SYSTEMIQ

In Partnership with the Sustainable Tourism Global Centre, incubated by

وزارة السياحة
Ministry of Tourism

BETTER TRAVEL & TOURISM, BETTER WORLD

November 2022

PREFACES

H.E. FELIPE CALDERÓN, HONORARY CHAIRMAN, GLOBAL COMMISSION ON THE ECONOMY & CLIMATE, FORMER PRESIDENT OF MEXICO (2006-2012)

I have long been convinced of the role that travel and tourism plays in sustainable economic development and in helping us tackle some of the greatest global challenges we face this century. As the former President of Mexico, a country where tourism is an engine of economic growth and has enabled many of our conservation efforts, I have seen first-hand the benefits for people and nature that it can bring.

With COVID-19 travel restrictions eased or easing around the globe, much of the industry is focussed on returning to business-as-usual. This is understandable, and indeed T&T has contributed to post-covid recovery in many places. But the pandemic and its economic consequences are not the only crises affecting our societies nowadays. 2022 has seen very severe weather-related disasters around the globe, underlying the fact that climate change is intensifying, compounded by a crisis of biodiversity loss. If T&T is to continue to deliver benefits to societies around the world and maintain its licence to operate, business-as-usual is not a possibility. The sector must become a part of the solution.

It is not just about mitigating risk – facing these challenges also poses a hugely exciting opportunity to transform T&T for the better. Better Travel & Tourism, Better World, a report commissioned by the Sustainable Tourism Global Center in partnership with Systemiq, shows us that we should harness the full potential of T&T for abating carbon emissions, protecting nature and boosting resilience. It provides a data driven, action oriented and systemic view on how to unlock that potential. It is an invaluable resource for decisionmakers and an opportunity that should not be missed.

PAUL POLMAN, BUSINESS LEADER, CAMPAIGNER AND CO-AUTHOR OF NET POSITIVE

Imagine a thriving and productive travel & tourism industry, widely seen as a force for good around the world. An industry that has comeback from COVID-19 stronger and more resilient, boosting global growth and creating millions of good jobs, as it connects people around the world. All while helping tackle climate change and restore nature.

With enough courage and collaboration this future is within reach. But time is not on our side and, without serious and concerted action to transform the sector, there is a risk it will head in the opposite direction.

The choice is stark: a travel & tourism industry which thrives by giving more than it takes and therefore maintains its licence to operate, or one which risks both its reputation and revenues on narrow, short-term interests and failed business models of the past. While there will always be laggards and opportunists, many in the industry are committed to transforming and future-proofing their businesses in our volatile and fast-changing world. This report offers a new and thrilling vision for the sector that we can all unite behind, as well as a plan to achieve it. It is undoubtedly a big lift, demanding action at every level, global, national and local, with unprecedented leadership from the industry and unseen partnership between companies, and with government and civil society too. But if not now, when? And who better to lead the change than the industry itself? We are at a crossroads and it's time for the sector to choose. We choose better travel, better world, and there is no time to waste.

BRUNE POIRSON, CHIEF SUSTAINABILITY OFFICER, ACCOR

The hospitality sector, and the travel & tourism industry more broadly, have a key role to play in transforming society for a more sustainable future. The choices we make in the hospitality sector have the potential to influence actors within the travel & tourism value chain and beyond: from construction and real estate, to agriculture, food and beverage and entertainment, and all the way to the traveller, inspiring them to consider how to navigate environmental and societal challenges.

To unlock this potential, we need to rethink how we operate and collaborate. The future of hospitality is one that goes far beyond the four walls of a hotel, but has strong connections to the local community and surrounding environment delivers positive economic, social, environmental and cultural impacts. We are already taking steps to make this a reality at Accor, and are excited to see progress being made elsewhere in the sector. To scale this progress industry-wide, we need a shared vision, and creativity and ambition to make it happen. We also need to work together in ways we have not done before.
The Better Travel & Tourism, Better World report is a tremendous step in that direction, providing a North Star vision for the industry and the actions we need to take to get there. The emphasis on collective action is particularly crucial. It is an exciting agenda that can unlock travel & tourism's potential to be a true force for good.

ABOUT THIS REPORT

The Better Travel & Tourism, Better World Report was produced by Systemiq in partnership with the Sustainable Tourism Global Centre, incubated by the Ministry of Tourism of Saudi Arabia under the leadership of His Excellency Minister Ahmed Al Khateeb. The report was undertaken in consultation with members of the travel and tourism (T&T) industry to explore how travel and tourism could accelerate its transition to a net-zero, nature and community-positive future. The work received invaluable, extensive inputs from individual industry players as well as from industry aggregators, allowing Systemiq to develop an independent vision, objective fact-base and prioritised action plan for the industry. The Better Travel & Tourism, Better World report is part of a series of system transformation reports produced by Systemiq, including Better Business, Better World and Better Finance, Better Built Environment.

AUTHORS

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Leaders deeply engaged with the Center contributed to the report include President Felipe Calderón (Former President of Mexico); Isabel Hill (Former Director of the United States National Travel & Tourism Office); Mario Hardy (former CEO Pacific Asian Travel Association); Adolfo Favieres (Occidental Hotels); Ambassador Dho (UN SDGS Advocates Alumni Chair; Special Advisor of the SDGs Center for Africa; Special Advisor to PATA); Christoph Wolff (Former Head of Mobility, World Economic Forum); Ramon Sanchez (Harvard University); Donald Hawkins (George Washington University); Geoffrey Lipman (SUNxMalta) and Harry Theoharis (Former Minister of Tourism for Greece).

Beyond the Center a number of individuals who have generously contributed their time and expertise to the report, notably, Dr Ya-Yen Sun (The University of Queensland); Libby Owen Edmunds (independent tourism specialist),; Sally Davey (Travalyst); Inge Huijbrechts (Radisson Hotel Group); Brune Poirson (Accor); Kate Knowles (IHG Hotels & Resorts); Darrell Wade (Intrepid Group); Alix Farr (Skyscanner); Shana Fatina (President Director at Labuan Bajo Flores Tourism Authority); Felicity Wade, Stephanie Hedt, Tom Owen Edmunds (World Resources Institute); Rob Grave, Rikesh Patel (Conservation International); Gloria Fluxa (Iberostar Group); Wolfgang Neumann, Glenn Mandziuk (Sustainable Hospitality Alliance); Lindsey Walters (Nianova); Professor Xavier Font (University of Surrey); Christopher Imbsen, Virginia Messina (World Travel & Tourism Council).

Contributors and their respective organisations do not necessarily endorse all findings or recommendations of the report. The authors would like to thank Gina Campbell for editing the report and Lauren Bloom for designing and producing the report. All remaining errors and omissions are the responsibility of the authors.

ABOUT SYSTEMIQ

Systemiq, the system-change company, was founded in 2016 to drive the achievement of the Sustainable Development Goals and the Paris Agreement, by transforming markets and business models in five key systems: nature and food, materials and circularity, energy, urban areas, and sustainable finance. A certified B Corp, Systemiq combines strategic advisory with high-impact, on-the-ground work, and partners with business, finance, policy-makers and civil society to deliver system change. Systemiq has offices in Brazil, France, Germany, Indonesia, the Netherlands and the UK.

ABOUT THE SUSTAINABLE TOURISM GLOBAL CENTRE

The Sustainable Tourism Global Center (STGC) is the world's first multi-country, multi-stakeholder global coalition, incubated within the Ministry of Tourism of Saudia Arabia, that will lead, accelerate, and track the tourism industry's transition to net-zero emissions, as well as drive action to protect nature and support communities. It will enable the transition while delivering knowledge, tools, financing mechanisms and innovation stimulation into the tourism sector. The STGC was announced by His Royal Highness the Crown Prince Mohammed Bin Salman during the Saudi Green Initiative in October 2021 in Riyadh, Saudi Arabia. His Excellency Ahmed Al Khateeb, Minister of Tourism for Saudi Arabia then led a panel discussion during COP26 (November 2021) in Glasgow, United Kingdom, to elaborate on how the Center will deliver on its mandate with founding country representatives and experts from partner international organizations.

ENDORSEMENTS

"Over a decade, I have seen how impactful sustainable tourism can be on multiple levels. With a holistic ecosystem approach, low footprint ecotourism can be a catalyst of sustainable development. It integrates conservation and restoration efforts, with the installation of sustainable renewable, waste and water infrastructure, often for the benefit of local communities. It dramatically enhances the livelihoods and living conditions of these communities, while educating travellers and local populations about the importance of biodiversity and the use of best practices to protect flora and fauna. This report highlights this potential for positive impact, which will help to put T&T higher up on the agenda for key decisionmakers as an engine of economic growth and an accelerating force for solving the world's greatest challenges today. "

- Craig Cogut, CEO, Pegasus Capital Advisors

"Aviation is one of the world's highest emitting and hardest to abate industries, but solutions exist to reduce emissions before 2030 and reach net-zero by mid-century. The travel and tourism sector has a crucial role to play to incentivise the aviation industry to rapidly deploy Sustainable Aviation Fuels."

- Faustine Delasalle, Director of Systems Change, Mission Possible Partnership

"With more than 6,000 hotels spanning over 100 countries, IHG Hotels & Resorts is proud to be at the heart of thousands of communities around the world. Through our Journey to Tomorrow 2030 Responsible Business plan, we're looking to make sure that, as we continue to grow, we're using our reach to deliver positive change in those communities, and the environment within which they sit. The Better Travel & Tourism, Better World report makes the case for that change with collective industry action and a joined-up agenda"

- Catherine Dolton, Chief Sustainability Officer, IHG Hotels & Resorts

"At Skyscanner, we believe that collaboration across the travel industry is key for making urgent and meaningful progress toward a sustainable future: a joined-up agenda is vital in ensuring systems-level action is enacted. Systemiq's report plays an important role in pulling together a macro view of the challenges the travel industry faces and outlining clear pathways to addressing those challenges. Doing so helps clearly visualize a way forward and ensure the sector's efforts lead to greater impact through alignment."

- Alix Farr, Sustainability Lead, Skyscanner

"At Labuan Bajo Flores, a previously little-visited part of the East Nusa Tenggara island of Indonesia, we have seen how partnerships and collaboration - cross sectors, cross actors - can lead to significant increases in the number of visitors and ground the nation's big vision. This also proved that such an increase in tourism can go hand in hand with protecting ecosystems, and benefiting local communities. The Better Travel & Tourism, Better World report underlines this opportunity and takes it to an international level."

- Shana Fatina, President Director, The Labuan Bajo Tourism Authority

"Nature-based solutions can deliver up to a third of the climate mitigation needed, but are not currently being implemented at the scale required. Sustainable Travel and Tourism has exciting potential to accelerate this, channeling much needed finance and resources to conservation and restoration, and I am excited to see this highlighted in this report."

- Morgan Gillespy, Programme Director of the Food and Land Use Coalition, the World Resources Institute

"At Hilton, we believe in the potential for travel to be a powerful force for good. Our industry has always been an engine of opportunity for our communities, a champion for the destinations where we operate and a powerful connector of people and cultures. There has never been a more important time to support efforts towards a more sustainable, inclusive and resilient world. This report is a welcome call to action and shows that by coming together, the future of our industry is bright"

- Erica Gordon, Senior Vice President, Global Head of Public Affairs and ESG, Hilton

"Tourism can be a powerful driver of impact when conducted in a Nature Positive manner. Conservation International believes that by working with partners in the tourism sector, we can drive investment into the outcomes that matter for communities, biodiversity and climate, and achieve real change for an improved tomorrow as highlighted in the Better Travel Better World Report."

- Rob Grave, Senior Director Conservation Finance Africa, Conservation International

ENDORSEMENTS

"The Better Travel & Tourism, Better World Report provides a data based call for bold leadership and collective action by governments, the private sector and NGOs to ensure that travel and tourism addresses its responsibilities to people and the planet and truly becomes a force for good in the world."

- Isabel Hill, Former Director, The U.S. National Travel and Tourism Office

"The Better Tourism & Travel, Better World Report outlines how travel and tourism can be a catalyst for global prosperity, if organized based on 10 net positive priorities for action. The new report published during this year's G20 Summit calls on the travel and tourism sector to build on the good work done to date by many companies and destinations, and use this energy to focus on the important next step of addressing the sector's significant sustainability challenges. The report gives innovative insights, strategic proposals, and concrete actions to implement including a total cost estimation, which is attainable in light of the travel and tourism's total contribution to global GDP. The report's proposals form a much-needed impetus and basis for travel and tourism to come together and create a framework for collective net positive action for the benefit of all. What are we waiting for?"

- Inge Huijbrechts, Global Senior Vice President Sustainability, Security and Corporate Communications, Radisson Hotel Group

"For Six Senses, sustainability is only the first step in establishing a reciprocal relationship with local ecosystems, communities and cultures. Going beyond protection, acting as a regenerative business adds value to all local stakeholders (whether human, animal or plant) with the ultimate aim of Six Senses giving back more than it takes. The Better Travel & Tourism, Better World report outlines the much needed net positive vision for the industry as a whole."

Omar Romero, Chief Development Officer, Six Senses

"WTTC welcomes this initiative as a thoughtful contribution on how the global Travel & Tourism sector can focus its decarbonisation plans and act as guardians of the natural world. Critical to this a single set of data so the whole sector is united on the same priorities. Our sector will continue to grow in terms of both its contribution to economies around the world and the creation of jobs. But its success will also be measured on how we become more efficient and reduce greenhouse gases."

- Julia Simpson, CEO & President, World Travel and Tourism Council

"Transforming the travel and tourism industry requires new capital and collaboration across different parts of the real economy and financial system. The good news is that investing in an industry which is nature-positive, low-carbon and more equitable is both risk mitigating and value-creating. We are already seeing examples of mainstream capital in better travel and tourism solutions from hydrogen fuelled flying to ecotourism. We need to replicate what is working to get to scale. The strategy set out in this report gives the industry the tools to prioritise action and will help unlock the capital needed to deliver on this transition."

- Katherine Stodulka, Director, The Blended Finance Taskforce

"The Travel & Tourism sector is a sector that figures on both sides of the climate and sustainability equation. On one side, it brings a significant negative impact on ecosystems and the climate, and is itself one of the first victims of that impact by the destruction of key drivers for tourism. On the other side, there are few sectors that have such a big potential to fight climate change, protect ecosystems and bring other sustainability benefits, such as innovation, education and jobs. This report highlights key facts and issues, and puts the spotlight on what needs to be done to align the sector with a sustainable and climate smart planet."

-Niclas Svenningsen, UNFCCC advisor to the Sustainable Tourism Global Centre

"It is clear that the Travel and Tourism industry cannot continue on a business-as-usual trajectory, and urgently needs to shift from a resource intensive, and often wasteful, model to one with a lighter, more regenerative footprint. This report is an important contribution to this movement, showing that a better future is possible and that many high impact solutions are already available"

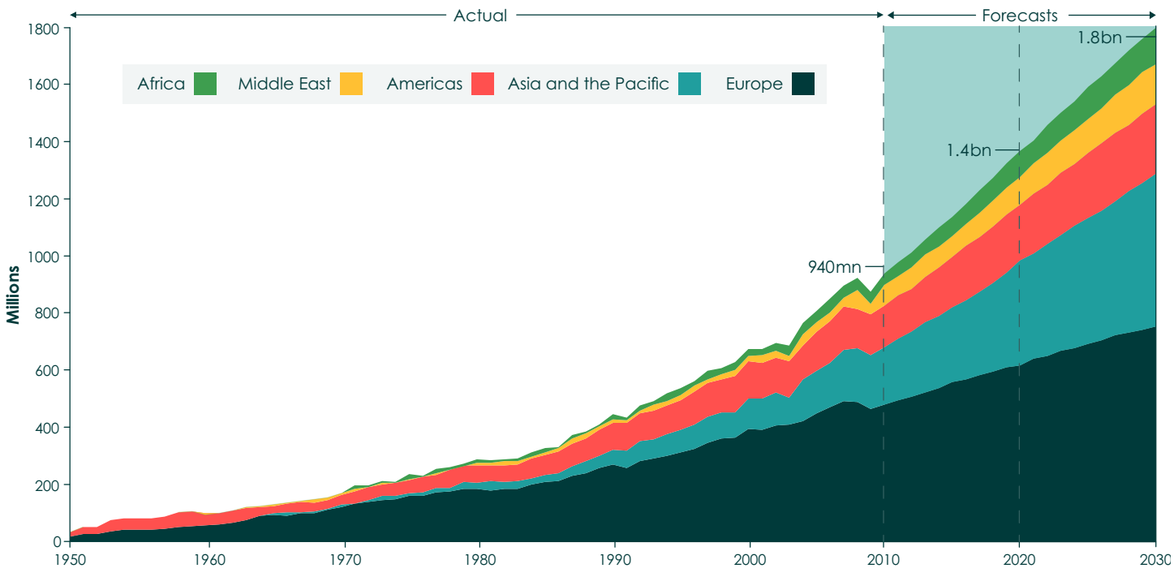
- Marc Zornes, Founder, Winnow Solutions

EXECUTIVE SUMMARY

Travel & Tourism (T&T) has enjoyed immense success over the past seventy years. By driving economic growth, shaping communities and connecting people worldwide, the sector has unlocked countless social benefits.[i]
Having grown rapidly since the 1950s, T&T took off in the 2000s with[ii] the advent of affordable international travel. Today, it accounts for around 10% of global GDP and up to 70% of GDP in some countries (see Figure 2).[1] Not surprisingly, T&T is now considered strategically important, both nationally and internationally.

FIGURE 1: INTERNATIONAL TOURIST ARRIVALS RECEIVED BY REGION

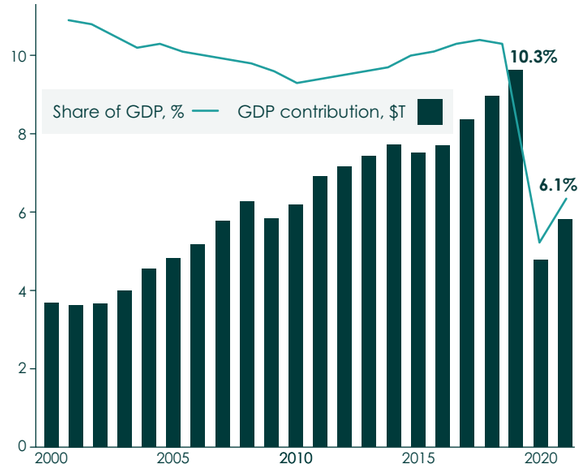
Millions



The industry's scale and dynamism create a wealth of economic opportunities. Before the pandemic, it employed over 330 million people (one in ten jobs worldwide)[2] and supported more than a billion livelihoods.[3] Revenues from T&T are a major source of funding for natural and cultural heritage. Beyond its economic benefits, the sector is unique in the ways it connects people and businesses across the world. By democratising travel, T&T makes it possible for people to visit distant friends and relatives, expand their professional and academic networks, fulfill religious duties, get medical treatment or simply rest and relax. By introducing both travellers and hosts to different people and cultures, T&T furthers international peace, understanding and prosperity.

FIGURE 2: T&T GDP CONTRIBUTION OVER TIME

% of total, USD trillions



These varied contributions to societies and individuals reflect the industry's diversity. T&T comprises multiple sub-sectors – transport, hospitality, tour operators, travel agencies and more – stretching from local to global levels.[iii] The resulting multiplicity of interconnections and global scope give the industry outsize potential to drive positive change across the global economy.

i We acknowledge the wealth of resources and extensive work done on the topic of Travel & Tourism (T&T) by the WTTC, UNWTO, WRI, Conservation International and many others. This report builds on the existing work and brings it together into a comprehensive, fully costed strategy for the T&T industry, capturing opportunities that are missed when looking at T&T's closely interlinked sub-sectors in isolation.

ii This report uses 2019 data (pre-COVID-19 levels).

iii This includes those working directly within the industry, in the sub-sectors transport, hospitality, (online) travel agencies, tour operators, destination management organisations and (online) tourism and information guiding services. It also includes actors that interact with T&T as customers and suppliers, including food and agriculture, retail, construction and digital sectors.

THE CASE FOR ACTION

However, T&T's success has also come at a cost. Alongside its many contributions, the sector generates significant environmental and social costs. The main ones are:

CLIMATE COSTS

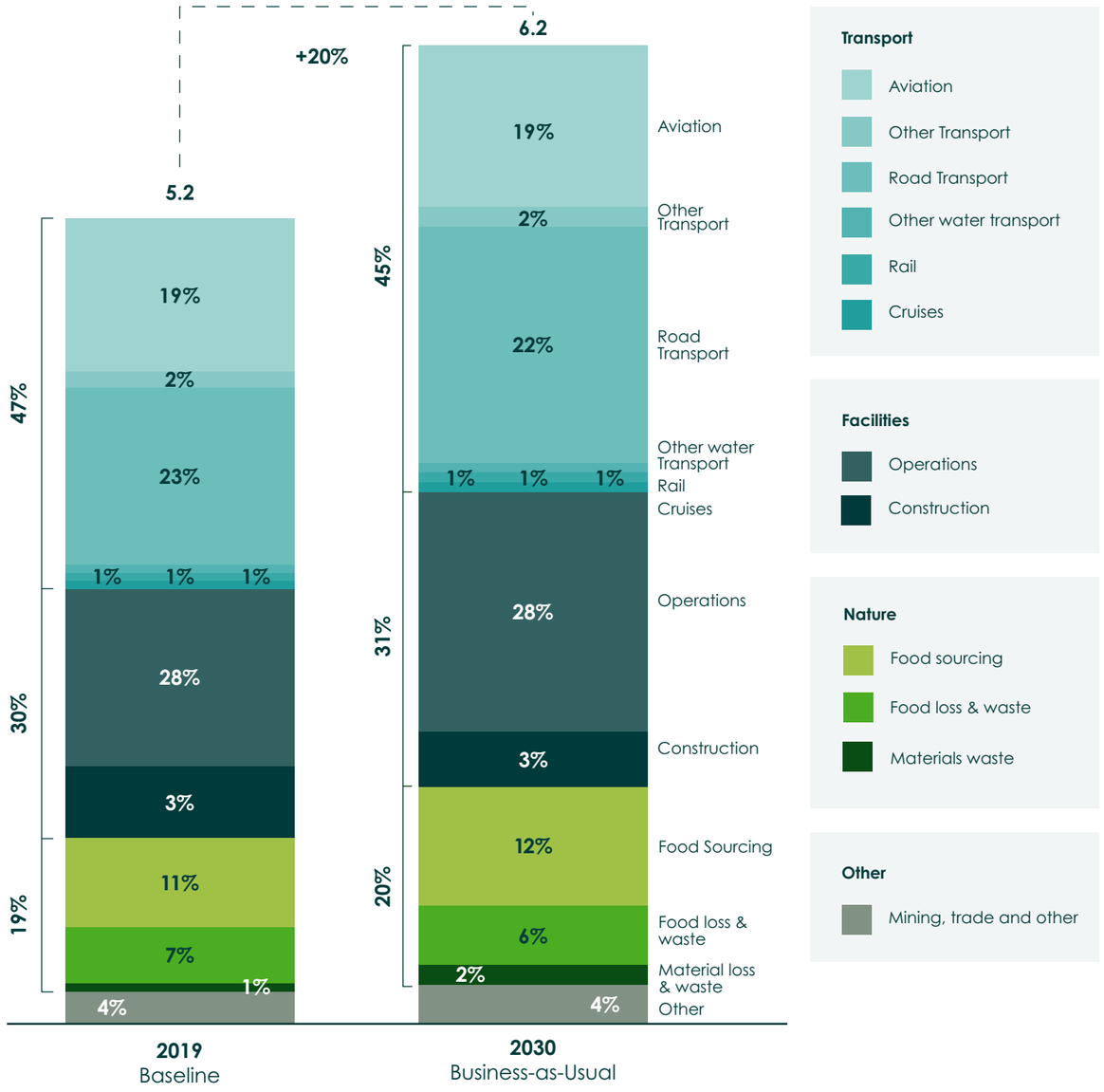
T&T generates an estimated 5.2 GT of CO_2e each year, accounting for 9-12% of total greenhouse gas emissions worldwide.[iv] Emissions from the sector's transport operations (mainly aviation and vehicles) and from running facilities (mainly hotel buildings) account for almost 80% of the sector's total emissions.[v] Without significant change in the industry's operating models, we project its annual emissions will rise 20% to 6.2 GT CO_2eq by 2030, representing one-third of the total (net zero) global carbon budget for that year (see figure 3[4]).[vi; 5]

COSTS TO NATURE:

T&T developments in many places degrade nature and deplete biodiversity. The damage is caused by a combination of land clearance to construct T&T facilities and infrastructure (for instance, Aruba has lost 70% of its mangroves since 1990 largely to hotel development)[6], mismanaged tourist behaviours, such as uncontrolled diving to coral reefs, and overuse of local resources, notably water. T&T also has a large indirect impact on nature through its supply chains for food and materials. Unless managed sustainably, these can encourage deforestation and other kinds of harm to the natural world. High levels of food waste[vii] throughout the T&T value chain are particularly damaging to climate and nature – as well as hitting the industry's bottom line.

FIGURE 3: GLOBAL GHG EMISSIONS OF THE TRAVEL & TOURISM SECTOR

Gt CO_2eq, 2019 and 2030 BAU



iv Systemiq analysis. Emissions estimated as between 4.6 and 5.8 GtCO_2eq in 2019, based on WRI estimates for global total emissions of 49.8 GtCO_2eq the same year. See Technical Annex 1 and 2 for details. This is higher than most previous estimates for T&T emissions; our analysis is based on up to date data for aviation and cruise, and also includes nature-related emissions not typically included in previous estimates. Data availability continues to be a challenge for accurately estimating T&T emissions, and the industry would benefit from further work on this topic.

v Estimate for T&T related construction emissions only includes hospitality construction, and not retail, food and beverage, and other services due to a lack of data. This means the true figure is higher.

vi Based on IPCC Carbon Budget estimations.

vii 12% of global food waste is from the hospitality industry.

Venice, Italy

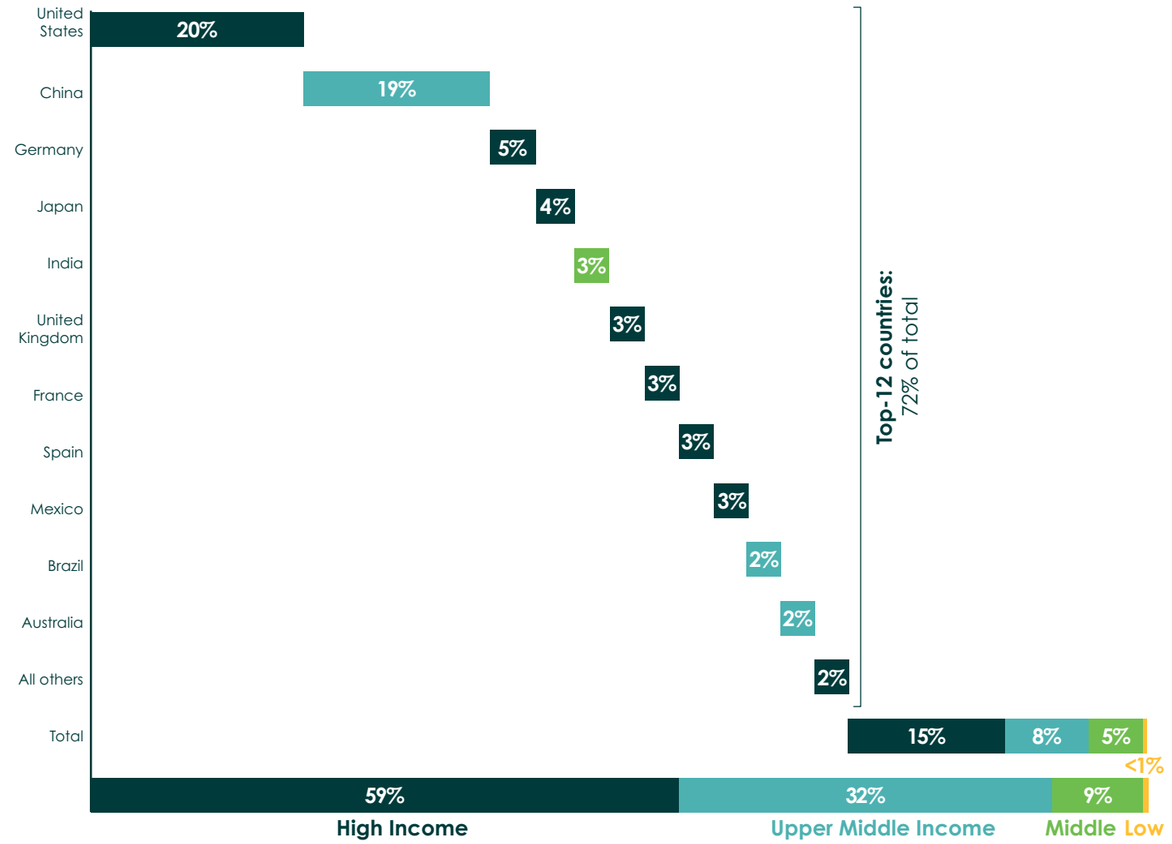
COSTS TO HOST COMMUNITIES

While T&T is an important generator of jobs and incomes, significant gender inequality and high rates of informal work can undermine these benefits. Women, migrant workers, and young people are more likely to take informal T&T jobs and so miss out on the social protections that come with formal employment.[7] Excess numbers of tourists can damage popular cultural and natural sites and also drive up local housing costs.

In addition to these costs, long-standing problems caused by the concentration of visitors on relatively few destinations and the sector's seasonality are compromising its performance. About 72% of T&T's contribution to global GDP comes from 12 countries, most of them in the global north. Just 10 of them receive half of all international arrivals worldwide.[8] Seasonal travel patterns produce excess demand for the popular destinations in peak seasons and untapped capacity at other times, making T&T business models more vulnerable to shocks and volatility. Yet while T&T puts excessive strains on these established tourist hotspots, other potential destinations miss out on its economic and social opportunities entirely.

FIGURE 4: SHARE OF GLOBAL TRAVEL AND TOURISM, COUNTRY

% of global T&T GDP contribution, 2019 USD



The COVID-19 pandemic highlighted T&T's general lack of **resilience.** The sector lost 62 million jobs in 2020, though it regained 18 million in 2021, demonstrating the bounce-back capacity of some segments.[viii; 9] That said, the challenges of COVID-19 are likely to pale in comparison to the likely effects of climate change and depletion of nature on an industry that depends on predictable weather and beautiful surroundings.

Many destinations are already suffering. The 2017 hurricane season in the Caribbean cost an estimated USD 741 million in lost tourism revenues.[10] In ski areas in the western US, the snowpack season shortened by an average of 18 days between 1982 and 2021.[11] Future projections make it even clearer that business-as-usual is untenable for the sector. The number of days of extreme heat (above 37°C) is expected to double by 2050 in southern Spain, Turkey and north Africa, from 30 days to 60.[12] And the majority of coastal areas[13], where 80% of tourism takes place, face rising sea levels. With these and other effects of climate change set to mount, investing to enhance the sector's resilience is clearly an urgent priority. This report estimates that annual investments of USD 14-31 billion[ix] are needed by 2030 to future-proof T&T destinations against looming climate shocks. Yet funds are not being channelled towards these destinations fast enough.

The Bahamas

Swiss Alps

What explains these growing "hidden costs" and the risks they pose to the sector? In part, they simply reflect T&T's share of a global economy that has grown fast for the past 30+ years without fully managing the environmental or social consequences. However, for T&T the situation is complicated by three additional factors. First, countries lack the joined-up public sector capacity to set policies and plans needed for healthy development of their T&T sector. Few tourism ministries have a seat at the top table of government. Second, travellers, whether for business or leisure, lack the reliable, accessible information they need to understand the impact of their T&T choices, compare providers' performance across the sector, and make better decisions. This prevents the signal of market demand for sustainable options reaching T&T providers loud and clear. Third, most of T&T apart from its luxury segment has been on a relentless drive to compete on cost. The industry has unintentionally conspired to devalue its own product, in the process reducing its margins, weakening its resilience and forgoing the investments needed to secure its longer-term value proposition.

Addressing the sector's hidden costs and their causes should be an urgent priority for the T&T industry as a whole and for governments that want to leverage the potential of T&T as an engine of sustainable growth and job creation for the wider economy.

viii The change in Travel & Tourism's contribution to jobs is slower than the change in contribution to GDP because jobs are less elastic and hence, are less volatile. This is because the process of laying off existing staff and onboarding new personnel takes time (WTTC, 2020). On top of that, in the immediate aftermath of the crisis informal wage workers were three times as likely to lose their jobs as formal workers.

ix Systemiq analysis, see Technical Annex 4.

A BETTER FUTURE IS WITHIN REACH

The good news is that taking the right action now has every chance of delivering a better future for all T&T stakeholders by 2050. What could that future look like if we get it right? Here are some ideas:

- **In 2050, T&T is a thriving, productive and diverse industry, widely seen as a force for good around the world.** The sector has achieved rapid, sustainable growth, doubling the number of trips since 2019 (the pre-COVID peak). It now accounts for 15% of global GDP and is viewed as a major contributor to better growth, good jobs, innovation and meeting environmental and climate goals.

- **By 2050, T&T has become a leading net-zero industry.** Growing customer demand for sustainable options across business and leisure segments during the 2020s prompted T&T industry leaders, especially in aviation and hotels, to co-ordinate early investment in climate solutions, helping to secure the industry's future. MSMEs have also been able to shift to net-zero, with blended finance making it possible for them to upgrade their facilities at an affordable cost of capital.

- **By 2050, T&T is a nature-positive industry:** with over 20% of tourism revenues and investments directed towards protecting and regenerating forests, parks, savannahs, mountain landscapes, beaches and coral reefs and simultaneously strengthening destination resilience. Global action to place a value on nature through carbon and biodiversity credits has moved eco-tourism from niche to mainstream. Over 1000 destinations across the world are now nature-positive as a result of tourist revenues and careful regeneration plans, creating benefits for both travellers and local communities.

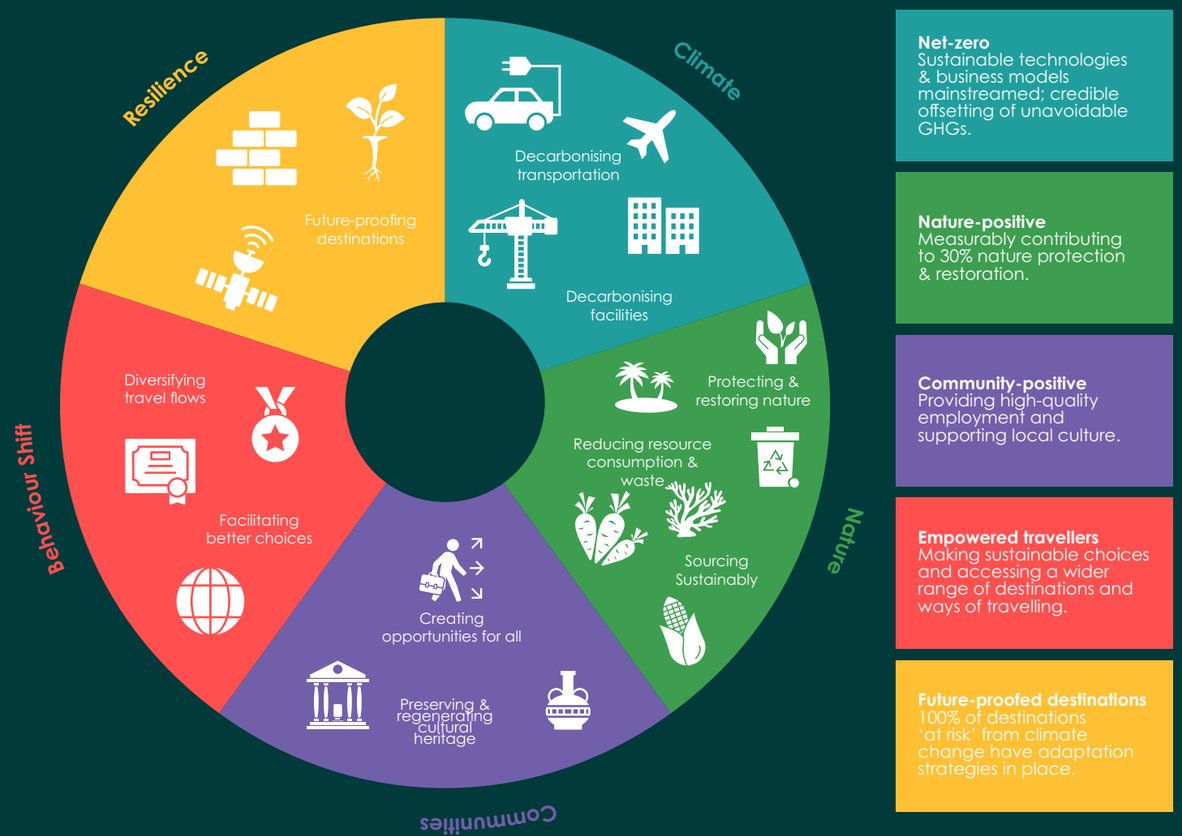
- **T&T continues to generate over 40 million new jobs every year: over 80% of these jobs provide proper employment benefits and security.** T&T is a hot sector, winning the war for talent by offering careers combining human interaction (ever more precious in online 2050), good job security and purpose - every T&T job is a chance to be involved in great projects that strengthen communities and nature. The T&T industry is now a leader in integrating people with disabilities fully into the workforce.

- **T&T in 2050 is a major source of funding for the protection and restoration of cultural heritage and for cultural exchange.** Augmented reality tools are making it easier for travellers to understand and connect with the destination and communities they are visiting. A virtuous circle continuously connects tourism and the capital needed to protect and improve cultural assets.

- **New travellers are visiting new destinations; travelling behaviours have changed.** New T&T destinations account for 20% of annual journeys worldwide. Most are in the Global South, where travel has taken off. New technologies are making it possible for travellers to experience and learn about their destinations like never before. Instant translation tools are changing interaction between travellers and the communities they visit, opening up new worlds. Reliable data on T&T providers' impact on people and planet is available to all consumers, who now routinely make informed travel decisions.

- **T&T destinations are future-proofed against looming climate shocks.** All destinations considered 'at risk' of climate change have adaptation strategies in place. And T&T is seen as a strategic, essential player in channelling finance towards those vulnerable destinations that need support the most. In turn, these destinations are now more appealing for visitors and more stable for their host communities.

FIGURE 5: TRAVEL AND TOURISM SYSTEM

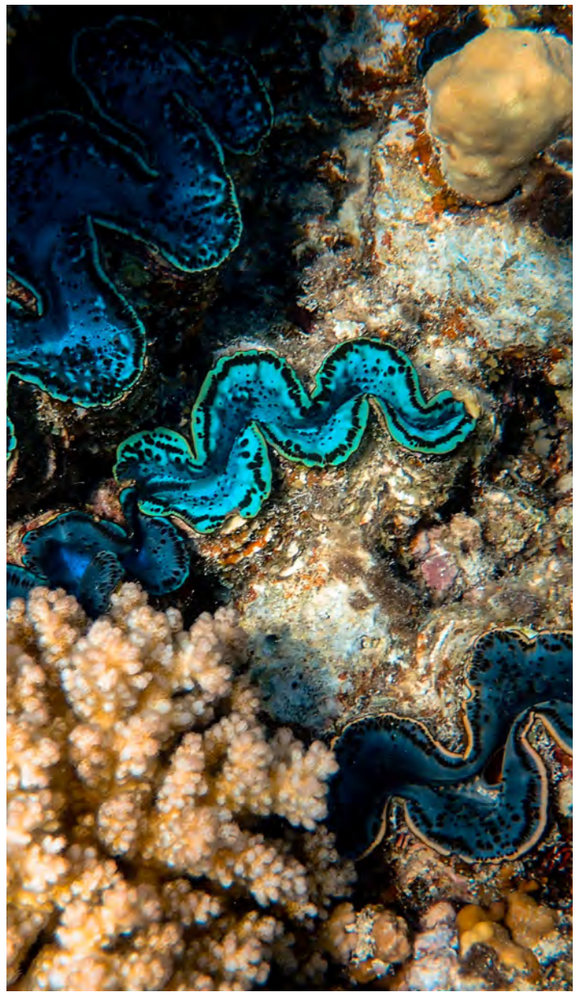


WE NEED A PLAN FOR THIS DECADE AND MUCH MORE CO-ORDINATED LARGE-SCALE ACTION

T&T has set off on its journey to this better future. Over 450 organizations signed the Glasgow Declaration on Climate Action in Tourism. Several initiatives to help T&T businesses reduce emissions are in motion, including Tourism Declares a Climate Emergency and the Global Sustainable Tourism Council. There are also climate initiatives targeted on T&T sub-sectors: the Sustainable Hospitality Alliance (SHA) rallies the major hotel chains and hospitality groups to address environmental and social issues; the Mission Possible Partnership convenes actors across the aviation value chain to make sustainable fuels a reality; and Travalyst is bringing together online platforms to improve data transparency for travellers. The World Travel and Tourism Council represents the industry as a whole and provides data insights and research.

But the industry is travelling too slowly. For example, only 2% of the 3500 private companies that have signed up to reduce emissions through the Science-Based Targets Initiative are in tourism and hospitality businesses, representing far less than the sector's 10% share in global GDP. Fewer than half of these T&T companies have had their targets approved.[14] As businesses recover from the shocks of the pandemic, returning to business-as-usual (BAU) seems to be taking priority over building back better.[15]

What the industry needs now is a shared agenda for co-ordinated, high-impact action. This report puts forward 10 industry-wide priorities for T&T and a set of concrete 2030 targets for industry stakeholders to aim at. It identifies the key actions needed to hit the targets, with clear roles for different stakeholders (see figure 6).



