Government of the Republic of Trinidad and Tobago

CANARI

Trinidad and Tobago

National Outlook on Indigenous and Local Knowledge of Biodiversity

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Disclaimer Page

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Foreword

Trinidad and Tobago ratified the United Nations Convention to Biodiversity (CBD) in 1996. As a party to the CBD, Trinidad and Tobago is obliged to develop a National Strategy and Action Programme (NBSAP), which is the primary instrument through which parties implement the Convention at the national level. In 2022, at the fifteenth session of the Conference of the Parties (COP 15) to the CBD, Trinidad and Tobago assented to the Kunming-Montreal Global Biodiversity Framework (KMGBF) which set goals and targets for the conservation of biodiversity, to be attained by 2050 and 2030 respectively. All of the goals and many of the targets under the new Framework are centred around people sustainably with nature and deriving benefits from it. Accordingly, this necessitated Trinidad and Tobago to reorient its NBSAP to bring it more into alignment with the KMGBF and by extension adjust our National Biodiversity Targets so that they more closely match those of the Framework. Part of this effort meant the recognition and reconciliation of the roles played by the knowledge and practices of our first peoples as well as what has become traditional practices.

The Ministry of Planning, Economic Affairs and Development, therefore, takes pleasure in endorsing and introducing this Report on the Trinidad and Tobago National Outlook on Indigenous and Local Knowledge (ILK) of Biodiversity. In aligning our NBSAP with the KMGBF, this document seeks to bridge the gap between traditional wisdom and scientific practice.

At first glance, the current population demographics of Trinidad and Tobago's society doesn't immediately appear to reflect a high percentage of indigenous peoples or communities in comparison to some of our Caribbean neighbours. However, as a Caribbean Small Island Developing State, with close proximity to South America, Trinidad and Tobago's history and culture has been influenced by the region's first to an outsized degree and this can still be observed in our present socio-economic development. By way of illustration, many of the foods on which our national cuisine is based were bequeathed to us by our indigenous forebears. ILK on local flora has supplemented orthodox medical practice to good effect, by identifying plant species which have proven and potential clinical application, for both human and veterinary medicine.

Most countries in today's world expend significant resources, both financially and otherwise to implement engineering solutions for civil infrastructure or the provision of services such as potable water. These amenities in many instances can be accounted for in the form of nature-based solutions, with our Indigenous Peoples and Local Communities (IPLCs) being the first and sometimes foremost exponents of this facility that nature affords us. It's safe to say that the trend toward depending entirely on a purely scientific appraisal of our environment has contributed to the discounting of the value of knowledge accumulated and communicated through oral traditions. Instead, this body of knowledge should complement what science has afforded us, through

verification of anecdotal information and by streamlining, or sharpening the focus of the direction of scientific enquiry. Modernity has quietly led us to largely ignore our intangible connection with biodiversity and this disposition is linked with our philosophical attitudes to our environment.

This Report provides a more fulsome understanding of the value and meaning of biodiversity to our local context and the problems faced in managing biological resources in order to generate livelihoods while maintaining the integrity of our various ecosystems.

Senator Dr. the Honourable Kennedy Swaratsingh

Minister of Planning, Economic Affairs and Development
Republic of Trinidad and Tobago

Foreword

Indigenous and local knowledge systems are increasingly being acknowledged worldwide as crucial to advancing sustainable development and safeguarding biodiversity. Across the Caribbean, communities hold unique knowledge of biodiversity that is deeply embedded in their cultural identity and livelihoods. Recognizing, valuing, strengthening, and safeguarding these knowledge systems, rooted in generations of lived experience and grounded in profound spiritual and cultural connections to land and sea, is crucial to addressing the accelerating loss of biodiversity, climate change, and socio-economic pressures across the region.

In Trinidad and Tobago, the rich and diverse natural and cultural heritage shaped by First Peoples, Afro-descendant, Indo-descendant, and other local communities, is home to diverse knowledge systems grounded in farming, fishing, forest and ocean stewardship, medicinal plants, and spiritual practices.

As the UN agency mandated to advance cultural diversity, education, science, and inclusion, UNESCO is committed to ensuring that Indigenous and local knowledge systems are recognized as vital contributors to sustainable development. Through its Local and Indigenous Knowledge Systems (LINKS) Programme, UNESCO works alongside community knowledge holders, policymakers and national partners to strengthen the role of Indigenous and local knowledge in shaping biodiversity and climate policy and actions.

The Trinidad and Tobago National Outlook on Indigenous and Local Knowledge of Biodiversity (National ILK Outlook), implemented by the Caribbean Natural Resources Institute (CANARI) in partnership with the Environmental Policy and Planning Division of the Government of the Republic of Trinidad and Tobago under the coordination of the UNESCO LINKS Programme and supported by the Kunming Biodiversity Fund, represents a significant milestone in enhancing mainstreaming of Indigenous and local knowledge in biodiversity related policy and practice. This publication establishes a clear baseline understanding of the status of use documentation and the level of policy inclusion of Indigenous and local knowledge in Trinidad and Tobago.

Through a Multiple Evidence Base approach, the Trinidad and Tobago National ILK Outlook brought communities and their knowledge closer together with national biodiversity policies, with a special participation of communities that live within the North-East Tobago UNESCO Biosphere Reserve.

Aiming at advancing the implementation of the Kunming-Montreal Global Biodiversity Framework (KMGBF) and informing the national biodiversity and strategy and action plan (NBSAP III), the National ILK Outlook serves as a catalyst for strengthened partnerships and dialogue among policymakers, scientists, civil society organizations, and Indigenous Peoples and local communities in Trinidad and Tobago.

UNESCO gratefully acknowledges the support of the Kunming Biodiversity Fund and expresses its appreciation to CANARI and the Environmental Policy and Planning Division of Trinidad and Tobago for their strong partnership and effective implementation of this initiative.

This publication invites us to take pathways that are not only guided by scientific knowledge, but also by the wisdom, stewardship, and resilience of the communities that have long been inhabiting and caring for biodiversity in land and the sea, as envisioned by the KMGBF and UNESCO's LINKS Programme.

Antonio De Sousa Abreu, PhD

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UNESCO

Acknowledgements

The *Trinidad and Tobago National Outlook on Indigenous and Local Knowledge (ILK) of Biodiversity* (TTNOILKB) initiative is funded by the Kunming Biodiversity Fund (KBF) with oversight from the United Nations Educational, Scientific and Cultural Organization (UNESCO) and in partnership with the Environmental Policy and Planning Division (EPPD), of the Ministry of Planning, Economic Affairs and Development of the Republic of Trinidad and Tobago.

The TTNOILKB was made possible through the generosity of ILK holders who shared their time and expertise during either community workshops, multistakeholder dialogues or key informant interviews. These contributors are gratefully acknowledged and listed in the following section. Sincere thanks are also extended to the focus groups participants who provided metadata on ILK sources and helped to identify relevant knowledge holders. Further appreciation is extended to government and civil society organisations who participated in the multistakeholder dialogues.

Author's Note

This report was developed within a defined timeframe and budget, which influenced the scope and depth of data collection and analysis. As such, in-person visits to certain museums, libraries, and organisations holding physical ILK documentation were not feasible. This included institutions in Tobago.

Extensive efforts were made to ensure broad and inclusive engagement in workshops, focus groups and key informant interviews. However, the project's short timeframe, coupled with stakeholder unavailability, restricted the number of key informant interviewees and the range of organisations they represented. This is acknowledged as a limitation of the study.

The findings also reflect prioritisation decisions made within the project's scope. While agricultural ILK is documented in the report, it is not analysed at the same level of detail as medicinal plant knowledge. Deeper, more systematic analysis of agricultural ILK would benefit from dedicated follow-up research and specialist expertise. Accordingly, areas not fully addressed within this project are highlighted as recommendations for future work to build on the foundations established by the TTNOILKB.

Executive Summary

Indigenous and Local Knowledge (ILK) is defined as "a cumulative body of knowledge, practice and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (IPBES, 2025). The Trinidad and Tobago National Outlook on Indigenous and Local Knowledge of Biodiversity (TTNOILKB) aimed to establish a baseline understanding of the status and documentation of biodiversity ILK in this country, highlighting ILK documentation gaps, and examining the level of inclusion of ILK in biodiversity policies and decision-making processes. The initiative also sought to strengthen awareness and build the capacity of policymakers and other stakeholders to effectively engage Indigenous Peoples and local communities in biodiversity decision-making and policy formulation.

The TTNOILKB utilised desk research, focus groups, Key Informant Interviews (KIIs), multistakeholder dialogues and policy workshops. A case study of two communities in Tobago was also conducted to demonstrate inclusive, ethical, and locally adaptable participatory methods for documenting ILK while strengthening biodiversity management and building capacity among communities and partner institutions. The communities of L'Anse Fourmi and Charlotteville were selected as the target communities, and ILK was documented using participatory mapping, ecological calendars, historical timelines, and walking workshops. These methods generated spatial, temporal, and experiential data on fishing and farming sites, seasonal cycles, culturally significant landmarks, and historical land and sea use. Outputs, including community-owned photo journals, provided baseline information to support biodiversity monitoring, management planning, and the integration of ILK into protected area management frameworks.

The desk study revealed that ILK on medicinal plants was well documented in Trinidad and Tobago (43% of documentation reviewed). There were fewer studies on historic aspects of biodiversity use, agricultural and marine ILK, and spiritual roles of biodiversity. KIIs with Indigenous and Afro-Indigenous groups yielded information on traditional uses of medicinal plants, traditional agricultural practices and spiritual connections with nature. The KIIs also captured the traditional practices of resource user groups such as hunters, beekeepers, fisherfolk and farmers. Interviewees noted ILK gaps in terms of species management, sustainable use of non-timber forest products, climate change and agriculture, fisheries and marine biodiversity, traditional medicine usage, women's roles as ILK custodians, Indigenous community mapping, and agrobiodiversity and traditional agricultural systems. Interviewees identified multiple threats to ILK related to biodiversity, including habitat degradation of culturally and resource-important areas, unsustainable harvesting practices, restricted access to traditional lands, climate and environmental change affecting resource availability, negative perceptions

and limited understanding of Indigenous practices, weakening connections among Indigenous groups, and insufficient documentation of ILK.

Focus groups suggested that the limited recognition of ILK within biodiversity governance was driven by inadequate engagement with Indigenous Peoples and local communities. Focus group participants also noted weak inclusion of ILK in decision-making and insufficient mechanisms for intergenerational knowledge transfer. Other key barriers to using ILK in biodiversity governance included limited capacity and platforms to document and share ILK, concerns over knowledge ownership and misuse, declining land rights and biodiversity, and erosion of traditional practices.

Multistakeholder policy dialogue and ILK capacity-building workshops assessed the state of ILK inclusion in biodiversity policies, identified gaps and opportunities and sought to strengthen mechanisms for mainstreaming ILK into planning and decision-making. Bringing together policymakers, civil society organisations, and Indigenous Peoples and local communities, the workshops combined policy-focused discussions with hands-on training on participatory ILK documentation tools. These tools included participatory mapping and ecological and historical calendars, strengthening participants' capacity to apply these approaches within their own contexts.

Workshop participants noted that while ILK is already informally influencing some biodiversity policies, e.g. through public consultations, CSO-government collaboration, and education initiatives, its broader mainstreaming is constrained by a number of factors. These include low policy awareness, weak documentation, limited capacity and resources among Indigenous Peoples and local communities, trust deficits, and inadequate legal and institutional frameworks. Stakeholders identified strong opportunities to address these gaps through improved consultation processes, diversified participatory methods and capacity-building in documentation and policy engagement. They also suggested dedicated ILK data repositories, strengthened legal protections, including Free Prior and Informed Consent (FPIC) and intellectual property rights, as well as greater use of education, youth engagement, and bridging institutions. Overall, the discussions underscored that sustained capacity-building, financing, networking, and rights-based frameworks are essential to effectively integrate ILK into biodiversity policy, planning, and decision-making.

Stakeholders elaborated further on capacity gaps for ILK inclusion in biodiversity governance, noting, for example, limited training in data-gathering methodologies, inadequate communication and networking (particularly with youth and the scientific community), financial constraints, low representation in decision-making forums, and limited awareness of rights. To address these challenges, stakeholders recommended targeted capacity-building in documentation using accessible and culturally appropriate formats, e.g. photo journals and cell phone videos. They also suggested training in digital and storytelling skills, policy and legal literacy, and

engagement in government consultative processes, alongside technical support in project management and fundraising. Strengthening institutional frameworks was also emphasised, including integrating and properly crediting ILK within research by government agencies and universities. They also recommended establishing accessible ILK repositories, supporting community councils and joint forums, and embedding FPIC and intellectual property protections in legislation and drawing on successful community-based and culturally grounded initiatives as models for replication.

Weakening inter-generational transmission of ILK was noted due to social change and limited learning opportunities. Strengthening storytelling, youth-focused cultural programmes, and integrating ILK into school curricula were identified as key strategies to support knowledge continuity, future leadership, and long-term environmental stewardship. Training in practical skills such as policy interpretation, public speaking, media engagement, and proposal writing was recommended to support confident and effective participation.

The TTNOILK initiative also evaluated the extent to which ILK is incorporated in national policies, including the Trinidad and Tobago's National Biodiversity Strategy and Action Plan (NBSAP). It was noted that the NBSAP is under revision, but that the drafts in development show strong alignment with the ILK- and Indigenous Peoples and local communities related targets of the Kunming Montreal Global Biodiversity Framework (Targets 9, 21, and 22). However, to strengthen ILK mainstreaming in the NBSAP, it is suggested that ILK be recognised as part of the Multiple Evidence Base (MEB) for wild species management, explicitly protecting the rights of Indigenous Peoples and local communities in ecosystem restoration and access and benefit-sharing (ABS) processes. It is also suggested that mention should be made within the NBSAP of integrating ILK into national scientific, research, and monitoring frameworks through participatory approaches. Further, there should also be mention of inclusive decision-making, access to justice, and access to information, ensuring gender-responsive and rights-based participation of Indigenous Peoples and local communities, in closer alignment with KMGBF Targets.

Overall, the MEB approach recognises that differences between knowledge systems (e.g. ILK and scientific data) may arise due to scale, timelines, methods, or interpretation, and should be jointly documented and assessed rather than dismissed. Validating ILK within communities through feedback and consensus-building workshops is recommended before undertaking joint assessments with scientific data, as this can often resolve apparent contradictions.

Effective ILK mainstreaming requires the meaningful participation of Indigenous Peoples and local communities and ILK champions in policy consultations, aided by practical support measures such as providing transport, using community-based venues, and scheduling flexible meeting times.

Facilitation processes should also create safe and inclusive spaces, supported by sensitisation of policymakers, technocrats, and academics on both inclusive engagement and the value of ILK in biodiversity policy. Trust-building and respect for ILK holders' rights are critical, as concerns about misuse, loss of ownership, and weak legal protections can discourage knowledge sharing. While formal mechanisms such as FPIC are essential, complementary measures such as validation workshops, author credits, and involvement in document review also play an important role. Strengthening intermediary organisations, improving access to legal expertise, clarifying access-and-benefit-sharing arrangements, and embedding ILK and customary land rights within national legislation are key steps to ensuring that ILK is protected, respected, and effectively translated into biodiversity policy and action.

Contributors of ILK

CHARLOTTEVILLE

- Akedo Muzla - Rasta/Community member
- Allison Thomas - Tobago Unified Fisherfolk Association (TUFA) and Trinidad and Tobago Association of Village and Community Councils (TBAVCC)
- Ancil Kent - North East Sea Turtles
- Chelsea Manswell - Charlotteville Police Youth Club (CPYC)
- Christopher Moore - Charlotteville Village Council
- Desiree Francis - Community member
- David Murray - Community member
- Fredrick Roberts - All Tobago Fisherfolk Association (ATFA)
- Gail Caesar - Community member
- Ian Daly - Tobago Unified Fisherfolk Association (TUFA) and Bloody Bay Fisherfolk
- Jaycel Joseph - Charlotteville Police Youth Club (CPYC)
- John Carrington -Spiritual Baptist (Pastor)
- Junior Quashie - All Tobago Fisherfolk Association (ATFA)
- Malika S. Cordner - Charlotteville Police Youth Club (CPYC)
- Martha Greenawalt - Rising Minds Education
- Ned Celestine - North East Sea Turtles
- Nirala Sonder - Charlotteville Village Council
- Penelope Williams - Cholson Chalets Ltd.
- Sheneka Warrick - Community member
- Thomas Nicholson - Community member
- Vanessa Perry - Community member
- Vita Dillon-Jack - Charlotteville Heritage

L'ANSE FOURMI

- Aamir Charles - Community member
- Aaron King - Community member
- Ackim Chance - Community member
- Adeel Kerr - Community member
- Akeda Braithwaite - Community member
- Allison Thomas - Tobago Unified Fisherfolk Association (TUFA) and Trinidad and Tobago Association of Village and Community Councils (TBAVCC)
- Ani-Ann King - Community member
- Arnel King - Community member
- Barrington Nedd - L'Anse Fourmi Village Council
- Carlene Beckles - Community member
- Danesha Barton - Community member
- Dannyelle Williams - L'Anse Fourmi Village Council
- Dashawn Chance - Community member
- Ethlyn Chance - L'Anse Fourmi Village Council
- Gloria Chance Roberts - L'Anse Fourmi Village Council
- Hailey Cordner - L'Anse Fourmi Village Council
- Ian Daly - Tobago Unified Fisherfolk Association (TUFA) and Bloody Bay Fisherfolk
- Leon Chance - L'Anse Fourmi Village Council
- Lyndell Manswell - Community member
- Ray Edwards - Community member
- Reynold Chance - Community member
- Shannon Chance - Community member
- Tinnell Wilson Charles - Community member
- Tyrell Gracie - Community member

KEY INFORMANT INTERVIEWEES[1]

- Akinde Rudder
- Aleeyah Amanda Ali
- Baba Neal Ryan Rawlins
- Casey Primus
- Chief Ricardo Bharath Hernandez
- Chief Veronica Antoine
- Don Cummings
- Empress Mwanajuma Extavour
- Erwin Doyle (Oba a Ala Obatala)
- Glenroy Halls (Bongo Grease)
- Goomtee Ragoobar
- His Excellency Eric Lewis
- Iya Akilah Jaramogi
- Iya Ifabumi Rhonda Valentine Charles
- Rauold Keith Simon
- Rodney Ramgoolam
- Sunil Roopchand

INDIGENOUS PEOPLES AND LOCAL COMMUNITIES (IPLCS) AND CIVIL SOCIETY ORGANISATIONS (CSOS) WHO PARTICIPATED IN MULTISTAKEHOLDER POLICY DIALOGUE AND CAPACITY-BUILDING WORKSHOPS[2]

TRINIDAD

- Allan Bachan, Turtle Village Trust
- Andrew Campbell, Trinidad & Tobago Field Naturalists' Club
- Azard Mohammed, The Trinidad and Tobago Unified Fisherfolk
- His Excellency Augustin Chin, First Peoples Sovereign Nations TT
- Joanna Fiddler, Caribbean Youth Environment Network (CYEN) Trinidad and Tobago
- Ricardo Hansil, Warao People of Siparia
- Savann Phillip, Caribbean Youth Environment Network (CYEN) Trinidad and Tobago

TOBAGO

- Bertrand Bhikarry, Environment Tobago
- Christine Scipio, Speyside Eco-Marine Park Rangers
- Haynes Cowie Clarke, Tobago Wildlife and Environment Protection Group
- Ian Wright, Corbin Wildlife
- Jezrine Bovell, Save Our Sea Turtles, Tobago
- Juivon Palmer, Anse Fromager Ecological/ Environmental Protection Organisation
- Kadifa Mulrain, Environmental Research Institute Charlotteville
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- Rhonda McMillan-James, Speyside Eco-Marine Park Rangers
- Roy Corbin, Corbin Wildlife
- Shanice Mark, Environmental Research Institute Charlotteville
- Susan Suchit, Speyside Eco-Marine Park Rangers
- Tamica Whitlock, Environmental Research Institute Charlotteville / Green TT

1 Organisations of key informant interviewees listed in Appendix 2
2 Excluding persons already listed in sections above

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List of Acronyms

ABS	Access and Benefit-sharing
AIS	Alien Invasive Species
ASESA	Aripo Savannas Environmentally Sensitive Area (ASESA)
BIOREACH	Biodiversity conservation and agroecological land restoration in productive landscapes of Trinidad and Tobago
CANARI	Caribbean Natural Resources Institute
CBD	Convention on Biological Diversity
CBO	Community-based organisation
CDA	Chaguaramas Development Authority
CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora
CSO	Civil Society Organisation
DMRF	Department of Marine Resources and Fisheries
DNRE	Department of Natural Resources and Environment
EMA	The Environmental Management Authority
EPPD	Environmental Policy and Planning Division
ERIC	Environmental Research Institute Charlotteville
ESA	Environmentally Sensitive Areas
ESS	Environmentally Sensitive Species
FPIC	Free, Prior and Informed Consent
FAO	Food and Agricultural Organization
FARCP	Fondes Amandes Community Reforestation Project
GMO	Genetically Modified Organism
GORTT	Government of the Republic of Trinidad and Tobago
ICZM	Integrated Coastal Zone Management
ILK	Indigenous and local knowledge
IMA	Institute of Marine Affairs
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
KII	Key Informant Interview
KMGBF	Kunming-Montreal Global Biodiversity Framework
LINKS	Local and Indigenous Knowledge Systems
MAB	Man and the Biosphere
MAF	Ministry of Agriculture and Fisheries
MEB	Multiple Evidence Based
NALIS	National Library and Information System Authority
NBSAP	National Biodiversity Strategy and Action Plan
NEST	North East Sea Turtles
NCP	Nature's Contribution to People
NETMABR	North-East Tobago UNESCO Man and the Biosphere Reserve
NEP	National Environment Policy
NGO	Non-governmental organisation

NPSAP	National Protected Area Systems Plan
PGIS	Participatory Geographic Information Systems
PNA	Protected Natural Area
SOS	Save our Sea Turtles
SLM	Sustainable Land Management
STRP	Sea Turtle Recovery Plan
TEK	Traditional ecological/environmental knowledge
THA	Tobago House of Assembly
TTBO	Trinidad and Tobago Bird Observatory
TTNOILKB	Trinidad and Tobago National Outlook on Indigenous and Local Knowledge of Biodiversity
TWEP-G	Tobago Wildlife and Environment Protection Group
UN	United Nations
UNESCO	United Nations Educational, Scientific and Cultural Organization

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CHAPTER 1: Introduction

1.1 Project overview and objectives

The *National Outlook on Indigenous and Local Knowledge (ILK) of Biodiversity* initiative is a global project under the Local and Indigenous Knowledge Systems (LINKS) Programme of the United Nations Educational, Scientific and Cultural Organization (UNESCO). The initiative aims to address challenges associated with mainstreaming ILK into biodiversity decision-making and supports the implementation of the Kunming-Montreal Global Biodiversity Framework (KMGBF) targets, particularly Targets 9, 21, and 22[3]. The first phase of the National ILK Outlook project has been implemented in Malawi, Namibia, and Trinidad and Tobago, with the Caribbean Natural Resources Institute (CANARI) conducting the Trinidad and Tobago body of work. The *Trinidad and Tobago National Outlook on Indigenous and Local Knowledge of Biodiversity (TTNOILKB)* is executed in partnership with the UNESCO Local and Indigenous Knowledge Systems (LINKS) Programme and the Environmental Policy and Planning Division (EPPD) of the Ministry of Planning, Economic Affairs and Development of the Republic of Trinidad and Tobago. Funding for the National ILK Outlook project is through the Kunming Biodiversity Fund.

The TTNOILKB project's overall goal is to establish a baseline understanding of the status and documentation of ILK in the country, including the identification of ILK documentation gaps, and the level of inclusion of ILK in biodiversity policies and decision-making processes. In so doing, the project aims to enhance ILK documentation and mainstreaming within national biodiversity strategies and policies in Trinidad and Tobago. These include Trinidad and Tobago's National Biodiversity Strategy and Action Plan (NBSAP) and other key national biodiversity policies. The initiative also seeks to strengthen awareness and build the capacity of policymakers to effectively engage Indigenous Peoples and local communities (IPLCs) in biodiversity decision-making and policy formulation. Specifically, the objectives of this project are to:

- examine the state of ILK of biodiversity and ecosystem services in Trinidad and Tobago and highlight ILK documentation gaps;
- evaluate to what extent ILK is incorporated in the current Trinidad and Tobago's NBSAP and national targets in line with KMGBF and evaluate the degree of inclusion of ILK in Trinidad and Tobago's biodiversity policies; and
- strengthen mainstreaming of ILK into NBSAP implementation and national reporting in Trinidad and Tobago, by implementing tailored capacity-building workshops (based on identified capacity gaps) and ILK knowledge exchange forums with Indigenous Peoples and local communities and policymakers.

3 Target 9: Manage Wild Species Sustainably to Benefit People; Target 21: Ensure That Knowledge Is Available and Accessible to Guide Biodiversity Action; Target 22: Ensure Participation in Decision-Making and Access to Justice and Information Related to Biodiversity for all.

1.2 ILK and IPLCs in the Trinidad and Tobago context

Within the TTNOILKB, ILK is defined as "a cumulative body of knowledge, practice and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment" (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services [IPBES], 2025). ILK is also referred to by other terms such as "traditional knowledge; traditional ecological/environmental knowledge (TEK); farmers' or fishers' knowledge; ethnoscience; indigenous science; folk science" (IPBES, 2025).

Indigenous Peoples and local communities are "individuals and communities who are, on the one hand, self-identified as Indigenous and, on the other hand, are members of local communities that maintain inter-generational connection to place and nature through livelihood, cultural identity and worldviews, institutions and ecological knowledge. The term is not intended to ignore differences and diversity within and among Indigenous Peoples, and between them and local communities; however, Indigenous Peoples have recognised and distinct rights, which do not extend to the broader and encompassing concept of local communities" (IPBES, 2025). In Trinidad and Tobago, the term 'First Peoples' is preferably used to refer to Indigenous groups (Joint Select Committee on Human Rights, Equality and Diversity, 2022).

Trinidad and Tobago's socio-cultural landscape is shaped by Indigenous presence and centuries of migration and cultural interchange. This diversity has produced dynamic local knowledge systems that are embedded in everyday livelihoods; namely farming, fishing, hunting, apiculture and small-scale commerce, as well as expressed through religious and cultural practices. Spanning the coastal villages of Tobago, the forested areas of northern Trinidad and the southern peninsula, local ecological understanding is embedded in cultural practice, livelihood strategies, and collective memory. These knowledge systems exist on a continuum of blending and adaptation, where Indigenous, African, East Indian and other traditions interact and reflect generations of accumulated understanding of local ecosystems. The following section describes the principal Indigenous Peoples relevant to national ILK considerations, the local communities that steward natural resources, and the ways in which ILK systems are integral to biodiversity governance.

1.2.1 Indigenous knowledge holders

Historically, the Indigenous Peoples arrived from the South American continent and settled in Trinidad and Tobago 6,000 years before Columbus arrived in 1498. They included eight ethnic peoples belonging to three language families, including Amerindians of the Kalina, Warao, Kalipuna, Nepuyo, Taino, Aruaca and Carib peoples (NALIS, 2022b; Ali, 2014). These groups comprised a population of

40,000 at the time of Spanish settlement but have significantly declined over time following European colonisation (NALIS, 2022a, 2022b; Boomert, 2016). However, descendants of full or partial Amerindian heritage are still present in the country, especially in areas such as Toco/Cumana, Arima, Siparia and Moruga (NALIS, 2022b). Today, recognised Indigenous groups in Trinidad and Tobago include the Santa Rosa First Peoples Community, the Warao Nation and the Moruga First Peoples (Joint Select Committee on Human Rights, Equality and Diversity, 2022).

The contemporary First Peoples of Santa Rosa (Arima) (Figure 1) is one of the most prominent groups of Trinidad and Tobago's Indigenous heritage. The First Peoples community maintains cultural practices and ceremonies, and its public profile (including the annual Santa Rosa commemoration) anchors a visible Indigenous presence on a national level (NALIS, 2020).

Figure 1: Members of the Santa Rosa First Peoples Community dressed in traditional attire.
Photo credit: NALIS (2020).

The Warao People, an Indigenous Amerindian group originally from the Orinoco Delta, has also become a part of Trinidad and Tobago's social fabric through migration from Venezuela. Warao traditions bring water-based ecological knowledge and livelihoods shaped by riverine environments, and their presence adds to the diversity of Indigenous-derived knowledge in the country. The Moruga First Peoples are Indigenous Peoples who have settled in Moruga (located in South Trinidad), descending from various Indigenous backgrounds. The First Peoples Sovereign Nation originated from the Moruga First Peoples, but its members now are from a variety of Indigenous backgrounds, including the Warao, Kalinago, Lokono, Carina, Kapon, Chaguanese, and Nepuyo (First People TT, 2024).

Indigenous culture relied on the natural environment for food, medicine and building materials. This is reflected in Indigenous languages, resulting in place names and phrases that remain even today. For example, in the Arawak/lokono language, Caroni includes the -uni suffix meaning water, Iere is a variation of the word 'cayri' meaning island, and Guayaguayare includes the Indigenous word for clay. Similarly, Kalina/Carib place names include Chaguaramas, meaning palm plant, Toco, meaning wild sapodilla and Tunapuna, meaning on or upon water or river (Adonis and Ferreira, n.d.).

The National Policy on Culture and the Arts for Trinidad and Tobago (2019-2024) provides for the preservation of Indigenous Peoples' culture. First Peoples rights are recognised in Trinidad and Tobago and the Joint Select Committee on Human Rights, Equality and Diversity has recommended expanding ongoing efforts to collect and record accounts of Indigenous/First Peoples communities in a planned Cultural Heritage Library, as well as establishing the First Peoples Heritage Village and expediting efforts to develop community based tourism initiatives that will benefit Indigenous communities (Joint Select Committee on Human Rights, Equality and Diversity, 2022).

Given Trinidad and Tobago's history of slavery and indentured labourers, other historically distinct groups with Indigenous legacies also contribute to local knowledge systems. For example, the Merikins, who are direct descendants of formerly enslaved African-American soldiers who settled in parts of South Trinidad, have retained practices linked to small-scale agriculture, rotational cropping, and herbal medicine (NALIS, 2025). Religious and spiritual practices by Afro-indigenous groups all express a worldview that honours nature as sacred. These groups include the Orisha (African-based religion practised in Trinidad and Tobago), Rada (founded by freed African slaves and centred around African spiritual practices such as vodun), and Rastafari (Afrocentric practices developed in the Caribbean, which rose to prominence in Trinidad and Tobago post 1970 Black Power movement), (Seemungal, 2024; Besson, 2011; Tindall, 1998). The use of sacred spaces or shrines, plant-based healing, and ritual observances tied to seasonal or lunar cycles reflect a spiritual ethic of balance and restraint; principles that can reinforce conservation-minded behaviours at the community level. Indo-indigenous groups are not as differentiated as the Afro-indigenous groups in Trinidad and Tobago, but they also observe spiritual cleansing, nature-based rituals, e.g. the Ganga Dhaara festival at river sites. Many of the naturalised and cultivated medicinal plants used in Trinidad and Tobago originated in India and were brought across during Indentureship in the 1800s (Mahabir 2008; Rampersad 2012). Indo-indigenous knowledge about these plants has since been integrated into wider ILK systems.

1.2.2 Local knowledge holders

Across both islands, rural and coastal communities remain custodians of, and transmitters of local biodiversity knowledge through key resource users, including fisherfolk, beekeepers, hunters and small-scale farmers (Figure 2). See Chapter 3 for more information on ILK held by key resource users.

Figure 2: Community members of L'Anse Fourmi in Tobago demonstrating traditional crayfish harvesting practices. Photo credit: CANARI (2025).

