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JNCC Joint Nature Conservation Committee

Enabling investment into conservation, climate and communities.

Developing a Natural Capital Investment Plan for the Turks and Caicos Islands

Technical Report

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W106 Vox Studios, 1-45 Durham Street
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Project Summary

This report has been produced as part of the Resilient Community Recovery from COVID-19 in the Turks and Caicos Islands project, delivered in partnership between the Joint Nature Conservation Committee (JNCC), the Turks and Caicos Islands Government Department of Environment and Coastal Resources (DECR), the Turks and Caicos Islands Fishing Cooperative, the Turks and Caicos National Trust, and Invest Turks and Caicos.

Report details

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The contents of this document are the sole responsibility of the Beneficiary and may under no circumstances be regarded as reflecting the position of the European Union, Expertise France, and RESEMBID.

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Executive Summary

The Natural Capital Investment Plan aims to provide pathways to unlock sustainable finance for the protection and enhancement of the natural environment in TCI to safeguard TCI's natural capital assets for generations to come.

- **TCI's natural capital:** TCI is home to diverse marine and terrestrial ecosystems vital for the economy and local population, providing services such as coastal protection and supporting industries including tourism and fishing.
- **Risks to natural assets:** Threats caused by coastal development, overfishing, and pollution alongside rapid growth in the population and tourism endanger these assets and impacting livelihoods.
- **Financial gap:** Public funding to protect and enhance natural assets is insufficient requiring the need for new funding sources to address risks like ecosystem loss, climate change, and food security.
- **Crucial role of new funding:** Diversifying revenue and funding sources, and leveraging private finance, is pivotal in bridging the finance gap to protect and restore natural capital in TCI.
- **Role of the NCIP:** The NCIP aims to create a pathway towards sustainable and diverse financing sources, while building capacity and capabilities to support long-term conservation goals in TCI.

Importantly, the NCIP aligns with the key strategic pillars of the TCI Government's Vision 2040 documentation:

Vision 2040 sustainable development dimensions (SDDs):	
SDD1	High national income and wealth
SDD2	A socially cohesive society
SDD3	A healthy natural environment, heritage and cultural assets
SDD4	Citizen security
SDD5	Good governance

The NCIP aims to identify the sustainable financing opportunities for natural capital that are aligned with national priorities, resonate locally and achieve the strongest social and environmental impacts.

Executive Summary: Priority NCIP Actions

To facilitate the development of an investable pipeline of projects and unlock additional investment in natural capital over time, a series of recommended priority actions are outlined below:

	Actions

Develop policy, strengthen regulation and governance	➢ Launch NCIP and publish recommendations
	➢ Progress with policy and regulatory actions to safeguard natural capital and drive forward investment e.g.
	  ➢ **Development policy:** strengthen regulations such as mandatory Environmental Impact Assessments, alignment with Mitigation Hierarchy[1], potential requirements for compensation payments
	  ➢ **Ringfencing user fees:** identify opportunities to ringfence a portion of user fees / taxes (e.g. destination management fee, restaurant and water sports tax, mooring fee etc) for natural capital
	  ➢ **Renewable energy:** implement supportive policies e.g., Feed in Tariffs, tax incentives, streamlined permitting
	  ➢ **Agriculture:** progress Agricultural Bill and legislative frameworks to support sustainable and scaled agriculture (e.g. import levies, hydroponics)
	➢ Strengthen standards, regulation and monitoring for sustainable business practices e.g. sustainable tourism, fisheries, agriculture, property development
	➢ Develop sustainable certification programmes for best-practice operators and products across tourism, fisheries, aquaculture
	➢ Design and develop the business case for multi-stakeholder natural capital funding and governance vehicle e.g., TCI Natural Capital Trust
	  ➢ Consult stakeholders to agree governance structure and roles
	  ➢ Assess legal / statutory opportunity to create a special purpose vehicle (e.g. fund/trust)
	  ➢ Identify internal public funding allocations (e.g. ringfenced user fees) that could support natural capital vehicles and projects

Sources:
(1) Mitigation Hierarchy

Executive Summary: Priority NCIP Actions (2)

	Actions
Build capacity and expertise	➢ Support training and capacity building on natural capital protection / restoration techniques; ecotourism; waste management, sustainable farming, aquaculture, fisheries etc ➢ Provide innovation funding programmes to foster local entrepreneurial capacity in sustainable business development e.g. mariculture, ecotourism
Gather data and evidence	➢ Gather additional data and information on habitat extent, condition, threats, historic loss, drivers of degradation / loss ➢ Carry out mapping of target opportunity areas for natural capital restoration and protection ➢ Identify metrics to support baselining and monitoring of ecosystems overtime
Identify champions, expand stakeholder engagement and raise awareness	➢ Identify clear champions on-island and develop working groups to support delivery of NCIP recommendations and maintain engagement with stakeholders ➢ Conduct educational campaigns to raise awareness of the value of natural capital and benefits of responsible practices (across tourism, fisheries, property development etc) ➢ Map and engage funders and networks to build networks & knowledge sharing and leverage additional funding sources
Deliver pilot projects and demonstrate revenue generation	➢ Carry out ongoing market engagement (e.g. with local corporates) to test and build demand for ecosystem service payments e.g. for coastal protection payments, biodiversity credits, blue carbon credits ➢ Expand identification of projects that could support biodiversity protection and enhancement – identify delivery partners, implementation costs, revenues, investment need, and outcomes ➢ Develop a financial plan for protected area management over the long term to understand scale of funding needs

Project Overview

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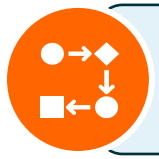
Project Objectives

Commissioned by JNCC and supported by the RESEMBID programme, Finance Earth and eftec have developed a Natural Capital Investment Plan (NCIP) with the aim of scoping new natural capital income opportunities and building local capacity and capabilities to mobilise additional investment to protect and restore ecosystems and benefit local communities in the Turks and Caicos Islands (TCI). The key objectives of the NCIP are to:

Ascertain **the need and opportunity for investment in the protection and enhancement of natural capital in TCI while expanding sustainable livelihoods** to inform the development of a NCIP

Identify and short-list the financing models and approaches which are more likely to resonate locally, are **aligned with national priorities** and achieve the strongest social and environmental impacts

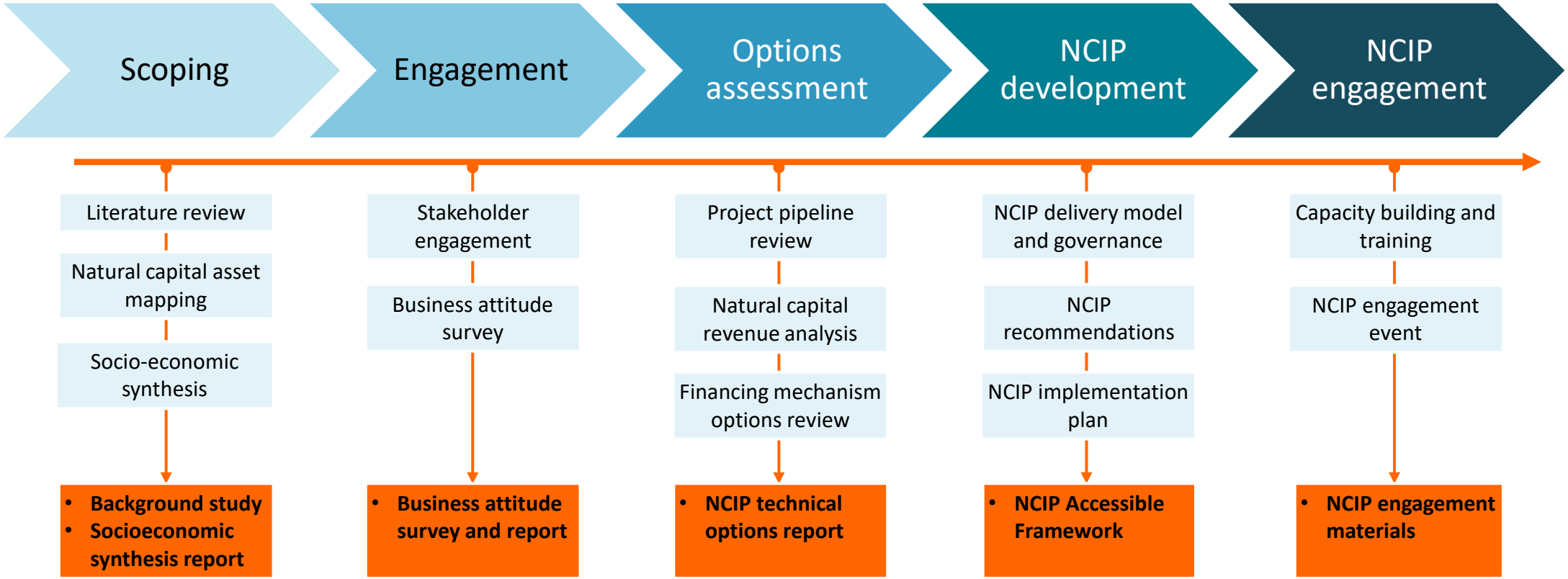


Develop a **prioritised shortlist of sustainable finance opportunities** which can be progressed towards implementation as part of the NCIP

Support the **practical implementation** of the identified sustainable finance opportunities with a **targeted training programme to build knowledge and capabilities of local stakeholders** on the opportunities

NCIP Development Approach

The creation of a NCIP for TCI has involved a series of key stages delivered by Finance Earth and eftec: a review of available literature and evidence available on natural capital; stakeholder engagement; identification and evaluation of natural capital pipeline, review of revenue and financing options; and delivery of training to facilitate capacity building.



Context – The Need and Opportunity for a NCIP for TCI

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The Need & Opportunity for Natural Capital Investment in TCI

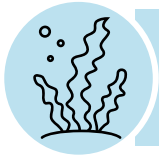
TCI is home to a wide array of ecosystems across marine and terrestrial habitats, providing key natural capital assets which underpins a tourism-focused economy. However, latent threats and risks pose challenges to the ecosystems and livelihoods of TCI, and additional investment is needed to diversify and improve the resilience of economy of TCI while protecting and enhancing its extensive natural capital.

- **TCI's natural capital:** TCI is home to diverse marine and terrestrial ecosystems vital for the economy and local population, providing services such as coastal protection and supporting industries including tourism and fishing.
- **Risks to natural assets:** Threats caused by coastal development, overfishing, and pollution alongside rapid growth in the population and tourism endanger these assets and impacting livelihoods.
- **Financial gap:** Public funding to protect and enhance natural assets is insufficient requiring the need for new funding sources to address risks like ecosystem loss, climate change, and food security.
- **Crucial role of new funding:** Diversifying revenue and funding sources, and leveraging private finance, is pivotal in bridging the finance gap to protect and restore natural capital in TCI.
- **Role of the NCIP:** The NCIP aims to create a pathway towards sustainable and diverse financing sources, while building capacity and capabilities to support long-term conservation goals in TCI.

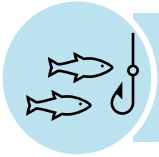
Key Statistics

TCI's natural assets provide annual benefits valued at $156 million[1,*]

From 2013 to 2019, total visitor numbers increased by 50%[2]



Well-functioning ecosystems support tourism worth c.$787 million (2018) – c.71% of GDP[3]



Fishing generates ~10% of TCI's overall GDP, behind tourism & offshore banking[4]

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Sources:
(1) TCI 2020 Ecosystem Account (eftec, JNCC, 2022)
(2) Statistics Department, Government of the Turks & Caicos Islands
(3) Hagedoorn, L., et al (2017). JNCC Report No: 606 Sustainable Finance in EU Overseas Territories An assessment of sustainable finance mechanisms in the Caribbean region.
(4) FAO Fisheries & Aquaculture
Others: TCI Natural Capital Accounts 2023, Department of Environmental and Coastal Resources (DECR), Wolfs Company, Stakeholder Engagement Programme 2023

*See Slide 67 for TCI's 2020 Ecosystem Account.

Pressures on Natural Capital in TCI Today

The economy, environment and livelihoods of Turks and Caicos are vulnerable to a number of risks and challenges:

Climate change	Rising sea levels, damaged habitats, extreme weather events and climate change pose threats to the islands, affecting coastal infrastructure, property values, and the attractiveness of the destination to visitors. For example, **11,370** properties and infrastructure are at risk of storm surge in TCI, which is why its protective coral reef is of vital importance.[10]
Over-dependence on tourism and economic vulnerability	The economy is heavily reliant on tourism, with tourism comprising **~70%** of TCI's economy in 2022, making it susceptible to fluctuations in global travel patterns and economic downturns.[1]
Insufficient environmental monitoring and enforcement	Resource constraints & geographic complexity (**~40** islands) contribute to inadequate environmental monitoring and enforcement[2]. For example, over **362,800kg** of lobster are caught annually in TCI waters, which is very near the maximum sustainable yield – since records started being kept, the average lobster size has decreased from **3kg to 0.7kg**.[4]
Financial management and transparency	There is still a concern regarding transparency of government budget expenditure, and uncertainties on the prioritisation of public funds. This is highlighted by instances such as the closure of the Conservation Fund around a decade ago due to evidence indicating potential mismanagement of funds and transparency issues.[9]
Degradation of natural infrastructure	Over the long term, the further degradation of TCI's natural capital assets and consequent reduced coastal protection may generate a cost of **$6.6m/yr** (**$91m/yr** with severe degradation).[3]
Extraction and damage to natural resources	Illegal and over-fishing[4], resource exploitation from sand mining[5,6], and habitat destruction[7] from property development is leading to irreversible damage to ecosystems and exacerbates threats to local livelihoods and habitats.
Need for capacity building	There is a need for capacity building to deliver and manage natural capital initiatives effectively over the long term.[9]

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Sources:

(1) The Borgen Project. (2023, October 1). Turks and Caicos' Economy: Affecting the Majority. The Borgen Project.
(2) Environmental Conservation in the Turks and Caicos.
(3) Wood, 2022. Developing disaster resilience in the Turks and Caicos Islands: coastal and inland flood risk modelling, opportunity mapping and indicators.
(4) Overfishing Facts. Turks and Caicos Reef Fund.
(5) Jones, F. (2023, September 6). UN warns against the environmental impact of sand dredging. Mining Technology.
(6) The CARIBSAVE Partnership. (2012, March). CARIBSAVE Climate Change Risk Profile for The Turks & Caicos Islands.
(7) Overseas Territories Conservation UK.
(8) BVC. (2023, April 3). Turks and Caicos' Strategy for Success - Turks and Caicos Office of the Premiere. Business View Caribbean.
(9) Stakeholder Engagement Programme 2023
(10) TCI 2020 Ecosystem Account (eftec, JNCC 2022)

The Benefits of Natural Capital Investment in TCI

Investing in increased natural capital in TCI can yield numerous benefits across various sectors and contribute to the long-term sustainability and prosperity of its people and islands.