Great Barrier Reef,
Australia

Stonehenge,
United Kingdom

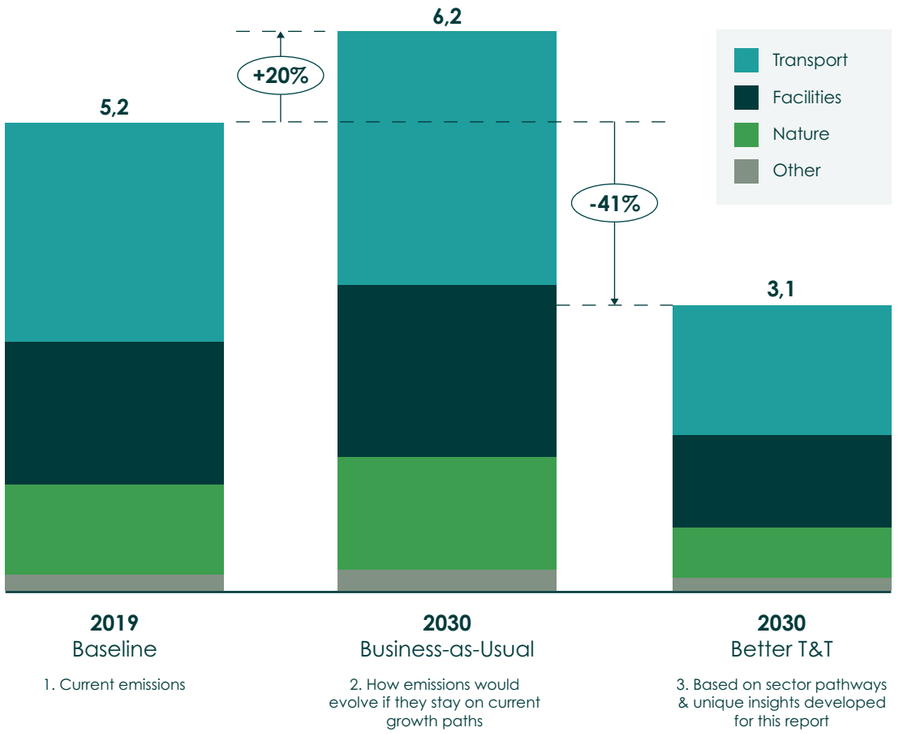
FIGURE 6: BETTER TRAVEL PRIORITIES & TARGETS

AREA		10 T&T PRIORITIES	KEY 2030 TARGETS[1]
CLIMATE	1	Decarbonising transportation	• SAFs meet 15% & hydrogen meets 1% of aviation energy needs • 85% rental vehicles are EVs
	2	Decarbonising facilities	• 50% reduction in operations GHGs • 30% reduction in construction GHGs
NATURE	3	Protecting & restoring nature	• By 2025, major T&T corporates & whole destinations can make credible claims about their impact on nature • By 2030, T&T contributes to protecting 30% of all terrestrial & marine ecosystems
	4	Reducing resource consumption & waste	• 40% reduction in food loss and waste • 25% reduction in carbon footprint of plastic use • Traveller water consumption is in line with local per capita rate
	5	Sourcing Sustainably	• 80% of businesses have sustainable food procurement policies
COMMUNITIES	6	Creating opportunities for all	• 80% formal employment in medium to large T&T firms (>50 employees)
	7	Preserving & regenerating cultural heritage	• T&T is a significant contributor to funding for cultural assets
BEHAVIOUR	8	Diversifying travel flows	• 25 countries drive 70% T&T global GDP contribution, up from 12 countries today
	9	Facilitating better choices	• 80% of the industry uses common framework to measure and report sustainability
RESILIENCE	10	Futureproofing destinations	• 100% of destinations 'at risk' from climate change have adaptation and mitigation strategies in place

1 Analysis for this report has identified additional targets around other topics, these can be found in the Technical Annex. This list represents the targets that will deliver the most impact and serve as the best indicator of progress by 2030.

FIGURE 7: GLOBAL T&T GHG EMISSIONS IN 1. 2019 2. BAU 2030; 3. BETTER TRAVEL SCENARIO 2030

Gt CO_2eq



To improve T&T's **climate** impact in line with the Paris Agreement, the report outlines actions to reduce T&T emissions from **5.2 to 3.1 Gt CO_2e** between 2019 and 2030 instead of the rise to 6.2 Gt CO_2e projected in the 2030 BAU scenario (see figure 7).[x] The two T&T priorities that focus most on climate are Decarbonising Transportation and Decarbonising T&T Facilities. Today, transport and facilities account for 47% and 30% of T&T's total emissions. Slashing emissions from both will have a dramatic impact on the industry's total carbon footprint.

Actions that will secure T&T's positive impact on **nature** are, first, measures that directly protect and restore nature. These include adopting nature-positive business models that tap into carbon markets and channel tourism revenues towards conservation. Tackling food waste and cutting single-use plastics alongside switching to sustainable food sourcing will also enable T&T to replenish nature and reduce emissions at the same time.

Two priorities focus on improving T&T's impact on **communities.** The first is creating opportunities for all by ensuring good pay and working conditions and widening access to jobs for local people. Moving towards 80% formal employment, at least for medium and large T&T firms, will be critical too. The second is improving T&T's impact on cultural heritage by adapting business and governance models to include preserving and regenerating destinations' culture not only through direct funding but also by offering more authentic interactions between travellers and destination communities. By 2030, funding for culture generated by T&T will have increased by 50%.

Nudging **traveller behaviour is critical but not easy.** The T&T industry has focussed too much attention over the past 20 years on competing on cost and driving scale-based efficiencies. With post-COVID consumers now looking for better options, the T&T industry has an opportunity to raise its game. First, it could diversify travel flows away from traditional destinations and grow visitor numbers in new ones. Second, it could help consumers make better choices – by 2030, over 80% of trips should be informed by high-quality carbon emissions data.

Finally, all involved in T&T can build the industry's **resilience** by future-proofing destinations against the effects of climate change and tourism induced stress. This will involve developing resilience strategies with local partners and investment in better infrastructure including early warning systems, and nature-based solutions, such as restored mangroves and coral reefs.

Taking the actions needed to hit the 2030 targets will require additional investments[xi] in T&T transport, facilities, nature and resilience totalling an estimated USD 220-310 billion a year, rising through to 2030 (see figure 8). This is a significant amount, 2-3% of T&T's contribution to global GDP in 2022 of around USD 10 trillion. But making these investments will enable the industry to drive strong, sustainable growth, strengthen its resilience, maintain its licence to operate and remain competitive in the long run.

Himalayan Macaque in Chamunda Sacred Grove, Uttarakhand, India
Credit: Aneesh Kotru

x Systemiq analyses, see Technical Annex 1, 2, and 3 for details.

xi Additional investments are those required on top of current and business-as-usual investments. The majority of additional investments are CAPEX. Systemiq analyses, see technical annex 4 for details.

FIGURE 8: INVESTING IN THE TRANSITION

% of total investment	Investment area	
CLIMATE 50%	Decarbonising transport $61 - $83	Aviation $33 - $43
		Road Transport $14 - $19
		Ferries & Cruises $13 - $20
		Other Transport $1
	Decarbonising facilities $52 - $71	Operations $49 - $68
		Construction $2 - $3
NATURE 42%	Protecting & Restoring Nature $62 - $85	Terrestrial $22
		Marine $39 - $63
	Reducing Resource Consumption & Waste $27	Food Loss & Waste $7
		Material Waste $20
	Sourcing Sustainably $7 - $15	Productive & Regenerative Ag. $6 - $14 Local Loops & Links $1
RESILIENCE 8%	Future Proofing Destinations $14 - $31	Adaptation & Resilience $14 - $31
TOTAL	**$220 - $310**	

Nearly 60% of the total investment needs to be targeted on three actions: decarbonising aviation, largely through increased use of sustainable aviation fuels (USD 33-43 billion a year); protecting and restoring marine ecosystems (USD 40-65 billion a year); and improving heating and cooling systems across the global hotel estate (USD 50-70 billion a year).[xii] All three of these actions face financing challenges, but there are practical solutions.

Decarbonising aviation may require airline ticket prices to rise, but not by very much. Using more sustainable aviation fuels (SAFs) is likely to raise jet fuel costs. But these higher fuel costs could be largely offset by efficiency gains, meaning average ticket costs would only need to rise by less than 10% by 2030.[xiii] Moreover, the rise will follow a period of 30 years in which real ticket prices have fallen by 50%[16]. Decarbonising aviation could also be paid for by a Frequent Flyer Levy (FFL). Recent analysis by the International Council on Clean Transportation (ICCT) makes a strong case for an FFL being a more equitable way to compensate for aviation emissions than a flat tax on flights, because such a tax burden would fall on wealthier frequent fliers and ensure people on lower incomes are not priced out of flying.[xiv] Estimates suggest that a global FFL would generate 81% of revenue from frequent flyers and 67% from high-income countries, compared to 41% and 51% under a flat tax. The proposed FFL would start at USD 9 for a person's second flight, rising to USD 177 for their twentieth in the same year. Those travelling in premium cabins are likely to have little sensitivity even to the highest levy.

Restoring marine ecosystems will require a mix of public and private financing, with the private part potentially coming from voluntary (blue) carbon markets. This is one priority area where additional public sector investments will be needed. Smart hypothecated local taxes are already a source of such public funding in some destinations. One such is Cancun, whose reef is critical to its tourism sector and where the local community recognises that collective funding to protect the reef and invest in marine ecosystem restoration is essential.

Passing the full costs of decarbonising hotel buildings through to consumers would add between USD 8 and USD 23 to the average cost of a hotel room per night.[xv] For example, a typical midscale, full-service business or leisure hotel built in the UK in 1966 would cost an extra USD 15 per room per night. But much of the upfront costs of lowering emissions from hotels could also be offset by (energy) efficiency gains over time: many energy efficiency measures have a 5-7 year payback period. As well as reducing operating costs, studies have shown that gaining energy and sustainability certification also reduces the risks of commercial property and increases its value by an average of nearly 15%.[17]

Hout Bay, South Africa

Figure 8[xvi] shows the costs of making 6 archetypal trips by either conventional, high-carbon means or better sustainable options. Shifting the costs of decarbonising mainly retrofitting hotels and making aviation more sustainable to consumers raises the average trip prices by between 1% and 8% compared to conventional trips.

FIGURE 9: COMPARING THE COST OF SIX ARCHETYPAL TRIPS IN A BUSINESS-AS-USUAL VS A BETTER TRAVEL SCENARIO IN 2030

USD

xii Systemiq analysis. See Technical Annex 4. Estimate for T&T related construction emissions only includes hospitality construction, and not retail, food and beverage, and other services due to a lack of data. This means the true figure is higher.
xiii Systemiq analysis, see Technical Annex 5.
xiv Frequent flyers are defined as those who take more than six flights a year. The ICCT estimates that the richest 20% worldwide take 80% of flights, and the top 2% most frequent flyers take around 40% of flights.
xv Amortization of 10-years. Only looking at costs, not savings. Systemiq analysis, see Technical Annex 5.
xvi Systemiq analysis. Key assumptions include the costs of achieving SAF mix of 15%; retrofitting hotels to achieve net-zero, amortized over 10 years; use of electric vehicles and/or train; less emissions intensive diet. See details in Technical Annex 5.

A JOINED UP AGENDA

Brave leadership from business and governments, creative thinking and unprecedented collaboration across the sector can accelerate work on each of the 10 T&T Priorities detailed in the report. Net-zero pathways have already been developed for several T&T sub-sectors, including transport, hospitality, food, buildings, and energy providers. But collaboration between stakeholders across sub-sectors and geographies can unlock even greater gains for climate, nature and communities, accelerating the speed and scale of T&T's transition.

Having consulted with stakeholders across the T&T system, we have identified four cross-cutting initiatives to boost the transition across the industry.

01 Launch a 'T&T First Movers Coalition' to harness the market power of large T&T buyers.

02 Establish a fund that directs T&T offsets to strengthening climate resilience in vulnerable T&T destinations.

03 Build 'Better T&T' flagship destinations.

04 Align on single framework for measuring sustainability across the T&T industry.

01 Launch a 'T&T First Movers Coalition' to harness the market power of large T&T buyers.

WHAT

The coalition would bring together the largest T&T buyers, including corporations, governments and international organizations with large travel budgets, which account for a significant share of the industry's emissions. Members would commit to reduce their use of high-carbon options (e.g. kerosene-fuelled flights) and increase their use of low-carbon, sustainable options (e.g. SAF-fuelled flights, rail, low-carbon hospitality options), providing a market signal that encourages and supports the T&T industry to change. Commitments would include both changes in purchasing behaviour and in procurement frameworks, to bring questions of sustainability to the table.

WHY

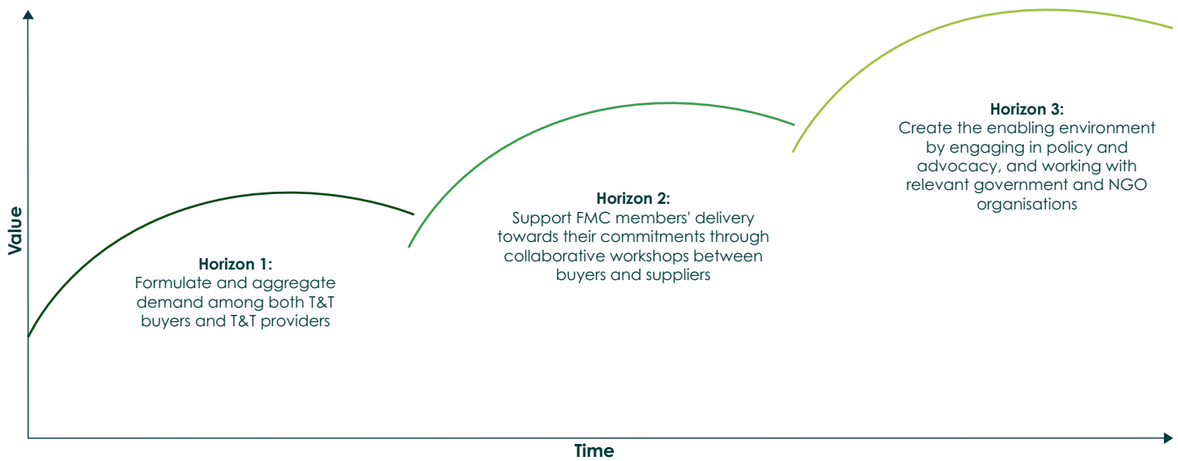
Many low-/ or zero-carbon technologies and business models remain small-scale, with higher costs and limited access to revenues and investment, due to a lack of product familiarity among consumers and investors. Demand shifts are needed so that these solutions can secure investment and tap into economies of scale. Leveraging the purchasing power of large T&T buyers could provide the market signal required to scale sustainable solutions.

WHO

Existing initiatives to build on include:

Glasgow Declaration Climate Action in Tourism · Institute of Hospitality · Travalyst · Energy & Environment Alliance · Tourism Declares Climate Emergency · Sustainable Hospitality Alliance · Hotel Owners for Tomorrow · Avelia

3 HORIZONS



02 Establish a fund that directs T&T offsets to strengthening climate resilience in vulnerable T&T destinations.

WHAT

Industry actors would launch a T&T Resilient Destinations Fund, designed to channel investment towards vulnerable T&T destinations. T&T industry actors would allocate a share of offset contributions towards the fund, which would direct investment towards projects that would enhance resilience in climate vulnerable T&T destinations. Suitable proects could include nature-based solutions that deliver win-wins for GHG mitigation and adaptation, such as protecting and restoring coral reefs and mangrove forests.

Over time, the initiative would seek to make changes in voluntary carbon market accounting systems to allocate more climate finance to adaptation efforts even when these do not mitigate emissions, such as climate-proofed infrastructure. This would represent a powerful step to unlocking more funds for resilience worldwide.

WHY

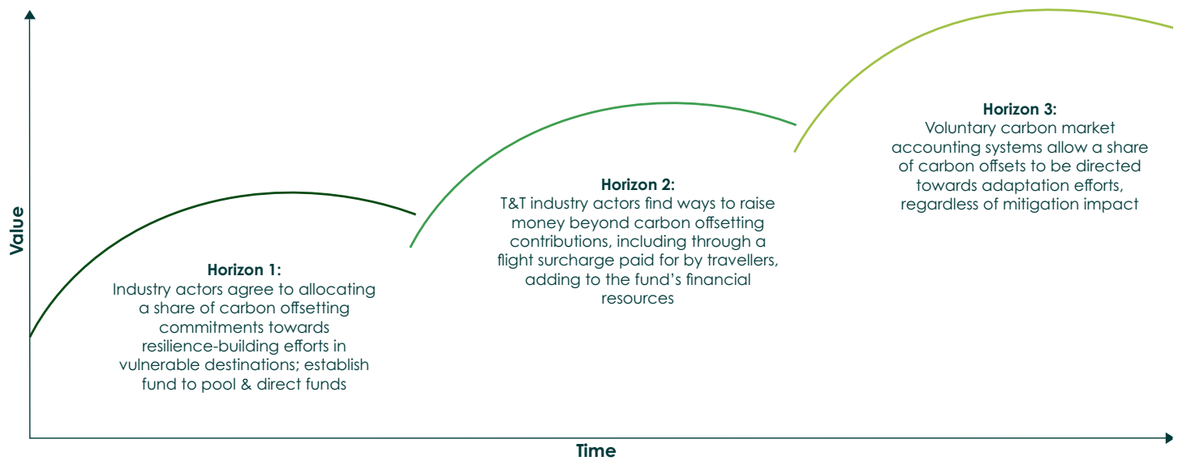
T&T industry actors will need to continue to make offset contributions in the medium-term as part of their decarbonisation pathways. Yet currently, many of the sector's offsets fund projects beyond the T&T value chain. Instead, these funds could be used to address the ~USD 14-31 billion annual investment gap to build resilience in the sector by 2030. This would support host communities, enhance the appeal of destinations and future proof the industry as a whole. This is an ambitious idea and would require significant resources to set up the necessary governance structures, but could be a highly effective way of financing adaptation, which is currently underfunded worldwide.

WHO

Existing initiatives to build on include:

Net Zero Methodology for Hotels · CORSIA Carbon Offsetting and Reduction Scheme for International Aviation · AOSIS · Vulnerable Twenty Group · World Green Building Council

3 HORIZONS



03 Build 'Better T&T' flagship destinations.

WHAT

Public authorities, hospitality providers, tour operators and travel agents would collaborate to develop Flagship Destinations that drive progress across the 10 priorities, providing a holistic, sustainable experience for travellers. This would involve both retrofitting existing tourism hotspots and journeys and developing new tourism destinations that deliver a positive impact on climate, nature and communities. Flagship Destinations would be defined as sustainable based on existing sustainability standards initially, and according to a unified set of industry-wide standards once these are established.

WHY

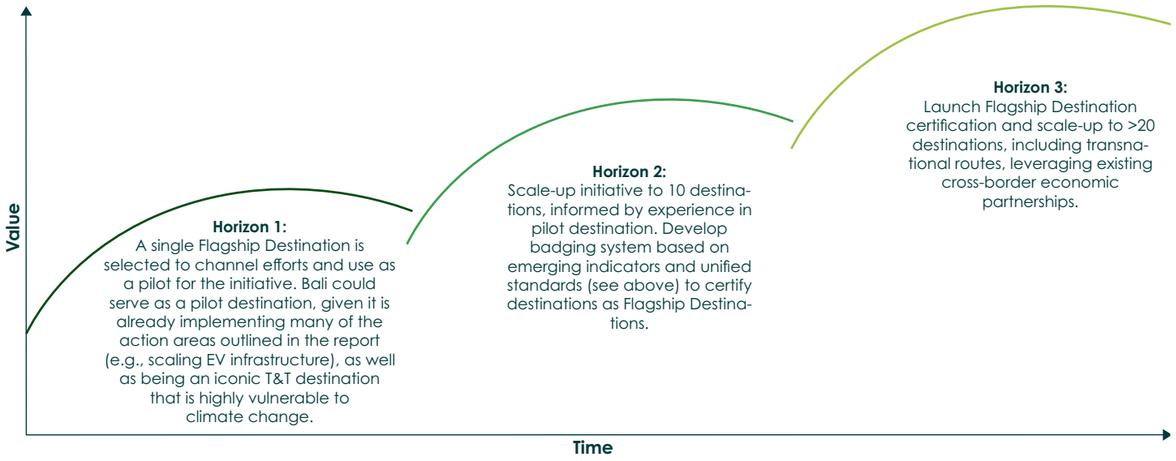
Driving industry-wide change in T&T is challenging, given the varied and complex nature of the sub-sectors within the industry. Flagship Destinations offer a way to focus coordination efforts and incentive alignment in specific destinations, providing a demonstration of the benefits of transformation and the feasibility of unlocking these.

WHO

Existing initiatives to build on include:

- Coordinated efforts at the destination level, eg., the Carribean Tourism Organization's Sustainable Tourism in the Caribbean initiative
- Transnational economic corridors provide a platform for coordination and scaling, e.g., the Greater Mekong Sub-regional Tourism Corridor, the Danube Tourism Corridor and the Turkic Skilk Road Tourism Corridor

3 HORIZONS



04 Align on single framework for measuring sustainability across the T&T industry.

WHAT

Industry actors would coordinate behind efforts to unify existing, diverse standards into an industry-wide system that enables consumers to understand the impact of their trips on climate, nature and communities. The framework would pull together existing standards into uniform indicators of T&T impact on climate, nature and communities. By extending across key impact areas and industry actors, unified standards would equip travellers to make better informed decisions, strengthening the market signal of impact-conscious travellers.

Over time, these standards could be extended and linked-up to other initiatives to be of use to other users (e.g., investors).

WHY

Already, a number of players are driving efforts to develop unified standards for the T&T industry (see below). These actors recognise that travellers want to understand their travel footprint, but that currently this information is fragmented, incomplete, and that existing metrics and standards are often not consistent across sub-sectors and issue areas. Consistent, industry-wide standards would equip travellers to make informed decisions. This would create a race to the top among industry providers, overcoming first mover hazard and accelerating action.

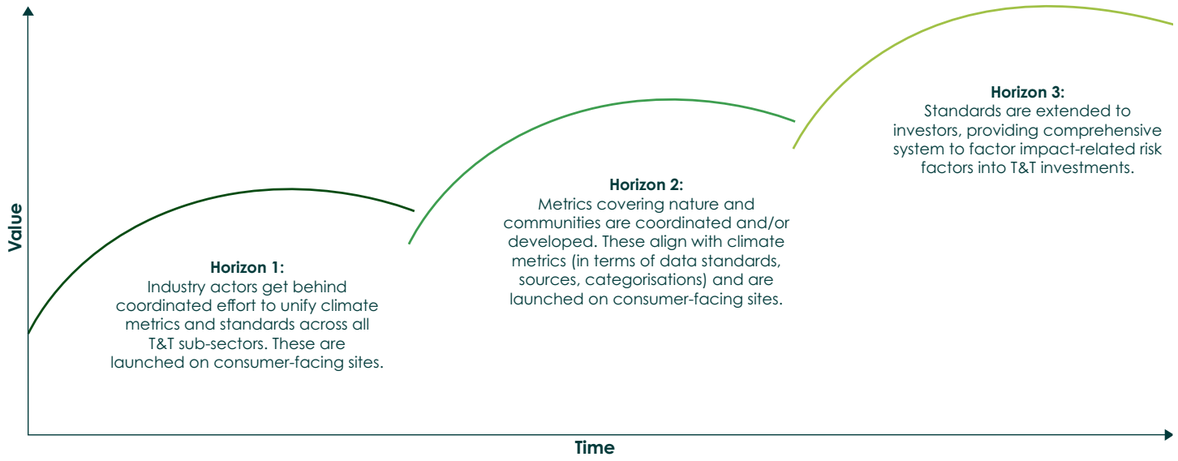
This initiative would not seek to establish new standards. Instead, what's needed is coordination behind a single effort, supporting leaders in this huge endeavour and collaborating to ensure that these efforts represent T&T as a whole.

WHO

Existing initiatives to build on include:

WORLD TRAVEL & TOURISM COUNCIL · Travalyst · OXFORD ECONOMICS · Measuring the Sustainability of Tourism · GSTC Global Sustainable Tourism Council · GSTC Destination Criteria · GLOBAL SUSTAINABLE TOURISM DASHBOARD

3 HORIZONS



The agenda proposed in this report offers T&T a route to becoming the best that it can be by 2050: a thriving, strategically important industry across the world, recognised as a leading force in tackling climate change, regenerating nature, creating quality jobs and bringing people together. This is T&T's chance to drive the solution rather than be seen as part of the problem. Delivering the agenda will secure a better future for T&T and all its destinations, established, new or as yet undiscovered.

The opportunity is huge. The time to seize it is now.

TABLE OF CONTENTS

CHAPTER 01

THE IMPORTANCE OF TRAVEL & TOURISM

THE IMPORTANCE OF TRAVEL & TOURISM

The travel and tourism industry (T&T)[i] makes important and varied contributions to societies across the globe: it delivers tourists and travellers benefits ranging from the practical to the spiritual; it drives economic growth, creating jobs and boosting local communities; and it helps to protect nature and cultural heritage.

T&T's broad scope is reflected in the complex structure of the industry's supply side. This comprises six highly interdependent sub-sectors: transport, hospitality, travel agencies, tour operators, destination management organisations, and tourist information and guiding services. The global reach of this interconnected T&T supply system gives it outsized potential to drive progress on the Sustainable Development Goals (see Figure 10).

FIGURE 10: THE UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

This chapter details the structure of T&T's supply side and the industry's capacity to contribute to individuals, economies, nature and culture. It draws on industry data collected immediately before COVID-19 struck since this represents the industry more accurately than data collected during the pandemic.

i Travel, tourism, and travel & tourism are used interchangeably.

1.1 SIX SUB-SECTORS SUPPLY T&T SERVICES

FIGURE 11: THE SIX SUB-SECTORS OF THE T&T INDUSTRY

The six sub-sectors interact closely. For instance, attractive transport links may increase demand for travel to a given destination and the hospitality businesses located there, or a destination's potential attractiveness to travellers may spur the transport sub-sector to direct new routes to it. Some cities, like Dubai, have shaped transport routes by becoming both travel hubs and tourism destinations in their own right. Similarly, travel agencies interact with the transport, hospitality and tourism information sub-sectors to enable travellers to make informed choices and book trips. Tour operators may also partner directly with service providers in these three sub-sectors to design tours. The majority of the industry is made up of small and medium sized enterprises (SMEs).

Harar, Ethiopia
Credit: Alexandre L'Heureux

Angkor Wat,
Cambodia

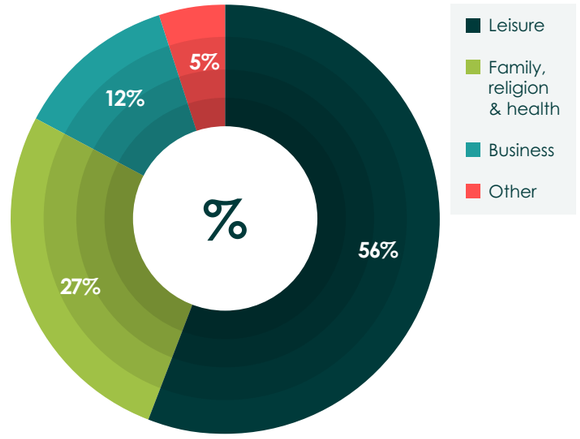
1.2 T&T'S CONTRIBUTIONS TO TOURISTS AND TRAVELLERS

People derive different kinds of benefit from T&T depending on their reasons for travelling. The main reasons given are the pursuit of leisure, contact with friends and family, religious duty, medical treatment, and business (see figure 12[1]), although people often travel for more than one purpose. People may also travel, for example, for education. In terms of spend, business travel counts for 21% of the total.[2]

Overall, the large majority of trips are domestic rather than international: in 2018, domestic trips worldwide outnumbered international ones by six times.[3] Travellers in China make the most domestic trips, an estimated 6 billion in 2019 [4], followed by travellers in the USA, with 2.3 billion domestic trips in the same year.[5] However, global spending on international trips is significantly higher than global spending on domestic travel.

FIGURE 12: GLOBAL PURPOSE OF TRAVELLING

%, 2019 data



Singapore

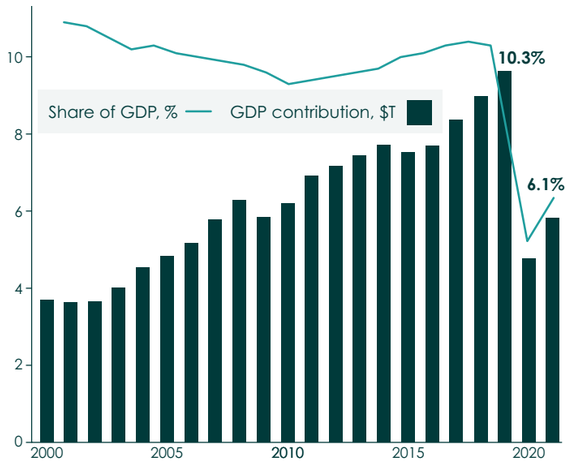
1.3 T&T'S CONTRIBUTIONS TO ECONOMIES

T&T has grown into an economic powerhouse. Between 2000 and 2019, international arrivals more than doubled from 674 million to 1.5 billion thanks to a combination of lower-priced international travel and growth in disposable incomes.[6, 7]

Today, the industry contributes 10% of global GDP (Figure 13). It is the world's largest employer, employing 330 million people directly and indirectly in 10% of global jobs[8] and supporting an additional 1.3 billion livelihoods. Between 2014 and 2019, 1 in 4 new jobs were generated by T&T, reflecting the industry's rapid recent growth and high labour intensity.[10] Women make up more than half of the global tourism workforce (54%).[11]

FIGURE 13: T&T GDP CONTRIBUTION OVER TIME

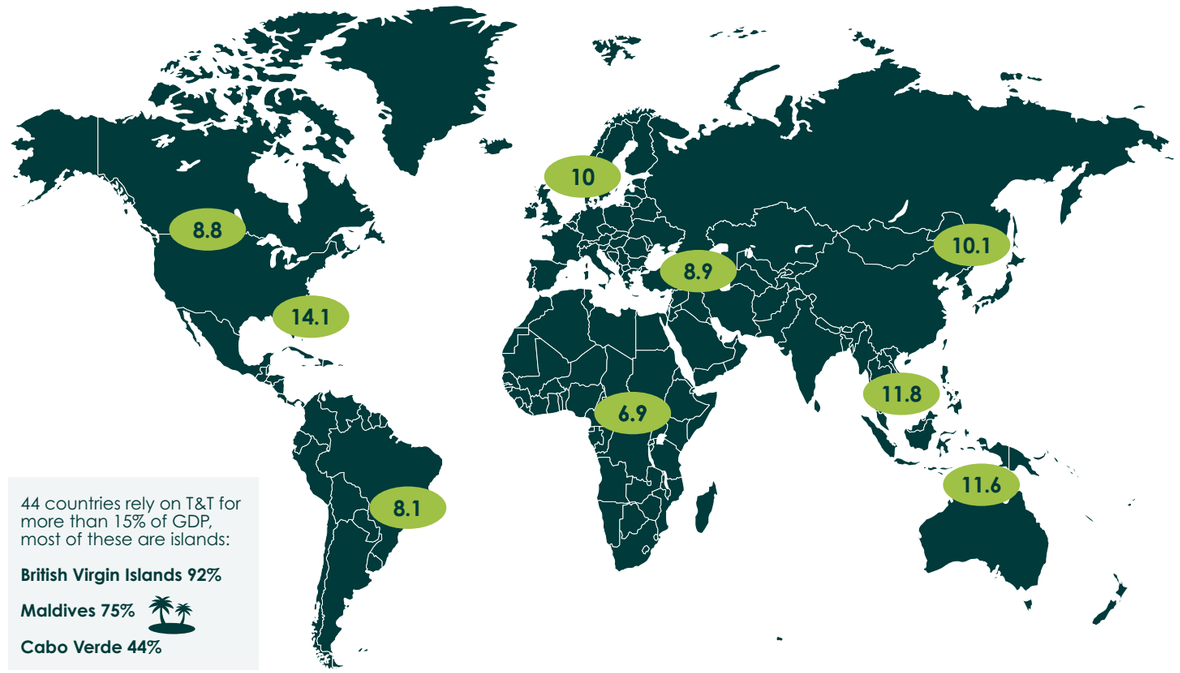
%, USD trillions



South Africa

FIGURE 14: TRAVEL & TOURISM SHARE OF GDP

% of total, 2019



T&T is more important to some economies than others, particularly some developing and emerging economies. The sector contributes more than 15% of GDP in 44 countries (see figure 14)[12] and dominates in many Small Island Nations, including British Virgin Islands, Aruba, and the Seychelles.[13] It accounts for more than half of employment in St Lucia and Aruba[14] and is credited with propelling the Maldives to middle-income status.

The industry is also critical to global business.[15] For instance, in 2017, business events drew 1.5 billion participants[i], who generated more than USD 1 trillion of direct spending and contributed USD 621.4 billion to global GDP.[16] Although business is the reason for only 12% of trips, business travel accounts for 21% of yearly spending on T&T.[17] This market is particularly important to high-end hotels and airlines: pre-COVID-19, some 70% of global revenue for high-end hotel chains came from business travel as did 55-75% of airline profits.[18]

Seychelles

i Majority domestic.

Kelingking Beach,
Indonesia

1.4 T&T'S CONTRIBUTIONS TO NATURE

Thriving nature is a vital asset for much of the T&T industry, attracting large numbers of people to destinations worldwide. Every year, naturally endowed locations draw millions of visitors looking for either activities based in nature, such as snorkelling, skiing or safaris, or simply a beautiful seaside or rural setting. Nature tourism generates revenues of over USD 600 billion a year, with wildlife tourism contributing more than half of this total.[19] Coral reefs attracted some 70 million visitors a year pre-COVID-19, with associated spending of USD 36 billion.[20] Wildlife tourism in Africa accounts for an estimated 12 million trips a year and 80% of the continent's tourism revenue.[21] In total, T&T contributes 7% of Africa's GDP, worth USD 169 billion.[22] The importance of thriving nature looks likely to mount, as studies of people's attitudes following the COVID-19 pandemic indicate a rising desire to connect with nature.[23, 24]

Revenues from nature-based tourism can in turn provide funds for protecting and conserving nature. Tourism revenues from the Philippines' Tubbataha Reefs Natural Park provide more than half the budget for protection from illegal fishing.[25] An estimated 85% of funding for South Africa's wildlife and public land management authority came from tourism-related sources in 2018.[26] In the United States of America (USA), fees from government-managed national parks fund habitat restoration and enforcement of nature conservation laws.[27] Some governments and public authorities also allocate taxes raised from tourism to supporting nature. In 2022, Bhutan increased its daily tax on tourists to USD 200 and designated it a 'Sustainable Development Fee'. Bhutan will use the money to improve the sector's impact on the environment as well as tourists' experience and sector infrastructure.[28]

T&T can also add intangible benefits to nature by educating millions of visitors about nature's value and its vulnerability. For example, guided boat tours in the Great Barrier Reef have significantly reduced damage to the reef that visitors used to cause.[29]

Zanzibar, Tanzania
Credit: Florian Homann

1.5 T&T'S CONTRIBUTIONS TO CULTURAL HERITAGE

Cultural assets are similarly a big draw for visitors, driving the expansion of T&T and its local economic benefits. Cultural tourism, which overlaps with travel to visit religious sites or perform religious rituals, is one of the fastest-growing market segments, accounting for 40% of all tourism revenues worldwide.[30] Iconic sites draw huge numbers: the Taj Mahal attracts 7 to 8 million visitors a year[31] and the Louvre drew 10 million in 2019.[32] Managing visitors to these heritage sites is crucial to maintaining the balance between the sites' value for local and religious communities with income from tourism. The Taj Mahal complex does this by charging different prices for tickets sold to local nationals and foreigners. Every Friday, the complex is closed to tourists but open for free to local Muslims who wish to perform their Friday prayers at the Taj Mahal mosque.[33]

Like revenues from nature tourism, proceeds from cultural tourism can be channelled into cultural conservation and regeneration. T&T is the largest source of funding for the preservation of cultural heritage in many destinations, outstripping official government expenditure. Funding from this source goes to heritage sites, such as galleries and museums, and to support contemporary cultural and creative industries. It also generates employment, for example, in restoration and maintenance, crafts and food production, local tour guiding and the performing arts.[34] Similarly, people travelling for religious reasons generate funds not only for the religious places they visit but also for the hospitality facilities that serve their other needs.[35] Recognising these benefits, 90% of countries surveyed by the UN World Tourism Organization in 2018 prioritised cultural tourism in their tourism policy.[36]

T&T also fosters appreciation for cultures, both familiar and new. There are over 200 million annual pilgrimage visits to religious sites worldwide, during which visitors can explore their own religious culture.[37] By enabling interaction and exchange between travellers and local residents, tourism exposes both to new and unfamiliar cultural practices. This works both ways: tourists' engagement in local culture has been found to renew local residents' interest in and appreciation of their own culture, especially among younger generations.

Ta Prohm Temple, Cambodia

CONCLUSION

T&T plays a distinctively wide-ranging role in the global economy, generating different types of value and significance for both people and planet. Looking to the future, T&T as a system has potential to greatly increase the benefits it brings by shifting to a net positive model, one that gives more to economies, climate, nature, and communities than it takes. But plans to leverage T&T's unique capacity to deliver greater global benefit must address the critical challenges facing the industry today, as Chapter 2 explains.

CHAPTER 02

MAJOR CHALLENGES FACING THE INDUSTRY

MAJOR CHALLENGES FACING THE INDUSTRY

T&T's success has come at a cost. At the same time as it gives the abundant benefits to people and planet outlined in Chapter 1, the industry in its current form also creates significant downsides for climate, nature and communities. The extent of these negative effects already threatens the industry's commercial viability in some areas. Coupled with its long-term structural inefficiencies, these negative effects are weakening the sector's resilience, making it increasingly vulnerable to likely future climate and other shocks.

Addressing the sector's negative impacts on climate, nature and people detailed in this chapter is an urgent priority for decisionmakers across the industry, as it is for governments seeking the benefits of a flourishing T&T sector. Work has started, and there is encouraging progress. But much more needs to be done.

The good news is that addressing the sector's challenges systemically, as described in the subsequent chapters of this report, will do more than minimise their costs and risks: it will compound T&T's benefits to people and planet, positioning the sector to serve growing numbers of travellers in a sustainable and stable fashion, in turn ensuring that T&T's success continues.

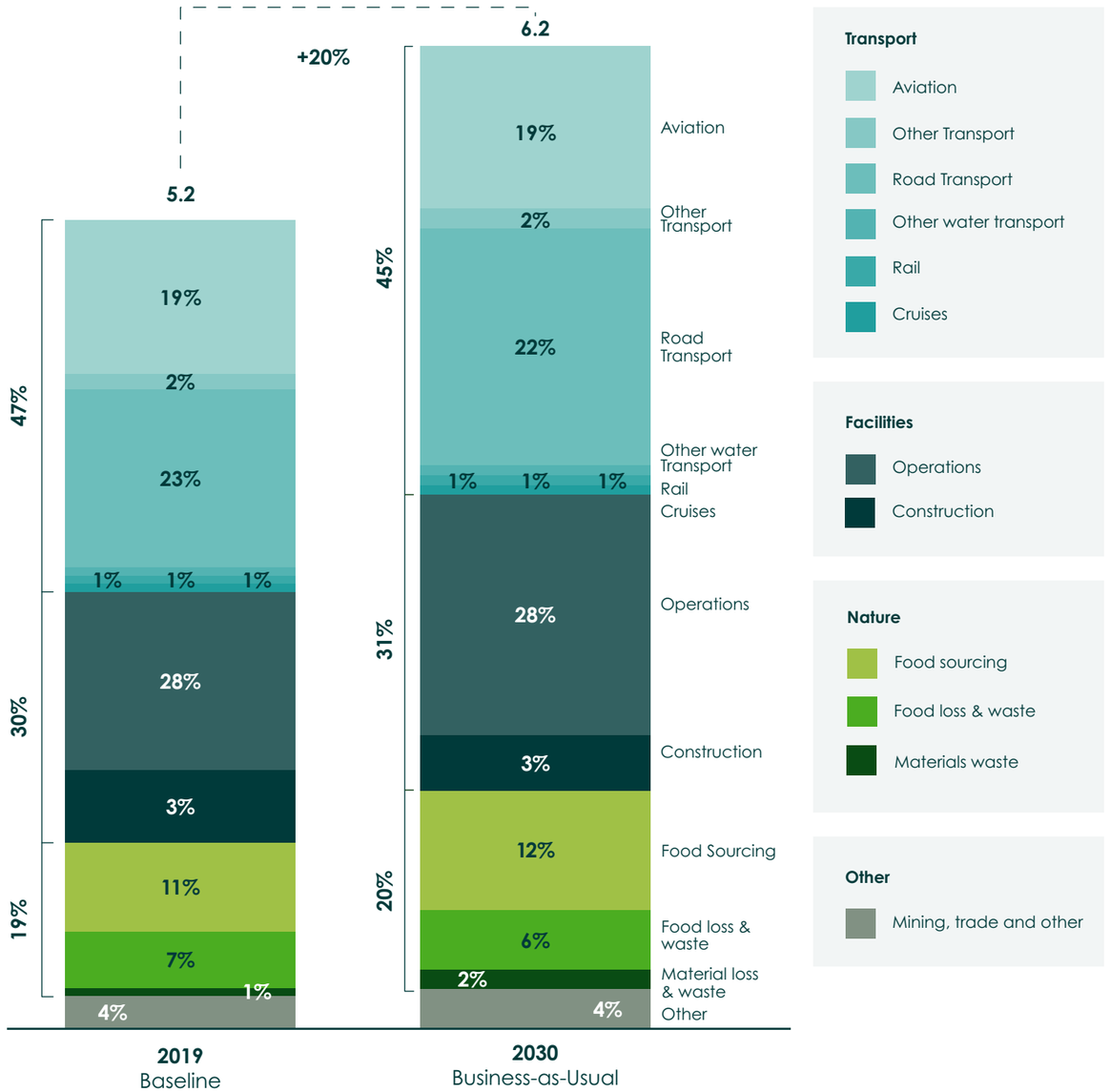
Neuschwanstein Castle, Germany

2.1 T&T'S IMPACT ON CLIMATE

T&T is a major source of the greenhouse gas (GHG) emissions held responsible for climate change. The industry produces 5.2 gigatonnes of CO_2eq[i] a year, or 9-12% of global GHG emissions.[ii] The transport and facilities subsectors are the industry's largest GHG emitters, accounting for 47% and 30% of its total emissions respectively. We project that, without concerted action to address them, T&T emissions will rise 20% to 6.2 gigatonnes of CO_2eq by 2030 (see figure 15).[iii] This would be around one-third of the total global carbon budget for that year.[iv, 1] The cost of abating these projected emissions from T&T is an estimated USD 0.5 – 0.6 trillion a year.[v]

FIGURE 15: GLOBAL GHG EMISSIONS OF THE TRAVEL & TOURISM SECTOR

Gt CO_2eq, 2019 and 2030 BAU



i Systemiq analysis. Emissions estimated as between 4.6 and 5.8 $GtCO_2$eq in 2019, based on WRI estimates for global total emissions of 49.8 $GtCO_2$eq the same year. See Technical Annex 1 and 2 for details. This is higher than most previous estimates for T&T emissions; our analysis is based on up to date data for aviation and cruise, and also includes nature-related emissions not typically included in previous estimates. Data availability continues to be a challenge for accurately estimating T&T emissions, and the industry would benefit from further work on this topic.

ii For the reader's convenience, we report mid-points instead of ranges from here onwards. Share of global emissions based on WRI estimates of 2019 global total GHG emissions (49.8$GtCO_2$eq).into account that COVID-19 recovery periods will vary by sub-sector.

iii This figure is based on current trends continuing and no major changes to operating models in the sector. It also takes into account that COVID-19 recovery periods will vary by sub-sector. Systemiq analysis, see Technical Annex 2.

iv Based on IPCC Carbon Budget estimations .

v Current 2019 estimated emissions of T&T (4.6 – 5.8 $GtCO_2$eq, Systemiq Analyses) have been multiplied by $100USD per tonne CO_2eq (FOLU Growing Better, CPLC Carbon Pricing Report 2017), which is the average of a range of marginal abatement costs for global GHG emissions from 2020-2050. These marginal costs are estimates of how much society must spend to avoid emitting each tonne of the CO_2eq to ensure that global temperature increases do not exceed 2oC in line with the Paris Agreement.

