



TCI Fishing Cooperative



Development of a Natural Capital Investment Plan for the Turks and Caicos Islands

Business and community perspectives

July 2024

By: Finance Earth and eftec



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.

By asking how communities and businesses have been impacted by COVID-19, this project provides insights into how the Turks and Caicos Islands can build resilience to future shocks by identifying new economic activities and opportunities for skills development that support the natural environment and deliver widespread benefits to communities across the islands.

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Evidence Quality Assurance:

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Executive Summary

Finance Earth and eftec (the “Consultants”) have been commissioned by the Joint Nature Conservation Committee (JNCC) to develop a Natural Capital Investment Plan (NCIP) to provide pathways for sustainable finance for the protection of the natural environment in the Turks and Caicos Islands (TCI).

A credible Natural Capital Investment Plan needs to balance perspectives and needs of a range of stakeholders, including investors, delivery bodies, and local communities. This report summarises key insights for natural capital investment from three rounds of stakeholder engagement conducted in 2023 and 2024. These were:

- A socio-economic survey undertaken between January and April 2023 by JNCC to explore issues of sustainability and post-COVID 19 recovery.
- A business attitudes survey undertaken alongside the socio-economic survey to understand business attitudes towards sustainable recovery of the TCI economy post-COVID 19.
- A set of Natural Capital Investment Plan (NCIP) interviews undertaken as part of this project between November 2023 and February 2024. These interviews were with a broader set of stakeholders than the business attitudes survey and capture perspectives regarding investment in and management of TCI’s natural capital.

Private investment in natural capital requires both a) confidence in the management of natural capital in TCI, and b) a pipeline of potential projects and activities which demonstrate suitable returns. These returns need to be assessed against local risk factors which influence the success of natural capital management. Short-term actions under the NCIP must focus on better understanding and reducing existing TCI investment risks to an acceptable level (e.g., alignment of government policy commitments to support natural capital markets with Vision 2040).

Stakeholder engagement has highlighted the economic and social importance, as well as the risks, dependencies and vulnerabilities, of tourism to local communities and business on TCI. It is the largest contributor to GDP on the islands, and both directly and indirectly supports financial incomes and wellbeing across a range of business types (e.g., hotels, tour operators, local craft shops, transport, fisheries). It has also highlighted the environmental risks from heavy tourism footfall, in particular on Providenciales. Tourism drives environmental degradation through increasing coastal development (e.g., land clearing, water abstraction, pollution, waste management) and associated tour operations in the marine environment (e.g., water sports, wildlife

tours). This manifests differently on different islands, influencing management of natural capital and the impact of human activity on nature. The current trend of developing the tourism sector is unlikely to change in the short term, and there are risks that this trend is shifting to other less-developed islands (e.g., through cruise tourism in Grand Turk and proposed resort development on Middle Caicos increasing footfall). Further developments in tourism increase economic dependency on the sector, in turn driving further coastal development, pressure on natural resources, and unsustainable business practices. Limited financial and human resources in government dedicated to monitoring and regulating the extent of these pressures creates an uncertain environment for investors.

The tourism sector creates both risks and opportunities for TCI and its natural capital. It is an opportunity in the short term to leverage existing funds to support current environmental management priorities. This can be supported by government ringfencing a part of existing fees and permits (e.g., natural capital business license fees, permits to enter marine national parks) to fund management of natural capital in TCI. It can also support development of further business opportunities and increases in household income on-island that are aligned to long-term natural capital management aspirations. Opportunities may include development of low-footfall, nature-based tourism and/or lower-density resort development.

Tourism in TCI also provides a mechanism to alleviate pressure on natural resources by enabling diversification of income opportunities (e.g., for fishers to organise fishing tours, or set-up arts and craft businesses with natural TCI-sourced products). However, significant reliance on tourism for funding natural capital management may exacerbate existing pressures, conflicts and trade-offs for users of natural resources. The socio-economic and business attitudes survey indicated that both tourism and fisheries sectors were the most impacted by the global COVID-19 pandemic, highlighting the vulnerability of local businesses and people to the impacts of such events and the need for diversification to develop community and business resilience.

Stakeholder engagement highlighted that tourism is not the only sector of socio-economic importance, nor the only pressure on nature in TCI and therefore risk to natural capital investment. External environmental pressures (e.g., climate change, natural hazards, warming sea temperatures) also drive environmental change. These events exacerbate the impact of economic activity on the environment and influence the future viability of local businesses dependent on nature (e.g., scuba diving on the bleached coral reefs). Communities and businesses highlighted improvements in monitoring and enforcement of existing legislation, increasing funding (potentially through ringfencing existing monies), data collection and education and outreach as critical to improving the condition of the natural environment on TCI.

Each of these actions are a necessary pre-condition for private investment in natural capital projects in TCI. NCIP priority actions in the short term should therefore focus around developing strategies and government policy which support existing national objectives and priorities (e.g., Vision 2040). The surveys and NCIP interview highlighted several businesses, NGOs, and other stakeholders which provide opportunities for natural capital management and community engagement on TCI. Examples include supporting: Experience TCI to integrate marketing natural capital management into the TCI tourism brand; the TCI Reef Fund to continue to research and educate regarding changes in natural capital; and the Community Resilience Hub (developed as part of this RESEMBID-supported project) to identify mechanisms to support vulnerable communities.

Finally, TCI has the advantage of existing data management structures (e.g., the existing ecosystem accounts and supporting data) to measure the baseline against which investment can take place, and provide evidence of outcomes from environmental management, for investors. Well organised and timely monitoring of the environment in TCI will help reduce investor uncertainty and provide confidence in those charged with governance of natural capital management in TCI.

A full list of recommendations is included below. These are incorporated into the final technical appraisal of the longlist of sustainable finance options in TCI (Finance Earth and eftec, 2024)

Recommendation 1: The NCIP should promote business opportunities which support the most vulnerable communities and reduce their dependence on specific natural capital assets (e.g., single species fish stocks). In the short term, the synergies between the tourism sector and traditional local fisheries provide a good example of where opportunities for diversification exist, but a long-term plan to sustainably manage dependence on the tourism sector is needed to enhance community and business resilience.

Recommendation 2: Further mapping of the roles, responsibilities and capabilities (including current skill and knowledge gaps) of key on-island organisations is recommended. This includes outlining how they contribute to natural capital management, and their willingness to participate in the NCIP. Examples include Experience TCI, TCI Reef Fund, and social initiatives such as the Community Resilience Hub, which already have significant trust within TCI society.

Recommendation 3: An island-based natural capital approach that tailors investment opportunities to the local environment and its current use, is strongly recommended given the difference in existing business opportunities, social capital and infrastructure across the islands (e.g., reflecting the differences in existing tourism and fishing activities and patterns (including intensity and existing infrastructure) in Providenciales compared with Grand Turk).

Recommendation 4: Training, education, and outreach initiatives to help businesses understand their short- and long-term impacts on natural capital are important as part of transitioning further towards sustainable development. This can be achieved by inclusion of natural capital training under existing programs, or new initiatives or programmes, and should be linked to enforcement of existing rules, regulations, and principles. Undertaking these activities alongside Recommendation 1 will maximize the likelihood of successful management and local buy-in.

Recommendation 5: The natural capital investment plan needs to be supported by the necessary vision, long-term natural capital strategy and ultimately legislation to channel resources which facilitate enforcement of legislation to protect nature (on land and sea), monitor natural capital projects and support existing actors in environmental management on TCI.

Recommendation 6: The TCI ecosystem accounts provide a practical structure to systematically record and collect environmental data. For investment, accounts help identify and prioritise opportunities for enhancement and restoration (i.e., the best use of investment monies), and evidence project impact (i.e., the success of investment). The NCIP should leverage and adapt these structures for different beneficiaries (including investors) at relevant scales.

Recommendation 7: The NCIP should support additional research efforts to monitor the extent and condition of the environment across TCI. This research will inform a) priority habitats and locations for management (as described in Recommendation 6), and thus b) the scale and suitability of payment for ecosystem service opportunities across TCI.

Recommendation 8: Develop a case for ringfencing a percentage of taxes, fees, incomes and levies for use in natural capital investment, and assess how much this may generate in initial funding towards natural capital management in TCI. Further engagement work will be needed with institutional investors to assess demand for natural capital products from TCI.

Recommendation 9: Develop the business case for the nature-based tourism and certification market in TCI, including for natural capital products (e.g., fish) as well as services (e.g., tour operations on-water, local carbon offsetting for on-island activities). This should include the risks and challenges associated with tourism in TCI, as well as the strategy for managing the sustainability of economic dependency of TCI on the tourism sector.

Contents

1. Introduction.....	1
2. Analytical Approach.....	3
2.1 Ecosystem accounting	4
2.2 Socio-economic and business attitudes surveys	6
2.3 Natural Capital Investment Plan Interviews	7
2.3.1 Purpose and approach to engagement.....	7
2.3.2 NCIP interview format.....	8
2.3.3 Approach to engagement.....	10
3. Socio-Economic and Business Attitude survey results.....	11
3.1 Socio-Economic survey.....	11
3.1.1 Survey sample	11
3.1.2 Business impacts on the environment	11
3.1.3 Proposed solutions for a sustainable environment.....	14
3.2 Business Attitudes survey findings.....	15
3.2.1 Survey sample	15
3.2.2 Business impacts on the environment	15
3.2.3 Proposed solutions for a sustainable environment.....	18
4. NCIP interviews	21
4.1 Attitudes and perceptions regarding impacts of business activities on nature in TCI.....	21
4.2 Current investment and management of natural capital in TCI	25
5. Discussion	31
5.1 Distribution and beneficiaries of natural capital investment in TCI	31
5.2 Business attitudes and perceptions to natural capital management and investment.....	33
5.3 Natural capital market opportunities.....	35
6. Next steps.....	38
References	39
Appendix 1: List of organisations engaged in NCIP interviews.....	40
Appendix 2: NCIP Interview Script.....	41

1. Introduction

This report is the second in the workstream “Development of a Natural Capital Investment Plan (NCIP) for the Turks and Caicos Islands”. In this workstream, Finance Earth and eftec have been commissioned by the Joint Nature Conservation Committee (JNCC) to develop a Natural Capital Investment Plan (NCIP) for TCI. This work is sponsored by the RESEMBID¹ funding programme. The intention of the NCIP is to provide pathways for sustainable finance for the protection of the natural environment in TCI.