More resilient and diversified economy	Natural capital investment opens up opportunities for economic diversification e.g. through the facilitation of ecosystem service markets, potentially reducing reliance on traditional industries.[1] For example, **26%** of TCI's terrestrial habitats are intertidal forests and shrubland (i.e. mangroves) which could be used to generate carbon credits.[2]
Increased employment opportunities and community prosperity	Investing in natural capital creates job opportunities in various sectors including conservation, eco-tourism and agriculture. Approximately 20% of TCI's labour force are employed within agriculture or fishing: these sectors could be enhanced through modernising practices and using more sustainable methods, which have the potential to improve yields and food security.
Ecosystem preservation	Habitat protection supports the long-term viability of ecosystems, safeguarding them for future generations. For example, **~$200k** of conservation funding is needed each year to protect rock iguanas in order to maintain current yearly tourist expenditure of **$2.2m-$7.3m**, understood to be largely reliant on the presence of rock iguanas.[2]
Climate resilience and enhanced infrastructure	Healthy natural capital enables increased environmental resilience to extreme weather events. Updated and improved green infrastructure across water, energy, waste management, and pollution can help to reduce costs and negative impacts.
Community health and wellbeing	Preserving natural capital supports healthier environments for local communities. Clean beaches and access to natural spaces contribute to improved mental and physical health for residents.

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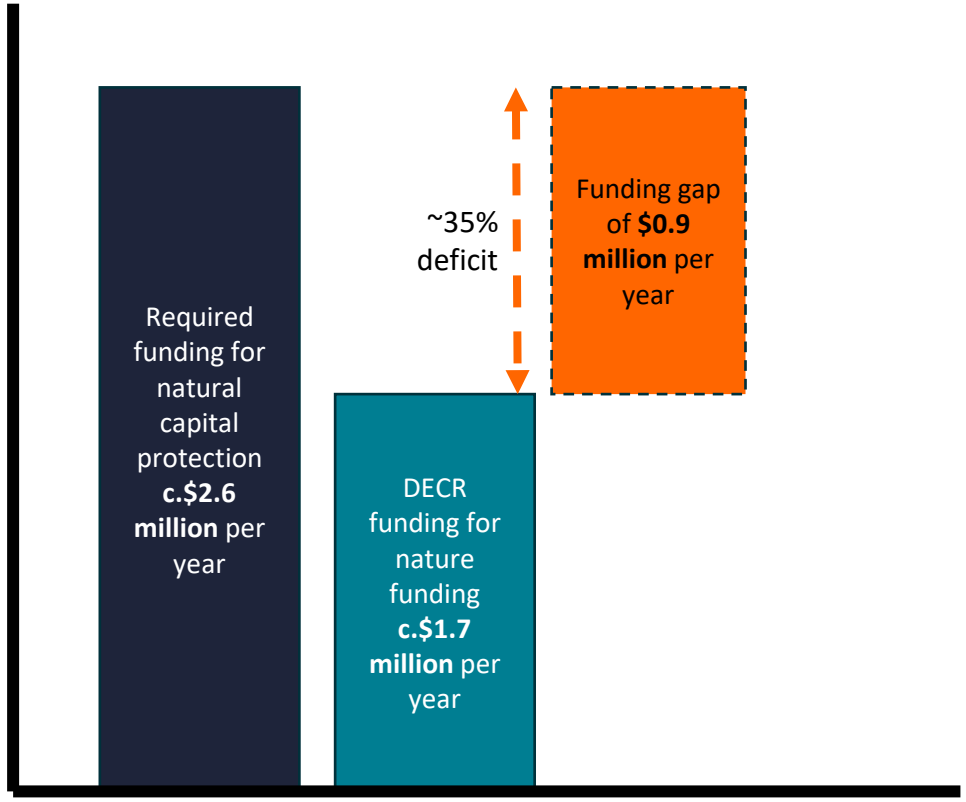
Sources:
(1) Vida ManglarPound, D. and Whittlesea, E. (2015). Greening the Economy of the Turks and Caicos
(2) TCI 2020 Ecosystem Account (eftec, JNCC 2022)
(3) eftec, 2022b. Review of marine and fisheries evidence in the UK Caribbean Overseas Territories. Fishmongers' Company's Charitable Trust.
Other: TCI Natural Capital Accounts 2023, Department of Environmental and Coastal Resources (DECR), Wolfs Company, Stakeholder Engagement Programme 2023

Estimated Natural Capital Finance Gap in TCI

To safeguard and manage TCI's protected areas for the long-term, it is estimated that additional funding of approximately $0.9 million is required annually. This gap represents an essential investment towards the conservation, management and sustainable utilisation of TCI's natural assets in order to safeguard the environmental integrity, ecological richness, and long-term resilience of these precious natural assets.



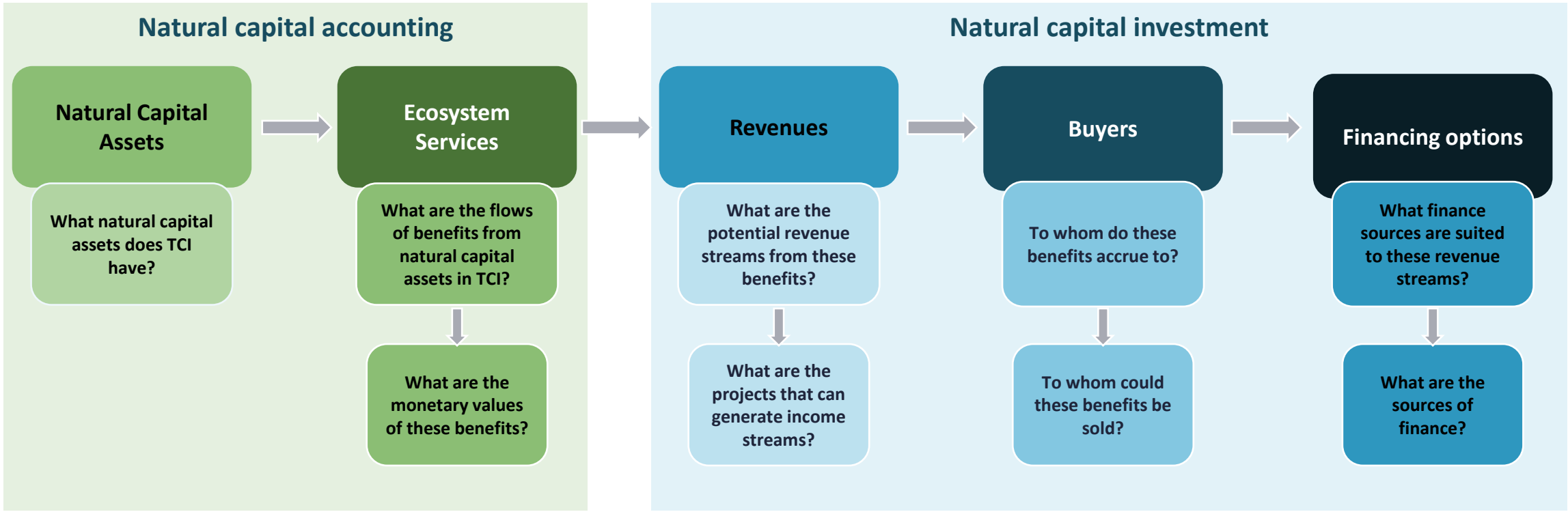
- In 2015/2016 the Department of Environmental and Coastal Resources (DECR) had an annual budget of **$1.7 million**
- It is estimated that **$2.6 million** is needed each year to facilitate the effective management of TCI's protected areas
- Based on 2015/2016 data, there is still a 35% deficit **of $0.9million** to effectively safeguard and manage the natural capital and ecosystems of TCI*

** This figure does not include the required investment in infrastructure and sustainable businesses*

Sources: TCI Natural Capital Accounts 2021, Department of Environmental and Coastal Resources (DECR), Wolfs Company, Stakeholder Engagement Programme 2016

Natural Capital Accounting and Investment

Ecosystem accounting reports on the extent, condition, and provision of benefit attributable to the terrestrial and marine environments of TCI. It also determines the recipients of these ecosystem services, which informs subsequent analysis on the potential to generate revenue streams and resulting financing opportunities from TCI's natural capital.



Natural Capital Assets in TCI

Key:
- xx = Terrestrial environment benefits
- xx = Marine environment benefits
- xx = Terrestrial & marine environment benefits

TCI has a wide range of ecosystems across terrestrial and marine environments. Many of the most important economic sectors in TCI are dependent on these ecosystems, including tourism and fishing.*

Ecosystem type	Ecosystem Service	Physical flows	Monetary flows
Terrestrial, 90,677 ha	Agriculture	44,520 lbs/yr agri-production 360 flats/yr egg production	$0.1m/yr agri-production sales $4,000/yr egg sales
	Carbon sequestration	962,000 tCO2e/yr sequestered	$65m/yr cost of achieving emission reductions
Marine, 690,591 ha	Local recreation	7 million visits/yr to recreational sites	$25m/yr expenditure on local recreation
	Tourism	1 million visits/yr by tourists	$38m/yr value added to tourism industry attributed to nature
	Fisheries	2,905 tonnes/yr fish caught for sale	$28m/yr fish sales

Based on 2020 values, the annual monetary value of the flows of benefits from physical natural capital in TCI is **$156m** per annum

Beneficiaries*

Farmers | **Wider society** | **TCI residents** | **Tourists** | **Local government** | **Local businesses** | **Fishers**

- *See Slide 68 for TCI's 2020 Ecosystem Account.*
- *Monetary figures are presented in US$ 2023 market prices.*

Beneficiaries directly impacted by terrestrial or marine environments are coloured red or blue, respectively. Beneficiaries affected by both are purple.

Sources: TCI Ecosystem Accounts (eftec, 2022), Department of Environmental and Coastal Resources (DECR), Wolfs Company, Stakeholder Engagement Programme 2023

*The diagram illustrates how the TCI terrestrial (red) and marine (blue) environment benefit people. Note that all ecosystems deliver multiple benefits to people. These are shown in purple.

Context – Local Business Attitudes Towards Natural Capital in TCI

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Stakeholder engagement

To understand the perceptions, challenges and opportunities for natural capital investment in TCI, between October 2023 and April 2024 Finance Earth and eftec have engaged with a wide range of stakeholders from both the public and the private sector. In addition, a range of resources and datasets have been consulted to support the analysis.

Example stakeholders engaged

Additional resources reviewed

Resources and datasets consulted:

- TCI's national Ecosystem Accounts
- JNCC hub and shared documents relating to finance mechanisms
- Environmental Valuation Reference Inventory (EVRI)
- Ecosystem Services Valuation Database (ESVD)
- National Ocean Economics Program (NOEP) Non-Market Valuation
- Turks and Caicos Green Economy Project
- TCI National Development Plan

Business Attitudes Research Findings

The survey took place in January to April 2023 to understand the attitudes of businesses to natural capital investment. The survey had 24 responses, with half of the respondents from the tourism sector; other key sectors represented include retail (13%), transportation (8%), and real estate (8%). Findings include:

Infrastructure (water utilities)	The resilience of infrastructure across the islands to withstand shocks and meet islander needs is variable, often impacting a range of sectors, (e.g., tourism) and residents' access to resources (e.g., energy, transportation, water). Islands with less reliable water infrastructure (e.g., Grand Turk) have more inconsistent access to clean water than Providenciales, often leading to water scarcity issues. The process of cleaning water is energy-intensive and a significant driver of TCI's high energy and water prices. Increasing cleaned water storage capacity and renewable energy use would help reduce reliance on the potentially less reliable existing infrastructure.
Real estate development sector	Real estate development on TCI is variable in how it impacts the natural environment since there are more regulations surrounding developments with larger footprints (e.g., requirements for large hotels to manage their own waste facilities). Consensus suggested that larger developments did keep their sites clean and follow regulations (e.g., create pathways for locals to public areas like beaches), whereas smaller developments were not consistently clean, e.g., coastal bars. More consistent enforcement of regulations, or requiring Environmental Impact Assessments for smaller developments, would minimize environmental impact of real estate expansion across the island.
Tourism Industry	Stakeholders agreed that TCI's environment is the biggest draw for tourism, particularly its beaches. On this basis, the condition of beaches are particularly important, and their degradation would have a significant impact on the tourism industry. Notably however, the condition of the natural environment affects tourism businesses unequally. Businesses that worked directly within the environment, such as kayaking tours through mangroves, are more affected by changes to the environment than others like wellness, casinos and restaurants. Pollution and littering impacts on tourism are also more acutely concentrated in Providenciales since it is the main hub for the tourism industry in TCI.

Business Attitudes Research Findings

Fishery sector	The fishery sector's impact on the environment is primarily concentrated in coastal and marine ecosystems and is dependent on individual business practices. Illegal practices and overfishing typically occur in specific fisheries (e.g., Queen Conch) which are subject to excess pressure from overseas vessels and sold onto the export market. Stakeholders believed variation of the impacts from fishing operations were generally due to the difficulty of enforcement and insufficient education or training opportunities for operators on sustainable fishing practices. Stakeholders were also concerned about pollution from illegal dumping of fishing waste in South Caicos and Providenciales, although most commercial fishing activity takes place in Middle and North Caicos.
Agricultural sector	The size of the farming industry is comparatively small and located predominately in North Caicos. Although fertilisers bleed directly into the water sources, because the scale of farming is so low the overall impacts on the environment from farming are expected to be comparatively low. Efforts are being made to increase the sector's productivity to increase the quantity of domestic production and reduce reliance on overseas imports.
Local recreation	Pollution in the coastal and marine environments was cited as the most significant impact on local recreational use and enjoyment, in particular where recycling and waste management is lacking. This impacts not only on-land recreation (e.g., beach goers) but also water-based activities e.g., snorkelling and presence of pollution and trash in the water.

Natural Capital Revenue Opportunities

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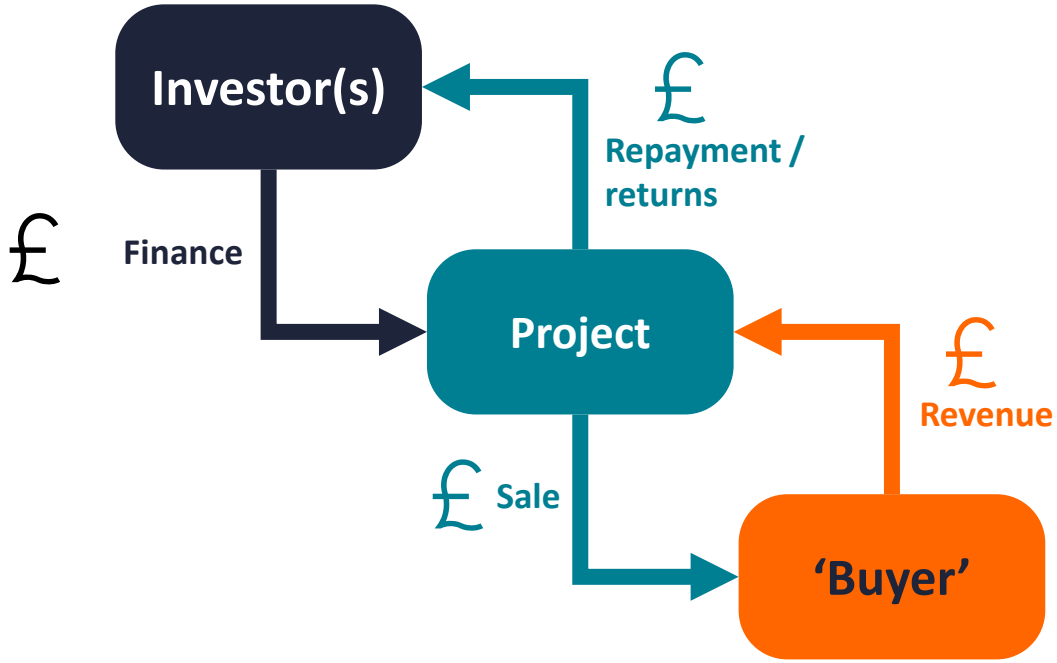
Bridging the Finance Gap in TCI

The NCIP aims to identify potential sustainable revenue streams from natural capital and opportunities to unlock additional finance within TCI to close the funding gap for nature protection and enhancement.

