



MEASURING TOURISM'S IMPACT A PILOT STUDY IN CYPRUS

in association with



This report was prepared for **the Travel Foundation** by **PwC**. The pilot study was conducted by PwC using their Total Impact Measurement and Management (TIMM) approach.

<http://www.pwc.co.uk/corporate-sustainability/total-impact-measurement-management.jhtml>

TUI Group assisted this project by providing access to their hotels and suppliers, data for the analysis, technical review of the report, and in their role on the project Advisory Panel.

The Travel Foundation is an independent charity that works with those who develop and manage tourism so that it has a positive impact on destinations - enabling local communities, the environment and businesses to thrive.

This report is available for free on the Travel Foundation website: <http://www.thetravelfoundation.org.uk/impact>

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MEASURING TOURISM'S IMPACT

A PILOT STUDY IN CYPRUS

A STUDY BY THE TRAVEL FOUNDATION IN ASSOCIATION
WITH PwC

JULY 2015

CONTENTS

Foreword	i
Introduction	1
Purpose of the study	1
Background – the need for change	2
So, how are leaders responding to the changes?	2
Impact measurement in tourism	4
The structure of this paper	5
Introducing TIMM and Travel Foundation/TUI Group pilot project	7
What is Total Impact Measurement and Management (TIMM)?	7
The pilot project in Cyprus	9
Background – the importance of tourism in Cyprus	9
Pilot scope and approach	10
Overview of results	12
Economic impact	14
Interpreting the economic impacts	14
Tax impact	15
Interpreting the tax impacts	16
Environmental impacts	17
Interpreting the environmental impacts	18
Social impact	20
Interpreting the social impacts	22
How could the pilot study be enhanced?	24
Potential policy interventions	25
What is the future for impact measurement in tourism?	27
Lessons learned – applying impact measurement	27
Lessons learned – managing impact	28
What comes next – how can impact measurement be applied more widely to the benefit of destinations and the tourism sector?	32
Appendix 1 – breakdown of pilot study results	34



FOREWORD

We are all aware that tourism can have a profound impact on holiday destinations. We know that tourism will bring economic and fiscal benefits in the form of profits, jobs and tax revenues, and it will affect the host communities' way of life and the environment in ways which can be both positive and negative.

Yet it's striking how much we don't know about tourism's impact given its scale and reach. While much work has been done to consider different impacts in isolation, to date there has been very little consideration given to whether these impacts can be measured, valued and compared. This makes it difficult to understand the overall impact tourism is having on destinations and hampers efforts to manage impacts in a proactive way.

That's why this pilot is so exciting and important: it's breaking new ground. For the first time on this scale, we've measured the overall impacts of a large tour operator in a mainstream holiday destination.

It was a challenging task, but the pilot has provided us with new insights into ways of measuring impacts and highlighted how valuable the results of such an undertaking are to understand and manage tourism activities for the benefit of everyone involved - destinations, travel companies and tourists.

We are delighted to share our experiences and the wider learning from the study as we hope this is the start of a more informed conversation around tourism impact management and the importance of this for achieving sustainable tourism.

We hope you find this paper informative and useful. If you would like to join the conversation or discuss any of the issues in more detail please get in touch.

Salli Felton

Salli Felton
Chief Executive, the Travel Foundation

MEASURING TOURISM'S IMPACT - A PILOT STUDY IN CYPRUS

A STUDY BY THE TRAVEL FOUNDATION IN ASSOCIATION
WITH PwC

JULY 2015



INTRODUCTION

Purpose of the study

Over the past year, the Travel Foundation has worked with TUI Group and PwC to pilot a new, holistic method of impact measurement which quantifies and values the economic, tax, environmental and social impacts of tourism activities in a given destination. This report summarises the results and learnings from the pilot study, which has measured and valued the different impacts arising from TUI Group's activities in relation to eight hotels in Cyprus in 2013.

As a charity influencing the sustainability actions of the tourism sector, the pilot study is intended to help the Travel Foundation to:

- test a new approach to measuring the impact of tourism;
- assess the value of the results for key stakeholder groups including destination governments as well as tourism organisations, tourism businesses, standard setters and wider stakeholders;
- raise awareness of the tourism sector's impacts to help tourism businesses and their suppliers improve their sustainability performance; and
- shape the focus and design of the Travel Foundation's future programmes and projects.

The learnings gained from the pilot are also intended to provide insight into how all parts of the tourism sector can better measure, manage and communicate the sector's impacts. In the long run, this could help the sector to increase its positive impacts, minimise its negative impacts and ultimately grow in a manner that balances the needs of the economy, the environment and society.



If governments and businesses are to succeed, a more holistic, longer term approach to understanding their diverse impacts is needed by both parties

Background – the need for change

This study takes place at a time when the global context in which economic activity happens is changing:

- Economic pressures are making steady, stable growth more difficult to achieve for companies, while new business models are evolving, such as the sharing economy (e.g. Airbnb);
- Environmental and social consciousness among consumers is growing as they find it easier to access and share information, meaning purchasing decisions are increasingly influenced by wider consumer concerns rather than just price and quality; and
- External stakeholders are gaining more influence over businesses and are demanding greater openness and improved quality of public reporting.

Together, these changes in the global business context are being reflected in new and evolving sustainability risks linked, for example, to climate change, economic development and the need for responsible tax management, climate change, resource scarcity and the need to support local communities and address poverty. They are causing leaders in government, business and NGOs to rethink their organisational strategies.

So, how are leaders responding to the changes?

Leading governments and businesses are starting to think about how they can look beyond increased short-term financial returns towards real, inclusive, responsible and lasting change for the benefit of consumers, employees, suppliers, shareholders and society alike. This change makes good sense for all parts of society, since business performs better in a society that is stable, healthy and prosperous. It creates a virtuous circle where business thrives in a socially and environmentally responsible manner.

If governments and businesses are to succeed, a more holistic, longer term approach to understanding their diverse impacts is needed by both parties. Such an approach is not currently reflected in conventional financial performance measurement and reporting, or in management or investment decision making. Increasing numbers of leading businesses are beginning to consider all the outcomes and impacts of their activities (i.e. what changes as a result of their activities) and some are starting to look at what the value of these changes is (see Figure 1). However, few businesses are integrating this thinking into their decision making and external reporting.

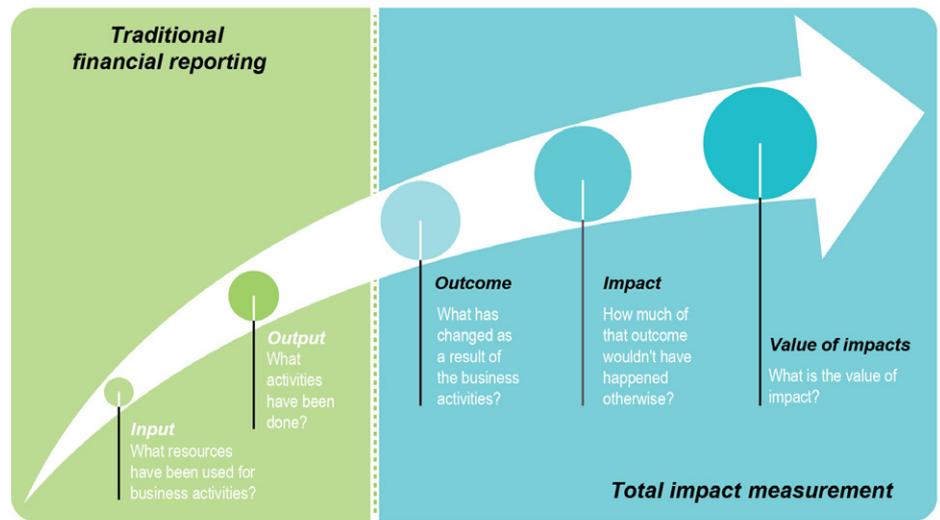


Figure 1: Extending the scope of impact measurement and reporting
Source: PwC

Around the world, some governments are further ahead than business in recognising that wider social, environmental and tax impacts need to be taken into account in their decision making. For example, new ways of measuring national output have been developed and adopted such as:

- GDP+¹
- Wealth Accounting and Valuation of Ecosystem Services (WAVES)²; and Wellbeing accounting³.

These leading approaches are allowing governments to begin the process of measuring value creation and erosion in a more holistic and long term way by enhancing traditional GDP measures (e.g. with an evaluation of the depletion or replenishment of a nation's natural resources or enhancement to human capital).

1 GDP+, is aligned with the Sustainable Development Goals arising from the RIO+20 UN Conference. It encourages countries to also measure and account for the value of their natural resources and the social wellbeing of their people.

2 WAVES is a global coalition of UN agencies, governments, international institutes, and nongovernmental organizations that aims to promote sustainable development by ensuring that natural resources are mainstreamed in development planning and national economic accounts. Implementing countries include Botswana, Costa Rica, Columbia, Guatemala, Indonesia, Madagascar, Philippines, and Rwanda. <https://www.wavespartnership.org/en>

3 The UK Office for National Statistics began measuring subjective wellbeing in 2011 under its "Measuring National Well-being" programme in order to supplement existing economic measures of progress to provide a fuller picture of how the country is progressing and help to tailor government policies accordingly. It includes indicators in areas such as health, relationships, education and skills, the environment and measures of personal well-being. The programme publishes updates to the measure every six months. <http://www.ons.gov.uk/ons/guide-method/user-guidance/well-being/index.html>



The success (or failure) of the sector depends critically on conditions in destinations

Impact measurement in tourism

The tourism sector is uniquely exposed to these themes of changing economic pressures, new business models, growing environmental and social consciousness among consumers, and the increasing influence of external stakeholders on business. The success (or failure) of the sector depends critically on conditions in destinations, notably the available social, human and natural capital, all of which are affected directly and indirectly by tourism activities.

