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Component of a 10-year Management Plan

North-East Tobago
Man and the Biosphere Area

unesco
Man and the Biosphere Programme

FOCUS: BLUE ECONOMY

AUGUST 2022

Component of a 10-year Management Plan

FOCUS: BLUE ECONOMY

for the

North-East Tobago Man and the Biosphere Area

Draft

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1 EXECUTIVE SUMMARY

This document was developed as part of a project titled: *"Caribbean Small Island Developing States Trinidad Sub-Project Rehabilitation of Quarries"* (IWEco TT) with funding from the Global Environmental Facility, under approval of the United Nations Development Programme and via a contract with the Environmental Management Authority of Trinidad and Tobago. It is meant to be a guideline for the future management authority and staff of the North-East Tobago UNESCO Man and the Biosphere Reserve (NETMABR). While it will be open to all stakeholders, it is not meant to be an instrument for outreach activities; an outreach-friendly, intelligible version of the management plan will be developed in late-2022. The document represents the second component of the overall 10-year Management Plan for the NETMABR. The first, complementary component was finalised in December 2021 and a third and final one will be finalised under other interventions and consolidated in November 2022.

This draft plan was developed via review and analysis of primary and secondary literature as well as formal and informal stakeholder consultations between 2018 and 2022; major limitations were based on COVID-19 restrictions and significant primary data deficiencies. The draft plan at hand will be discussed with stakeholders between June and November 2022, revised and finalised accordingly.

This, second component of the Plan includes:

- Revision of previous Stakeholder and Communication Plans,
- Participatory Development of Vision, Mission, Objectives and Principles,
- Site Description,
- SWOT and PESTLE,
- Alignment with existing Legal and Regulatory Framework, Policies and International Conventions.

Furthermore, it includes situational analyses, high level goals, priorities, strategies and proposed actions for three management topics / components:

- Conservation Strategies, Programmes and Priority Projects
- Climate Change Resilience Strategies, Programmes and Proposed Actions
- Community-based, Green, Blue, Purple Economic Strategies, Programmes and Proposed Actions

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Next steps and two key recommendations are provided in the chapter below.

The ERIC team would like to thank the EMA Office, Trinidad and Tobago, specifically Alicia Aquing, GEF IWEco National Project Coordinator, and Mr Linford Beckles, Director, Department of the Environment, Tobago House of Assembly for facilitating this intervention and put trust in our technical capabilities.

North-East Tobago Man and the Biosphere Reserve Management Plan Components

SLM

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7. Sustainable Agriculture and Sustainable Land Management Practises
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2 THE WAY FORWARD

The ERIC has successfully applied to the UNDP Small Grants Programme, Trinidad and Tobago, to fund the final components of the Management Plan and create a knowledge sharing platform for the Plan via a project titled: "*Drafting the Final Components of the Management Plan for the North-East Tobago UNESCO Man and the Biosphere Reserve and Intelligible Knowledge Management*". The proposal was endorsed by the Department of the Environment, Tobago House of Assembly, which is the Focal Point for the UNESCO MAB Programme in Trinidad and Tobago and by Division of Ecological and Earth Sciences, UNESCO, Paris, France. This final component was approved in May 2022.

This timing aligns perfectly with a contract between the Inter-American Development Bank and Syntegra Change Architects Limited (Trinidad) with the following key objectives:

1. to structure the corporate governance framework of the NETPAMPT under a research-driven and participatory approach;
2. to structure the institutional framework of the NETPAMT, using components of an environmental and social management systems and including the foundations for a fund-raising strategy; and
3. to provide training and dissemination of i) the corporate governance framework; and ii) E&S institutional framework to key stakeholders.

Having started in February 2022, this intervention, of which the NETPAMT, and by extension the Tobago House of Assembly, is the direct beneficiary, will allow the NETPAMT, as future management organisation of the UNESCO Man and the Biosphere Reserve in North-East Tobago, to revise, refine, and apply the finalised management plan.

Based on these interventions, **the key recommendations** for advancing the sustainable development goals under the UNRESCO MAB Programme for NE Tobago are to:

1. **engage the Government of Trinidad and Tobago and the Tobago House of Assembly to provide the necessary budget allocations (2022-2024) for the operations of the NETPAMT until initial Green Fund funding and subsequent, self-financing is secured, and**
2. **facilitate stakeholder awareness and tangible benefits for communities in the NETMABR.**

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3 INTRODUCTORY REMARKS

This document was developed as part of a project titled: *"Caribbean Small Island Developing States Trinidad Sub-Project Rehabilitation of Quarries*" (IWEco TT) with funding from the Global Environmental Facility. It is meant to be a guideline for the future management authority and staff of the North-East Tobago UNESCO Man and the Biosphere Reserve (NETMABR).
The document represents a component of the overall 10-year Management Plan for the NETMABR. The additional, complementary components will be finalised under another intervention, and both consolidated in June 2022.
Amongst other guidelines, the Technical Guidelines for Biosphere Reserves (TGBR, UNESCO 2021) were taken into consideration for preparing this document.

The TGBR provides an indicative list of several main items a UNESCO Biosphere Reserve Management Plan should contain:

a. a recommendation for an organisational/governance structure responsible for implementation of the plan,
b. a situational analysis,
c. a vision,
d. medium-term goals,
e. management priorities,
f. proposed priority projects, and
g. monitoring indicators,

The document at hand covers, for the components under the contract with the EMA, items **b, c, d, e, and f**. Item **a** was covered under a previous assignment, item **g** will be covered under the above-mentioned complementary SGP project.
The components (topics) of the NETMABR Management Plan covered under this assignment included:

- Revision of previous Stakeholder and Communication Plans
- Participatory Development of Vision, Mission, Objectives and Principles
- Site Description, SWAT and PESTLE
- Alignment with existing Legal and Regulatory Framework, Policies and International Conventions
- Conservation Strategies, Programmes and Priority Projects
- Climate Change Resilience Strategies, Programmes and Proposed Actions

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- Community-based, Green, Blue, Purple Economic Strategies, Programmes and Proposed Actions
- Stakeholder Consultations, Local Capacity Building and Media Outreach

As discussed with the funding agency, stakeholder consultations were quite limited due to time- and COVID-19 restrictions. Furthermore, stakeholder consultations will be most efficient and effective when the full draft of the Management Plan will be available in 2022 and a more concise and intelligible version can be produced to meaningfully engage at all stakeholder levels. Once all documents will have been consolidated, the final layout will be polished using an advanced desktop publishing and page layout designing software application. Once funding permits, an intelligible and interactive website will be created to facilitate ease of access to and navigation through the Management Plan.



Figure 1. Fishermen in Castara Bay

4 METHODS

This draft document was developed via review and analysis of primary and secondary literature (see Annex 1) as well as formal and informal stakeholder consultations between 2018 and 2022. These consultations were conducted in relation to the drafting of the UNESCO Man and the Biosphere Nomination Form for NE Tobago, the drafting of the Dossiers for the Designation of NE Tobago's Main Ridge Forest Reserve, Islets and Reefs as Natural National Heritage Sites of Trinidad and Tobago and the drafting of a proposal to the Inter-American Development Bank titled: "Organisational Governance and Operational Strengthening of the North East Tobago Protected Area Management Trust (NETPAMT)".

It should be noted that this document applies the common writing style of UNESCO MAB Reserve Management Plans and, as such, does not claim to be or follow the writing style of a scientific research paper.

5 LIMITATIONS

The bulk of the document was prepared between November 2021 and June 2022 when restrictions regarding the COVID-19 pandemic prohibited workshops, group consultations and broader community involvement. Additionally, the extremely tight timeline for delivery of the draft and final document did not allow for the desired stakeholder participation. However, these limitations can be addressed in mid-2022, when the complementary components of the management plan will be finalised and a more intelligible version of the management plan can be developed, which will be more directed towards stakeholder engagement than programme management guidance (as it is the case for this document).

An additional, major limitation is the ubiquitous data deficiency for NE Tobago regarding all components of the management plan. Therefore, many statements in the situational analyses are based on recent, oral stakeholder reports and personal observations of the resident expert team. Hence the reason that baseline surveys, monitoring and evaluation interventions are essential to inform the future implementation organisation.

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6 VISION

MAB Vision: A world where people are conscious of their common future and their interactions with the planet, and act collectively and responsibly to build thriving societies in harmony within the biosphere.
To be based on stakeholder consultations.

7 MISSION

The MAB Mission 2015–2025 is to

- develop and strengthen models of sustainable development through the WNBR;
- communicate experiences and lessons learned, and facilitate the global diffusion and application of these models;
- support evaluation and high-quality management of biosphere reserves, strategies and policies for sustainable development and planning, and accountable and resilient institutions;
- help Member States and stakeholders to achieve the Sustainable Development Goals by sharing experiences and lessons learned related to exploring and testing policies, technologies, and innovations for the sustainable management of biodiversity and natural resources and mitigation and adaptation to climate change.

To be adapted on stakeholder consultations.

Figure 2. Children planting trees in Parlatuvier Bay (Janina Ewals)



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8 KEY OBJECTIVES

In order to address NE Tobago conservation and sustainable development challenges through strengthening the functions of a BR, the technical team proposes the following **Main Objective** for the management of the NETMABR:

To successfully consolidate and co-manage interventions related to sustainable and regenerative development, research, capacity building, education and networking on landscape, human- and eco-system levels for the benefit of NE Tobago's cultural and natural heritage, communities, and people.

Note: To be adapted based on stakeholder consultations

This key objective is designed to address the 12 key barriers that were identified by previous management plans for NE Tobago and IFPAM documents further as follows:

1. outdated legal and regulatory framework for establishing and managing natural and cultural resources,
2. unclear, fragmented roles responsibilities of stakeholders, especially managing authorities,
3. disempowered and under-resourced management authorities,
4. inadequate funding,
5. willingness to participate if interventions seem to be too restrictive,
6. stakeholder conflicts,
7. lack of broad, bipartisan political will,
8. lack of technical capacity to identify and address issues,
9. minimal capacity on the ground with respect to practical approaches to effective natural and cultural heritage management,
10. inadequate law enforcement,
11. minimal experience with income-generating opportunities, and last but by no means least,
12. a lack of transparency, accountability and compliance with regulation and legislation by the Tobago House of Assembly.

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While IFPAM and other programmes and projects were able to partially address these barriers, and while it can be stated that conservation status and efforts in NE Tobago have never been better, it remains a fact that all of the above barriers are still valid and need attention.
The Management Plan at hand is based on the methodical approach that most of the above-mentioned barriers can be addressed by implementing strategies aligned with the three MAB functions.