Finance is a tool that can bridge the time gap in the funding needs of a natural capital project

Revenue is a cashflow that can be generated through:

- the **sale of a product or service** such as carbon credits
- the **reduction of a cost** such as through natural coastal defense through avoided costs from coastal damage.
- The **increase in capital value** which can then be sold to create cashflow.



Relationship between investment, revenue and buyers of the product or service generated from a project

Repayable private investment can be used where there is a pipeline of identified opportunities delivering robust and predictable revenue streams and buyers identified willing to pay for the products and services generated

Natural Capital Revenue Opportunities in TCI

Revenues from natural capital can be generated based on the ecosystem services it provides, characterized across four main buckets – Payments for Ecosystem Services, User-based Fees, Supply Chain Fees and Sustainable Enterprises. The potential for revenues hinges upon the accessibility of buyers willing to pay for the benefits derived from natural capital and the availability of a mature project pipeline.

Revenue Type	Ecosystem service	Example Revenue(s)	Potential Buyer(s)
Payment for Ecosystem Services (PES)	• Carbon sequestration • Biodiversity	• Carbon credits • Biodiversity compensation • Voluntary biodiversity credits	• Developers • Corporates (offsetting and voluntary payments)
	• Natural coastal defense	• Risk mitigation payments & avoided costs	• Reinsurance companies
User-based Fees	• Tourism	• Tourism levies / fees / taxes • Operator licenses / levies	• Tourists • Tourist operators
Supply Chain Fees	• Fisheries • Aquaculture & Mariculture • Agriculture	• Volume based fees	• Product offtakers
Sustainable Enterprises	• Energy • Fisheries • Aquaculture & Mariculture • Agriculture • Water supply • Tourism	• Product / service sales	• Consumers • Tourists • Businesses

Pipeline Opportunity Analysis

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Pipeline Opportunity mapping

Desktop research and stakeholder engagement was carried out to identify and map pipeline project opportunities with the potential to generate revenue streams and protect/ enhance natural capital in TCI. The business model maturity of the pipeline was assessed to understand the confidence in revenues and ability to attract investment to support natural capital in TCI.

Tourism — 4 projects

Eco-tourism, sustainable accommodation, eco-moorings, entrance fees ringfencing

Carbon Sequestration & Storage — 3 projects

Mangrove and seagrass protection and restoration, reforestation and afforestation

Biodiversity Payments — 2 projects

Biodiversity mitigation payments; voluntary biodiversity credits

Aquaculture & Mariculture — 2 projects

Responsible farming practices (queen conch, spiny lobster, grouper fish)

Fisheries — 3 projects

Sustainable fishing certification, offshore pelagic fishing, recreation/ sport fishing

Agriculture — 4 projects

Premium, locally-grown produce, hydroponics, livestock farming, import levies

Energy — 3 projects

Renewable electricity sales, energy storage services, electric vehicle charging

Natural Coastal Defence — 1 project

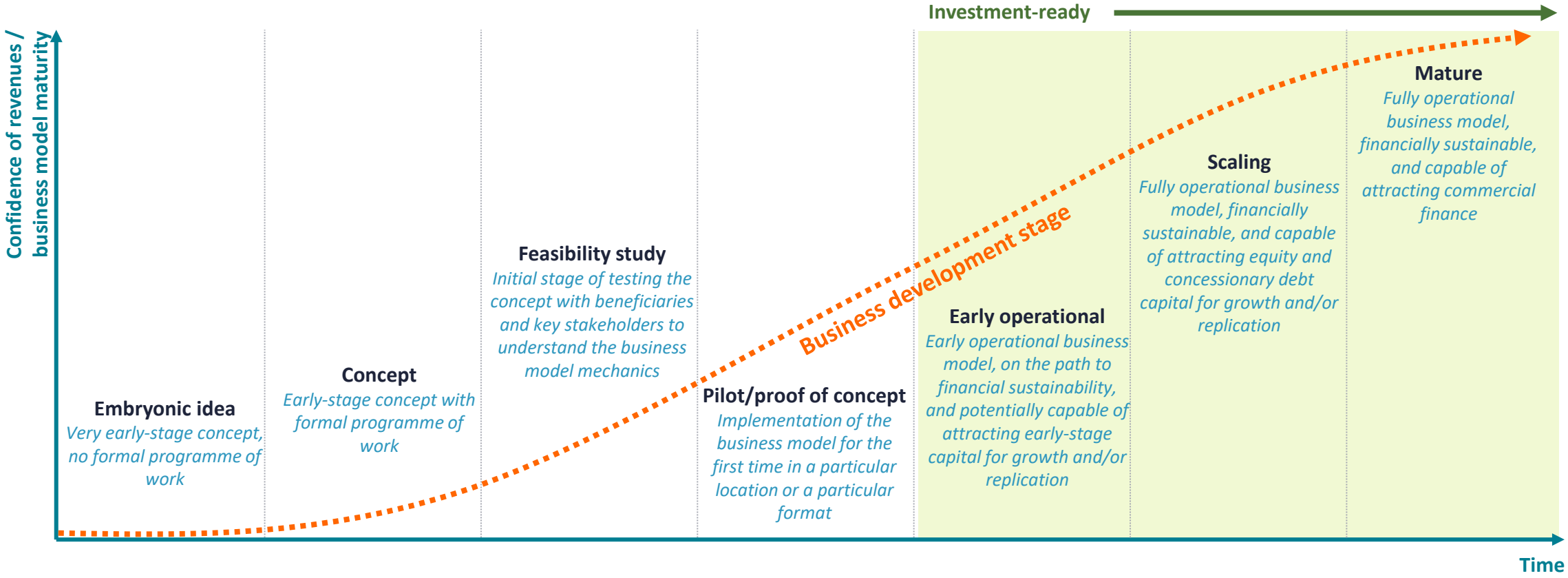
Restoration and protection initiatives

Water supply — 1 project

Solar-powered filtration and supply, generating cost savings

Pipeline Opportunity Analysis

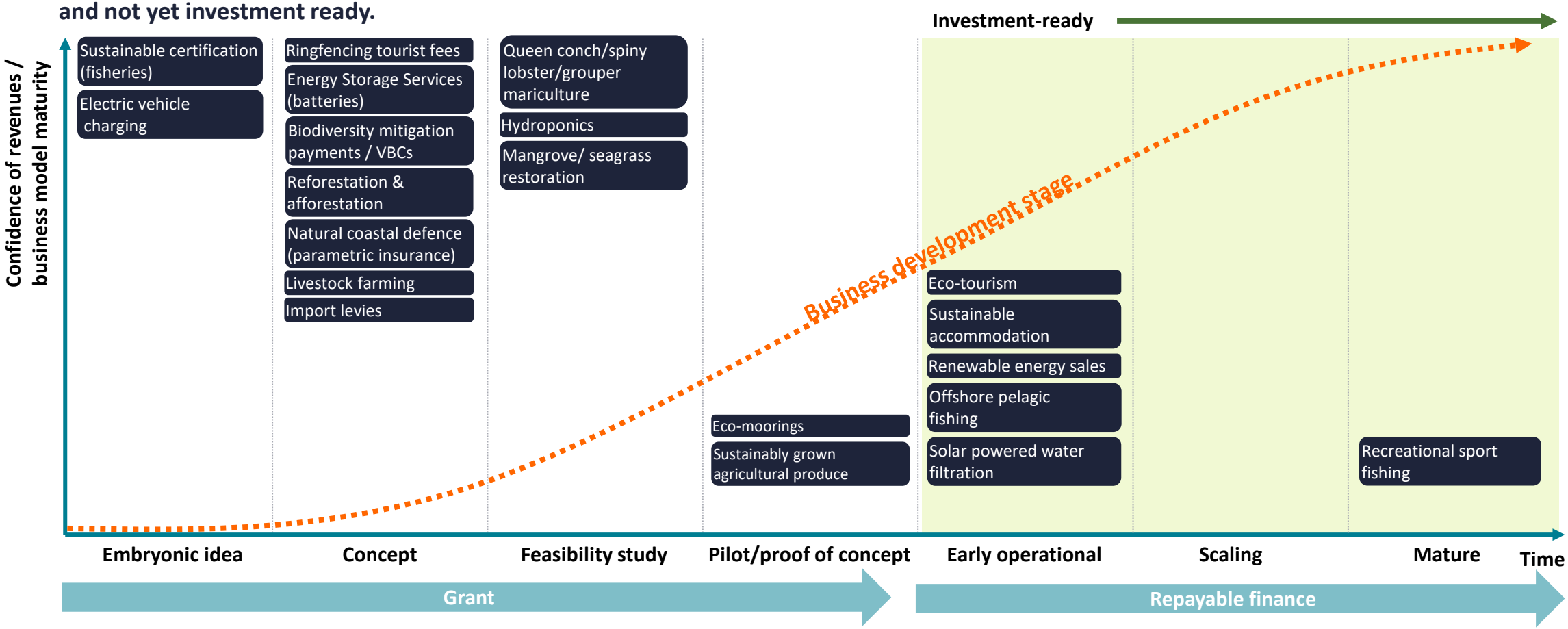
Each pipeline opportunity was mapped against a "J-Curve" based on an assessment of the business model maturity and viability for investment. The J curve provides a visual approximation of how business models develop over time as businesses grow from early-stage concepts through to initiatives which have the ability to access commercial finance.



Pipeline Opportunity Analysis

Non-exhaustive

The mapping of the pipeline against the J-curve was used to evaluate and prioritise each revenue opportunity and determine the market development needs for the NCIP, outlined in the next section. Initial analysis found that the majority of pipeline projects are at an early stage and not yet investment ready.



Assessment of Revenue Options

finance earth eftec economics for the environment

Evaluative Framework

Five criteria were used to identify priority natural capital markets in TCI and assess the scale of opportunity and strategic alignment to the NCIP. Potential pipeline projects were also reviewed to consider the need and opportunity for investment.*

Scale of Demand	Level of buyer interest in ecosystem services, products and services, ability to generate revenues and existence of drivers for buyers
Market Supply	The need for investment and the availability of current and potential project pipeline opportunities able to meet demand
Impact Potential	The direct potential to deliver positive environmental, social and economic impact as well as alignment to local priorities and key needs
TCI Enabling Environment	The presence of political support, local buy in, local capacity and capabilities and market infrastructure to facilitate transactions
Investment Readiness	The strength of business case, track record of existing projects, confidence in revenue generation and viability for investment

NCIP Scale of Opportunity and Strategic Alignment

Scale and robustness of the revenue stream, investment readiness of opportunities, and alignment with TCI strategic impact priorities

*The analysis is largely qualitative based on availability of data received; quantitative financial analysis should take place on a focussed short list on the back of public engagement, as it relies on access to costing and income data.

Summary of Market Evaluations

Summary of aquaculture & mariculture, energy, carbon sequestration & storage, and tourism against the evaluation framework.

Investment readiness

Ranking	Market	Market Demand	Market Supply	Impact Potential	TCI Enabling Environment	Investment Readiness	NCIP Scale of Opportunity and Strategic Alignment
1	Tourism						
2	Carbon Sequestration and Storage						
3	Energy						
4	Biodiversity Payments						

Summary of Market Evaluations

Summary of fisheries, natural coastal defence, agriculture, biodiversity, and water supply against the evaluation criteria.

Investment readiness

Ranking	Market	Market Demand	Market Supply	Impact Potential	TCI Enabling Environment	Investment Readiness	NCIP Scale of Opportunity and Strategic Alignment
5	Natural Coastal Defence						
6	Aquaculture & Mariculture						
7	Fisheries						
8	Agriculture						
9	Water Supply						

Tourism

Revenue Type: User-based Fees & Sustainable Enterprises

The scale of opportunity to generate income streams from tourism-related activities is significant in TCI. However, there is currently apprehension towards applying and ringfencing additional tourism levies, limited implementation of sustainable tourism practices, and a need to diversify revenue sources away from tourism.

	Rating	Description
Market Demand		• Tourism comprises the vast majority of TCI's economy (~70% of annual GDP) and is a key driver of recent growth. There is desire to continue and scale up tourism in a sustainable manner, however, awareness of natural capital issues is low amongst tourists/local populations, with a lack of local appetite for additional tourist / tourist business levies (charges are already considered high).
Market Supply		• There is potential for the existing 12% restaurant tax[1] and $10 destination management fee[2] (potential for $16m/yr on 2019 visitors figure: 1.6m) to be ringfenced and utilised for natural capital protection; currently tourist taxes/fees are absorbed into the overall government budget. • There are already some eco-tourism initiatives in place; however, the scale and integrity of certain initiatives could be improved. Limitations on scaling ecotourism initiatives exist, with a need for capacity & knowledge building to support transition to more sustainable practices
Impact Potential		• High potential for impact given dominance of tourism across TCI. If fees and taxes can be effectively governed and ringfenced for nature restoration/protection, then impact could potentially be significant, given the threats from a growing tourism industry.
TCI Enabling Environment		• Strategic focus on tourism and the adoption of more sustainable practices by TCI government. • However, capacity and knowledge related to sustainable practices amongst residents is low, limiting current buy-in; in addition, there is reluctance to apply additional tourism levies and ringfence these to support natural capital.
Investment Readiness		• Tourism forms the cornerstone of TCI's economy, with potential for investment in more sustainable practices and a track record of viable ecotourism initiatives. Further analysis of specific pipeline opportunities would need to take place to review investability and scale of the potential. • Long-term income through ringfencing user fees would support ability to leverage finance.
NCIP Scale of Opportunity and Strategic Alignment		• **The scale of opportunity to transition towards a sustainable tourism economy is significant. There is potential to ringfence existing fees/taxes for the protection and restoration of natural capital. However, existing governance and awareness of nature capital issues and knowledge of sustainable tourism practices is low.**

Key: ○ = Very low ● = Very high

Pipeline Opportunity & Pipeline

- ***Early operational:*** Eco- and conservation tourism and nature-based experiences
- ***Early operational:*** Sustainable accommodation development
- ***Pilot/Feasibility Study:*** Eco-moorings (BlueSeeds platform)
- ***Concept:*** Ringfencing a portion of tourist fees/taxes e.g., 12% restaurant taxes/$10 destination management fee for nature conservation

Sources:
(1) Visit Turks and Caicos Islands (2023): The Best Budget Restaurants on Providenciales
(2) Turks & Caicos The Sun (2023): $10 Destination Management Fee For Tourists and Returning Nationals

Revenue Model Case Study: User Fees

Name: Palau PAN fund

Location(s): Republic of Palau, Western Pacific Ocean

Income streams: User fees (paid by tourists)

Key stakeholders: Micronesia Challenge

Source: Palau PAN fund.