1.2.3 The blending and continuity of ILK in Trinidad and Tobago

The evolution of ILK in Trinidad and Tobago is characterised by a continuum of blending among Indigenous, African and Indian traditions. This fusion has generated hybrid knowledge systems that are both deeply local and inherently adaptive. For example, Afro-Indigenous families often utilise medicinal plants, some of which were introduced by Indian indentured labourers, into home medicine and ritual use. Similarly, farming

practices integrate African methods with Indian crop and horticultural varieties, while fishers merge Indigenous place-naming and navigation with modern gear and observation techniques. Mahabir (2008) further noted similarities in the usage of plants amongst Indigenous Peoples and indentured labourers from India. This blending of traditions has produced not a loss of authenticity but a vibrant, plural knowledge base capable of innovation and resilience. From a management perspective, this hybrid nature can be considered an advantage, in that it creates multiple entry points for engagement and creates communal resilience through diverse knowledge systems. Overall, Trinidad and Tobago's socio-cultural context produces dynamic ILK systems, which are crucial to biodiversity stewardship at local and national scales. Supporting these knowledge systems through inclusive governance and sustained institutional support is key to ensuring that biodiversity management reflects both ecological and cultural realities.

1.3 Geography and biodiversity of Trinidad and Tobago

Trinidad and Tobago is the southernmost island nation in the Caribbean, with Trinidad located just 11km from the coast of Venezuela, and Tobago approximately 35km (See Figure 3). The islands' geological origin, Trinidad as an extension of the South American continent and Tobago as an older oceanic island, has produced a unique blend of continental and insular biodiversity. Variations in rainfall, temperature, and elevation shape distinct ecological zones across the islands (Government of the Republic of Trinidad and Tobago [GORTT], 2016).

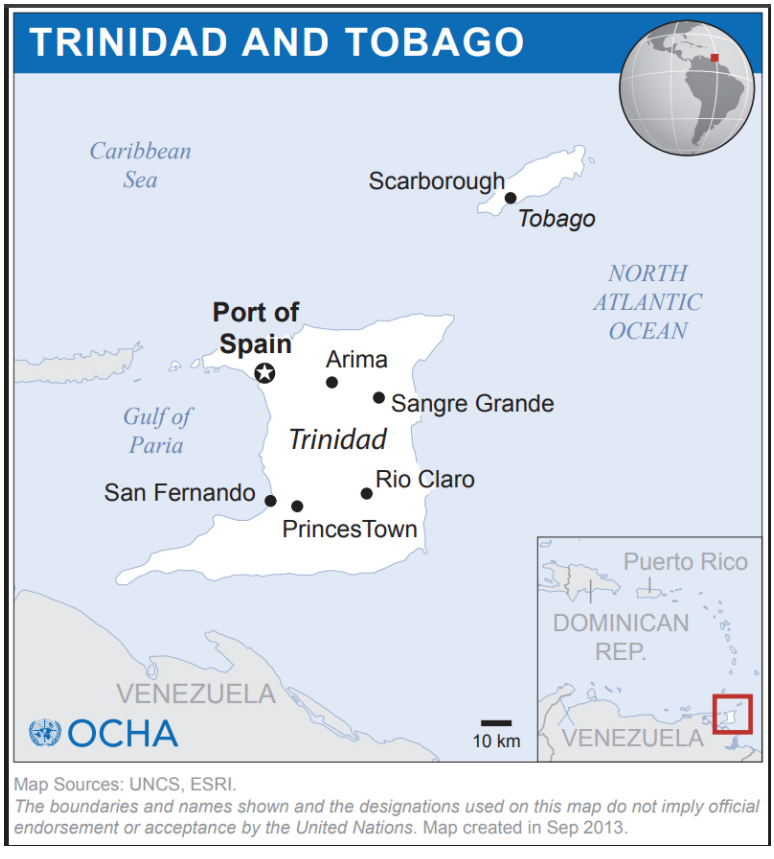

Figure 3: Location of Trinidad and Tobago.
Source: UNCS, ESRI (2013).

Trinidad's topography is defined by three mountain ranges, namely the Northern, Central, and Southern Ranges, which are separated by broad plains and lowlands. Similarly, Tobago's terrain is dominated by the Main Ridge, a forested spine running from South-West to North-East. These physical features give rise to a mosaic of ecosystems, including forests, savannas, wetlands, seagrass meadows, and coral reefs, which collectively sustain rich biodiversity and provide critical ecosystem services for communities across the islands (GORTT, 2016).

1.3.1 Key ecosystems, Environmentally Sensitive Species (ESS) and Environmentally Sensitive Areas (ESAs)/ Protected areas

The tropical forests of Trinidad and Tobago are among the most diverse in the Caribbean region. The Northern Range in Trinidad contains extensive evergreen and montane forest that supports numerous species. The Main Ridge Forest Reserve in Tobago (Figure 4), established in 1776, is recognised as one of the oldest legally protected forest reserves in the Western Hemisphere and remains vital for watershed protection and biodiversity conservation (UNESCO, 2020). The Main Ridge Forest Reserve is also part of the North-East Tobago UNESCO Man and Biosphere Reserve (NETMABR), a designation which promotes the North-East region of Tobago as an area where sustainable use of natural resources is promoted, including research and monitoring. Figure 5 shows Castara, one of the many communities located within the NETMABR. Two other communities within the NETMABR are the focus of the case study in this report, demonstrating methods for the collection of ILK in Trinidad and Tobago that meaningfully engage local communities.

Figure 4: Main Ridge Forest Reserve Visitor Centre.
Photo credit: Jacob Bock (2022) (ERIC, 2022).

Figure 5: Castara, one of the villages within the Man and Biosphere Reserve in Tobago.
Photo credit: Jacob Bock (2022) (ERIC, 2022).

Trinidad's wetlands are equally important for ecological and socio-economic roles. The Caroni Swamp, located on the West coast, is a Wetland of International Importance (Ramsar) site comprising mangrove forests, tidal channels, and mudflats that provide essential nursery habitats for fish and crustaceans. It is also the principal roosting site for the national bird, the Scarlet Ibis (*Eudocimus ruber)* (Ramsar Convention Secretariat, 2005a). On the East coast, the Nariva Swamp, another Ramsar site, is the largest freshwater wetland in the country. It consists of a dynamic mix of freshwater marshes, palm swamp, and mangroves that support species such as the West Indian Manatee (*Trichechus manatus*), Red Howler Monkey (*Alouatta seniculus*), and a range of migratory birds (Trinidad and Tobago's Biodiversity Clearing House Mechanism, 2020a).

The Aripo Savannas, located in East-Central Trinidad, represent one of the nation's most unique and fragile ecosystems. These seasonally flooded grasslands, interspersed with forest patches, support rare and endemic plant species adapted to nutrient-poor soils and are protected under law as the Aripo Savannas Environmentally Sensitive Area (ASESA) (Trinidad and Tobago's Biodiversity Clearing House Mechanism, 2020b).

In the marine environment, Tobago's coral reef systems are unique given its location within the southern Caribbean, and its proximity to the South American continent, which results in coastal zones being impacted by freshwater sediment and nutrients from the Orinoco and Amazon rivers. As such, there are a number of sediment-tolerant coral species recorded in Tobago (Mallela *et al*., 2010; Laydoo, 1991). The reefs provide critical habitat for marine life, protect the coastline from erosion, and support fisheries and tourism. They are complemented by adjacent mangroves and seagrass beds that

provide nursery areas for juvenile species, e.g. the Buccoo Reef/Bon Accord Lagoon (Institute of Marine Affairs [IMA], 2013; Juman and Ramsewak, 2013). The only Ramsar site in Tobago is the Buccoo Reef/Bon Accord Lagoon Complex (Ramsar Convention on Wetlands Secretariat, 2005b).

Complementing species protection, the Environmentally Sensitive Areas (ESA) framework safeguards critical habitats of national importance. Three ESAs have been designated to date, namely the Aripo Savannas, Matura National Park, and Nariva Swamp Managed Resource Protected Area (Food and Agriculture Organization [FAO], 2018). These sites encompass representative examples of savannas, forests, and wetlands that are essential to ecosystem function and biodiversity maintenance (See Figure 6).

In 2020, the GORTT approved the National Protected Areas Systems Plan, which seeks to expand the protected area network to approximately 20% of the nation's land and marine territory. The plan identifies 136 terrestrial, freshwater, coastal, and deep-sea sites for inclusion, aiming to strengthen ecosystem connectivity and resilience (FAO, 2018).

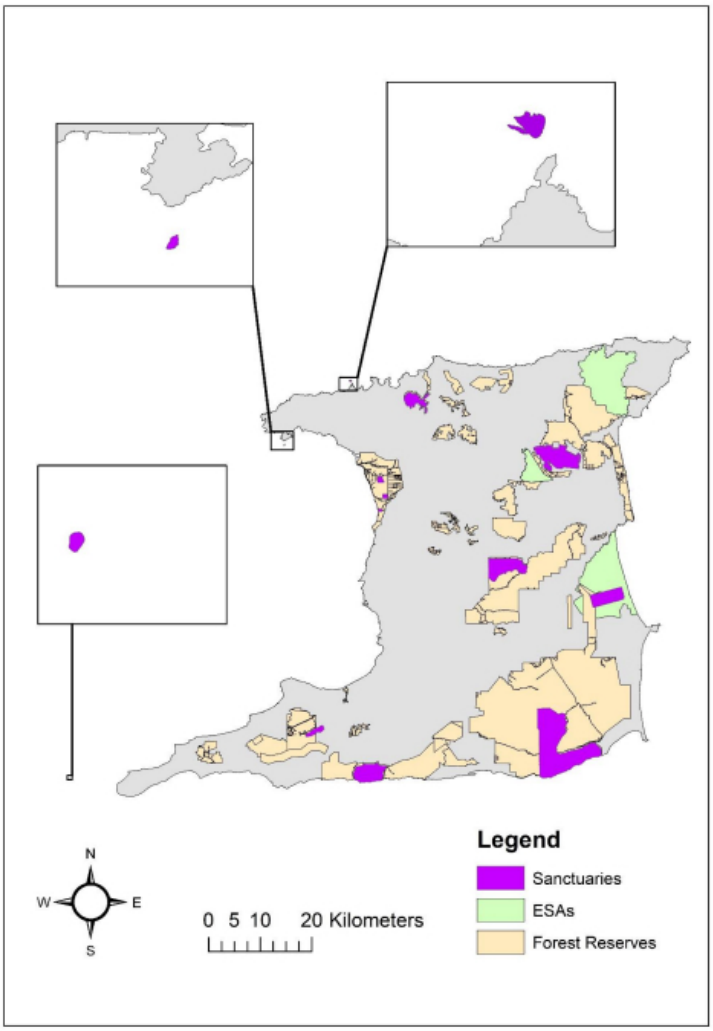

Figure 6: Protected areas in Trinidad and Tobago.
Source: FAO (2018).

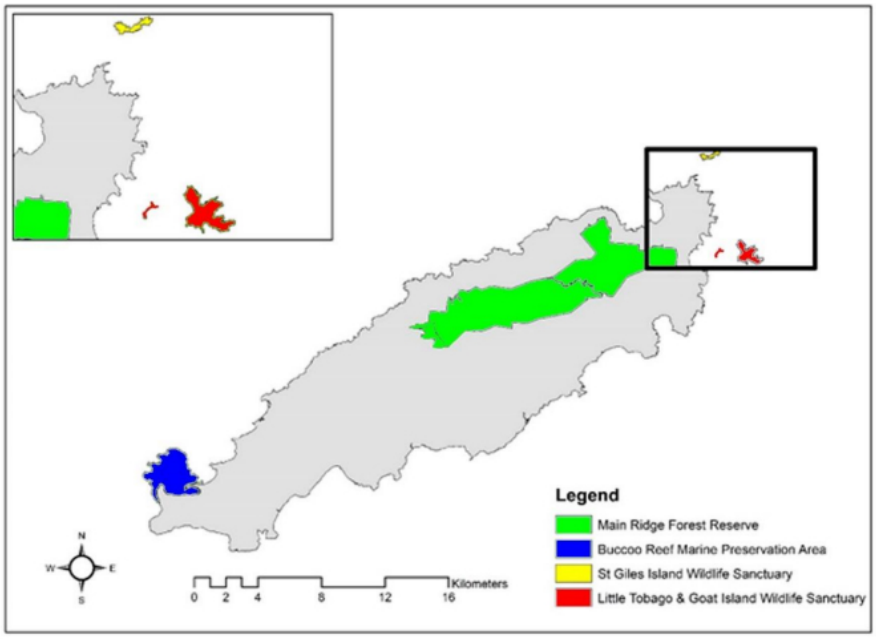

Figure 6: Protected areas in Trinidad and Tobago. Source: FAO (2018).

The Environmental Management Authority (EMA) designates species as Environmentally Sensitive Species (ESS) under the Environmental Management Act (2000) to ensure their protection and recovery. To date, thirteen species have been formally declared, including the Trinidad Piping-guan (*Aburria pipile*), West Indian Manatee (*Trichechus manatus*), Ocelot (*Leopardus pardalis*), Golden Tree Frog (Phytotriades auratus), White-tailed Sabrewing Hummingbird (*Campylopterus ensipennis*), Scarlet Ibis (*Eudocimus ruber*), Red Howler Monkey (*Alouatta macconnellii*) and White-fronted Capuchin (*Cebus albifrons*). All five marine turtle species occurring in the country's waters are also listed as ESS (EMA, 2023).

1.3.2 Threats to the biodiversity of Trinidad and Tobago

Despite the governance systems outlined above, Trinidad and Tobago's biodiversity faces threats such as habitat destruction, pollution, climate change, invasive species, and overexploitation of natural resources. These drivers have led to declining wildlife populations and the degradation and loss of vital ecosystems such as savannas, lowland and montane forests, coral reefs, mangroves, and seagrass beds.

Forests are being cleared for agriculture, housing, and illegal quarrying. Industrial expansion, especially within the petrochemical sector, has destroyed significant mangrove areas.

Terrestrial invasive species include the Giant African Snail (*Achatina fulica),* which is a voracious consumer of native and farmed plants. Non-native plants such as Wild Tamarind (*Leucaena leucocephala*) can outcompete native vegetation. Poorly regulated hunting and the wildlife pet trade remain a concern (GORTT, 2016).

Poor marine water quality due to nutrients and sediments from agricultural, domestic, and industrial runoff have led to the loss and degradation of seagrass beds. Rivers, wetlands, and coastal waters are being degraded by chemical spills, illegal dumping, and industrial waste (GORTT, 2016). The invasive lionfish is an aggressive predator of native fish species in the coastal waters across Trinidad and Tobago (GORTT, 2016).

Climate change is another major driver where, for example, warmer ocean temperatures have led to coral bleaching events. On land, climate change-related shifting weather patterns and overall drier conditions in the Southern Caribbean have led to physiological changes in plant flowering and fruiting, with ensuing impacts on wildlife populations (GORTT, 2016).

1.3.3 ILK on the biodiversity of Trinidad and Tobago

As described in Section 1.2, Indigenous Peoples and local communities and resource user groups hold significant knowledge on the biodiversity and ecosystems of Trinidad and Tobago, as described in Section 1.3. While the National ILK Outlook initiative seeks to enhance the documentation and mainstreaming of biodiversity ILK in decision-making, the initiative will build on work already undertaken in Trinidad and Tobago towards this goal.

Biodiversity ILK gathering and mainstreaming is conducted routinely by organisations like CANARI, for example, for the development of policies and management plans, under contract to Government agencies or through grant-funded projects. ILK is also gathered to directly inform project activities (EMA, 2008; CANARI 2024a; CANARI 2024b). Figure 7 below, for example, showcases a 2024 participatory mapping exercise with members of communities around the Nariva Swamp. The local knowledge gathered informed the development of community-led ecosystem stewardship projects in this protected area. ILK gathering by organisations like CANARI, uses well-developed participatory approaches and methods which protect the rights and interests of the knowledge holders. However, the TTNOILKB is a valuable opportunity to further identify and implement best practices in ILK gathering, including documentation and protection of the knowledge and knowledge holders. Further, the TTNOILKB report, dialogues and capacity-building workshops promote the inclusion of ILK into biodiversity plans and policies, especially the NBSAP.

Figure 7: Local knowledge holders from communities around the Nariva Swamp in Trinidad at a participatory mapping workshop on the biodiversity and ecosystems of that protected area.
Photo credit: CANARI (2024).

1.4 ILK and IPLCs within the national and international governance context

1.4.1 National biodiversity governance frameworks

As noted in the section above, there is limited incorporation of ILK into this country's national governance framework and decision-making. As such, the TTNOILKB seeks to enhance and amplify the use of ILK in national biodiversity governance frameworks, at the same time protecting ILK and the holders of this knowledge. A deep analysis of ILK inclusion in biodiversity frameworks is provided in Chapter 3. However, this section introduces Trinidad and Tobago's biodiversity policies and governance framework.

In general, Trinidad and Tobago's biodiversity governance framework is guided by a variety of national and sectoral policies, strategies, and management plans that provide the basis for conservation and sustainable use. These instruments are implemented through a network of government ministries, departments, and agencies that work to manage terrestrial, freshwater, coastal, and marine resources. Tables 1 and 2 below summarise the principal policy frameworks and institutional arrangements that support national biodiversity management, while Chapter 3 provides a more in-depth analysis of ILK mainstreaming for these policies, particularly the NBSAP. An in-depth review of the NETMABR Management Plan (used as a case study) is also conducted in Chapter 3, along with recommendations for updating that plan, using ILK gathered during this project.

Table 1: Key national policies, strategies and plans related to biodiversity conservation[4]

Policy/strategy/plan	Year	Brief description
National Integrated Water Resources Management Policy	2022	Promotes the integrated management of water resources and the wider environment (land, air, flora, and fauna) to meet the growing needs of all water users in a sustainable, efficient, and effective way. This approach aims to maintain or improve environmental quality and ecosystem integrity, while also reducing loss of life and minimising damage to property from water-related hazards.
North-East Tobago UNESCO Man and Biosphere Reserve (NETMABR) Management Plan	2022 (draft, in process of being finalised)	Guides conservation, sustainable livelihoods, and learning within the NETMABR.
Integrated Coastal Zone Management Policy	2019	The policy aims to facilitate an integrated approach to coastal zone management for maintaining and where necessary, enhancing the functional integrity of coastal resource systems while enabling sustainable economic development through rational, inclusive decision-making and planning.
National Environment Policy (NEP)	2018	High-level policy to guide national environmental management, sustainable development, and cross-sectoral coordination of environmental action and planning. Provides the umbrella for biodiversity, wetlands, pollution control and environmental governance.

4 Table 1 does not include legislation.

Policy/strategy/plan	Year	Brief description
National Protected Area Systems Plan (NPASP)	2018	Framework to expand and systematise protected areas across terrestrial, coastal and marine systems; identifies over 120 candidate sites and aims to increase representation and connectivity of protected areas.
Caroni Swamp Protected Area Management Plan	2017	Management guidance for ecosystem health, bird roost protection, ecotourism management and wetland services protection.
Matura Forest and Coastal Zone Protected Area Management Plan	2017	Management guidance for Matura's coastal forest and adjacent marine habitats focusing on biodiversity protection and tourism management.
Nariva Swamp and Coastal Zone Protected Area Management Plan	2017	Management guidance for conservation of Nariva's freshwater habitats and species and enhancement of community livelihoods within the protected area context.
Trinity Hills and Eastern Extension Protected Area Management Plan	2017	Management plan for terrestrial biodiversity and habitat protection in the Trinity Hills corridor.
Main Ridge Forest Reserve, Tobago — Protected Area Management Plan	2017	Management guidance for protection and sustainable use of the Main Ridge Forest Reserve (watershed protection and biodiversity conservation).
North- East Tobago Marine Area Protected Area Management Plan	2017	Operational plan for managing the North-East Tobago marine protected area and associated coral reefs/seagrass habitats.
National Biodiversity Strategy and Action Plan (NBSAP) 2017–2022	2017 (currently being updated)	National roadmap for biodiversity conservation and sustainable use; contains targets, priority actions and institutional responsibilities.
Action Plan for the Implementation of the Forest Policy	2016	Sets objectives for sustainable forest management, watershed protection, forest restoration and agroforestry.
National Biosafety Policy	2016	Aims to manage the risks of modern biotechnology, such as genetically modified organisms (GMOs), to protect human, animal, and plant health and the environment.
National Wildlife Policy	2013	Provides a framework for the sustainable management of the country's wildlife resources. Supports national protection and conservation of wildlife species through the regulation of hunting and use of wildlife and promotion of conservation of ecosystems. Supports updates to existing laws and integration with international conventions.
National Climate Policy	2011	Sets national climate adaptation and mitigation direction, with implications for biodiversity resilience and ecosystem-based adaptation measures.
National Forest Policy	2011	Supports the sustainable management of the forest resources of Trinidad and Tobago to provide for the social, economic, ecological, cultural and spiritual needs of present and future generations; contributes to the sustainable development of the country; enhance the quality of human life, while at the same time protecting biological diversity and ecological processes.
National Protected Areas Policy	2011	Establishes an appropriate framework for the selection, legal designation and management of a national system of protected areas.

Policy/strategy/plan	Year	Brief description
Sea Turtle Recovery Plan (STRP)	2010 (under revision)	Multi-year plan for protection and recovery of nesting and foraging populations of marine turtles.
Pawi (Trinidad Piping-guan) Management & Recovery Plan	2010 (under revision)	Species recovery plan for the critically endangered Pawi.
Aripo Savannas Environmentally Sensitive Area Management Plan	2008	Outlines management objectives, zoning framework, governance arrangements, administrative procedures, required capacity-building measures, and the financial and implementation priorities necessary for effectively managing the Aripo Savannas Environmentally Sensitive Area.
National Wetland Policy	2002	Provides a rational framework for the wise use of the country's wetlands. These principles are also consistent with fulfilling obligations under the Convention on Wetlands.
Draft Wildlife Strategic Plan	Draft	Strategic plan to guide national wildlife policy, threatened species management and enforcement priorities.
Environmentally Sensitive Species (ESS) management plans (Red Howler, White fronted Capuchin, Ocelot, Scarlet Ibis management plans currently being drafted)	Draft	Species-level management and recovery plans focusing on monitoring, habitat protection, threat mitigation and stakeholder engagement.

Table 2: Institutional framework for biodiversity governance in Trinidad and Tobago

	Mandate (in relation to biodiversity)	Role/Responsibilities
Environmental Policy and Planning Division (EPPD) within the Ministry of Planning and Development	National focal point for biodiversity and environmental planning policy development, coordination, international obligations.	Facilitates sound environmental management through developing, monitoring and coordinating the implementation of national policies, programmes and obligations e.g. the NBSAP under the multilateral environmental agreements.
Environmental Management Authority (EMA)	Environmental regulator, licensing, ESS and ESA designations, enforcement.	Implements the Environmental Management Act; designates ESAs & ESS; reviews Environmental Impact Assessments; monitors the implementation and effectiveness of the NEP.
Forestry Division under the Ministry of Agriculture and Fisheries (MAF)	Management of forest reserves, game sanctuaries, wildlife regulation.	Administers forest reserves, enforces Forests Act and Conservation of Wildlife Act; technical focal point for the Convention on Wetlands (Ramsar) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).
Fisheries Division (under the MAF)	Fisheries policy, regulation, sustainable use of aquatic resources.	Oversees marine resource management, fish stock assessments and fisheries legislation enforcement.

	Mandate (in relation to biodiversity)	Role/Responsibilities
Institute of Marine Affairs (IMA)	Marine research, monitoring, advising on marine policy.	Develops and implements programmes and projects that translate the marine and related policies of the Government into activities that contribute to national development; conducts research and development on marine, coastal, and related environmental resources in Trinidad and Tobago, the Caribbean, and adjacent regions, and studies the multiple uses of the sea and coastal zones to promote sustainable use and minimise conflicts; collects and analyses marine/ecosystem data and serves as an information centre for marine and coastal data; oversight of the National Sargassum Task Force and the Integrated Coastal Zone Management (ICZM) Inter-Ministerial Committee.
Tobago House of Assembly (THA) – Department of Natural Resources and Environment (DNRE)	Local environmental and biodiversity management in Tobago.	Manages forests, parks, protected areas, watershed and biodiversity within Tobago.
THA – Department of Marine Resources & Fisheries	Local marine and fisheries management for Tobago's coastal waters.	Oversees fisheries and aquatic ecosystem management for Tobago's nearshore zones.
National Sargassum Task Force	National, interagency coordination mechanism for the implementation of the Sargassum response for Trinidad and Tobago.	Collaborates among key stakeholders at all levels and throughout the Sargassum response process, from early warning to public education and awareness; also seeks to disseminate and coordinate research.
The Integrated Coastal Zone Management (ICZM) Inter-Ministerial Committee	Inter-Ministerial Committee to guide the implementation of the Action Plan for the approved ICZM Policy Framework.	Oversees, monitors and reports on the implementation of the ICZM 10-year Action Plan.
Chaguaramas Development Authority (CDA)	Land development and management in the North-West peninsula including conservation oversight.	Controls development and land use in the Chaguaramas area, balancing ecological concerns.
Emperor Valley Zoo	Conservation, captive breeding, education.	Manages species in captivity, runs educational and research programmes on wildlife.
Horticultural Division (under the Ministry of Agriculture and Fisheries)	Plant biodiversity, ex situ conservation, landscape plant programmes.	Works on propagation of indigenous plants, conservation of threatened flora.

1.4.2 International biodiversity frameworks

The TTNOILKB seeks alignment with international biodiversity, ILK and Indigenous Peoples and local communities' frameworks and approaches. These include the United Nations (UN) Declaration on the Rights of Indigenous Peoples (adopted in 2007), which addresses individual and collective rights of Indigenous Peoples related to culture, education, health, employment and language, and ensures their right to remain distinct and to pursue their own development priorities whilst also encouraging cooperative and harmonious relations between the State and Indigenous Peoples. The Declaration highlights the right to (i) lands/territories, (ii) free, prior and informed consent, (iii) participation in decision-making, (iv) traditional medicine practices, (v) spiritual practices related to their lands/environment, (vi) conservation and protection of the environment/productive capacity of their lands and (vii) right to maintain, control, protect and develop their cultural heritage and traditional knowledge.

Article 8(j) of the Convention on Biological Diversity (CBD) speaks to respecting and preserving traditional knowledge, innovations and practices. It also recognises the meaningful contribution of Indigenous Peoples and local communities towards the conservation and sustainable use of biological diversity through indigenous and local knowledge, innovation and practice. The Article also encourages the "equitable sharing of the benefits arising from the utilization of such knowledge innovations and practices" (CBD, 2025).

Article 7.5 of the Paris Agreement further acknowledges the role of ILK in supporting adaptive action in response to climate change. Additionally, Indigenous Peoples and local communities are engaged as key stakeholders and contributors in assessments conducted by IPBES, which serves to assess the status, trends and future of biodiversity and ecosystems and their contributions to people. For example, the IPBES Global Assessment (IPBES, 2019) integrated ILK inputs in all chapters and was the first global-scale assessment to engage with ILK through the process of evaluating and synthesising multiple sources of evidence (McElwee *et al.*, 2020).

The Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Agreement), adopted in 2018, aims to "guarantee the full and effective implementation in Latin America and the Caribbean of the rights of access to environmental information, public participation in the environmental decision-making process and access to justice in environmental matters. It also supports the "creation and strengthening of capacities and cooperation, contributing to the protection of the right of every person of present and future generations to live in a healthy environment and to sustainable development". Article 5 of the agreement speaks to accessibility of environmental information and seeks to ensure that persons or groups in vulnerable situations, including indigenous peoples, receive assistance in preparing requests for environmental information and obtain a response. Under Article 7, which focuses on public participation in the environmental decision-making process, guarantee is provided to ensure that "domestic legislation and international obligations in relation to the rights of indigenous peoples and local communities are observed".

1.4.3 ILK and IPLCs within the Kunming-Montreal Global Biodiversity Framework (KMGBF)

IIn addition to the aforementioned global frameworks, the TTNOILKB specifically supports alignment to and implementation of the KMGBF, focusing on Targets 9, 21, and 22 as well as overarching goals that aim to recognise and value ILK and ensure rights of Indigenous Peoples and local communities. The KMGBF (2022) responds to unprecedented rates of biodiversity loss as evidenced by the IPBES *Global Assessment Report of Biodiversity and Ecosystem Services* (IPBES, 2019) and the CBD Global Biodiversity Outlook (Secretariat of CBD, 2020). The aim of the KMGBF is to "catalyse, enable and galvanize urgent and transformative action by Governments, and subnational and local authorities, with the involvement of all of society, to halt and reverse biodiversity loss, to achieve the outcomes it sets out in its Vision, Mission, Goals and Targets, and thereby contribute to the three objectives of the Convention on Biological Diversity and to those of its Protocols". The KMGBF includes four goals and 23 targets to achieve by 2050 and 2030, respectively (CBD, 2024).

Under Section C of the KMGBF, one of the considerations for the implementation of the KMGBF includes recognising the contribution and rights of Indigenous Peoples and local communities as "custodians of biodiversity and as partners in the conservation, restoration and sustainable use". This section further provides considerations to ensure that the rights and knowledge of Indigenous Peoples and local communities are respected and preserved with their Free, Prior and Informed Consent (FPIC), and that Indigenous Peoples and local communities are included in decision-making processes.

Under the four global long-term goals for 2050, Goal C speaks to fair and equitable sharing of benefits from utilisation of traditional knowledge associated with genetic resources with Indigenous Peoples and local communities, whilst ensuring protection of traditional knowledge. Under the 23 global action targets for 2030, Targets 3, 9, 19, 21 and 22 include considerations for Indigenous Peoples and local communities and ILK. Target 3 speaks to conservation of 30% of terrestrial and marine areas by 2030 and notes the need to recognise the rights of Indigenous Peoples and local communities regarding their traditional territories. Target 9 encourages customary sustainable use by Indigenous peoples and local communities. Target 19 (f) addresses enhancing collective actions by Indigenous Peoples and local communities through non-market-based approaches, including community-based natural resource management and civil society cooperation. Target 21 addresses participatory management of biodiversity by ensuring best available data, information and knowledge are made accessible to decision-makers, and that traditional knowledge and practices of Indigenous Peoples and local communities should be sought through FPIC. Target 22 ensures the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making by Indigenous Peoples and local communities, inclusive of considerations for their access to justice and information related to biodiversity, as well as respect for their cultures and rights over lands and knowledge.

1.5 Multiple Evidence Base (MEB) approach

Against the backdrop of massive global biodiversity loss, it is critical to use all available information and information streams to address threats to biodiversity. As stated in the above section, Target 21 of the KMGBF addresses participatory management of biodiversity by ensuring that the best available data, information and knowledge are made accessible to decision makers, and that traditional knowledge and practices of Indigenous Peoples and local communities should be sought through FPIC. Biodiversity policies can be improved by engaging with multiple knowledge systems and the engagement of Indigenous Peoples and local communities (McElwee *et al.*, 2020). IPBES (2022) noted that scientific evidence related to the sustainable use of wild species is often limited, and ILK can be better utilised and valued to support better decision-making. CANARI's experience has showcased that decisions based solely on scientific information do not effectively capture local realities or identify key opportunities and solutions.

In the IPBES Global Assessment, ILK contributed to the understanding of nature and its contributions to people (including ecosystem services), assessments and monitoring of ecosystem change, development of international targets and development of scenarios, and development of policy-relevant options for people and nature (McElwee *et al.*, 2020). McElwee *et al.* (2020) further noted the need for deliberate frameworks and approaches for including ILK in assessments and policies, which is key to understanding linkages between natural and cultural systems, and identifying trends through biocultural indicators. Some examples of incorporating ILK in polices in IPBES (2019) included informing ecological restoration programmes by identifying culturally important species for restoration, supporting sustainable wildlife management through monitoring of populations, and supporting marine protected areas by informing fishing quotas for recovery. Further involvement of Indigenous Peoples and local communities can support policy action at the local level (IPBES, 2019).

