



KPMG ECONTECH

# New Tourism Research Capability Analysis

This report was prepared for the  
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Tourism

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ADVISORY

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## **Glossary**

ABS – Australian Bureau of Statistics

ADS – Approved Destination Status

BITR – Bureau of Infrastructure, Transport and Regional Economics

BHM – Brand Health Monitor

IVS – International Visitor Survey

NTAF – National Tourism Accreditation Framework

NVS – National Visitors Survey

OAD – Overseas Arrivals and Departures

STCRC – Sustainable Tourism Cooperative Research Centre

TA – Tourism Australia

TRA – Tourism Research Australia

VPS – Visitor Profile and Satisfaction program

## **Contents**

Executive Summary	2
1 Introduction	5
1.1 Report structure	5
2 Background	6
3 Current Tourism Industry Research Capability	7
3.1 Tourism Research Australia	7
3.2 Tourism Australia	10
3.3 Australian Bureau of Statistics	12
3.4 Department of Resources, Energy and Tourism	14
3.5 Other Federal Government agencies	15
3.6 State Tourism Organisations	15
3.7 Industry organisations and associations	18
3.8 Sustainable Tourism Cooperative Research Centre (STCRC)	19
3.9 Commercial business analysts and market researchers	20
3.10 Overseas tourism research agencies	21
4 Research Needs of the Tourism Industry	24
5 Costs and benefits of closing the research gap	30
5.1 Returns to publicly-funded research and development	30
5.2 Returns to current tourism research	31
6 Assessing Market Failure in the Provision of Research for the Tourism Industry	34
6.1 Market Failures	34
6.2 Addressing Market Failures	35
7 Public Provision of Research for the Tourism Industry	39
8 Appendices	42
8.1 Summary of TRA Initiatives (since formation)	42
8.2 Potential ABS indicators for tourism activity	43
8.3 Industry Organisations and Associations	45
8.4 Overseas Research Tourism Agencies	48
8.5 Rates of Return to publicly funded research	54

## Executive Summary

Early in 2008, the Minister for Tourism, the Hon Martin Ferguson MP, announced the development of a National Long-Term Tourism Strategy (the Strategy). The Strategy aims to strengthen the tourism industry's supply-side capacity and maximise the net economic benefits of tourism to the Australian economy.

The National Tourism Strategy Steering Committee (the Steering Committee), was established to provide industry input into the development of the Strategy. The Steering Committee has now delivered its report, *The Jackson Report*, to the Minister. A key recommendation of the Steering Committee report is the establishment of new supply-side research capability for the tourism industry, to complement existing demand side research delivered through agencies such as Tourism Australia (TA).

KPMG Econtech's analysis began with a review of the current research capabilities of the tourism industry in Australia. This survey identified that much of the research that is currently undertaken is focused on the demand side of the tourism industry. Some of the major contributions include Tourism Research Australia's (TRA) publication of the International Visitor Survey (IVS), the National Visitor Survey (NVS), tourism industry performance reports, online data services, the Tourism Forecasting Committee (TFC) forecasts, economic analysis and strategic reports. The tourism industry also has research provided by the Australian Bureau of Statistics; TA; the Department of Resources, Energy and Tourism; State Tourism Organisations; Industry Organisations and Associations and Commercial business analysts and market researchers.

The review also considered a number of overseas tourism research agencies. Of the countries considered, New Zealand and Canada appear to have a broad range of research capability that addresses the demand and supply side, as well as the areas of policy development, industry development and marketing.

Following this review of the current tourism-research capabilities in Australia and overseas, KPMG Econtech identified several research gaps. The key research gaps identified include industry supply-side research, economic modelling, visitor satisfaction research at the national level and competitor intelligence. The aforementioned research areas are required to have a complete view of the tourism industry value chain, which is needed to inform policy, industry-development initiatives and marketing strategies. To develop Australia's tourism industry, it is important that the focus of these three functional areas is closely aligned.

Prior to the commitment of resources to fill any identified gaps in tourism industry research, the benefits of the proposed action must be measured against the costs. A 2006 study by the Department of Education, Science and Training (DEST), highlighted that there is a benefit to research already conducted into the tourism industry. The DEST study indicates that the returns to closing the research gap identified above are likely to be positive. However, given the competition for investment funds and without more detailed research, it is difficult to determine whether returns to tourism research provide the highest return for each dollar invested.

Although the benefits to tourism research exceed the costs, the existence of a research gap indicates that the private market has under-provisioned research into the tourism industry. This constitutes a market failure, as the outcome of the private market has not resulted in economic efficiency. In particular, market failure occurs in those instances where individuals are not able to be excluded from reaping the benefits of the good once provided (**non-excludable**), and where the consumption of the good by one individual does not diminish the benefit enjoyed by others (**non-rival**). There exists a continuum of goods with varying degrees of excludability and rivalry. The table below simplifies this continuum.