Simply put, the destination communities and environments ARE the tourism sector's product. Furthermore, whilst tourism can be an important driver of economic development which can improve the livelihoods of local people, important environmental and social impacts also need to be taken into account to ensure that the sector delivers growth in a sustainable manner.

This means that relationships between the tourism sector, local stakeholders and the environment affect the quality of the tourism offering within a destination since they all influence tourists' experience on holiday. If the tourism sector damages these relationships, for example through poor management of its impacts, the tourism product and the sector's commercial success are directly affected, i.e. there is a complex inter-dependency between the "health" of the destination and the tourism activity within it.

Impact measurement within tourism can be improved. At present, existing practices tend to focus on macro-economic impact measures such as GDP or proxies such as visitor arrival numbers. These provide only a partial indication of the sector's true impact.

Leading tourism organisations and standard setters are increasingly recognising the need for a more holistic yet consistent and comparable way of measuring the impacts of tourism on the economy, community and environment. However, diverse destinations, a fragmented sector and multiple stakeholders mean collective action on this issue is challenging. Nonetheless, some progress is being made. For example:

- One of the United Nations Environment Programme's 10 year framework programmes on sustainable consumption and production is devoted to promoting more sustainable tourism and includes an emphasis on evidence based decision-making, a life-cycle approach and collaborative partnerships;
- The Global Sustainable Tourism Council (GSTC) has developed indicators for sustainable destination and hotel management with its members⁴; and
- The United Nations Sustainable Development Goals include specific targets (relating to Goals 8, 12 and 14) to "Develop and implement policies (and tools) to promote sustainable tourism which creates jobs and promotes local culture and products" and to "Increase the economic benefits to Small Island Developing States and Least Developed Countries from the sustainable use of marine resources,

4 <https://www.gstccouncil.org/en/gstc-criteria/sustainable-tourism-gstc-criteria.html>

including through sustainable management of fisheries, aquaculture and tourism”⁵.

This pilot study provides further support for, and new insight to, this collective effort.



The structure of this paper

The following section introduces the impact measurement framework used in this pilot study. The paper then explains how the framework was applied to Cyprus and provides a summary of the results of the pilot, including implications of the results specific to Cyprus. Finally, it takes a look at some of the implications of the study for the wider application of impact measurement in the tourism sector.

5 Stakeholder Forum, 2015, Universal Sustainable Development Goals: Understanding the Transformational Challenge for Developed Countries



INTRODUCING TIMM AND THE TRAVEL FOUNDATION/TUI GROUP PILOT PROJECT

What is Total Impact Measurement and Management (TIMM)?

The pilot study used TIMM⁶, an impact measurement and valuation framework developed by PwC, which provides a comprehensive and balanced evaluation of a business' impacts on society, the economy and the environment. It is a holistic approach to 'impact' measurement:

- **Total** because it provides a **holistic view** of social, environmental, tax and economic dimensions – to see the big picture;
- **Impact** because it looks beyond inputs and outputs to **outcomes and impacts** – to understand the footprint;
- **Measurement** because it quantifies and **monetises** the impacts – to value in a common language; and
- **Management** because it enables the options to be evaluated and the trade-offs **optimised** – to make better decisions.

TIMM considers four key categories of impact:

- **Economic impact** covers the effect of an activity on the economy in a given area by measuring the associated output or value added (and changes in employment);
- **Tax impact** covers the associated tax contribution;
- **Environmental impact** measures the value of the impacts on society of the emissions to air, land and water and the use of natural resources; and
- **Social impact** values the consequences of the activities on societal outcomes such as livelihoods, skills and cultural heritage.

TIMM involves estimating the value of each impact so that different impacts can be compared to each other. This enables decision makers to assess the total impacts and to compare alternative strategies, investment choices and operating plans. Business decisions can then be made with more complete knowledge of the overall impact they will have and a better understanding of which stakeholders will be affected by which decisions.

TIMM uses input-output models as well as other primary and secondary data⁷. A wide range of best practice impact measurement and valuation

6 For more information on the TIMM framework, please visit: <http://www.pwc.com/gx/en/sustainability/publications/total-impact-measurement-management/assets/pwc-timm-report.pdf>

7 An input-output model describes the economic relationships between different sectors of an economy. It provides an understanding of how different sectors relate to each other and how the activities of one sector are likely to stimulate economic activity elsewhere in the economy.



TIMM involves estimating the value of each impact so that different impacts can be compared to each other

methodologies are applied to quantify and value impacts consistently at three levels:

- **Direct:** the impacts that result directly from the business' activities;
- **Indirect:** the impacts generated in the supply chain which support the business' and customers' activities; and
- **Induced:** the impacts generated by the spending of the employees involved in the business' activity and those in the associated supply chain.

The use of an impact measurement approach that seeks to estimate impact at the direct, indirect and induced level is valuable as it provides a comprehensive estimate of impact. Furthermore, it is consistent with the World Travel and Tourism Council's approach to their annual country level economic impact reports.

All the impact measurement methodologies used as part of TIMM are based on established, widely applied techniques, such as those used by national governments and international policy organisations including the European Commission, the World Bank and the OECD, for example:

- The European Commission's Joint Research Council uses input-output models to assess the impact of policies on economic, tax and environmental variables⁸. Input-output analysis is also commonly used to assess the economic impact of the tourism sector; for instance, it underpins the 2008 Tourism Satellite Account (TSA): Recommended Methodological Framework, which is jointly presented by the United Nations, the European Commission and OECD⁹. It also underpins the WTTC's approach to its annual estimates of tourism's contribution to employment and economy in 184 countries and 25 geographic or economic regions¹⁰.
- The approach to social valuation is consistent with best practice principles of project appraisal used by governments around the world, for example the UK Government's Green Book¹¹ on project appraisal and evaluation.
- The methodologies used to value the environmental impacts reflect the latest academic and business research and were peer reviewed in 2011. Most recently, following an independent review, they have been accepted by the Natural Capital Coalition, a global, multi stakeholder open source platform supporting the development of methods for natural and social capital valuation in business, to form part of the basis for the Natural Capital Protocol¹².
- A detailed description of the data and steps we used to estimate each impact area can be found at www.pwc.co.uk/timmtourism

8 European Commission: <https://ec.europa.eu/jrc/en/research-topic/input-output-economics>

9 <http://unstats.un.org/unsd/statcom/doc08/BG-TSA.pdf>

10 <http://www.wttc.org/research/economic-research/economic-impact-analysis/>

11 <https://www.gov.uk/government/publications/the-green-book-appraisal-and-evaluation-in-central-government>

12 <http://www.naturalcapitalcoalition.org/natural-capital-protocol.html>

THE PILOT PROJECT IN CYPRUS

Background – the importance of tourism in Cyprus

TUI Group and the Travel Foundation asked PwC to pilot the application of TIMM in Cyprus. Cyprus was chosen because it is a mature mainstream market where the impacts of tourism are widespread. There are also questions about the positive and negative impacts of tourism on social and environmental issues such as water availability, working conditions, employment opportunities and waste management. These issues have put a spotlight on what tourism's contribution means for local people in terms of wider impacts.

Tourism has historically been a major source of economic development in Cyprus. The World Travel and Tourism Council estimates that travel and tourism directly contributed 6.8% of Cyprus's Gross Domestic Product (GDP) in 2013¹³. When taking into account the indirect and induced impacts (e.g. from the goods and services the sector purchases from suppliers), its total contribution is estimated to be about 24% of Cyprus's GDP¹⁴.

However, Cyprus's tourism sector is facing increased competition from other Mediterranean destinations such as Greece, Turkey, Spain and Malta. Tourist arrivals in Cyprus have fluctuated in the past 15 years, peaking at 2.7 million in 2001¹⁵. Although the sector was relatively resilient during the financial crisis, aided by more tourists from Russia and Eastern Europe¹⁶, the number of visitors to Cyprus fell by 2.4% to 2.4 million between 2012 and 2013. The seasonality of the sector, where it is common practice for hotels to suspend operations during winter, has also constrained the benefits accruing to the country and contributed to fluctuations in the level of unemployment.

Additionally, the wider Cypriot economy currently faces several challenges due to the ongoing financial crisis. In 2013, the country's banking sector collapsed, leading the European Union and the International Monetary Fund to provide bailout funds. GDP declined by 5.4% in 2013 and 2.3% in 2014. It is expected to drop by another 0.5% in 2015¹⁷. Additionally, unemployment increased from 7.9% in 2011 to 15.9% in 2013¹⁸, with local Cypriots facing increased competition for jobs from migrant workers. The rate of youth unemployment is also high, reaching 40.3% in December 2013¹⁹.

13 World Travel and Tourism Council, 2014. Travel & Tourism Economic Impact 2014: Cyprus

14 World Travel and Tourism Council, 2014. Travel & Tourism Economic Impact 2014: Cyprus

15 Republic of Cyprus Statistical Service, 2013. Arrivals of tourists by country of usual residence

16 Leaf Research, Tourism & Leisure: Dynamics and Expectations, July 2013

17 European Commission, Economic Outlook, Cyprus

18 Eurostat, Cyprus, Unemployment Rate

19 Eurostat, EU Labour Force Survey, 2013

The tourism sector is a key contributor to Cyprus's economy and the livelihoods of its people. Indeed, the President of Cyprus has publicly highlighted the importance of the tourism sector to the economy and its potential role in the country's ongoing economic recovery. The Government has called on the hotel sector to support its action to improve Cypriot tourism's prospects by hiring local staff, supporting local and regional producers and providing employees with vocational education and training²⁰. The results of this pilot study provide an indication of how well the sector is performing this role and what more it could do.