These, below-described key strategies, are mainly based on the results of the recent Improved Forest and Protected Area Management Project (IFPAM, 2015-2020) which applied a participatory approach in identifying objectives and potential solutions to overcome conservation barriers; additionally, the ongoing interaction between the technical team and key stakeholders was used to refine recommendations included into the Management Plan.
These strategies are reoccurring and supported by proposed activities in the various components of the Management Plan at hand.
It should be noted that, while IFPAM continuously considered socio-cultural aspects of NE Tobago as essential to successful management of natural resources, there was, unfortunately, not a matching project to similarly address the management of NE Tobago's cultural heritage.

Figure 3. Iguana Bay (Janina Ewals)



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9 WHAT IS THE UNESCO MAB PROGRAMME?

In 1971, United Nations Educational, Scientific and Cultural Organisation (UNESCO) launched the intergovernmental Man and the Biosphere programme (MAB) that aims to establish a basis for the improvement of relationships between people and their environments. It predicts the consequences of today's actions on tomorrow's world and thereby increases people's ability to efficiently manage natural resources for the well-being of both human populations and the environment (30).

The working unit of MAB is the Biosphere Reserve (BR), an international description of recognition from UNESCO for an area in the world, which is deemed to demonstrate a "balanced relationship between humans and the biosphere".

Biosphere Reserves are internationally recognised areas comprising terrestrial, marine and coastal ecosystems. Each reserve promotes solutions reconciling the conservation of biodiversity with its sustainable use by local communities. BRs are nominated by national governments and remain under the sovereign jurisdiction of the states where they are located.

BRs are intended to be model regions for demonstrating successful approaches to protection and sustainable development at a regional level. MAB sites are established with the goal to:

- harmonise conservation of biological and cultural diversity with economic and social development, and
- make a tangible contribution to the transition to green societies and support national governments' efforts to attain the Sustainable Development Goals (SDGs).

Biosphere Reserves have **three inter–connected functions**:

- **Conservation**: protecting cultural diversity and biodiversity, including genetic variation, species, ecosystems, landscapes, and securing services provided by such diversity.
- **Development**: fostering economic and human development that is environmentally and socially sustainable and culturally appropriate; and
- **Logistic Support**: facilitating demonstration projects, environmental education and sustainable development education and training, research and monitoring.

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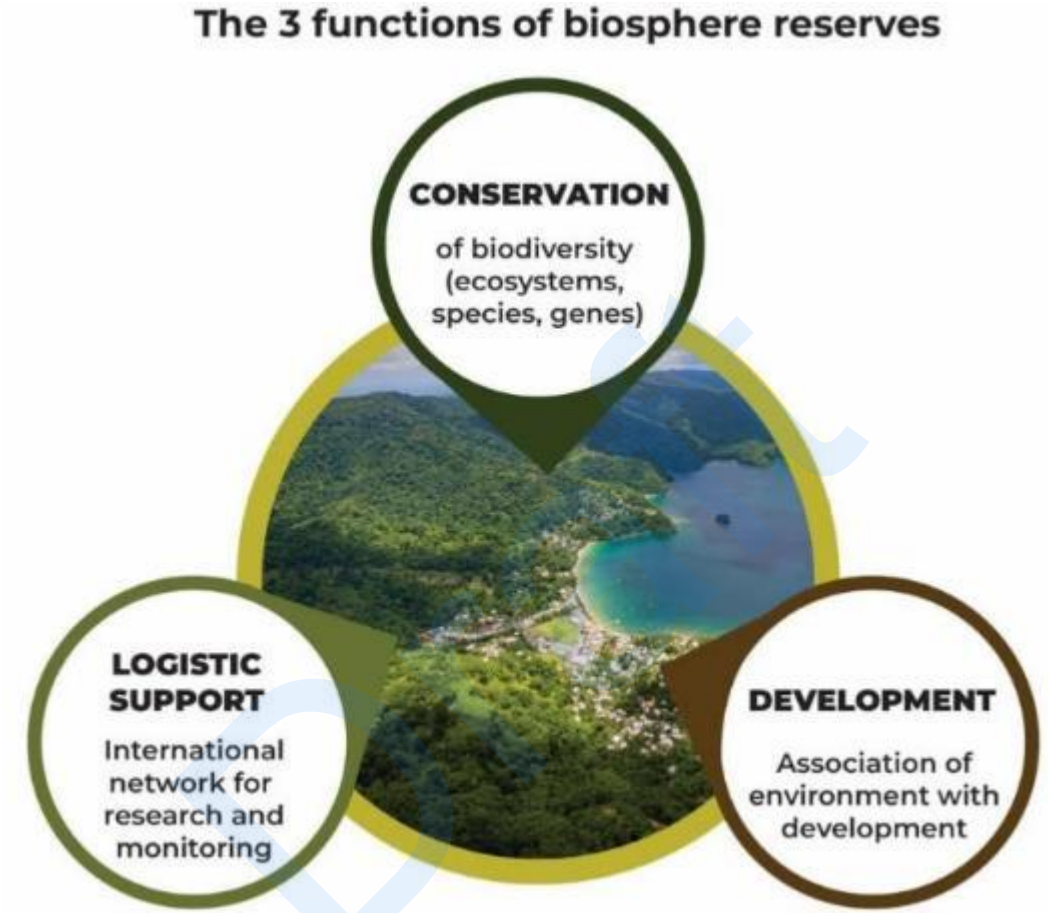


Figure 4. Schematic overview of 3 functions of biosphere reserves.

A BR consists of **three areas or zones – The core, buffer, and transition zones**.

The core zone is usually a legally protected area in which human activity is strictly limited and where monitoring of conservation priorities take place.

The buffer zone allows for appropriate activities such as research and scientific study, ecotourism, education and training.

The transition zone contains human settlements, agricultural and other commercial activities synonymous with human settlement.

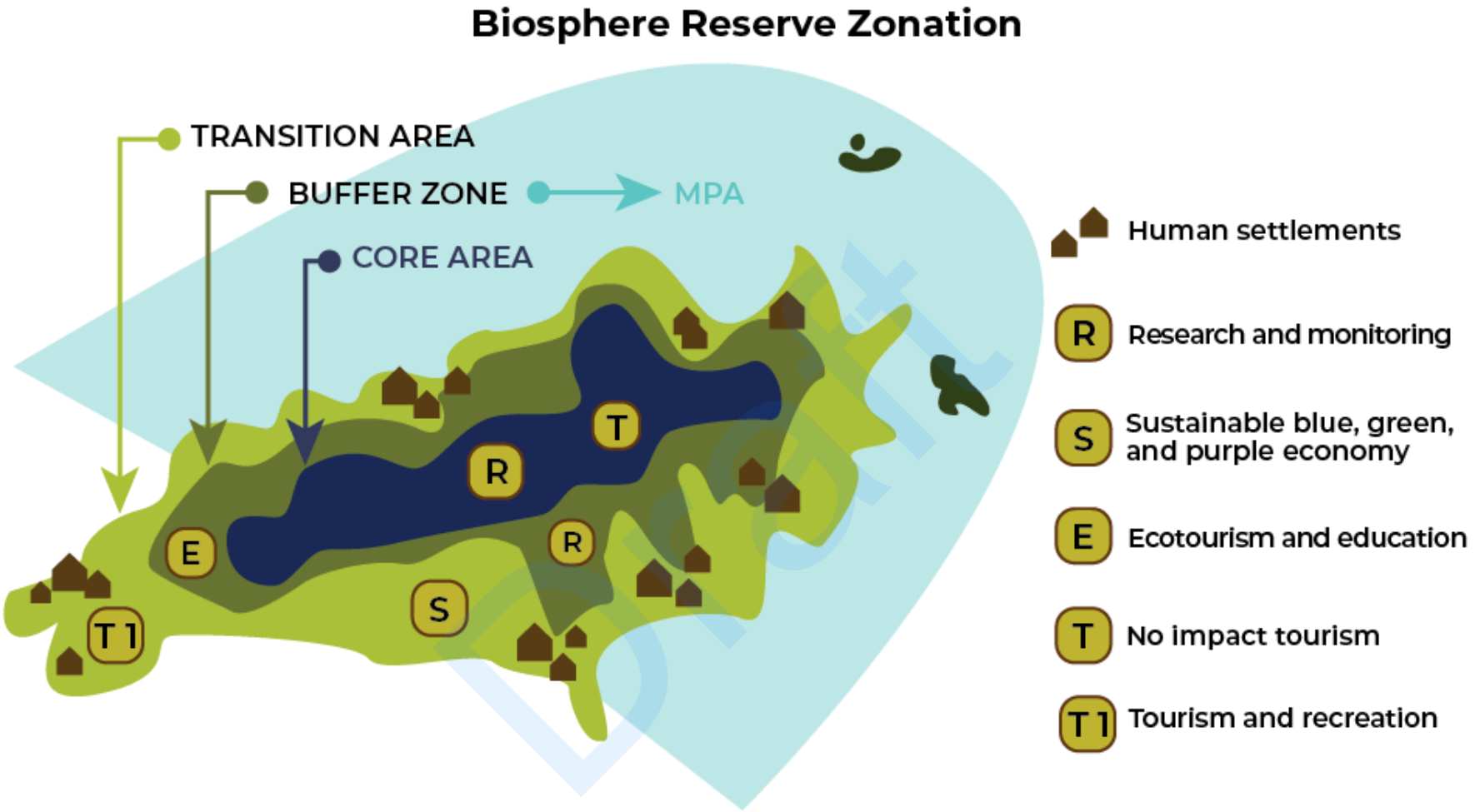


Figure 5. Schematic overview of NE Tobago Biosphere Reserve zonation (ERIC 2021).

The MAB Programme has a significant World Network of Biosphere Reserves (WNBR) which serves as a management tool for various municipal regions to improve strategies for sustainable development. As the pressures upon ecosystems increase with growing populations and climate change, the need for upgraded relationships between people and their natural surroundings only increases.

The **MAB Programme Mission** for the period 2015-2025 (31) is to:

- develop and strengthen models for sustainable development in the WNBR;
- communicate the experiences and lessons learned, facilitating the global diffusion and application of these models;
- support evaluation and high-quality management, strategies and policies for sustainable development and planning, as well as accountable and resilient institutions; and
- help member states and stakeholders to urgently meet the Sustainable Development Goals through experiences from the WNBR, particularly through exploring and testing policies, technologies and innovations for the sustainable management of biodiversity and natural resources and mitigation and adaptation to climate change. (MAB Strategy 2015-2025 & Lima Action Plan)

9.1 Administration

The international MAB Programme

The MAB programme is organised under an international agreement through UNESCO; state parties undertake actions within the MAB programme voluntarily and sites remain under national jurisdiction. At the global level, the MAB Programme is governed by its International Coordinating Council (ICC), under the overall authority of the UNESCO General Conference and its Executive Board.