Given that at least 25% of global land area is used, managed or co-administered by Indigenous Peoples and local communities (including diverse local communities of resource users), Indigenous Peoples and local communities through ILK help shape resource economies, conservation initiatives and ecologies (IPBES, 2019; Garnett *et al.*, 2018). Indigenous Peoples and local communities contribute to biodiversity conservation by maintaining locally-adapted species of crops and animal breeds, as well as the sustainable use, management and monitoring of biodiversity through habitat/wild species management and restoration practices (IPBES, 2019). IPBES (2022) further noted that effective policy instruments and tools benefit from participatory approaches, including plural knowledge systems bringing together ILK and scientific knowledge.

Despite all this recognition, the inclusion of Indigenous Peoples and local communities' contributions in NBSAPs and other policies to inform biodiversity conservation and

sustainable use has to date not been optimised (Forest Peoples Programme, 2020). One way to address this is the Multiple Evidence Base (MEB) approach, which aims to provide an equal platform for diverse knowledge streams (ILK and science systems), with the aim of recognising varying perspectives/knowledge streams as valid whilst recognising and addressing power imbalances (SwedBio, 2025).

The MEB approach highlights complementarity among different knowledge streams and ensures its integrity without having one dominant system or an external validator; however, acknowledging scientific knowledge has been historically prioritised over ILK. It is recognised that validation should occur within the respective knowledge systems, with different criteria of validation being applied to data and information from different knowledge streams. The MEB approach also aims to enable connections and co-creation across knowledge systems whilst ensuring collaboration, mutual respect and equality, which may build stronger confidence in knowledge and understandings that converge across the different knowledge systems. The MEB approach also ensures usefulness for all actors involved. However, even with the understanding that aspects of different knowledge systems may not be able to be translated to another, contradictions or disagreements and power imbalances amongst knowledge systems are acknowledged in this approach. The MEB approach notes that conflicts or contradictory evidence should not be neglected but accepted with the understanding that additional probing of diverse understandings can lead to the generation of new knowledge and further support an enriched picture to inform decision-making (Tengö *et al.*, 2014).

Five key steps have been highlighted in the MEB approach:

(i) mobilise ILK in a form that it can be articulated and shared with others, with the understanding that it is a valid knowledge system and ownership of knowledge lies with knowledge holders;

(ii) translate interactions amongst various knowledge systems to support mutual understanding, with knowledge holders having the opportunity to present their own knowledge, facilitated by ensuring their FPIC;

(iii) negotiate/discuss areas of convergence, divergence and conflicts within knowledge streams with the appreciation that new and innovative knowledge can emerge and that different knowledge systems can produce converging but complementary insights;

(iv) synthesise convergence and contradictions in knowledge whilst also maintaining integrity of knowledge streams; contradictions/tensions between knowledge systems can highlight knowledge gaps and opportunities for new understanding and co-produced synthesis leading to innovation and identification of new questions; and

(v) apply broadly accepted synthesised knowledge in decision-making processes, noting that the value of knowledge outcomes can support stronger engagement and co-ownership (SwedBio, 2025; Tengö *et al.*, 2017).

1.6 ILK data collection methods

Suggested methodologies to gather ILK through primary research include participatory mapping, dialogue workshops, ecological calendars, yarning/storytelling, and interviews (UNESCO and UNEP-WCMC, 2022). In engaging ILK holders in data collection, best practices include cultural respect and sensitivities to local context, considerations provided for their time, supporting participatory and empowering dialogue using effective tools and strategies that respect diverse and interactive styles of engagement (IPBES, 2017).

Organisations such as CANARI use a range of participatory tools that use a bottom-up, inclusive approach to collect, analyse, and share information, including ILK, in ways that reflect local realities and priorities. These include (CANARI, 2024b):

- Rapid tools which can be deployed quickly and easily in a short time frame and are low cost and require minimal time, resources and technical skills/effort to prepare and implement. Examples include: community mapping, seasonal calendars and transect walks.
- Intermediate tools which require additional time and effort to prepare and implement, and require specialised communication and facilitation skills. Some of these include: surveys, key informant interviews and participatory photo-journalling.
- In-depth tools: More complex tools that require significant time, resources and effort to prepare and implement, including technical expertise or specialised skills required to facilitate and undertake data analysis. Examples include livelihood analysis.

CANARI has utilised these participatory tools, for example, in vulnerability and capacity assessments (VCAs) to assess vulnerability and capacity to adapt to climate change at the community level. However, the participatory nature of the process helps to empower local communities to identify their own needs, priorities and take actions to address these needs, and the application of these tools have been expanded beyond VCAs (CANARI 2024a; CANARI 2024b; FAO and CANARI, 2022).

CANARI's approach to mobilising local knowledge through various ICT tools has included:

- facilitating processes that enable and support inclusivity and multi-stakeholder participation, including peer-to-peer exchanges with and amongst stakeholder groups;
- utilising ICT tools such as participatory video, participatory mapping and 3D modelling, and photo-journalling, which can help facilitate wide participation, including capturing, visualisation, collective analysis and learning and exchange of experiences by multiple stakeholders;
- supporting local communities and CSOs to document local knowledge, often using ICT and providing relevant training and capacity-building. Building

capacity and empowering local communities and CSOs to document their local knowledge using ICTs supports more cohesive and effective communication and sharing of knowledge and local perspectives on key issues, and the ability to tell their own stories;
- supporting and promoting inclusion of local knowledge in awareness raising and advocacy on key environmental issues;
- promoting integration of science and evidence-based approaches with local knowledge to support participatory policy making and planning. For example, through participatory mapping, local knowledge can be mapped, digitised and overlaid with other existing datasets for better planning and decision-making; and
- supporting and facilitating dissemination of local knowledge by Caribbean CSOs (e.g. through CANARI's knowledge platform to showcase the work of Caribbean CSOs).

1.6.1 Ethical considerations in working with ILK data

In gathering ILK, the principle of FPIC is a key consideration (UNESCO and UNEP-WCMC, 2022):

- Free implies that Indigenous Peoples and local communities freely give their consent without coercion and are not pressured, intimidated, manipulated or unduly influenced.
- Prior means that the consent process should be completed before data gathering activities are initiated.
- Informed implies that Indigenous Peoples and local communities are provided with all relevant information, including on the intended purpose of the activity; its duration and scope; a preliminary assessment of the likely economic, social, cultural and environmental impacts, including potential risks.
- Consent or approval is the agreement of the Indigenous Peoples, local communities and ILK holders to grant access to their ILK and reserves the right not to grant consent or approval during any part of the process.

In addition, data management and storage of ILK should account for FPIC processes, and as a means of good practice, information derived from ILK should be made available and sent back to communities concerned, considering privacy and confidentiality agreements.

IPBES (2022) notes the need to engage with Indigenous Peoples and local communities on protocols related to access and benefit sharing (e.g. Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization to the Convention on Biological Diversity). This seeks to ensure that benefits derived from genetic resources and associated traditional knowledge are granted through FPIC, recognise traditional knowledge holders as custodians of genetic resources, ensure negotiating fair and equitable agreements, and align processes to customary laws and local governance structures.

Additionally, Biocultural Community Protocols developed by Indigenous Peoples and local communities aim to outline "their core ecological, cultural, and spiritual values and customary laws related to their traditional knowledge and resources". These protocols define access to ILK in accordance with Indigenous Peoples and local communities' terms of engagement based on their preferences and needs (UNEP, 2009).

The IPBES data management policy also includes the CARE principles on Indigenous data governance which speaks to collective benefit from data, authority to control data, responsibility to share ILK data with Indigenous Peoples and local communities to support collective benefits, and ethics in ensuring Indigenous Peoples and local communities' rights in all stages of the data cycle (IPBES, 2024; Carroll *et al.*, 2020).

1.7 Summary of the TTNOILKB

This chapter provided an overview of the international initiative and Trinidad and Tobago project on the TTNOILKB. It gave the Trinidad and Tobago context with regards to ILK and Indigenous Peoples and local communities, showing the blending and continuity of ILK and highlighting that ILK knowledge systems are already recognised and used to some extent, but that greater effort is needed to further protect and incorporate ILK into biodiversity-related decision-making. An outline of the geography and biodiversity of Trinidad and Tobago was provided, showcasing how ILK can continue to help address biodiversity threats. Aspects of the national biodiversity governance framework were outlined along with relevant international biodiversity frameworks. Finally, the importance of MEB was elaborated on recognising the value of ILK along with academic and other knowledge streams.

Against this background, the TTNOILKB seeks to:

- examine the state of ILK of biodiversity and ecosystem services in Trinidad and Tobago and highlight ILK documentation gaps;
- evaluate to what extent ILK is incorporated in the revised/latest Trinidad and Tobago's NBSAP and national targets in line with KMGBF, and evaluate the degree of inclusion of ILK in Trinidad and Tobago's biodiversity policies; and
- based on identified capacity gaps, implement tailored capacity-building workshops and ILK knowledge exchange forums with Indigenous Peoples and local communities and policymakers, to strengthen mainstreaming of ILK into NBSAP implementation and national reporting in Trinidad and Tobago.

Chapter 2 documents the methods used to achieve the above, including for the first objective, utilising desk review, focus groups and Key Informant Interviews (KIIs). The design and implementation of the multistakeholder dialogue workshops and ILK capacity-building sessions are also outlined in this chapter, as well as the methodology for a specific case study to gather ILK and demonstrate multiple methods and best practices in doing so. Chapter 3 presents the findings of the above. Finally, Chapter 4 provides recommendations for mainstreaming ILK into national biodiversity strategies, policies and plans.

CHAPTER 2:

Methodology

2.1 ILK documentation mapping and gap analysis

One of the TTNOILKB project objectives is to assess the state of available documented ILK of biodiversity and ecosystem services in Trinidad and Tobago. Towards this end, a desk review was conducted to identify trends in biodiversity ILK documentation and highlight knowledge gaps. The desk review process examined 82 sources of ILK documentation collected through online research of peer-reviewed and grey literature, as well as in-person visits to the libraries of organisations that have a biodiversity focus or biodiversity-related collections. These organisations included:

- The EMA Library
- The IMA Library
- The National Trust of Trinidad and Tobago
- Research Division, MAF
- West Indiana and Special Collections Division, the Alma Jordan Library, University of the West Indies
- The National Library and Information System Authority, Port of Spain

Focus group stakeholders also highlighted literature available at the Indian Caribbean Museum of Trinidad and Tobago, Mundo Nuevo Heritage Museum, Mud House Museum, Toute Bagai Backyard Museum, Cocoa Panyol Museum, and the National Cocoa and Chocolate Museum.

A gap analysis was conducted on the documented ILK gathered through the sources described above. A tracking spreadsheet was created for the documented ILK, and each source of information was tagged to classify the type of ILK on biodiversity and ecosystems that was represented. Tags included the various uses of ILK on biodiversity and ecosystem services. Chapter 3 provides the results of this gap analysis.

2.2 Focus groups

Four virtual focus groups were conducted to gather perspectives and recommendations from representatives of key select stakeholder groups, including government and CSOs, both in Trinidad and Tobago. Appendix 1 provides a listing of focus group participants. The intention of the focus group sessions was not to gather ILK but rather ILK metadata on biodiversity and ecosystem services, as well as recommendations and perspectives on the following:

- **Resources/expertise for further investigation:** focus group participants were asked about resources/documents to support desk research, organisations with relevant ILK documentation on biodiversity, and suggestions for key informant interviewees.
- **Target communities for ILK engagement:** stakeholders provided recommendations on communities/target groups to potentially engage for ILK community dialogue workshops particularly noting the importance of communities around protected areas.
- **ILK in decision-making:** stakeholders discussed the current national structures and processes that recognise ILK on biodiversity. They also noted opportunities for better inclusion of ILK in biodiversity decision-making processes and challenges or barriers that may hinder inclusion of ILK into national biodiversity processes/frameworks.
- **Capacity-building needs:** stakeholders highlighted examples of capacity-building support needed by Indigenous Peoples and local communities to better document and share ILK, and by government stakeholders to meaningfully engage with and apply ILK on biodiversity.
- **Gaps in ILK knowledge:** stakeholders noted biodiversity data gaps that ILK can contribute valuable insights to.

2.3 Key informant interviews

Thirteen virtual key informant interviews (KIIs) were conducted, including interviews with organisations representing First Peoples of Trinidad and Tobago (Indigenous groups), Afro-Indigenous groups and key resource user groups/associations. The scope of these interviews did not include representatives from major religious groups (Christian sects, Hindu sects, and Islamic organisations) or ILK advocates. While there are a number of Hindu and Islamic organisations in the country, based on initial investigations for this study, there only appear to be two Indo-cultural/Indo-indigenous groups. One is the large, well-known umbrella Indian cultural group (National Council of Indian Culture), whereas the other is a publication group.

Key resource user groups interviewed included fishers, farmers, hunters and beekeepers. To capture broad perspectives, representatives from Indigenous groups and umbrella organisations representing key resource users were targeted to gain a broad understanding of the status of available ILK within a national context. The thirteen interviewees were either suggested by focus group participants or were nominated by the nationally recognised Indigenous and resource user groups that CANARI contacted.

The purpose of the KIIs was to supplement desk research and to assess available and utilised ILK on biodiversity and ecosystem services that may not necessarily be documented. Appendix 2 lists the thirteen interviewees and the organisations they represented. To protect the rights of knowledge holders, interviewees were asked

to sign FPIC forms (See Appendix 3 for the FPIC consent form used). The interview questionnaire sought to gather ILK and perspectives of knowledge holders on:

- Local knowledge and practices related to biodiversity.
- Adaptation to any unprecedented changes in the environment or changes related to any animal/plant species using local knowledge/practices.
- Challenges in preserving or passing on local knowledge/practices.
- Their role in biodiversity projects/programmes/decision-making processes and challenges in engaging in these decision-making processes.
- Recommendations for capacity-building support.
- Recommendations for better inclusion of ILK in policies and strategies.
- Recommendations for safeguarding knowledge holders' rights.

See Appendix 4 for the complete interview tool used.

2.4 National ILK dialogue workshops with Indigenous Peoples and local communities: Case Study

2.4.1 Dialogue workshops' focus

A key question that arose in the early execution of the TTNOILK was which biodiversity topic, target knowledge holders and/or geographic area to concentrate the national ILK dialogue workshops on. This was necessary given the limited timeframe of the TTNOILK project, such that it was not possible to have widespread national dialogues on multiple topics. Thus, a specific focus was needed to serve as a case study on gathering biodiversity ILK to inform decision-making processes. This was discussed at length among project partners, as well as with the focus group participants. Options raised included centring the dialogues on a single taxonomic group, e.g. stingless bees, or a topic of widespread interest, e.g. medicinal plants or on a specific protected area. Gathering ILK on protected areas was especially recommended by the focus groups.

Given this recommendation by focus group participants, as well as information gathered from desk research and a group discussion with UNESCO, the Tobago House of Assembly (THA), and the Environmental Research Institute Charlotteville (ERIC), the UNESCO North-East Tobago Man and Biosphere Reserve (NETMABR) was selected as the target geographic area to conduct community dialogues to gather biodiversity ILK to support the management of this area.

The NETMABR (Figure 8) was designated in 2020 under the UNESCO Man and the Biosphere (MAB) Programme, which demarcates biosphere reserves across the globe to illustrate sustainable multiple use of target areas. Management of biosphere reserves factors in economic and socio-cultural needs, balanced against biodiversity

and ecosystem protection. Reserves function as 'living laboratories" harmonising sustainable development research and participatory approaches with management. A focus on the NETMABR would benefit from synergies with past UNESCO/THA work on establishing and managing the reserve, as well as potentially inform future projects by both entities in the area. Further, CANARI had conducted recent projects with NETMABR communities; thus, the dialogues and ensuing case study could build on established community and stakeholder relationships. In general, an ILK focus on the NETMABR offered a suitable context for testing ILK documentation methods given its existing multi-stakeholder governance structure, ecological diversity, and ongoing review and updates to its management plan, offering an opportunity for ILK gathered to inform ongoing biodiversity decision-making processes.

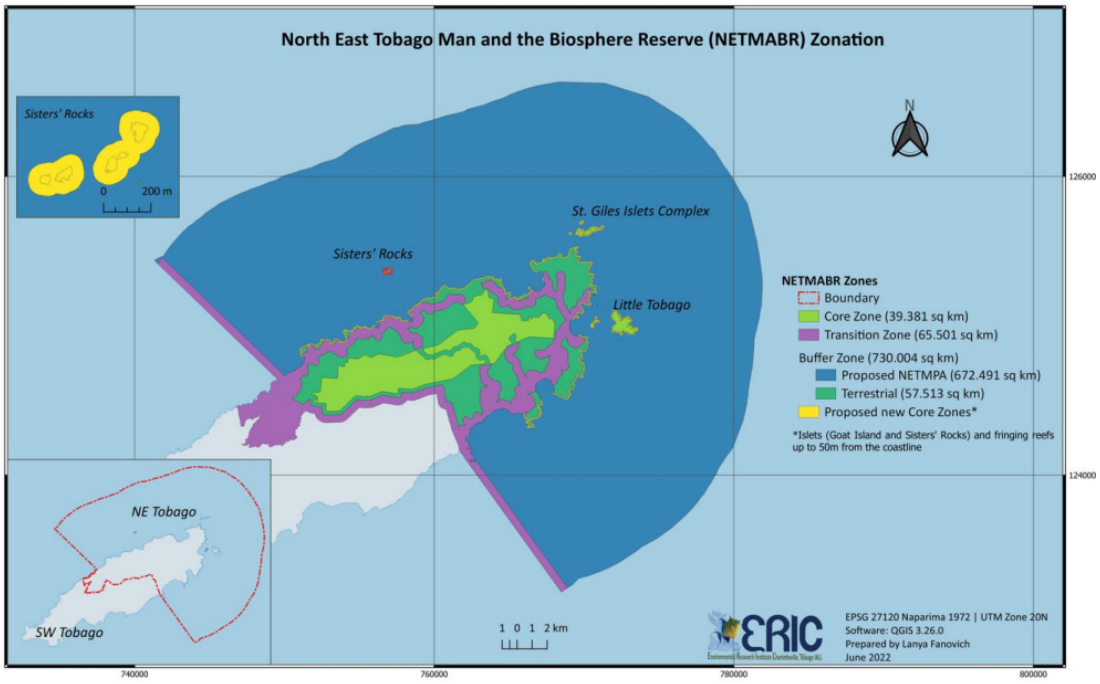

Figure 8: The NETMABR.
Source: THA (2022).

2.4.2 Methodology for the ILK dialogues/case study

Two communities were selected within the NETMABR for the dialogues and case study: Charlotteville (Figure 9), representing marine and coastal resource use, and L'Anse Fourmi (Figure 10), representing terrestrial and land-based resource use. These communities were previously identified through stakeholder focus groups as areas with strong cultural continuity, active community organisations, and a willingness to engage in participatory research.

Figure 9: Charlotteville.
Photo credit: Jacob Bock (2022) (ERIC, 2022).

Figure 10: L' Anse Fourmi.
Photo credit: Jacob Bock (2022) (ERIC, 2022).

The ILK case study applied a combination of CANARI's common participatory tools and other ILK methods based on the MEB approach, as highlighted by the UNESCO LINKS team. Three complementary approaches were selected to capture spatial, temporal, and experiential dimensions of ILK:

- Participatory geographic information systems (PGIS)
- Seasonal and historical calendars
- Walking workshops

The case study was designed not just to gather ILK but also to demonstrate participatory methods for documenting and applying ILK in support of biodiversity management. It sought to test approaches that are inclusive, ethically grounded, and adaptable to the local context, while building capacity among community members and partner institutions.

Seasonal and historical calendars and PGIS were utilised first during indoor workshop sessions, followed by the walking workshops on following days. All events were organised with the assistance of a local mobiliser who was known to community members. This is a standard CANARI practice utilised to optimise engagement and build trust with stakeholders. Workshops for the calendars and PGIS were held in the evenings to accommodate fishers, farmers, and other working residents (Figures 11 and 12). The walking workshop in Charlotteville took place late afternoon, and the L'Anse Fourmi walking workshop (more of a driving workshop) was carried out mid-morning based on stakeholders' preferences.

Facilitation for all activities encouraged open dialogue, storytelling, and collective reflection to ensure women, youth, and elders could participate meaningfully. All activities were conducted using FPIC consent forms, which explained participant rights, intended data use, and confidentiality provisions. Overall, sessions were designed to be inclusive, accessible and interactive.

Figure 11: Charlotteville workshop session.
Photo credit: CANARI (2025).

Figure 12: L' Anse Fourmi workshop.
Photo credit: CANARI (2025).

Seasonal calendars were used to document temporal and seasonal knowledge. Defined as "knowledge systems that measure and give meaning to time based on close observation of one's habitat" (Kassam *et al.*, 2023), it captures relationships between climate, biodiversity, and livelihoods across a 12-month cycle. This method was chosen because it enables reflection on how ecological rhythms intersect with cultural and livelihood activities, and it provides a framework for integrating ILK indicators, such as changes in seasonal timing, into long-term biodiversity monitoring.

In parallel, historical timelines were developed to capture changes in resource abundance, land and sea conditions, and community practices over approximately three reference periods, including the present day. The combined use of ecological and historical calendars allowed for both seasonal and diachronic long-term perspectives of ILK, providing a richer understanding of how knowledge, ecosystems, and livelihoods have evolved together. It also allows for reflection on what local ecosystems looked like in the past, the perceived causes of decline or improvement, and the social, environmental, or governance factors associated with those changes.

PGIS was selected as a visual and collaborative tool to record spatial dimensions of community knowledge, such as locations of fishing grounds, agricultural areas, and culturally significant sites. To ensure timely delivery of outputs, a rapid digital version of PGIS was used through Google My Maps as opposed to more detailed PGIS methods using printed satellite imagery or the construction of 3-D models.

Community participants worked in groups to identify areas of ecological and cultural importance. The process emphasised validation through group consensus and avoided mapping sensitive or restricted areas. The PGIS activity generated spatial layers that can later be analysed to illustrate community-identified zones of biodiversity value

and resource use, providing a foundation for future integration into management and zoning exercises within the NETMABR.

Walking workshops were chosen to ground the documentation process through direct observation of landscapes and seascapes. Knowledge holders guided facilitators along routes of ecological, cultural, or livelihood significance, sharing stories, identifying plant species, and discussing historical changes. In Charlotteville, the activity was conducted on foot along the coastal fringe and nearshore environments (Figure 13). In L'Anse Fourmi, given the larger area, the exercise took the form of a driving workshop, with discussions facilitated during transit and stops made at key sites for deeper exploration (Figure 14). This method promoted experiential learning and helped link community narratives to specific geographic locations, reinforcing the contextual nature of ILK.

Figure 13: Walking workshop in Charlotteville.
Photo credit: CANARI (2025).

Figure 14: Driving workshop in L' Anse Fourmi.
Photo credit: CANARI (2025).

The combined application of PGIS, ecological calendars, historical timelines and walking workshops provided a structured yet flexible framework for documenting ILK in Tobago's communities. The approach demonstrated how spatial, temporal, and experiential methods can collectively capture the richness of local ecological knowledge. Notably, the process-built trust, validated community expertise, and generated practical insights that can later inform management planning, policy integration, and future ILK research across Trinidad and Tobago.

2.5 Policy gap analysis and ILK inclusion in policies, strategies and plans

A key tenet of the NOILKB was an assessment of ILK mainstreaming within national biodiversity policies and strategies, and plans and alignment with the Kunming-Montreal Global Biodiversity Framework (KMGBF Targets 9, 21, 22). For this assessment the policies and plans in Table 1 in Chapter 1 were assessed. Criteria used in the assessment included:

- Alignment of the policy with Targets 9, 21, and 22 of KMGBF.
- If ILK was acknowledged as a knowledge system as indicated by:
    - Definition or references to ILK /traditional knowledge
    - Value of ILK recognised for biodiversity/conservation/sustainable resource use.
    - Joint learning/multiple evidence base approach/ILK and scientific knowledge collaboration/dialogue supported.
- Use of ILK in management, planning, reporting and monitoring indicated, e.g. by ILK informing strategies/ ILK indicators/activities/planning or community-based monitoring frameworks.
- Recognition of rights of Indigenous Peoples and local communities (including customary rights), Access and Benefit-sharing (ABS) and FPIC.
- Resource allocation for ILK initiatives or capacity-building/strengthening indicated by financing/funds, institutional support for inclusion of ILK including training.

2.6 Multistakeholder policy and capacity-building workshops

To further assess the state of ILK inclusion in biodiversity policies, multistakeholder policy workshops were conducted, combined with ILK capacity-building workshops. The workshops were a key part of the overall outlook objective to assess how ILK contributes to biodiversity conservation, identify policy opportunities and gaps, and strengthen mechanisms for integrating ILK into national and subnational planning. Workshops were held in October 2025 and brought together policymakers,

Indigenous Peoples and local communities to hold dialogues on lessons learned, opportunities and barriers for ILK inclusion and mainstreaming into biodiversity policies, targets and reporting in Trinidad and Tobago. Figures 15 and 16 show the group photos for workshops.

Figure 15: Trinidad Multistakeholder policy and capacity-building workshops.
Photo credit: CANARI (2025).

Figure 16: Tobago Multistakeholder policy and capacity-building workshops.
Photo credit: CANARI (2025).

2.6.1 Workshop goal and objectives

The goal of the workshops was to enhance understanding of the value of ILK documentation and mainstreaming into national biodiversity strategies and policies and to strengthen ILK awareness and policy-makers capacity for the active engagement of Indigenous Peoples and local communities and the mainstreaming of their knowledge, values and practices into biodiversity decision-making and policies formulation.

The specific objectives of the workshops were to:

i. present preliminary findings on the desk research conducted on the state of ILK of biodiversity within Trinidad and Tobago, and knowledge gaps in biodiversity documentation, as well as preliminary findings from the analysis of biodiversity policies, strategies, plans to assess the ILK mainstreaming;
ii. present case study findings from Tobago community dialogue workshops held in Charlotteville and L' Anse Fourmi which aimed to gather ILK though diverse methodologies and showcase best practices;
iii. facilitate discussions, based on findings presented, to understand lessons learned, opportunities and barriers for ILK mainstreaming into biodiversity policies, targets and reporting; and
iv. build capacity and support participants in applying ILK data gathering methodologies/participatory ICT tools to gather local knowledge, values and practices on biodiversity at the community level and support participatory decision-making processes.

2.6.2 Workshops' participants

Across the two-day national multistakeholder workshops, an average of 31 participants were engaged in Trinidad, and an average of 23 participants in Tobago: representing a diverse cross-section of institutions, civil society and local community interests.

Table 3: Representative sectors across the workshops held in Trinidad and Tobago

	Sector	Representative organisations
Trinidad	Government	15
	CSO (including Indigenous Peoples and local communities)	18
Tobago	Government	7
	CSO (including Indigenous Peoples and local communities)	12

Figure 17: Participants at multistakeholder policy dialogue and ILK capacity-building workshop in Trinidad.
Photo credit: CANARI (2025).

Figure 18: Participants at multistakeholder policy dialogue and capacity-building workshop in Tobago.
Photo credit: CANARI (2025).

2.6.3 Workshop proceedings

The multistakeholder policy dialogue and ILK capacity-building workshops were convened in Trinidad from October 22–23, 2025 and in Tobago from October 29–30, 2025. The workshops sought to build understanding of the role of ILK in biodiversity planning, share findings from the ILK documentation and national policy stocktaking

and case study conducted in NETMABR, and strengthen participants' capacity to apply participatory ILK documentation tools.

Day 1 focused on contextual presentations and dialogue. Participants were introduced to the project, followed by an overview of the policy review findings and preliminary insights from the ILK case study in Tobago. Presentations outlined existing national frameworks relevant to ILK, such as the NEP and the NBSAP and explored the extent to which ILK is currently acknowledged or utilised within these policies. Small group exercises allowed participants to reflect on key opportunities and constraints for ILK mainstreaming at both national and community levels.

Day 2 focused on practical capacity-building, where participants were introduced to a combination of participatory ILK documentation tools, including PGIS, ecological and historical calendars. Through guided exercises, participants learnt the techniques and explored how these tools can be potentially adapted to their institutional or community contexts.

Figure 19: Group exercises during the Trinidad and Tobago workshops.
Photos credit: CANARI (2025).

The workshops collectively provided an important platform for dialogue, learning, and collaboration among government agencies, civil society organisations, and community representatives. The national sessions helped illustrate ILK concepts, while also providing community participants and CSOs the opportunity to articulate how traditional and local knowledge can inform decision-making processes. The group exercises offered participants a practical understanding of participatory

documentation methods and how these can be applied in biodiversity planning, governance, and adaptive management.

Included within the workshops was CANARI's synergistic introduction of its *EnviroRightsTT* project during the capacity-building sessions. The initiative focuses on empowering CSOs and community members to exercise their environmental rights; specifically, the right to access information, participate in decision-making, and seek justice in environmental matters. Through this context, CANARI reinforced the connection between ILK and environmental governance, encouraging CSOs to strengthen advocacy and participation in biodiversity and natural resource management.

CHAPTER 3:

Findings of the assessment

3.1 Desk research findings

Desk research conducted gathered 82 sources of documented biodiversity ILK from journals, books, reports, newspaper articles and websites. Further information on each source of documentation is provided in Appendix 5 classified by type of Nature's Contribution to People (NCP) particularly related to material (medicinal resources, food) and non-material contributions (cultural/historical/Indigenous heritage). These categorisations of NCP are in keeping with IPBES eighteen categories of NCP which are broadly grouped into regulating, material and nonmaterial contributions (Brauman *et al.*, 2020).

Nature's contributions to people can be defined as "all the contributions, both positive and negative, of living nature (i.e. all organisms, ecosystems, and their associated ecological and evolutionary processes) to people's quality of life" (IPBES, 2025) and, compared to using the 'ecosystem services' framework, NCP provides an understanding of human-nature interactions and covers a wider range of values (including those associated with ILK) (Díaz *et al.*, 2018; Pascual *et al.*, 2017, as cited in McElwee *et al.*, 2020). NCP related to ecosystem regulating contributions was not reflected extensively in the ILK documentation collected thus was not incorporated into the classification scheme. Given this and the information above, the final classification tags utilised were medicinal plants, agriculture, historic/ indigenous ILK, cultural heritage, nature- based livelihoods, ILK related to ecosystems, and species-specific ILK. Figure 20 provides a breakdown of the classification of the ILK documentation. It is worth noting that a single source of information may have multiple tags, but for the purposes of this breakdown, the most relevant tag was used.

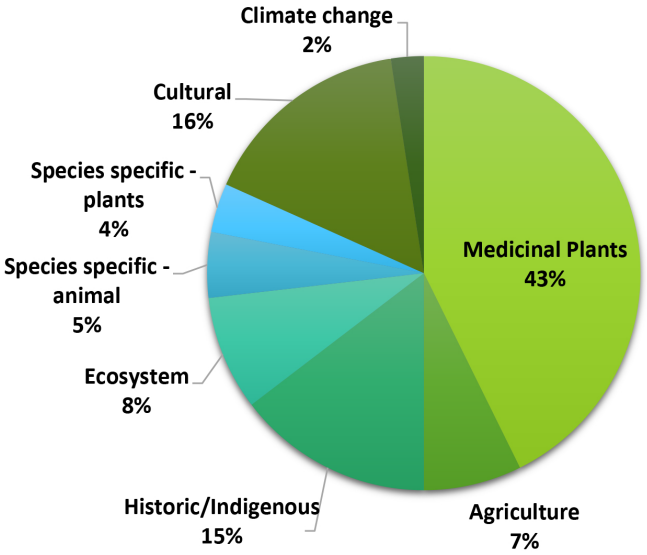

Figure 20: Classification of ILK documentation in Trinidad and Tobago.