Description[1]

- In Palau there is a Protected Areas Network (PAN) that safeguards areas of environmental or ecological significance. This was established in line with the intergovernmental "Micronesian Challenge" to place at least 30% of nearshore marine and 20% of the forest resources under effective conservation by 2020.
- A non-profit organisation called the Palau PAN fund manages donations and funds from the US$ 100 Pristine Paradise Environmental Fee (PPEF) paid by tourists; funds are then channelled to existing and future protected and sustainably developed sites. State governments will continue to have governance and ownership of their PAN sites.
- Palau is establishing a PAN Management Committee to better consults with the Ministers of Natural Resources, Environment and Tourism (MNRET).
- The PPEF has raised significant levels of funding in the past, with Palau States receiving US$ 15.4m between 2018 and 2019.

Key Takeaways for TCI[2]

- **Multi-stakeholder approach:** NGOs, community-based organisations and State Governments are consulted by the fund's board of directors. State and community buy-in were essential to support the long-term sustainable management of the sites.
- **Governance**: there have been some challenges around transparency related to the PAN fund, e.g. the fund has not reported since 2018. Regular reporting is paramount for maintaining trust and therefore the longevity of operations.
- **Tourism:** TCI is known for its pristine environments which support a strong, growing tourism industry e.g. the island received ~1.6m visitors in 2019. Ringfencing a conservation fee could yield significant revenues in TCI, with the potential to direct revenues towards protecting and enhancing TCI's natural capital assets and leverage private investment.

Sources:
(1) Palau PAN fund.

Carbon Sequestration and Storage

Revenue Type: Payment for Ecosystem Services

TCI's diverse carbon ecosystems, including mangroves, seagrass and forests, have the potential to store carbon and play a role in mitigating climate change. However, there is currently insufficient scientific data available on these ecosystems to assess viability of generation of carbon credits to protect and enhance these habitats in TCI.

	Rating	Description
Market Demand	●	• There is an increasing global focus on climate change mitigation and a growing awareness of the potential of natural capital interventions to help capture and compensate for carbon emissions globally.[1]
Market Supply	◑	• Extensive coverage of tropical-subtropical dry forests, intertidal forests and seagrass meadows across the islands offer capacity to sequester and store carbon. However, significant data gaps exist on carbon stocks, condition and evidenced threats, limiting the development of carbon projects. • A potentially relatively high baseline ecosystem value may limit potential for carbon credit income due to additionality requirements. In addition, potential restoration sites are small-scale and/or are dispersed across the islands.
Impact Potential	◑	• Data on the extent, condition, and threat to carbon stocks is lacking, hindering precise assessments of potential impacts on habitats. There is a need for protection given evidence of decline e.g. loss of 4,400 hectares of mangroves since 1996.[2]
TCI Enabling Environment	◔	• Political support exists to foster the creation of carbon projects, especially those focused on blue carbon. However, there is a lack of necessary evidence and market infrastructure to facilitate the development of these initiatives.
Investment Readiness	◔	• Carbon projects have proven track record of attracting finance at scale for nature protection and enhancement; however, opportunities on TCI are not yet investment-ready due to limited data regarding the condition, extent and threat to habitats, and opportunities for restoration. • There is also a need for capacity building and local training for successful delivery of carbon projects.
NCIP Scale of Opportunity and Strategic Alignment	◔	• **There is significant potential demand for carbon credits, aligned with increasing global climate focus, with political support in TCI for these initiatives. However, limited data on carbon stocks and opportunities for restoration and protection against threats impedes the development of a carbon market in TCI.**

Key: ○ = Very low ● = Very high

Pipeline Opportunities & Maturity

- ***Feasibility Study:*** Seagrass/ mangrove restoration
- ***Concept:*** Reforestation and afforestation
- ***Embryonic:*** Sinking sargassum mats for carbon dioxide removal

Sources:
(1) McKinsey, 2021
(2) Global Mangrove Watch, 2023

Revenue Model Case Study: Carbon

Name:	**Mikoko Pamoja Mangrove Carbon**
Location(s):	**Kenya, East Africa**
Income streams:	**Carbon credit sales* to academic institutions, government agencies, NGOs, private entities**
Key stakeholders:	Ministry of Blue Economy & Civil Aviation; mirova Investing in sustainability; Turneffe Atoll Sustainability Association; BNCFF Blue Natural Capital Financing Facility; Blue finance

Source: Mikoko Pamoja.

Description

- Mikoko Pamoja is a community-led mangrove conservation and restoration project, and the world's first blue carbon project. Its aim is to provide long-term incentives for mangrove protection and restoration through community involvement and benefit.[1]
- The project generates revenue of US$24,000/annum through the sale of carbon credits[1], which is used to support local development projects.
- The project is managed by the Mikoko Pamoja Community Organization (MPCO) consisting of representatives of Gazi Bay, the Mikoko Pamoja Steering Group (MPSG) which provides technical support to the MPCO; and is coordinated by The Association for Coastal Ecosystem Services (ACES).

Key Takeaways for TCI[2]

- **Community engagement and involvement:** Establishing community organisations, similar to the MPCO, can ensure that locals have a say in the project, fostering a sense of ownership and responsibility.
- **Benefit sharing:** carbon revenues are reinvested in the community, benefiting 5,400 residents through projects in education, health, and water, sanitation, and environmental protection. Ecotourism provides a further source of income for this initiative, which is in the process of being replicated in other places in Kenya.
- **Clear governance and roles:** MPCO meets 4 times a year and has a public dispute procedure. It consults the community on spending priorities yearly.
- **Long-term incentives:** partnership agreement between MPCO and ACES lasts 20 years and is overseen by a government representative.

Sources:
(1) Plan Vivo.
(2) Plan Vivo PDD.

* Verifier is Epic Sustainability Services Private Ltd.

Energy

Revenue Type: Supply Chain Fees / Sustainable Enterprises

The opportunity for the generation of positive impacts from renewable energy provision is significant in TCI and is a key strategic priority for local government given high energy prices and diesel fuel sources for local generators. Significant investment will be required to transition energy supply in TCI and supportive legislation and incentives are needed.

	Rating	Description
Scale of Demand		• There is a high demand for energy in TCI (0.27 TWh in 2021), especially for reverse osmosis water treatment, largely powered by expensive diesel. TCI is targeting a US$115.2 million reduction in system costs, a 12.3% cut in diesel usage by 2040, and for 33% of energy to be derived from renewable sources by 2040.[1]
Market Supply		• While current renewable infrastructure development in TCI is low, there is significant potential for the generation of energy from solar, wind and waste-to-energy sources which could deliver cost savings and be sold back to the grid.
Impact Potential		• Renewable energy infrastructure does not have a direct link to natural capital on TCI. However, a levy could be applied on income generated to support natural capital subject to project economics. • Investment in renewables could support natural capital indirectly through a reduction in pollutants, impacts on emission savings as well as community wellbeing through cost savings and cleaner air.
TCI Enabling Environment		• The current energy market is dominated by one public provider, Fortis TCI, which lacks incentives to invest in renewables at scale due to the potential loss of revenues. • Capacity building work is underway in TCI e.g. part of RESEMBID programme supporting sustainable energy; however, further legislative support and incentives are needed to develop the market.
Investment Readiness		• Strong interest in renewable energy given high costs of energy from fossil fuel powered generators; high levels of investment required to transition energy supply and potential for cost savings. • Additional legislative support and buy-in from the main supplier would support pipeline development and investment readiness.
NCIP Scale of Opportunity and Strategic Alignment		• **TCI has significant targets to cut energy costs and target renewable energy, offering the opportunity to boost adoption to meet emission reduction goals.** • **Renewable energy does not have a direct link to TCI's natural capital, therefore has lower strategic alignment to the NCIP.**

Key: ○ = Very low ● = Very high

Pipeline Opportunities and Maturity

- ***Early operational:*** Renewable electricity sales (solar, wind, waste-to-energy)
- ***Concept:*** Energy storage services (batteries)
- ***Embryonic:*** Electric vehicle charging

Sources:
(1) Department of Energy
(2) Caribbean, E.C. for L.A. and the (2011). *An assessment of the economic impact of climate change on the water sector in the Turks and Caicos Islands.*

Biodiversity Payments

Revenue Type: Payment for Ecosystem Services

The implementation of a biodiversity mitigation policy for development activity could generate a revenue stream for habitat enhancement projects. However, there is a lack of policy to support mandatory payments currently, with limited appetite amongst developers to compensate for biodiversity loss. In addition, the market for voluntary biodiversity credits is a high-potential emerging opportunity but remains nascent.

	Rating	Description
Market Demand		• Some interest from developers in supporting biodiversity mitigation voluntarily; however, this remains at a small scale and there is a lack of mandatory biodiversity mitigation policies in place. • Launch of the Taskforce for Nature-related Financial Disclosures is driving corporates to recognise nature-related risks and development of an emerging voluntary biodiversity credit (VBC) market.[1]
Market Supply		• There is a need for habitat protection and enhancement given pace & extent of developments in recent years. However, competition for land in TCI is very high, with tourism development remaining a key strategic priority given its significance to the economy.
Impact Potential		• Significant impact potential given extent of habitat destruction currently taking place with resort and residential developments (which tend to use traditional materials such as concrete and steel) and need for terrestrial and marine habitat protection and enhancement.
TCI Enabling Environment		• Lack of policy/ legislative frameworks to support biodiversity mitigation payments. • The VBC market is nascent, with a lack of standards and metrics for assessing biodiversity value, and uncertain demand from voluntary buyers.
Investment Readiness		• Lack of policy to support biodiversity compensation payments, limiting potential revenue streams for habitat restoration. • Emerging VBC market requires further development and testing.
NCIP Scale of Opportunity and Strategic Alignment		• **Significant need to protect and enhance biodiversity in TCI with opportunities to implement stronger legislation for biodiversity mitigation to mitigate for development impact and provide a revenue stream for habitat restoration. There is also an opportunity to develop pilots to capitalize on the emerging VBC markets to unlock payments for biodiversity protection and enhancement from corporates on a voluntary basis.**

Key: ○ = Very low ● = Very high

Pipeline Opportunity & Maturity

- ***Concept:*** Biodiversity Mitigation Payments
- ***Concept:*** Voluntary Biodiversity Credits

Source: World Economic Forum (2022) WEF_Biodiversity_Credit_Market_2022.pdf (weforum.org)

Revenue Model Case Study: Biodiversity Stewardship

Name:	**Ocean Conservation Commitments (OCCs)**
Location(s):	**Niue, South Pacific Ocean**
Income streams:	**Sale of biodiversity commitments to philanthropic funders and members of the public**
Key stakeholders:	

Source: Nuie.

Description[1]

- Ocean Conservation Commitments (OCCs) represent the cost of conservation, and leveraged associated benefits, across one square kilometre of the Moana Mahu MPA for a period of 20 years.
- OCC can be sold to the public, and proceeds will be managed by the Niue & Ocean Wide (NOW) Trust and used to fund a range of conservation, resilience, and sustainable development efforts. NOW represents a Public-Private Partnership between the Government of Niue and a local nonprofit, Tofia Niue. Allocation of funds will be governed by a Board of Trustees with detailed operational policies and procedures.
- If successful, the mechanism will bring significant funds to NOW's conservation efforts, with a target fund endowment capitalisation being US$18m.

Key Takeaways for TCI[1]

- **Community engagement and involvement:** NOW Trust works on the ground with Niuean village leaders, schools, businesses and organizations to develop education programs and ensure activities support community values.
- **Multi-stakeholder approach:** NOW Trust Board will be represented by members across local government, nonprofit and private institutions who possess significant expertise and rigorous oversight to ensure and monitor effective performance of the NOW Trust and its endowment.
- **Long-term incentives:** NOW aims to make conservation more durable in the long term by ensuring that ocean protection benefits Niue workers directly. For example, NOW will facilitate concessional financing towards sustainable tourism businesses by working with the Niue Development Bank and hiring a sustainable tourism and accreditation officer.

Sources:
(1) Niue Ocean Wide.

Natural Coastal Defence

Revenue Type: Payment for Ecosystem Services

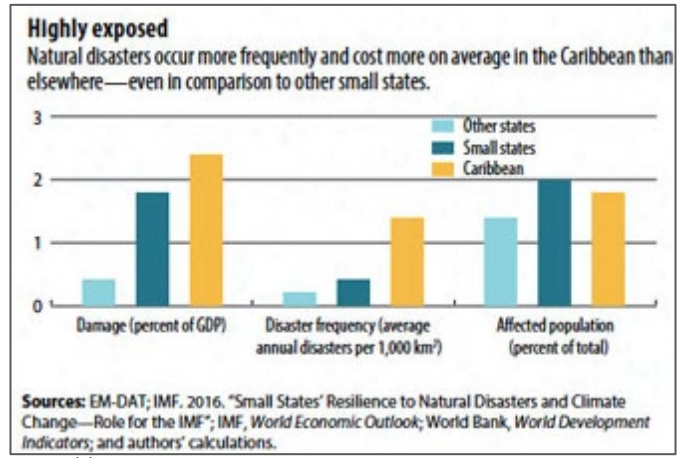
TCI hosts diverse and vibrant coral reefs, seagrasses and mangroves, providing essential protection against coastal erosion flooding and damage from natural disasters. There could be potential to generate revenue streams via avoided costs from coastal degradation; however, there is little data to assess the demand from beneficiaries to pay for natural coastal defense.