This report builds on a background study (Finance Earth and eftec, 2024), which assessed the case for natural capital investment in TCI. It reviewed the TCI ecosystem accounts (eftec, JNCC 2022) and provided a preliminary screening of possible suitable investment opportunities for TCI.

This study reports the results of stakeholder engagement. This includes:

- Socio-economic survey (SE survey) undertaken by JNCC in January – April 2023
- Business attitudes survey (BA survey), also undertaken by JNCC online during January – April 2023
- Interviews conducted with businesses, NGOs and government bodies relating more specifically to natural capital investment and management (NCIP interviews). These interviews were undertaken by eftec between November 2023 and February 2024.

This report directly informs the development of both a) the project’s technical options report, which will appraise and recommend the most suitable financial mechanisms for TCI, and b) the accessible framework which summarises next steps in the NCIP process.

This report is structured as follows:

- **Section 2** presents the approach to using TCI’s 2020 ecosystem accounts (eftec and JNCC, 2022) and JNCC’s SE and BA surveys to design and interpret the further

¹ The programme supports the sustainable human development efforts in the Turks and Caicos as well as 11 other Caribbean overseas countries and territories. More information is available at: <https://resembid.org/>

interview-based stakeholder engagement conducted by Finance Earth and eftec.

- **Section 3** presents the key findings from the SE and BA surveys in relation to natural capital investment.
- **Section 4** presents the findings from the NCIP interviews.
- **Section 5** discusses the results of the surveys in combination with other TCI-and natural capital-relevant evidence. It provides recommendations for next steps in developing the NCIP.
- **Section 6** briefly summarises the next steps in the NCIP workstream.

2. Analytical Approach

This section outlines both a) the analytical framework through which assessment of each of the surveys and interviews will be undertaken, and b) the design of the NCIP interview guide.

The NCIP interview (Section 2.3) was designed based on insights from the Background Study (Finance Earth and eftec, 2023), TCI Ecosystem Accounts (eftec and JNCC 2022), and the JNCC SE and BA surveys (Section 2.2). Connecting the findings from these reports will provide key insights into: (i) those businesses and sectors which are most reliant on, and/or impact on, TCI's natural capital; (ii) where natural capital investment may be feasible in TCI; and (iii) what stakeholder attitudes (of business or residents) may influence the likelihood of a successful NCIP.

The connections between the NCIP interview and the development of the technical NCIP contents are illustrated in Table 1 below. Rows are organised to show alignment of objectives.

Table 1: The linkages between the NCIP interview and NCIP development

NCIP development objectives	NCIP interview objectives
Understand industry view on the value of natural capital and willingness to invest in its benefits.	Evaluate stakeholders' awareness of how natural capital impacts their business.
Assess the availability and maturity of natural capital revenue streams.	Identify long-term business goals relating to natural capital for the major sectors (e.g., tourism, fisheries).
Identify potential projects/initiatives that could unlock income and investment.	Identify potential investment opportunities based on stakeholders' beliefs of what works best or has not worked in the past.
Identify the support that is needed to facilitate investment in natural capital.	Explore stakeholder interest in natural capital investment and if they have invested in and/or were impacted by it.
Review the availability and effectiveness of existing funding and financing.	-
Identify key barriers to investment.	-

2.1 Ecosystem accounting

The TCI Ecosystem Accounts (eftec and JNCC, 2022) were used to help interpret the results of the JNCC SE and BA surveys and inform development of the NCIP interviews. The accounts capture a wide range of evidence on the extent, condition, and provision of benefits from TCI natural capital assets in the terrestrial and marine environments. They also describe how different assets deliver benefits to different people, such as businesses, residents, or tourists. In describing the linkages between the TCI environment and people, the accounts identify sectors which depend upon and impact nature, such as agriculture, tourism, and fisheries.

The accounts show a strong aggregate picture of natural capital across TCI, but this hides spatial variation of both a) specific monetary values, and b) differences in who benefits most. Equally, the accounts provide a baseline reflecting current management, but do not give direct evidence on economic or financial returns from changes to environmental management and specific natural capital propositions. Physical (unit/hectare/year) and monetary (\$/hectare/year) flows are likely to change over time depending on management actions. While the accounts are a good baseline source, more evidence and research are needed to build on existing evidence of the condition of natural capital assets, and to test which management approaches are likely to work, and where, whilst managing trade-offs.

Following an ecosystem accounting approach helps identify how ecosystems link and contribute to wellbeing and economic activity, as well as those residents or businesses which stand to gain or lose from natural capital investment.

Table 2 below describes how gaps in the ecosystem accounts were used to inform the design of the NCIP interview.

Table 2: How information gaps in ecosystems have been used to inform the NCIP interviews

Information gaps in ecosystem accounts	Importance for natural capital investment	Coverage in NCIP interview
Business perception of the importance of TCI natural capital	Implementing actions to restore, protect and enhance nature requires the motivation and engagement of numerous actors. Many of the key pressures on the environment, and drivers of biodiversity loss, relate to business activities e.g., the footprint of tourism, unsustainable extractive practices. A natural capital investment plan needs to be realistic, credible and appeal to the motivations of the main TCI stakeholders.	The “Awareness” section of the NCIP interviews (Section A) probes awareness of benefits from nature, the impacts of business on nature, and perceptions around trends and changes in TCI nature.
More detailed linkages between business sectors and natural capital		The “Attitudes” section (Section B) also probes perceptions of responsibility and priorities for managing nature in TCI across a range of businesses.
Distributional impacts of natural capital.	There is clear evidence globally that social groups benefit and use natural resources in different ways. There is also spatial variation in who benefits from natural capital assets. Different environmental management actions are therefore likely to benefit different TCI stakeholders. Ensuring equitable distribution of the costs of undertaking natural capital projects, and the benefits they provide, is key for long-term sustainable success of the NCIP.	Questions were designed in the “Awareness” section of the survey to probe any differences in changes in TCI nature across the different islands, and for different businesses. Note that socio-economic distributional impacts are not within scope of the NCIP interview.

2.2 Socio-economic and business attitudes surveys

This report also utilises results from the two JNCC surveys, delivered under the RESEMBID-supported project, the BA and SE surveys. These surveys collected information on respondents’ perceptions on livelihoods and the environment during and since the COVID-19 pandemic relevant to natural capital management (see Table 3). The socio-economic survey was delivered to TCI residents and the business attitudes survey was delivered to business owners/managers.

Table 3: How insights from the SE and BA surveys have been used to inform the NCIP interview

Information collected in the SE and BA survey	Importance for natural capital investment	Use in NCIP interview
The positive and negative impacts of key business sectors on the environment in TCI	To build resilience of TCI industrial sectors with high natural capital impacts in the face of economic and physical risks	The “Attitudes” section (Section B) further probes perceptions of responsibility and priorities for reducing the business’ impact on nature. Attempts to elicit willingness to fund, invest or manage natural capital projects.
Skills and development opportunities for supporting a sustainable recovery	To address prime areas for future economic growth and social development centered on natural capital	The “Attitudes” (Section B) and “Investment” (Section C) sections probe barriers and challenges to undertaking or supporting natural capital projects, including skills and opportunities on-island.
Barriers to engagement in sustainable development opportunities	To identify gaps in public participation and awareness and introduce projects/ initiatives which may facilitate investment in natural capital	

2.3 Natural Capital Investment Plan Interviews

2.3.1 Purpose and approach to engagement

The NCIP interviews sought to gather further evidence on business attitudes to their impacts on the natural environment and investments in improving, enhancing or protecting nature. The interviews targeted the most relevant businesses and sectors, considering the structure of the TCI economy and evidence from the ecosystem accounts on business' impacts and dependencies on nature (see Table 4).²

Table 4: Business sectors with significant impacts or dependencies on TCI natural capital

Sectors within scope for NCIP interview	Representation in TCI economy (% of total GDP in 2021 (TCI Statistics Authority, 2024))	Impact and dependency on nature
Agriculture	0.16%	Dependent upon land use (and condition) to sustain domestic production and exports. Most prominently, it is dependent upon soil quality and other environmental factors, such as weather and pollution. The sector's impacts on the environment are, most notably, pollution from excess nutrients and fertiliser, and biodiversity loss.
Fishing	0.31%	Dependent upon maintaining healthy and rejuvenating fish stocks. Overfishing reduces fish stocks and likely to cause biodiversity loss.
Utilities (e.g., electricity, water supply and waste management)	4.51%	Reliable flow of water supply, electricity and waste management for household and commercial use. Impacts relate to the process of water abstraction and waste management.
Utilities (e.g., electricity, water supply and waste management)	4.51%	Reliable flow of water supply, electricity and waste management for household and commercial use. Impacts relate to the process of water abstraction and waste management.

² Note that the correlation between the contribution of a given sector to a country's GDP and its impact on nature is unlikely to be positive or linear. The comparison in this report is intending to illustrate the quantum of business activity which may be impacted by an NCIP, not that the NCIP interview is using GDP as a proxy for business impact and dependence on natural capital.