Pilot scope and approach

The scope of the pilot study in Cyprus was defined as:

- eight hotels used by TUI Group which are a subset of its operations in Cyprus and cover 60,000 TUI customers travelling to Cyprus²¹;
- all impacts accruing in Cyprus as a result of TUI Group's activities in these hotels in 2013: the pilot is a snapshot of one year and excludes travel to and from Cyprus and impacts accruing outside Cyprus (except Greenhouse Gases (GHGs), which have a global impact); and
- the impacts were assessed in gross terms by assuming that none of TUI Group's customers would otherwise have visited Cyprus: thus, it does not consider the impacts which would arise in the absence of TUI Group's presence in Cyprus (e.g. if another tour operator stepped in to fill the gap).

As this was only a pilot study, it was not possible to include all impact areas of potential interest in the scope. This meant that certain impact areas were not considered, such as gender equality and biodiversity associated with the loss of specific species. If these issues were highlighted as areas of particular concern, further work could be done to assess these impacts.

Figure 2 provides an overview of how the total direct, indirect and induced impacts of TUI Group's operations in Cyprus were estimated using the TIMM framework. Data were collected directly from the eight pilot hotels in scope, the airport handler, the ground handler and TUI Group itself. They included financial and fiscal data, energy and fuel use data and procurement data. Interviews were conducted with government departments and local municipalities in Cyprus. Two surveys of 603 hotel employees and holiday advisors were also conducted to understand their earnings, spending and saving patterns. In the case of hotel employees, the survey was also used to assess their quality of life. Finally, the

20 Cyprus Mail, Hoteliers must 'do their bit' Anastasiades says, 13 June 2014

21 The eight hotels provide a representative sample of TUI Group's operations in Cyprus in terms of board basis and star rating. However, they are largely well-managed flagship hotels, and were selected because they were most likely to be able to provide the data required for this study. It is likely that their environmental performance is above average relative to other hotels used by TUI Group. Approximately 60,000 TUI Group customers stayed at these hotels in 2013.

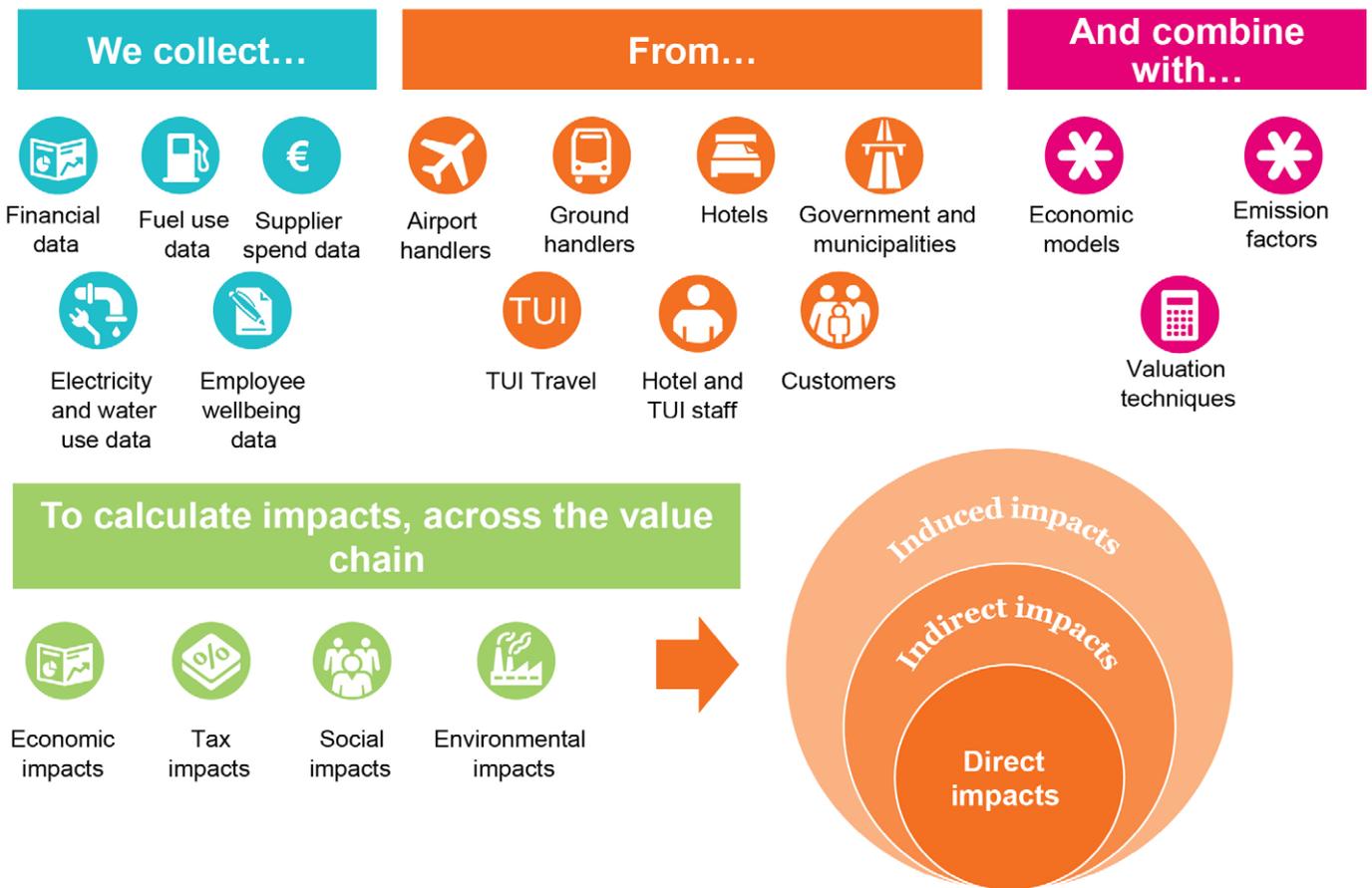


Figure 2: Overview of TIMM data collection and analysis

analysis drew on evidence from a recent survey of visitor spending in Cyprus undertaken by the Travel Foundation²².

These data were analysed using:

- an input-output model of the Cypriot economy;
- emissions factors which link economic outputs to environmental outputs²³; and
- a range of established impact valuation methods.

The results, which are summarised in the following pages, are estimates of the value of the direct, indirect and induced economic, tax, social and environmental impacts.

²² http://www.thetravelfoundation.org.uk/images/media/Optimising_Tourist_Spend_full_report_April_2014.pdf

²³ An emission factor is the average emission rate of a given pollutant relative to units of activity e.g. kilograms of GHGs per kWh of energy generated.



The total economic impact of €32.3m is larger than the impacts in the other quadrants

Overview of results

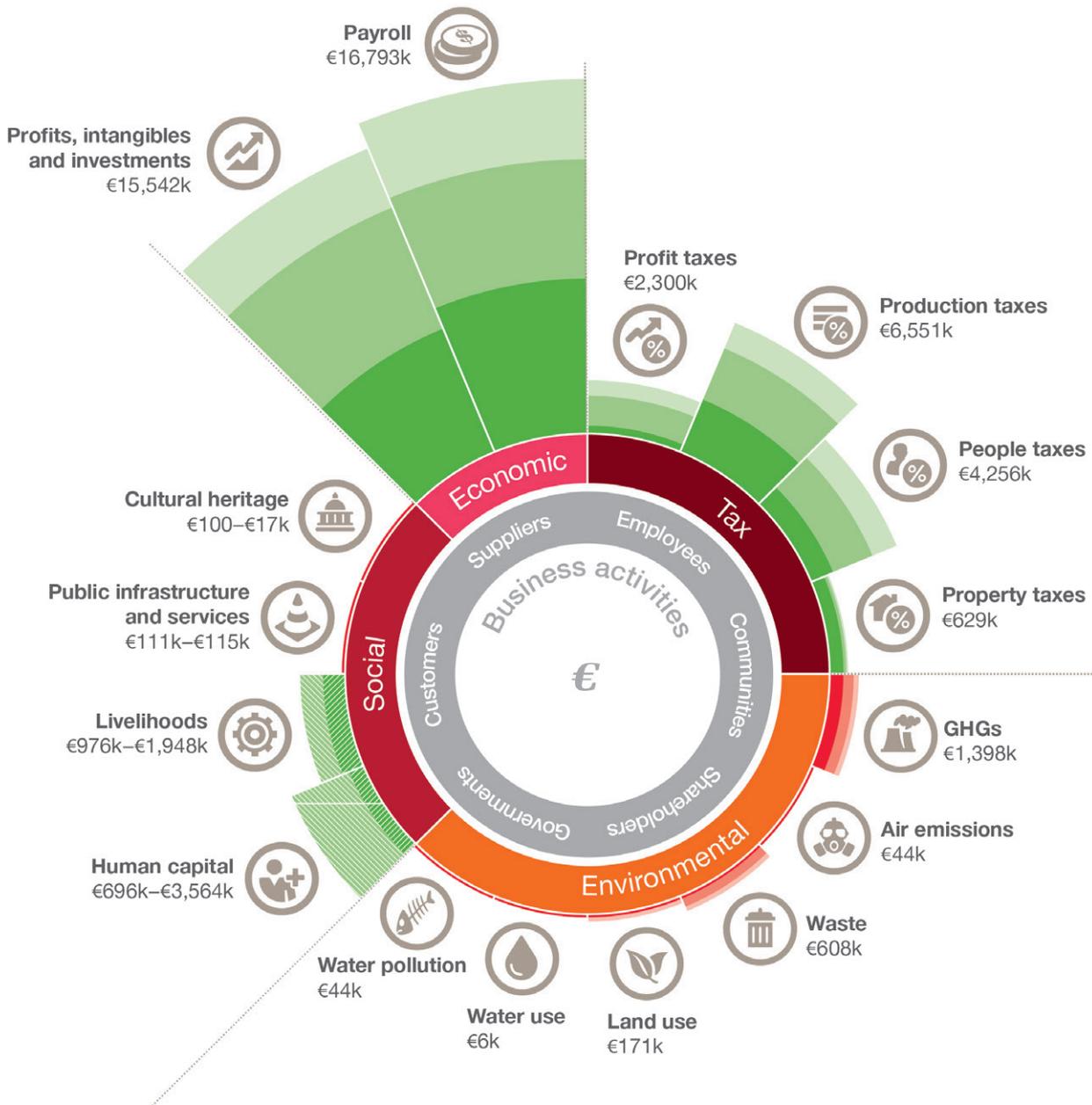
Figure 3 summarises the total impact accruing in Cyprus as a result of TUI Group's activities in 2013 relating to customers visiting the eight hotels in scope of the study – a snapshot of impacts occurring in one year. The green bars indicate positive impacts and the red bars indicate negative impacts. In the economic, tax and environmental quadrants, the direct, indirect and induced impacts are distinguished by the shading as shown in the key. In the social quadrant a wide range of social impacts were identified as of potential interest during the scoping phase of the project. Given the limited time and resources available, it was agreed the social analysis should a high level valuation of a larger number of social impacts rather a full valuation of a few. A full valuation would have involved more detailed primary data collection. As a result the social values are shown as estimated ranges. The estimated lower and upper bounds of the potential impacts are shown by the vertical and horizontal hatching of the bars²⁴.