The next level of governance is represented by regional and thematic networks. Governance at the national level is ideally through MAB National Committees.

The MAB institutional structure is outlined in Figure 6.

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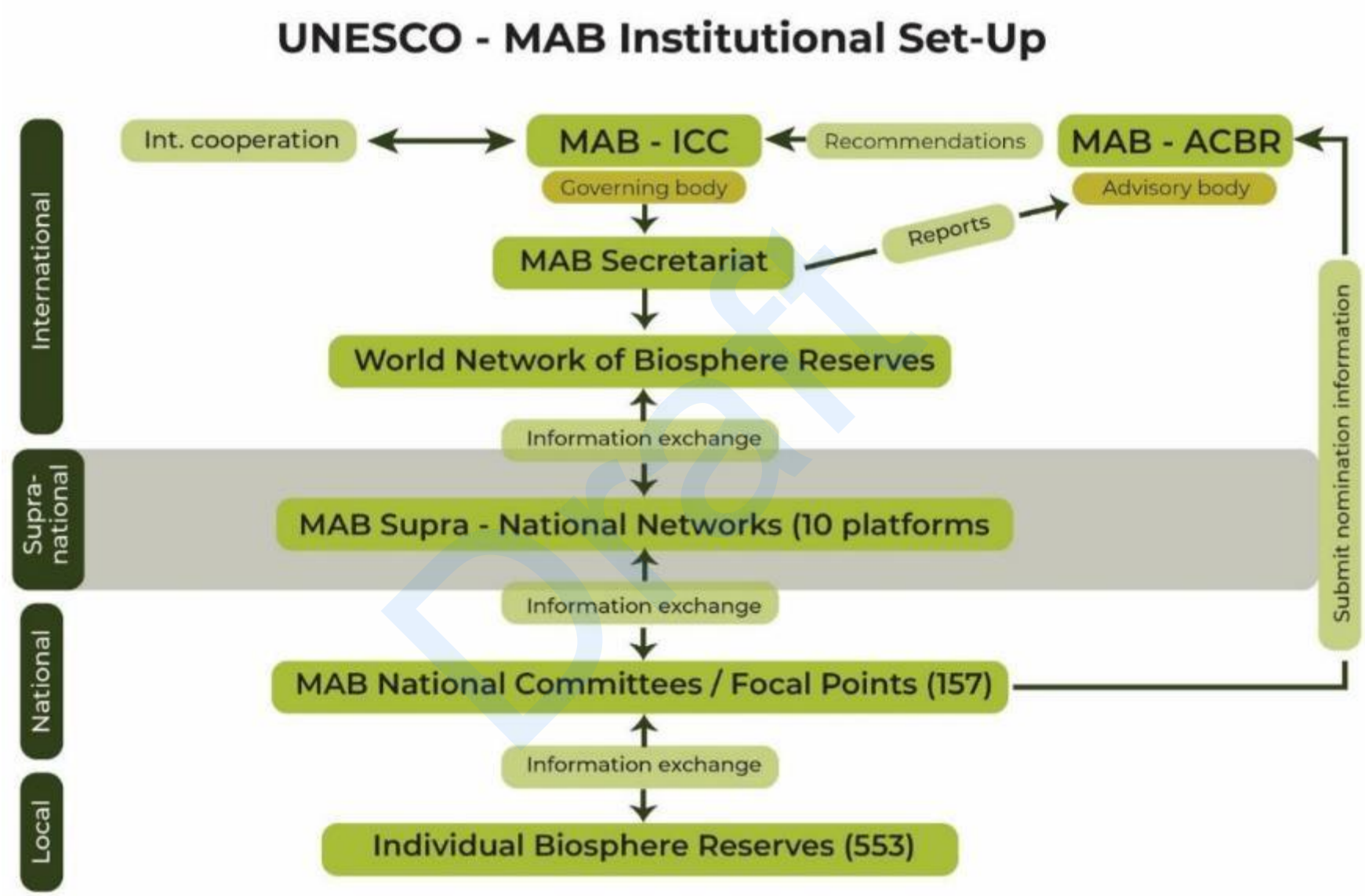


Figure 6. Diagram of the MAB institutional structure adapted from Schliep (24).

The MAB International Coordinating Council (ICC) is the governing body that meets biannually and consists of 34 Member States elected by UNESCO's General Conference. The ICC elects a chair and five vice-chairpersons from each of UNESCO's geopolitical regions that constitute the MAB Bureau which undertakes the responsibilities of the ICC between its biannual meetings. The MAB International Advisory Committee for Biosphere Reserves is the primary scientific and technical Committee body advising the ICC. The MAB Secretariat is the administrative centre for MAB based at UNESCO's Division of Ecological and Earth Sciences in Paris, the Secretariat work closely with the different field offices and Supranational Networks (e.g., IberoMAB – Iberian Peninsula and Latin America/ Caribbean region) around the world to coordinate the work of the MAB programme at the regional, national and individual Biosphere Reserve levels.

MAB is funded through the regular budget of UNESCO and mobilises funds-in-trust granted by Member States, bilateral and multilateral sources and extra-budgetary funds provided by countries, the private sector and private institutions.

UNESCO's intergovernmental structure provides MAB with a framework to help national governments support the planning and implementation of research and training programmes with technical assistance and scientific advice.

MAB-related activities are nationally financed however the programme can grant seed funding to assist countries in developing projects and/or to secure appropriate partnership contributions.

MAB offers fellowship opportunities co-sponsored by a number member states to assist the technical development of individuals seeking to build a profession within the field of the UNESCO programme priorities. These opportunities would be available to local staff to apply for.

Importantly, designation as a MAB Reserve does not necessarily require the formation of new laws.

9.2 Designation of NE Tobago

In September 2019, the Government of Trinidad and Tobago successfully submitted a Nomination Form to UNESCO with the request to consider NE Tobago as a Man and the Biosphere Reserve.

The eligibility criteria taken from the Biosphere Reserve Nomination Form are shown in Table 1.

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Table 1. The eligibility criteria taken from the Biosphere Reserve Nomination Form (2018).

	MAB Eligibility Criteria	NE Tobago
1	**Encompass a mosaic of ecological systems representative of major biogeographic region(s), including a gradation of human interventions**	✓
2	**Be of significance for biological diversity conservation**	✓
3	**Provide an opportunity to explore and demonstrate approaches to sustainable development on a regional scale**	✓
4	**Have an appropriate size to serve the three functions of biosphere reserves**	✓
5	**A legally constituted core area/s devoted to long term protection of sufficient size to meet long term conservation objectives**.	✓
6	**Buffer zone/s clearly identified & surrounding or contiguous to the core area/s, where only activities compatible with the conservation objectives can take place**".	✓
7	**Outer transition area where sustainable resource management practices are promoted and developed**	✓
8	**Organisational arrangements should be provided for the involvement and participation of a suitable range of inter alia public authorities, local communities and private interests in the design and the carrying out of the functions of a biosphere reserve**".	Ongoing
9	**Able to describe arrangements in place or foreseen**	✓
10	**Mechanisms to manage human use and activities in the buffer zone or zones**	✓
11	**Management policy or plan for the area as a biosphere reserve**	Currently developed
12	**Designated authority or mechanism to implement this policy or plan**	Department of the Environment, NETMAPT
13	**Programmes for research, monitoring, education and training**	✓

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In the Nomination Form, NE Tobago' values were described as follows:

"Covering over 835km^2, the proposed area encompasses three protected areas, one of which is the oldest protected tropical forest reserve in the world, a large planned Marine Protected Area (MPA) and 15 communities which are home to approximately 10,000 residents with a rich historical and cultural heritage. The area's rare and largely intact Caribbean Island Ridge-to-Ocean eco- and human-systems are well equipped to fulfil the three functions of a UNESCO Biosphere Reserve (BR): its biodiversity, range of ecosystems, and special-interest species are important on a regional and global scale (Conservation); the cultural heritage is a living example for the region's deeply rooted, historical, socio-economic and spiritual relationship between communities and natural resources (Development); and decades of regionally outstanding educational, research and networking activities (Logistic Support).

The close linkage between ecosystem services and natural resource use, active community groups, successful sustainable development projects, governmental initiatives and its closeness to Trinidad's resources provide the area with the prerequisites to successfully implement a BR and share lessons learnt with its Caribbean neighbours while serving as a regional role model. Being a hotspot for conservation related research for decades and having a track record of environmental education, capacity building and monitoring are well established cornerstones for providing and further increasing logistical support.

The legal, policy and institutional framework to manage a MAB area exist; current projects and programmes as well as those in the national and local development pipeline, and improved collaboration between government, civil society and private sector are demonstrably supportive of this BR nomination initiative. On varying levels, NE Tobago is already close to meeting the key conservation objectives of a successful BR as mentioned in the Seville MAB Strategy.

Coordinating future sustainable development efforts under a MAB umbrella and the inclusion of all relevant sectors of the society will significantly improve conservation and livelihoods through responsible use of our natural and cultural heritage which is the central goal of Tobago's guideline policy document, the Comprehensive Economic Development Plan."

On 28 October 2020, NE Tobago was officially declared a UNESCO MAB Reserve.