ILK on medicinal plants accounted for 43% of documentation reviewed. Some of these sources included "Creole Remedies of Trinidad and Tobago" which described the traditional use of plants in medicine and agricultural practices among Indigenous Amerindian communities in Trinidad and Tobago, as well as within the wider population (Lans, 2007). The "Power of plants in traditional Tobago yards" news article highlighted the importance of front yards for housing local (medicinal/useful) plants (Pemberton, 2021). "Medicinal and Edible Plants used by East Indians of Trinidad and Tobago" (Kumar, 2008) highlights sixty-three local plants used by the East Indian community of Trinidad and Tobago for various medical purposes, culinary traditions and cosmetic uses. These include the Moringa plant (*Moringa oleifera*) (Figure 21) used for the treatment of diabetes among other uses. "Folk medicines of Blanchisseuse" speaks to localised traditions of folk medicine in Blanchisseuse, a coastal village community located along the North coast of Trinidad (Wesley, 1967). PérezLloréns *et al.* (2003), makes mention of the traditional uses of seaweed to treat specific ailments for people in Trinidad and Tobago.

Figure 21: Moringa plant.
Photo credit: CANARI (2025).

Sixteen percent (16%) of documents were related to culture and ILK on biodiversity. Some of the 'cultural' classification sources are also classified as Indigenous but this includes current Indigenous practices whereas 'Historical/Indigenous' classification refers to historic indigenous practices. Cultural ILK examples include: "Kunuwaton: Culture & Cuisine of the Santa Rosa First Peoples of Arima, Kairi" which explores the cuisine and cultural practices of First Peoples in Trinidad (Balkaransingh and Singh, 2014) and Herrera (2013), who noted the cultural value of Timite palm by First Peoples in constructing thatched roofs. Fifteen percent (15%) of the documents were classified as 'Historic/Indigenous' and included sources of information on plants historically used by First Peoples for dye (De Souza, 2023) and plants and animals used for food and tools (Charan, 2015).

ILK related to agriculture was noted in 7% of documents. This included references to local crop protection practices for pests and diseases (Boney *et al.*, 2014) and the cultural importance of crops such as the Moruga Hill Rice (Ganeshram, 2025). Other documents describe agroforestry practices utilising indigenous forest species (La Rose, 2012) and guidelines for managing stingless bees informed in part by local knowledge of beekeepers on Trinbagonian hive culture (UNDP, 2024).

Ecosystem related ILK (8%) included references to the importance of key ecosystems and protected areas (e.g. Aripo Savannas, Nariva Swamp, mangroves) to local community livelihood and traditional practices (Herrera, 2022; Baptiste, 2012; Juman and Ramsewak, 2010). Species classification for plants and animals (4% and 5% of references respectively) referenced information on local uses of native trees (Quesnell and Farrell, 2005), including in construction of traditional artisanal fishing boat (Hubbard, 2010).

Persad (2020) noted the importance of conserving pelican populations (Figure 22) given that fisherfolk communities rely on the bird's behaviour to locate fishing grounds (Persad, 2020). Local knowledge gathered on climate change was noted for 2% of references and included local fisherfolk knowledge to inform coping strategies and climate adaptation strategies (Cox *et al.*, 2021). Apart from the above there was limited other documented ILK on marine ecosystems and marine biodiversity (non-fisheries).

Figure 22: Pelicans at Orange Valley, an important fishing hub in West Trinidad.
Photo credit: Natalie Boodram (2025).

Gathering biodiversity ILK from communities around protected areas or ILK on practices supporting nature-based livelihoods is routinely conducted by participatory organisations like CANARI. Some of the more recent CANARI initiatives and subsequent documentation incorporating ILK include the following projects:

- Integrating digital technologies and participatory tools to support coastal community resilience in Trinidad and Tobago (Tech4coastalresilience)
- Biodiversity conservation and agroecological land restoration in productive landscapes of Trinidad and Tobago project (BIOREACH)
- Experience Nariva – Creating a community-driven, sustainable cluster and brand to transform ecotourism in the Nariva Swamp, Trinidad and Tobago

These initiatives utilised participatory mapping activities to gather local community knowledge and perspectives on climate vulnerabilities, land-use practices, biodiversity hotspots and conservation and ecotourism related activities. However, given the blend of local knowledge and citizen science in these mapping activities, these projects' findings were excluded from the documentation listing. Additionally, social media sites were omitted from the documentation listing given time constraints.

Likewise, some documentation suggested by stakeholders at the multistakeholder policy dialogue and capacity-building workshop were not assessed for this reason. As it pertains to NCP, ILK documentation in this assessment did not reflect ILK related to regulating contributions of nature. As noted, documented ILK (hard copies of information at libraries) was not gathered in Tobago. ILK on notable species (ESS) and non- timber forest products were not found in the literature.

3.2 Focus groups

3.2.1 Data sources

The Focus Group meetings were conducted primarily to gather metadata on ILK documentation, possible key informant interviewees and suggestions for topics or communities to focus the case study on. The results of the interviews and case study are described in sections below and a number of the documents reviewed in Section 3.1 above were recommended by the Focus Groups. Knowledge gaps and recommendations for future research/work recommended by focus group stakeholders are included in Section 4 below.

3.2.2 Knowledge gaps

Analysis of desk research findings, and information provided by focus group participants, and workshop stakeholders identified key areas of interest where there is limited documentation of ILK related to biodiversity, and potential to conduct further research as it relates to the following:

- Species-specific ILK, particularly for ESS, was identified as having strong potential to inform and strengthen species management plans.
- ILK related to harvesting and use of non-timber forest products by Indigenous Peoples and local communities with relevance for sustainable livelihoods and resource management.

- Climate change and agriculture particularly as it relates to (i) climate impacts on pests and beneficial insects i.e. pollinators and (ii) understanding of seasonal shifts and adaptation strategies utilised by local knowledge holders on ways to adjust planting/harvesting of specific crops.
- Documenting local knowledge on fish spawning sites/grounds and mating seasons to guide updating fisheries management plans specific to local community needs and supporting declining fisheries for key species.
- Trade and use of marine products (turtle oil, shark oil, whale oil); focus group stakeholders noted there is limited information regarding local trade and uses of different animal products particularly as it relates to marine oil products and that this ILK can be documented and utilised to inform marine and fisheries policy.
- There is little ILK documentation related to marine biodiversity and focus group stakeholders noted the importance of further researching ILK related to coral reefs given threats faced by these fragile ecosystems.
- Although herbal/medicinal plants are well documented, focus group stakeholders suggested further exploring the prevalence of use of traditional medicine practices and correlation to reliance on the public health sector.
- Women in ILK and their roles as custodians of ILK; workshop stakeholders noted that women in local communities hold ILK related to agriculture (particularly on sustainable harvesting, seed preservation, and understanding of seasonality), water conservation practices, and medicinal plants.
- Focus group stakeholders noted the need to map geographical locations of Indigenous communities including Afro-Indigenous groups to have a better understanding of the range and diversity of Indigenous groups.
- Representatives from the Ministry of Agriculture and Fisheries further noted knowledge gaps in the validation process highlighting agrobiodiversity and traditional seed systems as critical areas for agricultural ILK research. Further research into agricultural ILK that was recommended included:

    - Local classification of soil types and traditional soil fertility management practices (e.g., fallowing, green manures).
    - Detailed ILK on stingless bees and other native pollinators beyond honey production, focusing on their role in crop pollination.
    - Traditional methods of preserving, storing, and processing agricultural products (e.g., cassava, cocoa).
    - Socioeconomics of ILK: particularly researching the economic value of crop varieties and practices sustained by ILK.

Workshop stakeholders observed that gaps in documentation across key thematic areas identified in Section 3.1 (e.g. agriculture) may reflect perceptions of ILK as common knowledge, resulting in limited research attention, or deliberate protection by ILK holders to safeguard commercially sensitive knowledge.

3.2.3 Challenges and barriers to integrating and mainstreaming ILK

Focus groups highlighted that current biodiversity governance systems do not adequately recognise ILK largely because engagement with Indigenous Peoples and local communities remains limited. Participants stressed the need for more intentional inclusion of Indigenous Peoples and local communities within decision-making processes and for updated data gathering approaches that better capture the experiences of elder generations. More mechanisms to share this ILK with the younger generations of Indigenous Peoples and local communities are also needed. A major theme that emerged during focus group meetings was the need to build Indigenous Peoples and local communities' capacity to document and share ILK. Many communities require external support and dedicated platforms for collating, storing and exchanging knowledge, along with data-collection methods tailored to their cultural context. At the same time, ILK holders are often hesitant to share information due to fears of losing ownership, not receiving benefits, or facing misuse. Fishers and farmers, for example, may withhold or alter information as a way of protecting the resources their livelihoods depend on. Participants emphasised that trust-building and formalised ILK-sharing processes are essential.

ILK is also being lost as traditional practices fade, land rights diminish, and biodiversity itself declines. Land tenure arrangements which restrict access to culturally and biologically important sites and the disappearance of native species undermine communities' ability to maintain rituals, healing practices, and ecological knowledge systems.

Despite these challenges, several positive initiatives exist. Cocoa farming communities, including farmers in Brasso Seco, continue to preserve and pass down traditional agricultural knowledge. Figure 23 below illustrates the Brasso Seco Community showcasing traditional products e.g. Cocoa tea. Ongoing efforts—such as documenting farmer knowledge, supported by institutions like the Cocoa Research Unit at UWI, St. Augustine Campus—show how ILK can be integrated into scientific research and industry planning. Initiatives such as the "Chocolate Train" project aims among other things to pass on traditional cocoa knowledge to the youth.

Figure 23: Cocoa tea and other cocoa products showcased by the community of Brasso Seco.
Photo credit: CANARI (n.d.).

3.3 Key Informant Interview (KIIs)

This section presents the findings of the KIIs (See KII interview tool in Appendix 4) as it relates to Section 1 (Indigenous and Local Knowledge and Practices Related to Biodiversity) and Section 2 (Changes and Challenges) of the interview tool. Out of the thirteen interviews conducted, two FPIC forms were not submitted before completion of this assessment. Although verbal consent was provided, in keeping with FPIC principles, this report does not include details of KIIs conducted with the following groups: Orisha community, and one representative of the Rada group.

The perspective of Indigenous groups and Afro-Indigenous on ILK as articulated during the KIIs related to biodiversity and ecosystems was predominantly that of "oneness" or solidarity with nature and respect for the natural environment born out of their spiritual connection with nature which informs their approach to protect and conserve the natural environment. Resource user groups described the traditional practices with their respective groups. Table 4 provides a summary of these key informant interviews.

Table 4: Summary of key informant interviews

Key informant group	Indigenous and local knowledge and practices related to biodiversity
Warao Community of San Fernando	ILK within the Warao Community is grounded in a holistic worldview of "oneness" between humans, animals, and the environment, which underpins practices that prioritise respect, balance, and conservation. Agricultural and irrigation methods are adapted to the landscape, do not include slash-and-burn approaches, and emphasise minimal pollution and limited use of agrochemicals. Cultural and spiritual traditions are closely linked to biodiversity, including herbalism for health and healing, reverence for trees as sources of divine energy, rituals to maintain harmony with the environment, and practices that strengthen connection to Mother Earth. Seasonal and environmental knowledge passed down through generations informs decisions on farming, harvesting, and ceremonial activities, including the use of specific natural areas such as rivers in Blanchisseuse.
The First Peoples of Santa Rosa	Biodiversity is described as the "life blood" by the First Peoples of Santa Rosa, with forests serving as their "hardware, pharmacy and grocery", providing materials for housing, food, medicines, and craft. The First Peoples hold knowledge of how to use forest products in a sustainable manner. Before harvesting, spiritual prayers and rituals are traditionally performed in recognition that the forest, water, and earth each have their own spirit. Materials such as lumber, thatch, and vines for housing and craft are harvested during the dark-night period of the moon to ensure durability and long-term use. Watercourses are regarded as precious and are protected from desecration and pollution. The community holds extensive knowledge of medicinal plants and takes care in preserving these species and passing on harvesting and preparation practices, although some knowledge is now inherited without full understanding. Hunting traditionally relied on traps, spears, and arrows, with animals taken only for immediate needs rather than for sport or economic gain and guided by spiritual traditions including respect for individual sacred animal spirit guides or totem animals that are not hunted. Fishing once centred on "sweet-water" rivers using fish baskets, arrows, and plant-based methods to stun fish, but these practices have become almost non-existent due to environmental degradation, with fishing now largely coastal. Seasonal knowledge guided planting of crops such as cassava and corn, as well as hunting and fishing, based on observation of the moon, stars, and environmental changes, although shifting weather patterns have reduced the reliability of these indicators.
The First Peoples Sovereign Nations (Moruga's First Peoples)	Indigenous agricultural knowledge in Moruga, passed down from elders and practiced within the community, is based on traditional methods that work with natural ecosystems rather than clearing them. Farming systems include mixed cropping such as the "Trinity crops" (peas, pumpkin, and corn), integrated with crops like dasheen, and cultivation in areas close to mangroves where soils are known to be fertile. Indigenous farming avoids large-scale clearing and slash-and-burn practices, instead planting under forest canopy, establishing nurseries within natural forest environments, selectively thinning trees based on age or productivity, and maintaining habitat alongside food production. Organic matter from forested areas is used as manure and compost in place of synthetic fertilisers, while traditional techniques such as high mounds around plants are used to trap moisture during the dry season, reducing the need for irrigation. The continued use of traditional crop varieties, including non-genetically modified cassava, creole corn, Moruga red rice, and hill rice, has allowed the community to preserve plant species and genetic diversity over generations. Respect for biodiversity extends beyond cultivation to animals and plants, with beliefs that plants are living beings deserving of acknowledgement and care, and practices that include leaving fruit for wildlife,

Key informant group	Indigenous and local knowledge and practices related to biodiversity
	planting trees for animals, and maintaining habitats. Herbal knowledge is used for both healing and spiritual cleansing through teas, baths alongside practices such as walking barefoot in forests to connect with the earth and observing rituals before harvesting plants. Key natural areas such as Trinity Hills, San Fernando Hill, rivers, coastal waters, and parts of the sea are considered sacred and are used for ancestral and water-based ceremonies held at specific times of the year. Certain animals hold spiritual significance, including hawks, deer, and snakes, for example each associated with specific spiritual roles, restrictions, or ceremonial uses.
Merikins	Representative noted ILK related to conservation practices associated with traditional hunting practices, natural pesticides, "clean"/non-GMO crops, religious significance of rivers, and respect when harvesting. In addition to traditional medical knowledge related to plants, and religious use of plants.
Rastafarian	Representative noted the importance of understanding healing through food and ensuring a circular system (e.g. as related to waste management and composting.
Rada group	Representatives noted use of herbs for spiritual baths as well as for medicinal use, as well as use of specific animals for spiritual offerings.
Orisha	The Orisha spirituality is linked to elements of nature and energies of the earth, and spiritual practices including offering the elements of nature (e.g. water offering).
The Traditional Afrikan Women's Organisation	The Traditional Afrikan Women's Organisation further highlighted traditional uses of medicinal plants particularly for children, spirituality associated with changes in season and merging of knowledge e.g. use of moringa initially used by Indo-Trinidadians but now utilised widely including among Afro-indigenous groups.
The Foundation for Heritage Preservation & Legacy	The Foundation for Heritage Preservation & Legacy applies ILK through traditional animal care, ethical foraging, companion planting, and habitat-based rehabilitation, traditional water conservation and forest canopy restoration. This group also noted their use of natural resource rotation methods which have been integrated with modern veterinary and ecological science to enhance biodiversity and food system resilience.
Moruga/ La Rufin Fishing Association	Representative highlighted traditional crab harvesting practices (using bamboo traps) and traditional fishing practices (gillnet, a la vie, fish pots). They also explained how they promoted conservation through these methods e.g. gillnets are designed to avoid entanglement on reefs. The Fishing Association also described their familiarity with the different fishing grounds in their area and that they alter their fishing grounds based on season e.g. dry season vs. wet season. They further noted their practice of using cues from natural environment to determine the best times to fish (e.g. observing the moon phases, currents, movement of birds).
The Fishing Pond Farmers Association	Representative highlighted ILK on the traditional process for producing coconut oil, and traditional preparation of local fish (open fire oven roasting).
The South-Eastern Hunters Association	Representative noted traditional hunting practices such as 'sentry-ing' (tracking based on an understanding of how game species feed) and developing connection/familiarity of hunting areas through generational knowledge.
The Trinidad and Tobago Beekeepers Association	Representative highlighted traditional practices of honey-hunting, mangrove honey (and medicinal value of this type of honey), use of Mora forests and rubber tree fields for hives, feeding bees during off season using pollen and adding essential oils, use of Bois Canot (*Cecropia peltata*) leaves as fuel when smoking hives and use of plants to mimic pheromones of queen bees.

Interviewees also described factors that threaten ILK of biodiversity including:

- Degradation of spaces/habitats important for either cultural/religious purposes (rivers) or for resource gathering.
- Unsustainable harvest practices eroding traditional knowledge and practices.
- Restricted access to traditional lands/recognition of indigenous practices on these lands.
- Changing environment/climate affecting availability of resources/location of resources.
- Lack of understanding of/negative perceptions of indigenous practices.
- Disconnection amongst Indigenous groups.
- Limited documentation of ILK.

With regards to the limited documentation on ILK, interviewees recommended improving the transmission of ILK through storytelling/recording, community teachings and publication of books. Other suggestions included research to further document ILK and museums to preserve and share traditional practices as well as ILK education for the wider public/ schools through exhibitions.

3.4 Case study on gathering ILK

As described in Chapter 2, the purpose of case study was to demonstrate inclusive, ethical, and locally adaptable participatory methods, and best practices to gather ILK, whilst supporting biodiversity management in providing recommendations of ILK entry points in the NETMABR and also building capacity within communities and partner institutions in participatory methodologies.

The two communities within the NETMABR highlighted in this case study were L' Anse Fourmi (focused on gathering ILK related to forest/terrestrial biodiversity) and Charlotteville (focused on gathering ILK related to coastal and marine biodiversity). Using four participatory tools (PGIS, seasonal ecological calendar, historical timeline and walking workshops), ILK was mainly gathered on livelihood resources connected to fisheries, farming, hunting as well as historical and cultural practices related to these natural resources e.g. material (medicinal resources, food) and non-material contributions (cultural/historical heritage).

ILK gathered from PGIS exercises provided spatial data on fishing sites and associated fishing practices, as well as key reef sites in Charlotteville. Turtle nesting beaches, freshwater springs, farming sites and hunting grounds were among sites highlighted in L' Anse Fourmi. Culturally significant landmarks were highlighted in both communities (e.g. old fruit trees within the community of L' Anse Fourmi and the old cocoa house in Charlotteville). Information gathered from the ecological calendars and historical timelines included ILK on seasonal cycles of rainfall, fish migrations, turtle nesting, fruiting seasons, and community events. Walking workshops further gathered stories of historical land and sea use, and key livelihood sites for local communities.

Table 5 below provides an assessment of the three participatory methodologies utilised. Overall, using participatory methods helped build trust and empowered communities to contribute meaningfully to biodiversity planning and decision-making and. Each participatory method offered unique insights and combining them provided richer data.

Table 5: Overview of participatory tools utilised for case study

Method	Strengths	Challenges
PGIS	• Spatial representations of local ecological and cultural knowledge. • Community ownership by letting participants identify areas of importance. • Useful for integrating ILK with geospatial data for future project planning.	• Differing opinions among participants on boundaries and area significance led to debate. • Technical challenges such as internet speed hampered this exercise. However, while an online mapping tool was utilised during this case study, offline physical maps and printed satellite imagery could be used instead. • Familiarity with digital tools may limit use of tools by community stakeholders.
Ecological calendars and historical timelines	• Captured seasonal and temporal ILK data. • Enabled collective reflection on how climate variability affects livelihoods. • Can be rapidly interwoven with scientific data.	• Visually engaging to capture stakeholder input. • Limited opportunity for detailed qualitative narratives. • Condensed format restricted follow-up questions.
Walking workshops	• Grounded observations allowed participants to link ecological change to specific sites. • Promoted intergenerational dialogue between elders and younger residents.	• Time constraints limited the depth of discussion at some sites. • Some anecdotal data lacked verification.

Details on the ILK gathered from the case study, using the participatory tools described above, are documented in two community photo journals presented in Appendices 8 and 9. Information gathered from the case study can be integrated into ILK indicators to support biodiversity monitoring, and provide baseline data to inform hunting closed seasons. Section 3.6.3 delves further into integrating ILK into the NETMABR management plan.

3.4.1 Protecting rights, ensuring ownership and participation

As part of the participatory approach and to safeguard community rights, FPIC forms were used. However, there were challenges in this process as some participants were hesitant to sign, and extra time was needed to explain the purpose and protections.

Also, while verbal consent was provided, considerable effort was still required to collect completed FPIC forms post KIIS. While the forms do ensure protection of ILK holder, they are not without limitations. To strengthen ethical engagement, CANARI has also applied other established methods, such as community validation workshops which provides the opportunity for review and revision of information, as well as ensuring clear crediting of all contributors. These steps support transparency, foster a sense of ownership, and help build community empowerment.

To support ILK ownership further, CANARI worked with the two communities to develop photo journals documenting the information they collected. The photo journals remain the property of the communities, who will decide how they are shared and used. Community members provided photographs and descriptions in the photo journals, (See Appendices 6 and 7). In this way their perspectives and voices were represented in the journals.

3.5 Multistakeholder policy and capacity workshop findings

3.5.1 Participatory SWOT analysis

Stakeholder discussions from both islands, which are summarised in the table below, informed strengths, weaknesses/threats and opportunities related to mainstreaming ILK in biodiversity policies, targets and reporting. This is recorded in Table 6 below.

Table 6: SWOT analysis of ILK mainstreaming

Strengths *What is working now and how is ILK being included/ mainstreamed into policies/strategies/ plans/ institutional frameworks.*	• Fisheries Management Bill integrated local knowledge of fishers, even if not identified as ILK. • Certificate of Environment Clearance Application process mandates public stakeholder consultations, and highlights power of community voices in open forums. • CSOs/local communities provide data to government to support decision-making processes e.g. ERIC and Save our Sea Turtles (SOS) Tobago have provided data to THA on turtles; Department of Environment engaged local communities in developing a management plan for Sargassum; ILK has supported management plans including plans related to Little Tobago. • In Tobago, ERIC conducts conservation and education programmes among school groups and ILK is used to inform the programme and support intergenerational transmission of knowledge. • There is a government initiative that conducts island-wide caravans highlighting Tobago heritage and traditions.
Weaknesses/ Threats *Main challenges or barriers (e.g., institutional, legal, cultural) that may prevent ILK from being integrated into national biodiversity frameworks.*	• There is a limited awareness/understanding/appreciation of ILK amongst policymakers leading to limited inclusion of ILK in decision-making processes. • Limited inter-generational transmission of knowledge due to lack of interest in ILK by youths which can result in loss of ILK over time. • Given uncertainty in political landscape and shifting priorities, projects focusing on ILK inclusion are not prioritised/given enough resources. • Limited documentation of ILK which reduces recognition of ILK.

	• IPLCs may lack resources to facilitate their participation in consultations/ dialogues (e.g. transportation, stipends, expertise, technical capacity). Additionally, due to the power imbalances, IPLCs may be intimidated by technocrats/academics. • Indigenous Peoples and local communities may lack resources to facilitate their participation in consultations/dialogues (e.g. funds for transportation, stipends, expertise, technical capacity). Additionally, due to the power imbalances, Indigenous Peoples and local communities may be intimidated by technocrats/academics. • ILK holders may be unwilling to share data, due to in part, the lack of trust between ILK holders and government stakeholders, and there may be cases of deliberately sharing inaccurate information. Other reasons stated for withholding information, was fear of external persons profiting from information shared e.g. fishermen withhold information for fear of losing their livelihoods as well as the fear of losing identity and uniqueness of community/culture. • Lack of technical capacity including online presence within groups of Indigenous Peoples and local communities. • Indigenous Peoples and local communities are often not aware of environmental rights and rights to common spaces. • There is limited framework to include ILK into the existing governance structures. Additionally, local government representatives participating in various events/plans/projects are not familiar with Indigenous Peoples and local communities and their ILK. • Lack of credit given to the ILK holders and limited protection for Indigenous Peoples and local communities' intellectual property rights. This is further exacerbated by lack of funding to ensure ILK is documented and protected. • Even if ILK is shared with policymakers, lack of implementation, lack of enforcement and weak legislation, reduces opportunities for ILK to impact on the ground action.
Opportunities *Opportunities that exist for better inclusion of ILK in biodiversity policy, planning, or implementation and recommendations for mainstreaming ILK into national biodiversity strategies and policies, plans.*	• Increase support for local knowledge systems can be facilitated by improving consultation processes with IPLCs. This can be done for example by ensuring a minimum representation of local community groups for public consultations. • Apart from consultations, policy makers can utilise different participatory methodologies to gather ILK. • Utilise MEB approach to reduce conflicts between ILK holders and scientists, building on successful cases of ILK inclusion e.g. ILK supported coastal resilience management with IPLCs working together with the THA. • Develop a central data hub where CSOs can document, store, preserve ILK; these can be self-owned/private data systems owned by ILK holders. • Conduct educational programmes for ILK holders to better understand how to contribute to policy processes as well as to understand their rights to their knowledge. • Support ILK holders to recognise added value of ILK shared e.g. ILK can support developing tourism products for IPLCs. • Social media can be utilised to increase engagement with the younger generation to support inter-generational transmission of ILK. • Given that ILK holders may withhold information, and there can be a gap in transmitting knowledge between ILK holders and policy makers, bridging institutions may be able to build trust and knowledge transfers between ILK holders and policy makers. • There is need to increase IPLCs access to legal protection/legal expertise to assist in safeguarding their intellectual property rights. ILK holders should be cited when their information is referenced.

3.5.2 Capacity-building for ILK inclusion

To support ILK inclusion in biodiversity policies and decision-making processes, stakeholders identified capacity gaps and recommended support or training that would strengthen ILK documentation/transmission and engagement of Indigenous Peoples and local communities in biodiversity governance. For instance, stakeholders noted one of the main gaps was Indigenous Peoples and local communities' capacity to document their own ILK to ensure its recognition and mainstreaming into current everyday practices (e.g. traditional agriculture) and decision-making processes. Stakeholders further noted the limited training in ILK data gathering methodologies to support documentation on the part of both Indigenous Peoples and local communities, as well as state agencies and other groups.

Capacity gaps related to communication and networking were also noted, in particular, limited communication among Indigenous Peoples and local communities and limited engagement with young people/youths to support inter-generational ILK transmission. Workshop participants also acknowledged limited networking between Indigenous Peoples and local communities and the scientific community to support merging of knowledge systems and improving the perception of the value of ILK.

In terms of financing to support ILK documentation and sharing, stakeholders noted the limited capabilities of Indigenous Peoples and local communities in accessing long-term funding and that most available funding is not sustainable, as it is either through project-based funding, or donations. Stakeholders also suggested that ILK inclusion in decision-making processes may be limited due to weak representation of Indigenous Peoples and local communities in decision-making forums/processes (linked to financial constraints to attend these forums or limited collaboration with policymakers leading to top-down policy development given lack of direct/structured inclusion of Indigenous Peoples and local communities).

Stakeholders further noted the limited awareness of the rights of Indigenous Peoples and local communities, including on the part of the Indigenous Peoples and local communities themselves. Broader systemic issues, such as generational poverty and lack of education, were noted by stakeholders as further exacerbating the above constraints.

Improved networking capacity amongst Indigenous Peoples and local communities can further support learning opportunities through cultural celebrations to showcase cultures/traditions of various communities, as well as inclusion of ILK in primary school syllabus.

Technical support recommended by stakeholders included providing training in documentation procedures, including data entry, writing, and generally improving computer literacy. Designating community officers who can support with in situ community documentation was also recommended. Further technical training in documenting ILK in a storytelling format through various media (social media, filmmaking, short-form content, music, blogs, etc.) was also suggested.

Stakeholders recommended providing training to Indigenous Peoples and local communities to support improved understanding of laws and policies relevant to biodiversity decision-making processes, to increase understanding of the impacts of laws and policies on Indigenous Peoples and local communities, and potential entry points for ILK and Indigenous Peoples and local communities to influence laws and policies. Along with this, Indigenous Peoples and local communities should have information on how to engage in various government consultative processes (e.g. related to updating policies etc.). Further, support to engage in these forums e.g. media training, public speaking as well as mind mapping to connect ideas and actions into structured documents, etc. Cooperation with established CSOs from similar communities with similar heritage can improve capacity of Indigenous Peoples and local communities in engaging with biodiversity decision-making processes.

General technical support in project management, proposal writing/fundraising, increasing monitoring capacity, improving legal support, and improving policy literacy of Indigenous Peoples and local communities were suggested.

3.5.3 Frameworks and mechanisms to support ILK inclusion in biodiversity policy and decision-making

Workshop participants suggested mechanisms (including national frameworks and institutions), that can play a stronger role in ILK inclusion. They also highlighted examples of successful capacity-building initiatives for ILK inclusion and provided recommendations to ensuring FPIC and respect for intellectual property rights of ILK holders in national frameworks. For example, they indicated that institutions that are involved in biodiversity data collection (e.g. universities, Forestry Division, Fisheries Division, IMA, EMA) can incorporate ILK into their research/work and credit ILK appropriately in their documents.

Stakeholders noted that ILK documentation can be supported by having designated document storage facilities that can be accessible to the public as a repository of ILK. This includes the addition of computer cafes to encourage documentation of ILK. These facilities can further ensure protection of ILK in the events of disasters. Financial support was recommended to support ILK documentation by Indigenous Peoples and local communities, and to support the creation of storage facilities/ ILK libraries.

Avenues for awareness raising on the importance of Indigenous Peoples and local communities and ILK include: the curricula of primary and secondary schools, awareness-raising workshop for government stakeholders and potential to develop learning centres within Indigenous communities to support inter-generational transfer of knowledge. Civil society organisations including Community Based Organisations (CBOs) and other various religious organisations can also lobby for the inclusion of ILK in biodiversity frameworks.

Workshop stakeholders provided the following examples of mechanisms and activities support inclusion of ILK on biodiversity, which can be replicated/leveraged to support for future work:

- Save Our Sea Turtles (SOS): brings together scientific knowledge and ILK to support turtle conservation efforts.
- Heritage Festivals which showcase Tobago's culture, and the Ital Foods Festival showcasing local foods and culture.
- Fondes Amandes Community Reforestation Project (FACRP): includes ILK in agroforestry work.

Stakeholders further recommended supporting the formation of Indigenous Peoples and local communities' councils that can represent the interests of Indigenous Peoples and local communities at a national level. Joint forums for Indigenous Peoples and local communities' representatives to engage government stakeholders on biodiversity issues was further recommended. Recommendations were also made to enshrine ILK rights within legislation to ensure Indigenous Peoples and local communities' 'seat at the table'. In order to further ensure rights of ILK holders, stakeholders recommended that documentation for granting consent be made readily available, and that FPIC procedures should be mandatory for national data collection and research. To support this, sensitisation about FPIC should be a prerequisite to any project to increase awareness among Indigenous Peoples and local communities of FPIC principles.

Similarly intellectual property rights can be ensured for ILK holders by ensuring patenting or copyrighting of knowledge and ensuring Indigenous Peoples and local communities are credited whenever ILK is cited/referenced. Reviewing existing legislation can provide more information on the current framework to protect Indigenous Peoples and local communities' rights.

3.6 Analysis of ILK policy gaps and entry points

3.6.1 ILK Inclusion in biodiversity policies, strategies and plans

A key goal of the TTNOILKB is to support the mainstreaming of the ILK in biodiversity policies and biodiversity related decision-making. Towards this end an analysis of how ILK is currently being incorporated into a subset of national biodiversity related policies (Table 1) was conducted, utilising the framework outlined in section 2.5. The results of this analysis are documented in Table 7 below. Note however that the NBSAP and NETMABR are treated separately and in more detail in sections 3.6.2 and 3.6.3 respectively.

Also included in Table 7 below are the observations and recommendations about ILK mainstreaming relevant to the specific policies and plans as suggested by participants during exercises within the multistakeholder dialogues. ILK mainstreaming observations and recommendations were also captured during focus group meetings and KIIs as detailed in sections above.