Sectors within scope for NCIP interview	Representation in TCI economy (% of total GDP in 2021 (TCI Statistics Authority, 2024)	Impact and dependency on nature
Construction, including real estate	12.67%	<ul style="list-style-type: none"> • Use of land and natural resources of construction of new developments. Renting and buying residential and commercial properties based on natural environment amenities and characteristics • Impacts arise from converting land uses, including biodiversity loss, habitat degradation and pollution. • Protection of property, in particular coastal real estate, from flood risk during extreme events.
Hotels and restaurants	23.66%	Sub-set of tourism and recreation sectors that rely on cultural services afforded by the natural environment. Water and land use impacts arise from energy and freshwater consumption.
Transport	12.10%	Highways and waterways that enable mobility of residents, tourists and materials. Water, chemical and airborne pollution are the greatest drivers of habitat degradation and air quality.
Financial intermediation	12.56%	Financing of activities or business sectors (including all the above) which are contributing directly or indirectly to biodiversity loss and wider natural capital impacts.
Other sectors e.g., health and social work	34.03%	Majority of activities not expected to have a direct significant impact on TCI natural capital.

2.3.2 NCIP interview format

The interviews were conducted in a semi-structured format. The project team developed a guide (Appendix 2) that included an introduction to the project and purpose of the interview, simple language definitions of relevant terminology, key themes to address (Figure 3), and a list of indicative questions across each theme.

Given the short format (between 30 minutes and 1 hour), not all questions were asked to each respondent. The format of the interview was intentionally flexible to ensure that questions could be adapted to better represent the interviewee's sector, expertise in the topic area, and their availability to undertake the interview.

The survey questions were divided into three sections. The full list of questions is presented in the interview guide included in Appendix 2.

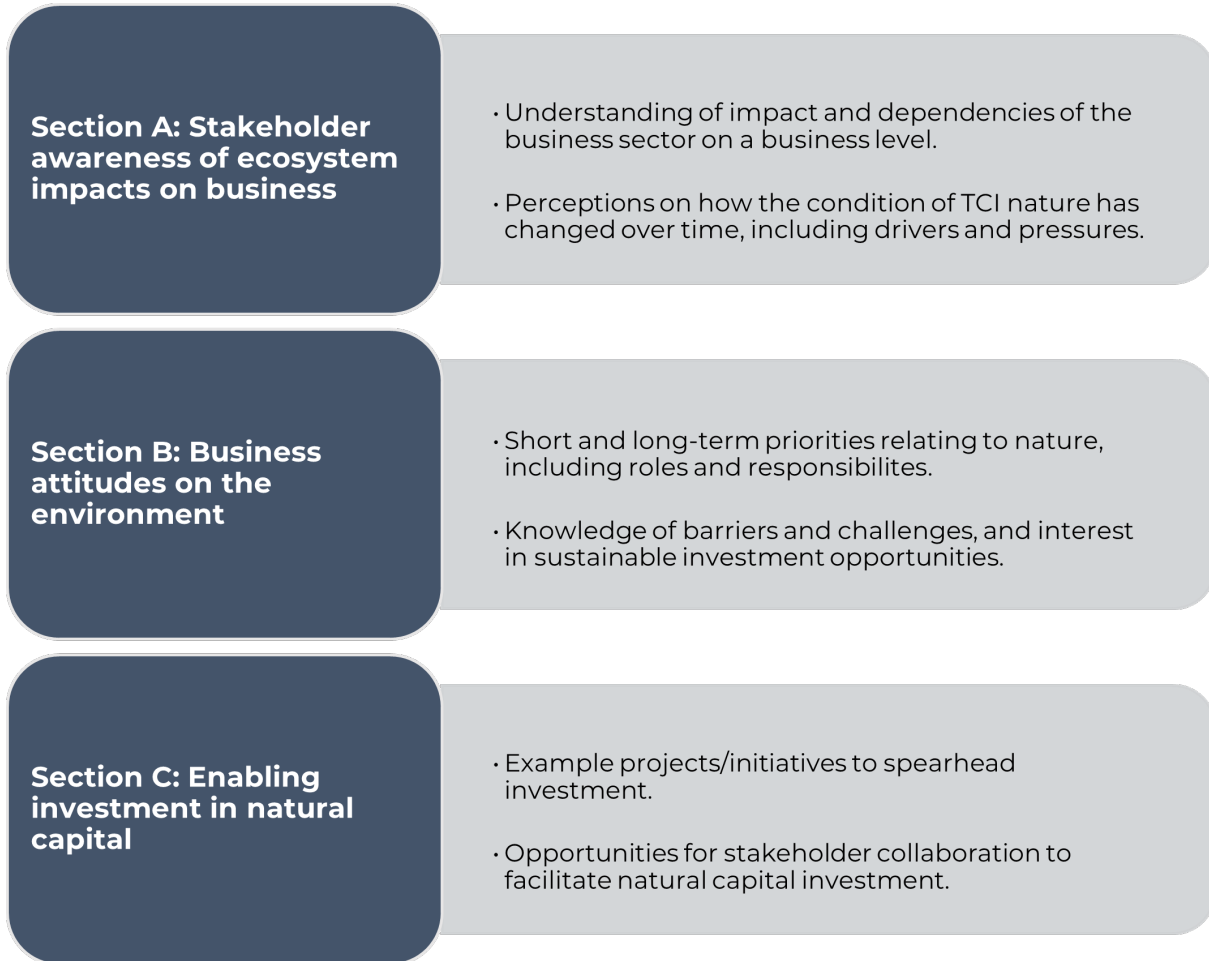


Figure 1: Interview design

2.3.3 Approach to engagement

Respondents for the NCIP interview were identified via JNCC and the wider RESEMBID project partner group. The project team also undertook further desk-based research to identify relevant representatives of businesses, sector leads, and TCI government officials.

In total, more than 300 organisations were contacted, and 9 organisations were interviewed between October and December 2023. Due to low response rates achieved from online contact and the importance of business engagement to maximise effectiveness of the investment plan, additional funding was secured to travel to TCI in February 2024 to undertake more interviews in person. On-island interviews were facilitated by meeting project partners early in the week (Invest TCI and the TCI Fishing Cooperative), who helped coordinate further interviews. Interviews were predominantly based on Providenciales, with a single day visit to Grand Turk.

In total, 31 interviews were undertaken, 22 of which were on-island in February 2024. Interviews were undertaken across a range of sectors, including hotels, tour operators, renewable energy, retail, real estate and insurance. It was not possible to engage with businesses in banking or institutional investment. due to both a) lack of response to invitations for interview, and b) project time and resource constraints. Business and non-business representatives who were engaged in the process are outlined in Appendix 1.

3. Socio-Economic and Business Attitude survey results

This section presents the main findings from the SE and BA surveys.³ The BA and SE surveys help answer several key questions related to the preparation of an NCIP (see Table 3) and provide additional context within which NCIP interview responses and wider recommendations regarding the launch of an NCIP can be drawn.

The results are presented for each of the SE (Section 3.1) and BA (Section 3.2) surveys separately. Data from the SE and BA surveys have been organised thematically. Neither survey has been verified for statistical representation of residents or business sectors. Results and interpretation of responses should therefore be treated as illustrative, but *not* necessarily representative of the views of TCI residents and business.

3.1 Socio-Economic survey

3.1.1 Survey sample




The SE survey was carried out in January – April 2023 and had 133 responses. In terms of composition of the respondents. Of the 107 respondents who reported a primary sector of employment, approximately 30% were involved in real estate development (n=19, 18% of sample size) and fisheries (n=6, 5% of sample size). Transportation (n=5, 5% of sample size), agriculture (n=1, 1% of sample size), and utilities, i.e. gas and fuel (n=1, 1% of sample size) were represented to a lesser extent. The SE survey final report (Robinson and Irving, 2023) outlines a full breakdown of respondent composition.

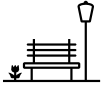


3.1.2 Business impacts on the environment

The key findings from the socio-economic survey relating to ecosystem dependencies and impacts are summarised in Table 5.

³ Note that this summary is not intended to be exhausted but rather highlight those results which are most relevant for natural capital investment.

Table 5: Environmental impact, barriers and challenges relating to selected sectors of interest



Sector	Impact of key business sectors on the environment	Barriers and challenges relating to natural capital management
<p>Agriculture</p> 	<p>The agricultural sector is primarily reliant on the terrestrial ecosystem and most farming takes place in North Caicos. Soil quality and resilience to extreme weather events are important for the security of the sector. Agriculture is one of the smallest sectors on TCI, and respondents said that they would like the sector to grow to decrease reliance on food imports.</p> <p>Some respondents believed that food shortages and increased costs during the COVID-19 pandemic would have been less if the agricultural sector had been stronger. Agricultural activity on island decreased during the pandemic and respondents noted how people were affected by food shortages, particularly in South Caicos.</p>	<p>The agricultural sector's main barriers are environmental (e.g., climate, limited space, and generally poor soil quality for arable production) and lack of education/training for a career in agriculture.</p> <p>One respondent said that there is a need to expand what farmers produce to include more salad vegetables (e.g., onions and peppers) and invest in hydroponics. Additionally, licenses to farm could be made more accessible to encourage new ventures. A few respondents said that education in schools and technical training in agricultural sciences was important for developing the sector further. One respondent said that agricultural science and animal husbandry was non-existent in schools.</p>
<p>Fisheries</p> 	<p>Fisheries activities during the COVID-19 pandemic were significantly less than in normal times, and concurrently, the fish stocks were perceived to be increasing. Many respondents said that the lack of fishing and tourism activity in the waters meant that fish stocks were replenishing.</p>	<p>Similar to the agricultural sector, respondents wished for the sector to increase. Some respondents want increased/improved training for fishing operators, and more effort to research information on fish stocks.</p>
<p>Real estate development</p> 	<p>Construction slowed during the pandemic. One respondent said that noise and pollution from construction also diminished. One respondent from the sector said because of monetary policies during that time, the value of real estate decreased significantly. As a result, there were 'record sales', primarily of undeveloped land.</p>	<p>Respondents in the sector were conscious of the real estate's impact of the environment, particularly related to pollution and environmental degradation from new construction. They suggested that regulation and enforcement be more consistent across developments in relation to environmental impact, and that planning authorities design in avoidance of exhausting a natural area. They also said that education on environmentally good practices for professionals in the sector would improve activities.</p>