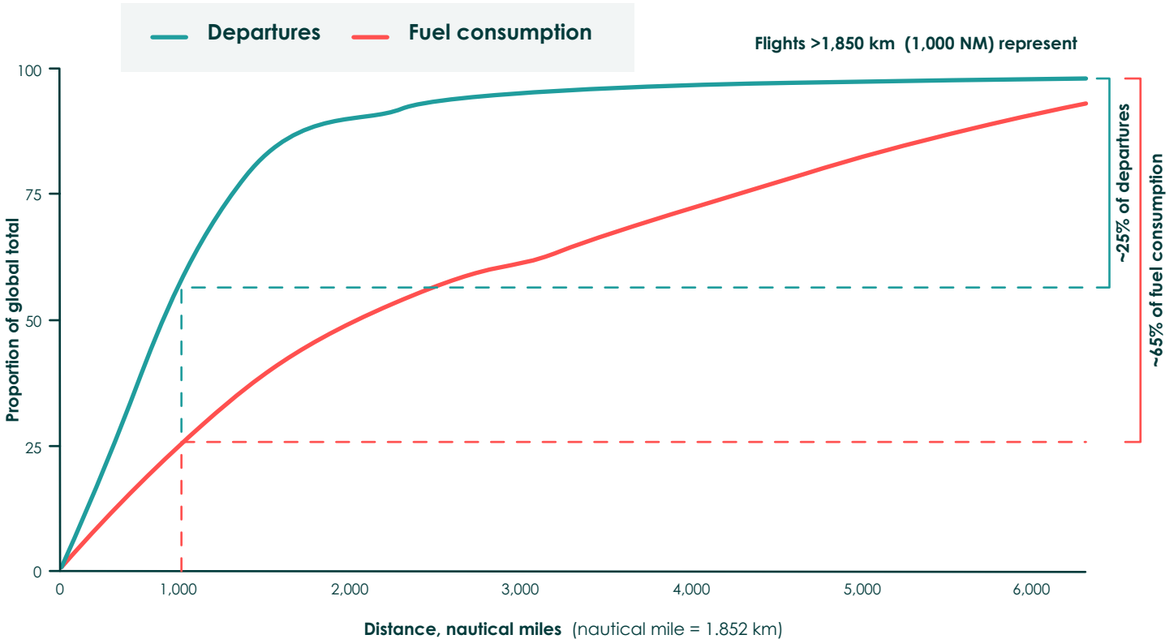
EMISSIONS FROM TRANSPORT

Transport produced 47% of the T&T industry's emissions in 2019. Aviation is one of the biggest and hardest to abate sources, producing over one-third of the transport emissions. Despite the fall in flights caused by COVID-19, pre-pandemic passenger numbers (and so pre-pandemic volumes of emissions) are expected to return by 2024.[2] Emerging economies, particularly in Asia and the Pacific, account for a significant share of expected growth in demand for aviation.[3]

Long-haul trips, defined as more than 1850 km, produce the bulk of emissions from aviation despite accounting for only ~25% of departures.[4] Although short-haul flights emit 4% more carbon per passenger-kilometre,[5] the distances travelled by long-haul flights mean they account for ~65% of all aviation fuel use, which explains their larger share of emissions (See Figure 16).

FIGURE 16: CUMULATIVE SHARE OF DEPARTURES AND FUEL BURN DEPENDENT ON FLIGHT DISTANCE

%, nautical miles



Efficiency improvements in aircraft do not yet reduce emissions enough to offset the effects of demand growth, hence the expected significant increase in aviation emissions. Travel by road accounts for almost half of the emissions from transport[6]. Although vehicles emit much less GHG than planes, travel by road is the usual choice for domestic trips: 76% of overnight trips within the UK are made by car[7] and 81% of overnight trips in rural India are by bus or hired transport.[8]

Rail travel accounts for just 1% of T&T's transport emissions because it is a relatively low emitter and only 2% of international T&T journeys are made by train.[9] Few train journeys can match alternatives by air on price and convenience. Current plans to expand the world's rail networks are too modest to support a marked increase in rail travel by 2030.

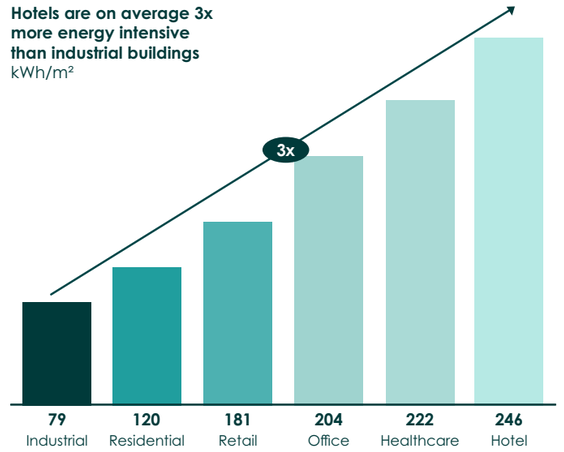
Despite these significant emissions from transport, current plans to reduce them are insufficient and rarely integrated with post-pandemic recovery.[10] For example, the International Air Transport Association recently published a guide outlining measures to support airlines during the pandemic and beyond. It examines ways to restart the industry following the pandemic but makes no mention of climate sustainability.

EMISSIONS FROM FACILITIES

T&T facilities account for 30% of the industry's total GHG emissions.[11] Of this, 74% comes from heating, cooling and powering buildings. High emissions from T&T buildings reflect their high energy consumption, which is largely a result of poor design: hotels are twice as energy intensive as residential buildings (see figure 17).[12]

Construction accounts for the small remaining emissions from facilities.[vi] The steel and cement used in hotel construction are highly carbon-intensive.[13] Taking a life cycle approach to designing facilities, which includes using more recycled materials, could sharply reduce emissions from both building and operating them.

FIGURE 17: ENERGY INTENSITY OF BUILDINGS BY INDUSTRY



vi This is, however, an understatement of the true emissions footprint for all T&T construction as data constraints mean that only accommodation is included, and not food and beverage, retail and services. The latter three categories are however included in the figure for operational emissions.

2.2 T&T'S IMPACT ON NATURE

Although T&T revenues fund nature conservation, the industry and travellers also put such pressure on natural resources and habitats that, in several places, they are damaging local ecosystems.[14] This dynamic undermines the value proposition of the industry itself: more than 80% of the value of T&T goods and services is highly dependent on nature, from the supply of raw materials through to delivery of nature-based tours.[15] Many destinations in developing and emerging economies are particularly dependent on a thriving natural environment.[16, 17, 18]

T&T's exact impact on nature is hard to measure because nature is so varied and T&T's effects inherently local. For example, the same level of water use may cause shortages in one locality but not another.[vii, 19] But we can get a good understanding of T&T's negative effects on nature by looking at four of its common consequences: land conversion; ecosystem reduction, including loss of biodiversity; waste of resources; and overuse of water.

LAND CONVERSION

Clearing land to construct T&T facilities and infrastructure can also destroy ecosystems, particularly the highly sensitive ecosystems found in coastal and mountain regions.[20] For instance, Aruba has lost 70% of its mangroves since 1990 primarily because of hotel developments. Converting virgin land to T&T sites can also threaten biodiversity and ecosystem services, as well as fuelling climate change by releasing CO_2 and removing carbon sinks.

Land conversion often displaces residents, including indigenous groups and ethnic minorities.[21] Tourism projects may start with a 'land grab', where developers and investors use questionable contracts to appropriate land and/or proceed without securing consent from previous land-users.

Unless the T&T industry takes action now, there is significant risk of more land conversion as the industry grows.[22] The average annual growth in global international tourism is 3-4% and the rate is twice as high in many developing economies.

ECOSYSTEM REDUCTION AND BIODIVERSITY LOSS

T&T can further reduce ecosystems and biodiversity by pursuing unsustainable practices.[23] For instance, locating developments in sensitive coastal or rural areas can damage coastal defences, increasing their risks of exposure to storm damage, erosion of vegetation and soils, and floods. The beach at Boracay in the Philippines had to close for 6 months in 2018 after suffering severe environmental degradation.[24] The use of illegal or unsustainably sourced timber to construct hotels encourages deforestation. In 2019, the hardwood used to build two new hotels in the Philippines was shown to be illegally sourced from local forests that environment-conscious hotel guests were trying to protect.[25] Similarly, poor management of visitor facilities can disturb wildlife. Cheetahs are less successful at hunting when surrounded by large numbers of tourists and vehicles[26]; turtle hatchlings can be disorientated by hotel lighting along nesting beaches[27]; and scuba divers may damage corals. Meanwhile, stringent conditions aimed at meeting the welfare needs of animals kept in captivity for tourists are often overlooked, resulting in abnormal behaviour, disease, and early death[28].

Pollution from tourists and travellers, especially plastic, also damages local biodiversity. Tourists are estimated to account for 13% of plastic waste in Bali, Indonesia, even though they average 8% of people on the island.[29] Total plastic pollution from T&T is estimated to generate annual costs of USD 50-170 billion in lost marine ecosystem services.[30] Sewage and greywater discharge from hotels and cruises likewise cause profound damage to ecosystems. The EPA finds that passenger vessels discharge an estimated 8.4 gallons of sewage and 45-65 gallons of greywater per day per person. This can deplete oxygen, spread pathogenic bacteria and viruses, and increase nutrient levels in the surrounding ecosystem, leading to toxic algal blooms and dead zones that in turn disrupt marine food chains.[31]

Mount Everest,
Nepal

vii The Science Based Targets initiative is working to quantify nature impacts as far as possible but does not expect to complete this project before 2025.

WASTE OF RESOURCES

Food waste is a significant source of emissions, and the hotel industry is responsible for 12% of all food waste worldwide.[32, 33, 34] Offering more choice and larger quantities of food than guests want or need has become an industry norm. It encourages over-eating and the disposal of uneaten food, both of which result in needless emissions.

Inefficiencies in food preparation also generate waste. Inadequate storage, insufficient cold chains and lack of training for staff in how to avoid waste all result in spoiled produce, as does overordering: 85% of hotels add a 'safety margin' to food orders.[35]

T&T's resource consumption, particularly of food, also indirectly drives land conversion. The rate of land conversion to agriculture, which already occupies 38% of the world's land, is speeding up as global demand for agricultural output outpaces land savings from more efficient agricultural production.[36] This dynamic puts particular pressure on critical ecosystems including tropical rainforests and carbon-rich peatlands.[37] T&T's rapid growth – faster than global GDP growth – combined with its high levels of food consumption and waste mean the industry could significantly reduce indirect land conversion if it focused on consuming less and switched to food with a low carbon footprint.

OVERUSE OF WATER

On average, tourists use eight times more water than local populations [38], putting significant pressure on local water resources. In Asia-Pacific, more than 75% of places are experiencing severe water stress with many areas running out of clean water for both local people and tourists.[39] In many beach destinations, tourists arrive en masse in the drier months of the year, compounding water scarcity. With creative, concerted action from the sector, these behaviours can be changed.

2.3 T&T'S IMPACT ON COMMUNITIES

The benefits to communities of T&T can be outweighed by its detrimental effects, notably where it stimulates inequality, socially disruptive industries and local price inflation, and where it encourages the commodification of local culture.

UNEQUAL OPPORTUNITIES

Common T&T employment practices are compounding T&T's post-pandemic staff shortages as well as 'short-changing' local employees and their communities.

Overall, the quality of jobs in the industry is far from assured. T&T is on average less well-paid than other industries worldwide.[40] Seasonal, sometimes low-skilled and frequently informal work means jobs are often insecure, making workers financially vulnerable. Informal working is notably widespread in T&T. For example, 61% of restaurant workers and 25% of hotel workers work informally in Latin America and the Caribbean and more than three in four workers in the tourism sector work informally in Asia and the Pacific.[41]

COVID-19 highlighted the degree of job insecurity in T&T. Some 62 million T&T jobs were lost in the first year of the pandemic – the most of any sector both in absolute terms and as a share of total sector employment.[42] Many T&T staff were put on furlough or made redundant, prompting large numbers to shift to other industries.

Women account for 54% of the hospitality workforce. Yet widespread gender disparities limit women's opportunities and benefits. Women are more likely to be employed in lower-skilled and informal hospitality roles[43] and are less well-represented among senior management.[44]

Inconsistently applied labour standards also fail to protect employees against sexual harassment, which disproportionately affects women. A review of international studies found that hospitality employees widely ignore sexual harassment because it is so common and they feel they can't do anything about it. Some view it as 'part of the job'.[45]

Concerns among potential T&T recruits about gender and pay disparities, low quality work, uncertain career prospects and widespread job insecurity make it hard for the industry to attract the talent it needs to address the significant labour shortages it currently faces: the WTTC estimated T&T staff shortages of 263,000 in Italy, equivalent to 1 in 7 jobs unfilled, in summer 2021; and 690,000 in the USA, equivalent to 1 in 9 unfilled jobs the same summer.[46] That said, the industry's elasticity meant quick recovery in many segments. Nevertheless, tackling gender and pay disparities and driving up the quality of jobs are priorities for improving workforce wellbeing and strengthening the industry's appeal to talent.

DISRUPTIVE INDUSTRIES

Growth in travel and tourism can stimulate socially disruptive industries, such as sex work, to grow alongside. Where sex work is illegal, it is often unsafe for workers, particularly minors, who are at high risk of exploitation and abuse.[47, 48] Similarly, while locations such as Las Vegas and Macau have cultivated gambling industries to attract foreign spending and investment, local residents in a number of aspiring gambling destinations link the industry to increasing crime and diminishing the historic and aesthetic value of their culture.[49, 50]

RISING PRICES FOR LOCAL COMMUNITIES

As destinations become more popular, competition for property can increase, driving up prices and, in some cases, leaving locals unable to afford property in their home town. In Barcelona, Spain, average rent increased by 50% between 2015 and 2020 alongside a boom in tourism.[51] Increased tourism to Mexico's Caribbean coast is displacing locals as demand for property surges, forcing them to live in unofficial settlements where they risk eviction.[52]

CULTURAL DAMAGE AND COMMODIFICATION

Increasing visitor numbers can place strains on local culture and heritage if visitors are not carefully managed. Tourists can cause costly and sometimes irreversible physical damage to heritage sites. By 2004, two-thirds of the Great Wall of China were reportedly damaged by sightseers and developers, as well as natural erosion. Similar damage threatened Machu Picchu's status as a World Heritage site in the early 2000s. The costs of preserving it were estimated at USD 132.5 million.

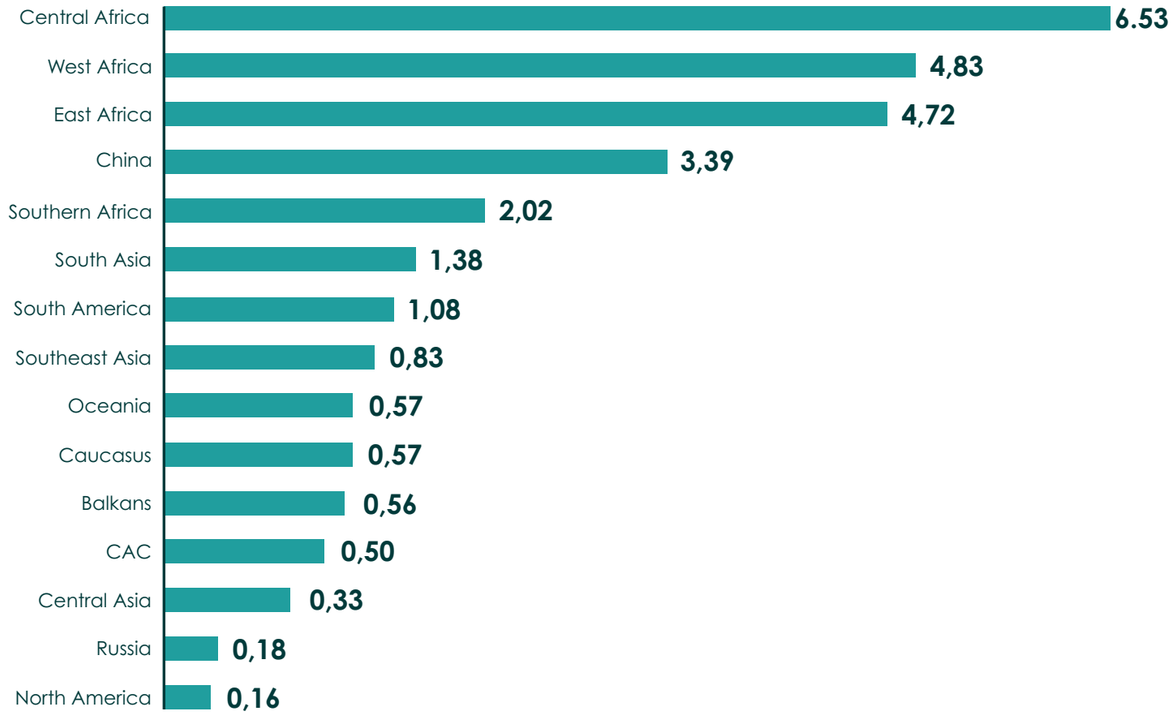
Some communities in tourist destinations also suffer from cultural commodification, or the merchandising of aspects of their culture.[53] They may come under pressure to stage local 'spectacles' to fulfil tourists' expectations, which encourages the 'invention' of local traditions or the standardization of real ones in forms they would not take were the tourists not there.[54] Communities may also be obliged to commodify formerly uncommercial areas of their cultural life. So rather than engaging authentically with local cultures, tourists may in fact experience their expectations of what local cultures should look like rooted in the value system they bring with them.

Machu Picchu, Peru

Locals involved in this merchandising may be excluded from decisions concerning it and feel a loss of dignity and pride. Communities whose culture is merchandised by external firms for tourist markets may be inadequately compensated.[55] This kind of cultural damage was experienced by First Nation peoples, whose culture was explicitly 'packaged' by British Columbia's tourism industry to draw visitors.[56]

FIGURE 18: UNAFFORDABILITY OF NATIONAL PARK FEES

Average fee x 1000 / per capita GNI



Similarly, the commodification of local cultural and natural sites for tourists can price them out of reach for local citizens. For example, when ancient Mayan sites were developed for tourists, the entrance fees became a barrier for local visitors.[57] Entry to national parks in developing economies is unaffordable for many citizens, particularly in Africa (see figure 18[58]).

Communities should not have to trade access to their local natural and cultural heritage in exchange for T&T jobs and investment in their locality. Imbalances can be redressed by careful management of visitor numbers, regulation, and targeted discounts.

2.4 STRUCTURAL INEFFICIENCIES

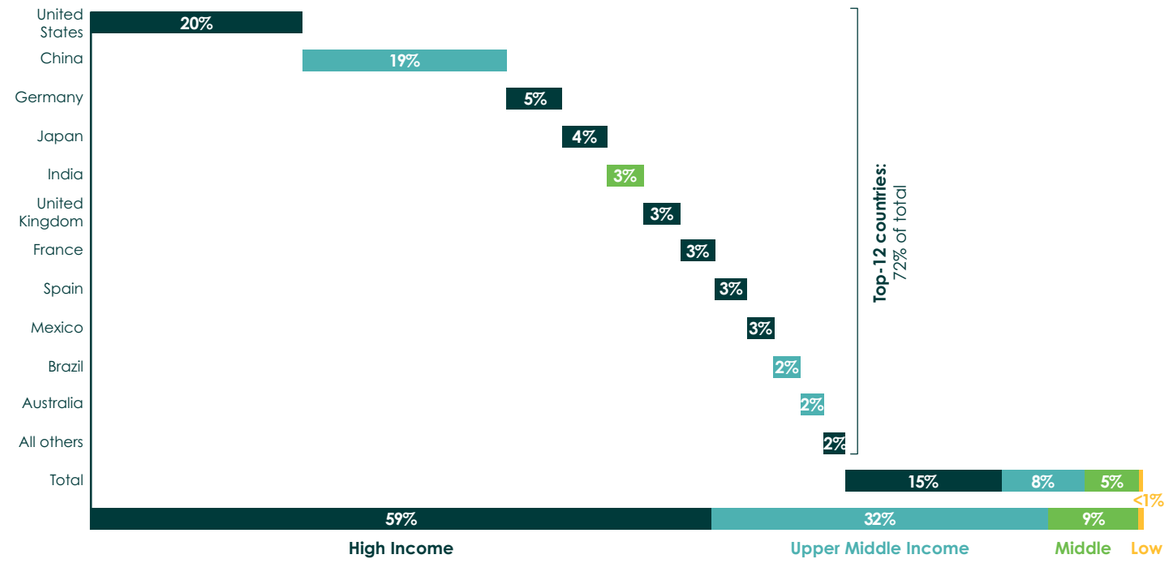
A number of long-standing structural inefficiencies in T&T compromise the industry's growth rate, sustainability and stability. T&T operations are concentrated in a few countries and destinations, which means a lot of places miss out on its potential benefits. The industry's seasonality means value created in destination areas is 'lumpy' and hard to manage sustainably. And perverse incentives work against the industry becoming more sustainable.

CONCENTRATION

T&T is particularly concentrated geographically. Just 12 countries, most of them high income, account for 72% of T&T's contribution to global GDP[viii] and 10 countries receive 50% of all international arrivals.[59] Europe has by far the largest share of tourism in terms of both global earnings from tourists and international tourist arrivals.

South East Asia and the Middle East have much smaller shares of tourist earnings, but the shares of both have grown fast, by 9% and 7.5% a year respectively between 2010 and 2019, and this growth is expected to continue.[60]

FIGURE 19: SHARE OF GLOBAL TRAVEL AND TOURISM BY COUNTRY



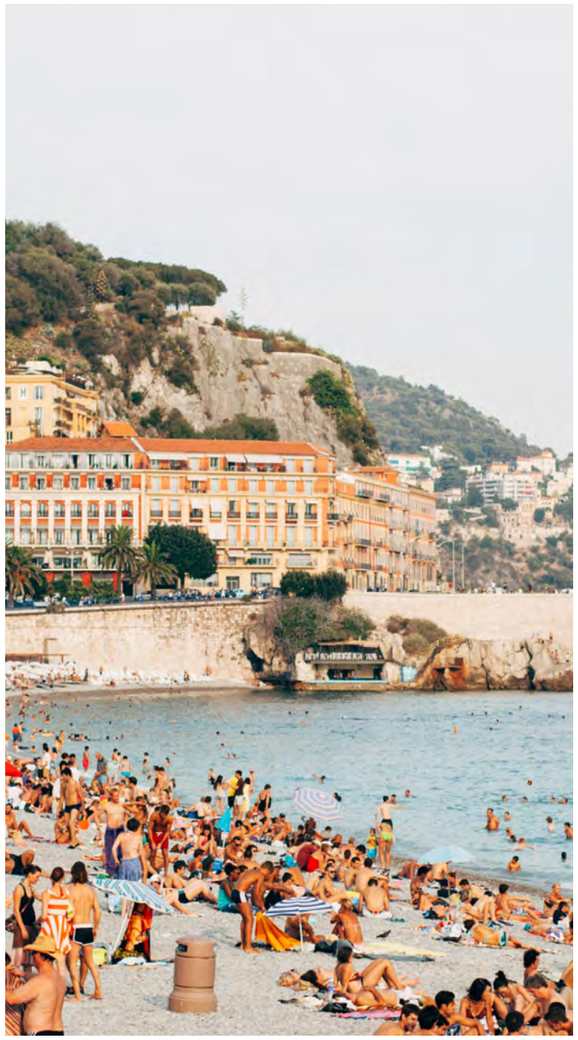
T&T is also concentrated within destination countries. Just 73 cities provide 25% of T&T's contribution to global GDP.[61] Similarly, cultural attractions in a handful of wealthy cities dominate cultural tourism: London, Paris, Washington DC and New York City are home to 11 of the 20 most visited museums worldwide.[62]

Growing numbers of tourists concentrated on relatively few 'hotspots' can accelerate the degradation of their local environment and cultural heritage detailed in 2.2 and 2.3. The 35 million annual visitors to Venice now vastly outnumber its 50,000 inhabitants. Tourist crowds have prompted many Venice locals to protest and some to leave for good. In some destinations, including Amsterdam[63] in the Netherlands and Borobudur Temple in Indonesia, governments have limited tourist numbers to protect local heritage and living conditions.[64]

Geographical concentration in T&T also means large parts of the world do not yet feature on travellers' radar. Many areas have potentially attractive natural and cultural heritage but lack the infrastructure, route options, partnerships and marketing resources to attract a lot of tourists. This is particularly true of Africa, which hosts only 5% of total tourism arrivals and earnings and where T&T is growing slower than in any other region. So far only three African sites feature in the world's top 100 most visited World Heritage Sites.[65]

SEASONALITY

Seasonal weather patterns compel some destinations to welcome an unmanageable number of tourists during their peak season in order to generate enough revenue to sustain the local economy year round. This makes them highly vulnerable to shocks during the peak season.[66]



Nice, France

viii This includes both domestic (~85% of trips) and international tourism and is roughly in line with the GDP share of the world's major economies.

INCENTIVES AT ODDS WITH SUSTAINABILITY

An estimated 83% of global travellers think that sustainable travel is vital.[67] However, trends in consumer information and incentives make it hard for tourists to make sustainable travel choices.

The rise of online travel agencies and price comparison websites has enabled price information to become the lead criterion for booking travel and accommodation. But T&T prices today do not reflect externalities, such as climate or nature impacts, so consumers have no price incentive to make sustainable choices. Government incentives - for instance, tax exemptions and subsidies for the aviation industry - can compound this effect.[68]

Even those who are willing to pay more for sustainable options get little help identifying them. As yet, sustainability criteria rarely feature on booking and comparison platforms. If they do, they tend to be incomplete or confusing, with a dizzying array of unaligned certification schemes and metrics.

Helping travellers to make sustainable choices represents a huge opportunity for the industry, given the large minority of travellers already willing to pay for them. Research on consumers' behaviour has centred on their willingness to pay for carbon offsets and use different modes of transport. Corporate travel stands out as an opportunity in this area. Out of 700 corporate travel buyers surveyed in Europe, 99% considered sustainability part of their travel policy[69] but there is so far little evidence of companies shifting from consideration to action.

2.5 T&T'S LACK OF RESILIENCE

In recent years, the industry has made some progress on preparing itself for shocks.[70] But the COVID-19 pandemic exposed weaknesses across T&T. Visitor numbers and revenues plummeted in 2020, with destinations highly dependent on T&T suffering particularly high economic losses. While travel and tourism GDP could return to 2019 levels by 2023, recovery will be uneven, with domestic tourism expected to bounce back more quickly than international travel and some destinations recovering faster than others.[71] Meanwhile business travel is recovering more slowly.[72]

The industry is still insufficiently prepared for the current effects and likely future shocks of climate change. Moreover, the industry's fragmented structure makes the cross-sector co-ordination needed to build resilience a challenge in itself.[ix]

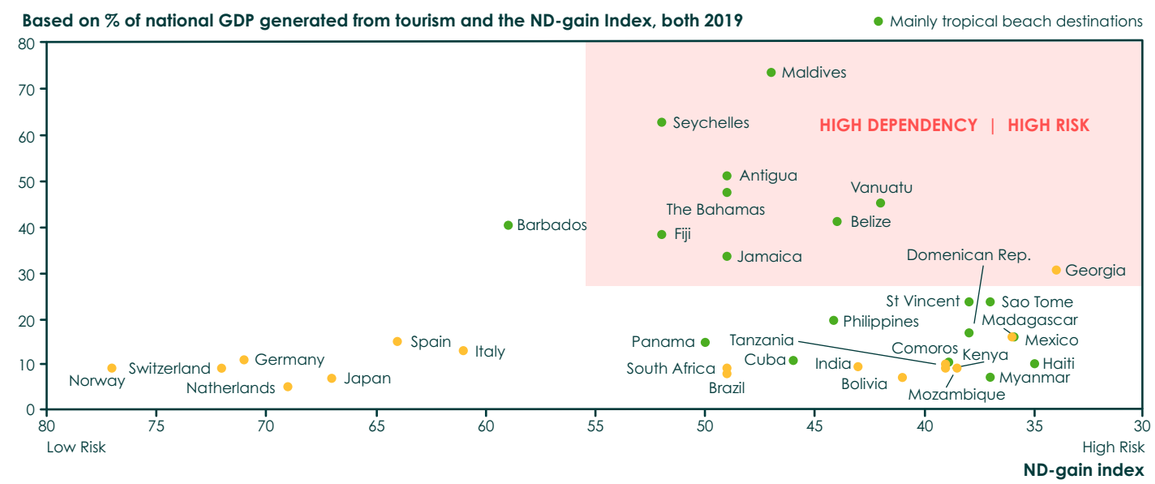
DIRECT AND MOUNTING CLIMATE CHANGE EFFECTS THREATEN T&T'S VALUE PROPOSITION

The impact on the industry of COVID-19 is likely to pale in comparison to the mounting effects of climate change. These already challenge large parts of the industry. A number of T&T markets and destinations face increasingly severe weather conditions, which are causing disruptions and significantly raising their costs. In ski areas in the western US, the snowpack season shortened by an average of 18 days between 1982 and 2021.[73] The number of days of extreme heat (above 37°C) is expected to double by 2050 in southern Spain, Turkey and north Africa, from 30 days to 60.[74] Destinations facing increasingly frequent extreme weather events become less attractive to tourists.

The 2017 hurricane season in the Caribbean, including hurricanes Irma and Maria, deterred 826,000 potential visitors, costing USD 740 million in revenue foregone.[75] In Portugal, the anticipated fall in tourist arrivals triggered by wildfires is expected to cost EUR 35-62 million per year by 2030.[76] Similarly, wildlife tourism is already being hit by changes in wildlife habitats and falling numbers attributed to changing rainfall and temperature patterns.[77]

Developing and emerging economies are projected to be hit hardest by the physical effects of climate changes.[78] Vulnerable communities in these economies are particularly challenged given their limited capacity to manage the consequences. Rising sea levels threaten the economies of many Small Island Nations dependent on T&T (see Figure 20).[79] For example, beach erosion is projected to lower tourism revenues in the Caribbean by 40-50% by 2100.[80]

FIGURE 20: MAPPING DEPENDENCY ON TOURISM WITH CLIMATE RISK



The scale of the threat to T&T posed by these effects of climate change gives the industry a powerful incentive to cut its own carbon emissions. This will entail a fundamental redesign of how actors within the industry operate and interact.

FRAGMENTATION UNDERMINES CROSS-SECTORAL COORDINATION

There is much more the industry could do collectively to adapt to the effects of climate change. Yet the sector's fragmented structure makes co-ordinated, effective action challenging. While the top five hotel groups account for 25% of global market share in 2018 (up from 19% in 2012), the rest of the market is less concentrated.[x, 81] Just under half of all hotel rooms are in independent, unbranded hotels.[82, 83] In 2020, approximately 30% of all tourism workers were employed in micro-enterprises with between 2 and 9 employees.[84] Building the industry's resilience rests on overcoming this fragmentation to drive sector-wide, concerted action.

ix A range of additional threats loom for the T&T industry, including geopolitical and geo-economic tensions, terrorism and new health risks. While these are not the focus of this report, they strengthen the case for building the resilience of the industry.

x The share of SMEs in T&T is commonly cited as 80%, but it is not clear if this is in terms of revenue, number of businesses, or jobs. In the broader global economy, SMEs make up around 90% of all businesses.

CONCLUSION

The T&T industry in its present form exerts contradictory forces: on the one hand, it generates significant value for economies, people and nature. On the other, its negative effects often undermine that value. As the industry grows, these ill effects, many of them accelerating, threaten to make T&T's net impact on the world negative rather than positive.

What explains these growing "hidden costs" and the risks they pose to the industry? In part, they simply reflect T&T's share of a global economy that has grown fast for the past 30+ years without fully managing the environmental or social consequences. However, for T&T the situation is complicated by three additional factors. First, most countries lack the joined-up public sector capacity to set policies and plans needed for healthy development of their T&T sector. Few tourism ministries have a seat at the top table of government. Second, travellers, whether for business or leisure, lack the reliable, accessible information they need to understand the impact of their T&T choices, compare providers' performance across the sector, and make better decisions. This weakens the market demand signal for sustainable options reaching T&T providers. Third, most of T&T (apart from its luxury segment) has been on a relentless drive to compete on cost. The industry has unintentionally conspired to devalue its own product, in the process reducing its margins, weakening its resilience and forgoing the investments needed to secure its longer-term value proposition.

Future-proofing the industry requires T&T activities to become net positive for climate, nature and communities, that is, to generate more value for each than they deplete. This will entail a big sector-wide shift in operating models. One plus is that many elements of this shift are already being deployed in T&T and other industries. But scaling these innovations and developing more will take unprecedented collaboration and ambition across the T&T value-chain. Chapter 3 describes this what a net positive T&T industry will look like and the actions needed to get the industry from here to this better future.

CHAPTER 03

BETTER TRAVEL & TOURISM

BETTER TRAVEL & TOURISM

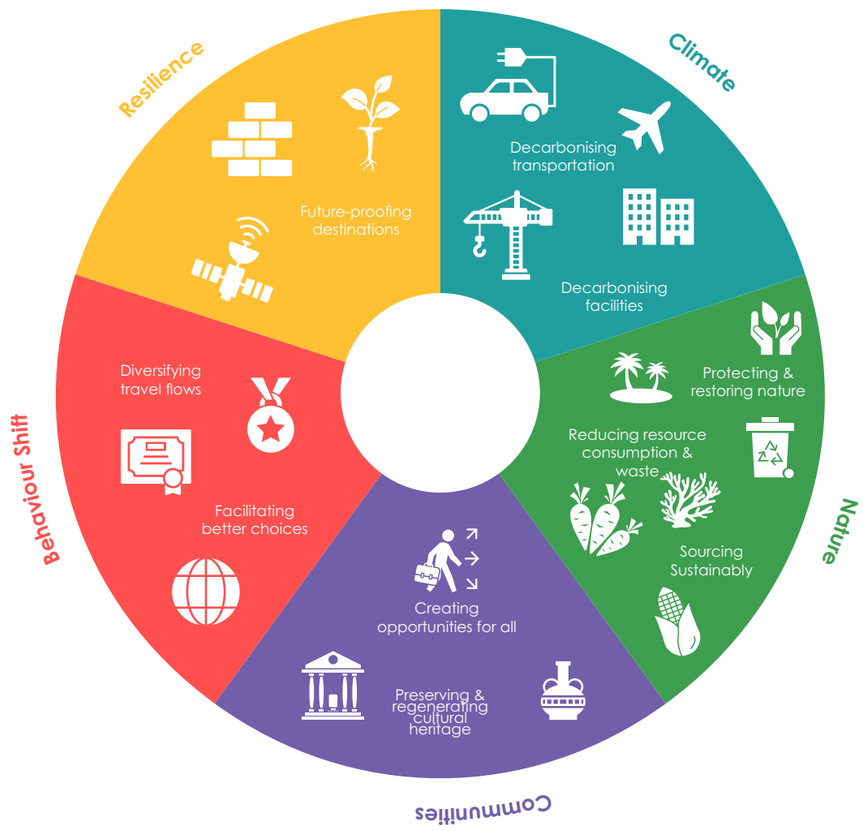
Imagine we can travel forward in time to 2050. To our delight, we find the travel and tourism industry thriving. Not only is the industry economically important worldwide; it is also universally recognised as a force for good. What was a diffuse, largely uncoordinated industry has grown into a collaborative system that is demonstrably net positive for climate, nature and communities.

What has the industry done to secure this success? What path has it followed?

This chapter describes what a net positive T&T industry could look like by mid-century (see Figure 21) and the actions needed between now and 2030 to achieve this vision, based on 10 T&T Priorities. These initial actions will be critical to setting the industry on a pathway to net zero by 2050. So we also give 2030 targets for each priority, as a focus for planning and investment in T&T over the coming years.

Encouraging progress is already being made on T&T's journey to a net positive future. But the pace of change needs to ramp up fast, as does cross-industry co-ordination: T&T businesses and the industry's other stakeholders need to address all 10 T&T Priorities together.

FIGURE 21: A BETTER TRAVEL AND TOURISM SYSTEM IS IN REACH, 2030 TARGETS



Net-zero
Sustainable technologies & business models mainstreamed; credible offsetting of unavoidable GHGs.

Nature-positive
Measurably contributing to 30% nature protection & restoration.

Community-positive
Providing high-quality employment and supporting local culture.

Empowered travellers
Making sustainable choices and accessing a wider range of destinations and ways of travelling.

Future-proofed destinations
100% of destinations 'at risk' from climate change have adaptation strategies in place.

3.1

A VISION OF T&T IN 2050

Many things about the industry are familiar. T&T in 2050 still enables people to explore their world safely and easily, learning about its wonders and enriching their lives. Through T&T, people can expand their business and professional networks, and access international education and health resources. They can learn about new cultures and build memories with family and friends.

But there are some remarkable changes. Political leaders recognise that travel and tourism forms essential connective tissue across societies. It is bringing people closer together, helping them to build economic systems that are getting to grips with climate change, regenerating nature and creating great jobs. As a result, the industry is continuing to grow faster than global GDP, and now accounts for almost 15% of the total (up from around 10% in 2022). Talent is flowing into the industry, drawn by its record as an innovator in many fields, from ecosystem landscaping to food technology and green construction. Governments view travel and tourism as a key part of the economy, generating high-quality jobs, supporting their goals for regional development and enabling a flow of ideas, people and capital across borders.

From the 2020s through to 2035, concern about the **climate impact** of the travel and tourism industry had been mounting, reinforced by the extreme weather events that hammered key tourist destinations in the Caribbean and East Asia year after year. Destinations around the world repeatedly broke the record for the number of extreme heat days in a year, which had an extreme impact on tourism. Increasingly unpredictable monsoons, combined with over 20 wet-bulb days a year in key locations, caused a shocking decline in international arrivals in India.[i] Winter snow cover in mountain resorts became increasingly unpredictable.

But against that background, first moves in the industry's now comprehensive shift to net zero started to reap rewards. In 2022, the International Civil Aviation Organization (ICAO) committed the aviation industry to a net zero pathway. The switch to Long-haul Sustainable Aviation Fuel (SAF) took off when the members of the Alliance of Small Island States (AOSIS) jointly declared they would be 'SAF-only destinations' by 2030.[ii] Their action spurred development of 'green airline corridors' to these and other major destinations, such as Singapore and Amsterdam.

i Wet bulb temperature combines dry air temperature with humidity to understand the effect of both on humans. In humid conditions, it is harder to cool ourselves, which intensifies the effect of extreme heat.

ii The AOSIS is the Alliance of Small Island States, set up in 1990 and which focusses on advocacy on climate change and its impact on member states.

Emissions from aviation are now under control. After peaking in 2022, the number of short-haul flights fell year on year and in the second half of the 2020s, hydrogen powered flights entered the short-haul market. During 2022, France had banned short-haul flights completely for routes with a train or bus alternative taking less than 2.5 hours. Many other countries followed the French lead. Thanks to virtual reality and similar technologies, the number of business trips has fallen significantly.

Although in 2050 aviation still produces 400m tonnes a year of greenhouse gases, this entire amount is fully offset in demonstrably effective nature-based carbon sequestration projects.

By 2025, the Top 20 T&T Hospitality players had all committed to becoming **nature-positive** by 2030. That meant they had to measure their nature footprint accurately. They focused first on their direct impact on nature, which they were measuring properly and taking action to reduce by 2025. By 2030, they extended the same approach to their indirect impact on nature as well. The industry's visible "race to nature-positive tourism" captured the imagination of travellers around the world. Demand for nature-positive T&T was surging by the mid-20s. It also caught the attention of leading players in the investment community, who started explicitly to value natural capital assets embedded in the hospitality sector and the risks facing them. As a result, investment in protecting ecosystems started to mainstream across other industries too.

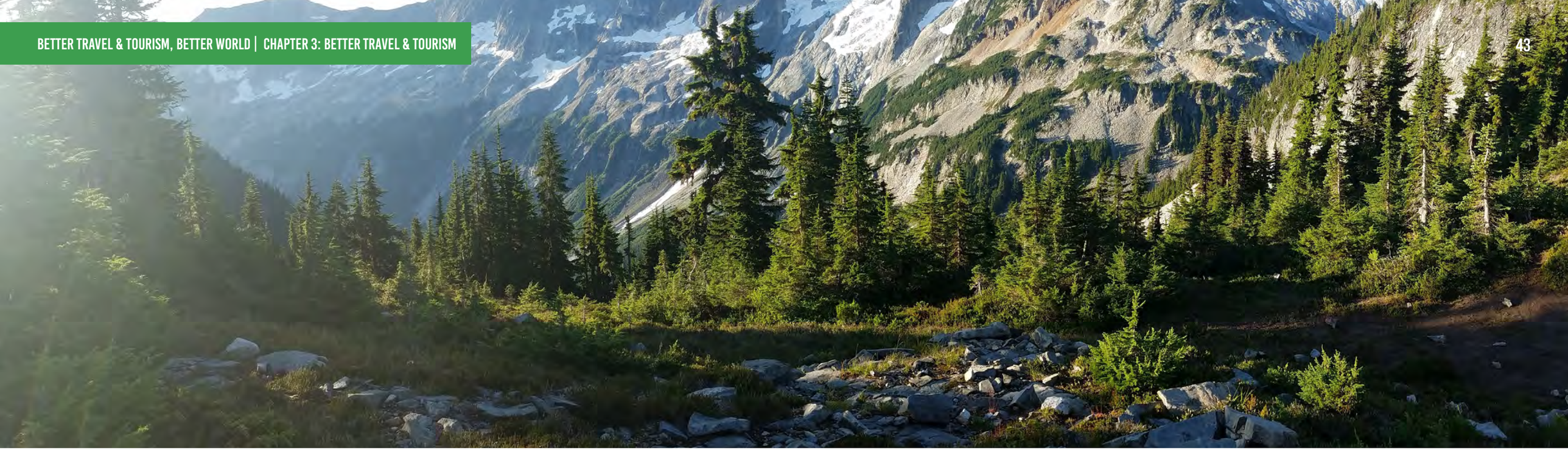
In 2050, the forests, parks, beaches and coral reefs that travellers want to enjoy all continue to flourish. Not only are their flora and fauna better protected against climate risks and pandemics, but they have also become a better natural carbon sink, absorbing more emissions. Saudi Arabia, Indonesia and Mexico took the lead on investing and scaling coral farming, using artificial reef build-up and other coral reef restoration technologies. These projects led to the formation of a 'pearl-string of coral reefs' accelerating innovation. Reefs across the globe are thriving, healthier than they have been for decades, thanks to conservation and restoration projects paid for by tourism and blue credits. Among other successes, T&T has despatched single use plastic to history.