Table 7: Review of ILK mainstreaming in biodiversity policies, strategies and plans

Policy/ Strategy/ Plan	Assessment[5] of policy, strategy or plans	Stakeholder suggestions on gaps that may be filled by ILK	Stakeholder suggestions on sources and potential application of ILK
National Environmental Policy (NEP)	The NEP was developed in 2018 with an overarching goal of guiding national environmental management, sustainable development and cross sectoral coordination of environmental action and planning. It is perhaps the broadest scale framework environmental management framework in Trinidad and Tobago. As a more recent policy document, it does showcase a more inclusive participatory approach with provisions for Indigenous Peoples and local communities and ILK following global trends, however given its role as an umbrella framework these provisions are somewhat of a general nature. The NEP encourages Indigenous Peoples and local communities and ILK holder participation in consultations and co-management of natural resources. One of its objectives is to "Encourage the meaningful participation of non-governmental organisations and community-groups, especially those involving youth, in the conservation, management, monitoring and evaluation of biodiversity". The NEP also advocates for the use of ILK in management, planning, reporting and monitoring and notes that "traditional knowledge, innovations and practices of Indigenous and local communities shall be respected and promoted for wider application given FPIC". The NEP also recognises the rights of Indigenous Peoples and local communities (including customary rights) and ABS. Further the NEP aims to "Empower small-scale food producers, particularly women, Indigenous peoples, and family farmers, through improving secure and equal access to land, other productive resources and inputs, knowledge, financial services, markets, and opportunities for value addition and non-farm employment." Through these provisions, the NEP incorporates aspects of targets 9, 13, 21 and 22 of the KMGBF, acknowledges ILK as a knowledge system and its utility in biodiversity reporting and monitoring frameworks as well as its value for biodiversity conservation. The document also mentions providing resources for Indigenous Peoples and local communities.	N/A	N/A

5 Criteria use in assessment of biodiversity policies, strategies and plans included a) Alignment of the policy with Targets 9, 21, and 22 of KMGBF; b) If ILK was acknowledged as a knowledge system as indicated by definition or references to ILK /traditional knowledge, value of ILK recognised for biodiversity/conservation/sustainable resource use; joint learning/multiple evidence base approach/ILK and scientific knowledge collaboration/dialogue supported (c) co-management strategies d) use of ILK in management, planning, reporting monitoring d) Recognition of rights of IPLCs (including customary rights), access benefit-sharing (ABS) and FPIC 2) Resource allocation for ILK initiatives or capacity-building/strengthening indicated by financing/funds, institutional support for inclusion of ILK including training.

Policy/ Strategy/ Plan	Assessment[5] of policy, strategy or plans	Stakeholder suggestions on gaps that may be filled by ILK	Stakeholder suggestions on sources and potential application of ILK
National Biodiversity Strategy and Action Plan (NBSAP)	See section 3.6.2 below	- Lack of microbiological data. - Repository of biodiversity data is mostly online and often websites don't function after the relevant project funding runs out; could consider how ILK documentation can support with ensuring data preservation.	- NBSAP can be further informed by engaging ILK holders in cultural/ religious groups (e.g. National Ramleela Council; Shouter Baptists; Catholics and other Christian churches). - Utilise MEB approach to gather microbiological data e.g. ILK can help understand soil characteristics in specific areas.
National Protected Areas Policy and Plan	These frameworks do consider traditional use of biodiversity and Indigenous Peoples and local communities' participation in decision-making. Relevant text for example includes "where possible, explicitly take into account issues of traditional use, access and uniqueness, to assign each of the new [protected areas]. They also call for the "Establishment of local Protected Natural Area (PNA) committees comprising the stakeholders (State management agencies, CSOs, CBOs, private landowners and traditional users of the sites), to act as local-level PNA advisory boards. This approach ensures that the development of the PNAs and their management takes into consideration the historical uses of the sites, as well as the needs and expectations of the local communities and traditional users. The frameworks further seek to empower stakeholders, including communities, to care for their own environments, providing opportunities to share in managing their local resources and the right to participate in decision-making. The documents also note that "the costs, benefits and responsibility for PA management will be shared among all stakeholders, who should have opportunities to share in managing resources and the right to participate in decision-making. The value systems, interests and priorities of all stakeholders must therefore be understood and respected, and mechanisms and structures should be put in place to institutionalise participatory PA management".	- Limited capacity/resources to manage/ enforce protection of the area. - Limited knowledge on species diversity and abundance in protected areas.	- ILK can inform species information gaps. - Elderly members from communities around PNAs are key ILK holders who can be consulted to fill knowledge gaps. - Build capacity with Indigenous Peoples and local communities to support enforcement and sustainable use of common property within PNAs; enforcement will benefit from Indigenous Peoples and local communities' intimate knowledge of specific areas.

Policy/ Strategy/ Plan	Assessment[5] of policy, strategy or plans	Stakeholder suggestions on gaps that may be filled by ILK	Stakeholder suggestions on sources and potential application of ILK
	The documents also note that "the costs, benefits and responsibility for PA management will be shared among all stakeholders, who should have opportunities to share in managing resources and the right to participate in decision-making. The value systems, interests and priorities of all stakeholders must therefore be understood and respected, and mechanisms and structures should be put in place to institutionalise participatory PA management". The policy and plan also advocate for the following: - Focus on the role of local communities and non-State actors in site-level management of the PNAs where this is possible and desirable. - The integration of local communities, CBOs and Non-Governmental Organisations (NGOs) in the governance and management of the individual PNAs should be at the heart of the management of the PNAs in the NPA. Thus, it is evident that ILK and Indigenous Peoples and local communities are relatively well incorporated into the National Protected Areas Policy and Plan However any potential updates to these frameworks could include more reference to resource allocation for ILK initiatives.		
National Integrated Water Resources Management Policy	This policy has very limited reference to ILK and Indigenous Peoples and local communities. It only speaks loosely to community involvement in projects. Given the focus of this policy, strong integration of biodiversity ILK may not be needed however biodiversity ILK may be useful to inform specific watershed or river management plans, activities or projects arising from this policy.	- Legality of rainwater harvesting to be explored given potential benefits to Indigenous Peoples and local communities. - Education outreach from local government to communities is needed regarding the policy.	- Policy to include considerations for the role of women in water use and conservation. - Agricultural Society of Trinidad and Tobago can provide ILK regarding water use by local farming communities.

Policy/ Strategy/ Plan	Assessment[5] of policy, strategy or plans	Stakeholder suggestions on gaps that may be filled by ILK	Stakeholder suggestions on sources and potential application of ILK
National Climate Policy	There is limited reference to Indigenous Peoples and local communities and ILK. However, one section indicates the need to "ensure that national and local stakeholders have equitable access to and benefit from information and knowledge on climate change impacts, mitigation and adaptation, including information and knowledge from foreign stakeholders and researchers".	- Educational outreach is needed to inform Indigenous Peoples and local communities on the policy.	- ILK, including historical ILK can inform (i) scale of coastal erosion over time, (ii) impacts of sea level rise, (iii) impacts of climate change on the fisheries sector, e.g. declining fish stocks and changing in migration patterns.
National Forest Policy	The policy references ILK as an information source and speaks to ensuring benefits to Indigenous Peoples and local communities. Section 6 notes that "Evidence-based management: policy formulation and implementation must be based, to the maximum extent possible; on tangible evidence and information, including scientific data, results of scientific research, and popular or grassroots knowledge as the basis of decision-making". Further Section 8.1 advocates for "Ensuring that the results of research and development, including traditional knowledge, and the benefits arising from the commercial and other utilisation of genetic resources are shared in a fair and equitable way to benefit local and national stakeholders." Section 6 also indicates that "the costs, benefits and responsibility for forest management must be shared among all stakeholders, who share in the management of resources and the right to participate in decision-making. The value systems, interests and priorities of all stakeholders must therefore be understood and respected." Thus, this policy includes aspects of the KMGBF targets 13 and 21 and 22. ILK is valued and acknowledged as a knowledge system for planning and implementation and advocates for ILK to be considered in tandem with scientific information. There is also a specific note to institutionalise forest co-management in Section 9. Further the policy speaks to resource allocation to NGOs (which would include Indigenous Peoples and local communities). There is also a specific reference to "build the capacities of stakeholders from government, civil society and the private sector including in: skills both in technical aspects of forest management as well as best practices and broader management skills (e.g. communication, stakeholder mobilisation, facilitation, conflict management); understanding	- Need to increase awareness of forest reserve boundaries amongst stakeholders.	- ILK from hunter's associations can provide information on wildlife abundance.

Policy/ Strategy/ Plan	Assessment[5] of policy, strategy or plans	Stakeholder suggestions on gaps that may be filled by ILK	Stakeholder suggestions on sources and potential application of ILK
	multiple value systems, world views, beliefs, culture and perceptions about how forests should be used and managed and how people should be involved. The policy also addresses resources provision for NGOs and CBOs as per the following text "(ii) provide resources to assist NGOs and CBOs to effectively participate in management (this may include provision of technical assistance, financial or material resources, access to and rights to manage lands, offices and facilities)." In general, this policy strongly aligns with targets and guidelines promulgated in international frameworks on supporting Indigenous Peoples and local communities and ILK integration in biodiversity conservation.		
National Wildlife Policy	The use of ILK for wildlife management is relatively well reflected in the National Wildlife policy. For example, within Section 6 on Principles and Values, the policy notes that "Evidence-based management, policy formulation and implementation must be based, to the maximum extent possible; on tangible evidence and information, including scientific data, results of scientific research, and popular or grassroots knowledge as the basis of decision-making". This is re-emphasised in section 8.3 on Optimising the Contribution of Wildlife Resources to Livelihoods noting that wildlife management will rely on "to the maximum extent possible; tangible evidence and information, including scientific data, results of scientific research, and popular or grassroots knowledge as the basis of decision-making such as patterns of human ownership, development and traditional use patterns in and around the proposed PNAs system". Thus, this policy emphasises the MEB approach including joint consideration of ILK and scientific data. Similarly Section 8.3 Paragraph I further notes the need to "within one (1) year of the adoption of this policy establishing a revised legally designated list of game species (Mammals, Reptiles, Waterfowl and Cage Birds) based as far as possible on the best scientific and local knowledge of the status of these populations and their ability to be sustainably harvested" and 8.3 xvii indicates the need to "ensure that the results of research and development, including traditional knowledge, and the benefits arising from the commercial and other utilisation of wildlife resources are shared in a fair and equitable way, which benefits local and national stakeholders".	- Need species information to support habitat and wildlife protection.	- Policymakers should recognise Indigenous Peoples and local communities' spiritual connection with nature when drafting policies/plans and note extractive activities that impact that connection (e.g. seismic surveys). - Indigenous Peoples and local communities will have knowledge on interconnectedness within ecosystems, e.g. which trees are useful for wildlife.

Policy/ Strategy/ Plan	Assessment[5] of policy, strategy or plans	Stakeholder suggestions on gaps that may be filled by ILK	Stakeholder suggestions on sources and potential application of ILK
	This policy therefore addresses the KMGBF Targets 13, 21 but does not speak as strongly to Target 22 on Indigenous Peoples and local communities and ILK participation in decision-making. These aspects should be considered in any future updates to the policy. The policy does value ILK as a knowledge system, embraces a MEB approach however and does provide for "resources to NGOs and CBOs to effectively participate in wildlife management (this may include the provision of technical assistance, financial or material resources, access to and rights to manage wildlife habitats, offices and facilities, etc)". The policy also embraces co-management opportunities as per the recommendation "development of collaborative management/co-management or delegated responsibility arrangements for issues related to management of non-commercial wildlife species in marine protected areas".		
Aripo Savannas Environmentally Sensitive Area (ASESA) Management Plan	This management plan integrates ILK as evident in the overall management goal which is "to equitably and effectively involve stakeholders in management of the ASESA to preserve the unique ecosystems and protect its biodiversity, historical and cultural values, while promoting research, education and the development of sustainable livelihoods, particularly for local people, to the extent that this can be done without compromising the integrity of the ASESA". The management plan also speaks to: producing direct and indirect economic, social and environmental benefits for the local and national community; establishment of community liaisons; and local community participation in the planning and management of the ASESA. The plan also notes potential IPLC representatives on the management committee for the ASESA including village councils and representatives of Indigenous groups. The introduction to the management plan describes the site's use by Indigenous Peoples including the importance of plants like the Moriche Palm (*Mauritia flexuosa*) to these groups. The ASESA management plan therefore addresses KMGBF Targets 9 and 13. It also speaks to "incorporating stakeholder knowledge, skills, perspectives, and opinions" as part of an overall participatory but does not strongly address Target 21 on the use of ILK for biodiversity policy and interventions. With regards to Target 22 the policy advocates for "a governance system, which promotes decentralisation and devolution to other stakeholders and builds on positive synergies and existing capacity is recommended".	N/A	N/A

Policy/ Strategy/ Plan	Assessment[5] of policy, strategy or plans	Stakeholder suggestions on gaps that may be filled by ILK	Stakeholder suggestions on sources and potential application of ILK
Matura Forest and Coastal Zone Protected Area and Management Plan	The plan highlights co-management arrangements with local NGOs. Activities include signage development based in part on local knowledge, working with these same local NGOs. There is also an emphasis on sustainable livelihoods within local communities. Apart from these aspects, there is limited reference to ILK and its inclusion in biodiversity conservation. Text on Indigenous Peoples and local communities' participation in decision-making is also lacking, as are points on access and benefits sharing and or resource allocation for ILK initiatives. Updates to the plan in the future should consider these aspects.	- TThere is need to monitor beekeeping and farming practices in this area. - Rights of Indigenous Peoples and local communities and ILK related to PNAs should be protected through legislation.	- IIndigenous Peoples and local communities can engage in reforestation projects.
Caroni Swamp Protected Area Management Plan	The plan noted the need to represent the interests of farmers and fishers who have traditional use interests and rights to farmland in the protected area. It also mentioned village councils, e.g. for Brickfield, Caroni and Felicity, which represent communities that have traditional use interests and rights. One of the activities listed is the creation of a portal for NGOs and private enterprises to develop and implement tourism initiatives that will involve communities/ traditional users (in line with overall objectives for the PA). Overall, there is not much reference to ILK as a knowledge system but more reference to general environmental education. Future updates to this plan could have greater consideration of ILK, including use of ILK in management, planning, reporting and monitoring. There could also be more specific text related to the rights of Indigenous Peoples and local communities and greater emphasis on ABS. In general, greater alignment to KMGBF biodiversity Targets 9, 21 and 22 is recommended.	- There is need to include ILK practices of surrounding communities related to the Swamp, and values associated with these practices should be noted. - There is need to address farming practices within swamp areas.	- ILK was gathered in research done by UWI under the Caroni Research and Development Impact Fund Project (including community mapping of resource users and scarlet ibis). - Organisations such as the Felicity Fishing Association, Ecosystem Approach, Oyster Association can also provide ILK to inform management plan; surrounding communities can provide ILK as well e.g. Bamboo and Felicity.

Policy/ Strategy/ Plan	Assessment[5] of policy, strategy or plans	Stakeholder suggestions on gaps that may be filled by ILK	Stakeholder suggestions on sources and potential application of ILK
Nariva Swamp and Coastal Zone Protected Area Management Plan	The management plan notes that local communities can be effectively involved in protection and enforcement activities, especially where they are protecting their own rights to access resources. The plan's sub-objectives included the following: - to build/strengthen governance and management arrangements that support and enhance the participation of local residents; - to build the capacity of locals to improve governance and management of the tourism plan; - conserving and promoting traditional environmental knowledge and sustainable cultural uses and practices by creating opportunities for resource mobilisation, education and recreation; - Protecting and encouraging the use of natural or ecological resources in accordance with protecting and encouraging the use of natural or ecological resources in accordance with traditional cultural and spiritual/religious practices that are compatible with conservation or sustainable management; and collaborating with relevant stakeholders to support the preservation of any historical, rare, unique, internationally important, fossil, national, scientific or archaeological interest; and - to a limited extent, the plan does recognise ILK and speaks to local community participation in governance/decision-making. However, treatment of these topics is general. Future updates to this management plan should consider the inclusion of elements of Targets 9, 21 and 22 of the KMGBF, the use of ILK in management planning, reporting and monitoring and resource allocation for ILK-related initiatives.	N/A	N/A
Main Ridge Forest Reserve, Tobago Protected Area Management Plan	There is limited reference to ILK in this management plan, as well as limited inclusion of aspects of KMGBF Targets 9, 13, 21 and 22. Updates to this management plan could include references to the main tenets of these targets as well as more detailed involvement of Indigenous Peoples and local communities including possible co-management options.	- Centralised repository of historical information on the Main Ridge needed for tour guides.	- Key community members in L'Anse Fourmi (ILK holders) can further inform the management plan.

Policy/ Strategy/ Plan	Assessment[5] of policy, strategy or plans	Stakeholder suggestions on gaps that may be filled by ILK	Stakeholder suggestions on sources and potential application of ILK
Draft Sea Turtle Recovery Action Plan	Sea Turtle Management has a long history of community engagement including co-management models in Trinidad and Tobago. To this end the Recovery Action Plan heavily does reference past community involvement and advocates for continuation of this engagement and co-management thrust. The plan notes that "community-based funding models are already employed for sea turtle conservation at the local level and can be enhanced with state support, providing a sustainable funding loop for conservation and livelihood development". Apart from the above, there is limited reference to ILK and Indigenous Peoples and local communities, including ILK use in management, planning, reporting and monitoring. There is also little alignment to KMGBF Targets 9, 21 and 22. It should be noted that representatives of the organisation leading the current revision of the plan attended the Trinidad Multistakeholder Dialogue Workshop under the TTNOILKB. The plan was discussed during workshop exercises, and the representatives were open to examining how ILK could be better incorporated within the plan.		- Key ILK holders that can inform these plans include SOS, ERIC, Tobago Wildlife and Environment Protection Group (TWEP-G), North East Sea Turtles (NEST) (Charlotteville), and SpeSeas. - ILK holders that inform the plan include L'Anse Fourmi and Charlotteville local community members and Save Our Sea Turtles (SOS).

Policy/ Strategy/ Plan	Assessment[5] of policy, strategy or plans	Stakeholder suggestions on gaps that may be filled by ILK	Stakeholder suggestions on sources and potential application of ILK
Management plans for ESS (in development or under revision) e.g. Pawi; Manatees, White-Tailed Sabrewing Hummingbird	n/a as under development and not available to the public.	- Limited information on population, distribution range, seasonality, and reproductive ecology of ESS.	- Pawi-NGOs/communities located within the range of Pawi can gather ILK to inform plan. - Manatee-Community groups in and around Nariva, Plum Mitan, Biche can further inform the plan. - Key ILK stakeholders that can inform the White-Tailed Sabrewing Hummingbird management plan include: ● Trinidad and Tobago Bird Observatory and Research Centre (TTBO) ● Shurland's Hummingbird Nature Park ● Tour guides ● Bloody Bay Community.

3.6.2 Analysis of NBSAP

The first version of the Trinidad and Tobago NBSAP was developed in 2001, and the second in 2018, covering the period 2017-2022. The third version of Trinidad and Tobago's NBSAP is currently being finalised by consultants under the directive of the EPPD. The second version of NBSAP included Target 18, which stated that "By 2020, the traditional knowledge, innovations and practices of Indigenous and local communities relevant for the conservation and sustainable use of biodiversity, are integrated and reflected in the implementation of the Convention in a participatory manner". National reporting (6NR) in 2019 indicated that progress towards Target 18, was made, but at an 'insignificant rate'. It was further noted that whilst there were several projects, programmes and initiatives that utilise local knowledge (e.g. the Improving Forest and Protected Area Management project), ILK could be better documented and utilised in national decision-making. The reporting noted there was only partial monitoring related to this target (CBD CHM, 2019).

The third version of the TTNBSAP, currently being developed, has already defined National Biodiversity Targets, with review and input by key stakeholders. These Targets have since been developed and approved by Cabinet. These targets were developed prior to initiation of work on the NOILKB; thus, there was no opportunity for the TTNOILKB team to directly input to the targets. Nevertheless, there is significant alignment with KMGBF targets related to ILK and Indigenous Peoples and local communities. This alignment is demonstrated in Table 8 below.

Table 8: Alignment between the targets of the Trinidad and Tobago NBSAP currently under revision and the ILK and Indigenous Peoples and local communities related targets of the KMGBF

KMGBF	Trinidad and Tobago NBSAP under revision
Target 9: Manage Wild Species Sustainably to Benefit People *Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.*	Target 5: Sustainable Use, Harvesting and Trade of Wild Species *The use, harvesting and trade of wild species are sustainably managed to minimise the risk of overexploitation and impacts on non-target species, ecosystems and human health while considering traditional and livelihood generating uses by Indigenous Peoples and local communities and applying the ecosystem and participatory approaches to management.*

KMGBF	Trinidad and Tobago NBSAP under revision
Target 13: Increase the Sharing of Benefits from Genetic Resources, Digital Sequence Information and Traditional Knowledge' *Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources, and by 2030, facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.*	Target 13: Sharing of Benefits from Genetic Resources, Digital Sequence Information and Traditional Knowledge *Identify and initiate legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources.*
Target 21: Ensure that Knowledge Is Available and Accessible to Guide Biodiversity Action *Ensure that the best available data, information and knowledge, are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent[1], in accordance with national legislation.*	Target 21: Knowledge Management for Biodiversity Conservation *Operationalise a National Biodiversity Information System (NBIS) to provide open access to biodiversity data, information, and knowledge including from Indigenous and local communities to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management. Implement actions to sustain operation of NBIS: including data generation, system maintenance and updates, data dissemination, knowledge product generation, outreach to engage potential users. Develop and implement a National Monitoring Framework for biodiversity conservation.*
Target 22: Ensure Participation in Decision-Making and Access to Justice and Information Related to Biodiversity for all *Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by Indigenous Peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.*	Target 22: Participation in Decision-Making and Access to Justice and Information Related to Biodiversity for all *Systems are in place to facilitate equitable, inclusive, effective representation (women and girls, men and boys, children and youth, persons with disabilities and others from marginalised groups and communities) and participation in decision-making, while also providing access to justice and information related to biodiversity, inclusive of the traditional knowledge, innovations and practices of Indigenous and local communities relevant for the conservation and sustainable use of biodiversity.*

The current draft includes 4 goals, 58 actions and 111 activities, of which the authors indicate that there are 25 activities across all four National Goals with ILK aspects (Advisors Next Door, 2025).

Goal C [6] in particular, speaks to sharing benefits fairly with further elaboration that ILK stakeholders should be actively engaged to ensure their knowledge informs the national ABS framework. Also, Goal C notes that the benefits from traditional knowledge are shared fairly and equitably. Within Goal A [7], which speaks to 'Protect and Restore' there is reference to mainstreaming ILK into policy and regulatory frameworks. Goal B [8], which is 'Prosper with Nature' has reference to sustainable harvesting and use to protect wild species and local livelihoods. Goal D [9], which speaks to investing and collaborating talks about knowledge transfer to foster biodiversity stewardship at all levels of society.

A recent stakeholder consultation on the NBSAP was held in November 2025 for stakeholder inputs on draft NBSAP activities and their corresponding targets and indicators. This meeting was attended by the TTNOILKB project team, which made ILK relevant inputs, including the following recommendations in Table 9.

Table 9: Recommendations for ILK mainstreaming in the actions and activities of the revised NBSAP

Action	Current text	Recommendation
9.3	By 2028 evidence for decision-making of wild species management made available.	Use MEB approach referencing ILK as one type of evidence.
11.2	By 2030 enhance local community and Indigenous Peoples engagement in ecosystem restoration.	Include reference to protecting the rights of Indigenous Peoples and local communities.
13.1	By 2030 the country has undertaken foundational steps to establish a national framework for ABS related to genetic resources digital sequence information and associated traditional knowledge.	Protect rights of Indigenous Peoples and local communities and ILK holders in the process in both the action and activity text.

6 Goal C, Share Benefits Fairly: The monetary and non-monetary benefits from the utilization of genetic resources and digital sequence information on genetic resources, and of traditional knowledge associated with genetic resources, as applicable, are shared fairly and equitably, including, as appropriate with Indigenous Peoples and local communities, and substantially increased by 2050, while ensuring traditional knowledge associated with genetic resources is appropriately protected, thereby contributing to the conservation and sustainable use of biodiversity, in accordance with internationally agreed access and benefit-sharing instruments.

7 Goal A, Protect and Restore: The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050; Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels; The genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential.

8 Goal B, Prosper with Nature: Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, maintained and enhanced, with those currently in decline being restored, supporting the achievement of sustainable development for the benefit of present and future generations by 2050.

9 Goal D, Invest and Collaborate: Adequate means of implementation, including financial resources, capacity-building, technical and scientific cooperation, and access to and transfer of technology to fully implement the Kunming-Montreal Global Biodiversity Framework are secured and equitably accessible to all Parties, especially developing country Parties, in particular the least developed countries and small island developing States, as well as countries with economies in transition, progressively closing the biodiversity finance gap of $700 billion per year, and aligning financial flows with the Kunming-Montreal Global Biodiversity Framework and the 2050 Vision for biodiversity.

Action	Current text	Recommendation
	Under Action 13.1 there is an activity to engage stakeholders including Indigenous and local communities, government agencies researchers and private sector actors to identify gaps and priorities.	
20.1	By 2028 strengthen national scientific and technical capacity for biodiversity management.	Including biodiversity ILK, while ensuring the protection of rights of the ILK knowledge holders.
20.2	By 2030 enhance community and citizen participation in biodiversity research and monitoring.	Could enhance by adding using participatory approaches and ILK, while protecting the rights of ILK holders and Indigenous Peoples and local communities.
22.1	Strengthen inclusive and participatory mechanisms for biodiversity related decision-making and policy development by 2026.	Include more reference to including Indigenous Peoples and local communities and ensuring protection of the rights of Indigenous Peoples and local communities.
22.2	By 2028 improve access to biodiversity related justice and information. Activity a) of this action speaks to strengthening national mechanisms for access to biodiversity information public participation environmental justice aligned with international good practices.	Suggested that the activities can be better aligned with Target 22 of both the KMGBF and the Trinidad and Tobago NBSAP target by instead speaking to strengthening national mechanisms for including gender responsive participation in decision-making and access to justice and information by Indigenous Peoples and local communities respecting their rights and culture.

3.6.3 ILK integration into the NETMABR Management Plan

The NETMABR Management Plan (drafted in 2022) aims to guide conservation, sustainable livelihoods, and learning within the MAB Reserve through collaboration among the Tobago House of Assembly (THA), the Environmental Research Institute Charlotteville (ERIC), and community partners. While the management plan is currently under review and not yet finalised, this section aims to provide an assessment of current ILK inclusion in the plan and present options for updating the plan to enhance ILK integration especially with regards to the ILK showcased by the case study communities. Table 10 provides an overview of existing ILK inclusion in the NETMABR Management Plan whilst Table 11 showcases potential avenues for inclusion of ILK.

Table 10: Existing ILK considerations in NETMABR Management Plan

Criteria	ILK in the NETMABR Management Plan
ILK is acknowledged as a knowledge system	Does not appear to explicitly define ILK or fully elaborate how ILK is systemically integrated alongside scientific evidence.
Inclusion of Indigenous Peoples and local communities	Acknowledges 15 communities within the MAB Reserve, however, less clarity on structured or formalised mechanisms for Indigenous Peoples and local communities' involvement, co-design or co-management of the Reserve.

Criteria	ILK in the NETMABR Management Plan
Recognition of rights of Indigenous Peoples and local communities (including customary rights, ABS, FPIC)	Limited reference to specific mechanisms for Indigenous Peoples and local communities' rights recognition, ABS or formal FPIC protocols within the plan components.
Resource allocation for ILK initiatives or capacity-building	Some capacity support is available via online resources, however, no clear public information on dedicated funding lines or institutional budgets specifically for ILK inclusion.

Table 11: Potential entry points for ILK inclusion in the NETMABR Management Plan

Component in NETMABR Management Plan	Potential ILK contributions to the NETMABR Management Plan
Sustainable Land Management (SLM)	• Support SLM through working with communities to improve baseline data on land degradation through participatory mapping. • Inform ongoing community land use conservation practices.
Climate Change Resilience	• Inform ongoing strategies used by communities in response to a changing climate and support climate adaptation strategies/ community adaptation plans. • Inform key natural resources/cultural practices threatened by climate change.
Green Economy	• Define what "well-being" and "social equity" means in a local context, in terms of what the local communities value and how traditional livelihoods can align with a green economy. • Support sustainable land management by providing traditional practices of land use, agro-forestry, crop rotation, and local knowledge of soils and species.
Alien Invasive Species (AIS)	• Provide historical perspective on species presence (e.g. when a given AIS species first appeared, its spread, what impacts have been observed). • Can help document traditional native species that have been displaced, or changes in ecosystem function that may be linked to invasives (specific to plants). • Provides insight into the livelihood impacts of AIS.
Blue Economy	• Provide traditional and historical baseline ecological data. • Provides critical spatial knowledge such as traditional fishing areas, and high-use coastal zones.
Purple Economy	• Purple economic activities (cultural/creative industries, local artisans, traditions, festivals, heritage, and community livelihood practices) in the NETMABR are extremely data deficient within the plan. • ILK data can fill data gaps on cultural and creative practices - documenting traditional art, music, dance, craft, rituals, culinary heritage that is known within communities (but not yet formally recorded) with one avenue being through the Tobago Heritage Festival which is an annual celebration of local dance, song, music and cuisine and aims to preserve Tobago's cultural heritage.

Component in NETMABR Management Plan	Potential ILK contributions to the NETMABR Management Plan
Conservation	• ILK considerations can support understanding of key ecosystems provisioning services (medicinal plans; hunting, fishing). • ILK on traditional practices which support or deter from conservation can be noted and actions taken to promote or educate (e.g. local tradition of turtle consumption; unsustainable local fishing practices). ILK tracking of patterns can inform monitoring of biodiversity (noting beaches where turtles nest etc).
Sustainable agriculture and land management	• Participatory mapping can gather ILK to inform baseline data regarding agricultural activities. • ILK documentation can prevent loss of traditional farming knowledge. • Knowledge exchange forums can provide avenue for sharing ILK to inform sustainable agricultural practices.

Case study findings highlighted in Section 3.4 and Appendices 8 and 9 showcase examples of how ILK from local communities can be utilised within the NETMABR Management Plan and related activities are described in Table 12 below.

Table 12: ILK examples that can inform updates to the NETMABR Management Plan

ILK thematic areas	ILK relevant to the NETMABR Management Plan
Agriculture	Cultural and agricultural practices for riverbank stabilisation along the Bloody Bay River, L' Anse Fourmi. ILK on river morphological changes (e.g. when river floods and where it is most impacted), can inform riverine conservation/ management.
Hunting	Traditional hunting practices, species abundances and variabilities in different geographic locations; and understanding of threats, e.g. unsustainable practices by external hunters from outside the community.
Ecosystems	Local understanding of various springs (active/flowing vs not flowing) in L' Anse Fourmi, along the Charlotteville-L'Anse Fourmi Road, can indicate the status of upstream watercourses within forested areas, which can have implications for spring water availability.
Fishing	ILK on key fishing sites (e.g. Sister's Rocks and Brother's Rocks in L' Anse Fourmi and St. Giles Island in Charlotteville); information on abundance/ fishing periods for key species (e.g. jacks, balahoo, grunts in L' Anse Fourmi and marlin, grouper, mahi mahi in Charlotteville); temporal special population changes (e.g. in Charlotteville stakeholders noted declines in flying fish due to climate change, overfishing, sedimentation runoff). Natural harvest cues e.g. related to the moon phases can further support holistic fisheries management approach.
Coastal and marine species	ILK on turtle nesting beaches, shark areas and the status of coral reef health in Man O' War Bay and Pirate's Bay, can further inform conservation management.

CHAPTER 4:

Policy options and mainstreaming pathways

4.1. Overview

International biodiversity frameworks such as the CBD and the accompanying KMGBF emphasise the utility of biodiversity ILK within a MEB approach to inform biodiversity policy and conservation actions. These frameworks also emphasise the rights of Indigenous Peoples and local communities and the need for access and benefit sharing arising from biodiversity ILK. This global emphasis filters down to the national level with initiatives such as this TTNOILKB seeking to strengthen ILK mainstreaming into biodiversity policy and decision-making.