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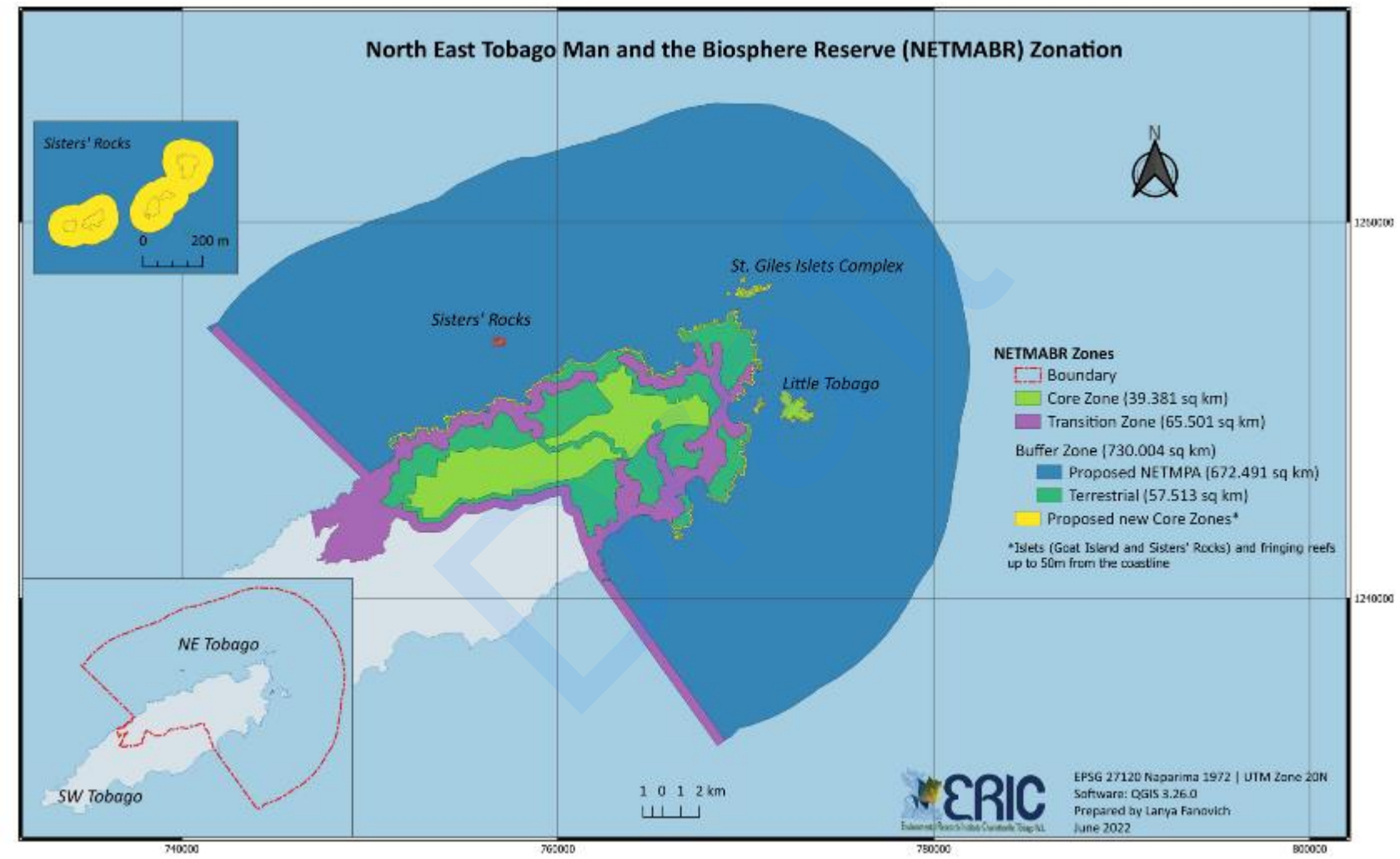


Figure 7. Zonation of the NE Tobago MAB Reserve (ERIC 2022)

The **Core Zone** of the NETMABR consists of three legally protected areas: the MRFR, Little Tobago and the St Giles Islet Complex, all of which are terrestrial.

It should be noted that, at the moment, the Core Zone does not include any marine areas, due to lack of protective legislation and regulations; however, work has started to designate high conservation value, coastal fringe reefs as Natural National Heritage Sites (which is the fastest way of to achieve legal protection) in 2021, and the National Protected Area Systems Plan was approved by Cabinet, which hopefully will result in the designation of the overall NE Tobago Marine Protected Area with some special, IUCN 1a category areas. Once these marine areas receive legal protection, they can, later on, switch from Buffer to Core Zone status within the BR.

The **Buffer Zone** for NETMABR was defined as:

- all lands between the Transition Zone and the MRFR Core Zone,
- a 125m belt on both sides of roads within the Core Zone (combining to a width of 250m)
- a 250m belt along the boundary between the Core Zone and the south-western area outside of the NETMABR,
- coastal areas between the boundaries of the NETMPA and the Transition Zone, and
- the entire marine realm of the proposed NETMPA.

As mentioned in the section above, some marine Buffer Zones might change to Core Zone as soon as legal protection can be provided. Therefore, the terrestrial, coastal Buffer Zones are crucial to protect sensitive marine ecosystems.

The **Transition Zone** was defined as all lands that are located within a 250m belt on both sides of all roads within the overall boundaries of the NETMABR; this includes all communities, and economic activities in the NETMABR (except for some micro-scale subsistence farming and hunting in the Buffer Zone). The result of this definition is a Transition Zone band, sandwiched between the terrestrial and marine Buffer Zones on which it has significant influence.

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10 MANAGEMENT PLAN COMPONENTS

The following chapters are subdivided into situational analysis, goals, strategies, and proposed activities. It is important to understand that the chapters are at different results framework levels therefore the subheadings are not necessarily on similar logic levels as well. This is the result of the High-Level Goal of each Component starting on a different logic level.

Table 2. Management plan component levels

Component level	Definition
Summary Situational Analysis	The current state of the BR respectively to the chapter subject, descriptively identifying strengths, weaknesses, opportunities and threats
High-Level Goal	The desired status achieved by the management plan
Priorities	Interventions that either significantly contribute to achieving the goal, or significantly reduce existing threats to the goal
Strategies	Long-term plans of action designed to achieve the goal
Proposed Activities	Programmes, projects, and other interventions that are aligned to the strategies and should be revised once the situational analysis significantly changes.

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10.1 Addressing Barriers to Sustainable Management

The NETMABR is subject to a series of interconnected, indirect threats to successful implementation of the MAB programme. Local residents and stakeholders are not commonly inspired to undertake conservation-relevant practices. This is partly because intelligible, adequate and continuous environmental education still requires improvement. While knowledge often exists, it is not successfully translated into a positive attitude and actual practise. This in turn is partially due to perceived and actual lack of ownership and empowerment on the part of residents in NE Tobago. On the other hand, and in certain cases, the sense of ownership is very well developed and strongly articulated; however, ownership rarely translates into stewardship.

Similarly, residents facing environmental challenges are often not informed enough to take appropriate actions against those perpetrating the violations (e.g., seek assistance from the Environmental Police and/or the Environmental Commission of Trinidad and Tobago).

Additionally, the lack of coherent and consistent conservation co-management and co-operation often undermines good efforts in some areas by neglect in others. For example, efforts of CSOs to protect nesting sea turtles are undermined by a lack of law-enforcement regarding the use of turtle nets and turtle meat consumption.

The principal barrier to addressing direct threats to the ecosystems of NE Tobago is fragmented management and use. The National Protected Areas Policy, the National Protected Area Systems Plan (7), the IFPAM Project (6) and ERIC's stakeholder assessments have all identified and prioritised this barrier for NE Tobago. Regulations and roles are unclear and consequently there is limited "enforcement / implementation of regulations concerning natural resource use" as stated in the NE Tobago Management Plan (2003). Fragmented, formal and informal, public and private, land management and use create an environment where it is nearly impossible for a single stakeholder to meaningfully influence the direct threats that are degrading NE Tobago's ecosystems.

This barrier has two components.

Government Sector

The ***government component*** involves the formal management of public lands and waters. This barrier includes outdated legislation and policy, a labyrinthine institutional structure and limited government capacity and resources. Repeated government initiatives since the 1970's have failed to address this issue; a case in point is the National Protected Areas Policy (2011) that called for a wide range of actions to be undertaken by 2016. These include the "*revision, development and declaration of supporting legal instruments [to] enact an enabling legislative framework*", the establishment of a centralised authority "*to administer the coordination and*

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implementation of the National Protected Areas Policy for Trinidad and Tobago", and the establishment of protected areas under the new policy. Unfortunately, all efforts to declare the North East Tobago Marine Protected Area have failed since over half a decade.

Non-Government Sector

Fragmented management and use of land and waters also occurs in ***non-government sectors***. The absence of a national land use planning framework combined with outdated regulations and limited enforcement means that private land management and use is largely unrestricted. There is a concomitant lack of mechanisms and incentives for private land owners to engage in or benefit from conservation. The current, forested state of most private land in NE Tobago is therefore not a result of public policies or priorities, but an artefact of the priorities and preferences of individual owners. Although this speaks to the conservation commitment of some land owners, it is a highly vulnerable state for long-term conservation. Land owners may choose to develop their land with infrastructure or unsustainable agriculture that compromises the NETMABR.

Informal management and use of the land- and sea-scape, including public and private areas, is likewise unrestricted. As explained in the THA Comprehensive Economic Development Plan 2.0 (20), Tobago hosts "*longstanding insecure land tenure arrangements with as much as 83 percent of the lands of Tobago allegedly in informal tenure (the majority being family lands)*". Informal but long-standing family lands, squatting, small agricultural plots, unregulated dumping, hunting, harvesting of timber and other forest products, and harvesting of fish from the marine environment all represent often legitimate uses of public and private lands that can none the less contribute to fragmentation and degradation of ecosystems.

The implementation of the UNESCO MAB programme, including the operationalisation of the NE Tobago Protected Area Management Trust, offers a significant opportunity to de-fragment and consolidate the management of natural and cultural resources under one, overarching programme.

Although fragmented management is the principal barrier to conservation in NE Tobago, another critical barrier is a lack of monitoring and communication. This issue captures two hindrances to biodiversity conservation regionally as identified by the Caribbean Islands Biodiversity Hotspot assessment: limited technical and scientific knowledge and poor availability of information needed for effective decision-making, and lack of awareness of importance of biodiversity and ecosystem services. This similarly applies to the socio-cultural and economic development aspects of the NETMABR. Limited information and communication mean that it is difficult to:

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quantify threats, foster informed discussions, prioritise management actions, measure the success of interventions, and inspire stakeholders to take action. This barrier will be specifically targeted by strengthening the logistic function of the NETMABR.

In order to address the described challenges through strengthening the functions of a BR, the technical team proposes the following **Main Objective** for the management of the NETMABR:

To successfully consolidate and co-manage interventions related to sustainable and regenerative development, research, capacity building, education and networking on landscape, human- and eco-system levels for the benefit of NE Tobago's cultural and natural heritage and people.

In order to go into more depth, previous management plans for NE Tobago and IFPAM documents further detailed 12 key barriers to successful natural resource management in NE Tobago as follows:

1. outdated legal and regulatory framework for establishing and managing natural and cultural resources,
2. unclear, fragmented roles responsibilities of stakeholders, especially managing authorities,
3. disempowered and under-resourced management authorities,
4. inadequate funding,
5. willingness to participate if interventions seem to be too restrictive,
6. stakeholder conflicts,
7. lack of broad, bipartisan political will,
8. lack of technical capacity to identify and address issues,
9. minimal capacity on the ground with respect to practical approaches to effective natural and cultural heritage management,
10. inadequate law enforcement,
11. minimal experience with income-generating opportunities, and last but by no means least,
12. a lack of transparency, accountability and compliance with regulation and legislation by the Tobago House of Assembly.