Significant staff shortages in major tourist destinations during the early 2020s shook the industry from its previous complacency. As a result, top players in the industry led the way on offering better working conditions and benefits. The industry's capacity to generate high quality, formal jobs has opened untold economic **opportunities for people** around the world. T&T businesses today find they can hold on to home-grown talent and attract great recruits from other sectors as well. Competition for talent and skills dominates the T&T labour market – working in tourism has come to be seen as an antidote to the screen-based work ubiquitous in other sectors.

Governments and T&T businesses have found ways to finance the preservation and restoration of **cultural heritage** as well as nature. By 2040, a breakthrough in negotiations on standards and reliable metrics for tracking heritage protection gave birth to the culture credit. Today, the voluntary culture credit market is valued at USD 5 billion per year. Of the many large-scale projects being funded by culture credits, the latest is restoration of the Shwedagon Paya temple in Yangon following cyclone damage.

Flows of travellers and their behaviour are both quite different from patterns seen in the early 2020s. Much of the growth in traveller numbers between 2020 and 2050 occurred in the Global South, where the middle class continued to expand fast. These new travellers were less interested in traditional big-ticket trips to established destinations, which struggled throughout the 2020s and still suffered over-crowding in peak seasons. Instead, new travellers were more attracted to the numerous new destinations opening up across the South and the fresh range of sustainable experiences they offered.

Despite showing promise in the late 2020s, space tourism did not take off. It has remained a niche, drawing fewer than 10,000 civilian "astronauts" a year. The mass of travellers have continued to find plenty of amazing, flourishing places they want to visit closer to home, thanks to the creativity and drive of the T&T industry. Today, some even enjoy visiting these places in the comfort of their own home: augmented reality is providing previously impossible experiences, including smelling the durian while virtually strolling through the streets of Bangkok. Technology has also vastly improved the possibilities for virtual business meetings and conventions.



Less well-known cities, towns and rural areas have become increasingly popular real-life destinations. At the same time, a number of traditional destinations have reinvented themselves to adapt to shifting travel patterns. Some now draw in high value, long-stay visitors by offering special visas in carefully managed numbers for 'digital nomads', capitalising on growing interest in combining business and leisure travel. 'Working from home' has turned into 'working from Goa or Bali' for visa-holders.

The information revolution has helped. In 2023, businesses across the travel industry's six subsectors began to collaborate on giving business and leisure travellers the information they needed to make the right choices for them: right in terms of not only price and convenience but also contribution to climate, nature and community. At first, the different measures were too varied and complex to make comparisons easy for the average traveller.
The industry also faced accusations of greenwashing and making unsubstantiated claims. But by the second half of the 2020s, the information was accurate, clear, comparable and increasingly uniform across platforms.

By 2030, the metrics were good enough for travellers to compare trips by contribution to people and planet as easily as by cost, location and transit times. This has given travellers new market power to reshape the industry while they contribute to causes they really care about. It has become standard practice for corporate travel policies to insist that staff use sustainable travel options and that all business travel-related emissions are offset. The preference among business and leisure travellers for trips that score well on sustainability is rewarding those airlines, hospitality providers and tour operators with a reliable track-record for net positive impact as well as excellent service and value for money. As 'better' choices have become the norm, so T&T players have adapted to the changing market signals and invested for longer-term sustainability.

The extreme weather events that made tackling emissions so urgent in the 2020s also persuaded the industry to move from talk about **climate adaptation** to action. By 2030, all destinations considered 'at risk' of climate change had adaptation strategies in place. More than two decades of investment of USD 10 billion a year in early warning systems, crisis management plans and other adaptation measures has prepared destinations at risk of storms, extreme heat and other climate shocks to take them in their stride. Fewer and fewer trips are disrupted by such events. A better relationship with nature and judicious use of resources – particularly water – is helping fragile destinations to reduce their risks and bolster their resilience.

3.2

FROM VISION TO REALITY: TARGETS FOR 2030

This vision of T&T in 2050 is clearly ambitious, but it can be achieved if concerted action starts now. Actions taken between now and 2030 are crucial to getting the industry on track for becoming net positive by mid-century.
So where exactly should T&T aim to be by 2030?

We set out 10 T&T Priorities that are crucial to unlocking a better future. Actions to deliver these priorities could lower T&T's emissions to 41% below their 2019 level, sharply reducing the industry's impact on climate, and produce less quantifiable but no less important benefits for communities, nature and resilience at the same time.[iii]

Vinicunca, or Rainbow Mountain,
Peru

iii Systemiq analyses, see technical annex 2 and 3 for details.

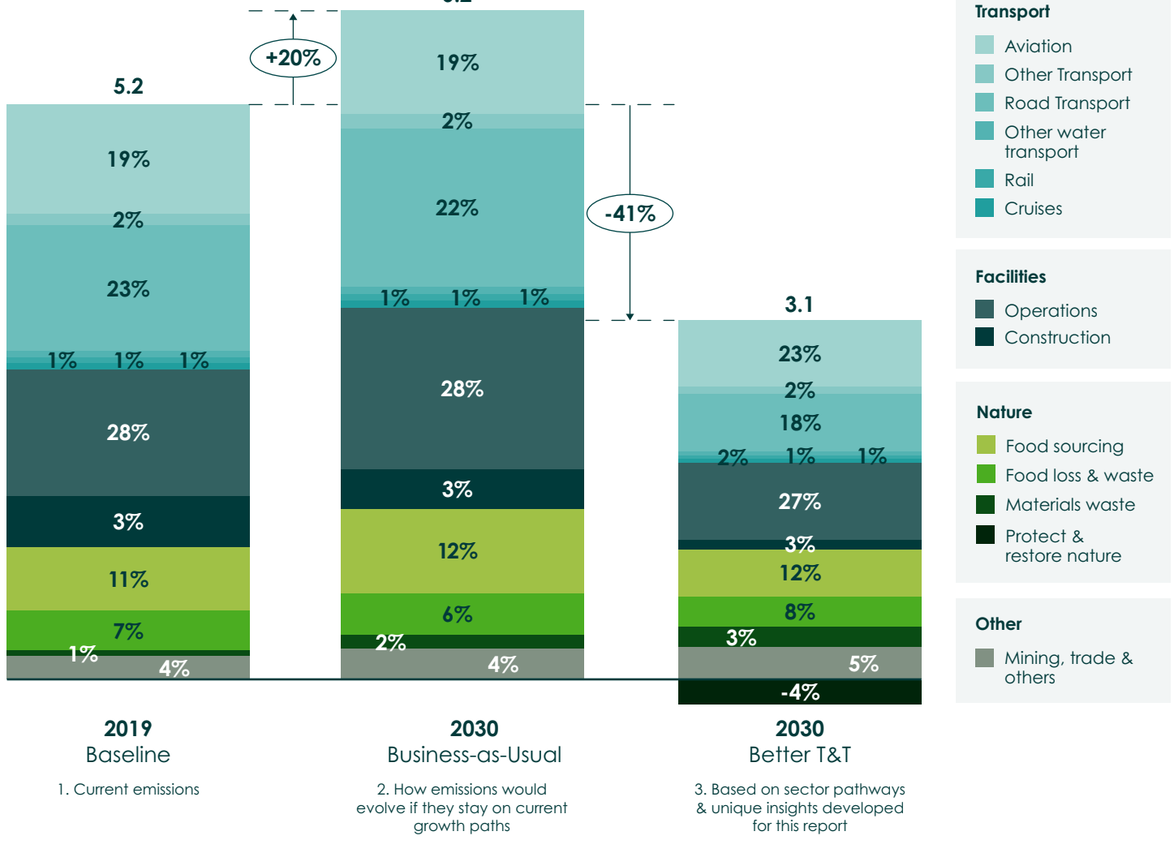
FIGURE 22: BETTER TRAVEL PRIORITIES & TARGETS

AREA		10 T&T PRIORITIES	KEY 2030 TARGETS[1]
CLIMATE	1	Decarbonising transportation	• SAFs meet 15% & hydrogen meets 1% of aviation energy needs • 85% rental vehicles are EVs
	2	Decarbonising facilities	• 50% reduction in operations GHGs • 30% reduction in construction GHGs
NATURE	3	Protecting & restoring nature	• By 2025, major T&T corporates & whole destinations can make credible claims about their impact on nature • By 2030, T&T contributes to protecting 30% of all terrestrial & marine ecosystems
	4	Reducing resource consumption & waste	• 40% reduction in food loss and waste • 25% reduction in carbon footprint of plastic use • Traveller water consumption is in line with local per capita rate
	5	Sourcing Sustainably	• 80% of businesses have sustainable food procurement policies
COMMUNITIES	6	Creating opportunities for all	• 80% formal employment in medium to large T&T firms (>50 employees)
	7	Preserving & regenerating cultural heritage	• T&T is a significant contributor to funding for cultural assets
BEHAVIOUR	8	Diversifying travel flows	• 25 countries drive 70% T&T global GDP contribution, up from 12 countries today
	9	Facilitating better choices	• 80% of the industry uses common framework to measure and report sustainability
RESILIENCE	10	Futureproofing destinations	• 100% of destinations 'at risk' from climate change have adaptation and mitigation strategies in place

1 Analysis for this report has identified additional targets around other topics, these can be found in the Technical Annex. This list represents the targets that will deliver the most impact and serve as the best indicator of progress by 2030.

FIGURE 23: GLOBAL T&T GHG EMISSIONS IN 1. 2019 2. BAU 2030 3. BETTER T&T SCENARIO 2030

Gt CO_2eq.



To give the industry concrete goals to aim for by 2030 and track progress against them, we have identified a set of 2030 targets for T&T industry actors (Figure 23). For priorities that tackle emissions, targets are based on the 2030 emission reduction potentials in existing sub-sector pathways, for example, the Mission Possible Partnership's net-zero pathway for aviation, plus new analysis for this report.[iv] For other priorities, the targets are based on existing global targets, for example for nature protection, or on results expected by 2030 from the highest-impact action.

The next section explains how the industry can meet these targets.

iv Systemiq analyses, see technical annex 2 and 3 for details.

FIGURE 24: 2030 TARGETS AND OVERVIEW OF HOW THEY CAN BE ACHIEVED

Stakeholders

Governments

Includes destination countries and departure countries

Financial Institutions

Includes public capital, private capital, investors, asset owners

T&T subsectors

- Transport
- Hospitality
- (Online) Travel agencies
- Tour operators
- Destination management organizations
- (Online) Tourism information and guiding services

Travellers

T&T Priorities

CLIMATE | NATURE | COMMUNITIES | BEHAVIOUR | RESILIENCE

T&T Priorities				Targets & Priorities	Stakeholders
CLIMATE	1	Decarbonising transportation	TARGET	• **SAFs meet 15% & hydrogen meets 1%** of aviation energy needs • **85%** rental vehicles are **EVs**	
			HOW	• Scale up SAF production • Increase EV incentives and infrastructure • Electrify rental car fleets and improve charging infrastructure	
	2	Decarbonising facilities	TARGET	• **50% operations GHGs** reduction vs 2030 BAU • **30% construction GHGs** reduction vs 2030 BAU	
			HOW	• Improve efficiency of heating and cooling systems • Switch to renewable energy sources • Minimize new construction, retrofit & repurpose where possible • Scale efficient and sustainable material use	
NATURE	3	Protecting & restoring nature	TARGET	• Credibly & quantifiably contribute to UN target of **30% of land and oceans** under protection by 2030	
			HOW	• Scale business models that fund ocean & land protection, incl. carbon markets as revenue stream • Adopt nature-positive practices in T&T developments and facilities	
	4	Reducing resource consumption & waste	TARGET	• **40% food loss and waste** reduction vs BAU • **25% plastic carbon footprint** reduction vs BAU • Traveller water consumption in line with **local per capita rate**	
			HOW	• Adopt efficient food procurement, storage and preparation practices • Increase efficiency in material use and contribute to waste infrastructure development • Reduce unnecessary water use and increase implementation of recycling and reuse solutions	
	5	Sourcing sustainably	TARGET	• **80% of businesses** have sustainable food procurement policies	
			HOW	• Tap into the growing appetite for healthy, sustainable and local food	

T&T Priorities				Targets & Priorities	Stakeholders
COMMUNITIES	6	Creating opportunities for all	TARGET	• **80% formal employment** in medium to large T&T firms (>50 employees)	
			HOW	• Align on industry standard for employment	
	7	Preserving & regenerating cultural heritage	TARGET	• T&T is a **significant contributor** to **funding for cultural assets**	
			HOW	• Offer tourism experiences that generate funding for culture • Manage visitor flows to maximise benefits and limit strains on local culture	
BEHAVIOUR	8	Diversifying travel flows	TARGET	• **25 countries** drive **70% T&T global GDP** contribution, up from 12 countries today	
			HOW	• Invest in transport infrastructure to increase accessibility to harder to reach destinations • Use campaigns to market different destinations, seasons and ways of travelling	
	9	Facilitating better choices	TARGET	• **80% of the industry** uses common framework to measure and report sustainability	
			HOW	• Mobilise around a common framework for measuring and reporting on sustainability	
RESILIENCE	10	Future-proofing destinations	TARGET	• **100% of destinations** 'at risk' from climate change have adaptation and mitigation strategies in place	
			HOW	• Direct industry resources and experience to support local resilience strategies & solutions	

Kaper Village, Indonesia
Credit: Labuan Bajo Tourism Authority

3.3

HOW TO REACH THE TARGETS

This section describes the key actions needed to deliver each of the 10 T&T Priorities and reach the targets by 2030. It focusses on those actions that will deliver most impact in each area by 2030, and together get the industry well on the way towards the 2050 vision.

Some of the actions are within the power of a **single actor** to implement using existing technologies or solutions, for example a hotel tackling food waste through staff training. But more impact can often be achieved when players work together, both within sub-sectors, such as hospitality, or across them, for example, a joint venture between destination management organizations, tour operators, hospitality and transport. And success in certain areas depends on such **collective action.** This is true of Sourcing sustainably, which requires close collaboration between buyers and suppliers, and Future-proofing destinations, where it is crucial to engage the destination's community, NGOs and local authorities in tailoring resilience projects to the destination and ensuring they complement any existing measures.

Examples of both single player and collective actions are given below. Chapter 4 sets out the amount of finance needed to fund all the actions and how it can be raised. Given the "silos" in the industry today, collective actions may be more complex to implement. Chapter 5 therefore details four collective actions that can kick-start T&T's shift to its net positive future.

London, United Kingdom
Credit: Iliana Griva

CLIMATE

PRIORITY 1:

DECARBONISING TRANSPORT

Travellers use a myriad of transport options to travel to and around destinations: cars, buses, trains, ferries, cruises and airplanes as well as bicycles and walking. The targets included here focus on the two biggest levers for reducing T&T's transport emissions - decarbonising aviation and decarbonising road travel. Nonetheless, action is required across all modes of transport, for example, to increase the use of rail and shift the ferry and cruise industry to more sustainable fuel.

TARGET 1.1

Sustainable aviation fuels meet 15% of aviation energy needs and hydrogen meets 1% of aviation energy needs

Key Actions:

Accelerate development and roll-out of sustainable aviation fuels (SAFs). SAFs are a greener alternative to jet fuel and can be used in existing planes. Action in the next two years will be critical to meeting the target of SAFs providing 15% of T&T energy needs by 2030, rising to 85% in 2050. The Mission Possible Partnership (MPP)[v] estimates that 40–50 Mt of SAFs must be on the market by 2030 to stay on track for net-zero by 2050. To reach that 2030 level of production will take investment now in 300–400 new fuel production plants and associated upstream infrastructure, since new SAF plants take at least 5 years to become fully operational.

Blending mandates, which require SAFs to be blended with standard fuel in regulated proportions, are one policy tool already used to increase demand for SAFs.[1] In Norway, for example, airlines have been mandated to blend 0.5% SAF since 2019. Groups like the First Mover Coalition are encouraging airlines to voluntarily commit to 5% blending mandates by 2030.

v The Mission Possible Partnership is an alliance of climate leaders focused on supercharging decarbonisation across the entire value chain of the world's highest-emitting industries in the next 10 years. Earlier this year they launched *Making Net-Zero Aviation Possible*, an industry-backed, 1.5°C aligned strategy to decarbonise aviation including key actions for policy, industry and finance.

CASE STUDY: FINANCING THE USE OF SAFS

KLM now adds a surcharge to travellers' tickets to finance the use of SAFs. The surcharge varies depending on distance flown and the class of seat booked (economy or business). Surcharges go towards paying for a standard 0.5% SAF mixture on all flights from Amsterdam. KLM also gives customers the option of funding more SAF as an alternative to contributing to reforestation projects. With its partners in the Clean Skies for Tomorrow Coalition, KLM wants aviation to be using a 10% SAF blend worldwide by 2030.

Invest in hydrogen (H2) and electrification technology. According to MPP analysis, if hydrogen aircraft of sufficiently long range enter the market in the 2030s, they could scale up through 2050 to meet around one third of aviation's final energy demand by mid-century.[2] Battery-electric planes are likely to play a more limited but still significant role in decarbonisation. If by 2050 they can power flights of up to 1,000 km, they could then replace more than 15% of the global jet aircraft fleet.

CASE STUDY: MAKING HYDROGEN-ELECTRIC FLYING A REALITY

ZeroAvia is developing hydrogen-electric technology for zero-emission engines used in regional aviation. It expects to launch a commercial model with a range of over 500 km in 2025. By 2030, the firm expects to achieve ranges of 3700 km. In the past two years a number of industry heavyweights have invested in ZeroAvia or placed orders for their engines, indicating confidence in the technology. United Airlines and Alaska Air Group have invested USD 35 million in the business; American Airlines has entered an agreement allowing the airline to order up to 100 of ZeroAvia's hydrogen-electric engines. ZeroAvia has also partnered with airports, such as Edmonton International in Canada, Glasgow in the UK and Rotterdam in the Netherlands, to help them develop hydrogen refuelling infrastructure.

TARGET 1.2
85% of rental vehicles are electric

Key Actions:

Electrify rental car fleets in the US and Europe. As well as reducing emissions from rental cars, this move could contribute indirectly to lowering emissions beyond the rental sector. A survey conducted by SIXT found that nearly two thirds of customers see renting an electric vehicle (EV) as a good way to try out electric driving, and more than 55% said that trying out an EV is an important step towards buying one.[3] By enabling people to 'try before they buy', the rental car sector can have a catalytic effect on the transition to electric road transport.

Increase charging infrastructure. The viability of the shift to EVs clearly depends on having adequate charging infrastructure along main travel corridors and at destinations, including hotels, to meet growing demand. France aims to finish installing fast chargers along all its motorways by 1 January 2023.[4] Given their potential to boost the shift to electric driving, tourism hotspots and corridors should be prioritised in plans for rolling out national EV infrastructure. Indonesia is showing how this works by developing an EV ecosystem in Bali, starting with the corridor between the airport and the Nusa Dua resort area.[5] Hospitality can also play a role in making it easier for travellers to use EVs. Hilton include a search filter that allows customers to find and book hotels with charging stations, now offered by more than 1,400 Hilton properties around the world.

CASE STUDY: SIXT

Car rental group SIXT plans to increase the share of electric vehicles in its global fleet to 70-90% by 2030. The company is also streamlining charging logistics to address consumers' reservations about using electric vehicles - the SIXT app will allow easy use of nearly all 300,000 charging points in SIXT's European markets. Sixt is meanwhile investing EUR 50 million in its own charging infrastructure in branches.

PRIORITY 2:

DECARBONISING FACILITIES

TARGET 2.1

Operations emissions reduced by 50%

Key Actions:

Reduce energy consumed in heating and cooling. Heating, ventilation and air conditioning (HVAC) account for half of T&T's operational emissions making these building services important levers for reducing emissions. They are feasible levers to pull: solutions exist and will often produce cost savings in the long run, although they can involve high upfront investments, as does, for instance, upgrading to a more efficient energy system.[6]

Switching to the most up-to-date air conditioning systems could reduce a facility's energy consumption by 45%.[7] Today's reversible heat pumps are 300% more energy efficient than direct electrical heating. And underground heat pump systems can be shared by multiple buildings, generating energy for the wider local community.

Natural heating and cooling solutions, where buildings are designed to make the most of nature's ability to moderate temperature, can reduce energy consumption and also costs. For example, green roofing – a layer of vegetation on top of a building – both heats and cools buildings. Buildings can also be retrofitted with well-established energy-saving technologies such as insulation and double glazing. The upfront capex for these types of retrofits is high, and the cost-effectiveness ratios of technologies differ. However, a pilot of 15 hotels in Jiangsu Province, China, showed a dynamic investment payback period of just under three years for retrofitting.[8] Additionally, public finance institutions can help to make costs more manageable, for example, by issuing green bonds (see Chapter 4 for more detail on financing the transition).

Switch to renewable energy sources. Switching to renewable sources will lower the carbon footprint of facilities and reduce their reliance on fossil fuels. Solutions include solar PV panels, microgrids, and geothermal energy. Facilities of all kinds can fit these solutions on their sites and they can prove more cost-effective than fossil fuel alternatives in remote areas, such as tropical islands. Facilities can also develop them jointly with other stakeholders in a destination, enabling a shift to renewable energy on a larger scale. In places where these solutions are not yet mainstream, T&T businesses can help to create a market and develop the required skills in the local community.

TARGET 2.2

Construction emissions reduced by 30%

Key Actions:

Minimise new construction, instead retrofitting and repurposing existing buildings. A quarter of general global facilities' emissions come from construction. Where possible, choosing to retrofit or repurpose existing buildings rather than build new ones will do the most to cut emissions from this source by avoiding use of high-carbon new materials as well as potential emissions from land converted for buildings. About 60% of construction emissions derive from cement and steel, which have highly carbon-intensive extraction and processing methods. So for unavoidable new construction as well as upgrades, using low carbon, recycled or reused materials will help to avoid emissions.[9]

Build following sustainable construction principles. Where new construction does take place, facilities should be built using low carbon materials such as sustainably sourced natural materials, low carbon concrete and/or reused or recycled materials. They should also be designed to optimise energy efficiency, using high quality insulation and making the most of natural heating and cooling solutions. Constructing or retrofitting both represent an important opportunity to design for resilience. The most widely used green building rating system currently is LEED (Leadership in Energy and Environmental Design), which provides a framework for efficient and cost-saving buildings. A study found that LEED-certified buildings had 34% lower emissions, and are estimated to have saved USD 1.2 billion in energy costs between 2015 and 2018.[10]

NATURE

PRIORITY 3:

PROTECTING & RESTORING NATURE

TARGET 3.1

T&T is able to credibly and quantifiably contribute to the UN Global Convention on Biological Diversity's target of 30% of land and oceans under protection by 2030

Key Action:

Scale T&T business models that generate funding for nature protection. There are many inspiring examples of successful T&T business models that directly channel revenue generated by tourism to nature protection. For example, Hotel Tranquilo Bay in Panama directs 10% of profits from hotel stays towards land conservation management. The hotel aims to grow the amount of land under its direct management and help protect the national marine park. The hotel has also worked with the local indigenous community to create a 500-acre municipal reserve that serves as a buffer zone for the national marine park. Even travel businesses that are not directly managing land or sea can contribute by offering responsible tourism experiences, such as hikes or conservation volunteering, and committing a portion of revenues to relevant nature protection projects.[11]

Programs that engage destination communities, visitors and employees in conservation, such as data collection or restoration activities and workshops, can help make this a shared mission.

Businesses can also tap into growing carbon markets as a way to generate more revenue for nature protection at scale. Carbon markets will be important for decarbonizing T&T as businesses buy credits to mitigate residual emissions in their value chains that they cannot abate. Credit Suisse estimates that as demand for carbon credits grows, the voluntary carbon market could expand from USD 1 billion today to USD 50-100 billion by 2030.[12] This presents an opportunity for the T&T industry to establish credible, destination-linked programmes financed by carbon credits that will not only sequester carbon but also provide opportunities for local communities, benefit biodiversity and increase local resilience to climate change. Mangrove restoration programmes are one example. 'Blue carbon' initiatives can similarly provide targeted support to ocean ecosystems, for example, funding for the restoration of reefs. This opportunity has the added benefit of enhancing tourists' experiences. Carbon credits funding these programmes could also be offered to tourists, enabling them to mitigate the climate impact of their travel in ways that deliver tangible benefits to the destinations they visit.

CASE STUDY: USING NATURE-BASED SOLUTIONS TO REDUCE EMISSIONS AND CREATE THRIVING ECOSYSTEMS

The Iberostar Group has more than 100 hotels in 16 countries, many of which are set on beaches and coasts. This makes protecting and regenerating nature, particularly oceans, a key priority in their sustainability strategy alongside decarbonisation. The group's strategy champions nature-based solutions that reduce emissions at the same time as creating thriving ecosystems and encouraging resilience.

Iberostar aims to be carbon neutral by 2030, primarily by decarbonizing their operations and supply chain. Of their remaining emissions, at least 75% will be offset through their own nature-based solutions projects. These ensure the long-term sustainable management of ecosystems and biodiversity while providing economic benefits to local communities. In one example, Iberostar is partnering with the Ministry of Environment and Natural Resources of the Dominican Republic on a mangrove restoration project. Mangroves have the potential to sequester 123 tonnes CO_2 per hectare per year, making them up to 10 times more efficient at removing carbon than rainforests.

To improve biodiversity, 25% of the area of Iberostar properties and surrounding areas have been earmarked for regreening and will develop plans to eliminate invasive species and prioritize native species. The company operates a '3:1 Green Plot Ratio', meaning that for every unit of ground area taken up by buildings, there is a three-times larger area taken up by plant coverage.

Iberostar Group has also opened a new land-based coral lab in the heart of the Caribbean. The coral lab initially houses 10 species—180 individual corals (most facilities only contain a few species). Built in the footprint of a former yoga palapa, the centre operates under rigorous scientific standards but is open to visitors. Importantly, the lab was designed to give clients and the local community a one-of-a-kind, indelible ocean experience on land and expose them to an environmental challenge they might otherwise never know about.

CASE-STUDY: FINANCING CONSERVATION AT SCALE THROUGH LOW IMPACT, HIGH VALUE ECOTOURISM

Singita – a leading ecotourism brand with award-winning luxury lodges in four countries across Africa – uses a sustainable operating model to connect its ultra-high-net-worth guests, who are often philanthropically minded, with conservation initiatives in the private reserves and concessions in which it operates. Its conservation model and commitment to sustainability is core to the brand's integrity and credibility. It also provides a strong guest, like-minded partners and donor pipeline to support direct contributions.

Singita uses a low impact, high value nature-based tourism model to leverage awareness, support, and revenue for the safeguarding and preservation of some of the continent's most rare and unique wilderness areas, home to critical biodiversity areas and iconic endangered species.

Singita works with a network of well respected local conservation partners with proven track records in driving effective conservation and community partnerships, operating across the brand's regions in the form of independent Conservation Trusts and Funds, which share the vision of making a meaningful and far-reaching conservation impact, whilst delivering socio-economic improvements and tangible benefits for the many neighbouring communities.

Singita's non-profit conservation partners are the Grumeti Fund in Tanzania, The Malilangwe Trust in Zimbabwe, and the Singita Lowveld Trust in South Africa. Each entity is fiscally independent of Singita and responsible for the conservation and community partnership work on the ground.

The basis of the ecotourism revenue comes from four operating regions across Africa (South Africa, Zimbabwe, Tanzania and Rwanda) and the associated lodges. **Ongoing revenue into conservation work is linked to the following:**

i) A **direct ecotourism levy** on guest stays. This takes the form of gate entry fees to wildlife reserves in some instances, a conservation levy on bed nights, a direct per-guest conservation fee added to invoices, and lease fees payable by the management company to support conservation.

ii) The Singita Conservation Foundation: a legacy bequest vehicle for guest and donors through an **Endowment Fund.** This allows unrestricted, strategic, and large-scale funding to provide an annual annuity income for the partner Funds & Trusts – which maintain and manage biodiversity and work to uplift rural communities living alongside the reserves in which Singita operates.

iii) **Large, strategic philanthropic guest funding for special projects** undertaken by these Funds & Trusts can be made to each Trust and Fund partner. Fundraising of this nature happens when guests are linked with meaningful projects while visiting the properties – and involves introducing them to conservation teams and offering up-close experiences of the projects on the ground.

iv) Another long term sustained source of revenue is the **carbon and biodiversity credits** that can be provided through the restoration of large scale degraded, or deforested landscapes. With ongoing restoration and effective conservation management and wildlife protection – many of these landscapes can form part of a reconnected, restored expanded protected area network.

Positive Impact

Singita, alongside these non-profit partner conservation Funds & Trusts, has created a successful blueprint of restoration, reforestation, rewilding and wildlife recovery. Successes include:

- **500,000 acres** of previously degraded and denuded ecosystems and habitats have been **restored.**
- A handful of conservation partners are custodian to at least 12% of Africa's current **African rhino** population, supporting establishment and protection of a stable, growing population of rhinos.

In addition to wildlife conservation, there is added economic **benefit for rural communities** neighbouring the reserves, which is not only linked to employment, but also entail entrepreneurial opportunities, community partnerships, skills development, and education.

- **2,000** pre-schoolers enrolled annually across 17 Early Childhood Development Centres
- **14,000** formal schooling or tertiary education bursaries to date
- **20,000** young schoolchildren are fed daily as part of a Child Supplementary Nutrition Feeding Programme
- **150** students have graduated from the Singita Community Culinary School, which offers an internationally accredited professional chef development programme. 95% of these graduates are now gainfully employed.

Singita is also committed to a **holistic sustainability approach,** focused on driving water conservation and energy efficiency, investment in renewable energy, elimination of food waste, single-use plastic and recycling.

PRIORITY 4:

REDUCING RESOURCE CONSUMPTION & WASTE

TARGET 4.1
Reduce food loss and waste by 40%

Key Action:
Improve food storage, preparation and waste management practices. Research by WRI finds that investing to reduce food waste has a potential return of USD 7 for every USD 1 spent.[13] This impressive return is achievable through measures well within the T&T industry's control including educating staff, measuring food waste, changing food storage and handling processes, and designing menus to meet customer preferences. The financial benefits come largely from avoiding the costs of buying food that previously went to waste and reducing food waste management costs.

Food that is wasted and cannot be repurposed or donated can be composted either on site or by local waste services. In destinations where local infrastructure for composting waste is not yet in place, T&T businesses can support its development, either independently or in collaboration.

Sumba Hospitality Foundation,
Indonesia

CASE STUDY: HARNESSING AI TECHNOLOGY TO EASILY TRACK AND REDUCE FOOD WASTE IN HOSPITALITY

Winnow develops Artificial Intelligence tools to help chefs run more profitable, sustainable kitchens by cutting food waste in half. Using the same kind of technology found in a driverless car, Winnow "learns to see" the food being thrown away. Insights from the tool, which uses a camera and digital scale to track food waste, help improve decision-making in kitchens leading to food cost savings of 2%-8%. Winnow also offers different tracking solutions for cruise, hotels and catering environments.

The tool helped Hilton Tokyo Bay cut food waste by 30% within 4 weeks saving USD 31,000/year, the equivalent of over 17,000 meals saved.

Pandox, a leading hotel property owner, has also adopted Winnow across 15 of its hotels. At Crown Plaza Brussels - Le Palace the team were able to quickly cut food waste by over 60% saving EUR 44,000 per year.

TARGET 4.2
Reduce plastic carbon footprint by 25%

Key Actions:
Reduce unnecessary use, eliminate single-use and switch to reusable and recyclable alternatives. Eliminating single-use water bottles and disposable toiletries, or replacing them with reusable alternatives, could reduce a facility's plastic consumption by two thirds.[14] Facilities can ensure that all the plastic they use in a destination is fully recyclable. Many hotels are already implementing such measures. The Six Senses Hotel group has committed to becoming completely plastic free from 2022. In one initiative, they have introduced reuse programs with suppliers, including local farmers and fishermen, to eliminate the need for new plastic containers. The Hong Kong and Shanghai Hotel Group has completely eliminated plastic packaging in its cleaning services and now uses an in-house duct system that distributes liquid cleaning products throughout the hotel.

Support local waste infrastructure. T&T can prevent plastics 'leaking' into the natural environment by helping to develop comprehensive waste infrastructure in destinations. As well as keeping beaches and other sites in better condition for visitors, this helps to prevent the volumes of waste arising from T&T, often far higher per head than the amount produced by local communities, from overburdening local systems. Plastic is much more likely to leak into oceans in places with low rates of waste collection, currently the case for many locations in South and Southeast Asia and Africa.

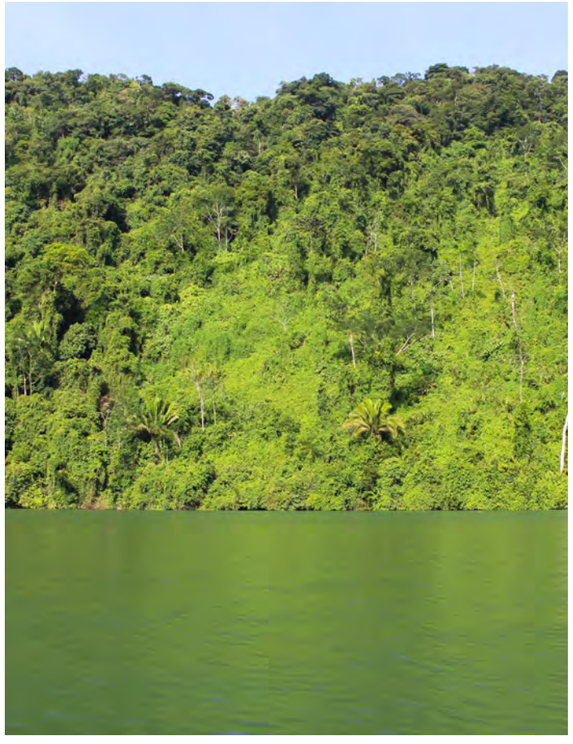
TARGET 4.3

Traveller water consumption is in line with local per capita use

Key Actions:

Reduce water use through efficiency improvements and behaviour change. There are many ways to reduce water use that have a minimal effect on the traveller's experience while saving costs. Hotels can cut their use by more than half with simple and inexpensive repairs: a single leaky tap can waste over 3,000 gallons of water per year, equivalent to 180 showers.[15] Rainwater and greywater can be collected and used in place of mains supply for toilets, cleaning and laundry as well as irrigation. This has the added benefit of avoiding greywater leakage, which can badly damage ecosystems as outlined in Chapter 2. The Premier Inn Abu Dhabi saves 60L of water per guest each year, equivalent to 110,000 baths, through greywater recycling. Room2 in the United Kingdom uses its 'blue roof' to collect rainwater for irrigating its greenery. This form of water harvesting also reduces the impact of heavy rains on local drains, lowering flood risk. The Sustainability Hospitality Alliance has a tool enabling hotels to track, benchmark and improve water use, supported by a library of case studies from around the world of successful water stewarding initiatives led by hospitality and other T&T businesses.

Work with local stakeholders to manage water collaboratively. In some places, tourism "competes" for water with other sectors, especially agriculture. In such instances, water agreements can help to ensure that the water needs of all stakeholders are met. For example, in Benidorm, Spain, a water exchange policy is in place to manage the water-use of tourism and agriculture, both important industries locally. Each group is represented by a consortium, who work together on an integrated water management approach. The policy means that during periods of drought or water scarcity, treated water from the wastewater treatment plant in Benidorm is allocated to farmers, while freshwater from the Algar-Guadalest watershed is prioritised for other uses including hospitality.



CASE STUDY ON THE IMPORTANCE OF A SCIENCE-BASED AND COLLABORATIVE APPROACH TO SUSTAINABILITY

Hilton is one of the largest hospitality companies in the world, with nearly 7,000 hotels across 122 countries and territories. Their 18 brands range from basic to luxury, meeting the needs of a broad range of travellers. In 2021, Hilton received more than 150 million guests. Aware of the potential for their scale to give them major impact in the industry, Hilton has adopted a comprehensive strategy for shifting to responsible travel and tourism, which is already making strong progress towards its 2030 targets. Two elements of the strategy stand out as important to its success:

1) **Science-based:** The strategy is guided by a set of science-based targets for 2030, informed by the UN SDGs. The targets were approved by the Science Based Targets Initiative and announced in July 2022. Hilton has also used a range of risk mapping tools to identify priority action areas, for example:
   - 100% of hotels have been mapped against the WRI Aqueduct Water Risk Atlas and WWF's Water Risk Filter to analyze current and future water risks across the portfolio, with results fed through to hotel teams so that they can understand and address **water risks** specific to their geolocation
   - To inform **resiliency** planning, all hotels have been mapped against Verisk-Maplecroft's ClimateChange Vulnerability Index, and all US hotels have been mapped against the US Federal Emergency Management Agency 100-year flood zone areas.
2) **Collaborative:** Hilton has taken a multi-stakeholder approach, engaging guests, suppliers, NGOs, government agencies and more to make progress towards targets. This delivers impact far beyond what on-site measures alone could achieve, particularly in areas such as sourcing and increasing resilience in destinations. For example:
   - The Meet with Purpose program allows customers to hold **meetings and events** in a more sustainable way. The LightStay Meeting Calculator calculates the environmental profile of a meeting based on each property's unique consumption data. It creates a custom report detailing the predicted carbon, energy, water and waste generated by a meeting or event. It then provides options for offsetting any remaining carbon impact. The resulting carbon credits fund projects including nature-based climate solutions and clean energy and community projects.
   - All suppliers are required to meet Hilton's Responsible Sourcing Policy which is included in all supplier contracts. Close collaboration is key to encouraging suppliers to adopt their own sustainable practices, including setting carbon reduction targets.

PRIORITY 5:

SOURCING SUSTAINABLY

TARGET 5.1

80% of T&T businesses have sustainable food procurement policies in place

Key Action:

Implement sustainable sourcing programmes. Food sourcing currently accounts for 11% of T&T's total GHG emissions, making it the fourth largest driver of industry emissions after facilities' operations, road transport, and aviation. This makes action here critical. T&T businesses can tackle their scope 3 emissions by ensuring they source from deforestation-free supply chains and from producers who use regenerative farming techniques. Successfully implementing such practices requires close collaboration with producers and suppliers. A sustainable sourcing programme might also prioritise local suppliers to minimise transport emissions, help cultivate nature-positive practices in the destination and support the local economy. As an example, the Relais & Chateaux group manifesto includes an action to 'sign contracts with small local producers who supply our restaurants, offering them an appropriate price allowing them to grow their products without chemicals or GMO, avoid overproduction and the depletion of natural resources'.[16]

Sumba Hospitality Foundation permaculture farm, Indonesia

Better sourcing can also lead to better offerings for guests, tapping into the growing appetite for local, seasonal and healthy food. For many people, food has always been an important part of their travel experience. Food tourism and agritourism are already well-established industry segments, and successful business models that give guests a 'farm to table' experience and focus on local food abound. Rising awareness of the impact of our diets on climate and nature mean that growing numbers of travellers are interested in the sustainability of the food they enjoy while travelling. A survey of American tourists in Hawai'i found that nearly 80% were willing to pay a premium for locally grown food, with respondents saying they wanted to support the development of sustainable tourism.[17]

The rise of global wellness tourism – travel associated with the pursuit of maintaining or enhancing a person's wellbeing – has contributed to growth in demand for healthy, sustainably produced food. The Global Wellness Institute estimates that wellness tourism was a USD 639 billion industry in 2017, growing at more than twice the rate of general tourism.[18] T&T has an opportunity to harness this growing momentum and make sustainable food choices the industry norm, satisfying changing demand at the same time as delivering major benefits for climate and nature and supporting local suppliers.

CASE STUDY: PRACTICAL MEASURES TO MINIMISE NEGATIVE SOURCING IMPACTS

The Accor Group includes more than 10,000 restaurants in its portfolio and serves more than 200 million meals a year. Its catering operations represent a significant part of their environmental and biodiversity footprint, making action in this area a priority. The overall ambition is to offer sustainable food, while eliminating food waste.

To contribute to a more responsible food sourcing policy, Accor hotels are working towards prioritizing certified, organic, local and seasonal food. All members of the group follow the Accor guidelines and charter on "sustainable food". And 60% of Accor hotels have taken measures including:

- Offering at least 10 regional dishes
- Creating meals in which seasonal fruit and vegetables make up three quarters of the portion
- Offering organic or certified eco-farm products

Additionally, almost all hotels have removed endangered marine species from their menus, for instance Bluefin tuna and swordfish. Almost half of Accor hotels offer only free range or cage-free eggs. Accor hotels have set up urban vegetable gardens to provide fresh produce for onsite restaurants and bars.

COMMUNITIES

PRIORITY 6:

CREATING OPPORTUNITIES FOR ALL

TARGET 6.1

80% of employees in medium and large T&T businesses are formally employed

Key Action:

Align on an industry standard for employment.

To strengthen T&T's employee value proposition and attract high calibre staff in competitive service labour markets, T&T businesses need to pay staff a living wage/income, commit to reasonable hours, and provide benefits such as access to healthcare. The need for better standards is already recognised. The 2019 G20 Tourism Ministers' Meeting recommended that the industry implement minimum wage regulations, equal pay laws, parental leave, flexible working hours, work-from-home options, childcare, and measures to prevent sexual harassment[19]. Earlier this year WTTC recognised provisions such as greater flexibility (including remote work), decent work, competitive employee
benefits and training schemes as key to tackling post-pandemic labour shortages.[20]

Being treated better increases employees' commitment to work and willingness to deliver quality service, perform efficiently and stay with the business long-term. These measures can also improve overall productivity and customer care.[21]

Today a large proportion of workers in T&T work informally. For example, 61% of restaurant workers and 25% of hotel workers work informally in Latin America and the Caribbean and more than three in four workers in the tourism sector work informally in Asia and the Pacific.[22] Formal employment contracts benefit workers by making jobs more job secure and improving working conditions. They also benefit employers, by helping them develop a more stable workforce.