Typology of Goods		
	Rivalrous	Non-Rivalrous
Excludable	Private good	Club good
Non-Excludable	Common property resource	Public good

Source: Hindriks, J., and Myles, G.D., “Intermediate Public Economics”, 2006

Importantly, the method by which market failure in tourism research can be addressed depends on the extent to which it is non-rival and non-excludable. As shown in the table above, a public good has both these characteristics, which means that it suffers from the free-rider problem, where individuals rely on others to provide the service and so it never ends up being provided by the private market. The closer that tourism research is to a public good, then, the more it will suffer from the free-rider problem, and the more justifiable public provision of the service becomes. There are a number of characteristics of tourism research which mean that it may not always be classified as a pure public good, as explained below.

Some types of tourism research may be quite specific to a particular attraction. Thus the attraction that will benefit from the research most directly will have incentive to provide/fund the research itself since it will not expect the wider industry to provide the research. That is, it will suffer only minimally from the free-rider problem

In addition, tourism-industry research is to a certain degree excludable, since users can be charged for access to any research outputs, and refused access unless they pay. For example, industry operators may be able to form a club or industry organisation to provide such research, and only grant members access to the research. This already occurs to some extent in the tourism industry, with various tourism-related industry organisations producing research. However, given that clubs operate only for the benefits of members, it is unlikely that the club will focus on research that would lead to broader industry-wide benefits.

These characteristics of tourism research mean that there is an argument for government to fund research in those instances where the free-rider problem exists, or where research is likely to lead to industry-wide benefits. The key research gaps outlined above, fall within this category.

There are different methods by which the government can raise funds for the additional research. The government may be able to fund the additional tourism research by placing a levy on tourism-industry operators. The distortionary effects of taxation are potentially minimised by focusing the tax base to those who directly benefit from the research. In addition, by focusing the burden of funding the research to those who directly benefit from the research, a levy is also more equitable. However, there are practical difficulties with this approach. This is

mainly due to the difficulties associated with identifying tourism-industry operators. Operators would have an incentive to under-report about the reliance of their business on travellers so as to avoid paying the levy.

The other option for raising funds would be to spread the cost over all individuals by raising taxes. Lifting taxes creates a distortion in the economy and reduces efficiency. This additional efficiency cost, is on top of the direct government expenditure on research and must be accounted for. However, the DEST study has shown that even after accounting for the distortionary effects of taxation, there are overall positive returns to publicly funded research (including tourism research), such as higher GDP, consumption and investment.

# 1 Introduction

On the 8th of May 2008, the Minister for Tourism, the Hon Martin Ferguson MP, announced the development of a National Long-Term Tourism Strategy (the Strategy) aimed at strengthening the tourism industry's supply-side capacity and maximising the net economic benefits of tourism to the Australian economy. The National Tourism Strategy Steering Committee (the Steering Committee), established by the Minister to provide industry input to the development of the Strategy, has now delivered its report to the Minister.

A key recommendation of the Steering Committee report is the establishment of a new supply-side research capability for the tourism industry, to complement existing demand side research delivered through agencies such as Tourism Australia. The Recommendation is to:

*Develop a high-powered national research capability focused on tourism industry development, to complement the existing capability in demand-side research and statistics.*

In this context, the Department of Resources Energy and Tourism (DRET) has engaged KPMG Econtech to assist in the development of the National Long-Term Tourism Strategy. Specifically, KPMG Econtech has been engaged to conduct economic research and analysis on whether and to what extent, on public policy grounds, there is a need to commit additional public resources to fill identified tourism industry research gaps.

Prior to the commitment of additional public resources to fill any identified gaps in tourism industry research, the benefits of the proposed action must be measured against the costs. If the benefits exceed the costs, the next step is to consider how to fund this additional research. Specifically, this report discusses whether there is a market failure in the provision of tourism industry research which would justify government intervention.

## 1.1 Report structure

This report is structured as follows.

- Section 2 provides a brief background to the Strategy and the recommendations of the Steering Committee surrounding the area of tourism-industry research.
- Section 3 outlines the current tourism-industry research capability already available in Australia and overseas.
- Section 4 draws on the information gathered in Section 3 and identifies the research needs of the tourism industry.
- Section 5 presents past estimates of returns to publicly funded research, including tourism industry research.
- Section 6 assesses the various options for provision of tourism research in the context of market failure.
- Section 7 provides an argument for public provision of research in the tourism industry.

## 2 Background

Tourism is an integral part of the Australian economy and operates in a competitive global market. According to the Australian Bureau of Statistics Tourism Satellite Account, the tourism industry contributed some \$40 billion (3.6 per cent) to Gross Domestic Product (GDP) in 2007-08. In the same year, the industry provided \$23 billion (10.1 per cent) to Australia's total exports making tourism the largest services export industry. In order to maximise the net economic benefit provided by the industry, the Minister for Tourism, the Hon Martin Ferguson MP, announced the development of the Strategy. The Strategy is aimed at strengthening the industry's supply side capacity in order to meet future market demands.