Sector	Impact of key business sectors on the environment	Barriers and challenges relating to natural capital management
<p>Tourism and recreation</p>  	<p>Tourism activity decreased significantly during the pandemic. As tourism activity is concentrated on specific islands, e.g., Providenciales, the change in impact was concentrated in these areas.</p> <p>In particular, respondents said that areas that were normally hot spots for tourism, such as the beaches, were the cleanest they had seen, although this reverted to similar pollution levels when tourists returned.</p> <p>Several respondents described the pandemic as a period when the environment was allowed to 'rest' or 'reset' and animal life could increase, particularly in the marine environment. Although respondents said that there was increased vegetation growth in some areas because they were not maintained during the pandemic, overall, the quality of recreation increased. For example, one resident who scuba dives said the coral and animal life was improved because there were less tourists. Additionally, one respondent said that the older generations could enjoy public spaces more because they were less crowded.</p>	<p>Respondents in the tourism sector were primarily concerned with pollution as this impacts their business operations. They suggested public campaigns with information on rules and regulations, and good practice. One respondent suggested more regulation to transition to more environmentally friendly products to reduce resource consumption and pollution.</p> <p>A couple of respondents suggested more rotation of economic activity across natural areas to avoid over-exhaustion of the habitat(s), preserving their value for tourism and recreation. Some respondents believed that targeting social beliefs through communication campaigns and education would encourage good environmental practice.</p> <p>Additionally, a couple of respondents wanted more participatory governance over natural and public areas, which they believed would increase desire to help keep those areas clean.</p>
<p>Transportation</p> 	<p>Because of regulations during the pandemic, cruisers and smaller vessels were not allowed to operate. Some respondents noted that this had positive impacts on the level of pollution in the marine environment and allowed marine life to increase. Additionally, some marinas were closed, which meant boating activity near the coast was also decreased.</p> <p>On island, less cars were on the roads which improved the air quality. Some respondents said that they would like the culture of conducting business digitally to continue as it would keep cars off the roads.</p>	<p>The negative impacts of the transportation sector, particularly vehicle and marine-based transportation is tied to use of polluting engines, and density of activity in certain areas. In addition to promoting a work culture that does not require travel by vehicle (discussed above), respondents wanted more environmentally friendly alternatives. Lower emission engines for boats were similarly suggested. Respondents also proposed more rotation for shipping activities to avoid over-exhaustion of frequently travelled areas.</p>

3.1.3 Proposed solutions for a sustainable environment

Table 6 describes how respondents categorized potential ways of maintaining the benefits which arose from reducing pressures on the natural environment (in relation to COVID-19 lockdowns) into the future.

Table 6: Reported impacts of COVID-19 lockdowns on nature in TCI and suggested actions to maintain these benefits

Theme	Reported impacts	Proposed actions
<p>Cleaner environment</p> 	<p>The most observed positive impact was the reduction in pollution arising from tourism activity. Pollution was described mainly in the context of waste, littering, noise, air and water.</p> <p>However, increases in pollution were also raised as a key <i>negative</i> impact arising from COVID-19. This was described as neglect and increased local littering during the pandemic.</p> <p>Similarly, the resumption of tourism since the pandemic has increased its impact on the environment</p>	<p>Actions to maintain the cleanliness of public spaces and nature post COVID-19 (e.g., public cleanups and improved waste management) were noted as the main category for sustaining positive environmental impacts from COVID-19.</p> <p>Education about the environment and civic participation in decision-making regarding environmental management were also noted as important.</p> <p>Consistent enforcement of laws and regulations for environmental protection (e.g., fines for uses of the natural environment).</p>
<p>Environmental management</p> 	<p>A reduction in pressure on the environment was noted as the most positive impact on marine and terrestrial habitats, alongside decreased fishing activity and pressure and visible recovery of marine and terrestrial species.</p> <p>However, negative impacts were also noted in relation to increased seaweed and seagrasses on the beach (since clean ups stopped over the pandemic)</p>	<p>The main emphasis was on enforcement of existing laws and regulation, use of temporary no-go zones, environmental monitoring and educations.</p>

The SE survey respondents identified several specific training ideas to support sustainable recovery from COVID-19 in TCI. The following areas with linkages to the environment were most regularly raised by respondents:

- Most responses outlined household and small-scale initiatives to support nature e.g., local gardens and hydroponics to reduce indirect dependence and impacts on nature from imported produce.
- Education and awareness-raising (of changes in the natural environment and its impact on people) was regularly mentioned in the survey and key informant interviews, as well as during the NCIP interviews, as necessary for supporting a sustainable recovery.
- Other areas of technical expertise e.g., aquaculture, waste management and science and technology were also mentioned.

3.2 Business Attitudes survey findings

3.2.1 Survey sample

The BA survey was carried out in January – April 2023 and had 24 responses, with half of the respondents (n=12; 50% of sample size) from the tourism sector. Other sectors represented include transportation (n=2; 8% of sample size), real estate (n=2; 8% of sample size) and retail (n=3; 13% of sample size).

3.2.2 Business impacts on the environment

Businesses were asked questions regarding the extent to which they considered their businesses dependent upon natural capital in TCI. Figure 2 and Figure 3 demonstrate respondents views on dependencies (Figure 2) and impacts (Figure 3) on nature.

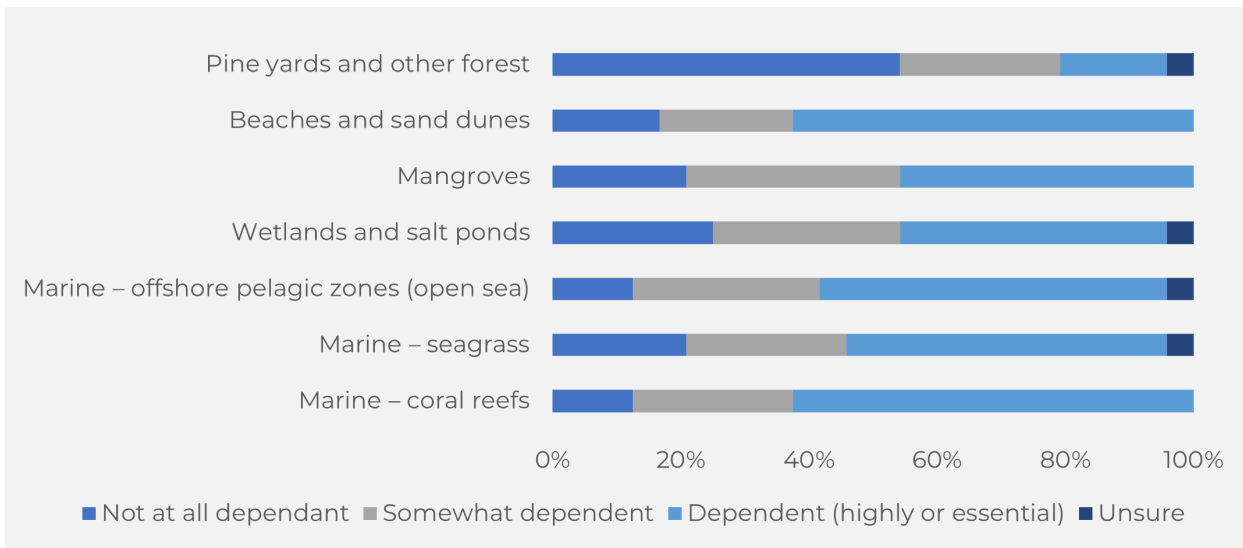


Figure 2: Business perspectives on dependency of organisation on various aspects of the TCI environment

Many organisations consider themselves dependent on the marine environment. Most businesses reported that they were highly dependent upon the coral reefs (n=15; 63% of sample size), beaches/sand (n=15; 63% of sample size) and offshore marine environment (n=13; 54% of sample size). This is unsurprising given the respondents were majority represented by the tourism and marine fishery sectors.

“It (the marine environment) (is) very important. In order for me to get fish. Conch and lobster. I need to (t)he mangrove. And the sea to keep clean”.

“My clients choose TCI as their destination partly because of our global reputation for having the best beaches in the world.”

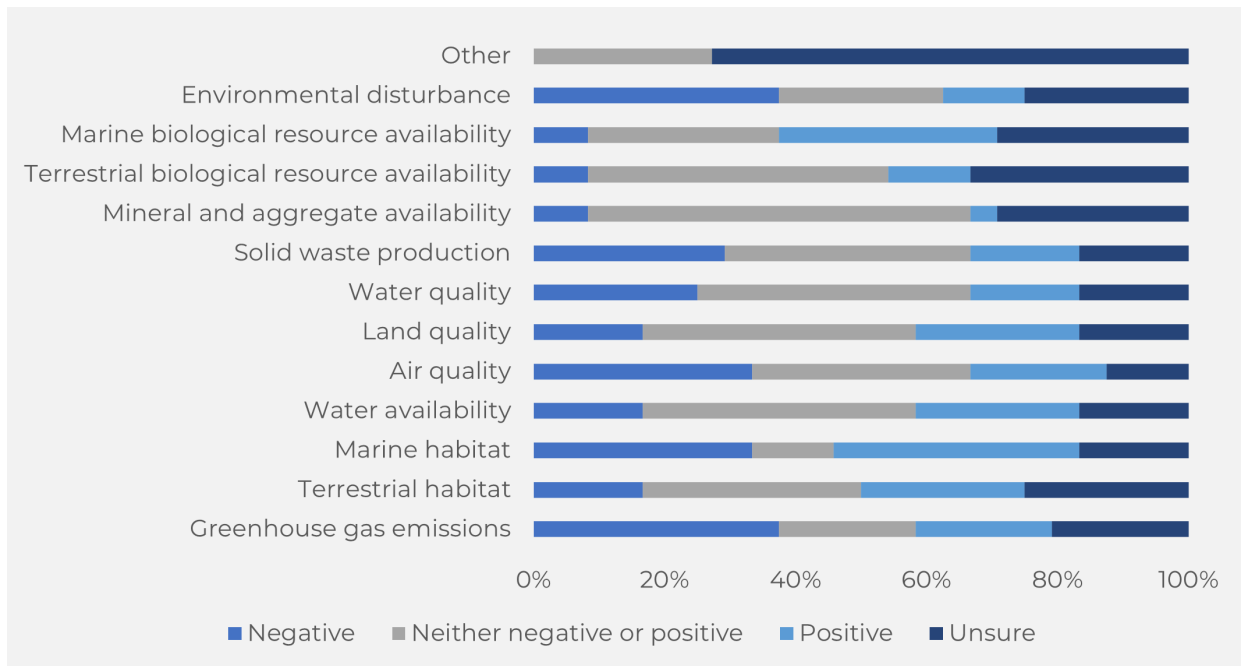


Figure 3: Business perspectives on impact of sector on various environment aspects

Notably, several businesses reported the importance of *both* the terrestrial and marine environments to their organisation, emphasising the importance of the entire TCI ecosystem rather than its constituent parts.