Figure 3 shows that the total economic impact of €32.3m is larger than the impacts in the other quadrants. The total tax impact of €13.8m is the next most significant in terms of magnitude. The upper bound of the positive impacts on human capital (€3.6m) and livelihoods (€1.9m) are comparable in size to some individual tax impacts such as profit taxes (€2.3m) and people taxes (€4.3m). The social costs (€112k - €133k) and the total environmental cost (€2.2m) were small relative to other impacts across the four quadrants.

A breakdown of the results and the definitions of each impact under each quadrant are provided in the following pages. For further details of the results, please see Appendix 1.

Figure 3: Summary of total impact of TUI Group's activities in Cyprus in 2013 ►

²⁴ A wide range of social impact areas were identified as of potential interest during the project inception and scoping discussions. It was agreed with TUI Group and the Travel Foundation that it would be preferable to use the available project resources to complete a "high level valuation" of all the impacts, rather than a more detailed valuation of a few. This approach used limited data collection and high level assumptions to prepare indicative valuations of a broad range of potential impacts, to enable TUI Group and the Travel Foundation to assess their scale relative to one another and to TUI Group's impacts in other quadrants. They are presented as ranges to reflect their sensitivity to data limitations and assumptions.



Key

- Negative impact direct
 Positive impact direct
 Negative impact minimum
 Positive impact minimum
- Negative impact indirect
 Positive impact indirect
 Negative impact maximum
 Positive impact maximum
- Negative impact induced
 Positive impact induced

Economic impact

The economic analysis examines the following direct, indirect and induced contribution of TUI Group's activities to Cyprus' GDP. This is done by estimating two elements of gross value added (GVA):

- **Payroll:** Wages and salaries paid to all employees, excluding social security payments and pension contributions (which are considered in the tax quadrant); and
- **Profits:** Including investments and intangibles.

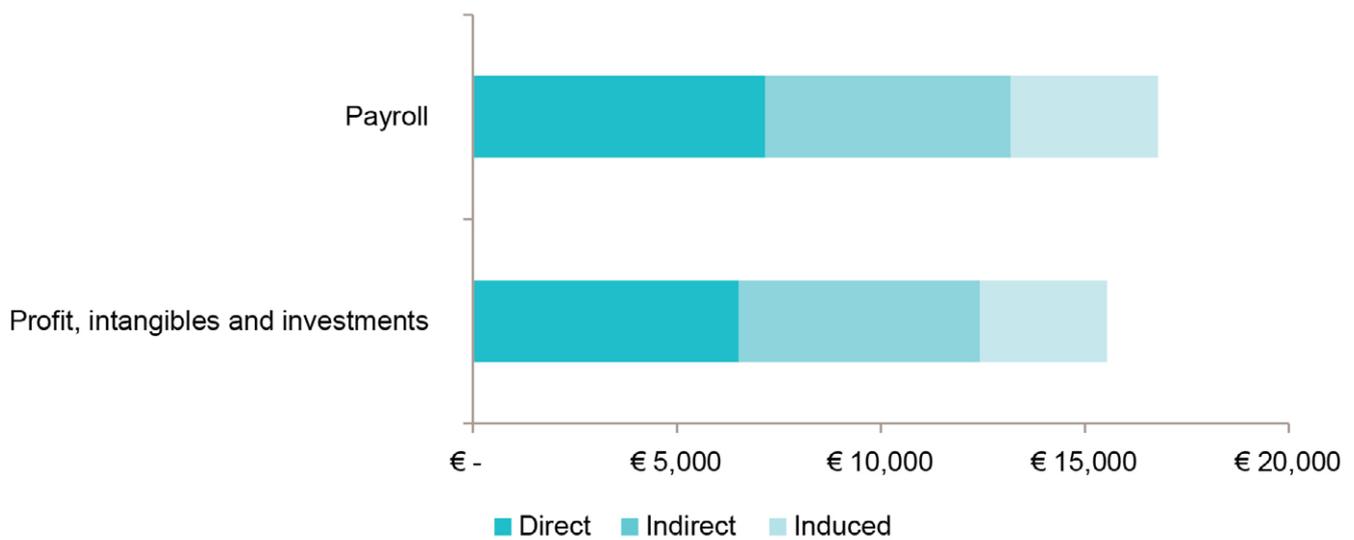


Figure 4: Summary of economic impacts of TUI Group's activities in Cyprus in 2013 (€'000)

Interpreting the economic impacts

The economic impacts can be interpreted as follows:

- The estimated total economic impact was €32.3m – equal to €59 per customer per night – of which €13.7m was direct economic impact.
- The indirect impact of €11.9m represents the impact of spending by the hotels, the ground handler and airport handler suppliers and by TUI Group's customers on goods and services outside their hotels.
- The induced impact of €6.7m is made up of the impact generated from the spending of:
 - TUI Group Holiday Advisors and employees of the hotels, ground handler and airport handler in Cyprus;
 - employees in the supply chains of businesses providing good and services to the hotels, ground handler and airport handler; and



Only 37% of the food and beverages bought by the hotels was reported to have been produced in Cyprus.

- employees in the businesses which meet the needs of discretionary²⁵ spending by TUI Group customers in Cyprus (i.e. what customers spend outside the hotels).
- The analysis shows that customers' discretionary spending has a greater economic impact per euro of spend than spending by the hotels. Every euro spent by the hotels generates €0.57 in further economic impact in Cyprus compared to €0.65 for every euro of discretionary spend by customers. This is because hotels and customers spend money on different items, which results in a different overall impact.
- Taken together, the indirect economic impact (€11.9m) and induced economic impact (€6.7m) exceed the direct economic impact of the hotels, the ground handler and the airport handler (€13.7m).
- Only 37% of the food and beverages bought by the hotels was reported to have been produced in Cyprus. In comparison, data from our input-output model (based on government statistics) suggest that, on average, 71% of purchases from the agricultural sector by businesses in the food, beverage and tobacco sector came from Cypriot suppliers. This suggests that hotels source proportionately less of their purchases of food and beverages from Cypriot producers than the national average.

Tax impact

TUI Group's activities also contribute to Cyprus's public finances through the tax payments they stimulate. The analysis, which is summarised in Figure 5, estimates the direct, indirect and induced tax payments in four categories:

- **Profit taxes** including corporation tax and capital duty;
- **Production taxes** including value added tax;
- **Property taxes** including immovable property tax and stamp duty; and
- **People taxes** including employer and employee contribution to income tax, social insurance and special contributions.

²⁵ Discretionary spend covers all guest spending activity that occurred outside of the hotel. Money spent in the hotel is considered separately to avoid double counting. The impacts of money spent in the hotel will be captured either by data collected from the hotel or in the supply chain of the hotels.

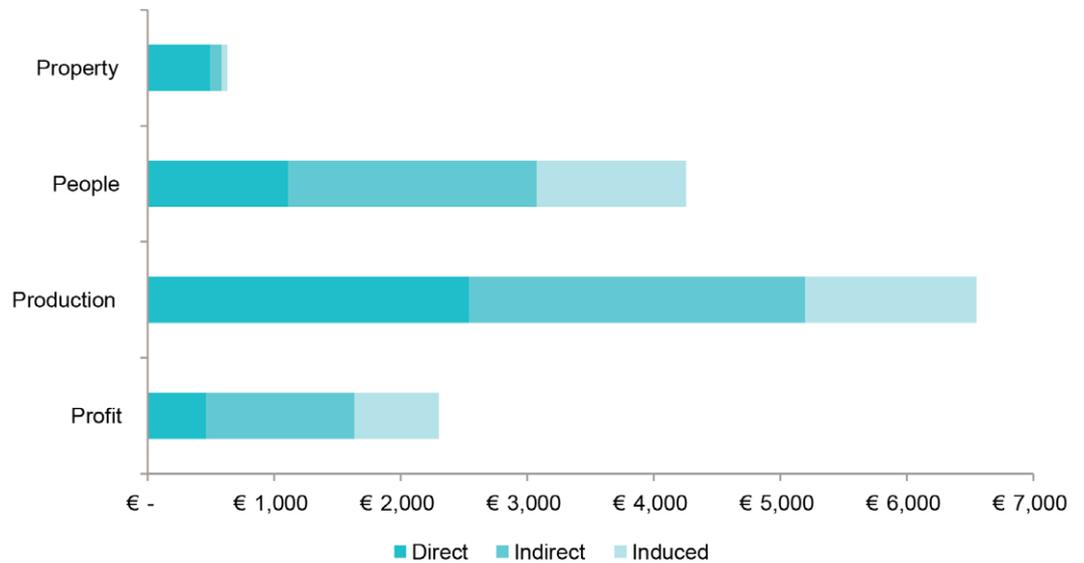


Figure 5: Summary of tax impact of TUI Group's activities in Cyprus in 2013 (€'000)



The total tax impact was €13.7m – equal to €25 per customer per night

Interpreting the tax impacts

The tax impacts can be interpreted as follows:

- The total tax impact was €13.7m – equal to €25 per customer per night.
- The largest direct tax impact is production taxes. The majority of this is through airport departure taxes paid by each customer leaving Cyprus. This accounts for €1.4m of the €2.5m direct production tax impact.
- The direct tax impact makes up 33% of the total tax impact whereas the direct economic impact makes up 43% of the total economic impacts. This suggests that TUI Group's activities in Cyprus are more effective at generating economic impact than tax impact. This is partly because the tourism supply chain employs relatively lower paid employees who pay a smaller proportion of their salary in taxes compared to other sectors in the economy.
- Spending with suppliers by the hotels, the ground handler and the airport handler and discretionary customer spend on other goods and services resulted in estimated indirect tax payments of €5.9m. Business spending drives €3m of this impact and discretionary spend by customers drives €2.9m.
- Production and people taxes are the most significant contributor to the induced tax impact of €3.2m. On average, each euro of employee spend generates €0.35 of induced tax impact.