	Rating	Description
Market Demand	◔	• There is uncertainty over the value that insurance companies and other businesses place on key coastal habitats such as mangroves and coral reefs to reduce risk of damage, and the willingness amongst potential buyers to pay for these benefits.
Market Supply	◑	• The coral reefs and mangroves of TCI are already relatively abundant and with coral reefs in good condition; however, they remain under threat from a number of environmental and human factors. As such, there is a need to sustain and scale protection/enhancement efforts.
Impact Potential	◕	• Given the high incidence of extreme weather events (e.g. hurricanes) and resulting coastal and environmental degradation across the island, the potential impacts from mangrove and coral reef protection/enhancement projects at scale are high. Further degradation of natural capital assets may generate an annual cost of $6.6m from reduced coastal protection.[1]
TCI Enabling Environment	◑	• Data on the condition and extent of coral reefs in TCI is robust, however data on the condition and extent of mangroves is currently being gathered. However, there is uncertainty over the potential cost savings to beneficiaries. • Concept supported by the government of TCI with increased interested in the potential for natural coastal defence.
Investment Readiness	◔	• Coastal degradation in TCI demands political attention and there is potential for cost savings by preventing degradation. The mechanisms to finance natural coastal protection (e.g. parametric insurance) are nascent and the willingness for insurers and other businesses to fund protection and restoration efforts is uncertain.
NCIP Scale of Opportunity and Strategic Alignment	◑	• **TCI is highly vulnerable to natural disasters and protection of its network of coastal habitats is vital to provide a natural coastal defence.** • **However, it is challenging to generate revenues for coastal protection due to uncertain buyer willingness to pay and incomplete data on natural coastal protection benefits and the cost savings that may be available.**

Key: ○ = Very low ● = Very high

Pipeline Opportunities and Maturity:

- **Concept:** Mangrove/ seagrass/ coral restoration and protection initiatives for the purposes of natural coastal defence (though mechanisms such as parametric insurance)



Source: (2)

Sources:

(1) Wood, 2022. Developing disaster resilience in the Turks and Caicos Islands: coastal and inland flood risk modelling, opportunity mapping and indicators.

(2) IMF. (2018). Building Resilience in the Caribbean to Climate Change and Natural Disasters - IMF F&D Magazine.

Revenue Model Case Study: Parametric Insurance

Name: TNC Quintana Roo

Location(s): Mexico, Central America

Income streams: Insurance premiums (paid by local businesses e.g. hotels and property owners)

Key stakeholders: Swiss Re, The Nature Conservancy, CANCÚN Asociación de Hoteles de Cancún, Puerto Morelos & Isla Mujeres, Comisión Nacional de Áreas Naturales Protegidas

Source: The Nature Conservancy.

Description[1,2]

- Coral reef parametric insurance guarantees funding to rapidly repair coral reefs after a major storm. The insurance is triggered if wind speeds are in excess of 100 knots. The maximum pay-out over a 12-month period, or the Annual Aggregate Limit, is set at US$ 3.8 million.
- A trust is created (Coastal Zone Management Trust or CMZT) to collect funds from coastal property owners and disburse them for coastal management. The trust is also able to accept funds from public, private and philanthropic sources. It then acts as the single purchaser of the insurance product and also invests in reef restoration and maintenance.
- In 2020, the policy was triggered by Hurricane Delta, leading to a pay-out of almost US$ 800,000 to repair insured reefs.

Key Takeaways for TCI[1,2]

- **Multi-stakeholder approach:** over two years, TNC worked with the scientific community and the Natural Protected Areas Commission to build understanding and support for the approaches needed with the state government, beneficiaries such as the hotel and tourism industry, and financial, reinsurance, and insurance experts.
- **Clear governance and roles:** CMZT is governed by a technical committee and includes a scientific committee that oversees spending on conservation projects, aside from the insurance premium.
- **Use of various funding mechanisms:** CMZT receives different types of funding, including property owner fees, government, and philanthropic grants.
- **Quick pay-out:** insurance pay-out is paid within three weeks of being triggered, which allows for restoration works to be undertaken quickly.

Sources:
(1) GFI.
(2) The Nature Conservancy.

Aquaculture and Mariculture

Revenue Type: Supply Chain Fees & Sustainable Enterprises

Aquaculture and mariculture are relatively nascent in TCI, with significant potential for scaling across the various islands, including the reintroduction of traditional conch farming and cultivation of spiny lobster and grouper fish. Aquaculture and mariculture are of high strategic importance for TCI government; however, supporting regulation, skills and capacity in sustainable practices could be improved.

	Rating	Description
Scale of Demand	●	• High local and international demand for sustainably produced mariculture products such as queen conch, spiny lobster and grouper fish, with demand for local fish by thriving tourist industry exceeding supply.[1]
Market Supply	◔	• Aquaculture and mariculture are nascent and small-scale in TCI, with significant potential for scaling activities across the various islands. Mariculture has been identified as an attractive area for investment[1], with feasibility studies underway for queen conch but no pipeline ready for delivery.
Impact Potential	◑	• Marine animal poaching, particularly the illegal fishing of conch in protected areas like the Bight and Northwest Point Marine National Parks, has led to the depletion of once-thriving populations. • Adopting responsible farming practices can help alleviate pressure on these stocks (however there is also a risk that aquaculture can damage the marine environment). Regulations and promoting sustainable approaches can support the recovery of fisheries & protect habitats.[2]
TCI Enabling Environment	◑	• High strategic focus from TCI government with key focus on encouraging the return of traditional conch farming practices and scaling lobster and grouper fish aquaculture and mariculture. • Lack of regulations and guidelines in place to support aquaculture development.
Investment Readiness	◔	• Mariculture in TCI has growth potential, with opportunities to reintroduce traditional conch farming and grouper fish cultivation. The government recognises the strategic importance but needs to enhance regulations and skills in sustainable mariculture practices. • Feasibility studies are underway but commerciality remains unproven, cultural barriers need to be overcome (farmed conch perceived less healthy than wild conch), and hurricane risk mitigated.
NCIP Scale of Opportunity and Strategic Alignment	◑	• **The mariculture sectors in TCI is nascent and small scale, with opportunity for growth due to high demand for sustainably produced seafood.** • **While strategic alignment with local priorities is evident, there is need to develop guidelines and boost skills for delivery of sustainable aquaculture projects.**

Key: ○ = Very low ● = Very high

Pipeline Opportunities and Maturity:

- ***Feasibility Study :*** Reintroducing & scaling queen conch
  - Additional interest in both spiny lobster and grouper
- ***Feasibility Study:*** Sargassum valorisation (sargassum to alginate)

Sources:
1 FAO Fisheries & Aquaculture
2 Environmental Conservation in the Turks and Caicos

Fisheries

Revenue Type: Supply Chain Fees & Sustainable Enterprises

Nearshore fishing practices are relatively mature in TCI; however, key opportunities exist across sustainability certification, sports and recreational fishing experiences, and scaling pelagic fishing activities with high demand levels but low skills and capacity to enable delivery locally.

	Rating	Description
Market Demand	◑	• There is growing demand for local, sustainably sourced fish. However, there is limited scope for industry growth given the relatively developed nature of the industry in TCI. • There is potential for premiums to be charged for sustainably sourced fish, however, the scale of the revenue potential and ability to allocate to support conservation efforts is unknown. • High demand exists from tourists for sports fishing experiences (e.g. average spend is $700/person/day), however uncertain ability to ringfence fees to support sustainability.
Market Supply	◑	• Fishing practices are relatively mature in TCI with limited potential for scaling near-shore practices. • There is potential to scale & improve the sustainability of fishing practices (e.g. through certification) as well as building sustainable offshore pelagic fishing. Supply is limited by workforce capacity & capability to deliver sustainably sourced fish, including monitoring and mitigating illegal fishing practices.
Impact Potential	◔	• Fishing generates ~10% of TCI's overall GDP and represents the main income for ~10% of the population.[1] TCI's fisheries have been fished at potentially unsustainable levels - for example, the queen conch fishery is in decline following increased pressures from sustained fishing practices driven by local demand and international markets.[2]
TCI Enabling Environment	◑	• High strategic focus on fisheries from TCI government with key interest in encouraging sustainable practices and reducing illegal fishing activity. Low skills base locally in sustainable fishing practices.
Investment Readiness	◔	• Potential opportunities to invest in infrastructure (e.g. vessels) for sustainable offshore pelagic fishing and sustainable certification. A lack of clarity exists over the infrastructure needs, and scale of potential sustainability premiums that could be generated to support investment.
NCIP Scale of Opportunity and Strategic Alignment	◑	• **Fishing practices are relatively mature in TCI with a strategic focus from local government;** • **Wild catch fisheries can be challenging to monetise; however, opportunities exist across sustainable certification, additional charges for recreational fishing experiences and entering and scaling pelagic fishing. There remains limited skills & capacity to enable delivery.**

Key: ○ = Very low ● = Very high

Pipeline Opportunities and Maturity:

- ***Embryonic:*** Achieving certification across fishing practices
- ***Early Operational:*** Offshore pelagic fishing
- ***Mature:*** Recreation/sport fishing

Agriculture

Revenue Type: Supply Chain Fees & Sustainable Enterprises

There are clear opportunities for investment to increase food production levels and food security, a strategic priority for local government with high interest from tourism resorts for premium local produce. However, due to high competition for land use in TCI and limited, poor topsoil, agricultural activities are likely to remain limited.

	Rating	Description
Market Demand		• Potential to increase production levels from improving practices & adopting new ones e.g. hydroponics. • High demand for locally grown and reared produce from high volume of tourists, usually staying at luxury resorts with the potential to charge premium prices.
Market Supply		• Agriculture operates at a small scale across TCI (with currently ~20 farmers) at subsistence scale due to low soil depth and quality; need for investment to increase capacity and range of farming activities. • Revenue generation potential limited overall given small scale of agricultural production potential due to limited extent of topsoil, which is only 2cm deep and comprised of mainly rock/limestone (unsuitable for agriculture at scale) and high competition for land use.
Impact Potential		• Potential to dramatically improve livelihoods of farmers, as well as enhancing and modernising practices to increase yields; however, due to high competition for land in TCI production levels will likely be limited.
TCI Enabling Environment		• Low policy support for agriculture (policies on farming only rolled out in 2015); however, there is an increasing interest in improving food security. • Community skills bases remain low.
Investment Readiness		• Clear opportunities for investment to increase food production levels and food security. • TCI geography remains challenging for farming and so activities likely to remain on smaller scale, limiting potential for commercial finance.
NCIP Scale of Opportunity and Strategic Alignment		• **Clear opportunities for investment to increase food production levels and food security, a strategic priority for local government with high interest from resorts for premium local produce.** • **However, due to high competition for land use in TCI and limited topsoil, agricultural activities are likely to remain limited.**

Key: ○ = Very low ● = Very high

Pipeline Opportunities and Maturity:

- ***Pilot / Proof of Concept:*** Premium locally grown produce
- ***Feasibility Study:*** Hydroponics
- ***Concept:*** Livestock farming
- ***Concept:*** Import levies

Water Supply

Revenue Type: Sustainable Enterprises

The potential for climate impact mitigation is significant through potential reductions in energy (diesel power) use via adoption of solar devices and wastewater to energy pellets; however, the diverse ownership of water infrastructure on TCI may pose challenges in coordinating & aggregating investments.

	Rating	Description
Market Demand		• There is a strategic priority in TCI to meet escalating demands for water arising from population growth and economic growth driven through tourism , however there is limited opportunities for payments for water supply benefits.
Market Supply		• There are opportunities to expand use of solar powered pumps or filtration devices for water desalination; however, opportunities for energy generation through wastewater to energy pellets and the use of recycled water remain at a smaller, more localised scale.
Impact Potential		• Water demand on TCI is high, driven by residences, businesses and tourism. • The use of solar powered pumps or filtration devices would support climate impact mitigation and generate cost savings. The use of wastewater to energy pellets and cisterns is likely to have small-scale benefits.
TCI Enabling Environment		• Water infrastructure in TCI is diverse, combining private ownership on Providenciales with government-owned systems on neighboring islands. • This diversity may pose potential difficulties in coordinating & aggregating investments and scaling natural capital initiatives due to the differing ownership structures, operational models, and regulatory frameworks at play.
Investment Readiness		• The adoption of solar devices and wastewater to energy pellets[1] generate cost savings and could attract investment. • However, the diverse ownership of water infrastructure (mixture of public, private and resident ownership on different islands) on TCI may pose challenges in coordinating & aggregating water-related investments.
NCIP Scale of Opportunity and Strategic Alignment		• **There are limited opportunities for delivering water supply initiatives in TCI, with the main opportunity at scale relating to the utilisation of solar-powered pumps and the potential for avoided costs. Challenges posed by diverse infrastructure and ownership structures limit large-scale implementation.**

Key: ○ = Very low ● = Very high

Pipeline Opportunities & Maturity

- ***Early operational:*** Solar-powered filtration and supply (cost savings)

Source:
(1) Yilmaz, E., Wzorek, M. and Akçay, S. (2018). Co-pelletization of sewage sludge and agricultural wastes. *Journal of Environmental Management*, [online] 216, pp.169–175.

Barriers and Enabling Actions

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Market-Wide Barriers and Enabling Actions

There are a number of market-wide barriers limiting the investment readiness of natural capital markets and pipeline projects across TCI. Various interventions across awareness raising, capacity building, and policy support can be used to overcome these barriers.

Barriers	Enabling actions
Lack of policy support & political uncertainties: Uncertainty on policy frameworks, limitations on resources for monitoring, and past financial management challenges in TCI could create investor uncertainty, discouraging engagement in projects spanning political cycles	Develop policy, strengthen legislation and robust governance to drive forward investment in natural capital: progress with supportive policies and legislative frameworks in pipeline (e.g. Agricultural Bill, Renewable Energy, Resource Planning Bill); support of new policies (e.g. ringfencing tourism levies/taxes)
Awareness of natural capital and availability of skills and experience: Need for additional technical expertise in restoration techniques and experience in developing new revenue models	Build capacity and expertise to protect and enhance natural capital and develop sustainable business models: deliver training initiatives and capacity building focused on habitat protection/restoration techniques; foster local entrepreneurial capacity by providing support programmes e.g. innovation/ development funding
Lack of data & evidence: Lack of baseline data and scientific evidence to quantify and monitor ecosystem services and revenue potential	Support additional research efforts to gather data and evidence, develop metrics and establish baseline assessments for natural capital assets
Challenges with communication and coordination: Challenging to engage and coordinate with local populations directly due to geographical constraints	Identify local convenors on the ground to act as a key information transmission and communications hub
Uncertainty of Revenues: Uncertain or limited demand for services and products generated from natural capital impacts revenue potential	Deliver pilot projects to demonstrate natural capital revenue generation: develop pilot projects to demonstrate ecosystem services and prove business models; support market development, legislation and regulation to create demand side pressure for natural capital protection and enhancement

Part 1: Market-Specific Barriers

Additional market-specific barriers were identified for each revenue model:

	Market Specific Barriers	Market wide barriers				
Tourism	• Need for awareness building amongst tourists and local populations of the impacts of tourism/recreational activities on local ecosystems, and of how to make practices more sustainable • Prevailing reluctance among stakeholders to adopt additional tourism levies/taxes, coupled with the limited appetite to ringfence fees generated prevents long-term income for natural capital protection	✓	✓		✓	✓
Carbon Sequestration and Storage	• Limited data regarding the carbon stocks, condition, extent and threats to blue carbon habitats • Restoration sites are likely to be small-scale and/or dispersed across the islands • Limited capacity and expertise amongst local populations to deliver and maintain carbon projects	✓	✓	✓		
Energy	• Monopoly of energy by Fortis TCI hinders large-scale investment in renewables, and limits competition and incentives for innovative renewable energy projects • High costs of installation for local solar PV systems (~£40k-60k per residential property), with no ability to sell energy back to the grid	✓			✓	
Biodiversity Payments	• Absence of policy and legislative frameworks to facilitate and mandate biodiversity mitigation payments in the region; low demand from developers to compensate for impact on a voluntary basis • Early-stage VBC market limits certainty of demand outside of TCI • Intense competition for land in TCI, with tourist development prioritised due to its pivotal role in the economy • Lack of consistent metrics to measure and quantify biodiversity	✓	✓	✓	✓	✓