“The health of marine environment is critical to the scuba diving industry, alongside the health of the natural environment of the island itself (and) it all ultimately reaches our oceans.”

“The health of the marine environment and the land are both important because they are codependent. Although we are a marine business, the ecosystem has to be in balance regardless of being on land or sea for both to be healthy.”

“Somewhat dependent (on the natural environment) as the health of all these natural assets contribute to the overall economic well-being of the country and the businesses therein”

In terms of impacts upon the environment, there was a more even balance between businesses reporting positive or negative impacts on the environment.

- Businesses reported negative impacts most regularly on climate (n=9; 38% of sample), marine habitat (n=8; 33% of sample) and air quality (n=8; 33% of sample).
- Where positive impacts were reported, marine habitat (n=9; 38% of sample) and marine biological resource availability (n=8; 33% of sample) were most regularly mentioned.
- Both positive and negative impacts were regularly reported by the tourism industry. That is, specific activities of businesses in the sector can vary significantly, and the number of respondents was high relative to the other sectors in the survey.

Notably, many businesses reported either no perceived impact on nature or positive impacts. Respondents more readily referred to the dependencies that their business sector has on nature, with less discussion on direct or indirect impacts that their businesses may have on the natural environment.

3.2.3 Proposed solutions for a sustainable environment

Figure 4 illustrates the proposed management action categories that respondents mentioned in support of maintaining and protecting the natural environment. Education and research, and regulation and enforcement, were the most mentioned action categories, with some respondents more in favour of cleaning and maintenance at regular intervals.

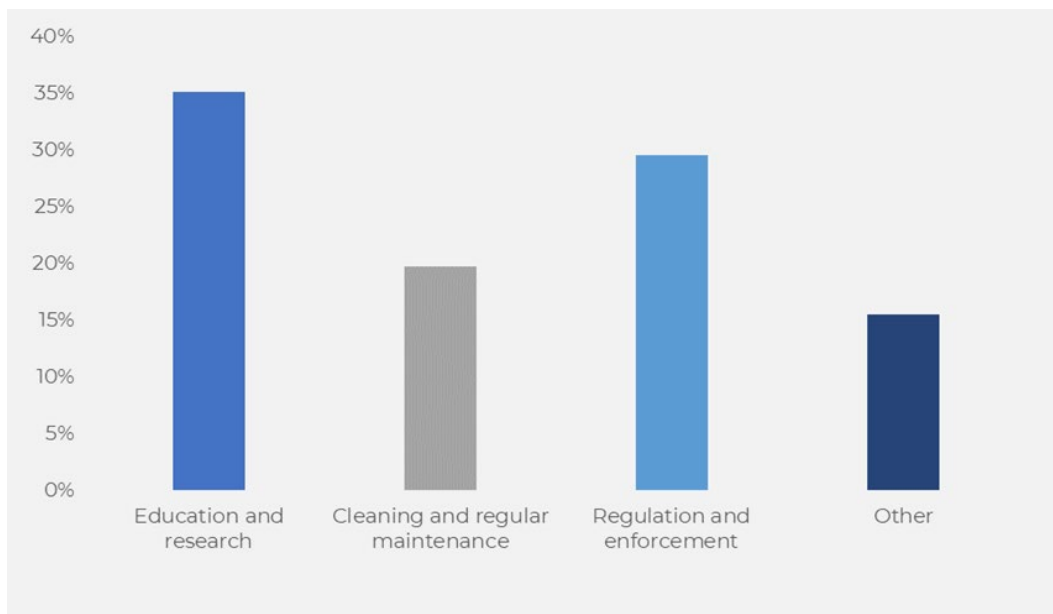


Figure 4: Categories of management actions reported to support maintenance and protection of the natural environment.

In terms of education and research, respondents gave marine research, tourism and youth education, and improved education around boat licensing and operating as examples:

"Providing access for research and conservation by volunteering services of boats to scientists and conservationists to observe, etc. Educate guests and crew about the natural environment, eco-tourism etc. so they in turn are more aware of their impact and become more responsible in their actions while in the TCI "

"Establishment, maintenance, enforcement and protection of mooring locations to encourage tourism safely and environmentally friendly".

"Training to increase awareness of impacts on the natural environment arising from land clearance, waste disposal, importation of "forever" chemicals and materials that cannot be reclaimed/re-used or re-cycled. Such as batteries, solar panels, electric motors using heavy metals, etc."

On regulation and enforcement, respondents cited improved, frequent and consistent enforcement measures, greater safety and licensing procedures, and waste regulation.

"... For example, the government needs to impose fines for littering and doing education campaign for the public and for school children about not littering".

"Outreach through workshops on natural environment, newsletters etc. DECR (Department of Coastal Resources) is already doing some of this! Perhaps establishment of a 'stewardship certification' - if person/tour company attends 'x' number of courses offered (i.e. courses on cultural history as it relates to marine environment, natural history of the islands, current threats to environment etc) they can earn that rating."

In terms of cleaning and maintenance, respondents mentioned funding for cleanup initiatives such as bottle return refunds and using government taxes and fees for cleanups. Those actions in the "other" category include investment in new infrastructure and levy raising (i.e., taxes and fines on the private sector).

"Have a public campaign against littering to make it not cool to litter. Impose penalties for littering. I see people throw things out of their car windows. Tourists comment on the garbage and the island is supposed to be 'beautiful by nature'."

“The private water sports sector already contributes to and supports the improvement of the natural environment through associations that help monitor usage of resources and promote good practices; through educating visitors about the importance of the marine environment (by helping them enjoy it responsibly) and by helping fund and promote funding for mooring balls to help protect the reefs”.

4. NCIP interviews

The main emphasis of a natural capital investment plan centres around the concept that investments in actions which benefit nature also benefit people. This section outlines the key themes highlighted during the NCIP interviews with local businesses, organisations and government departments working in the natural capital space in TCI.

- **Section 4.1:** Attitudes and perceptions regarding impacts of business activities on nature in TCI
- **Section 4.2:** Natural capital investment to date, including commentary on business views on motivations, barriers and condition to investment in natural capital, potential natural capital revenue streams, and on-island organisations which would support and deliver sustainable development on island.

4.1 Attitudes and perceptions regarding impacts of business activities on nature in TCI

Of the businesses interviewed, all described extensively the benefits of the environment. In particular, the marine environment was mentioned as critical to the success of their businesses and the sectors interviewed. This is consistent with the BA survey.

When asked about the aspects of the environment which supported their sector the most, different respondents described various physical aspects of nature as important for their business. The coral reefs were mentioned most regularly noting its capacity to support both a) abundance and b) *diversity of marine life* (e.g., iguanas, turtles and humpback whales), as well as c) the *protective role of the reef* for the coastal communities and resort/hotel developments. It was also noted by a couple of respondents that *consistency* was important in terms of the capacity of the reef to support fish stocks which support fisheries, providing reliable supply to hotels and supermarkets, and tourist operators that rely upon the species.

“Consistency...is important. If supplying hotels and tourist sector, planning timescales are weeks in advance and feeding hundreds of people. We can import the right quality at the right quantities, hence why there are more imports.”

Respondents also mentioned the dunes and beaches regularly, noting the aesthetics, white sand, and the vivid blue waters. The beaches support a busy tourism industry,

supporting hotels and resorts, other high-end real estate (e.g., luxury villas) and on-reef and reef-adjacent tour operators. It is the major attraction for tourists and a major pull for the expatriate community, as a couple of respondents suggested:

“The beach, ocean and freshwater are the islands greatest assets.”

“[We are] always interested in bettering TCI. That’s our backyard. Without that, we don’t have any businesses.”

Next, respondents were asked regarding their sector’s motivations and attitudes towards mitigating or minimising these impacts, and their perceptions of the sector’s views more broadly. Many respondents listed contributions to environmental management (see Table 7 in the next section).

When probed about the behaviour of the sector more broadly, the views were split. Many respondents across sectors suggested that their sector is generally conscious of environmental issues. This was particularly prevalent in (but not limited to) the tour operator sector. When probed on these responses, respondents suggested that their sector was broadly aware of its dependency on the qualities of the natural environment in TCI. Many respondents stated or inferred that action was undertaken often when in the best interest of the business itself to follow best practice.

“Water is the most important thing. The whole idea is to showcase the island.”

“Generally speaking operators are conscious and don’t remove or touch anything.”

“Don’t touch what’s out there...You can go conch diving, but you can’t touch the conch.”

“Don’t touch the mangroves, don’t get off, don’t stick paddles inside the sediments etc. There might be organisms there that you can’t see.”

However, some respondents did note that some businesses in their sector were not conscious of the impacts of their business on nature and identified a range of impacts from either their sector or others on the island (see Table 7).