In support of this goal, the TTNOILK initially sought to establish a baseline of the available biodiversity ILK in Trinidad and Tobago through desk research and stakeholder KII's, focus groups and workshops. Stakeholders also provided recommendations for better documentation and preservation of ILK as described in Chapter 3 and discussed further in Section 4.2 below. Section 4.2 also suggests best practices for gathering ILK, including general participatory approaches and specific techniques that may prove useful for biodiversity ILK documentation in Trinidad and Tobago.

Section 4.3 delves more directly into mainstreaming of ILK information and provides recommendations based on the opportunities and challenges identified in Chapter 3. These recommendations recognise the multi-scalar nature of biodiversity policy and note that detailed ILK can be directly integrated into biodiversity policy at the finest scales, such as species or protected area management plans and on species abundance or distribution. At broader scales, e.g. at the NBSAP or NEP level, ILK mainstreaming requires a more general treatment with a goal of facilitating the enabling environments and institutional frameworks for ILK use and protection. At this high level, integration also involves the promulgation of the overall national intent or perspective on biodiversity ILK. This is elaborated on further in Section 4.3.

Like documentation and preservation, ILK mainstreaming requires capacity-building for both Indigenous Peoples and local communities and the state agencies, or CSOs that may seek to gather biodiversity ILK. Section 4.4 outlines recommendations for capacity-building and also summarises the direct attempts under this project to build that capacity. Section 4.5 elaborates on capacity-building needed for Indigenous Peoples and local communities, specifically to support their participation in decision-making. The chapter ends with a discussion on ILK as part of the MEB approach towards biodiversity conservation. Options for building on outputs of this project are also suggested.

4.2 Documenting and preserving biodiversity ILK

Desk research highlighted a dominance of medicinal plant ILK in the literature. This medicinal plant focus is cross-cutting regardless of the specific Indigenous Peoples and local communities' source whether First Peoples, Indo-indigenous groups, Afro-indigenous groups or community local knowledge. As noted in Chapter 1, much of the ILK in Trinidad and Tobago is blended, given the close interactions and cultural blending among the different ILK holder groups. Thus, for example, in a capacity-building exercise on ILK gathering techniques during one of this project's workshops, a member of one of the Afro-indigenous groups shared his ILK on turmeric, a plant brought across to Trinidad and Tobago by East Indian Indentured labourers in the 1800s (Mahabir, 1991).

There also was some ILK documentation around plants and animals used for food and tools, and within agricultural and cultural practices. Traditional practices within key ecosystems and geographic areas have also been documented. ILK gathering and documentation are sometimes mixed with local citizen science information. Participatory organisations like CANARI, for example, routinely gather natural resource information from communities, e.g. around protected areas for designing and implementing community-led conservation activities, or informing specific protected area management plans or climate adaptation strategies. The information shared by these communities is often a mix of current-day observations (citizen science) and intergenerational knowledge (ILK).

Documentation gaps identified through desk research and stakeholder feedback include ILK on marine biodiversity and ecosystems, including coral reefs and fish spawning sites. However, these gaps may be a function of ILK holders understandably withholding information on the resources that their livelihoods directly depend on. There is also limited documentation of ILK on ecosystem services. During the multistakeholder policy and ILK capacity-building workshops, stakeholders also identified the types of ILK that may be useful to inform updates to the country's specific biodiversity policies, plans and strategies or activities therein. They identified, for example, the need for ILK on soil properties, species migration patterns and more information on the biodiversity of specific protected areas. Additionally, comments from the validation process suggested establishing and maintaining a database to document ILK providers. These are all potential research topics to be considered as follow-up to this TTNOILKB. Validation comments from stakeholders further noted linking agricultural ILK to climate adaptation (e.g. ILK on seasonal calendars and rainfall patterns can inform climate-resilient planting schedules, traditional water conservation methods (e.g. from the Merikins, First Peoples) are valuable for drought resilience, and that diverse traditional crop varieties (agrobiodiversity) are a genetic resource for breeding climate-resilient crops. Stakeholders further noted agrobiodiversity as a critical, under-documented component of ILK and a priority for research, inclusive of soil ILK, pollinator knowledge and post-harvest techniques.

Table 13 provides stakeholder recommendations (from focus groups and validation comments) of various resources for possible follow-up research under other projects.

Table 13: List of ILK sources for follow up research

Thematic Area	ILK sources for follow up research
Cultural / Historical	• National Archive of Trinidad and Tobago. The National Archives preserve records documenting government decisions, key events, alongside historically significant materials such as newspapers, journals, and yearbooks. • The National Trust of Trinidad and Tobago to further research petroglyphs. • Historical records/journals available through the Agricultural Society which may have ILK/traditional practices. • The Toco Folk Museum collates indigenous history, folk knowledge and natural history of North-East Trinidad. The museum has information on traditional cassava processing and traditional medicine. It also has preserved collections of local wildlife including marine specimens. • First Peoples knowledge is also showcased at various exhibitions which aim to demonstrate indigenous traditions, tools and way of life with the aim of preserving their traditional heritage. • Indian Caribbean Museum of Trinidad and Tobago highlights traditional knowledge and practices related to Indian heritage. • The Mundo Nuevo Heritage Museum houses various historical artefacts including from local Indigenous people. • Mud House Museum provides historical insight into the life of early settlers and East Indian heritage. • Toute Bagai Backyard Museum houses collections of historical artefacts. • Cocoa Panyol Museum showcases various historical artefacts. • National Cocoa and Chocolate Museum houses host of artifacts from historic cocoa plantations. • Tobago Heritage Conservation Society houses a record of Indigenous artefacts from throughout Tobago. • Tobago Historical Museum, located at Fort King George in Scarborough, hosts a collection of Amerindian artifacts, military relics and documents from colonial times. • ILK holders/advocates from Indo-indigenous groups.
Agricultural	• Research Division, Ministry of Agriculture, Land and Fisheries and their work on preserving local seeds. • Research available on aquaculture of cascadoux. • IMA's repository of information on local fish species names. • IMA's publication "Coral Reefs of Trinidad and Tobago". • ILK advocates/researchers e.g. Mr. Francis Morean (traditional medicinal plants) and Mr. Mark Forgine (Moruga Hill rice).
Ecosystems/Species	• Workshop reports from community consultations done for protected areas, Environmentally Sensitive Areas and Environmentally Sensitive Species may include local knowledge on key ecosystems/livelihoods related to these ecosystems. • Tobago fisheries livelihood study that was done by the University of Trinidad and Tobago in collaboration with Department of Marine Resources and Fisheries (DMRF)'s Data Collection Unit (2023/2024).

During the execution of the TTNOILKB, capacity was built among IPLCs, government agencies, CSOs and other stakeholders on techniques to gather and document ILK. These techniques included key informant interviews, participatory mapping (Figure 24), ecological calendars and historical timelines. Walking/driving workshops were also piloted as a technique where groups of ILK holders from two communities in the NETMABR chose routes and sites and led the field sessions to highlight and share ILK with the TTNOILKB project team. These two communities were also supported by the project team to develop photo journals on their ILK (Appendices 8 and 9), contributing to the documentation and preservation of their biodiversity ILK. The photo journals are community-owned and authored products that they can use and disseminate as they see fit. The development of the photo journals was also important in ensuring the Indigenous Peoples and local communities receive the TTNOILKB research outcomes most relevant to them in an accessible and easily digestible format, in addition to the detailed TTNOILKB report. All of the techniques mentioned above are detailed in this report and can be utilised by the Indigenous Peoples and local communities themselves, and the other stakeholders to document and share biodiversity ILK in the future.

Figure 24: Participatory mapping capacity-building exercise during the Tobago multistakeholder policy dialogue and capacity-building workshop.
Photo credit: UNESCO (2025).

Project stakeholders had a number of recommendations for the documentation and preservation of biodiversity ILK. For example, they suggested online platforms

for collating ILK once proper mechanisms to protect the rights of the ILK holders were established. Physical documentation and storage spaces were also suggested, e.g. through folk museums, several of which already exist in Trinidad and Tobago (Section 3.2). Support to these museums, e.g. financial or human resources can further the goal of biodiversity ILK documentation. Stakeholders noted that any physical and storage and documentation facilities should be adequately protected from natural disasters or other threats.

Exhibitions, either in situ or part of roving displays, were also recommended by stakeholders to demonstrate and preserve ILK, traditions, tools, products and practices (Figure 25). These events could also educate students and the general public on the ecological and cultural significance of traditional knowledge. Apart from exhibitions, festivals and cultural events can serve as additional forums to share biodiversity-related knowledge using, for example, engaging techniques like storytelling. Storytelling is particularly useful for inter-generational ILK sharing.

Figure 25: Exhibition by the First Peoples of Santa Rosa.

Protecting the rights of ILK holders is central to any ILK documentation and preservation efforts. FPIC procedures, as well as legislative measures are critical to safeguard knowledge. Mechanisms are also needed to ensure intellectual property rights, credits and recognition for Indigenous Peoples and local communities whenever their knowledge is used or referenced.

4.3 Mainstreaming biodiversity ILK into policy formulation and decision-making

The TTNOILK applied a broad interpretation of biodiversity policy, examining national-level policies like the NEP and NBSAP, moving to finer-scale sectoral instruments, e.g. the Forest Policy, then more detailed protected area and species management plans. Future work includes reviewing ILK inclusion in new legislation, such as the Draft Fisheries Management Bill. Future policy attention could also specify recommendations for agricultural ministries and research institutions, alongside the creation of a separate strategy for promoting and advancing the documentation, integration, and utilisation of ILK in research, extension work, and policymaking in the agricultural sector. This would also clarify roles and responsibilities, research priorities, as well as enhance cooperation with Indigenous Peoples and local communities, while promoting integration with ILK for more sustainable agriculture, food, and climate change resilience initiatives. Further future biodiversity and wildlife policy reform should examine gaps in existing legislation where ILK and cultural practices are not adequately recognised. For example, cultural items derived from wildlife species that are legally protected, e.g. artifacts used for Indigenous or traditional practices, may currently be subject to enforcement provisions without distinction between subsistence, cultural, or commercial use. This highlights the need for clearer legislative guidance on how ILK-related practices and culturally significant materials are treated within amended wildlife and hunting laws. Addressing this gap would support more culturally responsive, rights-based legislation while maintaining conservation objectives, and could include explicit exemptions, permitting mechanisms, or co-developed management approaches with Indigenous Peoples and local communities.

However, policies reviewed in Section 3.6 show that newer policies demonstrate stronger integration of ILK, reflecting shifts in national priorities aligned with global trends. Therefore, the revision of the NBSAP taking place currently demonstrates strong alignment to the KMGBF, in particular targets 9, 21 and 22. The timing of the Trinidad and Tobago NBSAP revision coinciding with the TTNOILKB allowed for further integration of ILK in the NBSAP through sharing of documents and cross-team participation in meetings for both initiatives, under the guidance and oversight of the EPPD. For example, as detailed in Section 3.6, the CANARI team was able to suggest ILK verbiage to include in the draft actions and activities for the NBSAP at a recent revision NBSAP meeting.

The synergies above also point to a key recommendation for ILK mainstreaming, namely, ensuring the presence of Indigenous Peoples and local communities, as well as ILK advocates and champions, at biodiversity policy consultations so that they can input relevant ILK insights. However, ensuring the participation of Indigenous Peoples and local communities and other ILK champions may often require practical logistic support, e.g. transport. Other participatory approaches are also useful in this context, e.g. taking the consultations to community venues and timing the meetings to accommodate ILK holders' availability, e.g. after working hours.

Effective ILK integration also depends on building trust and respecting the rights of knowledge holders. Many ILK holders, including fishers and farmers, may understandably be reluctant to share ILK, e.g. on fertile fishing grounds or traditional high-yield farming techniques they use as it may compromise their earnings. Their right to not share information or their right to withdraw sharing permissions has to be respected. However, even with ILK gathering on less sensitive topics, it is important to ensure voluntary participation and provide adequate protections. Formal protection mechanisms, such as FPIC forms were used during the TTNOILKB, but it was noted that ILK knowledge holders were sometimes suspicious of signing these forms requiring repeated explanations as to how the documents protected their rights. Over time, increased use of these forms by ILK gatherers in Trinidad and Tobago will increase familiarity and understanding of the benefits of FPIC forms. Less formal options for ILK holder protection, such as information validation workshops, author credits on relevant documents and the opportunity to participate in document-review processes will also continue to play an important role in protecting the rights of Indigenous Peoples and local communities.

TTNOILKB stakeholders frequently expressed concerns about losing ownership of ILK, experiencing misuse, or receiving inadequate credits or benefits. These concerns are exacerbated given the current weak legal protections relevant to ILK and limited national measures for ILK documentation and safeguarding. Stakeholders also emphasised that even when biodiversity ILK is shared, the information often does not translate to tangible biodiversity conservation results, given limitations in implementing projects, activities and enforcing legislation relevant to biodiversity. This discourages ILK holders from further sharing.

Intermediary organisations can be important in facilitating knowledge exchanges between ILK holders and policymakers. Institutions with credible track records in participatory approaches and in safeguarding community rights are best positioned for this role, especially those that have built trust and relationships with the respective Indigenous Peoples and local communities. Knowledge exchanges between policymakers and Indigenous Peoples and local communities should be designed to be respectful of the MEB approach. The same applies to forums where both academic knowledge and ILK are being showcased.

Strengthening ILK holders' access to legal expertise remains essential, particularly to protect intellectual property and to ensure proper citation and recognition when ILK is used. Clear access-and-benefit-sharing protocols are also required to prevent misuse or biopiracy and to ensure communities receive tangible benefits derived from their knowledge. This could include, for example, the opportunity to be ecotourism service providers where ecotourism activities have been informed by their ILK. Embedding ILK rights explicitly in national legislation is one way to guarantee Indigenous Peoples and local communities a recognised and protected role in shaping biodiversity policies and decisions. Customary land tenure rights must also be considered as part of the broader biodiversity ILK discussion. This topic arose repeatedly during the execution of the TTNOILKB.

4.4 Capacity-building needs for ILK mainstreaming and Indigenous Peoples and local communities' participation in decision-making

Capacity-building emerged as a key issue for enhancing the documentation, transmission, and mainstreaming of ILK as well as for supporting more meaningful participation of Indigenous Peoples and local communities in biodiversity decision-making. For example, there is a need to strengthen the capacity of Indigenous Peoples and local communities to document and preserve ILK in forms that are accessible, culturally appropriate, but usable within policy and management processes. This could include capacity-building on the use of visual, audio and video tools like photo journals, podcasts and cell phone videos. These approaches align with traditional modes of knowledge transmission and allow for culturally grounded forms of expression.

Many NOILKB stakeholders observed that younger Indigenous Peoples and local communities' members are increasingly disconnected from traditional practices and knowledge, partly due to changing social dynamics and limited opportunities for learning. Strengthening mechanisms for inter-generational transmission of ILK, such as community storytelling sessions, youth-focused cultural programmes, and inclusion of ILK into school curricula were identified as options to address. Enhancing youth engagement was viewed not only as a means of preserving ILK but also as a strategy for ensuring long-term continuity in community leadership and environmental stewardship.

Beyond documentation and transmission, Indigenous Peoples and local communities also require enhanced capacity to understand and participate effectively in biodiversity governance. Stakeholders noted that many community members are not fully aware of the environmental policies that affect them, nor of their rights within these governance frameworks. Limited understanding of consultative processes and technical policy language also restricts their ability to contribute effectively to national and local decision-making. Capacity-building initiatives that address relevant laws, policies, and procedural entry points are therefore recommended. These could include practical skills such as public speaking, policy interpretation, media engagement, and proposal writing. Strengthening these competencies would help ensure that ILK is represented accurately and confidently in formal policy spaces.

Limited communication and networking capacity among Indigenous Peoples and local communities was also identified as a barrier to broader biodiversity ILK integration. Many communities lack a strong online presence or the digital communication skills necessary to share ILK widely or participate in national networks. Supporting digital communication training, improving access to technology, and fostering connections among Indigenous Peoples and local communities and between Indigenous Peoples, local communities and external partners were actions recommended by NOILKB stakeholders.

4.5 Supporting IPLC participation in decision-making

Indigenous Peoples and local communities face a number of barriers that limit their meaningful participation in biodiversity decision-making. Representatives of Indigenous Peoples and local communities may not be able to attend consultations and meetings due to financial barriers, e.g. lost income or cost of transport. Logistic barriers, e.g. timing of meetings and childcare, may be further issues. Thus, for meaningful inclusion the aforementioned constraints should be factored into logistics planning for consultations and meetings. Options to address could include hosting meetings at venues close to their location and in the evenings after working hours, etc. Facilitation processes during these events should create inclusive safe spaces to reduce the chance of Indigenous Peoples and local communities' representatives feeling intimidated by government officials, technocrats, or academics. Sensitisation on creating inclusive spaces is also needed for the latter groups to facilitate a supportive environment for the Indigenous Peoples and local communities. Sensitisation of policymakers on the value of ILK for biodiversity policies is also needed.

Capacity-building on public speaking, media engagement and preparation of public statements are also recommended for Indigenous Peoples and local communities. Improved collaboration with established CSOs and heritage-based organisations could help strengthen Indigenous Peoples and local communities' capacity and representation. Joint forums where Indigenous Peoples, local communities and government actors can engage directly on biodiversity issues are also recommended.

Projects such as *EnviroRightsTT: Building civil society capacity to access information, participate in policymaking and access justice in environmental matters in Trinidad and Tobago* are examples of initiatives to help achieve the above. EnviroRightsTT seeks to improve environmental governance with better transparency, accountability, inclusive decision-making and more informed and just public policy, protecting the right to a healthy environment in T&T. By building their capacity and fostering partnerships with journalists, lawyers, legal experts and others who can provide support, the project empowers CSOs to more effectively engage in environmental governance in T&T. Similar initiatives can be designed and implemented to specifically assist with biodiversity ILK integration.

4.6 Utilisation of the MEB in biodiversity policy formulation and decision-making

During the execution of the NOILKB, stakeholders repeatedly sought guidance on how to address contradictions between ILK and scientific knowledge that may arise while developing biodiversity policy or conservation projects or activities. This was addressed and discussed in detail during the multistakeholder dialogues, and the recommendations arising are also shared below.

These recommendations are centred around the MEB approach, which acknowledges that contradictions may arise between different biodiversity knowledge systems. However, the MEB approach encourages documentation and joint assessment of contradictions to determine, for example, whether differences reflect variation in scale, timelines, experience or interpretation. It is noted, for instance, that ILK systems are holistic and grounded in long-term, site-specific observations, while scientific approaches emphasise analytical and reductionist methods. When the two systems are combined respectfully, they can provide complementary insights on ecosystem trends, resource conditions and management needs (UNESCO, 2025). For example, validation comments from the Ministry of Agriculture and Fisheries suggested advocating for programmes that link ILK holders (e.g., Moruga Hill Rice farmers, Brasso Seco cocoa farmers) with national gene banks and research institutions (e.g., The University of the West Indies, Ministry of Agriculture's Research Division) for participatory plant breeding and conservation, and integrate fisherfolk ILK on pelican behaviour and fish spawning with scientific stock assessments, and farmer ILK on soil characteristics with soil science data. Stakeholders further noted that ILK on using plants to mimic queen pheromones could be highlighted as an example of where the MEB approach could lead to innovative, sustainable apiculture practices.

Procedurally, however, it is recommended that knowledge should be validated within its own system before any joint assessment takes place. Validation methods could include workshops where ILK gatherers summarise, and present ILK gathered back to communities to verify or edit information previously collated or obtain community consensus. This initial step may, in fact, resolve contradictions before joint assessments take place. If there are still contradictions on critical issues for a biodiversity policy, plan or project, joint assessments and further discussion and investigation may be needed on the particular issue. However, overall, it should be noted that ILK is too valuable a resource to be excluded from biodiversity policy and decision-making processes.

Bringing together scientific knowledge and ILK is valuable across different scales. At the community level, jointly produced insights can guide local management plans, species-specific interventions or project-level decisions. At national and international levels, synthesised evidence can inform biodiversity strategies, strengthen reporting obligations and improve monitoring of species and ecosystem services. Overall, a MEB approach strengthens biodiversity policy by widening the evidence base, enhancing legitimacy and creating space for more adaptive and culturally appropriate solutions. It recognises the independent value of ILK and scientific knowledge while enabling them to work together to address complex environmental challenges.

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Appendices

Appendix 1: List of focus group participants engaged under the project

	Sector	Organisation	Participant
Trinidad	Government	Environmental Management Authority (EMA)	Darien Jones Marcia Tinto
		Institute of Marine Affairs (IMA)	Kathryn Audroing Ben Maharaj
		Forestry Division	David Mahabir Urmilla Hardial Tevin Butler (Wildlife Division)
		Horticulture Services Division	Frankie Solomon Jr.
		Ministry of Agriculture and Fisheries (ETIS Division)	Louis Farrell
	CSO	Cocoa Farmer's Association	Martin Matthew
		Network of Rural Women Producers Trinidad and Tobago (NRWPTT)	Gia Gaspard Taylor
		Fondes Amandes Community Reforestation Project (FARCP)	Akilah Jaramogi
		South Eastern Hunters Association (SESA)	Leslie Ramsaran
Tobago	Government	Department of Marine Resources and Fisheries	Esther Tobias-Clarke
		Department of Marine Resources and Fisheries	Jenise Kirk
		Department of Environment	Crystal Lawrence
		Department of Agriculture	Nichol John
		Department of Natural Resources and Forestry	Darren Henry
	CSO	Tobago Heritage Conservation Society	Gabriele de Gaetano
		Tobago United Fisherfolk Association (TUFA)	Allison Thomas

Appendix 2: List of Key Informant Interviewees engaged under the project

No.	Organisation	Key Informant Interviewee
1	The Santa Rosa First Peoples Community	Chief Ricardo Bharath Hernandez
2	Warao Community of San Fernando	Rauold Keith Simon
3	The First Peoples Sovereign Nations in Trinidad and Tobago	His Excellency Eric Lewis
4	Merikin Community	Don Cummings Akilah Jaramogi
5	Rastafari Community	Empress Mwanajuma Extavour Bongo Grease
6	The National Council of Orisha Elders of Trinidad and Tobago Society	Erwin Doyle Baba Neal Ryan Rawlins
7	Rada Community	Ifabumi Rhonda Valentine Charles Chief Veronica Antoine
8	Fishing Pond Farmers Association	Goomtee Ragoobar
9	Moruga Fishing Association	Casey Primus
10	Traditional Afrikan Women's Organisation (TAWO)	Akinde Rudder
11	South Eastern Hunters Association (SESA)	Sunil Roopchand
12	Apiculture Association - Trinidad	Rodney Ramgoolam
13	The Foundation for Heritage Preservation and Legacy Creation	Aleeyah Amanda Ali

Appendix 3: FPIC form used for KII participants

Free, Prior and Informed Consent Form

This form seeks your Free, Prior and Informed Consent (FPIC) to participate in a key informant interview. The interview aims to gather perspectives on Indigenous and local knowledge related to biodiversity and ecosystem services by interviewing key local knowledge holders from First Peoples/Indigenous communities, including Afro-descendant and Indo-descendant communities, and key resource user groups.

The Caribbean Natural Resources Institute (CANARI) is committed to engaging Indigenous Peoples and local communities, including key resource user groups, as respected holders of Indigenous and local knowledge (ILK). This consent form aims to ensure the rights of knowledge holders in keeping with FPIC procedures.

The key informant interview is part of the *Trinidad and Tobago National Outlook on Indigenous and Local Knowledge (ILK) of Biodiversity* project that aims to provide a baseline assessment of documented ILK in the country and assess its inclusion level in biodiversity policies and associated challenges. It is hoped that this research and planned dissemination workshops will strengthen the mainstreaming of ILK in national and sub-national decision-making.

As part of the key informant interview, we may also request to record the interview solely for note-taking purposes. This recording will not be publicly shared. As part of ensuring ownership of information by Indigenous Peoples and local communities, we will ensure that the information gathered is accurately credited in all knowledge products created as part of the project. However, if you do not wish to be credited, we can also ensure confidentiality.

The information gathered from yourselves, and other Indigenous and local knowledge holders will be included in a comprehensive assessment report which aims to also document elements of available ILK and highlight knowledge gaps in ILK of biodiversity documentation in Trinidad and Tobago. This information gathered through interviews will be complemented with desk research, focus groups and community workshops.

By giving your consent, you agree that:

- You have been informed about the purpose, scope, and intended use of the collected ILK data.
- You know understand that the data will be carefully stored, shared, and protected, and shall not be used for commercial purposes.
- You retain the right to withdraw your consent at any time without consequence.
- You can ask questions and receive clear answers.
- Your community's protocols and decision-making processes have been respected.

For more information on the project please reach out to the project manager, Natalie Boodram, at natalie@canari.org.

Project	Trinidad and Tobago National Outlook on Indigenous and Local Knowledge of Biodiversity
Activity	**Key Informant Interview**
Community/Organisation	
Name	
Signature *I have read through the FPIC form and consent to participating in the Key Informant Interview with CANARI.*	
Date	

Appendix 4: Complete KII tool used for the project

Trinidad and Tobago National Outlook on Indigenous and Local Knowledge (ILK) of Biodiversity

Key Informant Interviews

Name of interviewer:
Date:
Name of participant
Organisation/Title
Gender:

Context:

The Caribbean Natural Resources Institute (CANARI) has been contracted by the United Nations Educational, Scientific and Cultural Organization (UNESCO) to implement the Trinidad and Tobago National Outlook on Indigenous and Local Knowledge (ILK) of Biodiversity. This project's overall goal is to establish a baseline understanding of documented Indigenous and local knowledge (ILK) of biodiversity, assess its inclusion in biodiversity policies and decision-making processes, and identify gaps to support enhancing Indigenous and Local Knowledge documentation, and mainstreaming within national and subnational biodiversity strategies and policies in Trinidad and Tobago.

To achieve the project goals, we are aiming to gather a wide range of perspectives on Indigenous and local knowledge related to biodiversity and ecosystem services by interviewing key local knowledge holders such as yourself from First Peoples/ Indigenous communities, including Afro-descendant and Indo-descendant communities, and key resource user groups. These interviews will complement desk research, focus groups and workshops all of which will inform an Assessment Report on ILK Outlook of Biodiversity.

We are working with the follow definition of Indigenous and local knowledge. Indigenous and local knowledge can be understood as the knowledge and know-how accumulated across generations, which guide human societies in their interactions with their surrounding environment (IPCC). Indigenous knowledge (IK) can refer to the understandings, skills and philosophies developed by societies with long histories of interaction with their natural surroundings. Local knowledge (LK) can refer to the understandings and skills developed by individuals and populations, specific to the place where they live. These forms of knowledge, jointly referred to as Indigenous and local knowledge or ILK, (Moore and Nesterova, 2020). As mentioned, the context of this interview focuses on Indigenous and local knowledge particularly as it relates to biodiversity.

CANARI is committed to engaging Indigenous Peoples and local communities, as respected holders of Indigenous and local knowledge. In this regard, we aim to ensure

our processes are aligned with free, prior, and informed consent (FPIC) procedures, in line with our principles of inclusive and participatory governance and also based on the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). As such, CANARI aims to collaborate with Indigenous Peoples and local communities, and provide an open forum for their independent and collective discussions and decision-making. Attached to this interview is a consent form that aims to ensure the rights of knowledge holders keeping in line with FPIC procedures.

For further information, please see website here: https://canari.org/projects/trinidad-and-tobago-national-outlook-on-indigenous-and-local-knowledge-of-biodiversity/

General

1.

a. Can you please describe your role and responsibilities within your community/organisation?
b. How long have you engaged in this role?

Indigenous and Local Knowledge and Practices Related to Biodiversity

2. Can you describe the Indigenous and local knowledge and practices of your community/organisation that are related to biodiversity (i.e. use of plants and animals) and the environment (related to use of different ecosystems e.g. forests, mangroves, coastal/marine habitats)?

Particularly:

a. What are some of the traditional ways your community/organisation farms, harvests, fishes, or hunts?
b. Are there any cultural/spiritual traditions connected to certain animal/plant species or natural areas?
c. Are there any seasonal patterns or natural changes that your community has tracked over generations?
   i.If so, how have these seasonal patterns/natural changes informed activities like fishing, farming, or harvesting?
   e.g. How do you decide when to do these activities i.e. when it is the right time to plant, fish, harvest, or avoid certain activities?
d. Are there traditional areas that are used by your community/organisation for fishing, farming, hunting or harvesting?
e. What are some rules, customs, or beliefs your community/organisation follow to protect plants, animals, or other natural spaces?

Changes and Challenges

3. How has your community/organisation adapted to any unprecedented changes in the environment, or changes related to any animal/plant species, through your Indigenous and local knowledge/practices? For example:

a. Can consider whether climate change (or any other environmental changes or disasters) have impacted traditional uses of certain animal/plant species and how has your community/organisation adapted using Indigenous and local knowledge/practices to meet these changes.
b. Are there challenges in preserving or passing on your community's Indigenous and local knowledge/practices?
c. And if so, what are these challenges?

For example, have your community's Indigenous and local knowledge/practices been impacted by either:

- changes in the environment (e.g. has climate change or any other environmental change impacted your community's Indigenous and local knowledge/practices related to certain plants, animals or natural areas?),
- laws (e.g. related to access to resources)
- young people's interest in learning traditional knowledge/practices
- or any other factor

4. How is this knowledge on biodiversity (use of plants, animals and natural environment) being passed down to younger generations?
5. Are your traditional/local knowledge and practices documented? If so, please state how these are documented?
6. What are some other ways that Indigenous and local knowledge related to biodiversity can be preserved?

Participation in Decision-Making

7. Has your community/organisation been involved in government or community-based projects/programmes focused on biodiversity/conservation?
a. If yes, how were your views and traditional knowledge and practices included in these projects or decisions?
8. What role should your community play in protecting and managing biodiversity in the country?
9. What would make it easier for your community/organisation to take part in such decision-making to ensure better inclusion of Indigenous and local knowledge/practices in biodiversity policy, planning, or projects? For example:
a. Can you think of a situation where your community's Indigenous and local knowledge would have been relevant to a past biodiversity related project (e.g. including related to protected areas) but it was not considered or asked for or included.
- What would have needed to change for your community's indigenous and local knowledge contribution to be included.
b. What are the opportunities for your community's Indigenous and local knowledge to potentially be included in any other specific plan, policy or activity/project related to biodiversity?
10. What are the challenges for your community/organisation to take part in such decision-making?

11. What capacity-building support do Indigenous Persons and Local Communities (IPLCs) need to better document and share Indigenous and local knowledge in biodiversity decision-making processes?
12. Regarding updating national policies and strategies related to biodiversity, what advice would you give to government stakeholders to better include your community's Indigenous and local knowledge and priorities?

Rights, Safeguards, and Benefits

13. Do you feel your community'/organisation's knowledge is respected and protected from misuse?
14. Have there been cases where your community'/organisation's knowledge was used without your permission?
15. What would help ensure your knowledge is respected, protected, and benefits your community/organisation?

Is there anything else you would like to share that we have not discussed?

In terms of next steps, the information gathered from yourselves, and other Indigenous and local knowledge holders will be included in a comprehensive assessment report which aims to also document elements of available ILK and highlight knowledge gaps in ILK of biodiversity documentation in Trinidad and Tobago. This information gathered through interviews will be complemented with desk research conducted, focus groups and community workshops; the community workshop is planned as a case study on best practices in gathering ILK in the North-East Tobago UNESCO Biosphere Reserve.

The information gathered will also support multi-stakeholder policy dialogue workshop with policymakers and Indigenous Peoples and local communities to understand lessons learned, opportunities and barriers for ILK inclusion in Trinidad and Tobago.