Part 2: Market-Specific Barriers

Additional market-specific barriers were identified for each revenue model:

	Market Specific Barriers	Market wide barriers				
						
Natural Coastal Defense	• Lack of data on financial value of natural coastal defense from specific habitats e.g. coral reefs • Uncertain willingness of buyers e.g. reinsurers, hotels, resorts to pay for natural coastal protection	✓		✓	✓	✓
Aquaculture and Mariculture	• Need for expertise building and training opportunities in sustainable aquaculture and mariculture techniques • Lack of supportive policies and guidelines for development & insufficient industry support • Potential unwillingness of local populations and other offtakers to pay substantial premium prices for certified/sustainably sourced fish • Uncertain commercial viability and scalability of mariculture projects	✓	✓	✓	✓	
Fisheries	• Insufficient knowledge and technical expertise among local fishing communities regarding sustainable fishing methods and lack of comprehensive data on fish stocks hinders the adoption of more sustainable practices • Ineffective enforcement mechanisms to ensure sustainable fishing practices (e.g. controlling illegal fishing) • Potential unwillingness of local populations/offtakers to pay premium prices for certified/sustainable fish	✓	✓	✓	✓	✓
Agriculture	• Absence of legislative support for sustainable agricultural practices, with initial policies formulated in 2015 • Limited skills, expertise and access to new technology limits the ability of farmers to adopt and implement advanced or sustainable farming techniques	✓	✓		✓	
Water Supply	• Lack of natural water resources means opportunity for natural capital investment is low • Spilt ownership of water supply ownership (private/public) poses difficulties in coordinating & aggregating investment opportunities	✓	✓			✓

Part 1: Market-Specific Enabling Actions

Whilst these are theoretical solutions, the cost effectiveness and value for money has not been calculated and need further analysis prior to selecting which opportunities are most impactful to take forward.

Market	Enabling Actions
Tourism	• Establish and promote **standards for** implementing and **scaling up sustainable practices** in the tourism industry; regularly monitor impacts and benefits • Implement **additional user-based fees** (e.g., MPA/national park entrance fees, hotel/restaurant tourist taxes) or **ringfence existing fees** (e.g., destination management fee, water sports tax) to support natural capital protection and enhancement • Support and incentivize the development and operation **of eco-friendly accommodations** and provide **training programs** and capacity-building initiatives for tourism industry workers on sustainable practices, eco-tour guiding, waste management, and environmental conservation • Develop **sustainable certification** programs for best-practice tourist operators and products • Strengthen **regulations** around tourist developments, including enforcing Environmental Impact Assessments and requiring developers to align with the Mitigation Hierarchy. Ensure compensation for biodiversity impacts either on-site or through payments to restore biodiversity elsewhere in TCI • Conduct **educational campaigns** targeting tourists and locals to raise awareness about sustainable tourism, environmental conservation, and responsible travel practices. • Provide resources for monitoring and enforcement against unsustainable activities
Carbon Sequestration and Storage	• Support **data collection** to assess baseline, quantify carbon sequestration/ avoidance potential and identify opportunities for restoration • Strengthen **monitoring and reporting systems** so that outcomes may be verified with confidence over time • Deliver **pilot/proof of concept projects** to build expertise and capture learnings on how to deliver and scale high quality carbon projects • Support **data collection** to assess baseline habitat extent and condition, identify losses over time and key threats, quantify carbon sequestration/avoidance potential, and identify opportunities for restoration • Strengthen **monitoring and reporting systems** so that outcomes may be verified with confidence over time • Engage **networks and Accelerator programmes** (e.g., Blue Carbon Accelerator Fund or Blue Natural Capital Finance Facility) to explore potential funding opportunities for carbon project feasibility assessments and business case development • Carry out **ongoing market engagement** (e.g., with local corporates) to test and build demand for carbon credits • Deliver **pilot/proof of concept projects** to build expertise and capture learnings on how to deliver and scale high-quality carbon projects

Part 2: Market-Specific Enabling Actions

Whilst these are theoretical solutions, the cost effectiveness and value for money has not been calculated and need further analysis prior to selecting which opportunities are most impactful to take forward.

	Enabling Actions
Energy	• Establish **clear and supportive policies** that incentivize investment in renewable energy, including feed-in tariffs (FiTs), tax incentives, net metering, renewable energy targets, and streamlined permitting processes • Provide funding and incentives to scale the implementation of **privately installed solar photovoltaic** (PV) systems and **wind turbines** • **Promote public awareness campaigns** to drive significant adoption of renewable energy, specifically solar power • Carry out **mapping of opportunity areas** to deliver renewables, understand costs, and revenue potential
Biodiversity Payments	• **Strengthen development regulations**, such as mandatory Environmental Impact Assessments and alignment with the Mitigation Hierarchy, and provide resources for monitoring and enforcement • Encourage the development of **policies that mandate mitigation and compensation of development impact** on marine and coastal environments (ideally implementing policies that require a net gain in biodiversity vs. commitment to no net loss) • Support the development of **metrics and frameworks to measure biodiversity** to support biodiversity compensation payments • Support the **baselining of development sites** and Environmental Impact Assessments to assess needs • Develop **pilot projects to test the feasibility, measurement approach, and buyer demand** for VBC schemes
Natural Coastal Defence	• Build on existing research to **baseline, evidence and quantify the coastal protection benefits and cost savings** of high-quality habitats (e.g. coral reefs, seagrass, sand dunes) • **Engage with reinsurance market actors and other corporates with significant coastal infrastructure assets** to test appetite to fund natural capital which can deliver coastal protection

Part 3: Market-Specific Enabling Actions

Whilst these are theoretical solutions, the cost effectiveness and value for money has not been calculated and need further analysis prior to selecting which opportunities are most impactful to take forward.

Market	Enabling Actions
Aquaculture and Mariculture	• Provide support for **infrastructure development** such as hatcheries, fish farms, processing facilities, and cold storage to enhance the efficiency and capacity of operations • Offer **training programmes, guidelines and technical assistance** to aquaculturists and mariculturists to enhance their skills in best practices, business development and scaling effectively • Support and incentivize the **development of pilot projects** in aquaculture and mariculture to help establish investor confidence • **Support market access** for aquaculture/mariculture products by facilitating partnerships with retailers, restaurants, and export markets • Encourage **value addition** (e.g., premium prices for sustainable products) through processing, certification, branding, and effective marketing of locally produced seafood • Implement regular **monitoring programs and surveillance** measures to monitor aquaculture and mariculture activities, including patrols and inspections • Collect and analyze **data on stock levels** and ecosystem health to inform decision-making processes, adaptive management, and policy adjustments
Fisheries	• Implement regular **monitoring programs and surveillance measures** to monitor fishing activities, including patrols, vessel monitoring systems, and inspections • **Collect and analyse data** on fish stocks, fishing effort, and ecosystem health to inform decision-making processes, adaptive management, and policy adjustments • Encourage and fund **value addition** through processing, certification and effective marketing of local sustainable seafood products (sold at premium prices) • Capture **portion of fishing fees/licenses** (e.g. sports fishing license) to support conservation and infrastructure investments
Agriculture	• Establish **stronger legislative frameworks** supporting sustainable farming (e.g. land use planning, supportive regulations that encourage investment) • Invest in **comprehensive training programs** for agricultural workers **to enhance skills in adopting advanced techniques** • **Foster collaborations** and **provide financial incentives** to encourage wider adoption of sustainable practices (e.g. hydroponics, water conservation, the use of drought-resistant crops) ensuring a more resilient and sustainable agricultural sector

NCIP Needs Summary

Across the natural capital markets analysed, some key cross-cutting needs were identified that could be delivered through the NCIP to scale investment in natural capital. Potential financing and governance mechanisms to support these needs are considered in the next section.

1

Natural capital protection and enhancement

Grant funding for direct protection and restoration of natural habitats and ecosystems with no business model available, e.g. MPA and national park management, environmental monitoring etc.

2

Additional data and evidence

Additional baselining and evidence gathering is needed to understand the extent and condition of natural capital assets, the benefits they deliver and monitor impacts overtime

3

Awareness, capacity and expertise

Development of on-the-ground capacity and expertise, with technical support for business planning, is fundamental to accelerating projects to becoming investment-ready

4

Policy, regulation and governance

A supportive legislative and policy environment with strong governance in place is needed to support transparent decision making, monitoring and evaluation of outcomes

5

Pilot projects, revenue generation and repayable finance

Repayable concessionary capital could be deployed to scale up a portfolio of aggregated, investment-ready environmental projects e.g. renewables; ecotourism etc

Financing Mechanisms

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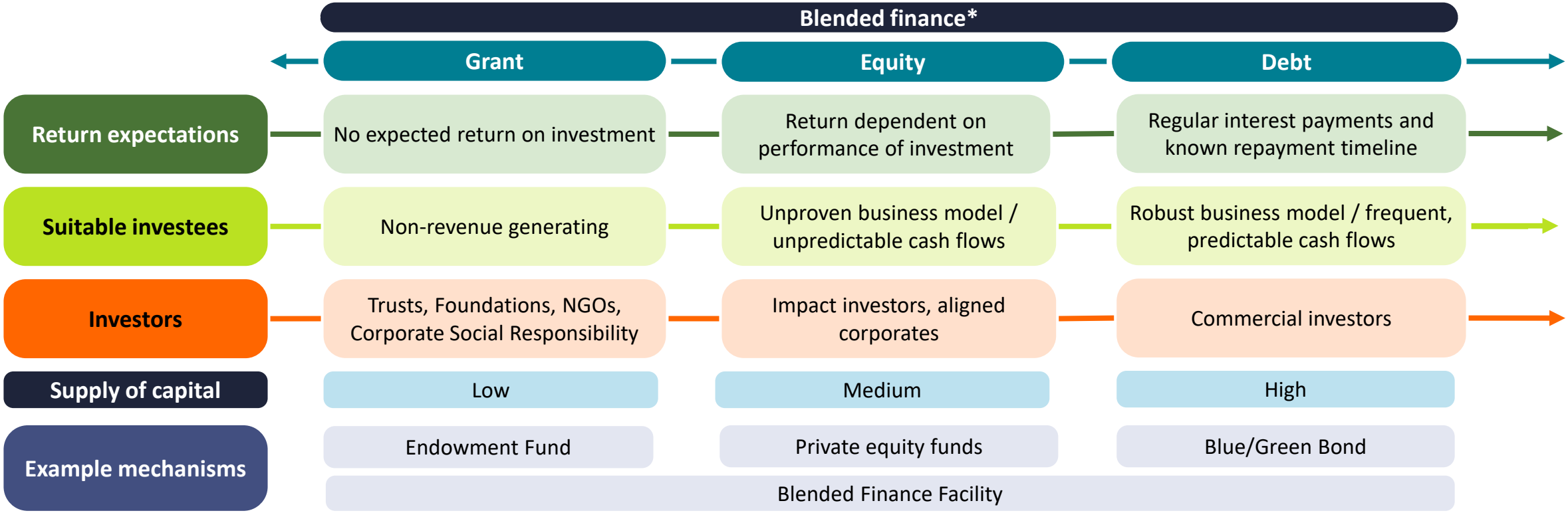
Financing Types

A range of different capital types are available for financing initiatives aimed at preserving and enhancing ecosystems and the associated services they provide. Capital types can be repayable or non-repayable, with the suitability of each dependent on the specific characteristics of the natural capital project in question, its revenue- and return-generating potential, and the risk appetite of both investors and investees.



The natural capital markets and projects in TCI often have uncertain / unpredictable cash flows and are at a nascent stage, meaning they may be unsuitable for commercial repayable finance. Blended finance and grant funding is needed to support natural capital market development.

*Use of public or philanthropic funds to support project development and reduce risk e.g through first loss capital or payment guarantees, in order to stimulate private investment.

Example Providers of Funding and Finance

Funding is the provision of financial resources for a specific purpose or project often without the obligation to repay while finance refers to the provision of repayable capital, usually with expected financial returns.

Philanthropic organisations e.g. trusts and foundations	**Public bodies** e.g. government agencies and international public bodies	**Corporates & other off-takers** e.g. private businesses	**Individuals** e.g. volunteers, visitors, tenants	**Investors** e.g. institutional investors, family offices, etc.
Grants fondation bertarelli John Ellerman Foundation OCEANS5 people's trust for endangered species UBS UBS Optimus Foundation	**Grants, innovative public financial instruments** DARWIN INITIATIVE GREEN OVERSEAS #604CLIMATE PROBLUE THE GOVERNMENT OF THE TURKS & CAICOS ISLANDS	**Purchase of carbon credits, premiums for sustainable commodities…** Microsoft MARS Disney Google	**Paying user fees for diving, yachting, secondary vacation homes, ecotourism…**	**Investing debt or equity** **Private investors:** althelia funds mirova OCEAN 14 CAPITAL CONSERVATION INTERNATIONAL Ventures LLC GLOBAL FUND FOR CORAL REEFS OCEANS FINANCE COMPANY s2g ventures orraa
Early-stage concept or pilot		Early operational / scaling		Mature
Sources of Grant Funding		Sources of Revenue		Sources of Repayable Finance

Stage of development:

Financing and Governance Mechanism Options Assessment

A spectrum of financing mechanisms with a unifying governance strategy are likely to be required based on the identified needs for natural capital investment in TCI. Based on a review of a range of options, the priority mechanisms are outlined below:

Financing mechanism	Function	Description	Applicability to TCI	Applicability to identified NCIP needs				
				Direct conservation	Data capture	Capacity & TA	Governance	Repayable capital
Natural capital grant fund	Grant capital	A fund to attract philanthropic grant contribution to support restoration and protection of natural capital assets with no existing business model.	A natural capital grant fund could leverage philanthropic grant funding to support direct protection and restoration of TCI's habitats and ecosystems where there may not be a business model available e.g. MPA and national park management, environmental monitoring etc.	✓				
Development funding and capacity building programme	Grant capital	A programme providing grants and technical assistance aimed at supporting early-stage market and project development.	A development funding programme could be designed to allocate funding and technical support to a broad range of natural capital market building activities needed in TCI (e.g. data capture, capacity building and technical assistance) in order to facilitate the generation of a pipeline of investment-ready projects and unlock additional sources of private finance.		✓	✓		
Place-based trust – "TCI Natural Capital Trust"	Governance, strategy and aggregation of funding	Strategically coordinates governance, funding and management of a portfolio of natural capital assets and enterprises to deliver a range of income streams and benefits across a seascape.	A dedicated TCI Natural Capital Trust could provide the independent governance, multi stakeholder collaboration and transparent decision making needed to scale natural capital investment in TCI. This could be attractive to donors, capture user fees/taxes generated, and enable management of a range of different ringfenced funding programmes. However, trusts can be complex and time-consuming to structure, are reliant on donor funding and require local political support to implement.				✓	