Table 7: Report impacts of businesses on TCI natural capital

Category of human impact	Summary from stakeholder response
Physical damage to marine and coastal habitats	Human impacts were primarily noted regarding on-water activities, including divers touching the reef, sticking paddles in sediment, feeding or catching turtles, inappropriate handling of the Queen Conch shells, and damage to the corals or ocean floor from anchoring or poor mooring technique.
Terrestrial development	Native shrub and wildlife cleared corner-to-corner and generally not preserved where possible. Stakeholders felt that rules were not generally followed or upheld; some concerns that Environmental Impact Assessment are “lip service” and either (a) not undertaken, (b) are inadequate, or (c) not enforced. No requirement to report environmental data or monitor impact of operations on the environment after the development is finalised (although some water quality and waste management requirements in place for large resorts). There isn’t a holistic approach to housing across the islands, with one respondent noting <i>“With more development requires more water, more electricity, more staff etc. There doesn’t appear to be a plan for expansion in line... tourism.”</i>
Pollution	Stakeholders were concerned about pollution from illegal dumping of fishing waste and oil from processing in South Caicos and Providenciales. Respondents noted the difficulty in enforcing regulations at sea. Many respondents believe pollution (including noise) is increasing as the quantity of tour operators on water increases. Littering in coastal waters has also increased, reporting impacts on recreation for locals. One respondent also remarked that there is not a culture of 'group policing' on environmentally impactful activities like dumping within the local fishing community.
Unsustainable extractive practices	Unsustainable behaviour included use of bleach in lobster fisheries, spear fishing and Hawai’i slings. There are subsequent knock-on impacts on the fisheries since fishers must move further out to catch smaller fish and are subject to further pressure to catch more, perpetuating the unsustainable cycle.

Where respondents were asked about motivations or reasons for unsustainable activity by business, four categories were suggested. Firstly, **local businesses aren't aware of their impacts on nature**. There are a range of reasons why this may be the case, but likely due to a) a lack of understanding, b) the nature of the environment itself (e.g., it is silent, invisible and mobile, c) based on upbringing and family traditions:

"All they know is what they see."

"[there is a] disconnect...people go down there and don't necessarily realise what they're seeing."

"Don't know [any better], grow up seeing parents do it...grown up doing it a different way."

"There is a disconnect with the marine environment because operators don't know really what they are looking at and therefore can't recognize changes in the environment."

Secondly, **some businesses may be aware of their impacts but don't care about their environmental footprint**. These views were generally expressed where the environment is viewed to make a financial profit.

"The ocean is seen like an endless resource."

"Tourism businesses are here for profit. The end."

"People can make money from more "budget friendly" (but not great environmental practices) operations through lower brow tourism."

"Short term greed...if you want to make a quick buck you start a motorboat company."

Thirdly, **small businesses can be particularly vulnerable** (socially and financially) with more pressing issues than sustainability and environmental matters. This may lead to destructive practices when trying to make a living.

"Some operators believe that if they're not feeding the fish and catching turtles than someone else will... "we gotta get it while we can" is the sentiment."

Finally, since monitoring certain behaviour is difficult given the expansive island system, **there is opportunity to engage in environmentally harmful practices and avoid detection**. Combined with the financial incentives associated with exploitation of the natural environment, this makes such behaviour more likely.

"3 or 4 people doing the checks (in the marine parks)... they are overstretched."

"There isn't an organization that management and monitors the parks etc. DECR isn't in the national parks, there are no park wardens."

There were also split views on whether smaller or larger operations have certain attitudes or impacts on the environment. Two conflicting viewpoints are outlined below.

"Bigger companies are very conscious...they know the service they provide has a lot to do with the nature and the reef...Smaller companies are in it for the money."

"The larger they (tour operators) get, the less conscious they get."

In general, however, most respondents across all sectors noted **changes in the natural environment arising from climate change**. Common themes that were mentioned by interviewees were warming sea temperatures, stony coral tissue loss disease, and the impact of hurricanes on the reef. When asked about whether human or climatic impacts were most important, the consensus was that warming sea temperatures was the most significant driver of the loss of life of the corals and the species it supports.

"It is a silent concern that the corals will go".

"There are seasoned divers who come year in year out who note some changes in the wildlife and the health of the corals."

"More so than tourism, global warming has had a significant impact."

4.2 Current investment and management of natural capital in TCI




The next theme of questions explore the current investment landscape. This section includes a summary of responses to questions regarding:

- The current contributions of businesses towards natural capital in TCI as a proxy for potential demand for investment in nature by local businesses, as well as willingness to invest in future projects
- Key investment conditions and barriers which would support further natural capital investment and successful natural capital management more broadly
- Options to develop natural capital management more broadly in TCI, and

- Governance, including those actors currently engaged in natural capital management.

As indicated above, many businesses already currently contribute towards environmental or social projects. These organisations already undertake various actions themselves (see Table 8) and the significant majority of these involve contributions towards the TCI Reef Fund.

Table 8: Environmental management activities undertaken by businesses interviewed.

Type of activity	Environmental management activities identified by businesses	Type of business identified
Protecting nature 	Local beach clean ups	All businesses
	Use of coral safe sunscreen	Tour operators
	Self-policing and monitoring	Tour operators, fisheries
	Reduce single use plastics	All businesses
	On-site recycling	All businesses
	Composting	Retail
Improving nature 	Lionfish predation	Tour operators
	Coconut tree planting	Hotels and resorts
	Coral-replanting	Tour operators
Research and education 	Internal research programmes, including training and education and species-specific research	All businesses
	Donations to the reef fund, including in-kind activities (e.g., fill up dive tanks, monitor coral health)	All businesses

Contributions are not solely monetary, but also in-kind time or in respect of specific projects or activities. These types of activities include (a) monetary contributions, (b) supporting the mooring system that TCI Reef Fund established, including providing training on how to use them, (c) refilling air tanks for the fund, and (d) monitoring coral health.

When asked about the conditions or factors which would influence their decisions to invest or contribute *more* (i.e., in addition to current investment) towards natural capital projects, some common themes arose. Some interviewees raised **governance** as an important topic for investment. It was suggested that any management by government would not necessarily be desirable, noting some concerns around how current monies are spent:

"Everybody would prefer separate government structure"

"I doesn't know if the government would use the money towards the environment or if it would go into someone's pocket"

"We pay for operating in the natural park and aren't sure what the money goes to".

"To hook up to a mooring, the government makes about \$300,000 per year in annual mooring fees. None of this money goes back"

However, one organisation noted the importance of government in driving demand and supporting the credibility of actions under a natural capital investment plan.

"Sometimes when the private sector runs with initiatives that doesn't mean that communities adopt it... Organisations are asking for guidance but are not getting this from government"

This factor was mentioned alongside both **enforcement and monitoring** and **legislative support**. Interviewees suggested the need for the ordinance to be both (a) consistent with the aims and objectives of investment in nature and (b) upheld in a consistent and punitive manner.

"Important of legislation in enabling investment in the right way. If disincentive, no sensible business is going to invest in it"

"The punishment needs to be a deterrent"

"3 or 4 people doing the checks [in the marine parks]... they are overstretched"

"There isn't an organization that manages and monitors the parks etc. DECR isn't in the national parks, there are no park wardens... There needs to be a group that is showing people what to do and enforcing it, such as not driving boats at full speed in certain areas to avoid hitting animals."

Some respondents noted the importance of self-policing on the water in particular (i.e., for businesses to intervene or report when they see unsustainable behaviour or damaging practices). There is mixed evidence regarding both the existence of this and, when undertaken, its efficacy in the fishery sector. One respondent noted that there is generally not a culture of self-policing and reporting in the fisheries sector, whereas a few tour operators did suggest that their sector may be willing to comment on sub-standard behaviour at sea:

“If I know the person I’ll say something...”

“If you go out and see somebody doing something, you have to say something”

A few interviewees had some insights regarding natural capital market opportunities specifically relevant for natural capital investment. Firstly, regarding **parametric insurance**, despite reinsurer interest in the region, current rates are much higher than for traditional coverage and uncompetitive in the market. For financial products like parametric insurance, which are novel and relatively untested in natural capital markets, the cost of these revenue streams remains uncertain in the context of an island like TCI. Whilst it was indicated that risk-pooling certain sector products (e.g., for water sports operators) may be a solution, vulnerability of the island’s infrastructure to natural weather events, coupled with increasing intensity of such events, may price ordinary businesses out of the prospective market.

Secondly, in the case of **off taking**, interviewees indicated a willingness to procure more local produce. Interviewees noted the mutually beneficial relationship between tourism and fisheries and local produce for example, and that tourists were generally willing to pay more for local fish. However, the variability in quality and quantity of local catch was noted alongside difficulties towards the end of the fishing season as stock sizes fall.

“Consistency...is important. If supplying hotels and tourist sector, planning timescales are weeks in advance and feeding hundreds of people. Can import the right quality at the right quantities, hence why there are more imports”

For the fisheries sector in particular, but more broadly, **tourism was suggested as a good diversification for individuals or businesses** which are heavily reliant on one aspect of nature. Various suggestions were raised for the fisheries sector to develop further skills and alternative businesses practices, for example a) taking tourists on boats for fishing experience and b) selling crafts using ocean materials (e.g., conch shells).

Businesses also mentioned **a variety of fees and licenses required to undertake business on TCI**. A selection of these are highlighted in Table 9 below.

Table 9: Outline of a selection of fees, permits and licenses noted during business interviews

Category of fee	Description	Amount (\$)
Business licenses	Required to undertake economic activities in TCI. Additional licenses possibly required for certain sectors, for example captain licenses, CPR, fire safety, TIDES training.	These vary widely depending on sector and business activity. Can range from \$150 to several thousand annually.
Marine park licenses and fees	There are both a) restrictions and b) fees for entrance to and use of the marine parks, reserves and sanctuaries for tourism purposes.	These vary widely depending on the specific activity and type of protection.
Destination management fees	Charge to visitors collected by airlines and disbursed to the management fund.	\$10 per visitor entering and leaving TCI.
Tourism tax	Sales tax added to products and services which operate in the tourism and restaurants sector.	12% added to gross product fee/bill.
Carnival head tax	Fee charged to cruise ship passengers upon arrival in Grand Turk.	Not known

In spite of various business licenses, the tourism tax, and various fees for using marine parks and reserves, the ability to channel these monies for natural capital investment is unclear since funds are either a) directed towards the total government fund with no pre-specified uses, b) are directed to specific uses as prescribed by legislation, or c) are required for other government priority investment (e.g., in developing infrastructure such as the airports and marketing).

