs)
- Capacity-Building and Transfer of Marine Technology (CBTT)
How is the BBNJ (Biodiversity Beyond National Jurisdiction) Agreement being developed?

- 4 meetings of Preparatory Committee 2016-2017
- Inter-Governmental Conference 1 Sept 2018
- Inter-Governmental Conference 2 Mar-Apr 2019
- Inter-Governmental Conference 3 Aug 2019
- Inter-Governmental Conference 4 TBD

Interested in more information on the negotiations? Check out: https://www.un.org/bbnj/
What are Area Based Management Tools (ABMTs)?

- The ocean is an interconnected environment so our activities in one area of the ocean may have impacts on another area.

- ABMTs are methods we use to regulate our human activities in the ocean to achieve conservation or sustainable resource use. Examples include Marine Protected Areas (MPAs), seasonal closure of fishing grounds for spawning of fish species or planning how we use certain areas of the ocean through marine spatial planning.

- Studies have been done to identify areas important for biodiversity in Areas Beyond National Jurisdiction (ABNJ), including the Sargasso Sea near to the Caribbean.

Interested in more information on areas with high conservation value worthy of protection in ABNJ? See here: https://www.pewtrusts.org/-/media/assets/2020/04/highseas_mpa_report.pdf

How will Area Based Management Tools (ABMTs) work in Areas Beyond National Jurisdiction (ABNJ)?

- Marine Protected Areas (MPAs) and other ABMTs will be used based on knowledge to guide what areas are important for biodiversity and what are the management priorities. It is important that scientific knowledge includes not only natural sciences, but also social sciences to consider cultural, economic and environmental perspectives in decision making.

- Stakeholders from different countries will need to have a say in designation of areas. This includes different users and interests (e.g. shipping, fishing, recreation, research).

- Governance arrangements will need to specify who is responsible for management of these areas and how coordination with other international bodies (e.g. regulating the fisheries or shipping sectors) is achieved.

- Compliance and enforcement will be challenging, especially for countries that are not signatories to the BBNJ Agreement but still use and travel in areas of the ocean beyond national territories.
Why are Marine Genetic Resources (MGRs) in Areas Beyond National Jurisdiction (ABNJ) valuable?

- MGRs include genetic materials, information and chemical derivatives from marine plants, algae, animals, and microbial or other organisms. These may have actual or potential commercial value.

- MGRs can be used for a wide range of industries including cosmetics, pharmaceuticals including anti-cancer fighting medication or supplements. For example, tests used to diagnose COVID-19, AIDS, SARS, and other diseases were developed with the help of an enzyme isolated from bacteria found in the deep ocean at marine hydrothermal vents.

Credit: Wikimedia Commons
What principles will guide sharing of benefits from Marine Genetic Resources (MGRs) in Areas Beyond National Jurisdiction (ABNJ)?

Agreeing on how international principles are applied will affect how MGRs are shared among countries.

- Common Heritage of Mankind principle means that MGRs belong to everybody so all countries should benefit fairly from these shared resources.
- Freedom of the High Seas principle applied as a standalone would mean countries could exploit MGRs on a "first come first serve" basis, resulting in the increased likelihood of global inequities for the Caribbean and other developing and small countries.

Benefit sharing needs to especially consider the limited capacities of developing states to engage in exploration, bioprospecting, research to develop commercial uses and how information and benefits can therefore be fairly shared.
What is needed to manage Marine Genetic Resources (MGRs) in Areas Beyond National Jurisdiction (ABNJ)?

It is important to manage and regulate MGRs exploration and utilisation.

- Research and exploration for MGRs could lead to habitat destruction, overexploitation of resources and pollution, and impacts can interact and accumulate over time.

- Deep seabed ecosystems appear sensitive to human disturbance, with slight environmental modifications having significant impact on key biological processes. As we advance exploration in international waters, ecosystems such as seamounts, hydrothermal vents, cold water corals, and sponge reefs are at risk of irreversible damage if activities are not regulated.
Why are Environmental Impact Assessments (EIAs) important in Areas Beyond National Jurisdiction (ABNJ)?