*A range of financing mechanisms were considered, details of which can be found in the Annex

Financing and Governance Mechanism Options Assessment

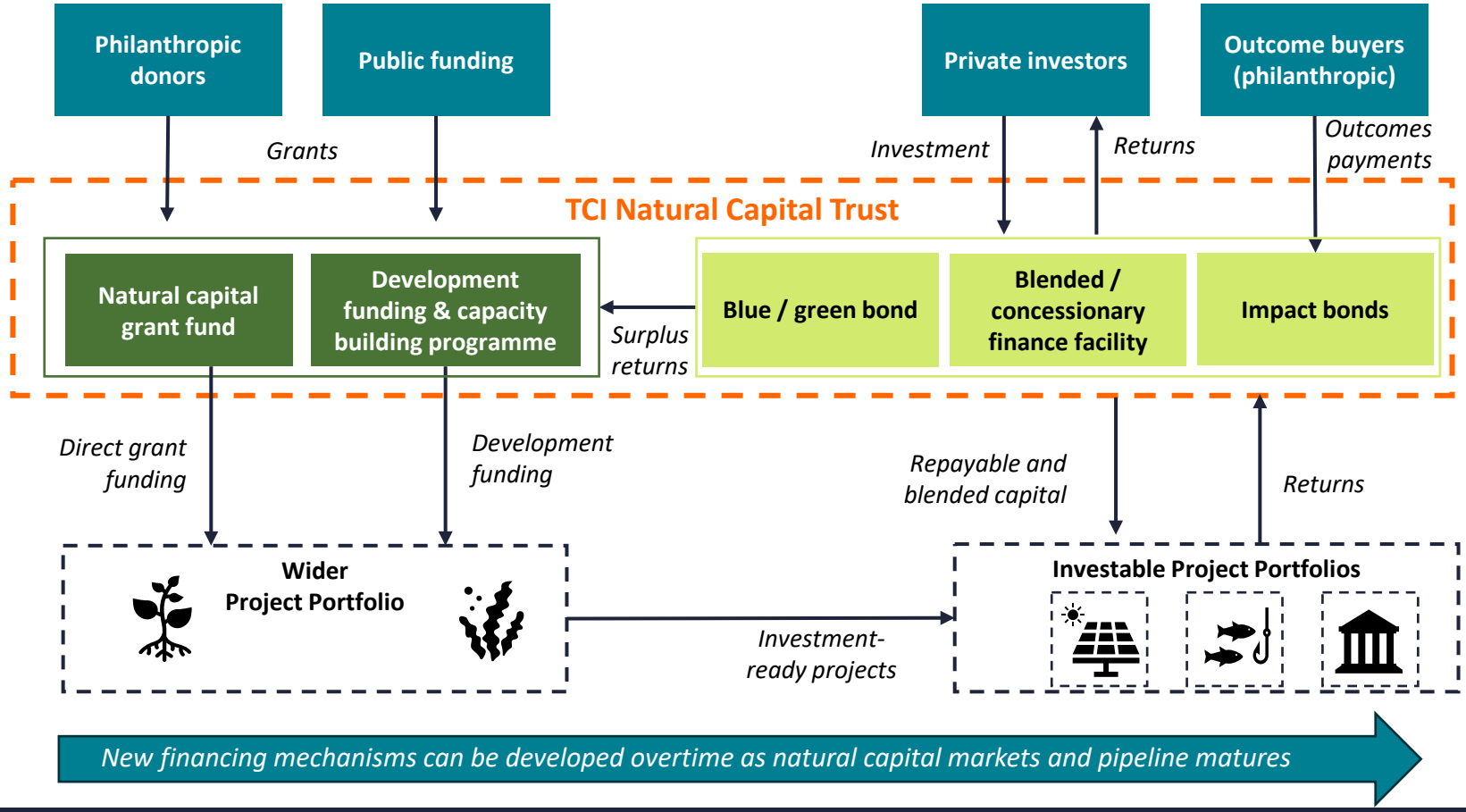
A spectrum of financing mechanisms with a unifying governance strategy are likely to be required based on the identified needs for natural capital investment in TCI. Based on a review of a range of options, the priority mechanisms are outlined below:

Financing mechanism	Function	Description	Applicability to TCI	Applicability to identified NCIP needs				
				Direct conservation	Data capture	Capacity & TA	Governance	Repayable capital
Blue & green Bonds	Debt	A debt instrument, often issued by governments, development banks, to raise capital to finance marine & terrestrial projects with positive environmental and economic impacts.	If tourist-based user fees (and other future user fees/taxes) can be ringfenced, this could provide a tangible, scalable opportunity to leverage finance to implement natural capital projects through a blue/green bond, given the availability of predictable cashflows to service the debt. However, with TCI linked to the UK Government, they may lack the full sovereign capacities of a nation-state. The establishment of a third-party entity e.g. a Trust to raise the bond could resolve these challenges.					✓
Blended / concessionary finance facility	Blended finance – debt, equity and grant capital	Financing tools (grants, concessional finance and guarantees) to achieve investment readiness, crowd-in commercial capital, deliver concessionary finance and socio-environmental impacts.	Blended finance would be suited to provide patient, repayable capital into aggregated investment-ready projects in TCI, such as renewables or eco-tourism businesses. However, most natural capital business models and projects in TCI are not yet ready for concessional finance. Further pipeline development and analysis of costs, income generation and investment potential is needed to carry out a detailed assessment of investability, with blended finance offering a potential key role in the medium term.					✓
Impact bonds	Payments for success	A type of outcomes-based contract between an investor, an outcomes payer, and a service provider, that tackle a social or environmental challenge.	A key requirement for an impact bond is the availability of an outcomes payer (often the government) willing to pay based on performance to compensate the investor for the risk taken. There could be an opportunity for to structure philanthropic funding received to be paid based on outcomes delivered. This enables philanthropy to be 'de-risked' and could provide new funding opportunities e.g. corporates providing funding in return for 'contribution claims' based on outcomes delivered.	✓	✓			✓

*A range of financing mechanisms were considered, details of which can be found in the Annex

Proposed NCIP Financing Model Structure

Due to the nascent nature of many natural capital investment opportunities in TCI, there may be a need for a spectrum of investment and governance models: grant funding to support direct conservation, project preparation and investment readiness; repayable investment funds to aggregate and scale investment-ready initiatives; and aligned governance to leverage funding and enable transparent decision making.

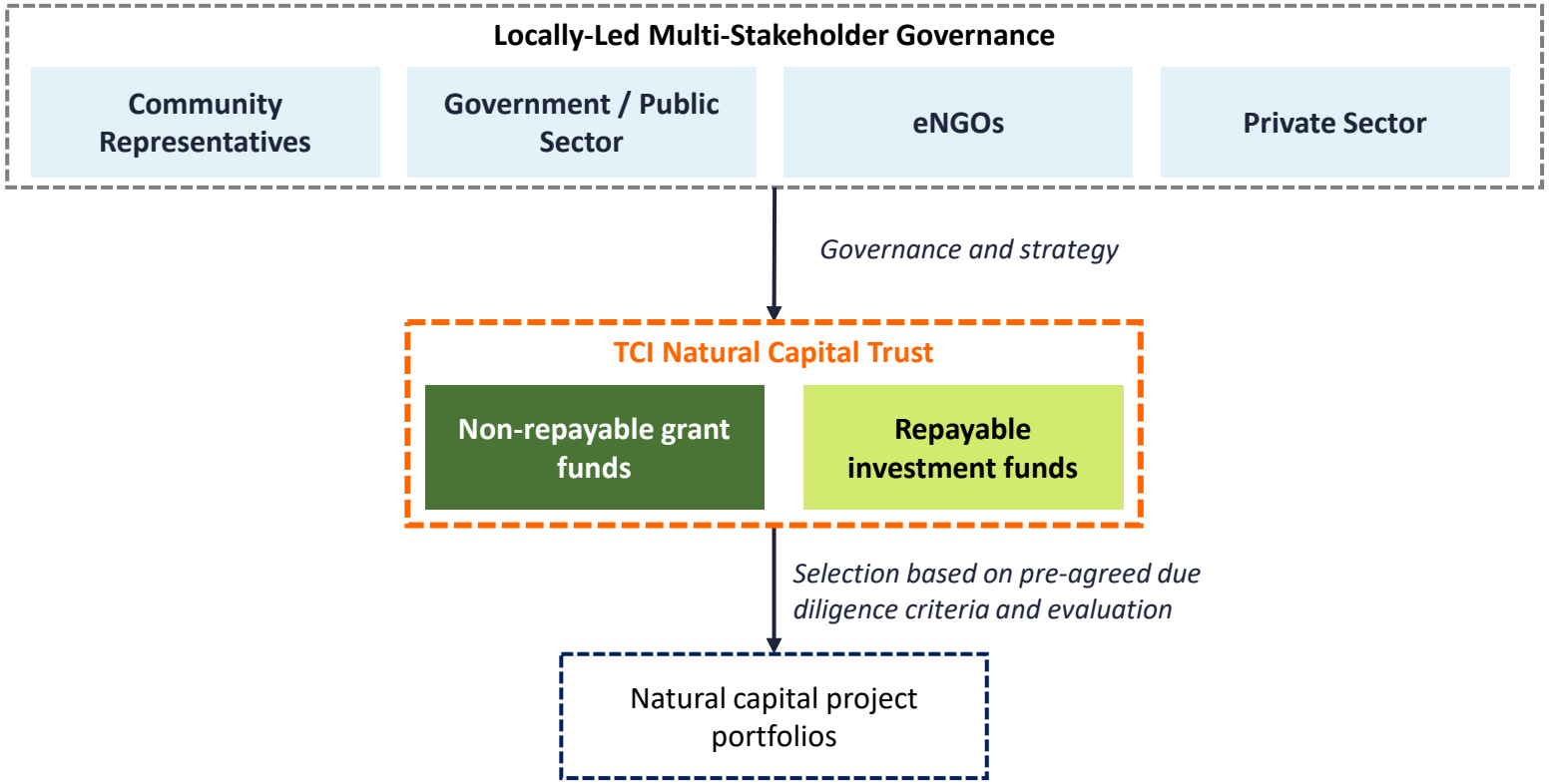


Description

- A TCI Natural Capital Trust could be established to provide robust governance, aggregate different funding structures, leverage funding and support decision making aligned to the NCIP priorities (importantly, building on learnings from the Conservation Fund).
- Initially, non-repayable funds could be set up e.g a natural capital grant fund to support direct conservation; and a development funding & capacity building programme to build investment-ready natural capital projects.
- A blue/green bond could be raised secured against a long-term income such as ringfenced user fees, providing stable cash flows for debt servicing and upfront finance for project delivery.
- Overtime, a blended finance facility could provide patient capital into investment-ready projects which deliver social and environmental benefits.
- Impact bonds could be established if there is appetite for philanthropic funders to pay based on outcomes delivered.
- This aligned approach to aggregation and management of funding could support the spectrum of natural capital investment and governance needs in TCI.

NCIP Financing Model Governance

In light of some of the monitoring and governance challenges raised, a TCI Natural Capital Trust could be established to enable locally based multi-stakeholder governance in support of NCIP delivery and aggregate and coordinate delivery of funding to priority natural capital projects.



Description

- Under the TCI Natural Capital Trust (the 'Trust') structure, both funding mechanisms would have aligned governance to co-ordinate the investment and funding strategy across the project portfolio aligned to the NCIP priorities.
- The proposed Trust governance structure could be locally-led to include a mix of public, private and third sector stakeholders with skills and expertise in developing, financing and advising on projects in the target sub-sectors and supporting the sustainable development of natural capital markets in TCI.
- Effective governance will also facilitate a strategic and coordinated approach to delivering priorities, aggregation of projects to form portfolios attractive to donors/investors, and provide a central point to enable refinement of policies supporting natural capital.

NCIP Governance Requirements

Considering the challenges posed by resource constraints, geographic complexity, and previous financial transparency challenges in TCI, the governance requirements for a Natural Capital Trust and NCIP more widely should aim to address these issues while ensuring effective management and utilisation of funds allocated for conservation.

- **Transparent financial management**: Stringent financial management practices should be implemented, including regular audits, transparent reporting mechanisms, and independent oversight of fund allocation and expenditure to ensure accountability.
- **Strategic resource allocation**: Areas should be prioritised based on scientific assessments, conservation value and urgency, ensuring that resources are allocated efficiently.
- **Stakeholder engagement and collaboration:** Collaboration among government agencies, local communities, NGOs, and international partners should be fostered to leverage resources, share expertise and ensure a holistic approach to conservation. Various stakeholders, including local communities, should be involved in decision-making processes to enhance transparency and gain diverse perspectives.
- **Establishing a supportive legal framework and robust compliance measures:** A robust legal framework should be established that defines the mandate, objectives, and operational guidelines of the Natural Capital Trust. The Trust should then ensure compliance with relevant laws, regulations, and international standards to maintain integrity and credibility.
- **Impact reporting and verification:** Public reporting of outcomes with third party verification should take place to ensure transparency and credibility of operations, enabling refinement overtime to maximise impact

Funding Mechanism Case Study: Blended Finance

Name: Turneffe Atol/Oriental Mindoro

Location(s): Belize, Central America / Philippines, Southeast Asia

Income streams: User fees (paid by tourists); blue carbon and sustainable fisheries and aquaculture

Key stakeholders: Ministry of Blue Economy & Civil Aviation; mirova Investing in sustainability; BNCFF Blue Natural Capital Financing Facility; TASA; Blue finance

Source: Conservation Finance Alliance (LHS); Oriental Mindoro (RHS).

Description[1]

- The Turneffe Atoll MPA is a co-managed MPA operated by Turneffe Atoll Sustainability Association (TASA) and the government. It covers ~132,000 ha of coral reef ecosystems. In 2021, the MPA received a US$ 1.2m investment from Mirova's Sustainable Ocean Fund (SOF)* alongside significant grant finance from International Union for Conservation of Nature's (IUCN) Blue Natural Capital Financing Facility (BNCFF), in partnership with Blue Finance.
- Blue Finance manages 9 MPAs in Oriental Mindoro, where the aim is to boost eco-tourism and kickstart blue carbon certification. As part of a place-based financing model, the MPAs have received US$ 350k from the Global Fund for Coral Reefs, plus US$ 700k soft committed from Mirova-Althelia through the Sustainable Ocean Fund[2].