- For every Euro spent by the hotels, the total indirect tax impact was €0.27 whilst every Euro of discretionary spend by customers outside the hotels was estimated to generate €0.33 in indirect tax impact.
- Discretionary customer spending is concentrated in sectors that have supply chains which add more value in Cyprus and, therefore, generate larger tax impacts per Euro spent than spending by the hotels.

As illustrated in Figure 6, the results of the economic and tax analysis explored above highlights two main opportunities for improving impacts in these two quadrants.

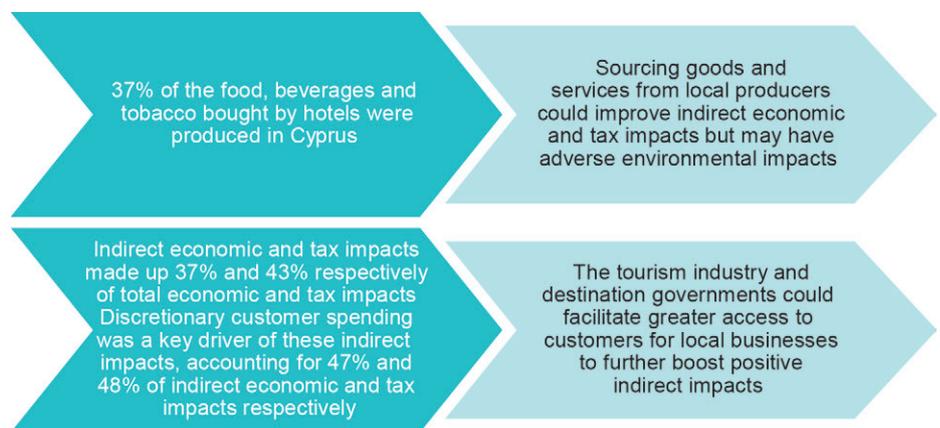


Figure 6: Opportunities to improve economic and tax impacts

Environmental impact

TUI Group's activities also impact the Cypriot environment. The environmental analysis estimates the direct, indirect and induced environmental impacts in six categories:

- **Greenhouse gases (GHGs):** The climate change impacts arising from GHGs;
- **Air emissions:** The health impacts associated with air pollution;
- **Waste disposal:** The climate change and disamenity impacts associated with waste disposal in landfills;
- **Land use:** The impacts of ecosystem degradation and reduced biodiversity;
- **Water pollution:** The health and eutrophication impacts associated with polluting releases to water bodies; and
- **Water use:** The environmental impacts associated with providing additional clean water (e.g. GHGs from desalination).

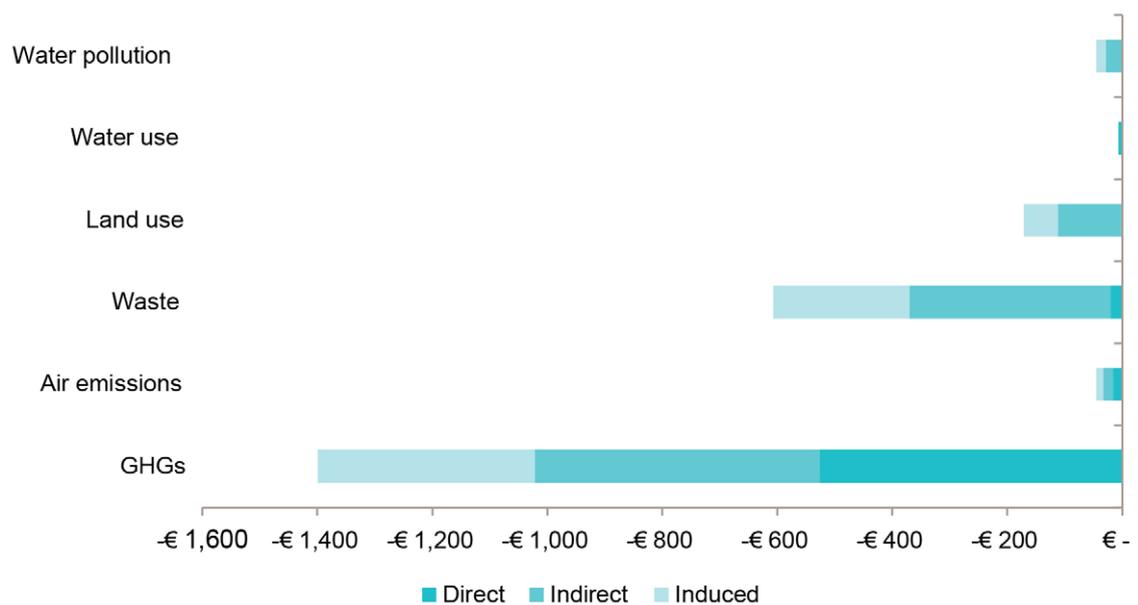


Figure 7: Summary of environmental impact of TUI Group's activities in Cyprus in 2013 (€'000)

Interpreting the environmental impacts

The environmental impacts can be interpreted as follows:

- The total environmental cost was €2.3m which equals a cost of €4 per customer per night. Although it is unsurprising to find that the direct environmental impact in the tourism sector is lower than resource-intensive sectors such as manufacturing, indirect and induced environmental impacts will still occur in the tourism sector as a result of supply chain activities and employee spending.
- The proportion of the total environmental impact made up of direct impacts is larger than the equivalent proportions from the economic and tax analysis.

The most significant environmental impact is that associated with GHG emissions:

- This impact comes at a total cost of €1.4m (or €2.50 per customer night), 40% of which is attributable to the indirect and induced impacts. Although out of scope for this pilot study, the direct emissions associated with tourists' flights to and from Cyprus would have contributed an additional environmental cost of €1.9m. If included in scope, the total environmental cost would increase to €4.2m. Flights would account for over 80% of this, and would be greater than the total GHG impacts of the eight hotels (€1.4m).

Waste is the second largest environmental cost at €608,000:

- Data from the hotels showed that, on average, hotels generate 1.8kg of waste per customer per night which exceeds the average Cypriot



Hotels generate
1.8kg of waste per
customer per night

resident (1.4kg of waste per day)²⁶. The hotels recycled 25% of their waste in 2013, which is slightly more than the Cypriot average of 20% in 2010 (the last year for which data are available). Hotels that recycle a higher proportion of their waste have lower environmental impacts. More significantly, 25kg of waste per customer night is produced in the supply chains of the hotel and other services the customers use in Cyprus.

The cost of land use is relatively small at €171,000:

- The most significant impacts occur in the agricultural sector in both the hotels and customers supply chains, where land has been converted from its natural state to produce food.

The environmental cost of water use in 2013 is small at €6,000.

- On average, the eight hotels used around 340 litres of water per customer night in 2013. Although this is less than the goal set by TUI Group of 400 litres per customer²⁷, it is more than the average Cypriot resident uses (264 litres per day)²⁸.
- Eight years ago, following a sustained drought, water shortages in Cyprus meant that water was shipped from Greece to satisfy both agricultural and tourist demand. This led to a perception that water use by the tourism sector could have significant adverse impacts on other parts of Cyprus.
- Analysis for the pilot study indicates much less pressure on water resources in 2013 because of increased rainfall and the development of desalination capacity. For example, the proportion of domestic water demand satisfied by desalination plants decreased from around 70% in 2009 to 14% in 2013. This suggests that the use of water by the tourism sector in 2013 did not limit the ability of the rest of the population to source clean water. Nevertheless, water use will still need to be closely monitored as some availability challenges remain (e.g. water distribution in remote areas and use of groundwater from aquifers in the agricultural sector).

Impacts associated with air emissions and water pollution are relatively small:

- Altogether, the total environmental cost of air emissions and water pollution was €88,000.
- Electricity production is a significant contributor to air pollution. Although air pollution concentration levels in Cypriot cities regularly exceed the relevant limits set by EU Regulations, this cannot be wholly attributed to tourism which accounted for only 10.9% of total electricity demand in 2013.
- The cost of water pollution is minimal as none of the hotels in scope

²⁶ This is based on household waste data from Eurostat.

²⁷ Source: TUI Group sustainability strategy. <http://www.tuitravelplc.com/content/tui-travel-plc-launches-new-three-year-sustainability-strategy#commitments>

²⁸ Calculated by dividing total residential water consumption by the population of Cyprus using Eurostat data.

indicated that they made direct releases of potential pollutants found in sewage such as nitrogen and phosphorus into the sea or any other open or ground water courses.

As illustrated in Figure 8, the results of the environmental analysis identified two main opportunities for reducing environmental impacts in Cyprus.