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While IFPAM and other programmes and projects were able to partially address these barriers, and while it can be stated that conservation status and efforts in NE Tobago have never been better, it remains a fact that all of the above barriers are still valid and need attention.
The Management Plan at hand is based on the methodical approach that most of those barriers can be addressed by implementing strategies aligned with the three MAB functions.

These, below-described key strategies, are mainly based on the results of the recent Improved Forest and Protected Area Management Project (IFPAM, 2015-2020) which applied a participatory approach in identifying objectives and potential solutions to overcome conservation barriers; additionally, the ongoing interaction between the technical team and key stakeholders was used to refine recommendations included into the Management Plan.
These strategies are reoccurring and supported by proposed activities in the various components of the Management Plan at hand.

It should be noted that, while IFPAM continuously considered socio-cultural aspects of NE Tobago as essential to successful management of natural resources, there was, unfortunately, not a matching project to similarly address the management of NE Tobago's cultural heritage.

Figure 8. View from Speyside onto Little Tobago and Goat Island (Janina Ewals)



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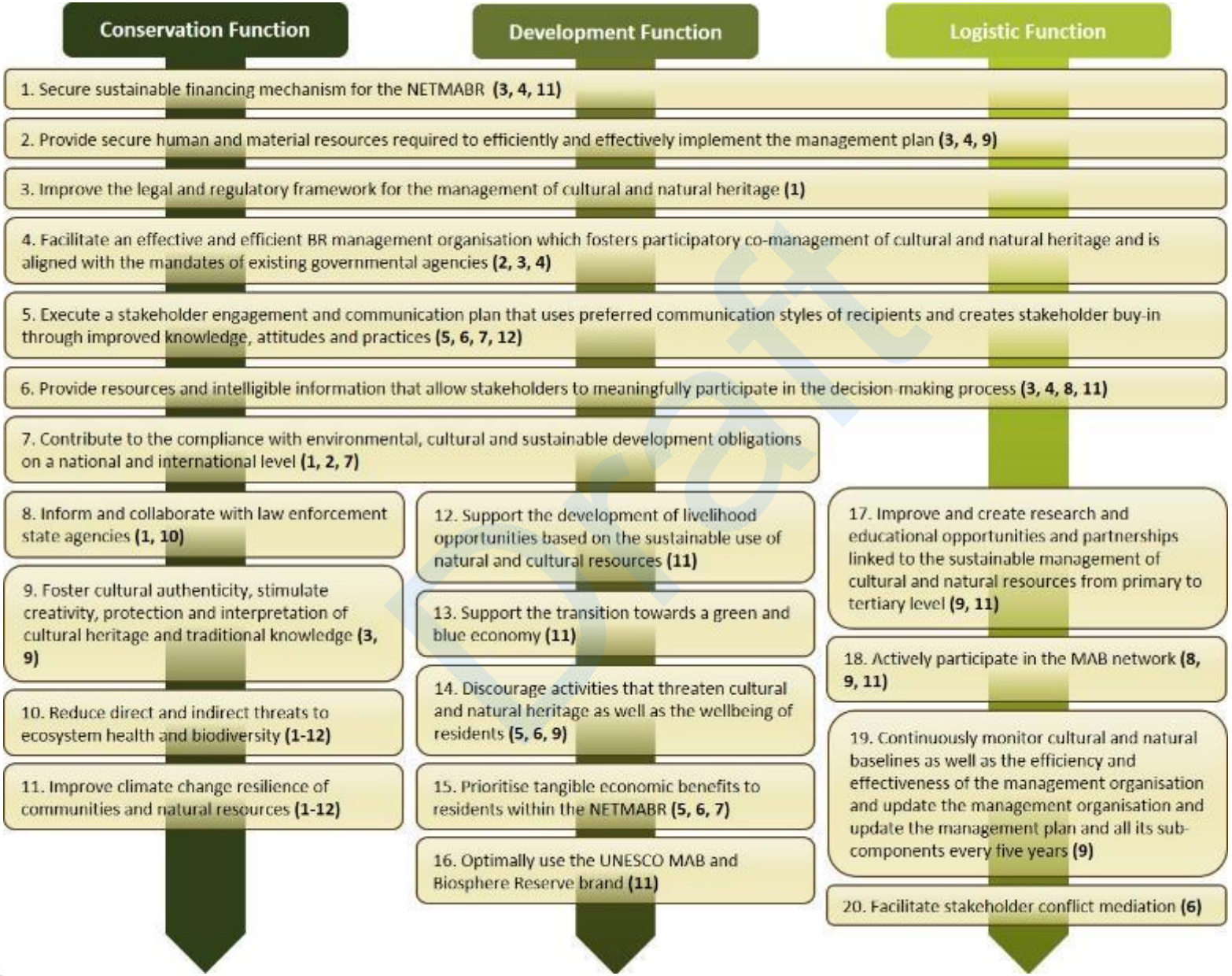


Figure 9. Proposed Main Strategies for the BR Management Plan, Addressed Key-Barriers in (brackets)

11 BLUE ECONOMY

Note: This chapter does not address sustainable fisheries which is covered by a specifically dedicated chapter.

Introduction

The World Bank (2017) defines Blue Economy as the "*sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem*".

More forward looking, the Commonwealth Blue Economy Series (2017), describes the "*concept of the blue economy as a promising avenue for economic diversification and growth embedded in fundamental principles of environmental sustainability*".

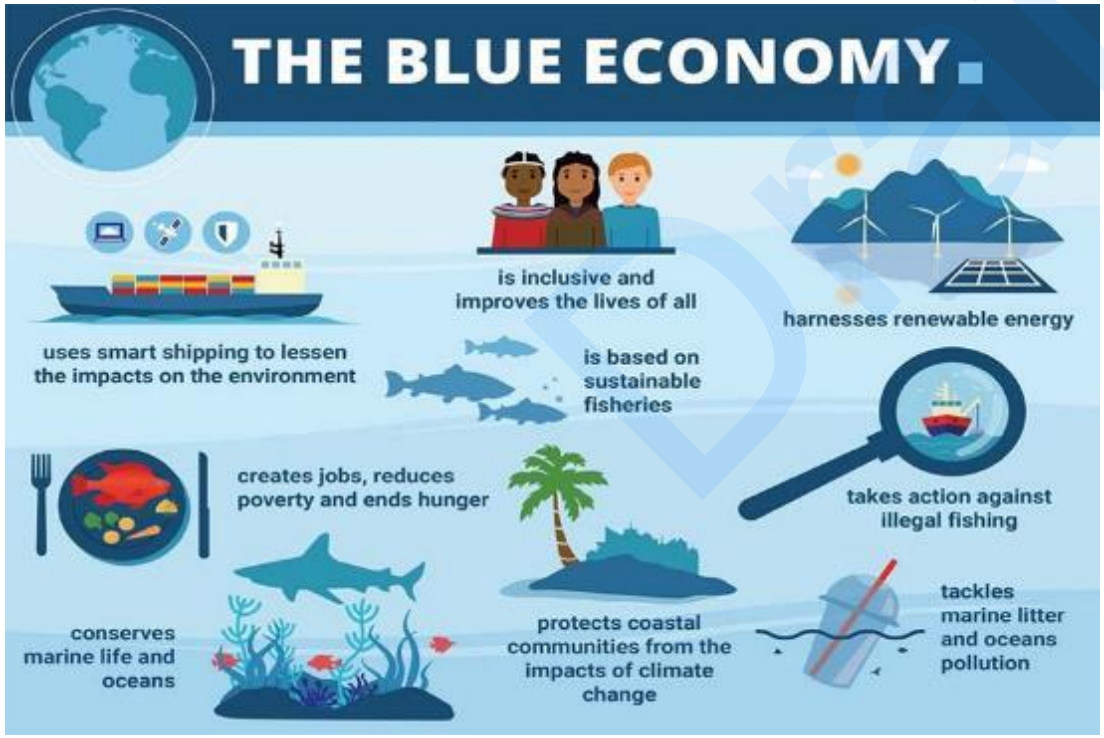


Figure 10. Principles of a Sustainable Blue Economy (Source: https://www.oceanactionhub.org/)

Increasingly, “Blue Economy” is used as a policy tool to drive economic growth and create jobs all over the globe; however, while the knowledge regarding the connection between economic and ecological wealth and health is abundant, this knowledge translates too slowly into a change of practise.
Therefore, it is imperative that global and local Blue Economy models tackle issues that cause environmental problems and shift resources from scarcity to abundance.

A strong blue economic development includes protection of all marine (coastal and open ocean-deep sea) and freshwater ecosystems in the NETMABR.



Understanding the above, the UN point out that the concept of a Blue Economy will aid in achieving the UN Sustainable Development Goals, specifically, Goal 14, which is “Life Below Water”.
Goal 14 describes the need to conserve and sustainably use the ocean, seas, and marine resources for sustainable development which is linked to all other SDGs, such as Goal 1: “*No Poverty*”, Goal 7: “*Affordable and Clean Energy*”, Goal 9: “*Industry, Innovation and Infrastructure*”, Goal 12: “*Responsible Consumption and Production*”, Goal 13: “*Climate Action*” and Goal 15: “*Life on land*”.

As a UNESCO Biosphere Reserve, the targets of SDG 14 should be at the centre of a management plan for NE Tobago’s blue economy. These targets include:

1. By 2025, **prevent and significantly reduce marine pollution** of all kinds, in particular from land-based activities, including marine debris and nutrient pollution.
2. By 2020, **sustainably manage and protect marine and coastal ecosystems** to avoid significant adverse impacts, including by strengthening their resilience, and take action for their restoration in order to achieve healthy and productive oceans.
3. **Minimise and address the impacts of ocean acidification**, including through enhanced scientific cooperation at all levels.

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4. By 2020, **effectively regulate harvesting and end overfishing**, illegal, unreported and unregulated fishing and destructive fishing practices and implement science-based management plans, in order to restore fish stocks in the shortest time feasible, at least to levels that can produce maximum sustainable yield as determined by their biological characteristics.
5. By 2020, **conserve at least 10 per cent of coastal and marine areas**, consistent with national and international law and based on the best available scientific information.
6. By 2030, **increase the economic benefits** to Small Island developing States and least developed countries from the **sustainable use of marine resources**, including through sustainable management of fisheries, aquaculture and tourism.

NETMABR stakeholders fully understand that tourism and fisheries, both blue economic activities, are the main private sector economic drivers in NE Tobago, yet the water-based natural resources in the NETMABR are unsustainably used, innovation and diversification have not materialised, pollution continues, and research is still rudimentary.

As such, the sustainable management of North East Tobago's water-based resources is the most important tool to prevent further environmental degradation, ensure ecosystem health, and improve socio-economic welfare for our communities.