Sumba Hospitality Foundation, Indonesia

CASE STUDY: DRIVING YOUTH EMPLOYMENT OPPORTUNITIES IN HOSPITALITY

To generate interest among young people to join the world of hospitality, the Radisson Hotel Group partners with schools and non-profit organisations to offer trainee positions and job experience opportunities for young people, including at-risk-youth and other vulnerable members of society.

Radisson also actions this through the Youth Employment program led by the Sustainable Hospitality Alliance. The program is a win-win: 85% of the program's graduates get a job at Radisson Hotel Group or another company, or they go on to continue their education.

CASE STUDY: HOLISTIC HOSPITALITY TRAINING IN INDONESIA

Sumba Hospitality Foundation was set up to provide young Sumbanese people with the skills they need to create employment opportunities on the island as the tourism industry gradually develops there.

The project aims to:

- Build a sustainable model for responsible tourism development, while preserving the cultural history of the Sumbanese people
- Provide vocational education to underprivileged students and give them the opportunity of a new career
- Share sustainable permaculture techniques in Sumba

A cornerstone of the Foundation is the hotel school which trains young people in key skills needed to thrive in the hospitality industry. It currently admits 80 students a year and provides them with full boarding, meals and healthcare. As well as hospitality training, it also educates students on environmental awareness, permaculture farming and personal development establishing alumni as 'green ambassadors for tourism on the island'. 98% of the school's graduates are employed.

At the end of the school year students embark on internships provided by internationally recognized names in the industry such as Alila, Aman, Bulgari, Oberoi, and Ritz Carlton among others.
By collaborating with members of the hospitality industry, the Foundation provides opportunities for its students while the hotels and restaurants gain well trained, motivated and inspired employees.

PRIORITY 7:

PRESERVING AND REGENERATING CULTURAL HERITAGE

TARGET 7.1

T&T is a significant contributor to funding for cultural assets

Key Actions:

Use travel and tourism to generate funding for preserving and regenerating cultural assets. Culture is a key draw for tourists, accounting for an estimated 40% of global tourism revenues.[23] Promoting and nurturing culture in a destination can therefore be important to developing a tourism economy. For example, Liverpool in the UK enjoyed an economic uplift estimated at GBP 100 million from opening new restaurants, hotels and bars during the ten years since it won the European Capital of Culture title in 2008.[24]

Given the importance of culture to travel and tourism, a portion of a destination's T&T revenues can be directed towards conserving cultural assets and supporting producers of contemporary culture and local community engagement. Allocating a percentage of heritage ticket sales and other revenues directly to cultural institutions and sites for maintaining and repairing cultural assets is already common practice. Given the value of culture to the broader tourism economy, local authorities can also allocate a share of a destination's visitor fees or taxes to these institutions and sites. For example, in 2014, local authorities in Cologne, Germany introduced an occupancy tax, generating an estimated income of EUR 7 million, to be allocated annually to areas of culture, education and tourism.[25]

Similarly, in Austin, Texas, the City Council allocates 15% of hotel occupancy tax revenues to the local commercial music industry, 15% to historic preservation and the remaining 70% to the Austin Convention Center.[26]

Tourists can also support contemporary culture directly by purchasing locally-produced art, crafts and traditional items. Hospitality businesses can boost this support by directly connecting visitors to local artisans.

Manage visitor flows. Heritage destinations need to manage the number of visitors coming to popular cultural sites and visitors' behaviour at the sites both to protect these cultural assets and to continue offering inspirational visitor experiences, the key to these destinations' popularity. This fine balance can be achieved through better advance planning combined with investment in the staff and infrastructure needed to regulate visitors' access to precious cultural assets. In addition, training and outreach for visitors themselves will increase their awareness of the vulnerability of cultural assets and help them to behave with due care during their visits. For example, social enterprise Human Connections connects local artisans, tradespeople and organizations in host destinations with travellers through cultural tours and student programs in Mexico.

Alongside managing visitors, making sure cultural sites, particularly religious ones, remain accessible and affordable to local visitors will help to preserve the sites' integrity and ensure communities maintain a sense of ownership of and connection with significant sites. For the Borobodur temple area in Indonesia, an important religious site also popular with tourists, a cap on the number of visitors who can climb to the temple's peak each day was implemented in favour of an increase in entrance fee.

Taj Mahal,
India

BEHAVIOUR SHIFT

PRIORITY 8:

DIVERSIFYING TRAVEL FLOWS

TARGET 8.1

30 countries receive half of global T&T arrivals (up from 10 countries today)

Key Actions:

Invest in transport infrastructure to improve access to less-visited destinations. Nearly 70% of travellers say they will avoid popular destinations to help disperse the benefits of T&T more widely and make sure they don't contribute to overcrowding.[27] All the same, accessibility and ease of arrival are still key determining factors for travellers deciding where to go. Some potential destinations are still too complicated and expensive to reach compared to more established options, meaning very few travellers visit them. For these potential destinations, investment in better transport infrastructure, such as airports, roads and public transport connections, is the key to attracting more visitors.

For example, the whole of Africa receives just 5% of international visitors compared to Europe's 51%.[28] Liberalising air markets in just twelve key African countries could result in 155,000 new jobs in T&T and other sectors and an additional USD1.3 billion in annual GDP.[29]

To unlock this opportunity, the African Union has set up the Single African Air Transport Market. The aim is to create a unified aviation market across the continent to overcome its current access constraints. The steps include removing market access restrictions on airlines and increasing flight frequency and capacity limits.[30] There have also been movements towards visa-free travel within the region, with similar developments in Asia and South East Asia and among the Pacific Alliance.

Improving access to less-visited destinations is critical to the future of T&T in much-visited countries too. The Netherlands 2030 tourism strategy focuses on diversifying destinations visited by travellers and identifies accessibility as one of its five strategic pillars. Indonesia has successfully diversified travel flows to less well-known parts of the country partly thanks to investments in better transport links.

CASE STUDY: DEVELOPING RESPONSIBLE TOURISM IN LABUAN BAJO, INDONESIA THROUGH PUBLIC-PRIVATE INVESTMENT

In 2016, the Indonesian government initiated the "10 New Balis" project as a way to stimulate development of tourism in new destinations. Labuan Bajo on the island of Flores was one of five destinations identified as 'super priorities'. A previously little-visited part of the island, the goal was to **increase the number of visitors** and create a stronger tourism economy. The **focus was on high-value tourists** to generate greater value through fewer visitors.

A key enabler of increasing tourism in Labuan Bajo was **improved travel infrastructure.** This has involved upgrades to the airport and the marina area to increase capacity for arrivals by sea. The ambition is to increase annual arrivals to 1 million a year. As well as improved access the project has worked to improve the tourist's experience by increasing facilities such as shops, restaurants and offering high-quality accommodation.

The initiative has been funded by the government (IDR 2.7 trillion) and private investment (IDR 11.2 trillion).

So far the project is a success story: visitors to Labuan Bajo have increased and growing tourism there has also had **benefits for other destinations** in Flores and the province of Nusa Tenggara. In fact, an important learning of the project has been that considering the region as a whole allows the tourism authority to balance visitors across a range of destinations to avoid overcrowding as well as bring the economic benefits of tourism to more places.

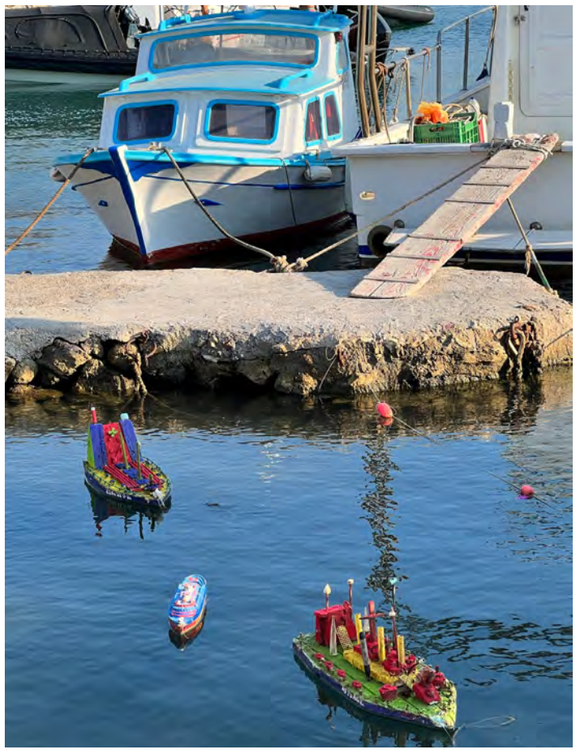
The project also links to **two other Action Areas:**

1) **Opportunities for All:** An important focus was on cultivating local entrepreneurship and developing businesses owned by those from West Manggarai regency, which is where Labuan Bajo is situated in Flores. This helps to ensure that a good portion of the economic benefits of tourism are kept within the community.

2) **Future-proofing Destinations:** The pandemic showed the economic risks of depending too much on tourism for income. In addition to developing tourism, they have also focused on creating a local coffee industry, capitalizing on growing interest in Indonesian coffee to grow and sell specialty coffee from Flores both to visiting tourists and buyers further afield.

Use campaigns to market different destinations, seasons, and ways of travelling. Campaigns led by Tourist Boards can be powerful means of changing visitor patterns given a particular destination's priorities, from reducing overcrowding in peak season for a popular city to increasing arrivals in a quieter place. Social media is increasingly influencing decisions about every aspect of travel, from the destination to the accommodation and transport provider. In one survey, 86% of respondents became interested in visiting a destination after seeing social media posts, 54% said they actively search social media for travel inspiration,[31] and 52% go on to book after seeing a destination or T&T business mentioned on social media.[32]

Businesses and tourist boards are starting to capitalise on this trend. When the VisitScotland Instagram page targeted London Millennials, bookings from that market segment increased by 34%.[33] Marketing campaigns are not only good for promoting destinations. They can also alert travellers to different types of trips or times of year to go. A number of Caribbean countries, for example Barbados, have created campaigns promoting special visas for remote workers to encourage high-value, long term stays. Iceland ran a successful campaign positioning the country as a year-round destination. In 2011, the year after the campaign launched, 60% of tourists visited in the summer. By 2017 this had shifted: 35% visited during summer while 65% visited during autumn, winter and spring combined. Iceland's tourists are also now encouraged tourists to travel to a wider range of destinations within the country. Average room occupancy outside of the capital region has grown from 33% in 2011 to 55% in 2017.[34]



Arki, Greece
Credit: Amy Paterson

PRIORITY 9:

FACILITATING BETTER CHOICES

TARGET 9.1

80% of the industry uses a common framework to measure and report on sustainability

Key Actions:

Agree on a way to factor environmental externalities into T&T prices. Some consumers want to make more sustainable choices but perceive them as more expensive than less sustainable options. This is because the environmental impacts and externalities of less sustainable options are not always reflected in their prices. In some cases, such as aviation, subsidies and low tax have compounded this omission. As a result, flying has become progressively cheaper over the years. Air travel prices hit an all-time low in 2019.

Agree a common framework for measuring and reporting on sustainability. The number of certification schemes and standards identifying sustainable travel is increasing. While this reflects growing attention on sustainability in the industry, it means that businesses and destinations face a dizzying array of schemes and criteria to guide and certify their performance. It also confuses travellers by making it hard for them to identify and book sustainable options. But clearly signposting more sustainable options to consumers can translate into better choices.

More than 10 million travellers have selected Skyscanner's 'Greener Choice' badge for lower carbon options, and the site recently launched a filter allowing customers to search only for Greener Choice flights.

Agreement on a common framework would require high levels of industry collaboration across sub-sectors, and strong leadership from the biggest players. Online booking platforms such as Booking.com and online tourism and guiding services like TripAdvisor have a key role to play. Chapter 5 explores this idea in more detail. The framework needs to be accompanied by an easy-to-use tool for businesses to make measurement and implementation of solutions more feasible.

CASE STUDY: A USER-FRIENDLY 'ONE-STOP-SHOP' FOR T&T BUSINESSES TO MEASURE AND IMPROVE THEIR SUSTAINABILITY PERFORMANCE

Weeva is a 360 degree sustainability management platform that allows T&T businesses to understand, measure and improve their impact on climate, nature, communities and resilience. It is intended to be user friendly and applicable at all scales, from a holiday apartment to a multinational hotel chain. Step by step guides in simple language explain what indicators to measure, how to record data and what action to take. The platform was developed by leading industry experts. It will officially launch in 2023.

RESILIENCE

PRIORITY 10:

FUTURE-PROOFING DESTINATIONS

TARGET 10.1

100% of destinations 'at-risk' from climate change have adaptation and mitigation strategies in place

Key Action:
Direct industry resources and experience to supporting local resilience strategies and solutions.
Investing in resilient infrastructure in host destinations is important both to maintain their appeal to travellers and to support local communities. As outlined in Chapter 2, many of these destinations are particularly vulnerable to climate change impacts. For example, 80% of tourism takes place in coastal areas[35], the vast majority of which expect to be affected by rising sea levels.[36] In the Caribbean, a one metre rise in sea-level would partially or fully inundate an estimated 30% of T&T resorts and threaten 60% with beach erosion or losing their beaches altogether.[37] SMEs need particular support to prepare for and recover from shocks. While crucial for the tourism ecosystem, SMEs often lack the capital to do either.

Raising the necessary finance is crucial. Initial funding will be needed to develop destinations' adaptation and mitigation strategies.

A lot more will be needed to implement early warning and disaster response systems, infrastructure improvements and natural resilience solutions, for example, developing mangrove forests and coral reefs to provide flood protection to coastal areas. Mangrove forests alone are estimated to have the potential to save USD 65 billion in flood damages each year[38], while Indonesia, the Philippines, Malaysia and Mexico could each save more than USD 400 million a year through improved reef management.[39]

CASE STUDY: SIX SENSES CERRO VERDE

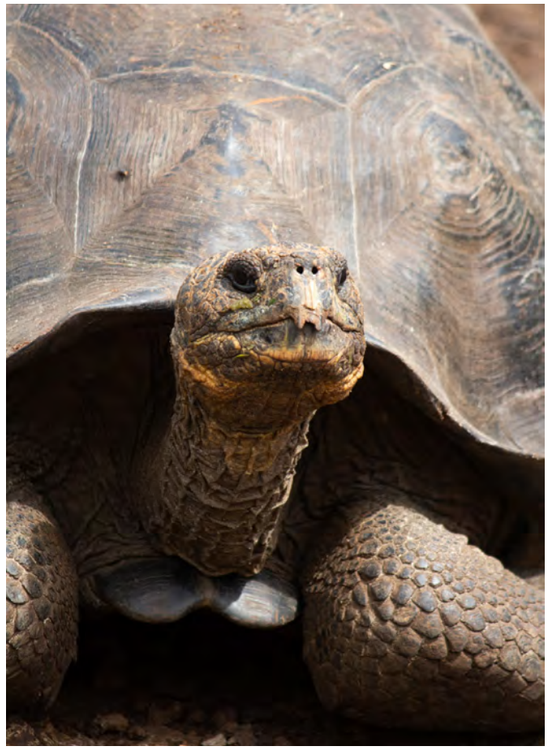
Six Senses Cerro Verde aims to demonstrate how well executed ecotourism that engages the local community can contribute to protection and restoration of nature at the same time as increasing resilience.

Located in the pristine highlands of San Cristóbal Island, Galapagos, the high-end ecotourism resort seeks to offer an alternative to carbon-intensive tourism development and unsustainable consumption patterns, increase ecosystem resilience in high-value biodiverse areas, and engage local communities, island inhabitants, and guests on climate mitigation and adaptation, all while offering a best-in-class traveler experience.

A thorough energy, waste, and water management system and the choice of sustainable materials seeks to ensure environmental-friendly and efficient use of resources. By placing the reduction of invasive species – which are currently one of the major threats to the exceptional biodiversity in the Galapagos – and the protection of endangered species at the core of value creation, the holistic ecotourism model serves as a new region-wide approach.

To ensure alignment with the island's conservation priorities, the project works in partnership with the National Park Service. The property also prioritises working with local farmers in the vicinity of the ecotourism resort and supporting sustainable agriculture practices.

Pegasus Subnational Climate Fund serves as a capital partner to the developer, Orgal S.A., in the creation of the luxury ecotourism resort.



Ghana
Credit: Alexandre L'Heureux

3.4

PROGRESS SO FAR AND KEEPING UP MOMENTUM

Taking the actions above will need to draw on the ambition and commitment of service providers and customers across T&T. But the industry is not starting from zero. Progress is already under way.

Over 450 organizations signed the Glasgow Declaration on Climate Action in Tourism. Several initiatives to reduce T&T businesses' emissions are already in progress, including Tourism Declares a Climate Emergency and the Global Sustainable Tourism Council. And some T&T sub-sectors already have their own climate initiatives: the Sustainable Hospitality Alliance (SHA) convenes the major hotel chains and hospitality groups to address environmental and social issues; the Mission Possible Partnership Coalition brings together actors along the aviation value chain to make sustainable fuels a reality; and Travalyst is coordinating online platforms to improve transparency for consumers. Examples of these early moves are summarized in Table 1.

TABLE 1: EXAMPLES OF PROGRESS IN T&T INDUSTRY

INITIATIVE	DESCRIPTION
Culture Declares Emergency	1,546 individuals and organisations in arts and culture have declared a climate and ecological emergency as part of the Culture Declares Emergency movement. Declarers are committed to highlighting the Earth crisis and its roots, including oppressive societal systems; promoting solutions and supporting diverse groups; and calling for action. 971 individuals and 575 organisations have declared as part of the movement so far.
Glasgow Declaration on Climate Action in Tourism	Over 450 organizations are signatories of the Declaration, agreeing to implement commitments including halving emissions by 2030 and reaching net zero as soon as possible before 2050; delivering and implementing climate action plans; coordinating climate action in tourism; and reporting on progress. The Declaration is hosted by the UNWTO. Signatories include destinations (national and local governments), T&T businesses, and supporting organizations (NGOs, business associations, academia, etc.).
Global Sustainable Tourism Council (GSTC)	GSTC establishes and manages global standards for sustainable T&T, providing Destination Criteria for public policymakers and destination managers, and Industry Criteria for hotels and tour operators.

INITIATIVE	DESCRIPTION
One Planet Sustainable Tourism Programme	Over 200 organizations are partners in the One Planet Sustainable Tourism Programme, which provides a platform for collaboration to advance sustainable consumption and production in the tourism sector. Members include national and local governments, NGOs, private sector and business associations, international organisations, academia and UN organizations. The Sustainable Tourism Programme is led by the UN WTO, the governments of France and Spain, and UNEP.
Sustainable Hospitality Alliance (SHA)	Hospitality companies accounting for 30% of the global hotel industry are members of SHA, working to support and protect destinations and communities through T&T. The Alliance works on a number of issues, including human rights, youth employment, climate action and water stewardship.
T&T participation in Science Based Targets Initiative	74 tourism and hospitality businesses have committed to set targets as part of the Science-Based Targets Initiative, of which 29 have had their targets approved.
Travalyst	Travalyst is a global initiative bringing together major T&T technology platforms Booking.com, Skyscanner, Trip.com Group, Tripadvisor, Visa, Google and Expedia Group.
UN World Tourism Organization (UNWTO)	160 member states, 6 associate members, 2 observers and over 500 affiliate members participate in the UNWTOs, the United Nations agency responsible for the promotion of responsible, sustainable and universally accessible tourism. Through the UNWTO, these members work to advocate for the value of tourism as a driver of socio-economic growth and development, promote sustainable tourism policies and practices, advance tourism's contribution to poverty reduction and development, foster knowledge, education and capacity building, and build partnerships to deliver action.
World Travel and Tourism Council (WTTC)	WTTC represents members from across the T&T industry and seeks to raise awareness of T&T's value, balance economic outcomes with people, culture and environment, and secure the industry's long-term growth and prosperity. WTTC works on a number of sustainability initiatives in partnership with governments, civil society and academia. Key examples include coordinating climate and environmental action, developing a plan to rethink single use plastic products in the sector, launching a human trafficking taskforce, coordinating action to eliminate illegal wildlife trade, and developing guidelines for futureproofing T&T destinations through public-private collaboration.

CASE STUDY: LUXURY HOSPITALITY PROVIDERS CAN BE POWERFUL PIONEERS

On average, the luxury segment has more capacity to cover the upfront costs of pioneering sustainable solutions than midscale providers. One-third of luxury guests are highly emotionally attached to their hotel brand compared to 12% of economy guests and emotional attachment has been found to vary inversely with price sensitivity.[40] Luxury hotels can therefore risk adopting sustainable solutions that may require short-term room rate increases for consumers. Leadership on sustainability – regularly identified as a key priority for hotel guests – can strengthen guests' emotional connection to a hotel brand, lowering their price sensitivity further.

Higher rates of guest spending at luxury hotels also gives these hotels an opportunity to offer higher-priced, sustainable products during their stay. The average spend of a luxury hotel guest at the hotel they visited most frequently in 2013 was USD 910 compared to a USD 176 average spend among economy guests.[41] Novel products could include insect-based protein for foods grown using regenerative farming techniques. For example, Insects in the Backyard is Thailand's first fine dining insect restaurant, launched in 2017. Chef Thitiwat Tantagarn pairs worms, crickets, grasshoppers and beetles with ingredients more familiar to western consumers, such as grains, seafood and vegetables, "so it's not too scary for people who want to try our food".[42] In the Philippines, eco-luxury wellness resort The Farm at San Benito offers guests natural, primarily plant-based foods grown regeneratively in its organic garden.[43] This kind of innovation can both change hotel procurement practices and prompt guests who like the sustainable products they try to buy them regularly after their visit.

Finally, in many cases, luxury hotels can leverage their existing luxury eco-lodge and safari business models to become net positive for climate, nature and communities. For example, as of 2022, Bistate, a luxury eco-lodge near Rwanda's Volcanoes National Park, has planted over 70,000 indigenous trees on 50 hectares of land and aims to double the amount of reforested land in its care by 2030.[44]

CONCLUSION

The actions detailed in this chapter show how T&T actors might seize a better future for climate, nature, communities and the industry itself by 2030. The many examples in the chapter of sustainable solutions and approaches demonstrate that significant progress is already underway. The challenge now is to take them to scale and shift to more collective, systemic action.

Seizing these opportunities requires coordination between public and private sectors, civil society and finance. It will also require significant up-front investment. Chapter 4 estimates the finance required. It also explains the innovations in finance that can open up the new opportunities in T&T to both public and private investors and so raise the funding needed to complete the industry's transition.

CHAPTER 04

FINANCING BETTER TRAVEL & TOURISM

Kyoto, Japan
Credit: Alexandre L'Heureux

FINANCING BETTER TRAVEL & TOURISM

Achieving the better future for T&T shown in Chapter 3 will require additional investments in the industry of an estimated USD 220-310 billion a year to 2030.[i] This is a significant amount, equivalent to 2-3% of T&T's contribution to global GDP in 2022 of around USD 10 trillion.[1] But this is what it will cost for the industry to become future-proof, maintain its licence to operate, and continue to prosper. Figure 24 shows the proportion of investment required for each priority and key actions in each one.[ii] Three priorities - decarbonising transport, decarbonising facilities, and protecting and restoring nature - account for 80% of the total investment.

i Additional investments are those required on top of current and business-as-usual investments. The majority of additional investments are CAPEX. Systemiq analyses, see technical annex 4 for details.

ii We do not offer investment estimates for the two priorities targeting T&T's impact on communities and behaviour shift because the nature and scale of such investment is so diverse in different locations.

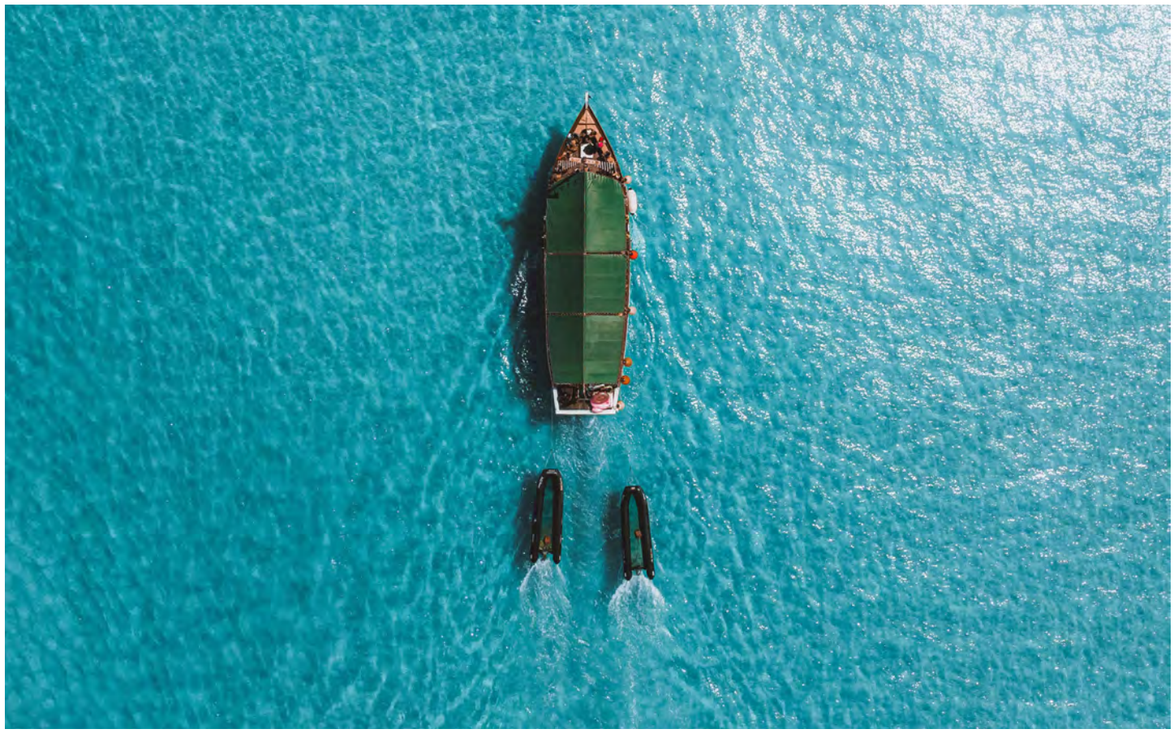
FIGURE 24: INVESTING IN THE TRANSITION

% of total investment	Investment area	
CLIMATE 50%	Decarbonising transport $61 - $83	Aviation $33 - $43
		Road Transport $14 - $19
		Ferries & Cruises $13 - $20
		Other Transport $1
	Decarbonising facilities $52 - $71	Operations $49 - $68
		Construction $2 - $3
NATURE 42%	Protecting & Restoring Nature $62 - $85	Terrestrial $22
		Marine $39 - $63
	Reducing Resource Consumption & Waste $27	Food Loss & Waste $7
		Material Waste $20
	Sourcing Sustainably $7 - $15	Productive & Regenerative Ag. $6 - $14 Local Loops & Links $1
RESILIENCE 8%	Future Proofing Destinations $14 - $31	Adaptation & Resilience $14 - $31
TOTAL	**$220 - $310**	

Conventional sources of commercial finance might not provide the total investment needed given the risks involved. But combining private and public capital with contributions from consumers can make this an entirely fundable transition, as this chapter explains.

Over the long term, investing in making the T&T industry positive for climate, nature and people is likely to offer investors highly attractive returns. Potentially high upfront investments, particularly those tackling inefficiencies and waste, will be offset by significantly reduced operating costs longer term. Those lower costs will raise profit margins in the sector, so investing to improve T&T's sustainability is likely to generate increasing rising long-term financial gains.

New concessional and impact-focused financing mechanisms can be used to de-risk riskier investments sufficiently to draw in funding from conventional sources. Such mechanisms include sustainability-linked loans, blended finance and voluntary carbon markets. Public or blended finance will be particularly important for de-risking investments with a long payback period or unclear return on investment.



Consumers' contributions to the total funding needed are likely to come from modest increases in consumer prices. One example could be charging slightly higher prices for plane tickets to cover some of the costs of using SAF. Figure 25 shows six archetypal trips, and compares the customers' costs of making them conventionally versus sustainably. Customer cost increases for the sustainable options range from 1% to 8%.

FIGURE 25: COMPARING THE COST OF SIX ARCHETYPAL TRIPS IN A BUSINESS-AS-USUAL VS A BETTER TRAVEL & TOURISM SCENARIO IN 2030

USD

Tourism policies in some host countries aim to convert part or all of their tourism to luxury hospitality services. Raising the price of flying and hospitality to make both sustainable could fuel this trend, reducing host countries' tourist numbers but increasing the average spend per tourist.

The rest of this chapter identifies current barriers to investment in making T&T net positive for climate, nature and people and explains the innovative financing mechanisms that can tackle those barriers. It then details how specific financial innovations can be deployed to unlock funding for the three actions that together require around half of the total annual investment required: decarbonising aviation, protecting and restoring marine ecosystems and decarbonising building operations.

4.1 BARRIERS RESTRICTING FLOWS OF FINANCE

A number of barriers restrict the flows of finance needed for many of the priorities (See table 2). These barriers must be addressed in order to realise the opportunities offered by sustainable T&T.

TABLE 2: BARRIERS TO INVESTMENT IN SUSTAINABLE T&T

INVESTMENT AREA		BARRIERS TO FINANCE
Cross-cutting		• **A lack of standardised sustainability indicators** for the whole T&T Industry limits the capacity of investors to account for sustainability risks in their decisions; governments to regulate; and T&T consumers to signal their demand for sustainable options clearly to T&T suppliers. • **Short-term targets disincentivise long-term decision-making.** Quarterly targets and reporting in private companies and investment firms disincentivise investment in sustainable solutions that may have higher up-front costs but deliver longer-term gains. • **Perception of sustainable options as higher risk limits investment.** Investors unfamiliar with new sustainable technologies and business models tend to perceive these as higher risk, reducing their willingness to invest in them on a large scale.
Climate	De-carbonising transport	• **Obtaining certification** to enter the market can take years even for technologically mature electric and hydrogen-fuelled planes. This limits their investment appeal. • **Tax exemptions for aviation fuel act like subsidies** in many countries, making it harder for new sustainable fuels to compete. • **SAFs and green shipping-fuels are likely to remain more expensive** than fossil-based jet and shipping fuel over the medium term, reducing their competitiveness.
	De-carbonising facilities	• **High up-front costs and long payback periods** for improving/retrofitting property limit incentives to invest. • **Unclear signals from governments** on future energy efficiency requirements reduce the incentive to invest in improving energy efficiency. • **Restrictive building codes and standards** currently deter use of innovative materials such as bio cement, reducing investment appeal of sustainable construction. • **Construction companies lack incentives to adopt low carbon solutions or alternative materials** for three reasons: (i) construction is low margin, making the additional risk and higher upfront costs of sustainable options big barriers to adoption; (ii) although construction companies bear the risk and costs of using such options, they rarely benefit from the resulting increase in a built asset's value (iii) with most developers issuing new tenders for each new project, construction companies are compelled to compete on cost, lowering their scope to promote sustainable options.
Nature	Protecting & Restoring Nature	• **Difficulties in quantifying nature-related risk exposure** limit investors' capacity to factor nature degradation into investment decisions. • **Data gaps and inconsistent progress indicators** make it difficult to target and evaluate policies and projects linked to nature protection and restoration. • **Weak international rules and enforcement** allow unsustainable practices to continue. • **Municipal planning and utility services lack the capacity to keep pace with tourism developments,** allowing leading property developers to build without constraint in some destinations.
Nature	Reducing Resource Consumption & Waste	• **Industry norms** encourage providing abundance and choice of food rather than reducing waste in hotels and restaurants. • **Perverse incentives** created by policies on food safety, quality, labelling, packaging and tax limit redistribution of food below its potential. • **Fragmented food supply chains** in many developing and emerging economies do not facilitate investment in networks of cold storage and distribution facilities.
	Sourcing Sustainably	• **Lack of incentives/ immediately visible consumer demand** for sustainably produced food limits investment in developing markets. • **There are few disincentives/penalties for unsustainable practices** such as excessive use of fertilizer or allowing nitrates to pollute drinking water. This reduces appeal of investing in alternatives.
Resilience		• **Investors struggle to calculate returns on resilience-building investments** as probability and costs of risks implicit in future climate scenarios are not well understood in the investor community. • **A lack of access to finance for high upfront costs of investments** in many developing country destinations limits their capacity to invest. • **There are weak incentives to integrate true costs of climate risks into decisions** made by the finance community, businesses and governments because of (i) a lack of reliable, accurate data (ii) weak technical capacity, (iii) weak/misleading risk signals from insurers because of regulations requiring them to insure some assets highly exposed to climate risk at regulated prices.

Finance for Decarbonised Aviation
Credit: ZeroAvia

4.2 HOW WILL IT BE FINANCED?

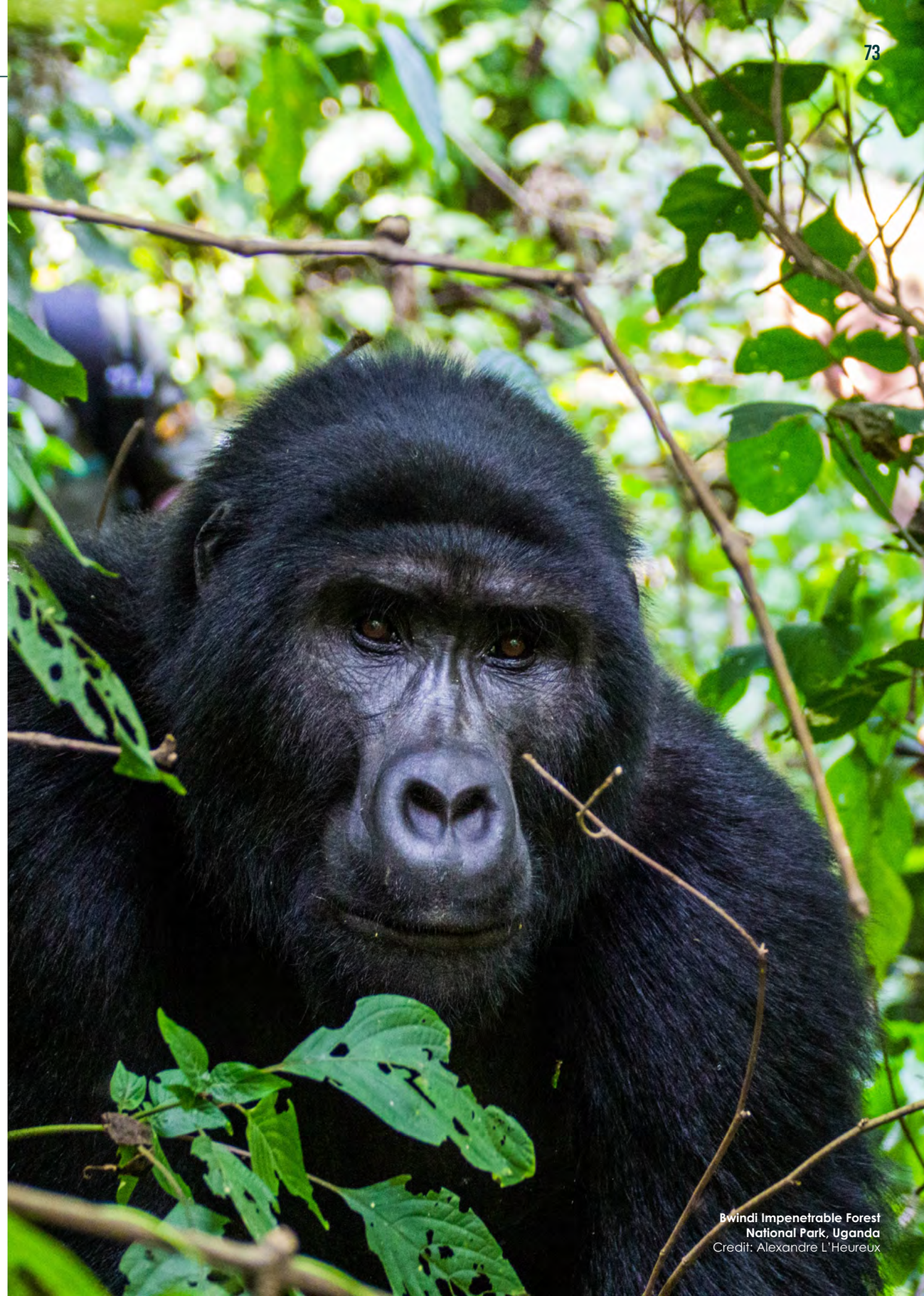
Implementing the policy interventions outlined in Chapter 3 can do much to tackle the barriers described above and direct flows of funding towards the right places. A range of new financial products and structures already on the market or in development will be crucial to dismantling the barriers completely and releasing the right scale of investment.

Table 3 describes seven innovative solutions and instruments suitable for financing the 10 T&T Priorities, with examples of where they are being applied today, to show how they can be replicated and scaled.

TABLE 3: FINANCIAL INNOVATION TO FINANCE THE TRANSITION

INNOVATIVE SOLUTION / INSTRUMENT	DESCRIPTION	EXAMPLES
Paying for nature	Payments to incentivise the protection and management of nature by attaching a value to the services it provides, such as climate change mitigation, oxygen, flood management or temperature regulation. This includes payments for ecosystem services (often through outcome based / pay for performance models), conservation finance models like carbon and resilience credits, debt for nature swaps, and tourism user fees etc. This solution includes 'produce-and-protect' business models, which combine nature tourism with protecting and regenerating nature.	• **The African Conservancies Fund,** established by Conservation International, aims to align economic and conservation objectives in communities in and around the Maasai Mara in Kenya, in partnership with organisations including the Big Life Foundation and Apple. ACF provides debt capital to the Maasai Wilderness Conservation Trust to develop sustainable revenue generating activities such as eco-tourism, sustainable agriculture and carbon credit generation. The fund aims to provide USD 5 million to the Trust over two years.[2] • Botswana-born ecotourism group **Wilderness Holdings Ltd** offers wildlife safaris that simultaneously conserve and restore wilderness and wildlife across seven African countries. The group directs its tourism revenues towards conserving six million acres of protected land, re-introducing animals into the wild, rehabilitating existing natural environments, and maintaining its sustainable ecotourism activities. In 2018, Wilderness Holdings secured investment from The Rise Fund in exchange for a 34% stake in the group.[3] • The **Blue Natural Capital Financing Facility (BNCFF)** blends private commercial capital, catalytic capital and public funding to support investible projects with ecosystem benefits. For example, together with the Turneffe Atoll Sustainability Association, the facility invested USD 1.2 million to help the Turneffe Atoll Marine Reserve (TAMR) improve management and implement sustainable revenue mechanisms, including robust visitor-fee collection and a blue carbon credit project which generates carbon credits based on the growth and conservation of carbon-storing plants in water. As a result of the investment, the Reserve is expected to develop its own revenues and manage TAMR more effectively.[4]
Bonds (green, blue, SDG, resilience)	Debt instruments issued by governments, development banks and companies to raise capital to finance natural and sustainable assets. Includes green, blue, SDG, impact and sustainability bonds plus resilience bonds which are designed to fund both projects that proactively reduce risks and reactive disaster recovery.	• **Costa Rica Tourism Bonds** provide private capital to small businesses and entrepreneurs in Costa Rica's tourism sector to raise the capital they need to recover from COVID-19 and expand. Investors secure a solid return on investment, rights to regular luxury vacations, the ability to apply for residency, and other benefits. Investments are used to expand sustainable business models that are in harmony with the local environment.[5] • In 2019, **Japan Hotel REIT Investment Corporation** issued a JPY 2 trillion (USD 19 million) green bond and used the money raised to repay loans borrowed for previous water and energy improvements and renovations and to fund more efficient construction and renovation of future hotels.[6] • In 2017, the **French National Railway Company, SNCF, issued green bonds** to finance rail investment. Funds will primarily be directed towards the existing network but also to new projects and strengthening the network's sustainability strategy. By contributing to a broader programme of rail network renovation, these investments seek to encourage a modal shift towards rail.[7]
Blended Finance	The use of development capital (public or philanthropic) to mitigate particular investment risks (including offtake, access to capital, credit, technical, demand and currency risk) and thereby mobilise commercial capital. Includes first loss or subordinate capital in a fund; development guarantees; hedging; political risk insurance etc.	• Social enterprise Blue Finance has launched the **Blended Blue Finance Facility,** which aggregates a pipeline of "bankable" high-impact marine protection projects and provides an opportunity for investors to support these. The facility uses concessional, subordinated debt alongside grant funding and commercial loans to reduce risks for different types of investors. Projects include sustainable tourism, blue-carbon credits and community small-business models such as responsible aquaculture.[8] • **The EcoEnterprises Fund** uses tailored mezzanine, quasi-equity, and long-term debt instruments to mobilise investment in scalable small businesses that contribute to preserving and regenerating biodiversity and sustainable livelihoods, through sectors including eco-tourism.[9] • **The Global Fund for Coral Reefs** is a blended finance vehicle that invests in and incubates solutions alleviating pressure on ocean ecosystems, including eco-tourism.
Impact investing	Investments made in companies, organisations and funds that aim to generate a measurable, beneficial social or environmental impact alongside a financial return	• **The L'Oreal Fund for Nature Regeneration** is a EUR 50 million impact investing fund that aims to repair natural ecosystems by investing in projects including eco-tourism. • Impact investor **Bridges Fund Management** provided financing to transform a disused office building in London (UK) into an innovative green hotel using pre-fabricated bedrooms made primarily from recycled materials. Green features added later include solar panels, LED and energy efficient lighting, and water saving mechanisms.[10] • **Eco-Business Fund** is an impact investor that provides dedicated financing and technical assistance to financial institutions and businesses engaged in sustainable tourism. The fund uses a blended finance model to crowd-in private investors alongside public and development capital.[11]

INNOVATIVE SOLUTION / INSTRUMENT	DESCRIPTION	EXAMPLES
Sustainability-linked loans	Loans and other financial instruments which are contingent on or incentivise the borrower / policy-holder's achievement of specific sustainable practices.	• **The Investment Readiness for Green Finance Mechanisms** initiative is a post-COVID-19 medium-term credit-line hosted by UNWTO and the IFC for hotels affected by the downturn in tourism caused by the pandemic. Credit is coupled with provisions for 'retrofit greening' as well as partnerships with the private sector to promote green finance in sustainable buildings. The initiative also provides capacity building and advisory support.[12] • Saudi tourism project developer **The Red Sea Development Company** secured a SR 13.1 billion (USD 3.8 billion) **'green' loan** from four Saudi banks, funds from which will be channelled to building 16 renewable energy-powered hotels across the country.[13] • In 2021, **the Hong Kong and Shanghai Hotels Ltd,** owners of the Peninsula, signed a sustainability-linked loan totalling HKD1.25 billion (c. USD160 million), refinancing an existing facility with HSBC and obtaining an additional facility with MUFG, with the loan conditions directly linked to HSH's ESG targets.[14] • **Triodos Bank** provides loans to sustainable tourism businesses to invest in property purchase and development, on-site renewables and green tourism accreditation. The bank only lends to businesses that have been or are in the process of being Green Tourism-certified. It gives a 1% interest rate discount for those working towards gold certification. These loans are conducted through Tridos Bank's participation in the **UNEP Finance Initiative.**[15]
Insurance	Insurance can provide a degree of protection against climate risk by promising to compensate for a specified loss or damage in return for payment of a specified premium. It includes parametric or weather index insurance (does not indemnify the pure loss, but makes a payment based on a triggering event like a hurricane) and microinsurance (protection of low-income people against specific risks like natural disasters)	• SwissRe has worked with partners including Mexican universities, tourism business stakeholders and The Nature Conservancy to develop a **Coral Reef Insurance product** for the Mesoamerican Reef in Mexico, delivered via the Coastal Zone Management Trust. The Reef protects the coastline and supports a USD 10 billion tourism sector. See case study on page 78.[16]
Technical Assistance	Grant funding for project preparation, incubation and research to bring a project to bankability. Such funding can be critical for pipeline development, especially in less mature sectors and riskier geographies. It is often provided by public finance organisations to mobilize private capital.	• The United Kingdom Green Fuels, Green Skies (GFGS) Competition supports first-of-a-kind SAF plants, with up to GBP 15 million in grant funding.[17]



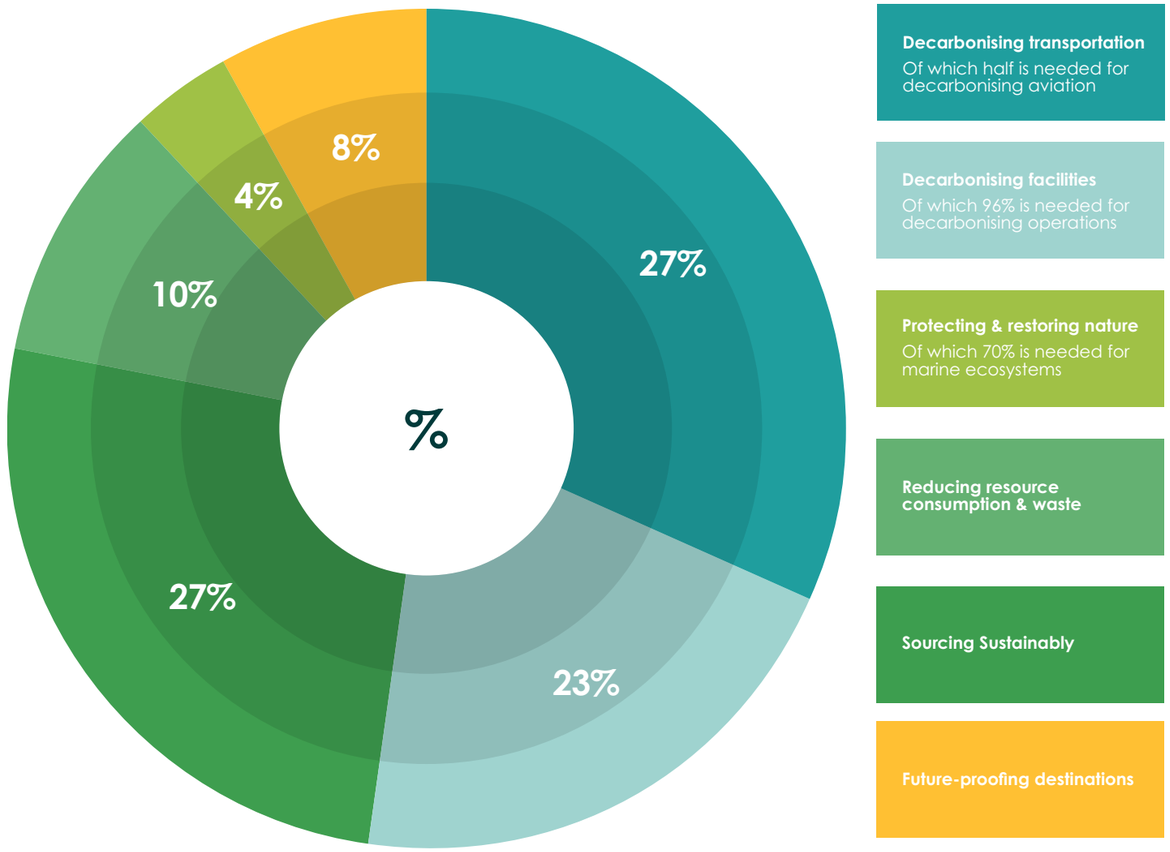
Bwindi Impenetrable Forest National Park, Uganda
Credit: Alexandre L'Heureux

4.3 RELEASING FINANCE FOR THREE CRITICAL ACTIONS

Figure 26 shows how three priorities - decarbonising transport, decarbonising facilities, and protecting and restoring nature - account for 80% (or USD 175-240 billion) of the total investment required to deliver all 10 priorities. Within these three priorities, three specific actions - decarbonising aviation, decarbonising facility operations and promoting marine protection and restoration - account for more than half of the USD 105-140 billion (see Section 4.4 below).