Finally, throughout the interviews various bodies and organisation were mentioned as having important role in both a) the current natural capital management on TCI, and b) a prospective natural capital investment structure. These organisations are outlined below (Table 10) alongside brief descriptions of their activities.

Table 10: Organisations mentioned during business interviews

Existing organisation	Type of organisation	Description	Linkages with natural capital management
Invest TCI	Statutory body	Provides investment to local businesses via businesses support (including technical assistance), duty concessions and cash grants to set up local businesses covering selected industries and economic sectors.	Supports sectors which impact and rely upon the natural environment, including agriculture and fisheries, tourism operators, renewable energy and waste management, but do not a) monitor the environmental impacts of their grantees, or b) link finance to social or environmental metrics.
TCI Reef Fund	Environmental Non-Government Organisation	An NGO which undertakes research, advocacy, education and conservation projects to enhance, protect and restore the TCI marine environment.	Current recipient of donations from many local businesses to support protection, restoration and enhancement of the reef, as well as education surrounding its benefits to local people and business
Grand Turk Enhancement and Sustainability Agency	Statutory body	Body responsible for managing infrastructure projects and services related to heritage sites, historic buildings, and cultural landmarks.	Fund monies can be allocated to preservation, enhancement or restoration of environmental sites but remit is not limited to natural capital or environmental issues.
Experience Turks and Caicos	Statutory Body	The destination marketing organisation of TCI. Its role is to promote its three conceptual pillars; inclusive growth, sustainability, and competitiveness.	Statutory obligation towards sustainable development and consideration of the impact of tourism and terrestrial development on TCI natural capital.
Community Resilience Hub	Public initiative	Primary contact point for information regarding different training and education programmes. So far it has coordinated training in fisheries, agriculture, waste management and composting.	Supports education and training of the most vulnerable sectors and subcommunities in TCI. Remit to help local communities diversify their income to support transition to sustainable and resilient livelihoods.
TCI Fishing Cooperative	Voluntary initiative	Promotes sustainable fishing practices and supporting the livelihoods of local fishers across TCI	Supports vulnerable communities which depend on natural resources.

5. Discussion

This section discusses a) distributional aspects of natural capital management in TCI, b) business perspectives on natural capital investment, and c) market-based opportunities for further exploration in TCI. A summary table with the list of recommendations from the stakeholder engagement across the two surveys and NCIP interview are presented by topic and outlined in the executive summary.

5.1 Distribution and beneficiaries of natural capital investment in TCI

The benefits and beneficiaries of natural capital assets in TCI differ depending on various factors, including access to nature, property rights over natural resources, availability, and spatial location. These benefits are not limited to just an improved flow from a given ecosystem service (e.g., larger fish catches or greater enjoyment of TCI nature due to cleaner beaches), but also indirect factors including economic (e.g., creation of job opportunities) and social (e.g., community engagement).

There are systematic differences across the TCI island systems between social groups with regards to those who can make use of, enjoy, or more broadly benefit from, nature. This difference in distribution is likely to influence how natural capital investment is used (e.g., which natural capital projects are prioritised, availability of investment for these purposes), as well as attitudes and perceptions towards investment. On this basis, environmental management actions intended to improve the condition of natural capital in a certain location are likely to deliver ecosystem services to specific beneficiaries.

Notably, NCIP engagement outlined differences in how tourism and fisheries manifests on each of the islands. Cruise tourism on Grand Turk brings a different set of challenges, risks and rewards to low density, nature-based tourism opportunities in Middle and South Caicos. High volume tourism on Providenciales in comparison puts natural capital (e.g., the reefs, dunes, and water supply) under increasing demand. The pressures on water supply differs between Grand Turk and Providenciales, because of both the availability of the resources and pressure from resort and villa development. Access and rights to marine resources on the different islands is distinct, as is the influence of foreign vessels competing for sale on the export market. Socio-economic trends (e.g., environmental education levels and aging sectoral population) are also a compounding factor in some sectors.

Both businesses and communities noted the impact of climate change in terms of a) increasing frequency and intensity of natural events, and b) reduced resilience of the ecosystem to deliver sustained and consistent benefits over time (i.e., damage to the reefs). These impacts are not limited to single business sectors, rather across a range of sectors which depend on the consistency of nature to deliver benefits. The impacts of climate therefore increase existing human pressures, making it more costly in the short- and long-term to be environmentally conscious, (e.g., use of bleach to increase lobster catch in the short-term; overuse of certain areas of the reef for tours).

In addition, these business sectors and beneficiary groups impact one another in various ways. The existence of tourism benefits the fishing sector for two main reasons. Firstly, respondents reported that tourists may be willing to pay a premium for local fish and that consumption by tourists is a higher value market than for domestic consumption. This hypothesis however is largely untested. Secondly, tourism provides opportunities for fishers to supplement their financial wellbeing without loss of the cultural and historic aspects of fishing. However, respondents suggested that whilst these opportunities exist in principle the ability or willingness of the sector to diversify remains limited. This highlights the importance of not only stakeholders' groups which promote the needs of the sector (i.e., TCI Fishing Cooperative), but also the coordination of multiple associations which address different facets of sustainable development (e.g., Invest TCI and their business' advisory function; the Sustainable Tourism Committee with representation from the resorts, business and tour operators; TCI Reef Fund with research and restoration of coastal habitats).

Recommendation 1: The NCIP should promote business opportunities which support the most vulnerable communities and reduce their dependence on specific natural capital assets (e.g., single species fish stocks). In the short term, the synergies between the tourism sector and traditional local fisheries provide a good example of where opportunities for diversification exist, but a long-term plan to sustainably manage dependence on the tourism sector is needed to enhance community and business resilience.

Recommendation 2: Further mapping of the roles, responsibilities and capabilities (including current skill and knowledge gaps) of key on-island organisations is recommended. This includes outlining how they contribute to natural capital management, and their willingness to participate in the NCIP. Examples include Experience TCI, TCI Reef Fund, and social initiatives such as the Community Resilience Hub, which already have significant trust within TCI society.

Recommendation 3: An island-based natural capital approach that tailors investment opportunities to the local environment and its current use, is strongly recommended given the difference in existing business opportunities, social capital and infrastructure across the islands (e.g., reflecting the differences in existing tourism and fishing activities and patterns (including intensity and existing infrastructure) in Providenciales compared with Grand Turk).

5.2 Business attitudes and perceptions to natural capital management and investment

The research has demonstrated business understanding of their dependencies on both the terrestrial and the marine environments. Interestingly, there is strong understanding (and appreciation) of the linkages between terrestrial and marine habitats, in particular how human pressures have negative impacts on the marine environment and business activities. Adopting a place-based investment approach should not just be organised around where the natural capital benefits are enjoyed (e.g., demand-based), but also where actions that influence the quality and extent of natural capital assets arise (e.g., supply-based).

It is also notable the extent to which uses and users of the natural environment overlap. Some of these relationships appear synergistic (e.g., resort tourism on Providenciales provides an opportunity for tour operators), antagonistic (e.g., potential conflicts between fishers and tour operators), and somewhere in between (e.g., mixed views on the impact of cruise tourism in Grand Turk). Since many sectors depend upon and impact the natural environment, businesses are linked to both the demand for natural capital investment and supplying actions which promote the recovery of nature. With the right legislative and enabling policy framework in place, an NCIP should therefore consider compatibility with the needs of local businesses.

However, overlapping uses, users, and competing pressures creates uncertainty in outcomes from environmental behaviour and therefore since there are multiple actors which influence the condition of nature. Supporting the protection of nature is therefore a key component of natural capital management in TCI. The business engagement in particular noted numerous reasons for unsustainable business practice and impacts on nature. Classification of these reasons and motivations is important since each suggests different prospective solutions and actions to support natural capital investment. The stakeholder engagement has highlighted the following areas to explore:

- Businesses may simply not notice impacts arising directly from specific activities since they are difficult to detect (i.e., not visually obviously for those without training or education in marine or terrestrial ecology) or manifest slowly over time such that the change is difficult to perceive (i.e., a shifting

baseline). In such cases, education and training may be an effective solution. This is a consistent finding across each survey.

- Some businesses may not care about their impact on nature. In these cases, there is a greater case for tightening enforcement and monitoring to detect and deter certain activities. Where this is the case, enforcement needs to be punitive and credible to users of natural resources. This is an important aspect for investment since any uncertainties around impact or success of environmental management creates risks around returns to investment. Understanding capacity for enforcement, and the risks created for investors, should be explored in the initial stages of the investment plan.
- Certain actions or behaviour may be opportunistic and/or users of natural resources are highly resource dependent. This may be due to a lack of finance or alternatives in some sectors (e.g., prohibitively high costs) or the structure of economic incentives (e.g., more beneficial to undertake illegal or unsustainable practices given the perception of low enforcement rates or risk of detection) which deters wider environmental action. A key aspect is likely to be timescales; the benefits from natural capital management or environmental action arise more slowly than the benefits from overexploitation and are not shared equally between stakeholders. Both the enforcement of legislation and support to diversify business activities in the short-term is needed to support businesses take a long-term view on nature.

However, not all impacts are directly human based. Climate change and natural processes more broadly also have negative impacts on natural capital. Often the source of impact is unclear, particularly the case where availability and quality of environmental data does not allow for in-depth analysis and research. Many businesses, mostly the tourism and fisheries sector, noted the impact of climate change on the reefs. Climate change therefore increases the necessity of an NCIP to local businesses and communities reliant upon the environment, and further work is needed to better understand how to adapt or reduce business activities during certain events (e.g., coral disease, warming sea temperatures), as well as support nature recovery (e.g., coral or mangrove replanting and restoration).