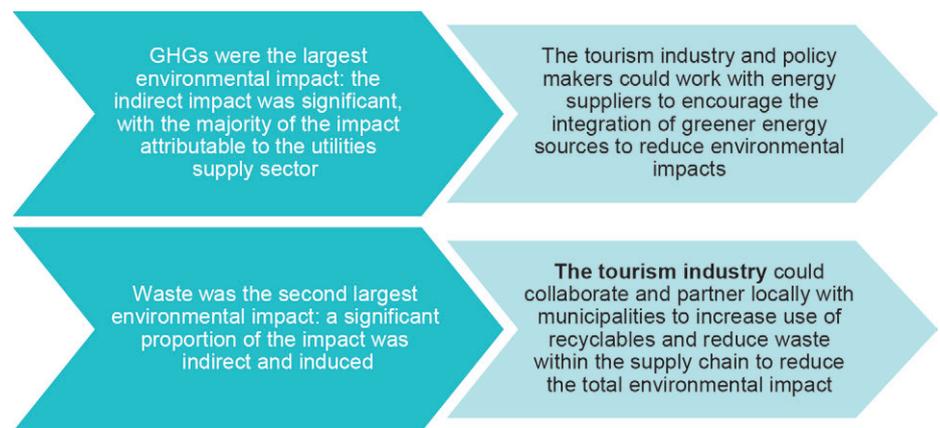


Figure 8: Opportunities to reduce environmental impacts



Social impact

TUI Group's activities also give rise to diverse social impacts. Given the limited time and resources available for the pilot, it was agreed that the social analysis would involve a high level assessment of many social impacts rather than an in-depth valuation of only a few to ensure that the spectrum of social impacts was covered. A full valuation would have involved more detailed primary data collection.

The pilot has covered:

- **Human capital** which assesses the value of the potential enhancement of knowledge, skills and competencies of individuals in Cyprus through the provision of work experience and work placements at hotels.
- **Livelihoods** which assesses the impact of:
 - **Avoided benefits payments:** The avoided cost of unemployment benefit payments by the Cyprus Government as a result of the direct employment supported by TUI Group and its customers;
 - **Employee wellbeing:** The value of the impact on the wellbeing of employees working at the hotels based on comparing their satisfaction with that of the working population as a whole in Cyprus;

- **“Living” wage:** The gap between the estimated living wage in Cyprus and the level of wages received by hotel employees paid below this level; and
- **Migrant workers:** The impact on the Cypriot economy in terms of lost GVA if all workers at the hotels, the airport handler and the ground handler had been Cypriot.
- **Public infrastructure and services** which assesses:
 - The costs of providing four additional public services - beach maintenance, public transport, waste collection and disposal and water - to meet the needs of tourists; and
 - The potential benefits to local residents arising from public sector expenditure to improve provision in response to tourism demand.
- **Cultural heritage** which assesses the potential additional costs of maintaining 11 UNESCO World Heritage Sites due to visitors, and the benefits from tourists contributing to the cost of maintaining each World Heritage Site through the payment of entry fees.

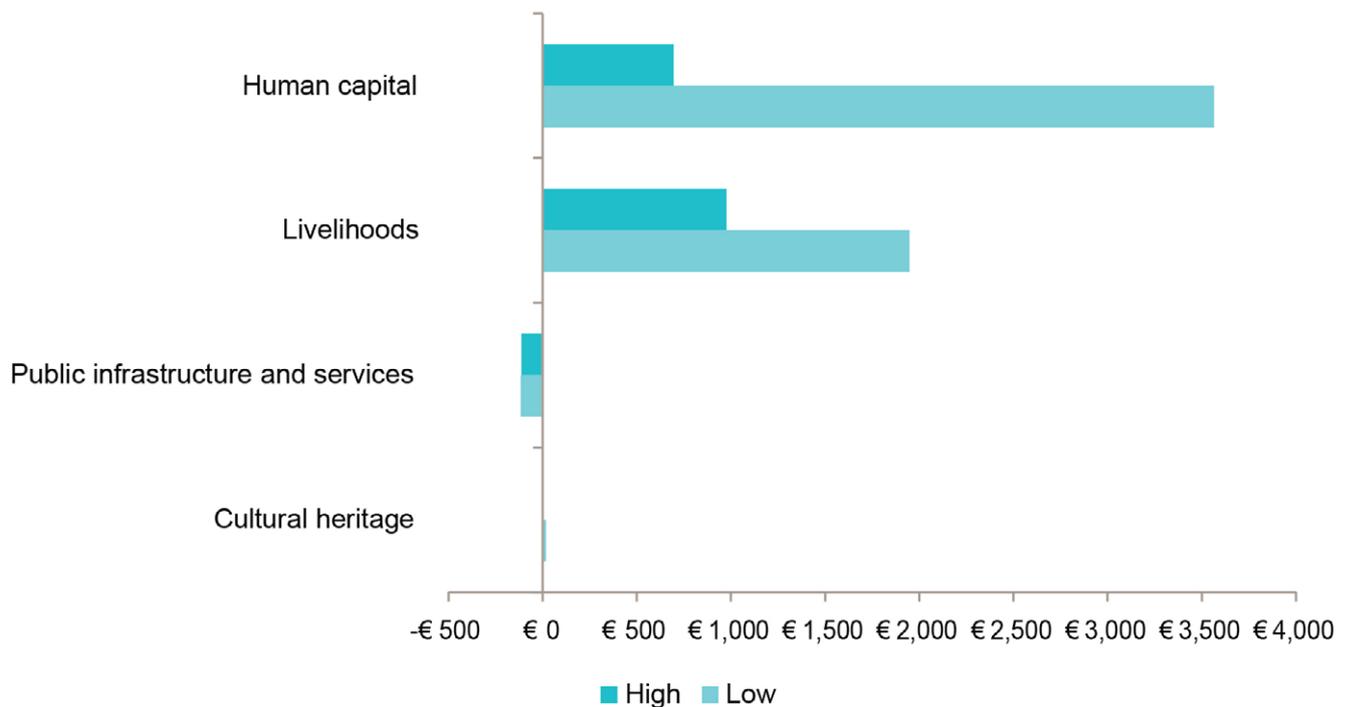


Figure 9: Summary of social impact of TUI Group’s activities in Cyprus in 2013 (€'000)



The most significant social benefit identified across all of the social impact areas is that associated with the provision of work experience

Interpreting the social impacts

The social impacts can be interpreted as follows.

Social impacts related to human capital were the largest identified in the pilot study:

- The most significant social benefit identified across all of the social impact areas is that associated with the provision of work experience, with an upper estimate of €3.4m. This highlights the tourism sector's significant role in developing skills in the Cypriot workforce, which is important in the context of the Cypriot economy where unemployment has increased in recent years, particularly among young people.
- The role of tourism in developing skills was acknowledged by hotel HR managers interviewed as part of the study. One manager stated that "what you do here [in the hotel], university can't give you". This emphasises the importance of experience gained on the job in driving career progression, in addition to formal skills and qualifications.
- Work placements, where a placement is a condition of an individual's degree, yielded the highest social impact per person (€8,800 per work placement student). However, its relatively small overall impact is primarily driven by the small number of Cypriot work placement students benefitting at each hotel.

Impacts related to livelihoods were the second most significant:

- The largest social impact related to livelihoods is the avoided benefits payments with an upper estimate of €2.1m. The vast majority of the impact arises from the employment of full-time staff. Where hotels employ staff on a seasonal basis, the longer the contracts of seasonal employees, the greater the benefits payments avoided.
- Employee wellbeing was the next largest social impact with an upper estimate of €760,000. The wellbeing of the hotel employees surveyed compared favourably to the average across Cyprus in 2011 (the latest year for which data are available). Employment in the tourism sector is often characterised as having a high staff turnover which is seen as linked to unfavourable working conditions such as shift patterns and working on unsociable hours. The survey results, however, suggest that even if working conditions are challenging, other factors mean that employees in the sector do not experience poorer levels of life satisfaction.
- We estimated a "living wage" in Cyprus based on the existing Cypriot minimum wage recognising that Cypriot minimum wage legislation only applies to certain occupations which do not include the majority of hotel employees²⁹. In practice, hotel employees often receive benefits in kind, including accommodation. We, therefore, adjusted the Cypriot minimum wage downwards to reflect the value of these

²⁹ The occupations the Cypriot minimum wage legislation applies to are: sales staff; clerical workers; auxiliary healthcare staff; auxiliary staff in nursery schools, crèches, and schools; security guards; caretakers; and cleaners.

benefits in kind to estimate the earnings equivalent to the “living wage”. Slightly less than 10% of 600 or so responses to the survey of employees in the hotels in Cyprus indicated that their earnings were less than our estimate of the earnings equivalent to the “living wage”. All of these employees indicated that they received some form of benefits in kind from the hotels, including accommodation, meals, transport and uniforms although it was unclear whether they had included the value of these benefits in kind when providing their monthly earnings figure and what value they had ascribed to these benefits. Thus, further investigation is ideally required and this issue of the living wage should not be overlooked in future studies.

The impacts of TUI Group’s activities on public services and infrastructure were relatively low:

- The cost to the taxpayer of providing public services to TUI Group’s customers is around €0.20 per customer night. This is low when compared to the €25.20 per customer night generated in tax contributions by TUI Group customers.
- The small size of the impacts across the different service areas is partially driven by the fact that TUI Group’s customers in the eight hotels in scope made up a very small proportion of the total number of visitors to Cyprus in 2013. When all international visitors to Cyprus are combined, TUI Group’s customers in these hotels only account for 2.5%.

The social impacts related to cultural heritage were the smallest:

- The impact of TUI Group’s activities on cultural heritage in terms of both social cost (€18,600) and social benefit (€1,500) is small relative to the other social impacts assessed.
- The low cost and benefit values reflect the small number of TUI Group customers visiting the World Heritage Sites in question, both independently and as part of organised tours. TUI Group or the ground handler would have to send more than 20 times the current number of customers to these sites before the social cost becomes comparable to the other social costs estimated in the pilot. The social benefits, from tourists contributing to the cost of maintaining each World Heritage Site, were also largely determined by whether sites charge entry fees or not.