The Steering Committee was established in 2008 to provide industry input to the development of the Strategy and deliver a long-term vision for the tourism industry. The Strategy will also establish a strategic rationale for consistent long-term policy engagement with the industry by successive governments. Chaired by Margaret Jackson AC, the Steering Committee provided the Minister with the Jackson Report on the 13<sup>th</sup> of June, 2009.

*The Jackson Report* outlines the current state of Australia's tourism industry and provides recommendations to address both the short-term and long-term challenges faced by the industry. In particular, the report identified that the industry is failing to recognise and capitalise on the opportunities in the current economic climate and the significant changes in the international market place. The report then outlines ten recommendations aimed at fundamental and sustained reforms to create a platform for Australia's long-term tourism future.

*The Jackson Report* identifies a need for the development of a national research capacity that focuses on tourism industry development and complements the current demand-side research and statistics that are available. It highlights a need for increased original research and a stronger link between market intelligence and product development for the commercial sector. The Steering Committee stresses the importance of having a practical research focus; one which can be used by tourism operators nationwide to innovate and grasp opportunities in the market place. A forum / medium is needed to distribute this research effectively to all relevant players along the distribution chain.

*The Jackson Report* recognizes that such a research capability will need to be sufficiently resourced and funded. Further, current entities providing the main sources of supply-side research need to work in partnership in order to maximise efficiencies and reduce the likelihood of redundant or competing research efforts. Finally, the research capacity should support policy development and advice to government on an ongoing basis.

## **3 Current Tourism Industry Research Capability**

This section profiles the research capability of organisations within the tourism industry, and determines whether the current research falls into the categories of policy development / industry development / marketing, and forms the basis for the Needs Analysis in Section 4. The information provided is based on publicly available information, such as that detailed on the relevant websites.

- Policy development – establishing an overarching framework which supports sustained tourism growth. Research will assist in developing the framework, identifying critical policy issues facing the Australian tourism industry and offer recommendations for future directions.
- Industry development – initiatives and programs that support and implement the abovementioned policies. Research will support the strategies identified in policy development.
- Marketing – anticipating and identifying the wants and needs of consumers, and promoting tourism products and services. Research will underpin product, brand and communications.

### **3.1 Tourism Research Australia**

#### **3.1.1 Background**

Tourism Research Australia (TRA) was established, concurrently with Tourism Australia's (TA) creation, to expand the wide range of activities that the Bureau of Tourism Research (BTR) was previously responsible for. TRA's focus is on producing and disseminating relevant research and insights to the tourism industry as well as providing research to underpin informed decision making.

TRA is to be re-integrated into the DRET. Going forward, the TRA research agenda will be overseen by a high level Advisory Board comprising the Secretary of the Department of Resources, Energy and Tourism; the Chair of Tourism Australia; representative from the Australian Standing Committee of Tourism, and industry. Where appropriate, the Advisory board would seek input from relevant unions. The role of the committee will be to establish the focus for the research agenda in the context of meeting the needs for industry development, policy development and marketing.

#### **3.1.2 Current Research**

The TRA's main services include publication of the International Visitor Survey (IVS), the National Visitor Survey (NVS), the Destination Visitor Survey (DVS) program (which includes satisfaction and region profiles), tourism industry performance reports, online data services, the Tourism Forecasting Committee (TFC) forecasts, economic and regional analysis and strategic reports. In addition, TRA also provides a range of specialist research services to the tourism

industry and support organisations including: conference papers and presentations, consultancy services, online data packages, publications, statistical enquiry services and more.

The outputs of the IVS and NVS are data outlined in the following table.

Outputs of the IVS and NVS	
International Visitor Survey (IVS)	National Visitor Survey (NVS)
<ul style="list-style-type: none"> <li>● Usual place of residence</li> <li>● Previous visits</li> <li>● Group tour</li> <li>● Travel party</li> <li>● Sources to obtain trip information</li> <li>● Purpose of visit and places visited</li> <li>● Transport and accommodation</li> <li>● Activities</li> <li>● Expenditure</li> <li>● Demographics</li> <li>● Impressions of aspects of Australia.</li> </ul>	<ul style="list-style-type: none"> <li>● Destination</li> <li>● Purpose</li> <li>● Transportation</li> <li>● Travel package</li> <li>● Sources to obtain trip information</li> <li>● Activities</li> <li>● Expenditure</li> <li>● Accommodation</li> <li>● Travel party</li> <li>● Demographics</li> </ul>

The above surveys deliver research that focuses on visitor behaviour – what visitors actually do pre and post trip. The IVS and NVS feed into the several other areas of TRA, including the Forecast and Tourism Satellite Accounts. Further, tourism operators, analysts and government agencies rely on this information to track industry performance trends. Inferences from these trends are relied upon by industry to:

- Predict the short-term market outlook (opportunities and risks);
- Identify visitor preferences.