For more information on the project please reach out to natalie@canari.org

Appendix 5: Summaries of ILK documents reviewed

#	Document	Tags	Summary	Reference:
1	Local Crop Protection Practices in Trinidad and Tobago.	Agriculture	This study captured the local control practices for pests and diseases by farmers 60 years and over in Trinidad and Tobago. A wide range traditional methods to control pests and diseases (non-chemical, natural materials and methods) were highlighted which included: use of ashes, human urine and soapy water.	Boney, A., Robley-Job, C., Isaac, W.A. and Ganpat, W., 2014. Local crop protection practices in Trinidad and Tobago. *Tropical Agriculture,* 91(1), pp.58.
2	From Glass Ceiling to Green Canopy: An Intersectional Model of Feminist Sustainability in Fondes Amandes, Trinidad	Agriculture; Agroforestry	The paper explores the Fondes Amandes Community Reforestation Project (FACRP) in Trinidad and Tobago as a feminist, community-driven model of agroforestry rooted in Merikin heritage and Rastafarian values. It highlights how FACRP integrates traditional and scientific knowledge for reforestation, climate adaptation, and sustainable livelihoods, aligning with the United Nations Sustainable Development Goals. The study calls for greater acknowledgement and inclusion of such Indigenous and feminist-led sustainability models.	Mulroy, R., 2021. From Glass Ceiling to Green Canopy: An Intersectional Model of Feminist Sustainability in Fondes Amandes, Trinidad. *Journal of International Women's Studies*, 22(5), 347-375. Available at: https://vc.bridgew.edu/jiws/vol22/iss5/22. [Accessed 30 August 2025].
3	Fondes Amandes 'Gayap' bearing fruit: Indigenous flora, fauna returning to St. Ann's Hills	Agriculture; Agroforestry ; Medicinal Plants	The article highlights the Fondes Amandes Community Reforestation Project's role in watershed and forest rehabilitation using local forest species, fruit trees, and medicinal herbs native to the Northern Range. It demonstrates the direct application of ILK in restoring biodiversity, evidenced by the return of fauna to the area. The article further illustrates ILK dissemination through school-based activities and community-led eco-tours done through this community, contributing to environmental education and public awareness.	La Rose, M., 2012. Fondes Amandes 'Gayap' bearing fruit: Indigenous flora, fauna returning to St. Ann's Hills. *Newsday*, 29 March. p.B1 and B6.
4	Guidelines for Sustainable Meliponini Management in Trinidad and Tobago	Agriculture; Beekeeping	This report highlights guidelines for beekeeping management; guidelines were developed with the local knowledge of stingless beekeepers and includes knowledge on local hive culture (including practices of keeping bees and design of hive boxes).	United Nations Development Programme, 2024. *Guidelines for sustainable Meliponini management in Trinidad and Tobago*. Port of Spain, Trinidad. Available at: https://meastt.gov.tt/wp-content/uploads/2025/05/Meliponini-Guidelines-2024-WEB.pdf [Accessed 30 July 2025].

#	Document	Tags	Summary	Reference:
5	Folk nomenclature and traditional knowledge of breadfruit [*Artocarpus altilis* (Parkinson) Fosberg] diversity in four Anglophone Caribbean countries	Agriculture; Cultural	The study was conducted in four Anglophone Caribbean countries (including Trinidad). It provided information on the ethnobotany and traditional knowledge associated with breadfruit biodiversity, including systems of naming, identification and classification of breadfruit cultivars or types. Farmers use rich traditional knowledge to classify breadfruit types by taste, texture, and cooking qualities, though names vary by island. The paper emphasises the need to document and conserve traditional knowledge and cultivar diversity to support regional sustainability and resilience.	Daley, O.O., Roberts-Nkrumah, L.B., Alleyne, A.T. and Gloster, M.C., 2022. Folk nomenclature and traditional knowledge of breadfruit (*Artocarpus altilis* (Parkinson) Fosberg) diversity in four Anglophone Caribbean countries. *Journal of Ethnobiology and Ethnomedicine*, 18(65). Available at: https://link.springer.com/content/pdf/10.1186/s13002-022-00562-4.pdf. [Accessed 30 August 2025].
6	Trace Moruga Hill Rice's Cultural Path to Trinidad	Agriculture; Indigenous Peoples	The article highlights the historical, traditional and cultural value of Moruga Hill Rice, a unique variety of red upland / hill rice brought from West Africa through the Merikins, formerly enslaved people from the Carolinas in the American South, some of whom settled in Moruga, Trinidad, living together with the indigenous Warao people, who shared knowledge on hunting and fishing.	Ganeshram, R., 2025. *Trace Moruga Hill Rice's Cultural Path to Trinidad*. Aramco World, [online] 01 July. Available at: https://www.aramcoworld.com/articles/2025/ja25/moruga-hill-rice?fbclid=IwY2xjawMEVwVleHRuA2FlbQIxMQABHr1PVeQ5fPd54GNIou4WhkPhvKH-3k7ui5hmVxGkKcPWWXAmhSdHUeruzlR__aem_Ld1ANhWCLj9b9W9hGONE-g [Accessed 30 July 2025].
7	A preliminary look at integrating local and scientific knowledge for climate change adaptation in the Eastern Caribbean fisheries sector	Climate change	The report emphasises the value of fisherfolk's local knowledge in climate change adaptation and risk management. It highlights fisherfolk's reports of shifts in sea conditions, wind patterns, and fish behaviour and availability, alongside coping strategies such as targeting different species and sizes for marketing.	Cox, S-A., A. Desai, A. Granderson, D. Albert, and C. Ramkissoon. 2021. *A preliminary look at integrating local and scientific knowledge for climate change adaptation in the Easter Caribbean fisheries sector.* CC4FISH Project Report D10 to the FAO. Centre for Resource Management and Environmental Studies, University of the West Indies, Cave Hill Campus. Bridgetown: Barbados. 35 pp.

#	Document	Tags	Summary	Reference:
8	Knowledge, Attitudes and Practices (KAP) of a Vulnerable Coastal Community in Trinidad about Ecosystem-based Approaches for Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA): A Validation Study	Climate change	Study tested an instrument to evaluate coastal communities' knowledge, attitudes and practices in relation to Ecosystem-based Approaches. Coastal populations in Trinidad targeted were Claxton Bay, Salybia, Balandra, Blanchisseuse, Charlotteville and other coastal and low-lying areas. In testing the tool, local knowledge on impacts of climate change and coping/adaptation strategies was gathered.	Renaud, S.S., 2022. *Knowledge, Attitudes and Practices (KAP) of a Vulnerable Coastal Community in Trinidad about Ecosystem-based Approaches for Disaster Risk Reduction (DRR) and Climate Change Adaptation (CCA): A Validation Study*. [pdf] St. Augustine: The University of the West Indies. Available at: https://www.ccrif.org/sites/default/files/publications/studentpapers/Sweelan_Renaud_2022_KAP_Vulnerable_Communities.pdf [Accessed 30 July 2025].
9	Aripo unspoilt by fame	Cultural	The article highlights the natural resources that the Aripo community has traditionally relied on for food, as well as their lifestyle practices centred around home gardening and communal living. It describes the strong social bonds among villagers, who for example share fruits from their trees and draw water from a common spring. These practices reflect a deep-rooted relationship with the local environment.	Williams, S., 2004. Aripo unspoilt by fame. *Guardian*, 1 March. p.7.
10	Bats of Trinidad and Tobago: a field guide and natural history	Cultural	Focusing on bats in Trinidad and Tobago, this book explores their ecological importance as well as their presence in local folklore and culture. Chapter 6 explores the role of bats in folklore and their symbolic influence on Trinidad and Tobago's Carnival traditions. It also highlights the silk cotton tree, deeply rooted in local mythology, as a dwelling place for spirits and jumbies, underscoring its cultural significance in folk beliefs.	Gomes, G. and Reid, Fiona, 2015. *Bats of Trinidad and Tobago: a field guide and natural history*. Trinibats.
11	A Field Guide to the Amphibians & Reptiles of Trinidad and Tobago	Cultural	Focusing on herpetofauna in Trinidad and Tobago, this book explores 130 species and subspecies as well as the environment of the two islands and the natural history of the herpetofauna. The book explore explores the role of herpetofauna in folklore.	Murphy, J., Downie, R., Smith, J., Livingstone, S., Mohammed, R., Lehtinen, R., Eyre, M., Sewlal, J.A., Noriega, N., Casper, G., Anton, T., Rutherford, M., Braswell, A., Jowers, M., and Auguste, R., 2018. *A Field Guide to the Amphibians & Reptiles of Trinidad & Tobago*. Trinidad & Tobago Field Naturalists' Club.

#	Document	Tags	Summary	Reference:
12	Caribbean Aphrodisiac Recipe Book.	Cultural	The focus of the book is on aphrodisiac recipes from the Caribbean and South America; includes mention of Parco Water from Trinidad & Tobago.	Lutchman, S., 2010. *Caribbean Aphrodisiac Recipe Book*.
13	Lessons from the Backyard: An Anthology of Trinidadian Poetry	Cultural	This work documents cultural livelihoods in Trinidad and Tobago through a poetic lens, capturing the rhythms of daily life and the deep connections people share with the flora and fauna surrounding their homes. It highlights a way of life rooted in tradition, where nature and culture are intimately intertwined.	Mathura, W.A., 2005. *Lessons from the Backyard: An Anthology of Trinidadian Poetry*. Trinidad and Tobago: Wayne A. Mathura.
14	Waterfalls of Paradise: Trinidad and Tobago	Cultural; Ecosystem	Provides overview of waterfalls in Trinidad and highlights cultural importance of some waterfalls.	Rajkumar, A., 2015. *Waterfalls of Paradise: Trinidad and Tobago*. Island Waterfall Publishing Limited.
15	First Peoples lament scarcity of Timite palm	Cultural; Indigenous Peoples	The article highlights the decline and increasing scarcity of the timite palm, a species traditionally valued for its leaves, which were used by the First Peoples in the construction of thatched roofs. This loss not only threatens a culturally significant plant species but also underscores the erosion of ILK associated with sustainable harvesting and traditional building practices. The article notes that preserving such species is essential for maintaining the cultural and ecological knowledge systems that have long supported biodiversity stewardship.	Herrera, H.D., 2013. First Peoples lament scarcity of Timite palm. *Trinidad Express*, 8 August. p.3.
16	First Peoples' monument unveiled in Moruga	Cultural; Indigenous Peoples	The article makes mention of the use of ethically acquired ivory and the use of traditional head pieces as part of garments for an indigenous smoke ceremony.	Herrera, H.D., 2021. First People's monument unveiled in Moruga. *Express*, 29 April.
17	Kunuwaton: Culture & Cuisine of the Santa Rosa First Peoples of Arima, Kairi	Cultural; Indigenous Peoples	The book explores cuisine and practices of First Peoples culture.	Balkaransigh, S., and Singh, J., 2014. *Kunuwaton: Culture & Cuisine of the Santa Rosa First Peoples of Arima, Kairi*. Trinidad and Tobago: Santa Rosa First Peoples Community.

#	Document	Tags	Summary	Reference:
18	The Subterranean Unsettling of Science, Race, and Religion: Obeah, Petroleum Geology, and Risk in Trinidad	Cultural; Religion	The article examines how petroleum geology and Afro-Caribbean spiritual practices (Obeah) in southern Trinidad both engage with risk, uncertainty, and unseen forces. Drawing on ethnographic research, it shows that while geology is often seen as science and Obeah as religion, both involve interpreting what lies beneath the surface, whether oil or spirit.	Crosson, J.B., 2024. The Subterranean Unsettling of Science, Race, and Religion: Obeah, Petroleum Geology, and Risk in Trinidad. *Comparative Studies in Society and History*, 66(3), pp.501527.
19	Kartik–Symbol of environmental protection	Cultural; Religion;	The article highlights the significance of the Kartik Nahan festival for Hindus, noting beaches play a key role in the festival.	Maharaj, S. 2012. Kartik–Symbol of environmental protection. *Guardian*, 11 November. Available at: https://www.guardian.co.tt/article-6.2.454504.46479c01dc [Accessed 30 July 2025].
20	From Kala Pani to Gangadhaara: Sacred Space and the Trauma of Indentureship in Trinidad	Cultural; Religion; Ecosystem	The article highlights the significance of the Gangadhaara festival for Hindus, noting the importance of bodies of water in this festival.	Persaud, P., 2018. From Kala Pani to Gangadhaara: Sacred Space and the Trauma of Indentureship in Trinidad. *Nidan* 2(1), pp50-66. Available at: https://www.academia.edu/37119812/From_Kala_Pani_to_Gangadhaara_Sacred_Space_and_the_Trauma_of_Indentureship_in_Trinidad [Accessed 30 July 2025].
21	Devotees worship Balka Devi volcano	Cultural; Religion; Ecosystem	The article highlights the cultural significance of worship practices dedicated to Mother Balka, regarded as the reincarnation of the Hindu goddess Durga in the form of a volcano in located in the South-West peninsula of Trinidad. The surrounding trees are also revered as sacred, with offerings of flowers and grains made during poojas to honour and appease the deity, symbolically seeking protection from volcanic activity. These practices reflect a deep spiritual connection to the natural environment. Such traditions contribute to a broader understanding of how cultural beliefs can inform environmental stewardship and conservation ethics.	De Silva, R., 2019. Devotees worship Balka Devi volcano. *Guardian*, 7 April.

#	Document	Tags	Summary	Reference:
22	Stakeholder consultation for the prioritisation of Environmentally Sensitive Areas dossier on: Aripo Savannas, Buccoo Reef, Nariva Swamp, Caroni Swamp, Matura and Trinity Hills.	Ecosystem	This section of the document highlights the socio-cultural activities that local communities depend on within and around these areas, many of which are rooted in ILK. It also outlines current management structures and stakeholder organisations operating in these landscapes.	The Environmental Management Authority, 2002. *Stakeholder Consultation for the Prioritisation of Environmentally Sensitive Areas - Dossier on: Aripo Savannas, Buccoo Reef, Nariva Swamp, Caroni Swamp, Mathura, Trinity Hills.*
23	Status of Mangrove Forest in Trinidad and Tobago	Ecosystem	The report presents an assessment of the current status of mangroves in Trinidad and Tobago and also provides information on how local communities depend on wetlands.	Juman, R., and Ramsewak, D., 2013. Status of Mangrove Forests in Trinidad and Tobago, West Indies. *Caribbean Journal of Science,* 47 (2-3), pp.291-304. doi: https://doi.org/10.18475/cjos.v47i3.a18
24	A review of wetland use and management of the Nariva Swamp, Trinidad	Ecosystem	The paper highlights the importance of mangrove systems for local use in Trinidad, and gives a sense of management policies that are successful in one context and therefore can be applied to other Trinidadian and Caribbean settings. Furthermore, the paper provides an overview for researchers and coastal zone management practitioners, and essential background information for testing and understanding wetland management tools that facilitate the protection of the natural resource for dependent livelihoods.	Baptiste, A.K. and Smardon, R., 2012. A review of wetland use and management of the Nariva Swamp, Trinidad. *Caribbean Geography*, 17(1 & 2), pp.7391.
25	A swamp and its subjects: conservation politics, surveillance and resistance in Trinidad, the West Indies	Ecosystem	The article showcases local knowledge and practices of fishermen in the Nariva Swamp.	Sletto, B.I., 2005. A swamp and its subjects: conservation politics, surveillance and resistance in Trinidad, the West Indies. *Geoforum* 36(1) pp. 77-93. doi:10.1016/S0016-7185(04)00058-2.

#	Document	Tags	Summary	Reference:
26	Preserving Aripero wetlands	Ecosystem	The article highlights the environmental degradation of the Aripero Wetlands in Rousillac, caused primarily by unsustainable crab hunting practices and drilling for oil which threatened local biodiversity. It also describes the community's intervention to preserve the site, particularly emphasizing the ecological and social value of the wetland and the nearby dam. The community's understanding of the local biodiversity and its importance reflects elements of ILK which could support and inform more effective conservation strategies and sustainable harvesting practices in Aripero.	Herrera, H.D., 2004. Preserving Aripero wetlands. *Express*, 9 October. p. 17.
27	Studies on the Biological Resources of Nariva Swamp Trinidad (Volume 1)	Ecosystem	This report provides an overview of the Nariva Swamp, including a general description of the area, its biological and natural resources, and patterns of land use and development. The report explores the economic value of the swamp's flora, highlighting its role in coastal protection and the potential for exploitation, particularly for lumber and other wood products. It further examines the utilisation of local fauna by the surrounding communities. It focuses on species such as cascadura, oysters, conch, and mussels, which are harvested for both local consumption, especially in restaurants. The section also outlines the seasonal availability of these species, the types of traditional traps used by local fishers, common points of sale, and summarises findings from a fishing questionnaire conducted in the area.	Bacon, P.R. (ed.), 1979. *Studies on the Biological Resources of Nariva Swamp, Trinidad. Vol. 1.* Occasional Papers No. 4, Department of Zoology, The University of the West Indies, St Augustine, Trinidad.
28	Trekking through Aripo Savannas	Ecosystem	The article documents a guided interpretive tour of the Aripo Savannas, a designated ESA in Trinidad. The guide's shares knowledge of the region's native flora, including their traditional uses and ecological roles, reflecting a deep reservoir of Indigenous and local knowledge (ILK) systems learnt through sustained interactions with the local environment, community practices, and documented sources over time.	Herrera, H.D., 2022. Trekking through Aripo Savannas. *Express*, 24 November. p.25 and 27.

#	Document	Tags	Summary	Reference:
29	7000-year-old settlements unearthed at Avocat... T&T's first farmers	History; Indigenous Peoples	The article discusses archaeological findings at Avocat that shed light on the diet of the Ortoiroids, an early group of settlers in Trinidad around 7,000 years ago. Remains of shells and animal bones, along with tools used for processing plant-based foods, reveal the biotic resources these people depended on for sustenance. These findings offer evidence not only of their dietary practices but also of early forms of plant cultivation and resource management.	Charan, R. 2015. 7000-year-old set-tlements unearthed at Avocat... T&T's first farmers. *Express*, 20 March. p.8 and 9.
30	An archaeo-logical study of the Red House, Port of Spain, Trinidad and Tobago	History; Indigenous Peoples	This book references the horticul-tural plots of the Banwari people, highlighting their early agricultural knowledge in cultivating ground provisions, seed crops, and fruit trees. It also notes their use of slash-and-burn techniques for land clearing. The text further explores dietary practices among Amerindian communities, mentioning that mol-luscs formed a key part of the diet for women and children, while hunt-ing and fishing were predominantly male-led activities for securing food.	Reid, B.A. (ed.), 2018. *An Archaeological Study of the Red House, Port of Spain, Trinidad and To-bago.* St Augustine: The University of the West Indies Press.
31	Medicine Man	History; Indigenous Peoples	This newspaper segment "Mabri-ka! Greetings" features articles that highlight both historical and contemporary Indigenous practices and products from the First Peoples of Santa Rosa, in commemoration of the Santa Rosa First Peoples National Holiday. For example, one article titled "Medicine Man" by Irene Medina explores the work of the current spiritual guide and medicine man of the Santa Rosa First Peoples Community in Arima, showcasing how traditional knowledge is applied today through the sustainable use of forest resources for medicinal purposes.	Medina, I. 2017. Medi-cine Man. *Newsday,* 13 October
32	More artefacts at Whiteland, Mayo	History; Indigenous Peoples	Article mentions the use of roucou paint to adorn ceramic artefacts as well as fragments of nostril bowls used by Shamans to inhale tobacco juice and pepper juice to communi-cate with spirits of the ancestors.	Herrera, H.D., 2023. More artefacts at Whiteland, Mayo. *Ex-press,* 23 February, p.21.

#	Document	Tags	Summary	Reference:
33	Rare finds of rock art at Moruga	History; Indigenous Peoples	Discusses historical evidence of tools and artistic expressions carved into rock as petroglyphs, offering insights into the lifestyle of the First Peoples. It indirectly highlights how early peoples interacted with their environment through the tools and petroglyphs which reflect a deep reliance on components of biodiversity such as local plants, animals, and landscapes for survival, cultural expression, and spiritual beliefs.	Herrera, H.D., 2017 . Rare finds of rock art at Moruga. *Express*, 30 March. p.25 and 27.
34	Re-igniting the Ancestral fires: Heritage, traditions and legacies of the first peoples	History; Indigenous Peoples	A collection of papers presented at the First International Conference of The First Peoples, convened in Trinidad in October 2013. The book covers the following themes: – Indigenous World Views, Spirituality, Rituals and Festivals – Governance and Politics: Historical Perspectives – Culture and the Natural Environment – Governance and Politics: Contemporary Perspectives – Youth, Gender and Elders of the First Peoples Communities – Arts, Crafts, Cuisine and Wear: Exhibition and Technique	Balkaransingh, S., Belcon, P., García De la Torre, A., Liverpool, H. & Samaroo, B. (eds.), 2017. *Relgniting the Ancestral Fires: Heritage, Traditions, and Legacies of the First Peoples*. PortofSpain: University of Trinidad & Tobago Press & Santa Rosa First Peoples' Community.
35	The Book of Trinidad	History; Indigenous Peoples	This book focuses on the history of Trinidad, tracing its roots from Amerindian times to the present. It provides detailed insights into the Amerindian way of life, emphasizing their connection with biodiversity. The text highlights how they relied on various flora and fauna for their livelihoods: harvesting cotton for clothing and hammocks; using annatto for body paint; relying on turtles, crabs, and cassava for sustenance; crafting shells into trumpets; and making bone-tipped arrows for hunting and defence.	Besson, G. and Brereton, B., 2010. *The Book of Trinidad*. Port of Spain: Paria Publishing Company Ltd.
36	The Indigenous peoples of Trinidad and Tobago from the first settlers until today	History; Indigenous Peoples	This book highlights various aspects of the lives of Indigenous peoples in Trinidad and Tobago, including their use of local flora and fauna for food, tools, and craftsmanship. It documents practices such as using shellfish shells as tools, crafting canoes from native woods, and processing vegetable fibres for traditional basket weaving, demonstrating a connection to the natural environment and sustainable resource use grounded in ancestral knowledge.	Boomert, A., 2016. *The Indigenous Peoples of Trinidad and Tobago from the First Settlers Until Today.* Leiden: Sidestone Press.

#	Document	Tags	Summary	Reference:
37	The Second Coming: The Orisha Factor in the Emergence of the Steelband in Trinidad and Tobago	History; Indigenous Peoples	The article explores how the musical instrument pan has its roots in the Orisha yards of Trinidad and Tobago. The pan was used by steelbands during carnivals since the 1930s. The instrument was eventually introduced into the bamboo orchestra. The relationship between the steelband and its audience and the Orisha is discussed, as well as the history of the craft of pan-making.	Gibbons, R., 2019. The Second Coming: The Orisha Factor in the Emergence of the Steelband in Trinidad and Tobago. *Caribbean Quarterly,* 65(2), 241–254. https://doi.org/10.1080/00086495.2019.1606993.
38	The Useful and Ornamental Plants in Trinidad and Tobago	History; Indigenous Peoples	This book offers insights into various ornamental plants and their traditional uses.	Williams, R.O., 1951. *The Useful and Ornamental Plants in Trinidad and Tobago. Revised.* 4th edition. Trinidad
39	Trinidad and Tobago's Hidden Treasures highlighted in web series	History; Indigenous Peoples	The article highlights the use of local plants in producing indigo dye, historically significant as one of Tobago's primary export products. This traditional dyeing practice not only influenced the fabric industry but also reflects Indigenous and Local Knowledge (ILK) related to plant use, and craftsmanship.	De Souza, J., 2023. Trinidad and Tobago's Hidden Treasures highlighted in web series. *Newsday*, 11 September. Available at: https://newsday.co.tt/2023/09/11/trinidad-and-tobagos-hidden-treasures-highlighted-in-web-series/ [Accessed 30 July 2025].
40	Trinidad's Amerindian Legacy	History; Indigenous Peoples	The book highlights the diverse uses of biodiversity, including food sources such as shellfish, and the cultural and practical uses of plants like the silk cotton tree for worship and the manufacture of weapons. For example, it details how poison extracted from the manchineel tree was used alongside wooden clubs in warfare.	De Verteuil, A., 2019. *Trinidad's Amerindian Legacy*. PortofSpain: Anthony de Verteuil C.S. Sp.
41	A Guide to the Medicinal Plants of Trinidad and Tobago	Medicinal Plants	This book offers an overview of traditional medicinal plants cultivated and used in Trinidad, highlighting their role in local healing practices.	Seaforth, C.E., Adams, C.D. and Sylvester, Y., 1983. *A Guide to the Medicinal Plants of Trinidad & Tobago*. London: Commonwealth Secretariat.
42	Advancing Caribbean herbs in the 21st Century	Medicinal Plants	This book explores the science and commercialisation of herbs, the evaluation of medicinal plant extracts, and key challenges facing the Caribbean herbal industry. It also emphasises the importance of continued education in herbal medicine and includes insights from workshop reports.	Clement, Y.N. and Seaforth, C.E. (eds.) 2003. *Advancing Caribbean Herbs in the 21st Century: Proceedings of the Sixth International Workshop on Herbal Medicine in the Caribbean, 27-29 June 2003, St. Augustine, Trinidad & Tobago*. St. Augustine: University of the West Indies, Multimedia Productions Centre.

#	Document	Tags	Summary	Reference:
43	Caribbean herbs and Nutritional Supplements	Medicinal Plants	This book presents a scientific overview of fifty-seven plants traditionally consumed in the Caribbean, emphasizing their folkloric associations, cultural significance, and traditional uses highlighting the vital role of Indigenous and local knowledge systems in sustaining biodiversity and preserving culturally important plant species.	Seaforth, C., and Tikasingh, T., 2007. *Caribbean Herbs & Nutritional Supplements*. University of Trinidad and Tobago.
44	LMH Official Dictionary of Caribbean Herbs and Medicinal Plants and their Uses	Medicinal Plants	This book provides an overview of plants cultivated in Trinidad and the wider Caribbean, with a focus on their traditional medicinal uses.	Henry, L. Mike and Harris, K. Sean (eds.), 2003. *LMH Official Dictionary of Caribbean Herbs and Medicinal Plants and Their Uses*. Kingston: LMH Publishing.
45	Medical Sciences host traditional medicines workshop	Medicinal Plants	The article discusses the medicinal and commercial value of traditional herbs and plants highlighted at the TRAMIL "Traditional Medicine in the Islands" workshop. It directly engages ILK, as TRAMIL aims to rationalise the use of medicinal plants beyond folklore by grounding them in public health frameworks. The discussion emphasises that herbal medicine is practiced within a broader context of community and spirituality, where knowledge is shared among people with deep local ties, underscoring ILK's role in both healthcare and biodiversity stewardship.	UWI Today, 2008. Medical Sciences host traditional medicines workshop. *Guardian*, 24 February. p.10-11.
46	Medicinal plants at the Pointe a Pierre Wild Fowl Trust	Medicinal Plants	Documented local plants for at the Pointe-a-Pierre Wild Fowl Trust used for medicinal purposes.	Gaskin, M.R., 1991. *Medicinal plants oat the Point a Pierre Wild Fowl Trust*. Pointe-a-Pierre: Wild Fowl Trust.
47	Medicinal plants of Trinidad and Tobago and the Caribbean	Medicinal Plants	The book documents local plants used for medicinal purposes.	Gaskin, M.R., 2006. *Medicinal Plants of Trinidad & Tobago and the Caribbean*. Pointe-a-Pierre: Wild Fowl Trust.
48	Remedies and recipes of my Ancestry	Medicinal Plants	Book is focused on plants in Trinidad used for medicinal purposes.	St John, L., 1997. *Remedies and Recipes of My Ancestry*. Princes Town, Trinidad & Tobago: Lystra Elder-St. John.
49	Traditional medicines and women healers in Trinidad Post Natal Health Care	Medicinal Plants	This book discusses the relationship between traditional healers and modern healthcare practitioners in Trinidad and Tobago in the Caribbean. It focuses on medicinal plants, folk masseuses, and the new mothers and newborns they treat.	Mahabir, N.K., 2012. *Traditional Medicine and Women Healers in Trinidad: Postnatal Health Care*. San Juan, Trinidad & Tobago: Chakra Publishing House.

#	Document	Tags	Summary	Reference:
50	Treatment and cures with local herbs	Medicinal Plants	This book explores the medicinal uses of plants native to Trinidad.	Pavy, A., 1987. *Treatments & Cures with Local Herbs*. Port of Spain: Paria Publishing Company.
51	Trinidad and Tobago's Herbs & Spices	Medicinal Plants	The online article provides an overview of local popular herbs and spices.	National Library and Information System Authority (NALIS), 2021. *Trinidad and Tobago's Herbs & Spices*. Available at: https://www.nalis.gov.tt/blog/trinidad-and-tobagos-herbs-spices/.
52	A gap between acceptance and knowledge of herbal remedies by physicians: The need for educational intervention	Medicinal Plants	The study assessed how physicians in public hospitals in Trinidad perceive herbal remedies and also noted the general lack of transmission of substantial traditional knowledge from generation to generation and displacement of traditional medicinal practices by Western medicine in the modern Trinidadian society.	Clement, Y.N., Williams, A.F., Khan, K., Bernard, T., Bhola, S., Fortuné, M., Medupe, O., Nagee, K., and Seaforth, C.E., 2005. A gap between acceptance and knowledge of herbal remedies by physicians: The need for educational intervention. *BMC Complement Altern Med* 5(20). https://doi.org/10.1186/1472-6882-5-20
53	A review of the plant-based traditions of the Cocoa Panyols of Trinidad	Medicinal Plants	The research notes provide the uses and names for 148 plants that were important to Cocoa Panyols.	Lans, C., 2018. A review of the plant-based traditions of the Cocoa Panyols of Trinidad. *Geojournal* 83. pp.1425-1454, https://doi.org/10.1007/s10708-017-9835-2
54	A selections of plants used for 'bush medicine' in Trinidad	Medicinal Plants	The article highlights some well-known local medicinal plants (lemon grass, seed under leaf, chandelier, soursop, sensitive plant).	Coomansingh, J.,2025. A selections of plants used for 'bush medicine' in Trinidad. *Caribbean News Global*, [online] 21 May. Available at: https://caribbeannewsglobal.com/a-selections-of-plants-used-for-bush-medicine-in-trinidad/.
55	An ethnobotanical survey of medicinal plants in Trinidad	Medicinal Plants	The article reports findings from an ethnobotanical survey conducted in Trinidad to identify medicinal plants commonly used in traditional medicine to treat a variety of medical conditions; 917 single plant remedies were identified.	Clement, Y.N., Baksh-Comeau, Y.S. & Seaforth, C.E., 2015. An ethnobotanical survey of medicinal plants in Trinidad. *Journal of Ethnobiology and Ethnomedicine*, 11(67). doi:10.1186/s1300201500520.