As illustrated in Figure 10, the results of the social analysis described above identified three main opportunities for improving social impacts in Cyprus.

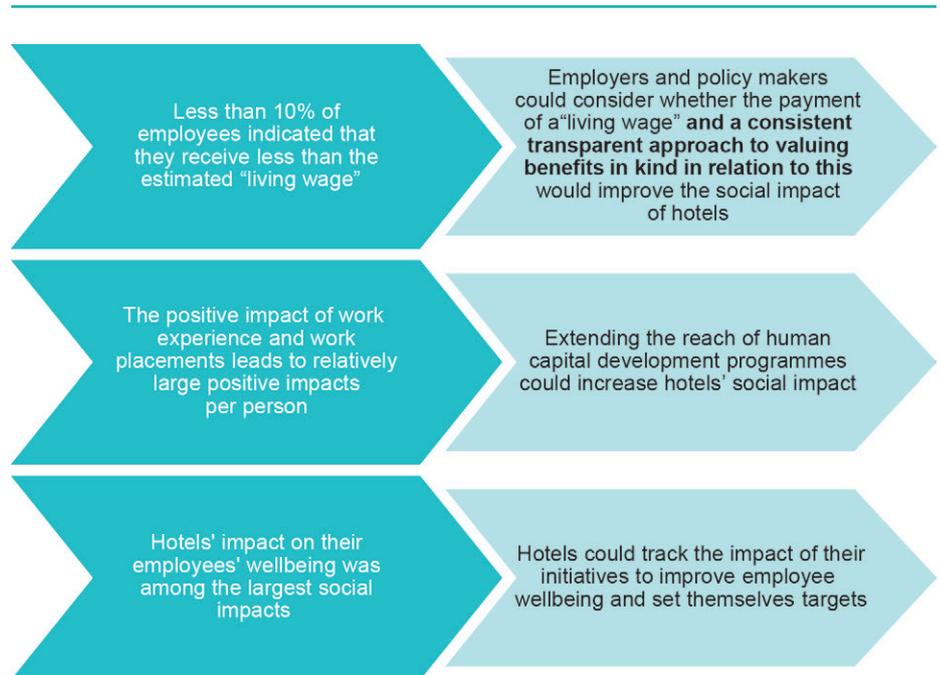


Figure 10: Opportunities to improve social impacts



How could the pilot study be enhanced?

The pilot study could be developed in several ways from a destination management perspective:

- Additional work could be conducted to assess all the impacts of different types of visitor to Cyprus, for example the impacts associated with different board bases and different accommodation types. This would enable a more informed discussion of the overall costs and benefits of different types of visitor to Cyprus.
- Further analysis of the spending by suppliers to the hotels, the ground handler and the airport handler would provide a more detailed picture of their impacts in Cyprus. This would allow the identification of specific sourcing opportunities which might result in greater overall benefit the Cypriot economy.
- Improved data availability and quality in certain areas would enhance the robustness of the analysis and support monitoring of the impact over time. For example, the hotels could seek to capture better data on their procurement of local goods and services and the quantity of waste they send to landfill and recycle. They could also collect better data related to their employees, such as the value of the benefits in kind they provide as part of the reward package and where employees go on to work when they leave employment at the hotels.



Exit surveys could also be used to develop a better understanding of visitor attitudes

Potential policy interventions

While the pilot study did not specifically examine the potential role of government in improving the tourism's sector's impact, it identified a number of areas where either the Cyprus Government or the municipalities could, subject to further investigation, potentially work with tour operators to improve the positive impacts of tourism and reduce their negative impacts. These areas include:

- Development of stronger local supply chains with greater capacity to deliver higher quality and potentially more diverse Cypriot products and services to meet the needs of the sector and improve their economic and tax impacts;
- Provision of incentives for Cypriot businesses, particularly hotels, to stimulate investment in energy efficient new technology during renovation/construction to reduce the sector's environmental impact;
- Integration of skills required for careers in tourism into the Cypriot national curriculum and formalisation of work experience and work placement programmes to improve human capital impacts further;
- Improved data from regular visitor exit surveys to capture the habits of visitors to Cyprus, including their spending patterns, use of cultural heritage sites and public infrastructure and services, to inform more robust impact analysis. Exit surveys could also be used to develop a better understanding of visitor attitudes and demand for local products and services; and
- Management of the Cypriot tourism development strategy based on an informed understanding of the different contributions or impacts of different types of visitor.



WHAT IS THE FUTURE FOR IMPACT MEASUREMENT IN TOURISM?

The pilot study reported in this paper was a collaborative effort between TUI Group, the Travel Foundation and PwC which represents a ground-breaking assessment of the impacts of tourism on a destination.

This is the first application of a holistic approach to measuring the economic, tax, environmental and social impacts in the tourism sector. There are no studies against which it can be compared. The results are a snapshot based on impacts occurring in a single year (2013); they provide a benchmark for future projects and contribute new evidence about the impact of tourism in destinations.

All parties have significantly built their knowledge and learned valuable lessons about the overarching process of applying impact measurement. The lessons support the wider application of impact measurement in the tourism sector in other destinations and to different tourism activities. This section explores these lessons from two perspectives:

- The application of impact measurement by the tourism sector; and
- The management of impact by the tourism sector.

Lessons learned – applying impact measurement

The pilot study has demonstrated that it is possible to measure and value the wider impacts of tourism in a more holistic way than has been done to date. Applying impact measurement brings three important benefits.

First, as in this pilot study, the initial step to conduct impact measurement is to **develop a baseline**.

- The baseline has the potential to provide new insight into the impacts generated by tourism activities. The results may be unexpected and contrary to existing perceptions. For example, in the pilot study, the extent to which the positive economic and tax impacts exceed the societal costs of the environmental impacts within the Cypriot context for 2013 was surprising.
- Performing a baseline also provides the starting point against which changes and progress can be tracked over time through regular monitoring and updates and a potential comparator for similar studies in other locations.

Second, impact measurement enables organisations to **identify the significant impacts** arising from tourism activities.

- Holistic impact measurement enables the different stakeholders in the tourism sector, such as destination governments, to identify which impacts are the most significant and potentially demand the most attention.



It should be possible to measure the economic, social, environmental and tax impacts of different types of tourist or tourism activity

- The pilot study has shown that it is possible to estimate the varied impacts, positive and negative of tourism. It has also shown that it should be possible to measure the economic, social, environmental and tax impacts of different types of tourist or tourism activity.
- However, it should be re-emphasised that the impacts estimated in the pilot study relate to a single year. Even though the value of an impact may be small and thus appear immaterial in a particular year, it may build over time. This cumulative effect could become significant if it is persistent and its impact reaches a tipping point (e.g. small but sustained environmental impacts over time may eventually alter the attractiveness of the destination in the eyes of potential visitors).

Finally, the application of holistic impact measurement can help organisations to **understand the drivers of positive and negative impacts** in terms of activities and stakeholders.

- The process of gathering the information needed to understand an organisation's holistic impact can be beneficial in understanding the tourism supply chain. For example, for tour operators, it requires them to investigate and have visibility of their supply chain beyond the suppliers they directly buy from to see what the indirect impacts are and how they could be influenced.
- Applying impact measurement enables organisations to identify and understand the activities and parts of the value chain which drive different impacts. For example, the pilot study shows that a large proportion of the impacts are driven by activities in the supply chain and as a result of customer and employee spending.

The pilot study applied impact measurement to a single country in a single year from the point of the tourist's arrival to the point of departure. There is, therefore, considerable scope to develop, refine and extend the application of impact measurement. For example, future studies could consider applying impact measurement to:

- a more detailed analysis of potential key areas (e.g. food and beverage spending by hotels);
- more or different areas of the tourism value chain (e.g. to include the impact of flights to and from a destination);
- more or different areas of the hotel life cycle (e.g. to include the construction, refurbishment and demolition of hotels in a destination); and
- other destinations.

Lessons learned – managing impact

Once impact measurement has been applied, its results can provide the basis with which to manage the impacts of tourism in a holistic manner. The pilot study shows how a better understanding of impacts can allow impacts to be better managed in the following ways:

Cross sector collaboration

Impact measurement highlights the need for collaboration between government, tour operators, local businesses, NGOs and other stakeholders to ensure impacts are sufficiently managed. The pilot study identified four key lessons about collaboration to address the impacts and opportunities presented:

- **No one organisation can act alone to deliver sustained, positive economic, tax, social and environmental impacts in a destination.** Instead, collaboration is required between key stakeholders in order to achieve better outcomes for stakeholders.
- **The pilot showed that understanding and influencing the impacts arising throughout the supply chain and from customer and employee spend is important.** As a result, effecting lasting and meaningful change for the good of local communities, local businesses and international tourism companies requires a collective effort between key stakeholders. This will ensure such impacts are understood and managed.
- **Destination governments in particular have an important role to play in creating and maintaining a collaborative and enabling policy environment.** For example, they can facilitate the development of relevant skills (business, financial and service skills) and entrepreneurship within local communities.
- **Destination governments can also play a role in building sector consensus** regarding the types of tourism that contribute to the most positive overall impact and, subsequently, enabling and encouraging these types of tourism to develop.

Strategy and performance management

The pilot study generated data and learnings that can inform strategic planning for destination governments and tour operators alike. By understanding the significant impacts and their drivers through impact measurement, destination governments and tour operators can actively build and implement strategies to manage their total impact.