In 2004 the Federal Government's Tourism White Paper provided additional funds to Tourism Research Australia for the development and implementation of a destination based survey program. The aim of the Destination Visitor Survey (DVS) program is to bridge the gap between the data provided from the NVS and the IVS and meet information needs at the local or regional level. Further, it provides the opportunity for regional tourism destinations to undertake research surveys specific to the destination and assist informed decision making to support growth of sustainable tourism products. The specific objectives of the surveys are to:

- Address unique local challenges and problems;
- Support growth and development of sustainable tourism; and
- Identify initiatives to make best use of local tourism resources.

Projects conducted within the DVS include the Visitor Profile and Satisfaction program (VPS) and Strategic Regional Research Projects (SRR).

The VPS program was developed in response to a number of industry requests. It coordinates specific projects to target destinations which are too small to be adequately covered, in terms of sample, in the NVS. While the national surveys provide a level of basic profiling information, there may not be significant detailed information that would be useful to local operators. These surveys are standardised and are produced for regional destinations on request at an extra cost.

The SRR focuses on issues that are impacting several regional destinations across Australia facing similar issues (e.g. decreasing caravan park supply, or tourism product distribution). Alternatively the projects may concentrate on a single region and have a very specific focus such as the development and marketing of a walking track.

Given the above, it appears that TRA’s primary research instruments could provide input for certain areas of the policy and industry development research areas.

### 3.1.3 Funding Arrangements

TRA is funded dually by the Federal Government.

TRA Research Funding	
Year	\$million
2004-05	5.1
2005-06	5.5
2006-07	5.4
2007-08	6.1
Source: Tourism Australia accounting data. Notes: Does not include industry contributed funding to this activity area.	

In a break with the previous approach between the Commonwealth and the States and Territories over funding of tourism statistics (approximate funding split of 50/50), TRA management now negotiates individually-tailored Service Level Agreements with the States/Territories for TRA services.

A summary of initiatives that have occurred since the formation of the TRA are summarised in Appendix 8.1. These include TRA online, timely regional tourism expenditure data, enhanced analysis of domestic tourism performance, the introduction of Destination Visitor Surveys, the development of measures of economic value, and forecasting research and development.

## 3.2 Tourism Australia

### 3.2.1 Background

In July 2004, TA was created by bringing together the collective skills and knowledge of four separate organisations: the Australian Tourist Commission; See Australia; BTR and the TFC. In addition to its oversight of TRA, TA operates a Consumer and Market Insights (CMI) team that consists of four people in the Strategy & Research division of TA’s Corporate Services Unit. The Tourism and Aviation Economics unit, and the Corporate Planning Unit reside within the Strategy and Research area of TA.

### 3.2.2 Current Research

CMI’s visitor research is quite different from, but complementary to, the research carried out by TRA. Its focus is on understanding the mindset of TA’s target consumers. Understanding

consumers and what motivates them to travel is an important element in the process of stimulating traveller demand for Australia as a leisure and business destination.

The types of projects which CMI manages fall into three broad areas:

- *Brand research* – continuous projects which provide ongoing diagnostics about the health of Brand Australia. This includes brand health metrics such as:
  - the purchase cycle of awareness, preference, intention in each source market;
  - where Australia sits relative to other destinations (i.e. our competitor set) in each of our source markets; and
  - the extent to which people's disposition towards Australia might change if they have seen campaign communication.

TA spends in the order of \$700,000 on its International Brand Health Monitor (BHM) and Anholt National Brands Index, and an additional \$100,000 on its Domestic BHM.

- *Campaign research* – continuous and ad hoc projects which are used to provide consumer-based insight towards the design and evaluation of the marketing campaigns developed for Australia. Projects include the following.
  - Campaign Development Research – using consumer research to identify the most compelling propositions and creative concepts which can be leveraged by TA at a global level but which also reflect local (regional) consumer needs and motivations. The expenditure on this project is approximately \$300,000 per annum.
  - Campaign Activity Evaluation – using consumer research to identify the extent to which the campaign delivers a measurable engagement with travellers based on creative objectives. The metrics evaluated include: who saw the campaign activity, what did it make them think about Australia as a leisure destination, and what did it make them do towards booking a trip to Australia. The expenditure on this project is approximately \$400,000 per annum.
- *Strategy research* – continuous and ad hoc projects which provide consumer-based evidence to help shape strategic objectives defined in TA's Strategic Annual Plan. Several projects fall into this category of research, but some examples include:
  - Digital Strategy Research – identifying the online behaviour of our target consumers to inform Digital Strategy of website and content development;
  - Indigenous Framework Research – understanding consumer and trade perspectives of the Indigenous Experience and provide input to TA strategy for helping stakeholders promote the experience to consumers domestically and internationally; and
  - Core Market segmentation studies – in depth attitudinal segmentation studies in 6 markets (in collaboration with the STOs).

- Australian experiences framework – Qualitative study looking at the key 7 Australian experiences in 4 markets (United Kingdom, France, China and New Zealand).
- Product Development Research – profiling the optimal bundle of tourism product relevant to Singapore and Germany and the Indian Activation Study (in collaboration with the STOs).