This section shows how specific innovations in finance can unlock funding for these three critical actions.

FIGURE 26: SHARE OF TOTAL INVESTMENT REQUIREMENT BY TRANSITION



4.3.1 FINANCE FOR DECARBONISING AVIATION

Decarbonising aviation represents the largest investment area of all the actions needed on Priority 1, Decarbonising Transport. Key actions to unlock finance include:

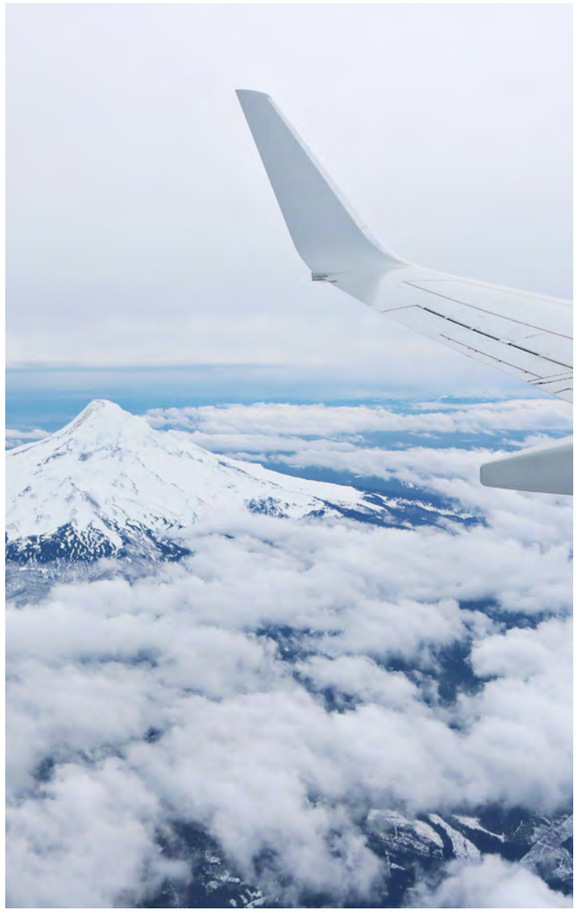
- **Investors can adopt climate-aligned investment principles to kick-start a race to the top among airlines.**
  - Capital providers (banks, institutional investors, public-sector banks) that adopt climate-aligned investment principles will create an incentive for aviation firms to align their strategy with 1.5°C. By stoking competition for investment among airlines, this can set off a 'race to the top', accelerating the transition to net-zero aviation. Investors can also divest from assets that are not in line with 1.5°C. This both removes support for unsustainable practices and compels the aviation industry into faster action.

- **Policymakers can use financial regulation to incentivise investment.** Governments of aircraft-exporting countries provide substantial financial support for aviation sales through production and trade policies, such as Export Credit Agencies (ECA) guarantee programs, through which governments provide financial guarantees to lessors and airlines during the acquisition of new commercial aircraft. Directing a significant share of this financial support towards sales of decarbonised aircraft can provide a strong incentive to buyers and investors to select decarbonised options when renewing fleets.

Investors can form public-private partnerships to de-risk novel technologies.

The ideal set-up of these partnerships differs depending on the maturity of the technology and the size of the developer (see Figure 27), as follows:

- Less mature technologies, such as hydrogen fuel cells and battery-electric aircraft, are often developed by smaller, pioneering businesses. Financing strategies should focus on reducing costs of finance and investor risks. For example:
  - Public, philanthropic and private investors can establish a consortium of capital providers to share risk. Concessional capital providers (public and philanthropic) can shoulder a higher proportion of the risk (e.g., first-loss, guarantees), thus lowering the risk for private investors. This blended finance approach is being pioneered in the Clean Aviation Partnership to raise investment in hydrogen and hybrid-electric aircraft in Europe (see case study on page 76).
  - Insurers can provide insurance for investment risks associated with uncertain technological developments to increase their appeal to investors. For example, insurers can cover the risk of a difference between a 2030 SAF price-point that SAF producers commit to now and their 2030 production costs, to de-risk offtake agreements.
- For more mature technologies that are already commercially attractive, such as SAF plants, financing strategies should focus on accelerating and scaling investment. Institutional investors and banks can play a key role here. For example:
  - Institutional investors can provide green bonds to finance climate-focussed projects that deliver a regular or fixed income payments to investors, increasing the appeal of investment.
  - Banks can provide green loans for projects, specifying that borrowers use the loans exclusively to fund climate-oriented projects. This approach has been pioneered by Deutsche Bank and lessor Avation (see case study on page 76).



- **National governments can coordinate to implement a global Frequent Flyer Levy (FFL).** Recent analysis by the International Council on Clean Transportation (ICCT) has made a strong case for an FFL as a more equitable approach to compensating for aviation emissions than a flat levy. It would focussing the tax burden on wealthier frequent fliers, ensuring that people with lower incomes are not priced out of flying.[iii] Estimates suggest that a global FFL would generate 81% of revenue from frequent flyers and 67% from high-income countries, compared to 41% and 51% under a flat levy.[18] Implementing an FFL will require collaboration between national governments, airlines and most likely an international body. The ICCT plans to investigate the implementation logistics. A different mechanism would be needed to raise an environmental tax from the very wealthy fliers who use private jets.

AVATION

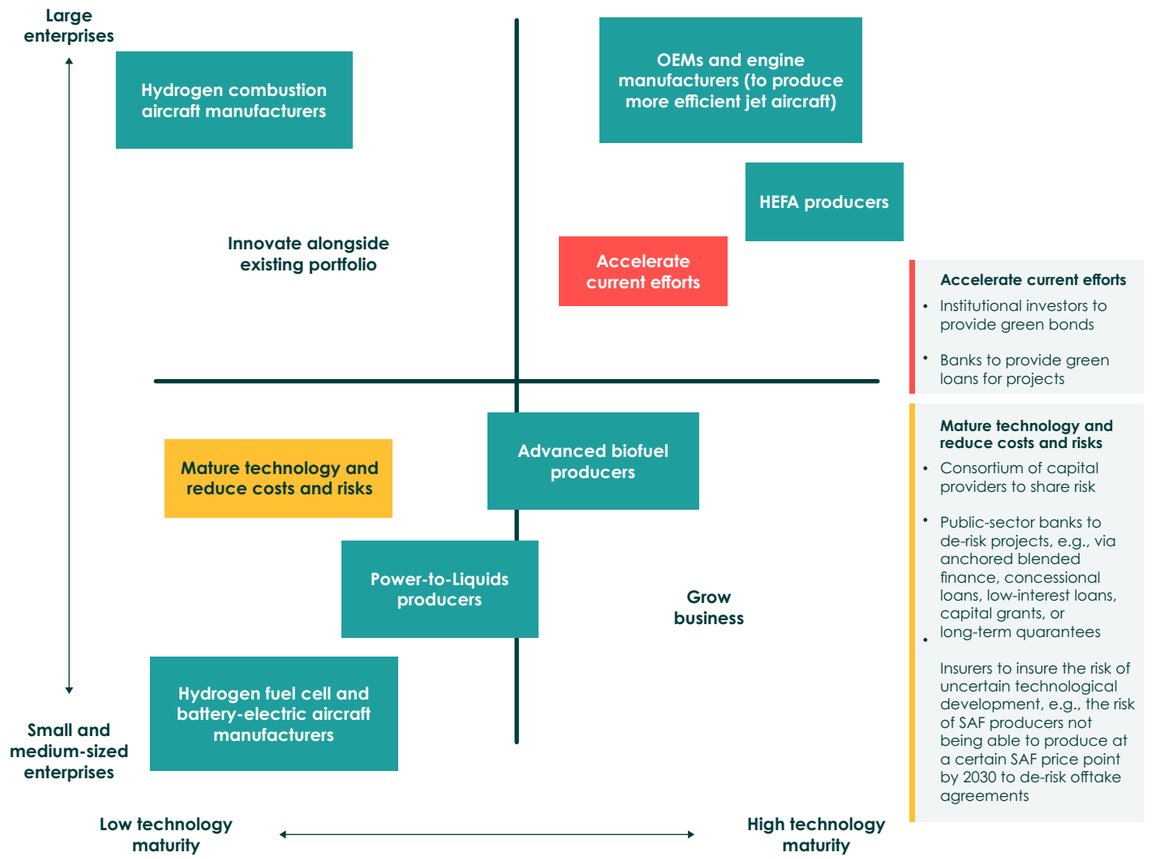
In 2019, Deutsche Bank and Singapore-based lessor Avation announced the first commercial aircraft transaction to be financed with a Green Loan. Avation used the loan to acquire three low-carbon aircraft, replacing ageing, higher-carbon models, to be leased to Braathens Regional Airlines.

CLEAN AVIATION PARTNERSHIP

The Clean Aviation Partnership is a European Union led initiative bringing together public and private actors to support research and innovation (R&I) in hydrogen and hybrid-electric aircraft and efficient propulsion systems.

The EUR 4.1 billion partnership is made up of EUR 1.7 billion public funds provided via Horizon Europe and EUR 2.4 billion private funds provided by industry.

FIGURE 27: FINANCING MECHANISMS FOR LOW-CARBON TECHNOLOGIES DIFFER DEPENDING ON TECHNOLOGICAL MATURITY AND SIZE OF COMPANY



Note: Ideal financing mechanisms depend on technology maturity and company size. Over time, growing corporations deploying maturing technologies will demand different financing instruments.
Source: Mission Possible Partnership, 2022.

iii Frequent flyers are defined as those who take more than six flights a year. The ICCT estimates that the richest 20% worldwide take 80% of flights, and the top 2% most frequent flyers take around 40% of flights.

4.3.2
FINANCE FOR DECARBONISING OPERATIONS IN T&T FACILITIES

For Priority 2, Decarbonising Facilities, decarbonising facility operations requires the largest amount of investment. T&T service providers need finance to pay for green heating and cooling technologies installed in new builds and in retrofits, and for sustainable means of improving building efficiency. Key actions to unlock the necessary investment include:

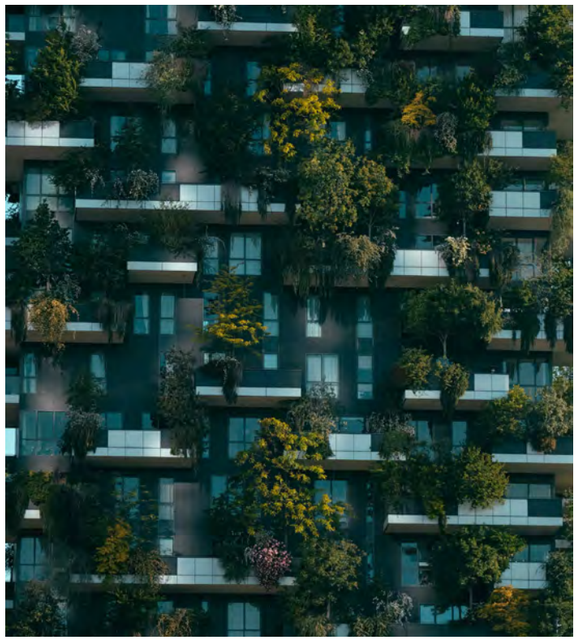
- **Policymakers can develop investment taxonomies to incentivise investment in low-carbon, sustainable facilities.** Governments can develop taxonomies to clarify which investments are sustainable - similar to the EU's taxonomy for sustainable activities (see case study). Companies which meet the sustainable investment criteria should be able to secure increased investment because it will differentiate them from competitors. Investors may recognise that these companies are ahead of the curve in both improving their impact and compliance with existing and likely future regulation. This will increase demand for sustainable designs, technologies and solutions, helping to scale all those markets and bring down costs. This regulatory trend is taking hold in other sectors. For T&T, it promises to stimulate investment in renovating inefficient facilities and making new-builds energy-efficient from the outset. efficient from the outset.

EU TAXONOMY FOR SUSTAINABLE ACTIVITIES

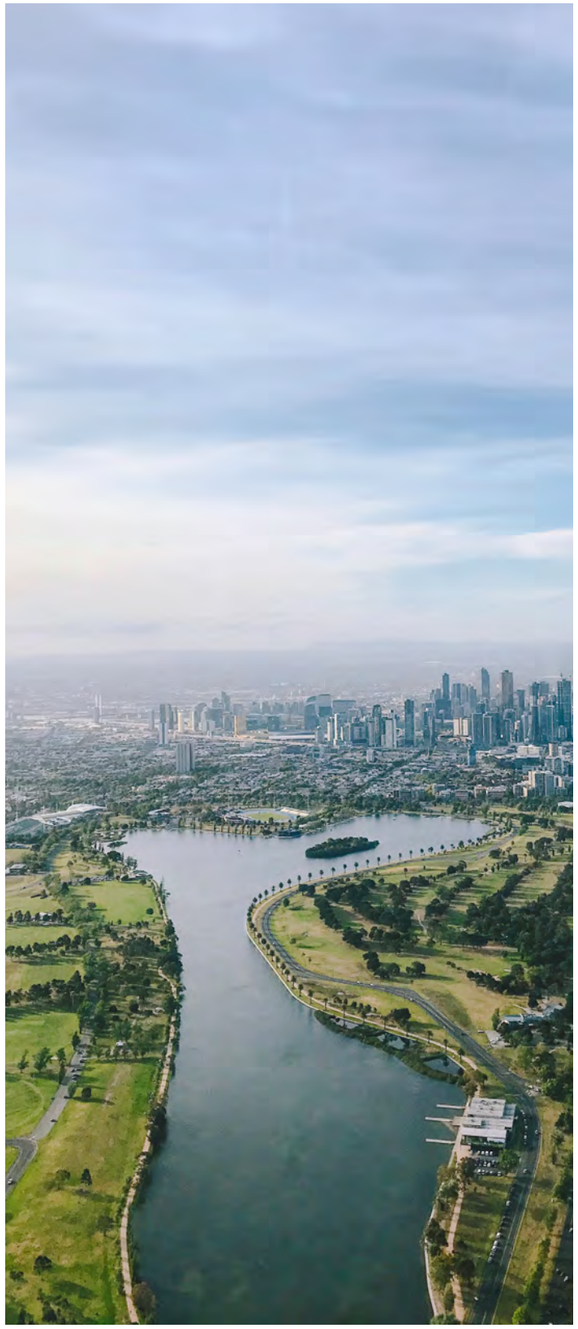
The EU Taxonomy regulation[19] provides a clear definition and framework for classifying "green" or "sustainable" economic activities carried out in the EU. All financial market participants offering financial products in the EU must disclose how and to what extent their economic activity includes, promotes or finances sustainable projects according to the EU Taxonomy criteria. Companies that perform well against these criteria stand out from their competitors and are therefore expected to attract more investment. Policymakers are increasingly relying on these taxonomies to target their fiscal policies and incentives on increasing the financial benefits of investing in sustainable real estate.

- **Commercial banks, investment banks and development finance institutions can issue green bonds to businesses to make their facilities' operations and construction more sustainable.** Green bonds can help facility owners meet the high upfront costs of retrofitting green heating and cooling systems, and leveraging alternative building materials to enhance energy efficiency. Bonds give borrowers liquidity, while investors get fixed income payments at the same time. Green bonds are already widely used for this purpose: after renewable energy, green buildings are the leading asset in the green bond market, with USD 150 billion issued in 2021, or 30% of total issuances.[20] Making green bonds available in local currencies will allow more facilities' owners to make use of them.

- **Investors and industry actors can partner to share the risks and costs of decarbonising the construction sector.** As outlined in Table 2, construction companies currently lack incentives to use low-carbon techniques and alternative materials that enhance operational efficiency when they build T&T facilities. To spur green construction, a group of public finance institutions (PFIs) could collaborate on identifying and supporting green champions in the construction sector and share the risks and costs of that support among group members.[iv] By increasing demand for green construction solutions, this approach would help them to exploit economies of scale, promoting their industrial production. It would also expand the evidence base for green construction, reducing perceived risks.



Milan,
Italy



Melbourne,
Australia

iv See Better Finance, Better Built Environment (Systemiq).

4.3.3 FINANCE FOR PROTECTING AND RESTORING MARINE ECOSYSTEMS

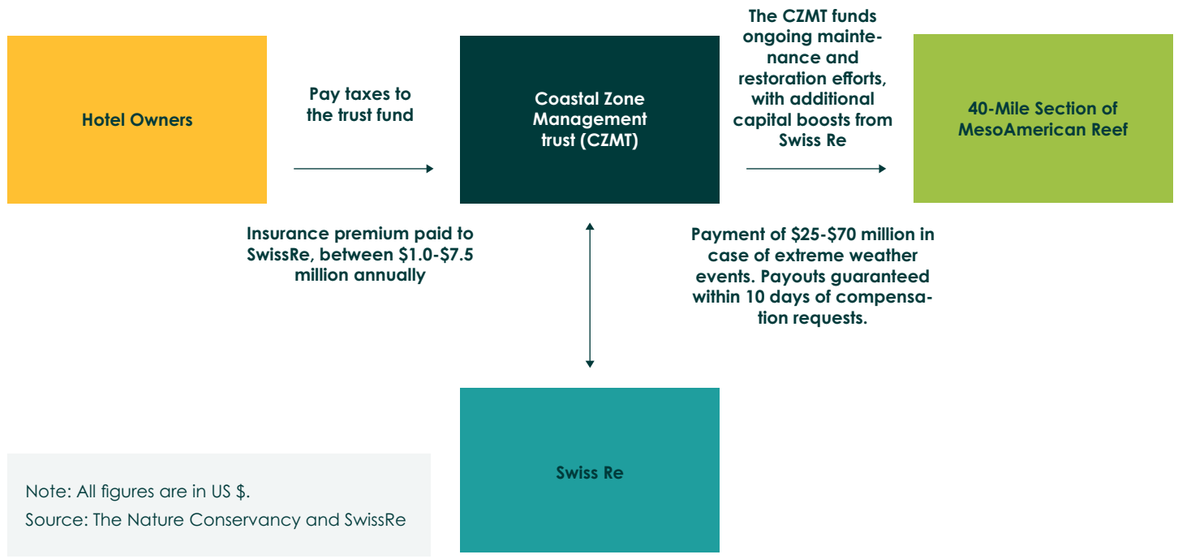
Protecting and restoring marine ecosystems accounts for the highest share of investment in Priority 3, Protecting and Restoring Nature. This is due to the high number of T&T developments located on coasts. A range of innovative ways to mobilise the necessary finance are outlined here. They could be used to unlock finance for land-based nature protection as well. They include:

- **Governments, development finance institutions and private investors can partner to develop new blended finance instruments and private insurance products that de-risk investments** in ocean-positive solutions. For example, SwissRe has worked with partners to develop a Coral Reef insurance product for the Mesoamerican Reef in Mexico.
- **T&T business could turn to the voluntary carbon market (blue or carbon credits) to increase revenues.** T&T businesses that are protecting and/or restoring nature can also help mitigate climate change. They can sequester carbon using nature-based methods and avoid any release of carbon previously caused by destroying nature. Firms that can demonstrate and quantify the extent of their climate mitigation can sell blue or carbon credits on voluntary carbon markets, generating an additional revenue stream. For example, the Blue Natural Capital Financing Facility is supporting the Turneffe Atoll Marine Reserve to develop a project which generates carbon credits based on the growth and conservation of carbon-storing plants in the water (see Table 3, above).
- **The private sector and multilateral financial institutions can choose to invest in line with ocean-positive principles.** Signalling that decision creates an incentive for T&T firms to align their strategy with protecting and restoring marine ecosystems in order to attract investment. Independent, science-based principles are available for institutions to use as a guide. For example, the UN Environment Programme Finance Initiative's Sustainable Blue Economy Finance Principles and the UN Global Compact's Sustainable Ocean Principles.
- **Philanthropic and development finance providers can issue grants and concessional finance to help scale ocean-positive businesses and ideas,** making the grants and impact-oriented capital accessible to MSMEs as well as larger firms. For example, the Global Fund for Coral Reef's Grant Fund Programme identifies investments that generate 'reef-positive solutions'. It provides businesses and projects with concessional loans, guarantees and grants in various forms to help them grow and attract private investment. In addition, the Global Fund for Coral Reef's Equity Fund invests in existing ocean-positive enterprises, some of them beneficiaries of the Grant Fund's programmes and technical assistance.
- **T&T industry actors and investors can support the development of a global 'ocean risk map' and 'risk index'** to catalyse investment in resilience-building efforts in islands and coastal communities and the growth of a responsible and sustainable ocean insurance market. Understanding climate-related risks is critical to encourage investment, enable investors to effectively calculate returns on investment, and underpin an effective insurance market. Many organizations are developing maps and indices, including the Stimson Center's Climate and Ocean Risk Vulnerability Index (CORVI), AXA XL's Coastal Risk Index, and the Ocean Risk Alliance's Coastal Risk Index, among others. These could be combined and adapted to inform financial decision-making.

MESOAMERICAN CORAL REEF INSURANCE PRODUCT

With partners including Mexican universities, tourism business stakeholders and The Nature Conservancy (TNC), Swiss Re is developing a **Coral Reef Insurance product** for the Mesoamerican Reef in Mexico backed by funding from the Coastal Zone Management Trust. The reef protects the coastline and supports a USD 10 billion tourism industry. The insurance product makes payments to those insured in the event of a damaging storm so they can repair the coastline and reef and maintain tourism. Funding for the Trust comes from an existing fee on beachfront property owners plus contributions from local government taxes and the local tourism industry.[21]

FIGURE 28: SIMPLIFIED CONCEPTUAL DIAGRAM OF CORAL REEF INSURANCE FOR THE MESOAMERICAN REEF



Note: All figures are in US $.
Source: The Nature Conservancy and SwissRe

iii See Better Finance, Better Built Environment (Systemiq) to be launched November 2022.

CONCLUSION

The additional investment needed to build a dynamic, net positive T&T industry is substantial. Yet combining private and public funding with contributions from consumers will make T&T's transition to being net positive for climate, nature and people fully fundable. Innovative approaches to mobilising the necessary finance are available and already benefitting sustainable T&T businesses.

Making the transition now is an existential priority for T&T, given the urgency of the challenges the industry faces. Chapter 5 shows how collective, co-ordinated action across stakeholders can accelerate this shift.

CHAPTER 05

FROM THEORY TO COLLECTIVE ACTION

FROM THEORY TO COLLECTIVE ACTION

This report has presented the case for action across T&T to make the industry net positive for climate, nature and people by 2050. Chapter 2 showed why this transformative, systemic transition is a commercial as well as ethical imperative for the industry. Chapter 3 identified the actions it will require across 10 T&T Priorities, and chapter 4 showed how the necessary investments can be financed.

This chapter focuses on getting the transition up and running fast.

Some action is already under way and momentum is growing, as we saw in Chapter 3: industry initiatives have formed and individual firms have begun to adopt sustainable practices; sub-sectors including transport, hospitality, tour operators and travel agents have set targets to drive progress.

The immediate question is how to build on this momentum and deliver systemic transformation across the industry as a whole. This will need co-ordination between the industry's many and diverse stakeholders, among them national and local governments, regulatory bodies, businesses of all sizes, private and public investors, destination communities, and tourists and travellers themselves.

Having consulted many stakeholders across the whole T&T system, we have identified four cross-cutting initiatives that can kickstart the transition to Better Travel across the industry.

01 Launch a 'T&T First Movers Coalition' to harness the market power of large T&T buyers.

02 Establish a fund that directs T&T offsets to strengthening climate resilience in vulnerable T&T destinations.

03 Build 'Better Travel & Tourism' flagship destinations.

04 Align on single framework for measuring sustainability across the T&T industry.

Each of these initiatives require cross-sector collaboration, aim to build on what already exists, and accelerate the transition to Better Travel & Tourism. These are suggestions to test and spur ambition, but this is not the implementation plan. This would require more work.

5.1 LAUNCH A 'T&T FIRST MOVERS COALITION' TO HARNESS THE MARKET POWER OF LARGE T&T BUYERS

WHAT:

The T&T First Movers Coalition (FMC)[i] would bring together the largest T&T buyers, including corporate travellers, international organizations and governments with large travel budgets. They would commit to reducing T&T-related emissions by creating demand for more sustainable options, leveraging their procurement muscle. T&T providers would also engage with their suppliers to meet the demand of, for example, food and energy, to trigger change higher up T&T value chains. This in turn would help meet the growing demand for better choices.

WHY:

A range of low- and zero-carbon ways of travelling which could help reduce T&T industry emissions are becoming available or being developed. Yet many of these remain small-scale in the industry, with relatively high costs, low take-up, and investment, because they are unfamiliar to consumers and investors. Directing the purchasing power of large T&T buyers - a significant share of total T&T spend - to these sustainable solutions could give them the demand boost they need to take off. At the same time, it could significantly reduce total T&T emissions because the T&T purchases of the same group of buyers - large international firms, government bodies and global institutions - account for a significant share of total emissions from T&T.

For example, corporate travel accounts for between 55% and 75% of profits for top airlines[1] in large part because corporate travellers book premium cabins which generate around three-times more emissions per passenger than economy class.[2] International firms are likewise key customers for multinational hotel chains, giving them the buying power to shift incentives across a significant share of the hotel market. Similarly, huge numbers of people travel to international conferences each year, creating demand for air transport and hospitality. There were 40,000 registered participants at COP26.

By committing to reduce their high-carbon travel and choose low-carbon, sustainable options instead, members of the First Movers coalition would boost business for T&T providers pioneering sustainable business models. They would also send a strong signal of the market's direction to potential investors in such firms, and incentivise other T&T businesses to improve their sustainability performance and invest in solutions. Given the scale of these large T&T buyers, their concerted action could rapidly push T&T corporate markets beyond the tipping point at which a critical mass of buyers will have switched to sustainable options. Once the tipping point is passed, sales of and investment in sustainable travel options and technologies will rise and cost-competitive, zero-carbon sustainable products become increasingly available. This impact of the First Movers Coalition on corporate T&T markets would have a trickle-down effect on the industry's MSMEs. They too would benefit from the falling cost of affordable, sustainable T&T business models, for which consumer demand is already rising (see 2.4).

Joining the First Movers Coalition also gives large T&T buyers the opportunity to improve their own performance amid the growing pressure on them from regulatory bodies, public opinion and their employees to reduce their Scope 3 emissions.

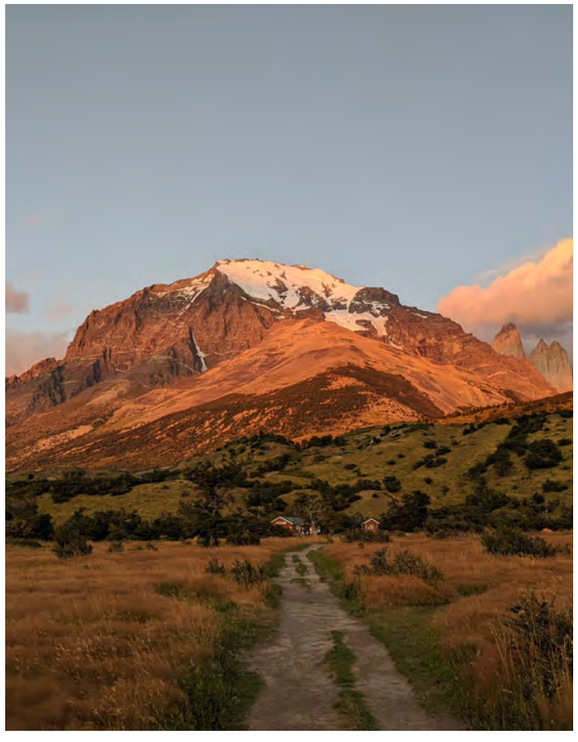
HOW:

The T&T FMC would accelerate the transitions by creating the right demand signals across three horizons (see figure 29).

In **Horizon One,** the initial T&T First Movers Coalition of key T&T buyers would be formed to send the initial demand signal. Members would comprise the largest T&T spenders, which could include management consultancies, media companies, technology companies and NGOs, the 'Big Four' accountancy firms, and leading international institutions including United Nations agencies, the World Bank and the International Monetary Fund.

The initial members would define and commit to a set of ambitious yet feasible, time-bound targets. These could include:

- Reducing air travel emissions by 40% per employee by 2030:
  - Consistently prioritising airlines with science-based net-zero strategies. In 2022 Swiss firm Zurich Insurance committed to cut flight-related emissions by 70% below pre-pandemic levels; Dutch bank ABN Amro aims to halve its air travel from its 2017 level over the next five years; and consultancies Deloitte and PwC have pledged to reduce travel.
  - Paying surcharges for SAFs on all ticket purchases, using smart booking tools like Avelia. Offset the remainder of emissions.
  - Asking aviation providers to outline SAF blending plans in procurement process/ supplier partnership agreements.
- Reducing their Scope 3 emissions from accommodation by 40% by 2030 by:
  - Consistently choosing hotels with low-carbon footprints wherever possible, based on cross-industry climate performance indicators being developed at the same time (see 5.4).
  - Buying offsets to mitigate unavoidable accommodation related emissions
  - Asking hospitality providers to show their renewable energy and sustainable food sourcing plans in procurement process/ supplier partnership negotiations.



i The concept of a First Movers Coalition already exists, spearheaded by the World Economic Forum. They are coalitions of companies using their purchasing power to create early markets for innovative solutions to combat climate change. FMCs have been set up across eight hard to abate sectors responsible for 30% of global emissions including shipping, steel and aviation.

CASE STUDY: AVELIA

Avelia is a digital book-and-claim platform hosted by Shell and Accenture that enables companies to select, book and track their use of SAF-powered flights. By aggregating the volumes of SAF represented by a company's flight bookings over time, the company can understand and make credible claims relating to the environmental benefits associated with the volumes of SAF it pays for, such as volumes of GHG emissions avoided.

Avelia makes using SAF more affordable for airlines and allows corporates trying to reduce emissions from their business travel to choose SAF-powered flights. In effect, it spreads the cost and benefits of SAF across the aviation value chain.

To match the demand with supply, membership then needs to be expanded to T&T providers including the largest asset owners and hospitality brands and operators, each with significant procurement budgets covering, for example, construction, energy and food. Commitments to sustainable procurement by the largest five hotel groups could have a major impact in shifting the industry. In 2018, the top five hotel groups represented 25% of the total hotel market, up from 19% in 2012. These hotel groups also account for 58% of the global pipeline of hotels in planning or under construction, giving them an opportunity to greatly reduce built environment emissions by joining this initiative.[3] Travel agencies should also be included, as they are often the key intermediary between buyers (travellers) and providers. Examples of commitments for the supply side players can be found in Technical Annex 7.

In **Horizon 2**, the convening firm (see table 4) will support the FMC members' delivery towards their commitments through collaborative workshops between buyers and suppliers. In **Horizon 3**, the enabling policy environment will be created by engaging in policy and advocacy and working with relevant government and NGOs.

Bali, Indonesia
Credit: Jessica Angkasa

FIGURE 29: THREE HORIZONS TO DEVELOP AND SCALE FIRST MOVERS COALITION

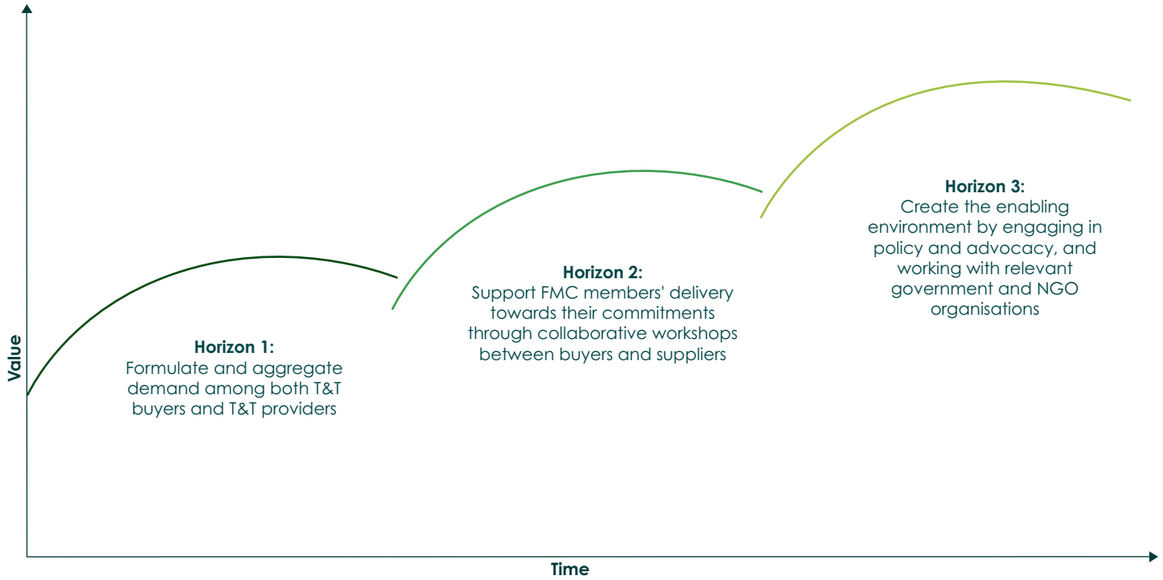


TABLE 4: STAKEHOLDERS INVOLVED

ACTOR	ROLE
Leading T&T customers: largest firms by annual transport/ hospitality spend in key segments	• Align on and commit to purchasing targets through Coalition meetings/ engagements • Report on progress regularly (e.g., annually)
Leading T&T providers: largest asset owners and hospitality providers worldwide	• Align on and commit to purchasing targets through Coalition meetings/ engagements • Report on progress regularly (e.g., annually)
Leading corporate travel agencies	• Engage with both supply and demand side in order to be able to provide buyers with options aligned to their commitments
Independent secretariat – housed in international institution/ convening firm	• Set agenda, key milestones, timeline and maintain momentum of the Coalition • Maintain credibility and accountability by ensuring that targets set are subject to appropriate industry and academic scrutiny • Coordinate progress reporting

5.2 ESTABLISH A FUND TO DIRECT T&T CARBON OFFSETS TOWARDS STRENGTHENING CLIMATE RESILIENCE IN VULNERABLE T&T DESTINATIONS

WHY:

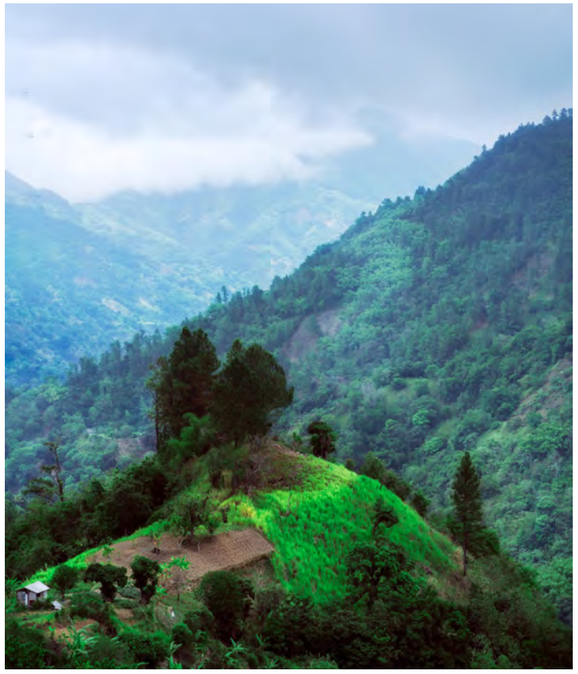
Chapter 2 demonstrated the urgent need to support T&T destinations vulnerable to mounting climate impacts, both to protect their local communities and to bolster the resilience of the T&T industry itself. We estimate USD 15 – 30 billion needs to be invested each year to 2030 to make these destinations sufficiently resilient.

T&T is already financing climate solutions, for example through mandatory offsetting schemes such as CORSIA and the voluntary carbon market. However, the money raised by these schemes is currently distributed to projects around the globe. With better coordination, a portion of these existing climate finance commitments from the T&T industry could be directed to projects that reduce emissions at the same time as boosting resilience in destinations particularly vulnerable to climate change. This would be an efficient use of funds, addressing both climate and resilience challenges, and future-proofing the industry.

WHAT:

The T&T Resilient Destinations Revolving Fund would channel funding from T&T carbon offsets into projects that not only mitigate emissions but also strengthen resilience to the effects of climate change in highly vulnerable locations that depend on tourism. It is an ambitious idea and would require significant resources to set up the necessary governance structures, but could be a highly effective way of financing adaptation, which is currently underfunded worldwide.

Given the urgent need to fund climate resilience, the project criteria could, in time, be broadened to finance adaptations to climate change that do not necessarily remove CO_2 from the atmosphere, such as resilience infrastructure. This would require changes in voluntary carbon market accounting rules, which would be complex but could be a powerful means of unlocking.