- **The results of impact measurement can be used to inform the sustainability and development plans of municipal and national governments.** For example, national governments could apply impact measurement to understand better where leakage from the economy is occurring and, therefore, prioritise areas for focus (e.g. local sourcing and development of authentic, locally produced tourist offerings). This could inform strategies at the municipal level for increasing the capacity of local businesses and the range and quality of goods and services to meet tourism needs, improve the attractiveness of the destination and the quality of tourist experience outside hotels. This in turn could increase customers' discretionary spend. As noted above, impact measurement has the potential to help destination governments understand which types of tourism and tourists have the potential to add the most value to their destination. This is a potentially powerful basis for developing tourism strategy and policy.



Impact measurement can help to inform sustainability strategies

- **Destination governments should consider collecting data to improve their understanding of tourist spending patterns and the potential for increasing tourist spend in the local economy.** This data collection effort could include elements such as: the proportion of tourist spend on local goods and services; potential tourist goods produced in the destination, and what tourists value about the destination and would like to spend more on. This effort would support the wider application of impact measurement in the sector and the development of destination strategies to increase the positive economic impact of tourism.
- **For tour operators, impact measurement can help to inform sustainability strategies which play to their core strengths.** They should look to maximise the wider economic and tax benefits that a well-run sustainable tourism operation can bring, whilst ensuring that impacts are measured and managed over time to the benefit of local businesses, communities and the environment.
- **Impact measurement can inform effective target setting and decision-making.** The results of impact measurement studies can be used to inform destination choice and to set impact-based performance standards for operations within a given destination. The value of the economic, tax, social and environmental impacts could be used to set management targets or quantified impact ‘thresholds’ (i.e. maximum or minimum “bearable” thresholds of impact for any given impact area).

Communications & engagement

The tourism value chain involves, and depends on, many industries. The outputs of impact measurement can be used to facilitate cross-sectoral communication and collaboration which is required for sustainability initiatives to succeed.

- **The results of impact measurement can enable destination governments to engage tourism stakeholders, encouraging and improving relationships within the sector.** For example, it could enable governments to be more consistent and supportive in their messaging to local businesses on the opportunity presented by working with the tourism sector.
- **For tour operators, understanding the scale and pattern of their overall impact can enable them to communicate more effectively to their stakeholders,** including destination governments, about their role in the local community and economy.

Standard setting

The pilot study has shown that impact measurement could be used to inform the work of standard setters in the tourism sector such as the GSTC and international policy making and funding institutions (including the World Bank and UNEP).

- **Impact measurement could help to enhance and complement the existing indicators within destination management standards**



for sustainable tourism such as those developed by the Global Sustainable Tourism Council. Impact measurement against these indicators could then be used by destinations as evidence that they are meeting internationally recognised standards. For example, this could be applied to metrics relating to:

- support for local businesses through local sourcing and facilitating customer spend in the local economy;
 - wider economic and / or tax contributions;
 - human capital development – skills development and progression;
 - employee life and job satisfaction; and
 - indirect environmental impacts resulting from Tier 2 supplier operations.
- **Holistic impact measurement can also facilitate the development of a common framework to enable more useful and more consistent data collection internationally.** This would support future investigation and measurement of tourism impacts and enable easier comparability between destinations. A consistent and internationally recognised measurement and understanding of overall impact could then be used to support the sustainability credentials of a destination and, potentially, as a source of competitive advantage.

Box 1: What benefits has the pilot study brought to TUI Group

This Travel Foundation project to trial PwC's Total Impact Measurement and Management (TIMM) methodology on the impact of 60,000 TUI Group holidaymakers to Cyprus stimulated a range of questions and learnings which TUI Group aims to investigate further and where appropriate integrate into business operations, in areas such as:

- Development of indicators to measure performance of suppliers which span not only environmental but also socio-economic factors (i.e. such as those relating to local sourcing, development of human capital, and employee wellbeing)
- Analysis of total impact in other destinations and in other product areas – particularly in relation to new destination operations and investments
- Introducing the concept of Total Impact Measurement and Management into our engagement with national and regional governments, customers, colleagues and the wider industry
- Influencing the future direction of TUI Group's programme of practical destination projects with communities, NGOs and other stakeholders

Box 2: Benefits of the pilot study for the Travel Foundation

Trialling a “big picture” approach to measuring and understanding destination impacts has helped the Travel Foundation shape both its own understanding and its approach:

- By going beyond the usual arrival and spend metrics and focusing on impacts, we’ve shown the value of measuring what really matters. This will help us to establish impact assessment as a powerful tool to inform effective tourism planning.
- By undertaking the practical side of data collection, we have a better understanding of what is available and useful. This means we can better support tourism stakeholders to develop and implement effective measurement frameworks.
- We can build on the experience gained in this pilot to develop our approach to measuring and managing impacts. For instance, we hope to further explore tourism’s potential to protect important habitats that are also “attractions”, and consider practical and meaningful ways to measure social impacts.
- Getting a better overall picture of the tourism sector and its links and dependencies across the supply chain means we can provide a more sophisticated interpretation of issues affecting, or caused by, tourism. This means we can better anticipate the likely trade-offs and unintended consequences of proposed actions.
- The results of the pilot clearly show the need for cross-sector collaboration to measure impacts and develop and implement tourism management plans. As an independent charity we are not affected by vested interests or commercial rivalry, and so we are well-placed to facilitate this.



What comes next – how can impact measurement be applied more widely to the benefit of destinations and the tourism sector?

This pilot application of a holistic impact measurement approach has demonstrated its potential value for the future of sustainable tourism. Impact measurement can provide invaluable information for destination governments and tourism businesses alike which can then be used to manage tourism operations in manner which benefits the economy, environment and society. Without being able to understand, and subsequently measure and manage, tourism’s true impacts over time, the very value on which the sector depends is at risk.

The tourism sector needs to consider the implications of impact measurement for themselves and their organisations. The Travel Foundation is keen to see a wider collaborative effort to build a foundation of tourism activity and impact data, to apply impact

measurement in a consistent way within tourism, and to build on existing work to set meaningful standards and targets for sustainable destinations and tourism operations.

In summary this would involve destination governments, tourism businesses and NGOs as well as standard setters recognising the value of impact measurement and working together to:

- Test impact measurement approaches in a wider range of contexts and then share learnings from this;
- Develop a more common and robust approach to data collection;
- Develop and share new best practices for impact management in specific areas;
- Integrate impact measurement into sustainable destination management strategies, tourism operation standards and sector targets.



Acknowledgements

Advisory Panel

Throughout the lifetime of this project, an Advisory Panel has provided oversight and critical review of our work. The Advisory Panel comprised Professor Harold Goodwin, of Manchester Metropolitan University, providing both academic and practical perspectives; Noel Josephides, the Travel Foundation Chairman providing a specialist tour operators and industry perspective with expert knowledge of Cyprus and John de Vial, a Travel Foundation Trustee, providing a different perspective from his leadership background with larger travel groups. In addition, Garry Wilson gave expert advice and guidance as Managing Director – Product and Purchasing for the TUI Group. PwC and the Travel Foundation executives attended and supported the Advisory Panel meetings. The expert Advisory Panel had no executive authority or responsibility in relation to the project, but provided guidance and constructive critique during the development of the project and its strategy. The Panel was a forum for dialogue and to explore the issues identified through the experience of implementing a total impact assessment pilot project.

The project partners would like to thank the Advisory Panel for their invaluable input throughout each stage of the project. The project partners would also like to thank the many Cypriot businesses and government organisations who supported this project by providing advice and data and by delivering and attending workshops.

APPENDIX 1 – BREAKDOWN OF PILOT STUDY RESULTS

Table 1 provides a breakdown of the total impact of TUI Group's activities in relation to its customers in the eight hotels in scope in 2013.

Table 1: Breakdown of total impact of TUI Group's activities in Cyprus in 2013 (€'000)

Quadrant	Impact	Direct	Indirect	Induced	Total
Economic	Profit, intangibles and investments	6,513	5,909	3,121	15,542
	Payroll	7,155	6,020	3,618	16,793
Tax	Profit	463	1,171	667	2,300
	Production	2,539	2,658	1,354	6,551
	People	1,109	1,966	1,181	4,256
	Property	494	90	46	630
Environment	GHGs	-526	-496	-377	-1,398
	Air emissions	-16	-17	-12	-44
	Waste	-20	-350	-237	-608
	Land use	-2	-110	-59	-172
	Water use	-6	-1	0	-7
	Water pollution	0	-29	-16	-44
Social	Human capital	696 – 3,564	N/A	N/A	696 – 3,564
	Livelihoods	976 – 1,948	N/A	N/A	976 – 1,948
	Public infrastructure and services	-112 – -116	N/A	N/A	-112 – -116
	Cultural heritage	0 – -17	N/A	N/A	0 – -17

Table 2 provides a breakdown of the total impact expressed per customer night.

Table 2: Breakdown of total impact of TUI Group's activities in Cyprus in 2013 (€ per customer night)

Quadrant	Impact	Direct	Indirect	Induced	Total
Economic	Profit, intangibles and investments	11.82	10.73	5.67	28.22
	Payroll	12.99	10.93	6.57	30.49
Tax	Profit	0.84	2.13	1.21	4.18
	Production	4.61	4.83	2.46	11.89
	People	2.01	3.57	2.14	7.73
	Property	0.90	0.16	0.08	1.14
Environment	GHGs	-0.95	-0.90	-0.68	-2.54
	Air emissions	-0.03	-0.03	-0.02	-0.08
	Waste	-0.04	-0.64	-0.43	-1.10
	Land use	0.00	-0.20	-0.11	-0.31
	Water use	-0.01	0.00	0.00	-0.01
	Water pollution	0.00	-0.05	-0.03	-0.08
Social	Human capital	1.25 – 6.47	N/A	N/A	1.25 – 6.47
	Livelihoods	1.77 – 3.57	N/A	N/A	1.77 – 3.57
	Public infrastructure and services	-0.20 – -0.21	N/A	N/A	-0.20 – -0.21
	Cultural heritage	0 – -0.03	N/A	N/A	0 – -0.03



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