In summary, it appears that CMI's research projects usually focus on the demand-side potential of a market and how TA can best engage with these consumers. TA's CMI area provides limited supply-side insights.

The Tourism and Aviation Economics unit is also part of the Strategy and Research area of TA. The main functions of the group are as follows:

- Assessing the performance of TA and the tourism industry
- Analyses and insights to support the development of strategy across TA
- Assisting the preparation of presentations for TA personnel especially with key stakeholders
- Analyses to support the markets in working with airline partners
- Analyses to support external stakeholders.

The Corporate Planning unit within TA is responsible for strategy development and dissemination (Strategic Annual Plan, Annual Plan, Corporate Plan), business operations monitoring and evaluation and reporting such as the annual report. The unit also reports Tourism Australia's responsibility in delivering the Federal Government's White Paper initiatives.

KPMG understands that the CMI unit also undertakes competitor analysis on behalf of TA.

### **3.2.3 Funding Arrangements**

TA is primarily funded by the Federal Government and will receive ongoing funding of approximately \$137 million a year from 2008/09. In addition to the Federal funding, TA also receives some revenue from industry.

## **3.3 Australian Bureau of Statistics**

### **3.3.1 Introduction**

The ABS assists the Federal and State Governments, business and the community to make informed decisions by leading a high quality and objective national statistical service.

### 3.3.2 Current Research

According to a recent Inter-Departmental Committee paper, the key ABS sources for the tourism industry currently are:

- *The Tourism Satellite Account (TSA - 5249.0<sup>1</sup>)* – which presents estimates of the direct economic contribution of tourism to the Australian economy within the context of a satellite account linked to the Australian System of National Accounts;
- *The Survey of Tourism Accommodation (STA – 8635.0)* – which provides a measure of activity in short-term commercial accommodation in Australia; and
- *Overseas Arrivals and Departures (OAD - 3401.0)* – which measures the number and characteristics of Australian residents and overseas visitors arriving in, and departing from, Australia.

The paper also identified extensive data collected either in individual industry collections, or across the broader economy which can be used as indicators for tourism activity. These are outlined in Appendix 8.2.

The above table illustrated that much of the ABS' data is potentially under-utilised, and although some data are only partial measures of tourism, its use would add value in better understanding the supply-side of the tourism industry. The particular areas of focus which would best support "The Jackson Report" findings include:

- *Profitability and investment* – knowledge of current levels of tourism investment and profitability is important to understand the productive capacity of the industry and to determine where the best returns might lie or where there may be barriers to investment or profitability<sup>2</sup>. Current profitability and investment sources provided by the ABS include:
  - *The Tourism Satellite Account (5249.0)* provides annual data on profits measured by Gross Operating Surplus;
  - *Australian Industry (8155.0)* supplies annual data on industries ratio including profit margin and investment rate and industry estimates including gross fixed capital formation; and
  - *Private New Capital Expenditure and Expected Expenditure (5625.0)* offers quarterly estimates of new capital expenditure by private businesses for selected industries.

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<sup>1</sup> The number quoted after each publication relates to the catalogue number of the data as recorded by the Australian Bureau of Statistics.

<sup>2</sup> Source – *The Jackson Report*, September 2008.

- *Innovation* – the Australian tourism industry needs to become more digitally savvy, digital technologies are already playing an increasing role in tourism<sup>3</sup>. Current innovation sources provided by the ABS include:
  - *Innovation and Technology Update* (8101.0) uses information collected in the Business Characteristics Survey including innovation by employment size and drivers and barriers of information.
- *Labour market* – tourism is a major Australian employer. Accordingly, to survive and succeed, the tourism industry needs an adequate supply of appropriate labour<sup>3</sup>. Current labour market sources provided by the ABS include:
  - *The Tourism Satellite Account* (5249.0) provides estimates of tourism employment by detailed tourism industries;
  - *Counts of Australian Business Entries and Exits* (8165.0) offers detailed information on the number of businesses by detailed industry subdivision and class; and
  - *Average Weekly Earnings* (6302.0) and *Employee Earnings and Hours* (6306.0) contains information on earnings, hours paid for and selected employee and employer characteristics.

### 3.3.3 Funding Arrangements

The Federal Government funds ABS's tourism-related research needs and \$1.4 million a year has been made available for statistics work from 2008/09 over a four-year period. This funding is made available through a memorandum of understanding between the ABS and DRET for the STA and TSA.

It should be noted that the state level TSA has been produced by the Sustainable Tourism Cooperative Research Centre (STCRC), which has recently been unsuccessful in rebidding for previously obtained Federal funding.

## 3.4 Department of Resources, Energy and Tourism

### 3.4.1 Introduction

The Department of Resources, Energy and Tourism (DRET) provides advice and policy support to the Australian Government regarding Australia's resources, energy and tourism sectors. The

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<sup>3</sup> Source – *The Jackson Report*, September 2008.

Department develops and delivers policies to increase Australia's international competitiveness, consistent with the principles of environmental responsibility and sustainable development.