Summary Situational Analysis

Of the various sectors included in the general model of a blue economy only some are applicable to the NETMABR.

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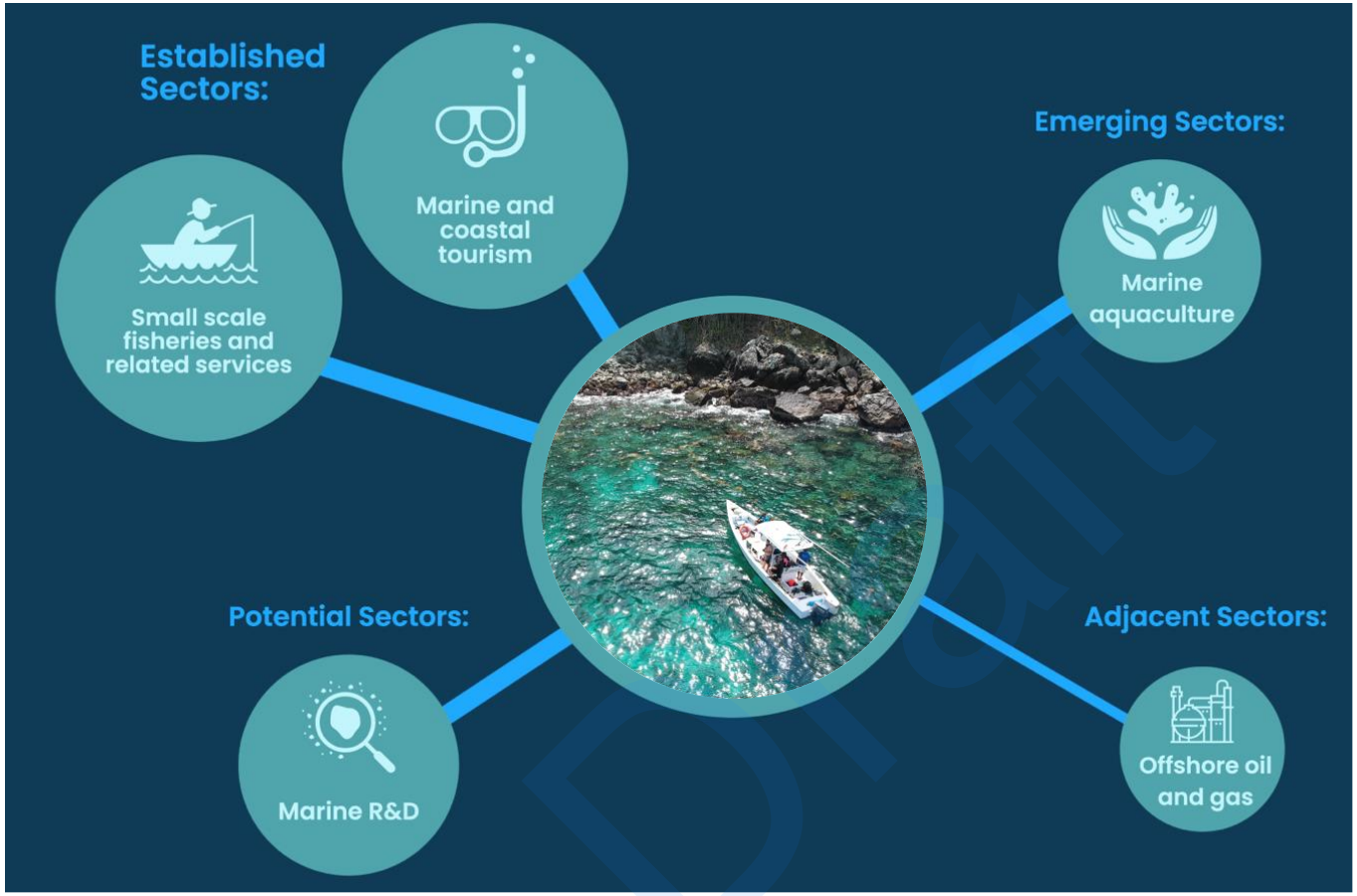


Figure 11. NE Tobago's Blue Economy Industries and Sectors

Legal and Policy Framework

The legal and policy framework for the management of marine resources within the NETMAR are described in Part 1 of the Management Plan.

Unfortunately, the Management Plan for the NE Tobago Marine Protected Area (2019-2029), prepared under the IFPAM project (2019), did not elaborate on the topic of Blue Economy.

Blue Economy Environment

As of 2022, the business environment within the NETMABR is not very conducive for the development of innovative blue economic business development.

Similarly to the situation regarding the green economy, general statements regarding business development impediments may be made, in the absence of data and research, as follows :

- NE Tobago is severely impacted from brain drain; on one hand, many gifted young persons need to leave the island for educational and employment possibilities, on the other hand, NE Tobago has difficulties to attract young academics, entrepreneurs, and experts due to underdeveloped health care, and difficult access to entertainment, shopping, kindergarten / school, governmental offices, and other necessities;
- the access to local financing is difficult and costly in comparison to international markets;
- the access to foreign exchange is very limited;
- infrastructural issues like power outages or limited vehicular access are challenging;
- sourcing of material and equipment is difficult;
- private sector organisations, such as business chambers, are not well established;
- innovation, entrepreneurship, and the taking of business risks are not well developed due to a history of dependency on governmental interventions and the after-effects of colonial governance structures;
- access to practical vocational training regarding blue economy is limited or not existing (esp. in the fisheries sector);
- stakeholders' exposure to capacity building, knowledge exchange, and travelling experiences is limited;
- the general skill level of the workforce requires improvement;
- there is a limited understanding of business ethics, financial accountability, and the negative consequences of corruption and nepotism;
- locally created, solid and liquid waste pollution remains a major challenge and is crucial for a sustainable blue economy having an impact on tourism attractions, entire food chains, ecosystem health, and ultimately human health;
- natural resource management is fragmented and under-resourced;
- in many cases legislation is outdated and difficult to interpret;
- existing policies are only partially implemented; and
- there is a deficiency of intelligibly analysed, applicable, blue-economic development research.

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Positive, business enabling factors include:

- beginning decentralisation of government services from Scarborough to Roxborough;
- opening of the Roxborough Hospital;
- opening of the Roxborough Police Station;
- Charlotteville functions as a port of entry;
- declaration of the UNESCO NETMABR focuses local, regional and international business, funding, R&D, and knowledge exchange interests;
- a heightened interest in sustainable development of NE Tobago by the current political representatives;
- a plethora of blue economic opportunities;
- relatively intact ecosystems;
- access to services, supplies, and expertise based in Trinidad;
- free healthcare;
- free education;
- access to airport and port within 1.5 hours of travelling; and
- easy access to international airport in Trinidad.

Established Blue Economy Sectors

Note: This chapter does not address sustainable fisheries to which a separate chapter is dedicated in part 3 of the management plan.

Marine and Coastal Tourism

Unfortunately, there are no data available regarding income for local communities from tourism activities in the NETMABR.
However, in order to understand the scale, a rough order of magnitude (ROM-25%/+75%), estimate can be made at 3,600,000 USD / year.
The natural beauty of NE Tobago is the most significant asset to bring visitors to the island. However, there must be a re-evaluation of the product as the usual marketing of the island as a "sun, sea and sand" destination is not enough to separate it from others in the wider Caribbean region. A diverse tourism product, particularly in the context of NE Tobago as a MAB reserve and its Blue Flag beaches, has great potential to bring a new growth dimension to the industry in the form of developing an eco- and regenerative tourism market. The challenges faced by the marine tourism industry include:

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- competition from neighbouring islands,
- poor management of the natural environment,
- uncompetitive investment climate, and
- threats from tourism in terms of waste and alienation, if not well managed.

Note: General sustainable tourism aspects are described in Part 1 of the Management Plan.



Recreational Diving

The reefs around Goat Island and Little Tobago and between St Giles and Castara are renowned dive sites. Most of the Atlantic reefs south-west of Speyside to Belle Garden are not used for recreational diving due to generally harsher water conditions.

In comparison to other small island dive destinations in the Caribbean, NE Tobago's underwater biodiversity and reef health are in relatively good condition; however, visibility is on the lower end due to the influence of the Orinoco plume. While new visitors are still amazed about the current underwater beauty, an overall loss of live coral and sponge cover, decline in abundance of snappers, groupers, and sharks has been reported over the past three decades and needs to be addressed to create a competitive dive tourism product.



Figure 12. Wreck Dive in Speyside (Janina Ewals)

During the pandemic, the recreational diving sector suffered a severe blow: of seven dive operators within the NETMABR in early 2019 only three were fully operational in early 2022. As such, the economic contribution from diving related activities in the NETMABR is now marginal, but has significant room for future expansion within the limits of acceptable change.

Major threats to the recreational dive industry are climate change related (e.g., change of fish migration patterns, rise in seawater temperature (coral bleaching), increased frequency and strength of swells), direct human threats (liquid and solid waste pollution, indiscriminate spearfishing, poaching of turtles, unsustainable fishing practises), and indirect human threats such as fragmented and under-resourced management.

The establishment of the new Roxborough Hospital, which includes a Hyperbaric Chamber, is a significant step forward to improve emergency care for divers.

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The limited availability of 3* to 4* accommodation in the 100 to 200 USD/d range, especially in Speyside and Charlotteville, is a significant hindrance to the expansion of the recreational dive tourism industry.



Figure 13. Map of NE Tobago indicating recreational dive sites

Yachting

Pre-pandemic data indicated that approximately 12 yachts overnighted on average in Charlotteville and 5 in Castara; other sites for short-term anchorage are Englishman's Bay and Kings Bay. Yacht visits dropped to zero during the pandemic and only in mid-2022, yachts kept returning.



Figure 14. Yacht in Pirate's Bay (Janina Ewals)

For many yachties, Tobago is the first stop after an Atlantic crossing, the south turning point of a Caribbean round trip, or a safe port during the hurricane season when many decide to stay for even several weeks or months. This is supported by the circumstance that Charlotteville is a port of entry with coast guards and immigration services.

Until mid-2022, the yachting sector was completely under-monetised: there were no services or sale of goods directed toward the needs of yachties and anchorage was free and unregulated. This contributed to attracting lower-end yacht tourists with very limited spending capacity and minimal contribution to the local economy.

In mid-2022, the first professional yacht-mooring field was established in Charlotteville by the Environmental Research Institute Charlotteville and yacht related services were offered by the Charlotteville Police Youth Club; since then, mooring fees pay for maintenance of moorings and assist vulnerable members of the community through a yacht tourism based social enterprise model; it is envisaged to replicate this model in Castara.