- EIAs are a management tool to evaluate the likelihood of environmental impact of a proposed action, taking into consideration the linked socio-economic, cultural and human health impacts – both positive and negative.

- EIAs are used to:
  - Identify mitigation measures needed
  - Recommend activities that should not take place because the impacts would, or may, be too severe

- Activities taking place in ABNJ or in a country’s coastal waters can both affect biodiversity in ABNJ, so both need to be managed.

- Strategic Environmental Assessments take a bigger picture view to look at the best options for use of a wider area considering environmental and social impacts of human actions.
What is needed to apply Environmental Impact Assessments (EIAs) in Areas Beyond National Jurisdiction (ABNJ)?

- Multiple resource users in ABNJ need to work together to conduct EIAs in a coordinated way. There are established processes for some activities that could be used as a starting point (e.g. the International Seabed Authority has developed guidelines on EIAs for exploration of marine minerals in international areas).

- Public involvement and transparency in the EIA process is important to ensure the needs of stakeholders which may be impacted are considered adequately in the assessment (e.g. activities in ABNJ could affect national waters that resource users such as fisherfolk rely on for food and income).

- Guidelines for special protection areas in ABNJ are needed to ensure activities do not affect biodiversity deemed valuable for protection (e.g. areas important for migratory species and unique ecosystems).
What is Capacity-Building and Transfer of Marine Technology (CBTT) relevant to Areas Beyond National Jurisdiction (ABNJ)?

As science and technology advances, human activities in ABNJ have revealed knowledge previously unknown about the ecosystems and potential benefits. These capacities include:

- Specialised vessels with onboard equipment to collect weather and ocean information such as water temperatures, shape of the seafloor and speed of currents.

- Submersible vessels which could be deployed deep into the ocean at depths not safe for divers, allowing humans to explore deep ocean and collect samples of previously unexplored ecosystems and species.

These capacities are expensive and complex, requiring knowledge and expertise as well as hefty financial investments.

Interested in more information on exploration tools? Check out: [https://oceanexplorer.noaa.gov/technology/technology.html](https://oceanexplorer.noaa.gov/technology/technology.html)
What Capacity-Building and Transfer of Marine Technology (CBTT) is needed to benefit the Caribbean?

- The Caribbean and other developing and small countries have limited capacities (financial, human and technological) which could prevent access to and benefit from biodiversity resources in Areas Beyond National Jurisdiction (ABNJ).

- Capacity and technology sharing are important so that the Caribbean and other developing and small countries can build their knowledge, expertise and competencies on the advancements in technology and science on international ocean areas.

- This will help countries to:
  - understand what obligations are required of them under the BBNJ Agreement and improve their compliance abilities (e.g. improved human resources through targeted training)
  - increase their likelihood and ability to access and benefit from resources by building capacity in marine sciences, data analysis and technologies used in international ocean areas.

- Developing nations may not be able to do exploration independently as this requires a large amount of resources. However, after building their knowledge, competencies and expertise they may be able to collaborate with other countries currently conducting exploration activities.

- For example, a Caribbean scientist joined a team of international scientists on a 6-day deep sea exploration of the Kick'em Jenny volcano on board the Exploration Vessel Nautilus. While this example is within national jurisdiction waters (of Grenada), the competencies and expertise required here is applicable to deep sea exploration voyages in ABNJ.
Why should stakeholders care about the BBNJ (Biodiversity Beyond National Jurisdiction) Agreement?

What happens in international waters affects all of us – it affects the biodiversity and health of our national waters, livelihoods of coastal communities and economic sectors such as tourism and shipping.

CARICOM stakeholders from government, private sector, communities, civil society, academia and regional agencies have rights, responsibilities and interests in the sustainable use and protection of biodiversity in international waters.

Get aware!
Get information:
https://www.un.org/bbnj/

Get involved!
Contact CANARI : info@canari.org

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