#	Document	Tags	Summary	Reference:
56	Comparison of plants used for skin and stomach problems in Trinidad and Tobago with Asian ethnomedicine	Medicinal Plants	This paper provides a preliminary evaluation of fifty-eight ethnomedicinal plants used in Trinidad and Tobago for skin problems, stomach problems, pain and internal parasites for safety and possible efficacy. Commonalities between Chinese traditional medicine and Trinidad and Tobago "bush medicine" are noted in the paper.	Lans, C., 2007. Comparison of plants used for skin and stomach problems in Trinidad and Tobago with Asian ethnomedicine. *Journal of Ethnobiology and Ethnomedicine*, 3(3). doi:10.1186/1746426933.
57	Creole Remedies of Trinidad and Tobago	Medicinal Plants	This book explores the traditional use of plants in medicine and agricultural practices among Indigenous Amerindian communities in Trinidad and Tobago, as well as within the wider population.	Lans, C.A. (2007) Creole Remedies of Trinidad and Tobago. 2nd edn. [Illustrated]. Lans, Cheryl. ISBN 9780978346812.
58	Development, preservation of residual knowledge	Medicinal Plants	The article highlights the gradual erosion of Indigenous knowledge related to the use of medicinal plants, largely due to the oral nature of knowledge transmission. As these practices decline, so too does the "medicinal memory" embedded in local flora—an invaluable resource for both cultural preservation and biodiversity-based health solutions. Revitalizing this knowledge in Trinidad and Tobago and across the wider Latin America and the Caribbean (LAC) will require efforts to document and restore Indigenous plant names, as well as the protection of critical habitats such as cloud forests, which serve as reservoirs of both biodiversity and traditional ecological knowledge.	Ali, F., 2023. Development, preservation of residual knowledge. *Guardian*, 30 April. p.18
59	Ethnomedicines used in Trinidad and Tobago for urinary problems and diabetes mellitus	Medicinal Plants	The article provides a review of traditional use of herbs for urinary problems and diabetes mellitus (also low blood pressure, jaundice, heart tonic, hypertension, kidney problems, gall stones).	Lans, C.A., 2006. Ethnomedicines used in Trinidad and Tobago for urinary problems and diabetes mellitus. *Journal of Ethnobiology and Ethnomedicine*, 2(45). doi:10.1186/1746-4269-2-45.
60	Folk Medicine in Trinidad	Medicinal Plants	The article highlights local knowledge on medicinal plants, collected in Belmont, Laventille, San Juan, Tacarigua, Arouca and Couva ; includes Shango remedies.	Simpson, G.E., 1962. Folk Medicine in Trinidad. *The Journal of American Folklore*, 75(298), pp. 326–340. doi:10.2307/538368.
61	Folk medicines of Blanchisseusse	Medicinal Plants	This book delves into the rich tradition of folk medicine in Blanchisseusse, highlighting how local plants have been used for generations to treat a variety of ailments.	Wesley, W. 1967. *The Folk Medicine of Blanchisseusse, Trinidad*. Brandeis University.

#	Document	Tags	Summary	Reference:
62	Herbal Self-Medication at Primary Health Care Facilities in Trinidad	Medicinal Plants	The paper examines use of herbal medication amongst patients at public health facilities	Clement, Y. N., 2009. Herbal self-medication at primary health care facilities in Trinidad. *Journal of Alternative and Complementary Medicine*, 15(1), pp. 6-7. doi:10.1089/acm.2008.0295.
63	Medicinal and Edible Plants used by East Indians of Trinidad and Tobago	Medicinal Plants	This book provides information on sixty-three local plants used by the East Indian community of Trinidad and Tobago. Their medicinal uses include arthritis, diabetes, high blood pressure, headaches, strokes, impotence, sterility, ulcers and skin infections. The purpose of this book is to describe and illustrate the local plants used mainly by the East Indian community of Trinidad and Tobago, and in particular, to fill the vacuum left by (non-Indian) botanists who have done research on plants and plant products in this geographical area.	Mahabir, K., 2008. *Medicinal and Edible Plants used by East Indians of Trinidad and Tobago*. 3rd edition. Chakra Publishing House.
64	Medicinal herb use among asthmatic patients attending a specialty care facility in Trinidad	Medicinal Plants	The study assessed the prevalence of use and the factors affecting the decision to use local herbs in asthmatic patients attending a public specialty care clinic in Trinidad. Study looked at characteristics of patients using herbal remedies (and identified cultural/tradition as one of the reasons for using the herbs) and effect of income and education in the use of herbs.	Clement, Y. N., Williams, A. F., Aranda, D., Chase, R., Watson, N., Mohammed, R., Stubbs, O. & Williamson, D., 2005. Medicinal herb use among asthmatic patients attending a specialty care facility in Trinidad. *BMC Complementary and Alternative Medicine*, 5 (3). doi:10.1186/1472688253.
65	Medicinal Plants of Trinidad and Tobago	Medicinal Plants	This literature highlighted 338 different plant species with reputed medicinal properties growing in Trinidad and Tobago. Threats to loss of ILK/practice were also identified and recommendations were made for maximising potential of indigenous medical treatments.	Barclay, G. 2012. Medicinal Plants of Trinidad and Tobago. In: B. Reid, 2012. *Caribbean Heritage*. The University of the West Indies Press.
66	Medicinal Plants of Trinidad and Tobago: Selection of Antidiabetic Remedies	Medicinal Plants	The paper explores antidiabetic remedies of medicinal plants.	Bullard-Roberts, and Angelle L., 2016. *Medicinal Plants of Trinidad and Tobago: Selection of Antidiabetic Remedies*. FIU Electronic Theses and Dissertations. Available at: https://digitalcommons.fiu.edu/etd/2546.

#	Document	Tags	Summary	Reference:
67	Perceived efficacy of herbal remedies by users accessing primary healthcare in Trinidad	Medicinal Plants	The study cited over 100 herbs for the promotion of health/wellness and the management of specific health concerns.	Clement, Y. N., MortonGittens, J., Basdeo, L., Blades, A., Francis, M.–J., Gomes, N., Janjua, M. & Singh, A., 2007. Perceived efficacy of herbal remedies by users accessing primary healthcare in Trinidad. *BMC Complementary and Alternative Medicine*, 7, p.4. doi:10.1186/1472688274.
68	Power of plants in traditional Tobago yards	Medicinal Plants	The article highlights the importance of front yards for housing local (medicinal/useful) plants.	Pemberton, R., 2021. Power of plants in traditional Tobago yards. *Newsday,* [online]. 6 May. Available at: https://newsday.co.tt/2021/05/06/power-of-plants-in-traditional-tobago-yards/.
69	Saved by seaweeds (II): Traditional knowledge, home remedies, medicine, surgery, and pharmacopoeia	Medicinal Plants	The article highlights the beneficial use of many types of seaweeds in many countries, including Trinidad.	Pérez-Lloréns, J.L., Critchley, A.T., Cornish, M.L. and Mouritsen, O.G., 2023. Saved by seaweeds (II): Traditional knowledge, home remedies, medicine, surgery, and pharmacopoeia. *Journal of Applied Phycology*, [e-journal] 35, pp. 2049–2068. doi:10.1007/s10811-023-02965-6.
70	Saving our medicinal plants. At the mercy of whackermen	Medicinal Plants	The article highlights utility of certain medical plants: Ti marie (*Mimosa pudica*), Jumbie basil (*Ocimum micranthum* Willd), Jumbie bead (*Abrus precatorius*), zebapique (*Neurolaena lobata*), wild jasmine (*Tabernaemontana undulata* Vahl) and stinking toe (*Hymenaea courbaril).*	Herrera, H.D., 2024. Saving our medicinal plants...At the mercy of whackermen. *Express*, [online]. 8 May. Available at: https://trinidadexpress.com/features/local/saving-our-medicinal-plants/article_da9bdcbe-0d90-11ef-a65c-87866ee4b185.html.
71	Screening of medicinal plants from Trinidad and Tobago for antimicrobial and insecticidal properties	Medicinal Plants	The paper highlights antibacterial activity in 29 plant species currently used in traditional medicine in Trinidad.	Chariandy, C.M., Seaforth, C.E., De Freitas, A.M. and Edwards, T., 1999. Screening of medicinal plants from Trinidad and Tobago for antibacterial activity. *Journal of Ethnopharmacology*, 64(3), pp. 265-270. doi:10.1016/S0378-8741(98)00130-5.

#	Document	Tags	Summary	Reference:
72	T&T biodiversity holds key to future	Medicinal Plants	The article features international consultant Mervyn Claxton, who highlights the traditional medicinal use of common plants and warns of the decline of eco-Indigenous knowledge, traditionally passed down orally. This loss poses a threat to both cultural heritage and biodiversity conservation.	Loubon, M., 2010. T&T biodiversity holds key to future. *Guardian*, 5 September. p.A43 and A45
73	Towards a Sustainable Medicinal Plant Industry in Trinidad and Tobago	Medicinal Plants	This paper provides an overview of the status of agriculture in T&T, some global and traditional trends vis-à-vis medicinal plant usage. It identifies some key elements in the development of a medicinal plant industry, such as identification of medicinal plants, Good Agricultural and Good Manufacturing Practices, identification of active health ingredients and intellectual property rights.	Badrie, N., 2009. *Towards a sustainable medicinal plant industry in Trinidad and Tobago. Proceedings of the West Indies Agricultural Economics Conference 27.* Belize City, Belize 23rd - 27th July, 2007. Available at: https://ageconsearch.umn.edu/record/122894/
74	Use of herbal medicines by surgical outpatients at the Eric Williams Medical Sciences Complex	Medicinal Plants	The article identified medical patients that used some form of herbal therapy (herbal medicines, bush medicine, bush tea).	Merritt-Charles, L., Chen, D., Perera, G., Koppada, A. & Hunte, S., 2003, Use of herbal medicines by surgical out-patients at the Eric Williams Medical Sciences Complex. *West Indian Medical Journal*, 52 (23), p. 23A.
75	Use of medicinal plants for diabetes in Trinidad and Tobago	Medicinal Plants	The articled assessed the use of herbal remedies from medicinal plants (bush medicines) in people with diabetes mellitus. Patients taking bush medicines mentioned 103 different plants used in remedies.	Mahabir, D. and Gulliford, M.C., 1997. Use of medicinal plants for diabetes in Trinidad and Tobago. *Rev Panam Salud Publica/ Pan Am J Public Health*, 1(3). doi: 10.1590/s1020-49891997000300002.
76	A healing at the Heights... First Peoples plan spiritual reclamation at Aripo	Species - Fauna	The article makes mention of the harvesting of oil from oilbirds for domestic use.	Herrera, H.D., 2021. A healing at the Heights... First Peoples plan spiritual reclamation at Aripo. *Express*, 18 February. p.23.
77	Big market for eating national bird, 3 for $100. Scarlet Shame	Species - Fauna	The article highlights enforcement issues related to illegal hunting of the Scarlet Ibis in the Caroni Bird Sanctuary. It also notes that the Felicity community's traditional use of the swamp for harvesting and recreation informed the decision not to expand the protected area.	Neaves, S., 2017. Big market for eating national bird, 3 for $100. Scarlet Shame. Newsday, 5 September. p.A8.

#	Document	Tags	Summary	Reference:
78	Natural History of Trinidad and Tobago	Species - Fauna	The book highlights the work of the Pawi Study Group (2004) which involved academia partnering with conservation CBOs, that are continuing study and conservation of the Pawi through support local communities. Local practices are noted in the book including mountain or manicou crab catching.	Rooks, C., and Barclay, G., 2012. Natural History of Trinidad and Tobago. In: B.R. Reid, ed. 2012. *Caribbean Heritage*. University Press of the West Indies
79	Pelicans in danger of being eaten	Species - Fauna	The article highlights the vulnerability of pelicans and declining populations due to increased predation are impacting fisherfolk communities in Claxton Bay. These communities traditionally rely on the birds' behaviour to locate productive fishing basins.	Persad, S., 2020. Pelicans in danger of being eaten. *Newsday*, 5 September. p.A15.
80	The Biological Diversity of Trinidad and Tobago	Species - Flora	Th book identifies a list of local names along with scientific names for flora in Trinidad and Tobago	Kenny, J., 2008. *A Naturalist's Notes: the Biological Diversity of Trinidad & Tobago*. Prospect Press.
81	Native Trees of Trinidad and Tobago	Species - Flora	The book collated information on native trees included local uses of these native trees.	Quesnel, V.C., Farrell, T.F., and Comeau, P.L., 2005. Native Trees of Trinidad and Tobago. Trinidad and Tobago Field Naturalists' Club.
82	The Construction of an artisanal fishing boat from Trinidad and Tobago, West Indies / Richard H. Hubbard.	Species - Flora	The book notes the use of various native trees in traditional artisan fishing boat	Hubbard, R.H., 2010. *The Construction of an artisanal fishing boat from Trinidad and Tobago, West Indies*. Institute of Marine Affairs

Appendix 6: Journal of Local Knowledge on the Biodiversity of Charlotteville

Journal of Local Knowledge on the Biodiversity of Charlotteville

by Charlotteville community members and civil society organisat

Cover photo- Man-o-War Bay Charlotteville

Photo credit: Akedo Muzla

Developed October 2025

Journal authors/contributors of local knowledge:

- Gail Caesar- Community Member
- John Carrington-Spiritual Baptist (Pastor)
- Ned Celestine- North East Sea Turtles
- Makika S. Cordner- Charlotteville Police Youth Club (CPYC)
- Ian Daly -Tobago Unified Fisherfolk Association (TUFA) and Bloody Bay Fisherfolk
- Vita Dillion-Jack- Charlotteville Heritage
- Desiree Francis- Community Member
- Martha Greenwalt- Rising Mindset Education
- Jaycel Joseph- Charlotteville Police Youth Club (CPYC)
- Ancil Kent- NorthEast Sea Turtles
- Chelsea Manswell- Charlotteville Police Youth Club (CPYC)
- Christopher Moore- Charlotteville Village Council
- David Murray- Community Member
- Akedo Muzla- Rasta/Community Member
- Thomas Nicholson -Community Member
- Vanessa Perry- Community Member
- Junior Quashie- All Tobago Fisherfolk Association (ATFA)
- Fredrick Roberts- All Tobago Fisherfolk Association (ATFA)
- Nirala Sonder- Community Member
- Allison Thomas - Tobago Unified Fisherfolk Association (TUFA) and Trinidad and Tobago Association of Village and Community Councils (TBAVCC)
- Sheneka Warrick-Community Member
- Penelope Williams- Cholson Chalets Ltd.

Fishing nets on the shoreline. Photo credit: CANARI

Photographs provided by community members: Akedo Muzla, Jaycel Joseph, Chelsea Manswell, and the Caribbean Natural Resources Institute (CANARI)

Journal collation, editing and formatting support provided by CANARI under the Trinidad and Tobago National Outlook on Indigenous and Local Knowledge (ILK) of Biodiversity Project executed in partnership with Environmental Policy and Planning Division of the Ministry of Planning, Economic Affairs and Development, Republic of Trinidad and Tobago, in collaboration with the United Nations Educational, Scientific and Cultural Organization (UNESCO) with funding from the Kunming Biodiversity Fund.

Government of the Republic of Trinidad and Tobago
Ministry of Planning, Economic Affairs and Development

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Charlotteville is village in the Republic of Trinidad and Tobago. It is located in North East Tobago within a UNESCO Man and Biosphere Reserve. Communities like Charlotteville have significant local knowledge on that protected area's biodiversity

Photos Credit: CANARI

1

Community members and CSOs shared their local knowledge about the biodiversity of Charlotteville during meetings and activities in September and October 2025.

Community led walks in the village showcased important plants and animals in Charlotteville and highlighted key environmental issues. Villagers also shared how the community depends on the area's biodiversity for their livelihoods as well as recreational, cultural and tourism related activities.

Photos credit: CANARI

2

Tools such as ecological calendars were used to gather information on how the community interacts with the natural environment during different periods of the year and how plant and animal populations change throughout the year

Photo credit: CANARI

3

Given that Charlotteville is a coastal community a lot of the local knowledge shared centred around fishes, fishing and coastal tourism activities.

Fishing boats in Man-o-War Bay. Photo credit Akedo Muzla

4

Jaycel Joseph shared this photo of the Charlotteville Pier noting that "boats are anchored here for close range access. The tower poles are what they use to hang the scales to weigh the marlins and other big fish for the fishing tournament that takes place in May. This area is also where bathing activities take place especially jumping and diving into the water. The previous DODS diving championship took place here where a platform was built on heights for freestyle diving purposes. This net shown here is what we call seine, it is used for seine pulling on the bay front where they would catch fish and all other sea creatures".

5

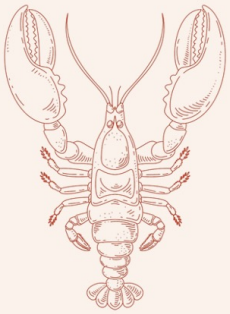
Local knowledge on Fish abundance/harvesting

- Redfish and Amber Cavali are harvested throughout the year
- Marlin is caught mainly between May to October
- There are two kinds of kingfish (Wahoo & Blackeye). Wahoo is most abundant October – March whereas Blackeye is harvested throughout the year
- Grouper abundance is linked to moon phases
- Albacore (Black Fin Tuna) and Jacks are caught mostly in the dry season
- While seasonal patterns exist, these patterns may be disrupted by the use of Fish Aggregating Devices

6

Local knowledge on shellfish abundance/harvesting

Whelks and Pacro are harvested throughout the year but abundance has been declining in recent times due in part to land based sources of pollution. Lobster is harvested year round. There is a declining abundance of conch linked to collection of the shells by tourists.



7

The community has noted declining abundance of fish harvested, which they link to species migration due to climate change, overfishing, sedimentation of coastal waters and seismic testing. They speculate that given declining harvests, that in the future farmed freshwater fish like Tilapia may replace traditionally harvested marine seafood species.

Top left photo- fisherman preparing his catch; Top right photo- Seine nets
Photos credit: CANARI

8

Declining coral reef health is a concern for the villagers which they believe is linked to climate change, land based sources of pollution e.g. septic tanks and detergents.

Jaycel Joseph shared this picture of Pirates Bay in Charlotteville where she indicated that coral restoration is taking place led by the CSO Environmental Research Institute Charlotteville (ERIC)

9

Crops e.g. coconuts, plantain, bananas (picture below) and mangoes are planted throughout the year. Mangoes are harvested in June. "Short crops" are planted more in the dry season. Provisions [e.g. dasheen and cassava] are planted from around May. Pigeon peas (picture to the left) is also planted around May.

Photos Credit: CANARI

10

Common medicinal plants used in Charlotteville include: turmeric, moringa ginger, seed under leaf, worm grass St. Johns Wort, mint rosemary, ginger, zebabique , bayleaf , fitweed (chadon beni) vervine , graterwood , limebud and stamp fern.

Medicinal plants are mostly grown mostly in backyards but in the past they were more commonly found in the wild. In the future villagers believe that there will be declining reliance on medicinal plants, transitioning to greater use of store -bought pharmaceuticals.

Chadon beni (fitweed) is used in a tea for babies to treat fits. Photo credit CANARI

11

Jaycel Joseph shared these photos of an Almond tree including the fruit in the picture below noting that "When they [the fruits] get ripe, they fall and get dry. The dried fruit can now be pounded with a stone that will open to an almond nut."

12

During the open hunting season [October to February] iguana,agouti, manicou, and tattoo are hunted in the forests surrounding Charlotteville· Villagers have noted a declining abundance of wildlife over the year· Forest extent has actually been increasing though as agriculture is on the decline· In terms of weather villagers noted that the area has become drier (less rainfall) over the years and seasonality is less distinct·
Photo Credit Akedo Muzla - view of Charlotteville and surrounding forests from the sea·

13

Tourism is an important economic activity in Charlotteville

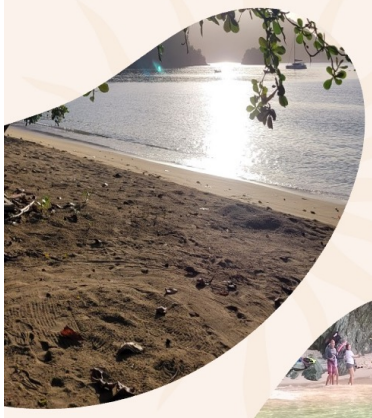
Jaycel Joseph contributed the photo above, noting that the picture showcases Man-o-War Bay where snorkeling takes place but that depending on where lifeguards place their flags, bathing and snorkeling may be restricted in some areas·

Chelsea Manswell took the picture on the left and described it as "Lover's bay Charlotteville where you can take a boat ride over there and do diving activities, bathe, etc· you can also view pretty pink sand at Lover's bay Charlotteville Tobago"·

14

In addition to touristic activities, the local community also relies heavily on the natural environment for recreational activities e·g· hiking to Pigeon Peak and Flagstaff Hill and therapeutic seaside bathing throughout the year·

A number of festivals held in Charlotteville are linked to the natural environment including the Fisherman Harvest Festival in June, Methodist Harvest in September and Anglican Harvest in October

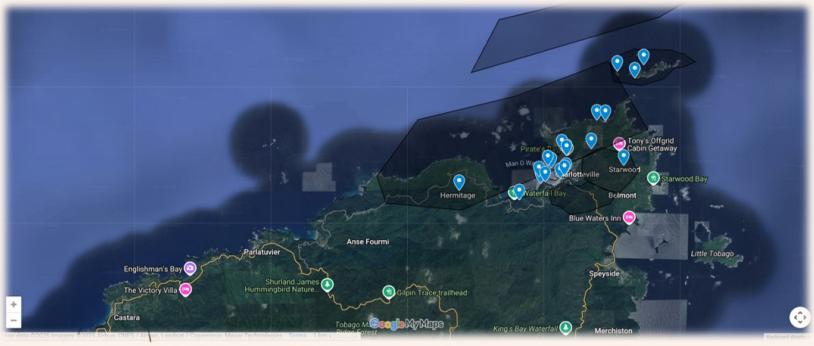


Man -o- War Bay (above) used for therapeutic bathing Photo credit: CANARI

Recreation at Lovers Bay· Photo credit: Akedo Muzla

15

Community members used participatory mapping (PGIS) on Google My maps to highlight some key features within the community. Villagers identified areas such as key fishing zones, coral restoration areas, coastal erosion sites and recreational beaches.



PGIS map showing key features highlighted by Charlotteville community members, using Google My Maps Photo credit: CANARI Map accessible at: https://www.google.com/maps/d/viewer?ll=11.325968883260359%2C60.552759141669947&z=17&mid=1blwN-Cg5ev36Y8-gZi93KXt5smZrtrg

16

Charlotteville thrives at the intersection of land, sea, and community. From its vibrant fishing traditions to seasonal food harvests, residents maintain a strong connection with their environment. Using this photo journal the community has showcased their valuable historical, seasonal and spatial local knowledge of the biodiversity of Charlotteville.

Thank You to all contributors!

Man O War Bay. Photo credit: CANARI

17

Appendix 7: Journal of Local Knowledge on the Biodiversity of L'Anse Fourmi

Journal of Local knowledge on the Biodiversity of L'Anse Fourmi by L'Anse Fourmi community members and Civil Society Organisations (CSOs)

Developed
November 2025

Photos credit: CANARI

Journal authors/contributors of local knowledge:

- Allison Thomas - Tobago Unified Fisherfolk Association (TUFA) and Trinidad and Tobago Association of Village and Community Councils (TBAVCC)
- Ian Daly - Tobago Unified Fisherfolk Association (TUFA) and Bloody Bay Fisherfolk
- Barrington Weld - L'Anse Fourmi Village Council
- Hailey Cordner - L'Anse Fourmi Village Council
- Reynold Chance - Community member
- Ethlyn Chance - L'Anse Fourmi Village Council
- Gloria Chance Roberts - Community member
- Leon Chance - Community member
- Carlene Beckles - Community member
- Shannon Chance - Community member
- Dannyelle Williams - Community member
- Danesha Barton - Community member
- Ani-ann King - Community member
- Tyrell Gracie - Community member
- Ackim Chance - Community member
- Arnel King- Community member
- Lyndell Manswell - Community member
- Aaron King - Community member
- Tinnell Wilson Charles - Community member
- Aamir Charles - Community member
- Adeel Kerr - Community member
- Ray Edwards - Community member
- Akeda Brathwaite - Community member
- Dashawn Chance - Community member

Bloody Bay
Photo credit: CANARI

Photographs provided by community member: Shannon Chance and the Caribbean Natural Resources Institute (CANARI)

Journal collation, editing and formatting support provided by CANARI under the Trinidad and Tobago National Outlook on Indigenous and Local Knowledge (ILK) o Biodiversity Project executed in partnership with Environmental Policy and Planning Division of the Ministry of Planning, Economic Affairs and Development, Republic of Trinidad and Tobago, in collaboration with the United Nations Educational, Scientific and Cultural Organization (UNESCO) with funding from th Kunming Biodiversity Fund.

L'Anse Fourmi is a community located in NorthEast Tobago, in the Republic of Trinidad and Tobago. It is one of the communities within the UNESCO Man and Biosphere Reserve. Community members of L'Anse Fourmi hold significant local knowledge existing on the biodiversity of their community and the wider Man and Biosphere Reserve

Photos Credit: CANARI 1

Community members and CSOs shared their local knowledge about the biodiversity of L'Anse Fourmi during meetings and activities in September and October 2025.

Community members led a driving workshop with visits to specific sites in the village, showcasing important plants, animals and areas in L'Anse Fourmi. They also highlighted key environmental issues. Villagers shared shared how the community depends on the area's biodiversity for livelihoods, recreational, cultural and tourism activities.

Photos Credit: CANARI 2

The driving workshop incorporated stops at specific sites, where community members identified a variety of medicinal plants. Along the main road, a community member pointed out the "cowheel" leaf, traditionally used for alleviating pain in the knees and back.

Community member showed the broad "cowheel" leaf, explaining its medicinal use. Photo credit: CANARI 3

Community members also identified other medicinal and significant flora such as:

- Zebepique – used for fever, colds, and cleansing the blood
- St. John's – brewed in tea to increase iron levels
- Vervine – used to treat fevers
- Christmas bush to treat respiratory issues
- Fiddlewood – used for healing wounds or sores
- "Ice" tree – said to have dew-like residue left by beetles that resembles icicles hanging form the tree

4

Fridge Spring— Named for its icy-cold waters, this spring is a cherished stop for village hunters after long days hunting in the forest. Locals believe its purity has the power to keep you young. Flowing year-round, even through the dry season, its waters turn brown with the rains. Though untreated, many still collect from it for personal use, keeping alive a quiet connection to this timeless source.

Villagers ensure water from Fridge spring is easily accessible, by installing and maintaining a PVC pipe outlet
Photos Credit: CANARI

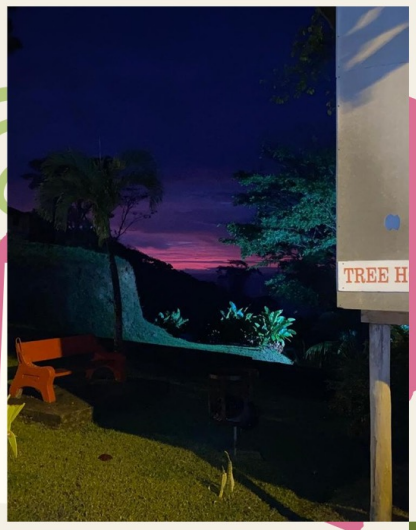
5

Shannon Chance shared this photo of the L'Anse Fourmi beach, noting that this beach is "a main fishing area for village fishermen".

L'Anse Fourmi beach
Photo credit: Shannon Chance

6

Shannon Chance also shared this photo indicating "This is at the dirt oven in L'Anse Fourmi where you can see the most beautiful sunset in Tobago with a lot of beautiful colours."

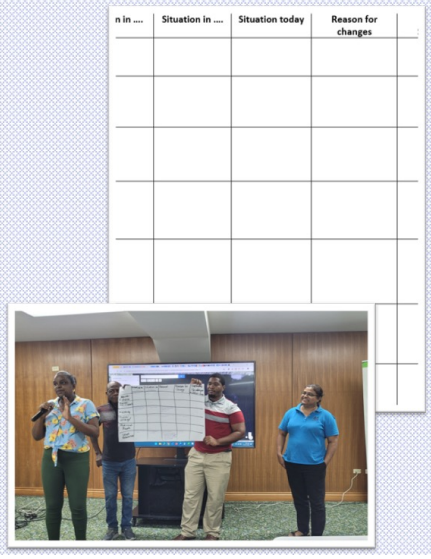


7

Photo Credit: Shannon Chance

Through the participatory tools used such as the seasonal calendar and historical timeline, community members mapped their relationship with the land and sea changes over time. The seasonal calendar captured the rhythms of the year; from the ripening of hog plum that signals the start of the "Boomba" fish season, to the nesting of turtles along the L'Anse Fourmi beach, and the harvest of crops such as provisions along the hillsides.

Historical timelines documented key shifts remembered by elders, including when hurricanes destroyed fruit trees and villagers replanted them to bring back the birds; when fishing grounds became less abundant; and when old springs and trails first opened paths between homes, farms and the sea.



L'Anse Fourmi community member shares local knowledge captured on a historical timeline.
Photos Credit: CANARI

8

Off the coast of L'Anse Fourmi, five rocks rise from the water. The villagers call them Sister's Rock; named for the five enslaved women chose the sea over capture, by swimming to those rocks after fleeing their master. Under the rocks, a vibrant coral reef supports the livelihoods of many, catching fish such as salmon, cavali and snapper.

Villagers point to Sister's Rock off the coastline.
Photos Credit: CANARI

9

Community members shared that when the sea grape trees along the beach turned heavy with fruit, children would run down to the shore, filling their hands and mouths with the small purple grapes, a taste of salt and sweetness together.

For the adults, baskets of fruit became bottles of homemade sea grape wine, entered proudly into village competitions.

Community members climb a tree to harvest ripe sea grapes hanging from a high limb. Photos Credit: CANARI

10

At several beaches between L'Anse Fourmi and Bloody Bay, green and hawksbill turtles climb the quiet beach to lay their eggs in the sand.

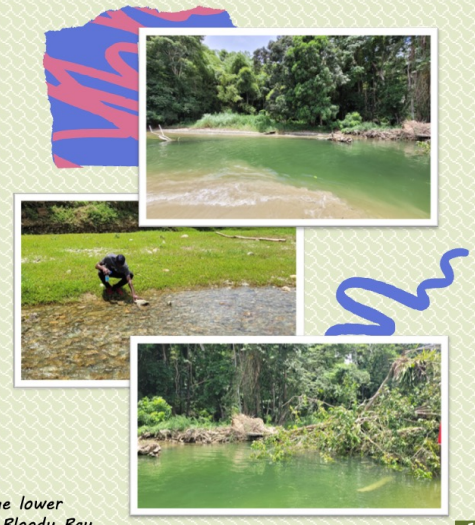
Community members hope for potential partnerships with local CSOs to establish community monitoring programmes during turtle nesting season including turtle tagging and guarding nests.

Turtle nesting educational signage erected at Bloody Bay beach Photo credit: CANARI

11

The Bloody Bay River flows through dense forest before meeting the sea, providing fresh water for domestic use and supporting small-scale farming along its banks. Community members recall bathing, washing, and crayfish hunting as part of their daily routines. They note two different types of crayfish one with claws and one without.

Closer to the river mouth is also used for recreation and provides lovely scenery for annual festivals held nearby. Over the years, residents have observed changes in the river's volume and clarity, reflecting broader environmental shifts in rainfall and land use.



Sections of the lower course of the Bloody Bay River Photo credit: CANARI

12

Community members used Participatory GIS (PGIS) through Google My Maps to combine local knowledge with mapping techniques, allowing a visual representation of their landscape and resource use. Villagers identified key areas such as off-shore fishing grounds, the forested stretch between L'Anse Fourmi and Hermitage, which serves as a major hunting zone, as well as areas that used to be large cocoa estates.

PGIS map showing key features highlighted by L'Anse Fourmi community members, using Google My Maps
Photo credit: CANARI
Map available at:
https://www.google.com/maps/d/u/0/viewer?mid=1188AzzvVdOeRIbeMe3qltDw3k3Qbnck&ll=11.315160794924154%2C-60.6181477999999996&z=13

13

Hunting remains an important seasonal livelihood and cultural practice in L'Anse Fourmi. The forests between L'Anse Fourmi and Hermitage form a well-known hunting ground, where villagers pursue a variety of wild meat like:

- Agouti
- Tattoo (armadillo)
- Iguana
- Wild hog

The peak of hunting activity aligns with Tobago's wild meat season, supporting many households through both income and community sharing.

The village hunters also serve as vital observers of environmental change, noting that wild animals like wild deer have not been seen in over twenty years and that agouti have grown noticeably smaller in recent years.

14

L'Anse Fourmi is a landscape of memory, practice, and resilience. From the forested hunting grounds, to the cocoa estates, Bloody Bay River, and L'Anse Fourmi beach, villagers' activities show deep ties to place. Participatory methods provided rich seasonal, spatial, and qualitative local data, helping to map how culture, ecology, and livelihoods overlap.

Thank You to all contributors!

Bloody Bay
Photo credit: CANARI

15

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