The development of a marina in NE Tobago has been discussed; however, the current infrastructure and available land space adjacent to safe harbours is a limiting factor.

Boat Tours

In 2019, there were less than 10 boat small-scale tour operators offering snorkel, sightseeing, and beach BBQs based in NE Tobago; four in Castara, one in Charlotteville, and possibly six in Speyside, which is the only location where glass-bottom boat tours are offered. Boat tours almost completely stopped during the pandemic and some boat owners

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increasingly engaged in artisanal fishing. The tour offerings were mostly basic with little difference to those offered in SW Tobago. Since 2020, the possibility to achieve international Blue Flag Boat certification (https://www.blueflag.global/blue-flag-for-boat-owners) is offered by the National Blue Flag Operator (https://green-tt.org) in Tobago.



Figure 15. Alibaba Tours Castara (https://www.alibaba-tours.com)



Recreational Fishing

Recreational fishing trips are offered from Castara, Charlotteville, and Speyside, often by the same boat owners that offer sightseeing tours. There are no professional game-fishing charters originating from NE Tobago; however, game fishing charters from SW Tobago might choose the marine area of the NETMABR depending on conditions. Pre-COVID, the Tobago International Game Fishing Tournament (https://tigft.com/) was held annually in May and attracted international visitors. The overall economic impact of recreational fishing is very low.

Recreational spearfishing, mainly by Trinidadian SCUBA-divers, does not add to economic revenue since spearfishing dive-trips cost the same as recreational dive trips and there are no permits to be obtained or fees to be paid. However, recreational spearfishing has a significant negative impact on reef heath and biodiversity as it indiscriminately targets meso-predators such as groupers and snappers without regulations regarding size limits, seasonal, or site restrictions.

Rock-fishing is conducted traditionally mostly by younger men on a relatively small scale for recreation and subsistence and has a very limited economic or environmental impact.



Beaches

There are several popular beaches within the NETMABR: Kingsbay*, Charlotteville Beach*, Pirates Bay, Bloody Bay*, Englishman's Bay, and Castara Beach*; * indicates presence of lifeguards and beach facilities. At peak times (weekends, public, and school holidays), these beaches might attract around 100 persons per day, these numbers are significantly lower during regular working days. Revenue generation at those beaches is limited to catering and has significant potential for improvement.



Figure 16. Parlatuvier Bay and Beach (Janina Ewals)

All beach facilities require upgrading regarding sewer treatment, solid waste management, turtle protection, health and safety. The internationally renowned Blue Flag status (https://www.blueflag.global/) was intended for Kingsbay and regrettably failed due to management and property-rights issues; it is now sought for Bloody Bay and will hopefully materialise in 2023 through a collaboration between the Tobago Tourism Agency Limited (TTAL, https://www.visittobago.gov.tt/) and Green T&T (https://green-tt.org/)



Cruise Ship Tourism

The only port to receive cruise ships in NE Tobago is Charlotteville. In mid-2022, the winter 2022 to spring 2024 schedule for 1-day visits was as follows:

Table 3. Cruise ship arrivals in Charlotteville winter 2022 to spring 2024.

Vessel	Capacity [pax]	Date						
Seabourn Sojourn	540	29 Dec 2022						
SeaDream Innovation	220	12. Jan 23	20. Jan 23	06 Mar 2023				
Star Legend	312	20 Jan 23	22 Jan 23	17 Feb 23	19 Feb 23			
Seabourn Ovation	638	24 Mar 2023	06 Jan 24	23 Mar 2024	02 Apr 24			
Star Pride	312	26 Nov 23	22 Dec 2023	24 Dec 2023	19 Jan 24	21 Jan 24	16 Feb 24	18 Feb 24
SeaDream II	112	21. Apr 24						

The cruise ship tourism contribution to the local economy is minimal due to the following reasons

- land excursion tours are sold by external tour operators before or on the cruise, tour operators based in NE Tobago are not able to offer or sell tours,
- anecdotally, cruise ship passengers are warned about health issues regarding local food and drinks,
- there is very limited authentic NE Tobago merchandise on sale,
- local vendors are not aware and do not offer products demanded by cruise ship passengers, and
- only a very limited number of passengers actually opts for a land excursion.

Charlotteville does not have the facilities or offerings to capitalise on cruise ship tourism, the jetty is in a dreadful state, and service providers are not trained to satisfy cruise ship passenger customer demands.

The underlying issue is that it is just not feasible to develop a tourism product that is only offered on 11 (or so) days per year.

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Emerging Blue Economy Sectors

Marine Aquaculture

As of mid-2022, a pilot oyster farm of the Environmental Research Institute Charlotteville is the only marine aquaculture pilot project in NE Tobago. Ideas about farming of blue crabs and Seamoss were discussed but never materialised out of various reasons including land ownership, environmental impacts, and predial larceny risks.

Potential Blue Economy Sectors

Marine Research and Development

The key enabler of a sustainable Blue Economy is applied R&D boosting new digital and biodiversity friendly technologies and innovation.

Currently, research and data collection in relation to the development of the blue economic sector is very limited and only conducted by the Department of the Environment, the Department of Marine Resources and Fisheries, the Institute of Marine Affairs, and the Environmental Research Institute. Unfortunately, there is no central repository regarding research and data related to blue economic development in NE Tobago.

The Logistics Pillar of the MAB Programme offers significant opportunities to engage with international universities and private sector industries to focus R&D activities regarding sustainable development in general and blue economic innovation specifically. Such options include regenerative energy, waste management (incl. ocean cleaning), fisheries, tourism, climate change, blue biotechnology, etc.

Carbon Offset

Carbon sequestration by phytoplankton within the marine zone of the NETMABR might have the highest potential for carbon off setting and carbon trading due to its amount and rapid growth utilising the nutrient rich Orinoco plume. Unfortunately, seagrass beds and mangroves cover only a very small area of the NETMABR and will not offer much economic gain from carbon trading; however, their carbon sequestration potential should be added to that of the forest and phytoplankton. While reefs are not a net absorber of CO2, they are closely associated with the remaining seagrass beds and mangrove forests which they protect from heavy wave action. Losing coral reefs may not only undermine these systems, but perhaps liberate stored carbon, such as where seagrasses and mangroves lose the storm protection that coral reefs provide by buffering the shoreline against storms and waves.

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Adjacent Blue Economy Sectors

The off-shore gas fields and exploration blocks are operated by Shell TT (north of Castara) and a partnership of Woodside Energy and bpTT (east of Charlotteville). In the past, these three companies have been supporting social and environmental programmes in NE Tobago and it can be expected that such initiatives are only increasing once the management plan is finalised and the management organisation established (currently North East Tobago Protected Area Management Trust). All three companies could be conduits for local and international funding as well as knowledge transfer, especially regarding renewable energy. The relationship between hydrocarbon extracting companies and fisherfolk in NE Tobago is fragile due to disputes over compensation for loss of income during surveying and exploratory activities.

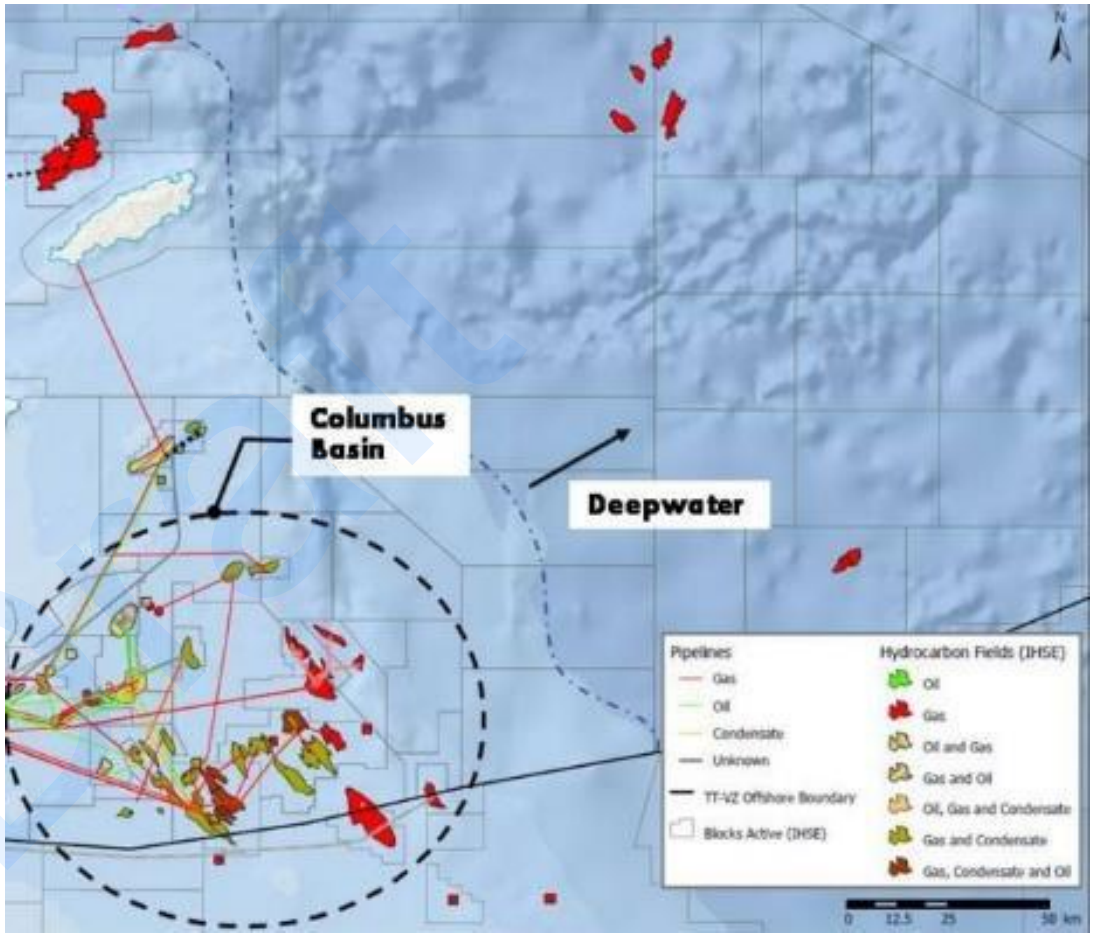


Figure 17. Gas and oil fields around Tobago. Source: Geological Society of Trinidad and Tobago.