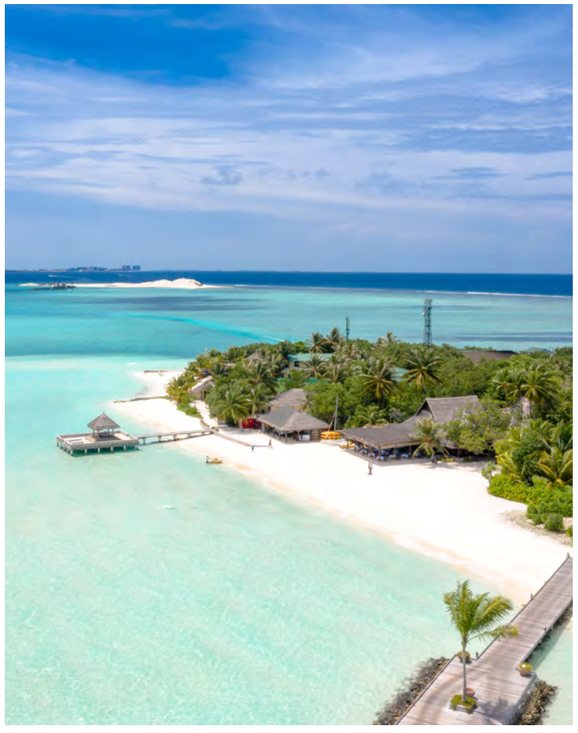
HOW:
the T&T Resilient Destinations Revolving Fund would pool T&T industry offsetting contributions and ensure that carbon projects funded by T&T simultaneously build the resilience of the industry to future shocks. In **horizon 1** T&T industry actors would commit to allocating a share of their carbon offsetting commitments to building resilience in vulnerable T&T destinations. Approved investments could include carbon projects that use nature-based solutions to achieve climate and adaptation goals.

Appropriate governance structures would need to be in place for proper allocation of funds. This would most likely require an Independent Secretariat to oversee fund processes and operations, as well as manage the necessary stakeholder collaboration, for example with CORSIA. Initial recipients could be chosen from the Alliance of Small Island States (AOSIS) or the V20[ii], given their climate vulnerability.

Destinations could use investment pledged by the Revolving Fund as a catalyst to bring in further funding from philanthropic, institutional and private sources, drawing on the blended finance models outlined in Chapter 4. It is important that the residents of the recipient destination are consulted on the use of funds.

Like the First Movers' Coalition, the Revolving Fund could grow over three time horizons (see Figure 30). In **horizon 2**, it could raise additional funds directly from travellers. For example, airlines could add a Revolving Fund surcharge to the price of tickets and explain to ticketholders the Fund's work to build resilience in vulnerable places. Many airlines already offer customers the option to offset their flight emissions through. For example, travellers can now contribute to forestry projects or sustainable aviation fuels, but this is not directly linked to T&T.

In **horizon 3**, voluntary carbon accounting systems could be expanded to allow some credits to go towards resilience-building adaptations that do not reduce emissions, such as resilient infrastructure, as explained above.



ii The Vulnerable Twenty (V20) Group of Ministers of Finance of the Climate Vulnerable Forum is a dedicated cooperation initiative of economies systemically vulnerable to climate change. The V20 works through dialogue and action to tackle global climate change. It currently has 58 member states.

FIGURE 30: THREE HORIZONS TO COORDINATE AND SCALE INVESTMENTS THROUGH T&T RESILIENT DESTINATIONS REVOLVING FUND

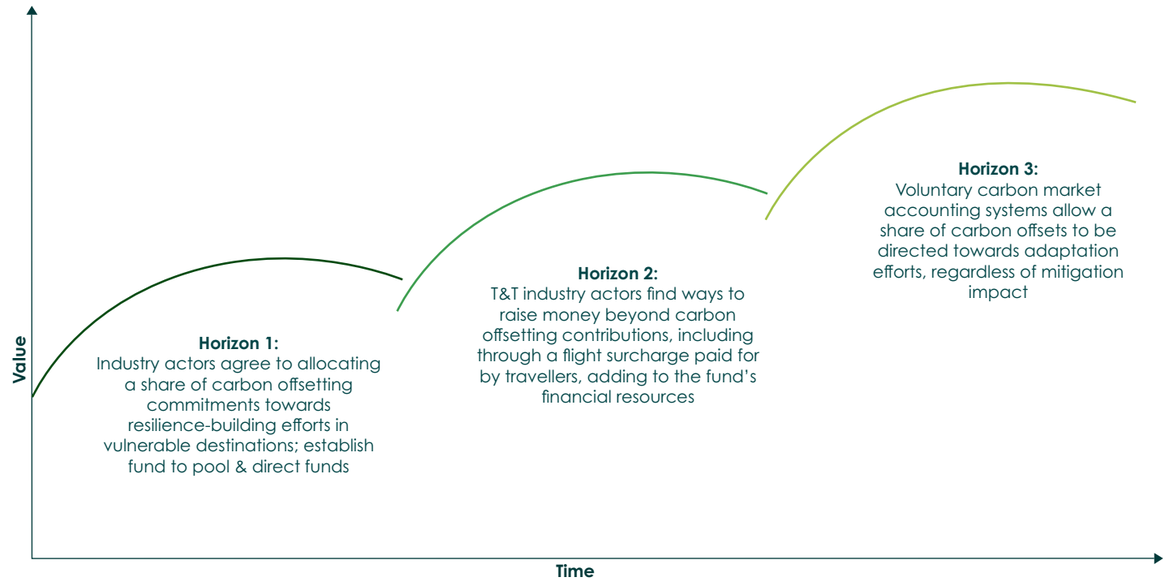


TABLE 5: STAKEHOLDERS INVOLVED

ACTOR	ROLE
Advisory Board: incl. public/ private donors & recipient countries	• Define and oversee process for allocating funds
Independent Secretariat	• Set the agenda and coordinate meetings and funding proposal and allocation rounds at regular intervals • Coordinate with external, relevant funds and offsetting initiatives – e.g., GEF, CORSIA – regarding their contributions • Ensure accountability and credibility in allocation of funds
Destination countries: Individuals or Alliance - e.g., AOSIS, V20	• Draft and submit funding proposals • Participate in Advisory Board discussions regarding allocation of funds

5.3 BUILD BETTER TRAVEL & TOURISM FLAGSHIP DESTINATIONS

WHAT:

The Better Travel & Tourism Flagship Destinations initiative would gather public, private and civil society actors to collaborate on developing packages of green and sustainable interventions for selected T&T destinations. Implementing their package would ensure these destinations have a net positive impact on climate, nature and their communities.
The initiative would give travellers the chance to choose a destination they can be sure has a net positive impact and at the same time offer other destinations a model of 'best practice'. As a starting point, destinations could focus on a single positive element, for example aiming to become a 'food positive' or 'net-zero transport' destination.

WHY:

Driving industry-wide change in T&T is challenging, given the varied and complex nature of the sub-sectors and public authorities involved. This initiative is a means of co-ordinating currently diffuse change efforts in destinations to deliver net positive T&T in those destinations faster and more efficiently. The work will align sustainability and commercial incentives, demonstrating the benefits of this coordinated approach to destination development.

Actors involved in this initiative can learn from the many examples of public authorities working with private sector partners to develop green routes and landscapes. For example, Merseytravel is boosting sustainable travel in the Liverpool City Region by promoting cycling and walking routes, in collaboration with transport and infrastructure providers and local government.[4] Applying these principles on a larger scale in T&T could unlock huge gains.

HOW:

The Better Travel & Tourism Flagship Destinations initiative would bring together national governments, local policymakers, T&T industry actors and civil society to implement the full suite of Better Travel 'action tracks' in a specific T&T destination and make it holistically sustainable. Travellers to Flagship Destinations would be able to stay in low-carbon and/or nature-positive accommodation and engage in sustainable activities, confident that the destination can manage its visitor numbers and has built resilience to climate shocks.

These destinations would be awarded a Better Travel & Tourism Flagship Destinations badge to use in their consumer marketing. The badges would play a similar role to the EU's Protected Designation of Origin and Protected Geographical Indication badges, which promote and protect agricultural products and food stuffs, such as Parmigiano-Reggiano and champagne. This assumes that a single point of truth for the definition and monitoring of 'Better Travel & Tourism' is in place (see 5.4).

The initiative would both **a) retrofit existing tourism hotspots** and **b) develop new tourism destinations,** so they could offer travellers a comprehensively sustainable experience from the outset. Pilots in one existing and one new destination could start the programme.

Shifting a destination to sustainability across all areas of T&T is a significant task, not least because it involves engaging players beyond the T&T value chain. For this reason, destinations could start by focussing on one action track, such as net-zero transport or sustainable sourcing.

a) **Retrofitting an existing tourism hotspot:** public and private actors would promote and incentivise investment in sustainable hospitality providers and future-proofing projects in the destination. Together, these actors could establish clusters of environmentally and socially sustainable hotels, restaurants and activities linked by low-carbon forms of transport on green travel routes. In destinations famous for natural or cultural assets, the initiative could promote offerings with a net positive impact, for example eco-lodges or cultural engagement tours, on green tourism routes.

b) **Developing a new sustainable tourism destination:** a destination seeking to develop its T&T industry would be selected as a pilot. Here, public and private actors would embed sustainability and resilience principles into T&T developments from the outset. Fiscal and regulatory incentives would encourage investment in sustainable infrastructure and hotels, restaurants and other hospitality services. Appropriate policy and regulation would ensure the new development is truly sustainable and does not strain local nature and/or communities.

Better Tourism & Tourism Flagships would not only improve T&T's impact on climate, nature and communities but also deliver significant benefits to the industry. They would improve T&T's reputation and appeal to growing consumer demand for sustainable travel options. They could also enhance the industry's efficiency and profitability by aligning sustainability and commercial incentives and co-ordinating diverse T&T providers' activities.

Public and private partners engaged in this initiative have three headline tasks: establishing favourable conditions for sustainable and/or low-carbon investments; maximizing tourism's economic contributions to the local population; and promoting the destination to target consumers as sustainable and environmentally friendly. The key challenges they will face are:

- **Aligning incentives:** reshaping incentives to encourage sustainable practices and investment in developing them will be challenging given the current inertia, vested interests and political barriers in some potentially eligible destinations. Collaboration across sectors is critical to understanding where incentives are misaligned and building momentum for change.
- **Funding and investment:** securing reliable funding commitments and then converting them into actual flows of money could also be tough. Demonstrating the potential financial returns to investors and society should make the case for raising funds. Transparent accountability will be key to funds being released as well as pledged.

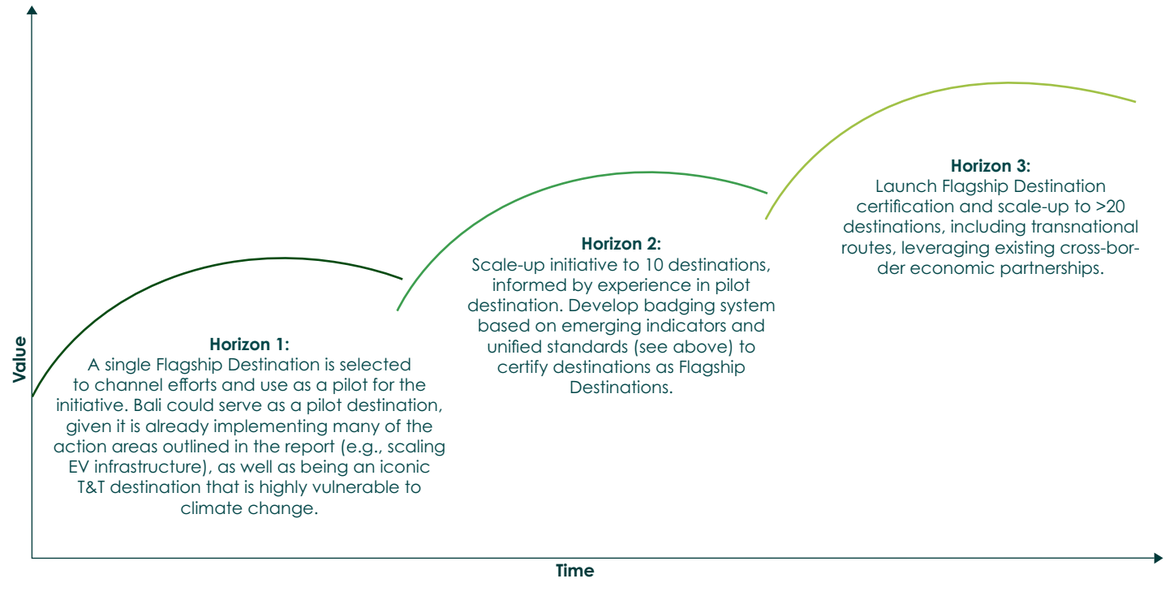
This initiative could build on existing efforts in pioneering destinations, such as work by the Caribbean Tourism Organisation to equip members to develop sustainable tourism in over 30 countries and territories.

SUSTAINABLE TOURISM IN THE CARIBBEAN

The Caribbean Tourism Organisation works to provide services and information for the development of sustainable tourism across its members, which include more than 30 countries and territories and multiple private firms.[5] Work includes developing a regional monitoring and evaluation system for reducing disaster risk and adapting to climate change, partnering with organisations to address climate risks, coordinating investments and initiatives across private sector members to reduce their environmental impact, and promoting the Caribbean as an appealing, sustainable destination worldwide.

Scaling the initiative across three time horizons (see Figure 31) would start with one pilot to test the methodology of a Better Travel & Tourism Flagship Destinations in **Horizon 1.** The pilot would pinpoint key metrics and provide lessons for future Flagships. Bali would be particularly suitable as a pilot since it is already implementing many of the 10 priorities outlined in the report (e.g., scaling EV infrastructure) and is an iconic T&T destination highly vulnerable to climate change. In **Horizon 2,** the initiative would scale to 10 more destinations, informed by the experience of the pilots. This would be the stage at which to develop certification for Better Travel Flagship Destination badges, based on consistent performance using unified standard measures (see 5.4). **Horizon 3** would launch Flagship Destination certification and develop >20 further Flagship Destinations. These might be located in existing cross-border tourism corridors based on thematic travel routes, as these corridors are already managed by established cross-sectoral partnerships. Examples include the Greater Mekong Sub-region Tourism Corridor, the Danube Tourism Corridor or the Turkik Silk Road Tourism Corridor.

FIGURE 31: THREE HORIZONS TO PILOT AND SCALE BETTER TRAVEL FLAGSHIP DESTINATIONS



The Great Pyramid of Giza,
Egypt

TABLE 6: STAKEHOLDERS INVOLVED

ACTOR	ROLE
National and sub-national government	National ministries, including e.g. Tourism, Finance, Industry, Public Works, Investment and other relevant departments, work with sub-national departments to: Report on progress regularly (e.g., annually). • Develop a holistic Better Travel & Tourism vision and strategy for the destination • Align incentives to encourage investment and innovation . • Coordinate with DMO, private sector and civil society to identify and prioritise barriers to action and address them. • Invest public funds in sustainable developments – e.g., public infrastructure needed to manage visitors, build resilience and lay foundations for attracting private investment.
Destination Management Organizations / National Tourism Organizations	Work with public and private sector partners to plan and coordinate developments, create the conditions for investment, and align plans with sustainability targets and meeting visitor and host population needs, e.g.: • Implement fiscal incentives to encourage investment in low-carbon materials in hotel construction and retrofitting to enhance energy efficiency in existing hotel buildings • Introduce regulations to shape sustainable developments . • Engage financial institutions in developing mechanisms that crowd-in private investment in nature-based solutions.
Hospitality providers and tour operators	• Provide sustainable accommodation, food and drink, entertainment and activity options for travellers, linking with other providers in sustainable clusters. • International firms target investment and innovations in pilot destinations, seizing the opportunity to trial new business models and technologies in supportive contexts. • Luxury hotels kick-start the process, differentiating themselves in the market with a comprehensively sustainable offering to consumers, followed over time by mainstream providers.
Construction firms	• Work with hospitality providers to develop and construct sustainable facilities and tourism-related infrastructure. Cross-sectoral collaboration helps to share best practice and unlock economies of scale for innovative, sustainable materials and methods.
Top 5 Tour Operators globally & Tour Operator Bodies	• Package, market and sell trips to Better Travel Flagship Destinations .
Financiers, including banks, multilateral institutions, investors, property developers	• Develop financing mechanisms to crowd in public and private investment in sustainable activities and solutions in pioneering destinations. • Work with T&T sub-sectors to identify financing barriers and, where relevant, share risks, as outlined in relation to construction providers in Chapter 4.
Independent Certification Body / secretariat	• Develop guidelines for holistic change programmes in flagship destinations. • Set criteria for qualifying as a Better Travel & Tourism Flagship Destination. • Award Better Travel & Tourism Flagship Destination badges to destinations as they meet the qualifying criteria. • Monitor compliance and impact at destination- and aggregate level.

5.4 ALIGN ON A SINGLE FRAMEWORK FOR MEASURING SUSTAINABILITY ACROSS THE T&T INDUSTRY

This action differs to the previous three in that it does not require something new to be created. It is already widely acknowledged that aligning on a single framework for measuring sustainability is a crucial step in creating a future-proofed T&T industry, and a number of initiatives already exist to achieve this. These are detailed below. The challenge is unifying current efforts and securing their adoption at scale.

WHAT:

T&T actors would collaborate to unify the current set of diverse measures for tracking sustainability performance into a single industry-wide, standard measurement system. This facilitates better choices for consumers towards net-zero emissions and a net positive impact on nature and communities of firms in all T&T sub-sectors, and help both consumers and investors make more sustainable choices.

WHY:

To make informed travel choices, travellers need to understand the real impact of their trips on climate, nature and communities and the relative sustainability performance of T&T providers. However, the many and diverse measures of impact and sustainability in use today deny consumers that understanding. The relevant information is incomplete and scattered across multiple sub-sectoral systems, many of which use different data standards, sources and categorisations.

When consumers' travel choices are informed by a unified, accurate T&T measurement system, the likely growth in demand for sustainable options will generate the market signals needed to incentivise businesses across the industry to up their game. In effect, it will trigger a race to the top across T&T as 'first mover hazard' gives way to 'slow mover risk'.

A number of initiatives to co-ordinate the T&T industry's development and use of a standardised set of sustainability measures are already under way (A longer list, including sub-sectoral standards are shown in Annex 8). These include:

- Travalyst is coordinating key actors, including GSTC, to unify industry standards to create a framework that is easy to understand for both operators and consumers. These efforts need to be scaled.
- The Global Sustainable Tourism Council's (GSTC) SDG performance indicators, an unquantified checklist which is currently used by destinations, hotels and tour operators. These could be developed into quantified indicators measuring transport and travel agencies' performance as well.[6]
- UNWTO's Statistical Framework for Measuring the Sustainability of Tourism (MST). This initiative is establishing a unified measurement framework to guide countries' collection and reporting of relevant data.[7] The WTO has established a network of Sustainable Tourism Observatories that contribute to this initiative, among other things.
- The WTTC/ Oxford Economics Travel & Tourism Economic Impact Reports collate and analyse data on T&T's economic, employment and sustainability impact. The reports aim to give public and private bodies hard evidence on the industry's value. WTTC & Oxford Economics plan to expand the scope of the Reports to include sustainability data.
- The Global Sustainable Tourism Dashboard, developed by a partnership of universities and international tourism organisations including WTTC, seeks to monitor the T&T industry's contribution to the SDGs.

Many more T&T actors need to support the organizations spearheading this undertaking. Above all, co-ordination is needed across industry subsectors and between public, private and civil society to develop a comprehensive system of standard measures that represent T&T as a whole and can be used across the industry. To ensure success, it will also be necessary to:

- **Create incentives for using standard measures** to ensure uptake. For example, investors could require companies to follow the standard framework. Sustainability awards have also proved an incentive for firms to change their behaviour.
- **Secure highly visible industry champions** to adopt and promote the standard measures across the industry, encouraging their wider adoption
- **Secure commitment to using the standard measurement system** from the highest-emitting companies
- **Enhance statistical, data collection and analytical capacity,** particularly in developing countries, for accurate monitoring of performance.
- **Secure sufficient resources** for the standard measurements to be collected across the industry and transparently displayed.

HOW:

Rather than establishing new standard measurements, T&T actors would co-ordinate to bring existing measurement frameworks into a single, unified set and to make sure this standard set is used across the industry for maximum impact.

Standard measures would be applied to the range of providers with whom customers interact, including transport providers (e.g., airlines, railways), hotels, restaurants and other hospitality providers.

Standard measures at the provider level could be aggregated into **destination-specific indicators,** enabling destinations to determine and demonstrate their overall sustainability to potential visitors. The World Economic Forum has highlighted the opportunity for destinations to attract visitors by advertising their sustainability indicators, such as hectares of land restored and rates of poverty alleviation.

As well as being valuable to travellers, a standardised way of reporting on sustainability would also be valuable to investors.

Like the previous initiatives, this one could scale over three horizons (see Figure 31). Work in **Horizon 1** could focus on agreeing unified measures of performance on climate across the industry, In **Horizon 2**, that project could be extended to cover performance on nature and communities, drawing on lessons learned in **Horizon 1**.

Work in Horizon 3 could concentrate on developing unified metrics for investors to factor into investment decisions. These measures would incorporate a range of risk indicators associated with a firm's sustainability performance. For example, a hotel's performance on climate would have varying implications for physical, regulatory, reputational and other risks. Investor-facing standards could also provide more detail on performance than customer-facing standards. They would include, for example, industry context and a firm's declared future plans or targets.

FIGURE 31: THREE HORIZONS TO UNIFY AND EXTEND T&T STANDARDS ON CLIMATE, NATURE AND COMMUNITIES

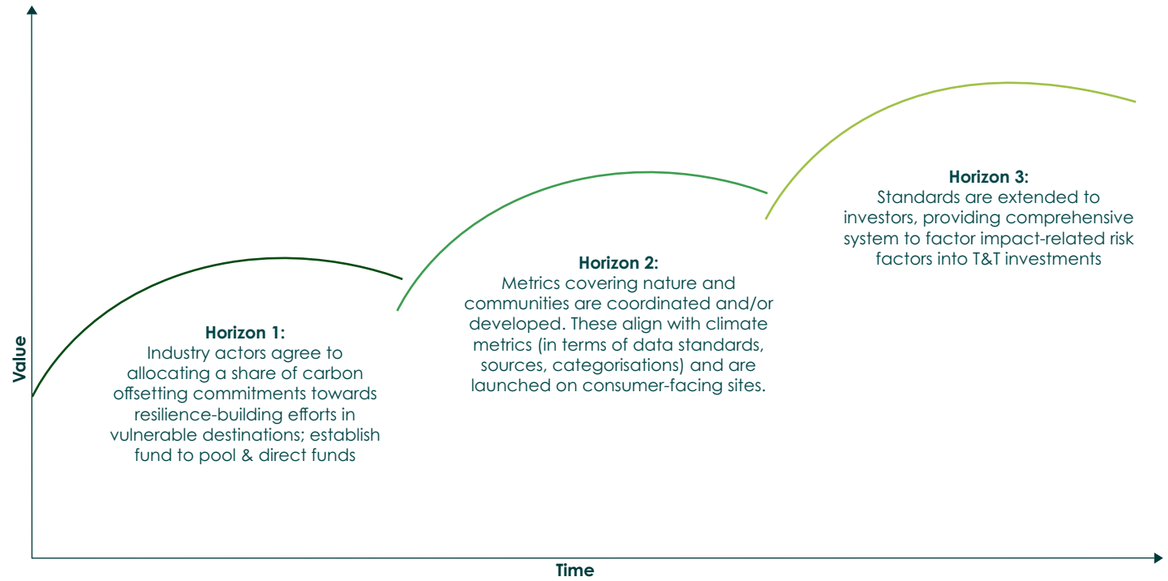


TABLE 7: STAKEHOLDERS INVOLVED

ACTOR	ROLE
Independent international and/or industry-affiliated organization	• Acting as taskforce secretariat, defining timeline and key milestones for the initiative • Coordinating inputs from industry and public sector participants • Establishing or identifying existing platform to host standards and determining appropriate partners with whom to collaborate/ existing initiatives to join
Existing standard-setting bodies, within and outside T&T	• Contributing to standards development and ensuring that T&T standards are consistent with broader standards
Academic institutions and civil society organisations	• Contributing to standards development, providing data to inform key metrics and highlighting key sustainability considerations • Helping with collating and reporting data for monitoring purposes
Companies from T&T sub-sectors, accounting for >[60]% of total industry market by revenue	• Contributing to standards development, providing data to inform key metrics and advising on feasibility of implementation and reporting by industry actors. • Committing to adopting standards and regular reporting of performance
MSME group, including representatives of MSMEs in each T&T sub-sector	• Advising on feasibility of implementing and reporting standards for MSMEs, including those in developing countries. This is key to achieving industry-wide participation and impact.
Representatives of financial institutions	• Contributing to standards development, providing data to inform key metrics and advising on utility/feasibility of using these in financial decision-making • Requiring T&T businesses to adopt standard metrics.

CONCLUSION

The T&T industry faces an opportunity that is challenging but potentially hugely rewarding. Transitioning into a system that tackles climate change, protects and restores nature, generates jobs, supports local economies and communities worldwide, and secures the resilience of tourism destinations and the industry at large will not be easy. But T&T actors working together will unlock the enormous potential gains of this transition far faster than if they continue to operate in siloes. And support for the transition is building as more and more actors across the industry recognise the opportunity.

Adopting and scaling low-carbon, sustainable innovations and approaches will ensure that future T&T has a net positive impact on climate, nature and communities. By contrast, failure to act with ambition and speed will let the costs of climate change and natural capital degradation mount. More companies will be locked into unsustainable investments. The accumulating risks to the industry could become unmanageable.

The 10 T&T Priorities described in this report show the T&T industry how it can make the transition to a better future. The four cross-sectoral initiatives described in this chapter are four ways for T&T to get off to a flying start on that journey. This is a moment of unprecedented peril and opportunity for T&T. The time to act is now.

ANNEX

TECHNICAL ANNEX 1: T&T GHG 2019 – BASELINE SCENARIO

- Table 8 outlines the estimated baseline emissions for Travel & Tourism in 2019 calculated for the Better Travel & Tourism, Better World report, accompanied by assumptions and sources. These cover Scope 1, 2 & 3 emissions. Previous work:
- The Baseline Scenario 2019 of global Travel & Tourism is primarily based on the WTTC Net Zero Roadmap 2021 (henceforth WTTC 2021).
    - WTTC 2021 estimates global T&T industry emissions at 8 - 11% global emissions (total global at 48.8 - 49.1 $GtCO_2eq$, as stated by the report), or 3.9 - 5.4 $GtCO_2eq$ in 2019. These T&T emissions sources are divided into 13 sub-categories, as outlined in Figure 32 alongside.
    - WTTC 2021 estimates are informed by Lenzen et al 2018, which quantifies tourism-related global carbon flows across 160 countries and carbon footprints under origin and destination accounting perspectives. Lenzen et al 2018 estimates that global T&T industry emissions rose from 3.9 $GtCO_2eq$ in 2009 to 4.5 $GtCO_2eq$ in 2013 across 15 sub-categories (see Figure 33).
- The Better T&T Better World report draws on WTTC estimates and sub-categories. It replicates the WTTC sub-categories for Transport and Facilities, although it groups WTTC's Accommodation, Food and Beverage and Services sub-categories within a single sub-category of 'Facility Operations'. The Better T&T Better World report develops separate sub-categories for Nature-related emissions, but nonetheless draws on WTTC as a source for emissions estimates. This process is detailed in Table 8.
- Additionally, we have made adjustments and updates to emissions estimates for specific sub-categories based on more recent sectoral insights and reports (including MPP Aviation, UNEP, Project DrawDown).

FIGURE 32: SPLIT OF TOURISM-RELATED GHG EMISSIONS BY INDUSTRY (PRE COVID-19 PANDEMIC)
WTTC 2021

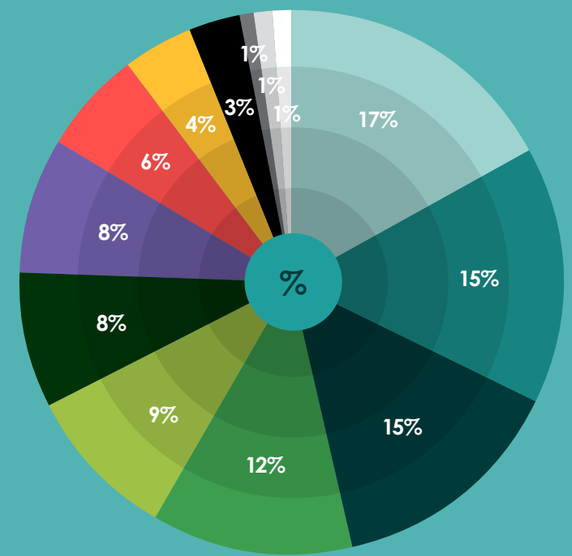
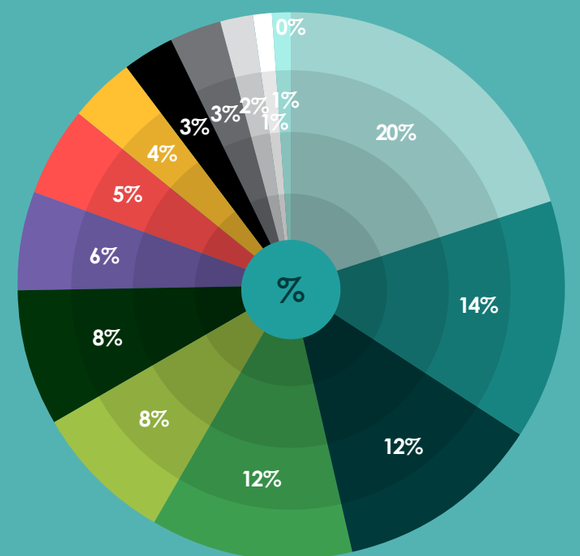


FIGURE 33: SPLIT OF TOURISM-RELATED GHG EMISSIONS BY INDUSTRY (PRE COVID-19 PANDEMIC)
Lenzen et al 2018



- Priorities relating to Communities, Behaviour, and Resilience have been excluded from GHG emissions and reductions estimates because (i) they are less relevant (e.g., increasing wages and securing decent work would not have a significant impact on GHG emissions), (ii) there is insufficient data quality or availability, and/ or (ii) there is a risk of overlap (e.g. restoring coastal ecosystems for resilience purposes would deliver GHG reduction benefits that would already be accounted for under the Nature Priorities)
- While the sources outlined above and in Table 8 provide a valuable basis for emissions estimates, data challenges remain. The estimates provided in this report should therefore be considered indicative and based on the best evidence available, rather than providing a comprehensive, bottom-up and water-tight account.

TABLE 8: T&T EMISSIONS BASELINE 2019: ESTIMATES, ARITHMETIC, ASSUMPTIONS & SOURCES

Category	Emissions ($GtCO_2eq$, low - high)	Arithmetic & assumptions	Sources
Total T&T	**5.22** (4.6 – 5.8)		
Transportation	**2.44**		
Aviation	1.02	• Total 2019 aviation emissions were 1.24$GtCO_2eq$, of which 82% was commercial Pax • 100% commercial pax is assumed to be T&T	Mission Possible Partnership. (2022). *Making net-zero aviation possible*
Other Transport – Ferries & Rail	0.08 (0.067 – 0.093)	• This is primarily made up of ferries and a small, uncertain share of rail GHGs. • The category and GHG estimate is based on the 'Other Transport' bucket in WTTC 2021, which includes transport GHGs reported by certain countries without splitting these into specific sources. The WTTC bucket 'Other Transport' bucket therefore includes aviation, road, water and rail. • We estimated the share of the 'Other Transport' bucket that is likely to be aviation vs. road vs. water vs. rail, based on a known ratio with T&T, informed by conversation with Lenzen et al 2018 authors (on which WTTC report is based). • The Aviation share and the Water/Cruises share were deleted to avoid double-counting versus our existing Aviation and Water Cruises Transport estimates. • The Road transport share is reported within our 'Road Transport' bucket (see row below). • The Rail share is not reported within our 'Rail' bucket because it is very small and to prevent exceeding global known passenger emissions in rail. It therefore accounts for a small but uncertain share of rail GHGs in this bucket.	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). The carbon footprint of global tourism.; expert interviews
Road Transport	1.22 (1.02-1.42)	• Based on (i) WTTC 2021 'Road Transport' emissions (14% of 3.9 – 5.4 $GtCO_2eq$), and (ii) Assumed road share of WTTC 2021 'Other Transport' emissions (0.48 – 0.66 $GtCO_2eq$) (see above)	WTTC. (2021). *A net-zero roadmap for travel & tourism;* Lenzen et al. (2018). *The carbon footprint of global tourism; expert interviews*
Other Water Transport – Ferries & Yachts	0.05 (0.039 – 0.054)	• Based on WTTC 2021 'Other Water Transport' emissions (1% of 3.9 – 5.4 $GtCO_2eq$) • Assumed to consist only of ferries and yachts, with ferries accounting for 92% of emissions (based on known ratio ferries:yachts emissions)	WTTC. (2021). *A net-zero roadmap for travel & tourism;* Lenzen et al. (2018). *The carbon footprint of global tourism;* IMO. (2020). *Fourth Greenhouse Gas 2020.*
Rail	0.05 (0.039 – 0.054)	• Based on WTTC 2021 'Rail Transport' emissions (1% of 3.9 – 5.4 $GtCO_2eq$)	WTTC. (2021). *A net-zero roadmap for travel & tourism;* Lenzen et al. (2018). *The carbon footprint of global tourism.*
Cruises	0.03 (0.03 – 0.032)	• Low value based on global cruise ship emissions from 4th IMO 2020, assuming all cruise emissions are linked to T&T (this value is higher than the WTTC low estimate of 0.6% of 3.9 $GtCO_2eq$) • High value based on 'cruises' bucket WTTC NzR (0.6% of 5.4 $GtCO_2eq$, high value)	WTTC. (2021). *A net-zero roadmap for travel & tourism;* Lenzen et al. (2018). *The carbon footprint of global tourism;* IMO. (2020). *Fourth Greenhouse Gas 2020.*
Facilities	**1.59**		
Operations	1.45 (1.21 – 1.68)	• Based on WTTC 2021 'Accommodation' emissions (6% of 3.9 – 5.4 $GtCO_2eq$) + WTTC 2021 'Food & beverage (5% of 3.9 – 5.4 $GtCO_2eq$)', 'Services (8% of 3.9 – 5.4 $GtCO_2eq$)', and 'retail (12% of 3.9 – 5.4 $GtCO_2eq$)' emissions • Lenzen et al. team confirmed that the WTTC categories 'Food & Beverage', 'Services', and 'retail' only consisted of operations emissions • Original WTTC 2021 F&B bucket was 9% of 3.9 – 5.4 $GtCO_2eq$, but has been split in 5% F&B services and 4% F&B production based on technical annex from Lenzen et al., where F&B services have been split as per above	WTTC. (2021). *A net-zero roadmap for travel & tourism;* Lenzen et al. (2018). *The carbon footprint of global tourism;* IEA. (2021) *Net zero energy by 2050.*
Construction	0.14 (0.12 – 0.16)	• Based on WTTC 2021 'Construction' emissions (3% of 3.9 – 5.4 $GtCO_2eq$) • The Lenzen et al. team confirmed that the 'construction' emissions bucket of WTTC was the only category with construction emissions for facilities • NB: this is an underestimation of the T&T construction emissions as the impact of building food & beverage, services, and retail buildings have not been included.	WTTC. (2021). *A net-zero roadmap for travel & tourism;* Lenzen et al. (2018). *The carbon footprint of global tourism.*
Nature	**1.01**		
Food sourcing	0.58 (0.48 – 0.67)	• Consists of WTTC 2021 'Agriculture' emissions (8% of 3.9 – 5.4 $GtCO_2eq$) + WTTC 2021 'F&B' Processing bucket (4% of 3.9 – 5.4 $GtCO_2eq$) • Original WTTC 2021 F&B bucket was 9% of 3.9 – 5.4 $GtCO_2eq$, but has been split in 5% F&B services and 4% F&B production based on Lenzen et al 2018 Technical Annex, which notes that F&B has been split as per above	WTTC. (2021). *A net-zero roadmap for travel & tourism;* Lenzen et al. (2018). *The carbon footprint of global tourism.*
Protect & Restore Nature	n/a	• Assumed no (positive) emissions from Protect & Restore Nature as no overall global data quantifying T&T's contribution to nature damage. This is an understatement as local data shows T&T drives damage, including mangrove loss, conversion of nature, coral loss, etc. • Assumed no negative emissions from Protect & Restore Nature as no overall global data quantifying T&T's contribution in nature protection	Sucharitakul et al. (2021). *A threat and a solution – tourism's role in mangrove protection.* Macdonald. (2020). *The unintended impacts of tourism on coral reefs.* UNWTO. (2010). *Tourism and Biodiversity, achieving common goals towards sustainability.*Habibullah et al. (2016). *Tourism and Biodiversity.*
Food Loss & Waste	0.35	• Global FLW emissions are 8% of total (Project DrawDown) • Global GHG emissions 2019 = 51.7 $GtCO_2eq$, excl unsure land-use change emissions (PBL), • Global FLW = 8% of 51.7 Gt CO_2eq = 4.1 $GtCO_2eq$ • Food services account for 26% of FLW (UNEP) • Assume Tourism accounts for 33% of food services (Restaurant.org) • T&T = 9% of global FLW emissions (26% x 33%) • 9% x 4.1 = 0.35	Project Drawdown. (2020). *The Drawdown review;* PBL. (2020). *Trends in global CO2 and total Greenhouse Gas emissions; 2020 report.* UNEP. (2021). *Food Waste index report.* restaurant.org. (2020). *Tourism-related spending in restaurants fall sharply in recent months.*

Category	Emissions ($GtCO_2eq$, low - high)	Arithmetic & assumptions	Sources
Total T&T	**5.22** (4.6 – 5.8)		
Material Waste	0.08	• Assume waste per tourist to be 1.67 kg per day (Obersteiner et al 2017) • Assume share of non-food of total waste to be 33% (Bhusal et al 2020) • Assume share of this waste to be non-recycled equal to 70%, or 0.39 kg per day per tourist • Assume 700 gram of CO_2eq per 1kg non-recycled waste (BBVA), or 270 g CO_2eq per tourist per day • Assume global average stay of tourist to be 3 days (average Gossling et al.) • 9.5 bn tourist arrivals per year (domestic and international, WTTC UNWTO) • 3 x 9.5b = 28.5bn tourism days total	Obersteiner et al. (2021). *Carbon footprint reduction potential of waste management strategies in tourism.* Systemiq. (2021). *Breaking the plastic wave.* Bhusal et al. (2020). *Qualitative and Quantitative Analysis of Municipal Solid Waste (MSW) in Butwal Sub-metropolitan City, Nepal.* BBVA.es. (accessed in Nov 2022). *1kg of non-recycled waste generates 700 g of CO2.* Gossling et al. (2018). *Global trends in length of stay: implications for destination management and climate change.* WTTC. (2021). *A net-zero roadmap for travel & tourism.* UNWTO. (accessed in Nov 2022). *UNWTO Tourism Data dashboard.*
Other	**0.19**		
Other	0.19 (0.16 – 0.22)	• Based on WTTC 2021 'Other' emissions (4% of 3.9 – 5.4 $GtCO_2eq$) • Assumed to include mining and trade emissions based on expert interview Lenzen et al 2018 • Exact content of 'Other' unknown and thus split of trade, Mining, etc. not possible	WTTC. (2021). *A net-zero roadmap for travel & tourism;* Lenzen et al. (2018). *The carbon footprint of global tourism.*

TECHNICAL ANNEX 2: T&T GHG 2030 – BUSINESS-AS-USUAL SCENARIO

- Table 9 outlines the Better T&T Better World report estimated emissions (Scope 1, 2 & 3) for Travel & Tourism in 2030 based on a Business-as-Usual (BAU) scenario, accompanied by assumptions and sources.
- While technological shifts and efficiency improvements are expected to reduce the carbon intensity of certain T&T sub-sectors, positive projections are not available across all sub-sectors. Furthermore, the volume of emissions is anticipated to grow overall given industry growth is expected to outpace efficiency gains in most if not all sub-sectors. Industry growth rates are based on UNWTO Global Tourism Dashboard. These find that T&T output levels recover from COVID-19, reaching 2019 output levels by 2023 and subsequently growing at a CAGR of 4.4%.
- While the 4.4% CAGR figure represents a cross-industry rate, this report's BAU 2030 emissions estimates account for differing growth and recovery rates across sub-sectors within the T&T industry, which are provided by a range of reports and expert interviews. As outlined in Table 9, these range from 1.8% to 6.5%.
- As with emissions baseline estimates, data challenges remain. The estimates provided in this report should therefore be considered indicative and based on the best evidence available.