Overall, the stakeholder engagement suggests a high willingness to support environmental management projects. Many organisations described different actions and contributions to environmental initiatives. Environmental management actions are also likely to be mutually reinforcing, for example education and outreach initiatives would hope to promote greater up-take or investment in clean-up and sustainability initiatives.

Recommendation 4: Training, education and outreach initiatives to help businesses understand their short- and long-term impacts on natural capital are important as part of transitioning further towards sustainable development. This can be achieved by inclusion of natural capital training under existing programs, or new initiatives or programmes, and should be linked to enforcement of existing rules, regulations, and principles. Undertaking these activities alongside Recommendation 1 will maximize the likelihood of successful management and local buy-in.

Recommendation 5: The natural capital investment plan needs to be supported by the necessary vision, long-term natural capital strategy and ultimately legislation to channel resources which facilitate enforcement of legislation to protect nature (on land and sea), monitor natural capital projects and support existing actors in environmental management on TCI.

Recommendation 6: The TCI ecosystem accounts provide a practical structure to systematically record and collect environmental data. For investment, accounts help identify and prioritise opportunities for enhancement and restoration (i.e., the best use of investment monies), and evidence project impact (i.e., the success of investment). The NCIP should leverage and adapt these structures for different beneficiaries (including investors) at relevant scales.

5.3 Natural capital market opportunities

The background study presented opportunities for natural capital investment in TCI. The surveys and NCIP interviews offer insights into different revenue streams and market opportunities highlighted in the Background Study. These are discussed below.

The stakeholder engagement suggests that there may be scope for **payments for ecosystem services**. These could include carbon credits from restoration, creation or enhancement of seagrass or mangrove habitats, biodiversity mitigation payments to compensate for damages arising from development, or risk-mitigation payments to support protection of the reef. References to carbon markets were not regularly highlighted by local businesses; mentions of carbon credits generally arose from environmental NGOs or public organisations. In comparison, challenges surrounding the impacts of development and the protective role of the reef for businesses and resorts highlight higher relevance of biodiversity and risk-mitigation payments. Enabling payments for ecosystem services requires clear definitions around what benefits are delivered by what

environmental actions, and clear property rights are needed for the provider of the service to ensure enforcement. On-reef Conflicts occur between uses and users, which make measurement and attribution of the impacts of natural capital management challenging. These conflicts also create uncertainty regarding the success of reef management activities, in the absence of supporting policies and enforcement that reduces pressure on the reef. This is likely not so relevant for biodiversity compensation payments if on-land property rights are more clearly defined, but this would need to be scoped more precisely. A lack of baseline environmental data also makes measuring success difficult although it is understood that there is much ongoing work on-island in this area.

There are a **variety of fees, levies and permits** which facilitate the use of natural resources in TCI. Tourism taxes, licence fees, park entry fees and the destination management fee all offer revenues streams with the possible opportunity for channelling into natural capital management. How significant an opportunity this may be depends on government policy, legislation and competing priorities for public monies. Analysis of natural capital accounting and stakeholder engagement however highlights that development to support people and management of the natural environment are complimentary; people and business benefit from nature and, therefore, investment in nature in a holistic manner supports investment in TCI business and society. Further work is needed to understand the legal and political options for guaranteeing funds for environmental management, and the extent to which government monies can contribute towards a TCI natural capital management structure.

The existence of tourism presents a significant opportunity for both **supply chain investment** and **sustainable business engagement**. The stakeholder engagement highlights both demand-side and supply-evidence; that people want to pay more for local produce and nature-based tourism, and that businesses want to supply this. There is also an opportunity to align nature-based tourism with the TCI branding “Beautiful by Nature”, along with other potential certification to differentiate sustainable businesses, new government training programmes and use of national parks (e.g., the TIDES programme), and using this to educate, train and promote sustainable development. Furthermore, linking licenses and/or grant monies to environmental actions on land and sea which minimise environmental impact is an option.

However, the NCIP should not be designed to depend upon the contributions of tourism. Similarly, it was noted across engagement that the TCI economy is dependent on tourism and that diversification would improve both a) resilience of the economy, and b) alleviate some of the pressure which tourism impose upon nature. The NCIP is not a short-term plan and should be designed to leverage existing opportunities whilst promoting business diversification and innovation to alleviate (or reduce) impacts of tourism on nature.

Recommendation 7: The NCIP should support additional research efforts to monitor the extent and condition of the environment across TCI. This research will inform a) priority habitats and locations for management (as described in Recommendation 6), and thus b) the scale and suitability of payment for ecosystem service opportunities across TCI.

Recommendation 8: Develop a case for ringfencing a percentage of taxes, fees, incomes and levies for use in natural capital investment, and assess how much this may generate in initial funding towards natural capital management in TCI. Further engagement work will be needed with institutional investors to assess demand for natural capital products from TCI.

Recommendation 9: Develop the business case for the nature-based tourism and certification market in TCI, including for natural capital products (e.g., fish) as well as services (e.g., tour operations on-water, local carbon offsetting for on-island activities). This should include the risks and challenges associated with tourism in TCI, as well as the strategy for managing the sustainability of economic dependency of TCI on the tourism sector.

6. Next steps

Business and community attitudes and perspectives on natural capital management in TCI will be used to inform the following next steps in the project:

- **Technical options report.** The overall aim of the report is to develop a prioritised shortlist of sustainable finance opportunities which can be appraised and progressed towards implementation under the NCIP. This report will outline the opportunity markets and assess the size of the respective opportunities in the TCI context, outlining those with the most potential and are commercially viable for progression under the NCIP.
- **Accessible framework.** This will summarise key outputs and recommendations to progress as part of the initial stages of the NCIP.
- **Capacity building and training materials.** Develop materials and deliver training to support successful implementation and ongoing assessment of sustainable finance opportunities in TCI.

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Appendix 1: List of organisations engaged in NCIP interviews

Table 11: List of businesses interviewed

VisitTCI	Island Vibes
Dive Provo	Big Blue Collective
Ariza	Provo Water
Grand Turk Diving Company	BCQS
Deep Blue Charters	Missick and Stanbrook
Osprey Hotel	TCI Reef Fund
Grand Turk Cruise Center	TCI Fishing Cooperative
CSC Insurance	Invest TCI
Green Revolution	Turks Tour Company
Graceway IGA	The Art Studio
TCHTA (including their Sustainable Tourism Committee)	Cardinal Points
Seven Star Resorts	TCI National Trust
Royal Society for the Protection of Birds (RSPB)	World Conservation Society (WCS)

Table 12: List of other organisations consulted

Department of Agriculture	Grand Turk Enhancement and Sustainability Agency
Department of Environment and Coastal Resources	TCI Fishing Cooperative Training Sessions with Cardinal Points
ExperienceTCI	
Ministry of Tourism, Environment, Fisheries and Marine Affairs	

Appendix 2: NCIP Interview Script

(TO READ TO PARTICIPANT) (INSTRUCTIONS TO PROJECT TEAM)

As part of the RESEMBID supported project “Resilient Community Recovery from COVID-19 in the Turks and Caicos Islands”, JNCC has commissioned eftec and Finance Earth to develop a Natural Capital Investment Plan (NCIP). We are interested in exploring different ways to use finance, and opportunities for investment, which support the ongoing and sustainable protection and enhancement of the natural environment in TCI. This work builds on recent JNCC work in TCI at the beginning of 2023, which asked residents and local businesses about the impact of COVID-19 on society, business activity and the environment.

We are talking to a range of stakeholders who influence and depend upon the natural environment in TCI. These include government agencies, private sector businesses, and environmental NGOs. We want to understand attitudes, barriers and opportunities relating to building a set of environmental projects and activities within the region which support environmental, economic and social prosperity. In particular, we want your views on how this would work best in TCI, whether such initiatives have been attempted in the past, and what learnings we can take from these.

This discussion is designed to be a semi-structured interview. It should take approximately 1 hour in duration. We hope to cover the following topics:

- Perspectives and priorities of local business for investment in actions which promote nature’s recovery and protection across a range of industries, sectors, and government organisations.
- Future revenue generation and investments opportunities, and stakeholder interest in pursuing these.
- Key barriers and challenges to developing and pursuing such types of projects in TCI, and
- The support needed to facilitate investment in nature and implement nature recovery projects at scale.

Instructions/notes for interviewer(s)

- Questions are listed in the left column.
- Questions may also have additional guidance. These are designed to guide the interviewer to either a) support the respondent understanding concepts with which they are less familiar, and b) probe for further information where possible.
- A glossary/terminology of key terms is also included before the questions. These definitions are in plain English and are designed to be accessible for all types of respondents. Where appropriate, it is acceptable to use technical definitions.
- Input responses in the right column.

Question for stakeholder

Section A: Stakeholder awareness of ecosystem impacts on business

Are you familiar with the term natural capital?

Do you notice the benefits or positive impacts of nature in your sector?

Which aspects of nature are most important for your business, or give you the largest benefits?

Do you see your sector as dependent on nature? In what way?

What kind of impacts do you think your business sector has on nature in TCI?

Do you perceive the condition of nature in TCI to be improving or getting worse?

Section B: Business attitudes on the environment

What role do you think your sector/business has in supporting nature's recovery?

What are your sector's perspectives regarding its responsibilities for nature?

What are your/the sector's short- and long-term priorities related to nature?

What role do other groups in society have in protecting and enhancing nature?

Has sustainable investment been trialled in your sector?

If yes, what has worked well? What has not?

What are the main barriers and challenges within the sector to undertaking such projects? What support is needed?

What is your interest in undertaking investments to enhance nature?

Section C: Enabling investment in natural capital

What funding and financing sources are available for natural capital? How effective are they?

What potential projects/initiatives could unlock income/attract investment in natural capital?





What is the scale/quantum of investment needed for natural capital? Over what time horizon?

What are the potential sources and maturity of revenue streams for natural capital protection/enhancement and sustainable business?

What support is needed to facilitate investment in natural capital e.g., policy/regulation, training/technical assistance?

What are the opportunities for stakeholder collaboration to facilitate natural capital investment?



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-  TClcommunity@jncc.gov.uk