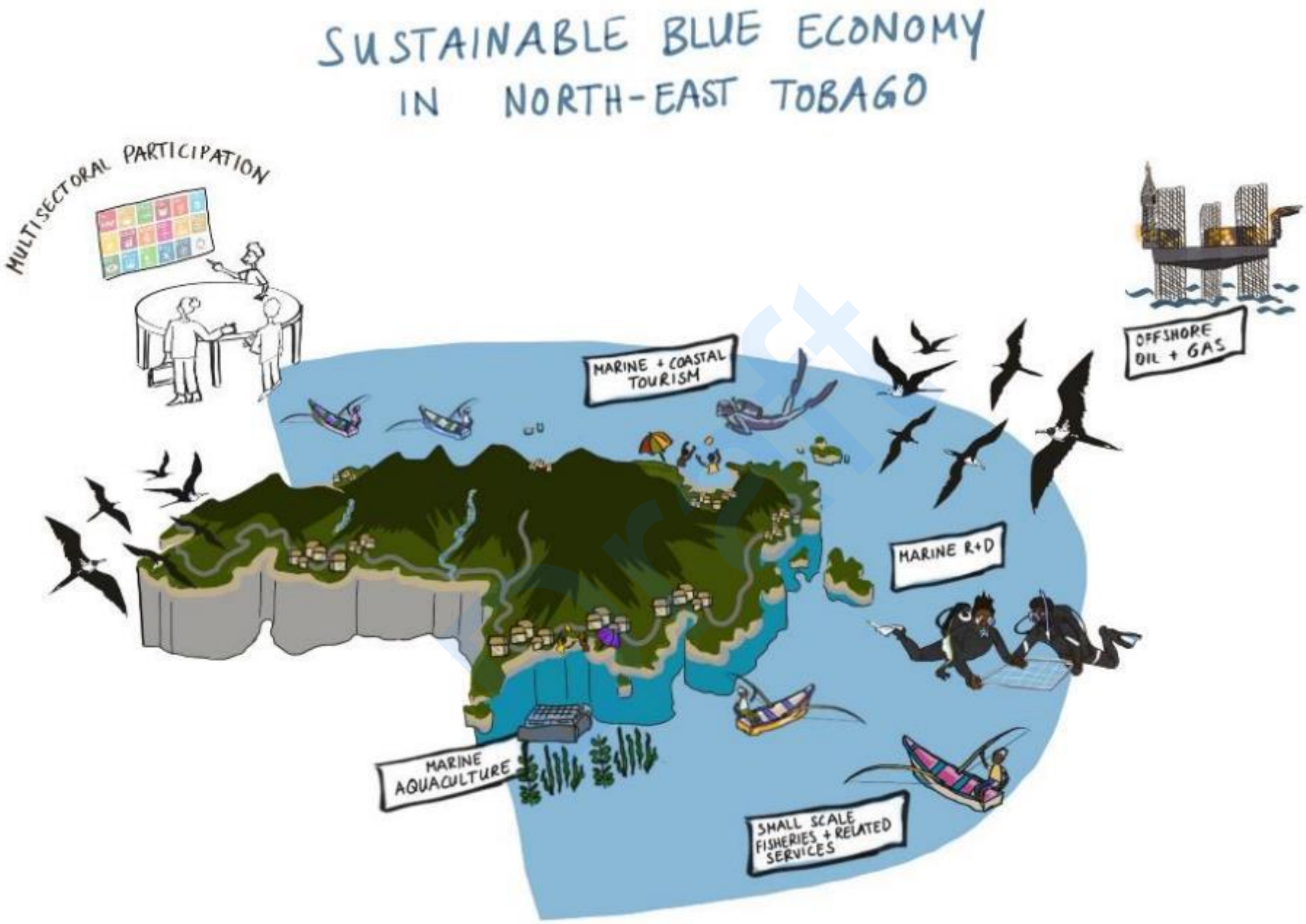


Figure 18. Sustainable Blue Economy in NE Tobago (Janina Ewals)

In summary:

While NE Tobago is highly dependent on blue economic activities, their potential is not realised and available resources increasingly depleted or compromised.

> "At the heart of developing a Blue Economy for Tobago should be sustainability, enhancing people's livelihoods and not engaging in activities at the expense of the environment."
> ~ Professor Judith Gobin, marine biologist, the UWI

High Level Goal

The Blue Economy in the NE Tobago UNESCO Man and the Biosphere Reserve consists of diverse and innovative marine business activities which manifest the Biosphere Reserve's full economic potential, equitably support sustainable livelihoods, create opportunities for residents, and regenerate ecosystems and biodiversity.

(to be stakeholder confirmed)

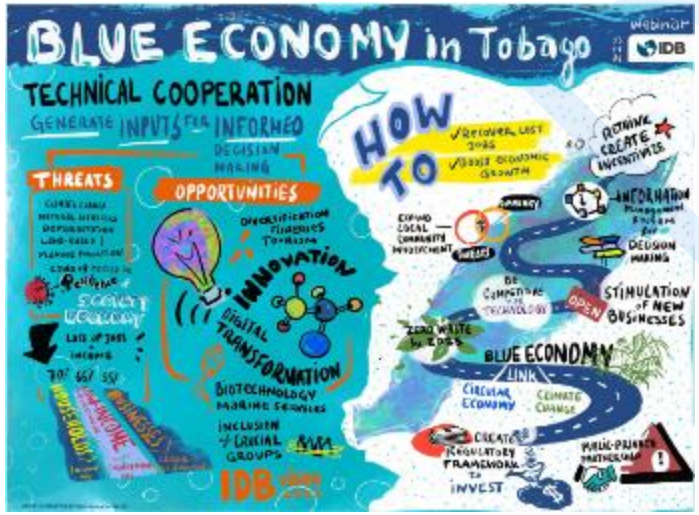


Figure 19. IDB Blue Economy Workshop Poster 03 Nov. 2021

Priorities

An integrated approach to coastal zone management in the NETMABR is needed to maintain and enhance the functional integrity of marine resources while enabling sustainable blue economic development through rational and inclusive decision-making and planning.

The priorities regarding the development of a successful blue economy (fisheries are addressed in a separate chapter) must address major threats and weaknesses and build on strengths and opportunities.
The proposed priorities are as follows:

- stakeholders understand the concept of Blue Economy and its importance for NE Tobago;
- establishing an integrated approach to blue economic development;
- applicable research regarding potential blue economic activities is intelligibly and freely available;
- stakeholders have the capacity to engage in blue economic activities;
- a business environment that is facilitating innovation, collaboration, investment, and development of blue economic activities;
- natural resources are regenerated and sustainably available; and
- an economic and environmental monitoring programme that is communicated to stakeholders.

Strategies

1. Identifying the most applicable, lucrative as well as socially and environmentally beneficial blue economic opportunities for the NETMABR.
2. Creating the facilitating business environment for the identified options.
3. Enabling local and attracting international investment.

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Programmes and Projects

Re. Strategy 1. Identifying the most applicable, lucrative as well as socially and environmentally beneficial blue economic opportunities for the NETMABR.

Facilitate:

- drafting a stakeholder approved integrated coastal zone management plan for NE Tobago (which is also required for other components covered in the NETMABR management plan)*, considering, inter alia:
  - climate change resilience,
  - user conflict resolution,
  - carrying capacity / limits of acceptable change,
  - disaster preparedness,
  - zoning,
  - ecosystem regeneration,
  - economic development, and
  - ensuring equitable benefits and strengthening communities.
- drafting of a stakeholder approved blue economic development plan in the NE Tobago UNESCO Man and the Biosphere Reserve*, considering, inter alia:
  - mapping of stakeholders, business opportunities, and business environment;
  - capacity building for local stakeholders to engage in regenerative blue economy;
  - blue economy SWAT and PESTLE analysis,
  - an investment opportunity portfolio,
  - equitable local business involvement, and
  - a strategy to attract investors.

*including a review of key documents including, but not limited to:

1. UNESCO-IOC, IMA. 2021. A Sustainable Blue Economy for Trinidad and Tobago. Paris, UNESCO (IOC Technical Series 166 / ICAM Dossier no 16)
2. Wothke et al. (2013) Final Report of the North East Tobago Marine Protected Area Specialist
3. Wothke, A., Moses-Wothke, J., Jordan, L., (2021) An Integrated Path Towards a Resilient Tourism Sector in North-East Tobago, a chapter in Managing Crises in Tourism Resilience Strategies from the Caribbean, Springer International Publishing, Print ISBN: 978-3-030-80237-0 https://www.springerprofessional.de/en/an-integrated-path-towards-a-resilient-tourism-sector-in-north-e/19773076
4. Institute of Marine Affairs (2015), Piloting the Integration of Coastal Zone Management and Climate Change Adaptation in Tobago

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Re. Strategy 2. Creating the facilitating business environment for the identified options.

Facilitate:

- clearly defining roles and responsibilities of various stakeholders (via the institutional and governance framework of the NETPAMT);
- building the readiness and capacity of stakeholders to engage in the blue economy through:
  - maintaining an ongoing communication campaign on the benefits of a regenerative blue economy and how to participate in it (especially through highlighting local success stories),
  - developing and promoting a NETMABR brand for products and services (including a tourism sub-brand),
  - establishing an intelligible online platform that lists all educational / vocational / attitudinal capacity building opportunities and requirements, distributed via monthly push communication,
  - facilitating experiential learning journeys for key stakeholders,
  - engaging the Tobago Tourism and Hospitality Institute,
  - engaging with international regenerative / sustainable tour operators,
  - creating and maintaining a NE Tobago tourism website, booking platform,
  - establishing a cohort of business skills trainers consisting of CSO members throughout NE Tobago communities,
  - providing focus to blue economic research and development guided by the above-mentioned blue economic development plan and ensuring intelligible broadcasting of research results, and
  - establishing blue economic research and development partnerships with academic and private sector organisations;
- ensuring that resources are sustainably used, regenerated, and threats minimised through:
  - a continued communication campaign improving knowledge, attitude, and practise regarding ridge to ocean ecosystems,
  - the regeneration of fragile ecosystems that are crucial for a prosperous blue economy: reefs, beaches, mangroves, sea grass beds, and rivers,
  - declaring at least 10% of the NETMABR marine area a legally fully protected core zone,
  - minimising solid, liquid, light, and noise pollution of the coastal and aquatic environment;
- collaboration with business enabling partners such as:
  - banks,
  - governmental departments,

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    - funders,
    - credit unions, and
    - insurances;
- supporting the establishment of a NETMABR business chamber, and
- establishing a blue economy M&E programme to identify trends and modify approaches where necessary.

<u>Re. Strategy 3: Enabling local and attracting international investment.</u>

Facilitating:

- the creation of business/investment including e.g., business plan templates, list of requirements, scaled investment options;
- linkages between local entrepreneurs and international investors;
- online or in-person NETMABR blue economy conventions; and
- engaging local and international business angels.

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