### **3.4.2 Current research**

The DRET Tourism Division's research area services the Minister and the Division with the regular provision of internal briefs, as TRA's IVS and NVS data is released. Similarly, the research area prepares briefs on any ABS data releases that include tourism components, e.g. Overseas Arrivals and Departures, Survey of Tourist Accommodation, National Accounts, International Trade in Goods and Services, etc.

In summary, the research area reviews and analyses the TRA, TA and ABS releases to identify their implications for the Australian economy.

### **3.4.3 Funding Arrangements**

Funding allocated to the research area of the Tourism Division is understood to be approximately \$1.7 million per annum, which is primarily to cover the cost of the STA and the expanded scope component of the TSA. The research and statistics team is comprised of two people.

## **3.5 Other Federal Government agencies**

Other Federal Government agencies provide research in areas that directly relate to the tourism industry. In particular the Bureau of Infrastructure, Transport and Regional Economics (BITRE) provides data on the demand for airline seats throughout Australia and the average pricing of air fares.

In addition the National Online Steering Committee undertakes cooperative market research on a range of topics, some of which relate to the tourism industry.

## **3.6 State Tourism Organisations**

### **3.6.1 Background**

Each State and Territory has its own State Tourism Organisation (STO's) to service the needs of each State or Territory. These include: Tourism New South Wales; Tourism Queensland; Tourism Western Australia; South Australia Tourism; Tourism Tasmania; Australian Capital Tourism; Tourism Victoria; and Tourism Northern Territory.

In addition to the STOs, some research would be carried out at a State level by other agencies, although the STOs are likely to provide the majority of the research generated.

### **3.6.2 Current Research**

A review of STO's research websites identified that the majority of their research publications relied on the TRA's IVS and NVS data. Other research presented by the STO's includes the STA and OAD ABS research and Department of Infrastructure, Transport, Regional Development and Local Government (Infrastructure) aviation research. Further, these research reports typically provide a high-level "snapshot" of state / territories overall and regional performance. Specific examples of non-TRA related research undertaken by the STO's are summarised below, based on a high level review of STO websites. Accordingly it is not an exhaustive list of non-TRA related research.

STO Non-TRA Related Research		
STO	Research	Includes supply-side research?
Tourism New South Wales	Project Cellar Door Consumer Research	No
	Wine Tourism Research Cellar Door Survey	Yes
Tourism Queensland	Product Distribution Channels for the Queensland Tourism Industry	No
	Domestic Market Segmentation Studies	No
Tourism Western Australia	Global Financial Crisis Report (impact on WA industry)	No
	Understanding the Caravan Industry in Western Australia	Yes
	Research into the Wildflower Tourism Industry	No
South Australia Tourism	Cellar Door Survey	No
	Consumer Segmentation Study	No
	Regional Branding Market Research	No
	Visitation to Major Attractions and Events	No
Tourism Tasmania	Mountain Bike Tourism Market Profile for Tasmania	Yes
	King Island Visitor Survey	No
	Tasmania Visitor Survey	No
Australian Capital Tourism	Event Research	No
Tourism Victoria	None reported on Tourism Victoria's website	
Tourism Northern Territory	Cruise Shipping	No
	Indigenous Cultural Education	No
	IPAT – Industry Performance Analysis for Tourism (online industry performance and benchmarking tool)	No

The STO's undertake customised marketing research; however, this is not disclosed on their websites. Examples of the type of research undertaken includes:

- Sectoral and regional analyses to support the development of sectoral plans and strategies;
- Investment research including concept proposals and sectoral investment opportunities;
- Analyses of brand and product strengths;
- Online performance and conversions;
- More detailed sectoral analyses of ABS supply side data;
- Input-Output (IO) and Computable General Equilibrium (CGE) modelling of specific activities;

- Consumer satisfaction research for specific destinations; and
- Aviation issues.

It is recognised that this type of research may be undertaken internally and cannot be published due to commercial and competition issues. A more detailed review of the research of the STOs would need to be undertaken to identify the full extent of this research. Further, the STO supply-side research that has been identified focuses on market niches. Although they do publish ABS' STA research which typically details room supply data and Infrastructure aviation data which details seat supply (or capacity) on specific routes (city pairs, e.g. Sydney and London) or between a state / territory and a source visitor market.

### 3.6.3 Funding Arrangements

STO's receive their funding from the State Government; however, their level of research funding is not disclosed in annual reports.

## 3.7 Industry organisations and associations

A number of key industry organisations were identified that produce tourism-related research and statistics. Details of these organisations, the type of research they produce and their funding arrangements are presented in Appendix 8.3 and summarised in following table.