Key Takeaways for TCI[1]

- **Turneffe Atoll:** Mirova's investment was enabled by Belize's existing legal and policy framework and previous MPA advocacy work. However, the small ticket size (US$ 1.2 million) is below what the SOF would usually consider as financially viable. TCI would need to assess suitability of legal framework and ability to aggregate the project pipeline to reach a suitable scale for investment.
- **Oriental Mindoro:** place-based models can aggregate several revenue streams from (i) user fees and other tourism activities, (ii) blue carbon, and (iii) sustainable fisheries and aquaculture, all of which are applicable in TCI. The model could be applicable to TCI as Blue Finance is developing an aggregation facility to facilitate investment in a portfolio of MPAs spread across of the Caribbean, the Pacific, the India Ocean and SE Asia.

Sources:
(1) Finance Earth (2022). *Catalytic sustainable financing approaches for blue forests.*
(2) BNCFF.

* Concessional debt: up to eight years, interest rates relief based on social & environmental performances Commercial debt: up to six years.[2]

Funding Mechanism Case Study: Conservation Trust Fund

Name: Caribbean Biodiversity Fund (CBF)

Locations : Antigua and Barbuda, Bahamas, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Montserrat, St Kitts and Nevis, St Lucia, St Vincent and the Grenadines, Suriname

Key stakeholders: KFW, The Nature Conservancy, gef, AFD Agence Française de Développement, USAID, En partenariat avec Canada, World Bank Group, Blue Nature Alliance

Source: Caribbean Biodiversity Fund.

Description[1]

- The CBF is a regional umbrella environmental fund that aims to mobilise resources in the Caribbean. Activities financed by CBF's Conservation Finance Programme include support for Protected Areas management and establishment, and infrastructure for natural resources management, environmental education, community engagement and environmental policy.
- The CBF, along with the National Conservation Trust Funds (NCTF), form the "Caribbean Sustainable Financial Architecture", and provides financial resources through eligible NCTFs who lead the grant-making process at the national level. The NCTFs' grantees can include government, NGOs, small private associations and research and academic institutions. The CBF is funded by 9 donors, totalling $97m in the endowment and sinking funds.
- The initiative was sponsored and supported by a wide range of organisations including the German government, the Nature Conservancy, the Global Environment Facility.

Key Takeaways for TCI[1,2,3,4]

- **Clear governance:** clear processes and roles are fundamental for the efficiency of a regional facility like the CBF, which for this purpose is now implementing a self-assessment governance tool for its NCTFs. In addition, an Environmental and Social Management System (ESMS) was developed for CBF beneficiaries. The ESMS and general Environmental and Social Safeguards govern the design and implementation of grant making procedures.
- **Stakeholder and NCTFs involvement**: the CBF convenes meetings of diverse stakeholder groups, advancing dialogue on common issues; it also builds the capacity of NCTFs, their grantees and host governments, improving the financial architecture's efficiency; finally, it raises awareness of the importance of conserving the Caribbean's natural resources for a sustainable future, creating a sense of ownership and responsibility.

Sources:
(1) Caribbean Biodiversity Fund.
(2) CBF factsheet 2023.
(3) CBF factsheet.
(4) CBF 2022 Annual Report.

NCIP Implementation and Next Steps

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NCIP Implementation Plan: Priority Actions

	Actions

Develop policy, strengthen regulation and governance	➢ Launch NCIP and publish recommendations
	➢ Progress with policy and regulatory actions to safeguard natural capital and drive forward investment e.g.
	  ➢ **Development policy:** strengthen regulations such as mandatory Environmental Impact Assessments, alignment with Mitigation Hierarchy[1], potential requirements for compensation payments
	  ➢ **Ringfencing user fees:** identify opportunities to ringfence a portion of user fees / taxes (e.g. destination management fee, restaurant and water sports tax, mooring fee etc) for natural capital
	  ➢ **Renewable energy:** implement supportive policies e.g., Feed in Tariffs, tax incentives, streamlined permitting
	  ➢ **Agriculture:** progress Agricultural Bill and legislative frameworks to support sustainable and scaled agriculture (e.g. import levies, hydroponics)
	➢ Strengthen standards, regulation and monitoring for sustainable business practices e.g. sustainable tourism, fisheries, agriculture, property development
	➢ Develop sustainable certification programmes for best-practice operators and products across tourism, fisheries, aquaculture
	➢ Design and develop the business case for multi-stakeholder natural capital funding and governance vehicle e.g., TCI Natural Capital Trust
	  ➢ Consult stakeholders to agree governance structure and roles
	  ➢ Assess legal / statutory opportunity to create a special purpose vehicle (e.g. fund/trust)
	  ➢ Identify internal public funding allocations (e.g. ringfenced user fees) that could support natural capital vehicles and projects

Sources:
(1) Mitigation Hierarchy

NCIP Implementation Plan: Priority Actions

	Actions
Build capacity and expertise	➢ Support training and capacity building on natural capital protection / restoration techniques; ecotourism; waste management, sustainable farming, aquaculture, fisheries etc ➢ Provide innovation funding programmes to foster local entrepreneurial capacity in sustainable business development e.g. mariculture, ecotourism
Gather data and evidence	➢ Gather additional data and information on habitat extent, condition, threats, historic loss, drivers of degradation / loss ➢ Carry out mapping of target opportunity areas for natural capital restoration and protection ➢ Identify metrics to support baselining and monitoring of ecosystems overtime
Identify champions, expand stakeholder engagement and raise awareness	➢ Identify clear champions on-island and develop working groups to support delivery of NCIP recommendations and maintain engagement with stakeholders ➢ Conduct educational campaigns to raise awareness of the value of natural capital and benefits of responsible practices (across tourism, fisheries, property development etc) ➢ Map and engage funders and networks to build networks & knowledge sharing and leverage additional funding sources
Deliver pilot projects and demonstrate revenue generation	➢ Carry out ongoing market engagement (e.g. with local corporates) to test and build demand for ecosystem service payments e.g. for coastal protection payments, biodiversity credits, blue carbon credits ➢ Expand identification of projects that could support biodiversity protection and enhancement – identify delivery partners, implementation costs, revenues, investment need, and outcomes ➢ Develop a financial plan for protected area management over the long term to understand scale of funding needs

NCIP implementation plan overtime

Next steps could involve refining analysis of pipeline opportunities and capacity building needs and designing the financing and governance vehicles.

Short term

- Publish recommendations for the NCIP
- Gather information on extent, condition and risks to natural capital assets in TCI
- Carry out further market engagement to build demand for natural capital payments
- Detailed financial analysis of pipeline to understand costs, revenues and investment potential
- Commit to policy actions to drive investment
- Design and develop business case for funding and governance vehicle e.g. Trust
  - Build business case for ringfenced tourism fees to generate foundational revenues
  - Consult stakeholders to agree governance structure and roles of various stakeholders

Medium term

- Form natural capital governance vehicle and initial funds
  - Create prospectus, identify and engage funders
  - Implement governance structure, establish monitoring and verification process
  - Secure cornerstone public and private philanthropic funding to launch initiative
  - Secure ringfenced tourism fees/taxes within structure
  - Implement natural capital grant fund and development funding programme
- Provide funding to support market development and build investment-ready projects across priority markets
- Implement policy levers to drive or enable investments

Long term

- Establish repayable finance vehicles to deliver and scale investment opportunities
- Carry out ongoing management, governance and oversight of projects
- Monitor and verify outcomes of the various projects
- Generate returns to repay investors
- Capture a portion of returns to provide further development funding
- Gather learnings from work to date and iterate/ improve processes

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Enabling investment into conservation, climate and communities.

For more information, please contact:

Jamie Mansfield
Co-Founder and Managing Director
James@Finance.Earth

Alicia Gibson
Senior Associate Director
Alicia@Finance.Earth

Paveen Ghalay
Senior Associate
Paveen@Finance.Earth

Anna Halliday
Associate
Anna@Finance.Earth

Beatrice Basso
Senior Analyst
Beatrice@Finance.Earth

Ian Dickie
Director
Ian@eftec.ec.uk

Mark Collar
Senior Consultant
mark@eftec.co.uk

Victoria Reeser
Researcher
victoria@eftec.co.uk

www.finance.earth

W106 Vox Studios, 1-45 Durham Street
London SE11 5JH

Annexes

finance earth eftec economics for the environment

Part 1: Financing Mechanism Analysis

Financing Mechanisms	Type of Capital	Summary	TCI Applicability	TCI Applicability
Natural capital grant fund	Grants	A fund to attract philanthropic grant contribution to support restoration and protection of natural capital assets with no existing business model.	A natural capital grant fund could leverage philanthropic grant funding to support direct protection and restoration of TCI's habitats and ecosystems where there may not be a business model available e.g. MPA and national park management, environmental monitoring etc.	High
Development Funding	Grants	A programme providing grants and technical assistance aimed at supporting market and project development from an early stage, to include evidence gathering, community engagement, business model and investment case development to develop and scale a range of new business models	Development funding can be allocated to a broad range of natural capital market building activities needed in TCI, including further evidence gathering, data capture, market infrastructure development and early-stage pilots to grow a pipeline of investment-readiness projects overtime and unlock new sources of finance.	High
Place-based Trusts	Blended finance and governance	Strategically coordinates governance, funding and management of a portfolio of natural capital assets and enterprises to deliver a range of income streams and benefits across a seascape.	A dedicated trust could provide the independent governance, multi stakeholder collaboration and transparent decision making needed to scale natural capital investment in TCI. This could be attractive to donors and enable management of a range of different ringfenced funding programmes. Trusts can be complex and time-consuming to structure, are reliant on donor funding, and requires local political support.	High
Blended Financing	Blended finance - grants, concessional finance and guarantees	Financing tools (grants, concessional finance and guarantees) to achieve investment readiness, crowd-in commercial capital, deliver concessionary finance and deliver socio-environmental impacts.	Blended finance would be suited to investment-ready projects in TCI e.g. renewables. However, most natural capital business models in TCI may not yet be ready for concessional finance as there is currently a lack of suitable pipeline and need to aggregate projects to reach a suitable scale. Further pipeline development and analysis is needed to carry out a detailed assessment of investability, with blended finance offering the potential to play a key role in the medium term.	Medium-High

Part 2: Financing Mechanism Analysis

Financing Mechanisms	Type of Capital	Summary	TCI Applicability	TCI Applicability
Impact bonds	Payments for success	A type of outcomes-based contract between an investor, an outcomes payer, and a service provider, that tackle a social or environmental challenge.	A key requirement for an impact bond is the availability of an outcomes payer (often the government) willing to pay based on performance to compensate the investor for the risk taken. There could be an opportunity for to structure philanthropic funding received to be paid based on outcomes delivered. This enables philanthropy to be 'de-risked' and could provide new funding opportunities e.g. corporates providing funding in return for 'contribution claims' based on outcomes delivered.	Medium-High
Blue & Green Bonds	Debt	A debt instrument, often issued by governments, development banks, to raise capital to finance marine & terrestrial projects with positive environmental and economic impacts.	If tourist-based user fees (and other future user fees/taxes) can be ringfenced, this could provide a tangible, scalable opportunity to leverage finance to implement natural capital projects through a blue/green bond, given the availability of predictable cashflows to service the debt. However, with TCI linked to the UK Government, they may lack the full sovereign capacities of a nation-state. The establishment of a third-party entity e.g. a Trust to raise the bond could resolve these challenges.	Medium-High
Endowment Funds	Grant	Permanent financing vehicles that take on large donations as the initial capital to then provide funds in perpetuity to support specific causes or objectives. Endowment funds are primarily funded through grants, only generating income and potential capital appreciation that can be used for the specific objectives of covering long-term costs.	Endowment funds for conservation (conservation trust funds) have been established in over 50 countries as part of efforts to support long term financing for protected areas and biodiversity conservation. This structure would be well suited to supporting a range of priority conservation projects. It would be reliant on significant pools of government and donor capital to support the endowment, and the establishment of a robust governance structure to support transparent decision making.	Medium
Sinking Funds	Grant	Like an Endowment Fund but uses both income and principal capital to achieve objectives and as such, have a limited life.		Medium

Part 3: Financing Mechanism Analysis

Financing Mechanisms	Type of Capital	Summary	TCI Applicability	TCI Applicability
Catastrophe Bonds	Risk mitigation / risk transfer- Coupon payments	Catastrophe bonds serve as a means for insurers and reinsurers to access additional capital and manage their exposure to catastrophic risks (e.g. hurricanes, earthquakes) while providing an alternative investment opportunity for investors seeking higher yields, albeit with an associated risk of loss.	Proceeds can be used to invest in infrastructure that can help prevent catastrophic impacts (e.g. flood defenses, natural coastal defense). Despite catastrophe bonds being mature instruments, they have not been applied in natural capital before and are only applicable to certain natural capital assets. Further evidence is needed of the potential cost savings provided to businesses from natural coastal defence.	Low-Medium
Public-Private Partnerships (PPPs)	Blended finance	Public-Private-Partnerships involve long-term agreements between governments and private entities to provide assets or services sharing the associated risk. Typically, private enterprises provide upfront capital and are repaid with interest once the project is complete. PPPs are often used to source greater technical expertise or capacity, and reduce immediate budget burdens.	A private partner in a PPP would require interest payments in return for the project delivery and strong evidence of returns available. Business models in the natural capital market are likely too early stage for a PPP.	Low
Debt for Nature Swaps	Grant – generated out of proceeds	A mechanism that allows countries to restructure their sovereign debt in exchange for a commitment to channel debt service savings into nature projects.	Given TCI is an Overseas Territory (OT), it cannot raise sovereign debt and therefore Debt for Nature Swaps are not applicable for the region.	Low

Ecosystem Service Flows and Beneficiaries

This table presents the ecosystem flows, benefits and beneficiaries to whom they accrue as reported in TCI's 2020 Ecosystem Accounts:

Ecosystem services	Ecosystem service typology	Physical terms		Monetary terms		PV25* (US$m, 2023)	Direct beneficiaries
		Quantity/ year	Physical indicator (unit/year)	US$m/year (2023 prices)	Valuation metric		
Fisheries	Provisioning service	2,905	Total weight of fish (tonnes/yr)	28	Market price	427	Businesses in the fishing industry and employees
Agriculture	Provisioning service	44,520	Total weight of agricultural production (lbs/yr)	0.1	Market price	2	Farmers
		360	Total egg production (flats/yr)	0.004		0	
Carbon sequestration	Regulating service	961,953	Total carbon sequestered (tCO2e/yr)	65	Cost of achieving emission reductions	1,623	Wider society
Local recreation	Cultural service	7,289,479	Total number of local recreational visits (visits/yr)	25	Expenditure on local recreation	500	TCI residents, Businesses near frequented sites and employees
Tourism	Cultural service	1,161,097	Total number of visits (visits/yr)	38	Value added to tourism industry attributed to ecosystems	1,467	Tourists, Businesses in the tourism industry and employees
Total				**156**	**Mix of values**	**4,019**	
Material non-monetised benefits							
Coastal protection	Regulating service	11,370	Total infrastructure at risk of storm surge (number/yr)	N/A	N/A	N/A	Properties and infrastructure in flood-vulnerable zone

* PV stands for present value, which is the current value of a future sum of money or stream of cash flows given a specified rate of return