TABLE 9: T&T EMISSIONS 2030 - BUSINESS-AS-USUAL SCENARIO: ESTIMATES, ARITHMETIC, ASSUMPTIONS & SOURCES

Category	Emissions ($GtCO_2eq$, low - high)	Arithmetic & assumptions	Sources
Total T&T	**6.24** (5.52 – 6.97)		
Transportation	**2.83**		
Aviation	1.20	• Aviation projected to recover to 2019 levels by 2024, followed by 2.4% emissions CAGR, 2024-2030, based on MPP 2022 • 2.4% emissions CAGR assumes continuous 1% efficiency gain p.a., based on historical achievements. • Of this, 84% (2% points higher than 2019) can be accounted to pax. 100% of pax assumed to be T&T.	Mission Possible Partnership. (2022). *Making net-zero aviation possible*
Other Transport	0.10 (0.09 – 0.12)	• Emissions assumed to grow in line with T&T industry 4.4% CAGR. Applied from 2024-2030, not 2019-30 due to COVID19 and the recovery of the sector by 2024. • GHG CAGR is likely to be lower than T&T industry CAGR due to efficiency/ carbon intensity improvements. However, there lacks credible projections on which to base alternative GHG CAGR.	WTTC. (2021). A net-zero roadmap for travel & Tourism.; Lenzen et al. (2018). *The carbon footprint of global tourism;* UNWTO. (2022) *Global Tourism Dashboard.*
Road Transport	1.37 (1.15 – 1.59)	• EV100 Fleets First BAU scenario 2030 projects total road transport 6.5Gt CO_2eq in 2030, including some reductions in regions where ICE banned by law • T&T road transport emissions 2030 assumed to be 16-22% of total road transport emissions, based on 2019 share of emissions • Assume share of T&T in total road transport GHGs remains the same in 2019 and 2030	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). The carbon footprint of global tourism; Climate Group. (2021). *Fleets first How accelerating fleet electrification can unlock the shift to clean road transport.*
Other Water Transport	0.05 (0.05 – 0.06)	• Shipping fleet emissions projected to increase at 1.8% CAGR 2019-2030, including COVID adjustment and sector less hard hit (ETC 2019) • Assume same emissions CAGR for ferries as shipping • Yacht emissions (8% of 'other water transport' 2019) projected to increase at 8.8% CAGR 2019-2030 (Globe News wire) • Applied these CAGRs to 2019 baseline GHGs	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). *The carbon footprint of global tourism;* ETC. (2019). *Mission Possible sectoral focus: shipping.* GlobeNewswire. (2021). *Global Passenger Ferries Market Size [2021-2028] Industry Share, Growth Factors, Revenue, Competitive Landscape & Forecast;*
Rail	0.05 (0.04 – 0.06)	• IEA projects railway emissions to grow 11% from 0.25 Gt CO_2eq 2019 (IEA Transport) to 0.28 Gt CO_2eq 2030 (IEA Future of Rail 2019, baseline scenario) • Increase driven by increased use and expansion of railway systems • Assume T&T railway emissions would increase in lines with global railway emissions	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). The carbon footprint of global tourism; IEA. (2019). *Future of rail; IEA. (2022). Transport*
Cruises	0.05 (0.04 – 0.05)	• Global cruise emissions projected to increase at 6.5% CAGR 2019-2030, including COVID adjustment and sector less hard hit (ETC 2019) • Applied 6.5% CAGR to 2019 baseline GHGs	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). The carbon footprint of global tourism; ETC. (2019). *Mission Possible sectoral focus: shipping.*

Category	Emissions ($GtCO_2eq$, low - high)	Arithmetic & assumptions	Sources
Total T&T	**6.24** (5.52 – 6.97)		
Facilities	**1.92**		
Operations	1.75 (1.47 – 2.03)	• Global operations emissions projected to increase at 1.91% CAGR 2019-2030, including COVID adjustment (IEA) • Applied 1.91% CAGR to 2019 baseline GHGs	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). The carbon footprint of global tourism; IEA. (2021). *Net zero energy by 2050.*
Construction	0.17 (0.14– 0.20)	• Assumed a 1.88% CAGR between 2019-2030 (for 10 years, to accommodate for COVID19, and assumed constructions less hard hit by COVID19) for T&T • Growth based on expectations that built floor area will increase with additional 75% (or 1.75) for 30 years from 2020-2050 (IEA Net Zero by 2050) • Assumed T&T emissions of constructions would increase in line with global built environment (Applied sense-check: historical hotel growth CAGR 2017-2022 was 2.6%, Ibis World) • NB: this is an underestimation of the T&T construction emissions as the impact of building food & beverage, services, and retail buildings have not been included.	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). The carbon footprint of global tourism; IEA. (2021). *Net zero energy by 2050.*
Nature	**1.26**		
Food sourcing	0.75 (0.63 – 0.87)	• Assumed 2019 T&T Baseline values will grow in line with T&T industry by CAGR of 4.4% over 6 years (2019-2030, accommodating for no growth due to COVID19)	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). The carbon footprint of global tourism; UNWTO. (2022) *Global Tourism Dashboard.*
Protect & Restore Nature	n/a	• Assumed no (positive) emissions from Protect & Restore Nature as no overall global data on T&T role in nature damage for 2019 is available, but this is an understatement as local data shows T&T currently drives mangrove loss, conversion of nature (for infra, golf courses, etc.), coral loss, etc. • Loss of nature due to T&T expected to increase in future in line with growth of T&T sector • Assumed no negative emissions from Protect & Restore Nature as no overall global data on T&T role in nature protection, and no BAU protection is expected in lines with expert interviews on nature protection from other industries	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). *The carbon footprint of global tourism; experts interviews*
Food Loss & Waste	0.41	• Assumed 2019 T&T Baseline value will grow by CAGR of 2.24% over 6 years (2019-2030, accommodating for no growth due to COVID19) • Growth based on historical growth FLW from 1970-2020 (0.12 to 0.35 $GtCO_2eq$), food waste has tripled over last 50 years (FOLU Growing Better) • Assumed growth will continue at same pace but probably understatement	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). *The carbon footprint of global tourism;* FOLU. (2019). *Growing Better*
Material Waste	0.11	• Assumed 2019 T&T Baseline value will grow by CAGR of 4.3% over 8 years (2019-2030, accommodating for no growth due to COVID19) • Growth based on expected growth of solid waste from 2020 to 2050 by 251% (or 3.51) (UNEP)	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). *The carbon footprint of global tourism;* UNEP. *Solid waste management*

Category	Emissions ($GtCO_2eq$, low - high)	Arithmetic & assumptions	Sources
Total T&T	**6.24** (5.52 – 6.97)		
Other	**0.24**		
Other	0.24 (0.20 – 0.28	• Assumed 2019 T&T Baseline value will grow by CAGR of 4.4% over 6 years (2019-2030, accommodating for no growth due to COVID19) based on growth of T&T industry • Assumed to include mining and trade emissions based on expert interview Lenzen et al. • Exact content of 'Other' unknown and thus split of trade, Mining, etc. not possible	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). *The carbon footprint of global tourism; UNWTO.* (2022) *Global Tourism Dashboard.*

TECHNICAL ANNEX 3: T&T GHG 2030 – BETTER T&T BETTER WORLD SCENARIO

- Table 10 outlines the estimated Better T&T Better World emissions for Travel & Tourism in 2030 calculated for the Better Travel Better World report, accompanied by assumptions and sources.
- The 2030 Better T&T Better World scenario bases sub-sectoral reduction potentials on sub-sectoral Net-zero pathways produced in a range of reports, outlined in Table 10. These are complemented by additional levers identified by the authors of the Better T&T Better World report, which enable the T&T industry to reduce emissions further. These additional levers are outlined in Table 10.
- As with baseline and BAU estimates, data challenges remain. The estimates provided in this report should therefore be considered indicative and based on the best evidence available.
- Note that the column with sources only includes the additional sources, on top of the sources used for establishing the 2019 and BAU 2030 scenarios.

TABLE 10: T&T EMISSIONS 2030 - BETTER T&T SCENARIO: ESTIMATES, ARITHMETIC, ASSUMPTIONS & SOURCES

Category	Emissions ($GtCO_2eq$, low – high) ($GtCO_2eq$ reduction vs 2030 BAU)	Arithmetic & assumptions	Sources
Total T&T	**3.11** (2.75 – 3.46) (~3.1 reduced)		
CT1: Transportation	**1.46**		
Aviation	0.71 (~0.49 reduced)	• **Reduce business travel: reduction of 0.12** $GtCO_2eq$ vs BAU 2030; A. 0.06 $GtCO_2eq$ reduction via moving all one-day business trips to video, assuming 25% of pax flights are business (IEA 2021) or 0.24 $GtCO_2eq$ 2030, of which 26% one-day trips (Associations Now), building on 0.01 $GtCO_2eq$ reduction via video conference as per MPP Aviation; **B.** additional 0.06 $GtCO_2eq$ reduction by assuming a reduction of 1/3 of remaining more-than-one-day business trips (100%-26%=74%) and assuming similar reduction in emissions. • **Reduce short haul via train: reduction of 0.04** $GtCO_2eq$ vs BAU 2030; A. 0.02 $GtCO_2eq$ reduction from shifting EU 250 most busy routes (GreenPeace), Greenpeace took the distance of a day train when under 6 hours, otherwise the night train connection, and EU average CO_2 per passenger kilometers for flights and trains (EEA 2021 data: 160 $g/CO_2e/pkm$ for flights and 33 $g/CO_2/pkm$ for trains). In addition, 50 kms were added to each flight for non-straight flights, waiting circles and other deviations from the straight way. B. 0.02 $GtCO_2eq$ reduction from shift Global 50 most busy airlines, focus on air routes with land-connection, of which 90% switches when under 500km, 80% switches 500-1000km, and 50% 1000-2000km, including rails that are non-existing yet. • **Reduce long haul via carbon tax: reduction of 0.08** $GtCO_2eq$ vs BAU 2030; assumed a $\$25/tCO_2eq$ carbon tax, assumed half of price-sensitive consumers (83%, Seeking Alpha) switch to destination more nearby and reduce on average 30% of emissions. So 42%*30% = 13% reduction. We got to the 30% reduction by looking at destinations (Turkey, Morocco, 5 case studies total) a bit closer to LND than Sharm al Sheik with lower ticket prices (~40% cheaper than Shark al Sheik incl carbon tax). Assuming that these price sensitive customers will still want a sunny holiday within 3-4 hours flying. Finally applied the 13% reduction to the leisure share (75%, IEA NZE 2050 state 25% is business trips) of medium-long haul flights (88% of all pax flight emissions, MPP Aviation). • **Efficiency gains: reduction of 0.09** $GtCO_2eq$ vs BAU 2030, additional 1% per annum on top of expected historical 1%, (as per MPP Aviation) • **Switch to SAF: reduction of 0.15** $GtCO_2eq$ vs BAU 2030 based on MPP Aviation, expecting 11-16% of flights use SAF and ~1% uses hydrogen in 2030	MPP. (2022). *Making net zero aviation possible;* Greenpeace. (2021) *Get on track;* IEA. (2021). *Net zero energy by 2050;* Systemiq analysis.
Other Transport	0.06 (0.05 – 0.07) (~0.04 reduced)	• **Reduction of 0.03-0.05** $GtCO_2eq$ vs 2030 BAU via assuming **average** (39%) of reduction from T&T road / aviation / rail sectoral pathways, as assumed 'other transport' is mainly transport of goods	2019 and 2030 BAU sources; Systemiq analysis
Road Transport	0.55 (0.45 – 0.65) (~0.82 reduced)	• **Sector switches to EVs as per sectoral pathway: reduces 0.64-0.89** $GtCO_2eq$ based on EV100 Fleets First 1.5 Degr scenario emissions of total fleet (3.3 $GtCO_2eq$) and taking 16-22% of this which is the T&T size of road transport emissions from 2019 baseline; or 56% reduction of emissions vs 2030 BAU by partially switching to EVs (10% of passenger cars that account for half of emissions, 40% of buses accounting for 10% of emissions, etc.) • **Assume rental companies increase EVs in 2030 from 10% to 85%: reduces additional 0.06** $GtCO_2eq$, assuming only car rentals in EU (1.7mln rental cars, or 1% of all EU cars excl trucks) and USA (2.27mln rental cars, or 1.2% of all USA cars excl trucks), assuming rental cars are 3x more used and thus have 3x higher share in emissions, and using stats that USA and EU account for resp 31% and 18% of global road emissions.	Climate Group. (2021). *Fleets first How accelerating fleet electrification can unlock the shift to clean road transport. Europcar.com; Statista.*
Other Water Transport	0.05 (0.04 – 0.06) (~0.003 reduced)	• **Ferries: reduce 0.003** $GtCO_2eq$ vs 2030 BAU by assuming 5% of fleet will be net-zero by 2030 (WEF), and assume net-zero ship reduces emissions by 100% vs combustion ship • **Yachts:** assume no reductions	World Economic Forum. (2021). *This new strategy is paving the way for net-zero shipping.*
Rail	0.04 (0.03 – 0.04) (~0.02 reduced)	• **Reduction of 0.01-0.02** $GtCO_2eq$ vs 2030 BAU based on IEA Future of Rail assuming 33% reduction of emissions via further **electrification** (e.g. high speed rail increased by 50% in 2030 vs 2017)	IEA. (2019). *Future of rail*
Cruises	0.04 (0.005 reduced)	• **Reduction of 0.005** $GtCO_2eq$ vs 2030 BAU by assuming cruises switch to 10% **net-zero fleet** by 2030, based on 5% net-zero by 2030 expected (WEF) and additional 5% net-zero assumption by extra effort, and net-zero cruises reduce 100% of the emissions	World Economic Forum. (2021). *This new strategy is paving the way for net-zero shipping;* Systemiq analyses
CT2: Facilities	**1.02**		
Operations	0.84 (0.71 – 0.98) (~0.90 reduced)	• **Reduction of 0.74-1.03** $GtCO_2eq$ vs 2030 BAU following IEA Net Zero Energy by 2050 **sectoral pathways** for all buildings, stating an overall 51% reduction in emissions from buildings operations in 2030 vs BAU (via avoided demand, efficiency, renewables, heat pumps, etc.), and assuming this will be the same for all T&T buildings operation emissions • **Additional reduction of 0.01-0.02** $GtCO_2eq$ vs 2030 BAU by challenging top 5 global hotel chains to reduce operation emissions by 70% instead of 51%. Assume extra efforts can be realised as proven by case studies with additional investments in energy savings, switching to alternative fuels, etc. As not all T&T 'Facilities – operations' category's emissions are solely from hotels, we had to carve these out first. This was based on the 2019 emissions of 'T&T accommodations', assuming this would only cover hotels (6% of all T&T, or 0.2-0.3$GtCO_2eq$, WTTC). These 2019 values were extrapolated by the known T&T buildings operation emissions CAGR for 10 yrs (1.91%, IEA CH3Fig27). Top 5 hotel chains (IHG, Marriott, Hilton, Wyndham, and Accor) cover 25% of market (IHG), and assumed same share in emissions as sub-brands range from budget to luxury (where luxury are most emitting) but equal out to average. The additional reduction of 19% was applied to the 2030 extrapolated T&T 'accommodation' emissions after already reducing by 51%.	IEA. (2021). *Net zero energy by 2050; WTTC.* (2021). *A net-zero roadmap for travel & Tourism;* IHG Hotels & Resorts. (2018). *Annual Report.*

Category	Emissions ($GtCO_2eq$, low – high) ($GtCO_2eq$ reduction vs 2030 BAU)	Arithmetic & assumptions	Sources
Total T&T	**3.11** (2.75 – 3.46) (~3.1 reduced)		
Construction	0.10 (0.08 – 0.12) (~0.07 reduction)	• **Reduction of 0.04-0.06** $GtCO_2eq$ vs 2030 BAU following **sectoral pathway** average of IEA and ARUP reduction potential of 29% via efficiency material design (majority, ~40%), enhancing existing building utilization (~25%), sustainable timber, low-carbon cement, reuse materials, et cetera. Average reduction of 29% was obtained by A. IEA reduction potential of all building construction emissions by 40% per square meter of new floor area by 2030, and B. ARUP reduction potential of all building construction emissions by 44% by 2050, assuming a linear increase of reduction from 2017-2050, resulting in 17% in 2030. The 29% has been verified with Material Economics Industrial Transformation 2050. **NB:** the impact of T&T buildings from food & beverages, retail, services, etc have not been included in the calculations. This figure only represents the direct T&T constructions of facilities such as hotels. The figure is therefore an understatement. • **Additional reduction of 0.02** $GtCO_2eq$ vs 2030 BAU by challenging top 5 global hotel chains to reduce construction emissions by 50% instead of 29%. Assume extra efforts can be realised as proven by case studies with additional investments in more efficient design, better materials, etc. As not all T&T 'Facilities – construction' category's emissions are solely from hotels, we had to carve these out first. This was based on the 2019 emissions of 'T&T constructions', assuming this would only cover hotels (6% of all T&T, or 0.2-0.3$GtCO_2eq$, WTTC). These 2019 values were extrapolated by the known T&T buildings operation emissions CAGR for 10 yrs (1.88%, IEA assume 175% growth from 2020-2050). Top 5 hotel chains (IHG, Marriott, Hilton, Wyndham, and Accor) cover 25% of market and 58% of new global development pipeline in 2030, assuming this share is equal to share of construction emissions of hotels. The additional reduction of 21% was applied to the 2030 extrapolated T&T 'accommodation' emissions after already reducing by 29%.	IEA. (2021). *Net zero energy by 2050; WTTC.* (2021). *A net-zero roadmap for travel & Tourism;* IHG Hotels & Resorts. (2018). *Annual Report;* ARUP. (2019). *Building and Infrastructure Consumption Emissions Report.*
CT3-5: Nature	**0.56**		
CT5: Food sourcing	0.37 (0.31 – 0.43) (~0.37 reduced)	• **Reduction of 0.27-0.37** $GtCO_2eq$ vs 2030 BAU following sectoral pathway Growing Better reduction target of 31% for agriculture (crop and cattle) vs 2020 values in Better Future scenario, in line with SBTi FLAG. FOLU assumes 10 critical transitions such as increased productivity of 12% by 2050, and **regenerative agriculture.** Excluding the reductions from switching to plant-based diets to avoid double counting with below point, by assuming 15% of FOLU reduction comes from diet shift (Roe et al.) resulting in 26% reduction instead of 31%. Applied 26% reduction to 'T&T Food Sourcing' 2019 Baseline values assuming reduction applies to both underlying agriculture and food processing emissions. • **Additional reduction of 0.04 – 0.05** $GtCO_2eq$ vs 2030 BAU by challenging the entire T&T industry to switch to 1 **meatless day** per week. Global agriculture emissions are reduced by 61% when switching to a plant-based diet versus animal proteins (University Leiden). Assume switch of 1 day a week equals 14% of yearly emissions. Applied reduction of 61% to 14% of the T&T Agriculture emissions, assuming won't change emissions of food processing in the same way.	FOLU. (2019). *Growing Better.* SBTi. (2022). *FLAG Science Based Target Setting Guidance.* Roe et al. (2021). *Land-based measured to mitigate climate change.*

Category	Emissions ($GtCO_2eq$, low – high) ($GtCO_2eq$ reduction vs 2030 BAU)	Arithmetic & assumptions	Sources
Total T&T	**3.11** (2.75 – 3.46) (~3.1 reduced)		
CT3: Protect & Restore Nature	-0.13 (~0.13 reduced)	• **Reduction of 0.13** $GtCO_2eq$ by 2030 by challenging top players in the T&T industry to invest 1% of 2030 revenues (equalling $13.1 bn) in nature protection and restoration. Included were 2019 revenues of 22 largest Travel Companies, 20 largest airlines, 15 largest airports, 15 largest cruise companies. This 2019 total ($872bn) had been extrapolated to 2030 by using different CAGRs over 6yrs from 2019-2030 to accommodate for COVID19 (4.4% Travel companies as per T&T industry, 8.8% airlines and airports as per MPP Aviation, 6.5% cruises as per ETC Shipping). Assumed average cost of land and ocean Nature Based Solutions mitigation of $100/ tCO_2eq (Roe et al.).	Roe et al. (2021). *Land-based measured to mitigate climate change.;* Zippia.com (2022). *15 Largest airlines in the world.* Companies Market Cap. (accessed Nov 2022). *Revenue for airlines Macrotrends.* (accessed Nov 2022). Carnival Revenue 2010-2022.; travelweekly.com;
CT4: Food Loss & Waste	0.24 (~0.16 reduced)	• **Reduction of 0.06** $GtCO_2eq$ by 2030 vs BAU by **cutting FLW** by 40% in 2030. This is built on the assumptions of cutting FLW in 2030 by 50% for top 5 hotel chains (in line with SDG target 12.3 for retail and consumer levels, and proven reductions of hotel case studies), and 30% for the rest of the T&T industry (in line with Roe et al. for the global food system), assuming to average on 40% for the whole T&T industry. Assuming a reduction of FLW would result in same reduction of emissions. This is higher than FOLU 15% reduction by 2030 as they cover the whole food system (producers to consumers) and we assume hotels/restaurants can make significant changes by better operations, technologies, et cetera.	United Nations. (2015). *Goal 12: Ensure sustainable consumption and production patterns;* Roe et al. (2021). *Land-based measured to mitigate climate change.;*
CT4: Material Waste	0.08 (~0.03 reduced)	• **Reduction of 0.03** $GtCO_2eq$ by 2030 vs BAU by assuming a **25% reduction of material waste emissions** due to recycling, substitution, et cetera. Includes emission reductions in production, conversion, and EOL (incineration, landfills, open burning). Assumption based on the emission reduction target (11%) for 2030 from Breaking the Plastic Wave; BPW assumes 25% reduction of plastic emissions by 2040 vs BAU; case studies of hotels and restaurants already able to reduce non-food waste by 40-84% using educational programs, technological levers, increasing recycling rates, etc.; taking lower value of case studies (40%) and average with BPW results in 25% reduction. Being more ambitious than BPW is achievable with T&T as there product mix has a higher share of products with higher potential for reuse (bottles of shampoo and drinks) but also food service disposables i.e. takeaway trays. The global average contains a much wider range of products that are harder to abate.	Systemiq. (2021). *Breaking the plastic wave.* Foster EU (case study); EcoBNB (case study).
Other	**0.14**		
Other	0.14 (0.12 – 0.16) (~0.10 reduced)	• **Reduction of 0.08 – 0.12** $GtCO_2eq$ by 2030 vs BAU by applying the **average reduction** (39%) of other subsectors excluding the challenging additional reduction levers. This average was only taken of the reductions linked to published sectoral pathways of the different subsectors. The additional more challenging T&T reductions were excluded as there is not enough insight in the content of the 'T&T Other' category.	Systemiq analysis

TECHNICAL ANNEX 4: T&T INVESTMENTS 2030 – BETTER T&T BETTER WORLD SCENARIO

- Table 11 outlines the estimated investment opportunity to deliver on the Better T&T Better World scenario by 2030, accompanied by assumptions and sources. These represent additional investments required to shift from a BAU projection to a Better T&T Better World scenario, on top of existing and/or BAU industry investment levels.
- Investment estimates are based on actions outlined in Chapter 3 and Technical Annex 3. They draw on investment estimates provided by reports outlining sub-sectoral Net-zero pathways outlined in Technical Annex 3. The share of investment opportunity allocated to the T&T industry is based on the industry's share of emissions and impact within the given sub-sector – for example, T&T accounts for an estimated 82-84% of aviation emissions, so the investment estimate assumes that T&T accounts for 82-84% of the investment opportunity in aviation.
- Investment estimates for the additional emissions reduction levers identified by the Better Travel Better World are either based on increasing the ambition of existing emissions reduction pathways and estimates from these reports, or on additional sources and/or Systemiq analysis, as outlined in Table 11.
- T&T sector actors would not be expected to cover the entirety of these investment opportunities. Instead, the figures provide an illustration of the size of T&T in terms of investment opportunities and the T&T share of the emissions, not to lay all below stated investments solely to the T&T industry
- Investment in rail is not included in the Better T&T Better World investment opportunity estimates. The IEA estimates a USD 59 – 82 billion investment opportunity to establish net-zero railway systems by 2030 in its Future of Rail 2019 report. This would translate into a USD 59 – 82 billion investment opportunity for the
- T&T industry, given it accounts for 20-28% of total rail emissions by 2030. However, given this represents higher costs per CO_2eq unit reduction compared to other T&T sub-sectors, it is not included as a priority investment opportunity.
- As with emissions estimates, data challenges remain. The estimates provided in this report should therefore be considered indicative and based on the best evidence available. They provide a basis from which more detailed estimates can be developed, particularly at regional and national levels.

TABLE 11: BETTER TRAVEL BETTER WORLD INVESTMENT REQUIREMENTS – ESTIMATES, ARITHMETIC, ASSUMPTIONS & SOURCES

Category	Estimated Investment opp. 2030 (USD bn/yr)	Arithmetic & assumptions	Sources
Total T&T	**$222 - 312**		
T1: Transportation	**$61 - 83**		
Aviation	$33 - 43	• **$33-43bn** estimated additional p.a. investment opportunity on average from 2022-2030 of T&T share of net-zero aviation. Average annual capital investment to get **global aviation to net-zero**, including renewable electricity generation, SAF fuel production and upstream inputs, hydrogen and battery-electric aircraft construction, CO_2 capture; excl investments in regular fleet replacement. MPP Aviation estimates additional required investments for net-zero aviation in 2050 at $40-51bn p.a. by 2030, of this 82-84% taken (share of pax aviation, MPP).	MPP. (2022). *Making net zero aviation possible*
Other Transport	$1	• **$1bn** estimated additional p.a. investment opportunity by 2030. Assumed **weighted average** of T&T road, aviation, rail transportation emissions reduction costs. Exact split of 'other transport' is unknown due to no detailed information for some of the Lenzen et al. studied countries. Assuming this consists of equal T&T known ratios of road/aviation/rail for transport of goods.	Lenzen et al. (2018). *The carbon footprint of global tourism; Systemiq analysis*
Road Transport	$14 - 19	• **$14-19bn** estimated additional p.a. investment opportunity by 2030 for T&T share of **net-zero road transport** (chargers and their infrastructure), excl. investments for vehicle stock as assumed to reach price parity with ICE vehicles in 2030. Price parity will not be achieved for trucks, but due to these only being a small part of the transition in 2030 assumed to exclude for now. ETC projects incremental investments for al chargers and infrastructure globally at $89.5bn by 2030, of this the size of T&T road transport 2019 from global transport emissions (16%-22%) was taken. Using the EV100 Fleets First total global emissions for 2019 (6.5 $GtCO_2$eq). • **Assumed no additional investment for increasing share of EVs in 2030 for rental companies** in EU and USA. Built on additional challenge for these rentals to increase switching ICE passenger vehicles from 10% to 85% by 2030. ETC assumes price parity by 2030 between ICE and EV. Size of rental cars is <5% of total per region, so assumed to not significantly increase pressure on infrastructure. See Technical Annex 3 for more information.	Climate Group. (2021). *Fleets first How accelerating fleet electrification can unlock the shift to clean road transport.* ETC and Systemiq analyses (2022); ETC. (2020). *Delivering a net-zero economy.*
Other Water Transport	$8	• **$8bn** estimated additional p.a. investment opportunity by 2030 for T&T share of 5% **net-zero ferries.** This covers the additional cost of alternative technologies for ferries compared with fuel HFO per year in low electricity scenario (USD0.02/kWh electricity). Total size of ferries fleet 2030 (estimated growth of 1.8% CAGR 2019-30, with 15,446 ships in 2019 (IMO)) is 19,093 ships; ETC estimates the cost of one net-zero ferry at $12mln (hydrogen fuel – assume lower cost option), these are estimates of total annualized capital costs and operational costs + additional costs that would be triggered by a shift to alternative technologies; assuming 5% of fleet will be net-zero, results in $11-28bn; size of T&T ferries is 66% of total ferries based on WTTC 2019 emissions for 'other water transport' and global ferry emissions. • **Assumed no additional investments for yachts** as only account for 8% of 'other water transport' emissions and mostly privately owned (although incentives can promote private investment).	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). *The carbon footprint of global tourism;* ETC. (2019). *Mission Possible sectoral focus: shipping;* IMO. (2020). *Fourth Greenhouse Gas 2020*

Category	Estimated Investment opp. 2030 (USD bn/yr)	Arithmetic & assumptions	Sources
Total T&T	**$222 - 312**		
Cruises	$5 – 13	• **$5-13bn** estimated additional p.a. investment opportunity to ensure 10% of **cruises are net-zero** by 2030. Based on estimated 5% net-zero cruise ships in 2030 for sectoral pathway, plus additional 5% extra effort from T&T sector. Additional cost of switching to alternative technologies for cruises compared with fuel HFO per year in low electricity scenario (USD0.02/kWh electricity). Total size of cruise fleet 2030 (estimated growth of 6.5% CAGR 2019-30, with 1,207 ships in 2019 (IMO)) is 2,570 ships; ETC estimates the cost of one net-zero cruise at $21 – 49mln (hydrogen fuel and electric), these are estimates of total annualized capital costs and operational costs + additional costs that would be triggered by a shift to alternative technologies; assuming 10% of fleet will be net-zero, results in $5 - 13bn; size of T&T covers all cruises.	WTTC. (2021). *A net-zero roadmap for travel & Tourism.;* Lenzen et al. (2018). *The carbon footprint of global tourism;* ETC. (2019). *Mission Possible sectoral focus: shipping;* IMO. (2020). *Fourth Greenhouse Gas 2020*
T2: Facilities	**$52 - 71**		
Operations	$49 – 68	• **$48 – 67 bn** estimated additional p.a. investment opportunity by 2030 for **T&T better building operations,** according to subsectoral pathway of **reducing 51% emissions** (IEA). IEA estimates total additional capital investments for building operations in net Zero Energy scenario at $391bn ($792bn in 2030 minus $401bn in 2020), the size of T&T Building Operation emissions of total (12-17%) were taken from this investment figure. 12-17% was obtained by comparing the current 'T&T Facilities – operations' emissions (1.2 – 1.7 $GtCO_2eq$) and the global total building operations (9.8 $GtCO_2eq$, incl both direct operations $3GtCO_2eq$ and indirect operations $6.8GtCO_2eq$, IEA). • **$0.9 – 1.2bn** additional investment opportunity when **top 5 hotel chains** are challenged to reduce operation emissions 70% instead of 51%. See Technical Annex Table 3 for more context. Additional investment was obtained by multiplying the additional reduced emissions by the above obtained cost per tCO_2eq reduction.	IEA. (2021). *Net-zero by 2050.* IEA. (202). *Energy Technology Perspective*
Construction	$2 – 3	• **$1.6 – 2.2bn** estimated additional p.a. investment opportunity by 2030 for **better building constructions,** mainly based on **cost of net-zero concrete** (IEA, ARUP, GCCA). Assumption to focus on concrete was made due to lack of data, and being most cost intensive lever. Abatement cost of reduction construction emissions (average $\$38.5/tCO_2eq$) was calculated by triangulating the McK cost per different concrete lever (clinker substitution to CCS) in $\$/tCO_2eq$ and the GCCA size of each lever by 2030. **NB:** the impact of T&T buildings from food & beverages, retail, services, etc have not been included in the calculations. This figure only represents the direct T&T constructions of facilities such as hotels. The figure is therefore an understatement. • **$0.7 – 0.9bn** additional investment opportunity when **top 5 hotel chains** are **challenged** to not reduce construction emissions by 29% but 50%. See Technical Annex Table 3 for more context. Additional investment was obtained by multiplying the additional reduced emissions by the above obtained cost per tCO_2eq reduction.	IEA. (2019). *Net zero by 2050.;* Global Cement and Concrete Association. (2021). *Concrete future: The GCCA 2050 Cement and Concrete Industry Roadmap for Net Zero Concrete.* McKinsey. (2019). *Laying the foundation for zero-carbon cement.*

Category	Estimated Investment opp. 2030 (USD bn/yr)	Arithmetic & assumptions	Sources
Total T&T	**$222 - 312**		
T3-5: Nature	**$95 - 127**		
T3: Protect & Restore Nature	$62 – 85	• **$22 bn** additional required investment **need for terrestrial biodiversity** conservation, restoration, and sustainable use. UNEP estimates the required additional global investment need for terrestrial biodiversity at $217bn (total investment $350bn minus current investments #133bn) p.a. by 2030, to meet the climate, biodiversity and land degradation targets. T&T share has been allocated via its economical size (10.3% GDP). • **$39 – 63 bn** additional required investment need for **marine biodiversity** conservation, restoration, and sustainable use. Paulson Institute estimates the total required investments by 2030 for both terrestrial and marine at $723-968bn p.a., with a finance gap of $599-825. This overall finance gap has been deducted by the UNEP terrestrial finance gap, which led to $382-608bn p.a. required for marine biodiversity. This approach has been taken as Paulson does differentiate in marine and terrestrial for some aspects, but not for all. T&T share has been allocated via its economical size (10.3% GDP).	UNEP. (2021). *State of Finance for Nature.* Paulson Institute. (2020). *Financing Nature: Closing the Global Biodiversity Financing Gap.*
T4: Food Loss & Waste	$7	• **$7 bn** estimated additional p.a. investment opportunity by 2030 for **cutting FLW by 40%** in 2030. FOLU estimated additional investment opportunity to cut FLW by 15% by 2030 globally at $30bn. T&T accounts for 9% of FLW (see tech annex 1), resulting in $2.6bn for 15% reduction, which has been scaled (x2.9)to reach 40%, assuming same cost per tCO_2eq reduction. This includes demand management, postharvest waste, and supply-chain waste.	FOLU. (2019). *Growing Better.* UNEP. (2021). *Food Waste Index.*
T4: Material Waste	$20	• **$20 bn** estimated additional p.a. investment opportunity by 2030 for a **25% reduction of material waste emissions** due to recycling, substitution, et cetera. Breaking the Plastic Wave estimates global investment opportunity of $62bn for better plastic waste system ($1180bn cumm over 2021-2040, assume linear), and achieving ~11% global plastic emissions reduction by 2030. T&T accounts for 14% of solid waste (see tech annex 1) and thus $9bn p.a. in 2030. This relates to reduction of 11%, and has been scaled to 25%.	Systemiq. (2021). *Breaking the plastic wave.*
T5: Food sourcing	$7 – 15	• **$7 – 15 bn** estimated additional p.a. investment opportunity by 2030 for a **Better Food system.** This was based on the assumptions that T&T Agriculture (0.3-0.4$GtCO_2eq$, WTTC) accounts for 6-12% of global agriculture emissions (5.4$GtCO_2eq$, crop and livestock FOLU). The T&T Agri share has been applied to FOLU 2030 investment requirements for healthy diets ($30bn), regen ag. ($37.5bn), healthy oceans ($10bn), diversify proteins ($20bn), local loops ($10bn), and digital revolution ($15bn).	FOLU. (2019). *Growing Better.* WTTC. (2021). *Net zero roadmap for the travel & tourism industry.*
T6&7: Communities	**n/a**	*We do not offer investment estimates for these transitions because the nature and scale of such investment is so diverse in different locations. See report chapter 4 for qualitative description.*	
T8&9: Behaviour	**n/a**	*Not provided as data and estimates of investment requirements to drive Behaviour Shifts are limited. See report chapter 4 for qualitative description.*	

Category	Estimated Investment opp. 2030 (USD bn/yr)	Arithmetic & assumptions	Sources
Total T&T	**$222 - 312**		
T10: Resilience	**$14 - 31**		
T10: Futureproofing destinations	$14 - 31	• **$14 – 31bn** estimated additional p.a. investment opportunity by 2030 for **adaptation and resilience** to futureproof destinations. Built on estimations of UNEP for adaptation and resilience by 2030 of $140-300bn. Sized for T&T by taking size of economy (10.3% GDP). Significant data challenges in estimating Adaptation and Resilience, chance of overlap in investment requirements for protecting and restoring nature (e.g. restoring mangroves).	UNEP. (2021). *Adaptation Gap Report*
Other	**n/a**		
Other	0.24 (0.20 – 0.28	*Excluded from estimations as unknown what exact content of this category is.*	

TECHNICAL ANNEX 5: CUSTOMER COSTS IN SHIFTING TO SUSTAINABLE VARIANTS ACROSS SIX ARCHETYPAL TRIPS

- Better Travel options for 2030 calculated for three categories: transport, accommodation, and food.
- Key assumptions are in the table below.
- Note that for 'accommodation' we used a case study (Arup, 2021) to understand the costs of retrofitting per room per night. We used this case study as base case to understand the cost for different archetypical destinations using average room size, average occupancy rate and cost of living index as variables.

	Better Travel	Source
Transport		
Flights	6% markup per passenger per kilometres for 15% SAF blend	Systemiq analysis based on MPP. (2022). *Making net zero aviation possible.*
Car rental	Electric vehicle is 23% more expensive per day vs ICE	Systemiq analysis based on hertz.com and europcar.com
Fuel prices	Petrol prices per relevant country vs electric vehicle per kilometre	Systemiq analysis based on viamichelin.com
Accommodation		
Base case hotel	6% markup per passenger per kilometres for 15% SAF blend	MPP. (2022). *Making net zero aviation possible*
Average hotel room size	33 m2	Systemiq analysis based on booking.com and travelpulse.com
Reference Hotel size (rooms)	3647m2	ARUP, Gleeds, IHG and Schneider Electric. (2021). *Transforming Existing Hotels to Net Zero Carbon Version*
# of rooms	111	Calculation
Total cost of retrofitting	4,088,650.00 USD	ARUP, Gleeds, IHG and Schneider Electric. (2021). *Transforming Existing Hotels to Net Zero Carbon Version*
Total CAPEX per room	36,834.68 USD	Calculation
Amortization period	10	Assumption
Amortization per year	3,683.47 USD	Calculation
Average Occupancy	67%	Systemiq analysis
Nights Occupied per Year	244.55	Calculation
Costs of living index	144.03	Systemiq analysis based on World Bank Cost of Living Index
Extra cost per night	15.06 USD	
Accommodation		
Average price reduction per meal when switching to plant-based vs conventional in restaurants	-33%	Systemiq analyses; based on different main-course prices for vegetarian vs meat in restaurants of the 7 destinations
Share of trip eating vegetarian instead of conventional	1/3	Assumption

TECHNICAL ANNEX 6: EXAMPLE ALLIANCES IN THE T&T INDUSTRY

Name	Description
Sustainable Hospitality Alliance	The Sustainable Hospitality Alliance brings together hospitality companies targeting sustainability and uses their collective power to achieve local and global impact. Working with leading hospitality companies and strategic partners, the alliance addresses key challenges affecting the planet and its people. It develops practical resources and programmes to enable the wider industry to operate responsibly and grow sustainably.
Travalyst	The Travalyst coalition covers the vast majority of T&T providers due to the reach of its core members, which include technology platforms Booking.com, Skyscanner, Trip.com Group, Tripadvisor, Visa, Google and Expedia Group. The large-scale and networked nature of these technology platforms gives their actions huge reach, across T&T actors including hoteliers, airlines and car rental companies.
Energy & Environmental Alliance	The Energy and Environmental Alliance is a not-for-profit coalition of hospitality leaders seeking to adopt sustainable practices at scale. The Alliance helps members to purchase energy 100% sustainably and to enhance energy productivity through a partnership with Businesswise Solutions, an energy management consultancy.
Hotel Owners for Tomorrow	Hotel Owners for Tomorrow is a platform that equips members to drive progress in sustainable hotel management. Members commit to five actions to integrate sustainability into their decision-making. These include factoring sustainability criteria into investments and committing to one renewable energy evaluation project and one energy efficiency project in each property each year.
Institute for Hospitality	The Institute for Hospitality is the leading international professional body for hospitality, consisting of 13,000 members. It recently partnered with Foodbuy to disseminate information on the environmental impact of food among hospitality businesses.

TECHNICAL ANNEX 7: EXAMPLE COMMITMENTS FOR SUPPLY-SIDE FIRST MOVER COALITION

- The **top 5 hotels and restaurants** worldwide and/or in key tourism destinations could commit to:
- Buying100% renewable energy in developed markets and 50% renewable energy in developing markets by 2030. As a first step, T&T industry actors could join the Clean Energy Buyers Association (CEBA), whose members commit to purchase clean energy. Currently, major T&T players are not among CEBA's members.
- Purchasing low-carbon, efficient heating and cooling systems for a rising share of existing buildings, reaching 100% by 2030.
- Sourcing 30% of food served on sites from regenerative agriculture sources and a rising share of food from local producers by 2030
- Purchasing reusable alternatives to single-use products such as single-use plastics and aiming to replace all single-use products by 2030
- Hospitality providers' commitments could be developed through existing industry alliances, including the Sustainable Hospitality Alliance , the Energy & Environmental Alliance , Hotel Owners for Tomorrow and the Institute for Hospitality. These are summarized in Table [X] in the Annex.
- The **top 5 asset owners** in the hospitality industry could commit to:
- Applying 100% net-zero standards to all new hospitality buildings by 2024
- Facilitating retrofits by financing low-carbon, efficient heating and cooling systems for a rising share of existing buildings and reaching a target of retrofitting 2% of existing buildings each year by 2024.
- Increasing the share of low/ zero-emission construction materials used in new builds by 2030 and lobbying governments to reform current building codes and standards that restrict the use of innovative materials such as bio cement.

TECHNICAL ANNEX 8: EXISTING INITIATIVES IN THE T&T INDUSTRY ON STANDARDS & MEASUREMENTS

Name	Description
Cross-cutting	
Global Sustainable Tourism Council	GSTC manages global standards for sustainable travel and tourism, and acts as the international accreditation body for sustainable tourism certification. These cover destinations, hotels and tour operators, but not transport providers.
Travalyst	Travalyst is coordinating with key actors, including GSTC to unify industry standards.
UNWTO Sustainable Tourism Observatories	Observatories established to monitor the TBL at a destination level. National ministries are intended to partner with universities, who set up an STO unit with representation from key tourism stakeholders. The university then collects and analyses data, submitting annual reports to the UNWTO.
UNWTO Statistical Framework for Measuring the Sustainability of Tourism (MST) Initiative	The MST aims to develop an international statistical framework for measuring tourism's role in sustainable development, including economic, environmental and social dimensions.
ILO Guidelines on decent work & socially responsible tourism	Guidelines designed to guide the design and implementation of interventions on the promotion of decent work and full and productive employment in the tourism industry
Transport	
CAO Standards and Recommended Practices (SARPs)	SARPs are technical specifications adopted by the Council of ICAO - made up of UN member states - in order to achieve "the highest practicable degree of uniformity in regulations, standards, procedures and organization in relation to aircraft, personnel, airways and auxiliary services in all matters in which such uniformity will facilitate and improve air navigation".
World Benchmarking Alliance (WBA) Transport Benchmark	In 2022, the WBA Climate and Energy Benchmark will assess and rank 90 transport companies on their alignment with a low-carbon and world and their contributions to a just transition. Sub-industries relevant to T&T in scope include passenger air, maritime transportation, rail transportation and automobiles.
Hospitality	
BREEAM in Use for the Hospitality Industry (BiUH)	The Energy and Environment Alliance has partnered with BREEAM to develop the first global, scientifically robust standard for sustainable building management in the hospitality industry. This will cover energy, water, transport, management, waste, pollution, health & well-being, land use & ecology, and materials.
Hotel Carbon Measurement Initiative (HCMI)	Tool developed by the Sustainable Hospitality Alliance to help industry to understand and benchmark their carbon footprint and energy usage.
WTTC Hotel Sustainability Basics	Hotel Sustainability Basics is a globally recognised and coordinated set of sustainability indicators that all hotels should implement as a minimum. Launched by WTTC and developed by the industry for the industry, they represent the 12 actions that all hotels can and should implement at a minimum.
WBA Hotels benchmarking	The WBA has identified 16 hotel companies among 2000 influential companies for which it plans to publish a company scorecard. The scorecards will outline progress on decarbonisation and energy, food and agriculture, social, urban, nature, financial and digital indicators. While score cards are not available for all, WBA plans to publish all by 2023.
WBA Construction & Engineering and Construction Materials & Supplies benchmarking	116 Construction & Engineering firms and 48 Construction Materials & Supplies companies are included in the WBA's list of 2000 influential companies for which it plans to publish a company scorecard, as outlined above.
Tour operators & travel agents	
Carbon Management Tool for Tour Operators (CARMACAL)	CARMACAL is a user-friendly application which allows tour operators to measure the detailed carbon footprint of their tour packages, enabling them to account for the emissions impact of their decision making and operations. The tool contains information on the carbon intensity of a range of competing products (e.g. accommodation choices), carbon-efficient airlines and shortest travel routes.
Travelife Sustainability System	Travelife Sustainability System is a global sustainability scheme for the tour operator sector with more than 500 members from 80 countries across all continents. Travelife provides an integrated set of trainings, best practices, implementation, suppliers and certification tools specifically designed for tour operators. The Travelife certification standard is in compliance with ISO 14001, OECD, The Global Reporting Initiative, ISO 26000 and the GSTC Industry criteria.

ENDNOTES

Executive Summary

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