Industry organisations and associations			
Organisation	Source of funding	Level of funding	Research focus
Tourism & Transport Forum (TTF)	Member funded	Undisclosed	<ul style="list-style-type: none"> <li>• Tailored tourism related research</li> <li>• For example: Convention and Exhibition Space in Sydney; and Australian Transport Capacity</li> </ul>
Business Events Council of Australia	Member funded	Undisclosed	<ul style="list-style-type: none"> <li>• Produced the National Business Events Study to outline the economic benefit of business events in Australia</li> <li>• Currently developing the Business Event Venue Performance Project</li> </ul>
International Congress and Convention Association	Member funded	Not disclosed	<ul style="list-style-type: none"> <li>• International rankings of countries and cities based on the number of congresses held and the number of delegates attracted</li> <li>• General research on changes in the global convention market</li> </ul>
Australian Tourism Export Council (ATEC)	Member funded	Undisclosed	<ul style="list-style-type: none"> <li>• Produced a number of tourism research reports including:               <ul style="list-style-type: none"> <li>- <i>Destination: Health - Australia and the global Medical Travel sector: Examines Australia's future in the global Health and Wellness travel market.</i></li> <li>- <i>The Missing Link: a paper outlining ATEC's concerns over the priority placed on tourism demand over supply</i></li> </ul> </li> </ul>
National Tourism Alliance (NTA)	Member funded	Undisclosed	<ul style="list-style-type: none"> <li>• Research arm presents and argues policy positions and options to the Government.</li> </ul>

Industry organisations and associations			
Organisation	Source of funding	Level of funding	Research focus
			<ul style="list-style-type: none"> <li>Key publications include: Future directions for the tourism industry (2009 – 2014); the Tourism White Paper; State of the Tourism Industry 2006; and Industry Submission on Tourism Shopping.</li> </ul>
Pacific Asia Travel Association (PATA)	Member funded	Undisclosed	<ul style="list-style-type: none"> <li>Produce one-off publications which appear to identify opportunities or gaps in the tourism market. For example: The Development and Future of Aviation Hubs in Asia; and Cairns - A Review of Increased Tourism Potential.</li> </ul>
World Tourism Organisation (WTO)	International	Undisclosed	<ul style="list-style-type: none"> <li>Released a set of general guidelines on Measuring Tourism Supply, which provides valuable information on the development of statistics about tourism supply and offers guidance for the completion of tables / outputs.</li> </ul>
World Economic Forum (WEF)	Member funding	\$33.8 million (FY08)	<ul style="list-style-type: none"> <li>Produces a number of one-off research papers / publications on tourism.</li> <li>For example: Growth via Travel and Tourism, The Travails of Travel and Tourism in India, and Tourism Competitiveness: Taking Flight.</li> </ul>
Organisation for Economic Co-operation and Development (OECD)	Country member funded	Undisclosed	<ul style="list-style-type: none"> <li>Focus for 2009/10: a study on evaluation in the field of tourism; a study on policies supporting tourism education and training; a publication analysing tourism trends and policies in member and non-member countries; a study on the integration of sustainability in tourism policies focusing on climate change; and a review of the tourism policy of Italy.</li> </ul>
Asia-Pacific Economic Cooperation (APEC)	Country member funded	Undisclosed	<ul style="list-style-type: none"> <li>Produces tourism publications, guides and manuals</li> <li>For example: The Tourism Impediments Study; Tourism Risk Management Guide; Best Practices in Sustainable Tourism Management Initiatives</li> </ul>

The organisations identified above play a role in both policy and industry development. In particular, the NTA has a key link between the tourism industry and the Australian Government.

### 3.8 Sustainable Tourism Cooperative Research Centre (STCRC)

STCRC was established under the Australian Government’s Cooperative Research Centres program in 1997, and is the largest dedicated tourism research organisation in the world, with \$187 million invested in tourism research programs, commercialisation and education since 1997. STCRC undertakes research into the strategic challenges facing Australian tourism and produces reports, information, tools and products to improve business practices and inform policy development.

STCRC’s objectives are to enhance:

- the contribution of long-term scientific and technological research and innovation to Australia’s sustainable economic and social development;

- the transfer of research outputs into outcomes of economic, environmental or social benefit to Australia;
- the value of graduate researchers to Australia;
- collaboration among researchers, between researchers and industry or other users; and
- efficiency in the use of intellectual and other research outcomes.

STCRC produces a number of reports and toolkits which assist in improving the supply side of tourism. As an example, these include:

- *Motel makeover guide*: enables accommodation owners and operators across Australia to improve star ratings and profitability through cost-effective, strategic renovations.
- *Stepping stones for tourism*: enables emerging Indigenous/Aboriginal tourism businesses to develop effective business plans by following a series of steps.
- *Farm and nature tourism*: enables prospective nature-based tourism operators to determine whether they have the skills or product likely to succeed in this highly competitive industry.

STCRC are currently in the process of developing a research report called: “*Global Tourism and Travel Distribution - changes, impacts and opportunities for Australian tourism*”. The purpose of this research is to provide a comprehensive and detailed analysis of how global tourism and travel distribution is evolving, where it is potentially heading and what the implications for Australian tourism are.

It should be noted that the state level TSA has been produced by the STCRC, which has recently been unsuccessful in rebidding for previously obtained Federal funding. The state level TSA is an important issue to all States and Territories given the economic data contained captured by the TSA.

STCRC’s bid for a third round of funding was unsuccessful, which could significantly impact on the quantity and quality of research outputs going forward. The STCRC is currently rebidding for funding in another round of government funding.

## **3.9 Commercial business analysts and market researchers**

### **3.9.1 Market researchers**

#### **Roy Morgan (RM)**

Roy Morgan produces two research instruments, the Holiday Tracking Survey (HTS) and Air Travel Index (ATI). An overview of these two research products is presented in the sections below. HTS provides detailed information on travel preferences, intentions and behaviour, destination associations, holiday types, brand-specific information, attitudes towards holidays

and travel plus advertising awareness and taglines. The ATI is an ongoing tracking survey of air travel. It provides detailed information on key aspects of air travel (business & leisure), membership of airline clubs and frequent flyer programs, domestic and overseas air travel.

Given the above, it is evident that Roy Morgan research does not generate supply-side research but a combination of attitudinal and behavioural research – or demand-side research. Further, they provide some input into all three of the areas, namely policy, industry development and marketing.

### TNS

TNS are a global research firm. In 2006 TNS in conjunction with TRA, conducted “Domesticate” a study into the state of the Australian domestic travel market to understand its long-term decline. The study was designed to determine why the Australian domestic travel market was declining and to help local travel and tourism operators (destinations, airlines, accommodation, etc) to adjust their communications to meet the needs of their target markets. The Domesticate study has been undertaken annually since 2006. TNS also provides a range of customised research projects within the tourism market.

Similar to Roy Morgan research, TNS provides attitudinal and behavioural research (demand-side research), rather than supply-side research.

### Jones Lang LaSalle Hotels

JLL is a professional services firm that produces insights, foresights, research and hotel knowledge both within Australian and internationally. They produce regular publications and research pieces in the tourism hotel space which focus on investment outlook, sentiment and the state of the hotel sector. For example: *Hotel Investment Highlights*, overview of global hotel transactions; *Hotel Investment Outlook*, analysis of the global hotel investment market; and the *Hotel Investor Sentiment Survey*. Such research focuses mainly on the supply-side and industry development areas.

### 3.9.2 Business analysts

- Dransfield produces the *Hotel Futures* publication which forecasts hotel revenues for the ten major cities in Australia. This report also presents and analyses historical occupancy, average room rate and room supply information.
- Deloitte releases an annual *HotelBenchmark* survey which summarises the performance of hotels across the globe. In addition, they prepare thought leadership papers which focus on the supply-side of tourism such as *Hospitality Vision*, *Global Performance Review - How hospitality companies can thrive in challenging times*

### 3.10 Overseas tourism research agencies

The following table presents a summary of industry research undertaken by international tourism research organisations (refer to Appendix 8.4 for further detail).

Overseas Tourism Research Agencies					
Country	Organisation	Type	Source of funding	Level of funding	Research focus
South Africa	South African Tourism	Gov	Gov	\$78 million (FY07)	<ul style="list-style-type: none"> <li>• Domestic and international arrivals</li> <li>• Market research</li> <li>• Tourism growth strategies</li> <li>• Global competitiveness of South African Tourism</li> </ul>
Canada	Canadian Tourism Commission	Gov	Gov	\$85 million (FY08)	<ul style="list-style-type: none"> <li>• Domestic and international arrivals</li> <li>• Market knowledge on key target markets</li> <li>• Product demand research and industry capacity assessments</li> <li>• Research on economic and political factors affecting tourism</li> <li>• Trends/outlook on travel volume, consumer sentiment</li> </ul>
	Canadian Tourism Research Institute	Not-for-profit	Self funded	n/a <sup>5</sup>	<ul style="list-style-type: none"> <li>• Travel market outlooks</li> <li>• International travel activity</li> <li>• Key economic travel indicators</li> <li>• Tourism Economic Assessment Model</li> <li>• Traveller surveys (destination images, future intentions, etc.)</li> </ul>
	Statistics Canada	Gov	Gov	Undisclosed	<ul style="list-style-type: none"> <li>• Domestic and international travel</li> <li>• Tourism employment</li> <li>• Tourism indicators</li> </ul>
United Kingdom	Office for National Statistics	Gov	Gov	Undisclosed	<ul style="list-style-type: none"> <li>• Domestic and international travel</li> <li>• Demand-side focused research</li> </ul>
	VisitBritain	Gov	Gov	\$100 million (FY08)	<ul style="list-style-type: none"> <li>• Tourism indicators</li> <li>• Domestic tourism statistics</li> <li>• Country and trade profiles</li> <li>• Tourism trends</li> <li>• British Tourism Framework Review</li> </ul>
New Zealand	Ministry of Tourism Research	Gov	Gov	Undisclosed	<ul style="list-style-type: none"> <li>• IVS and NVS equivalent</li> <li>• Accommodation and STA equivalent</li> <li>• Yield research into the drivers in the tourism industry</li> <li>• The impact of adverse events on tourism</li> </ul>
	The New	URI <sup>6</sup>	Gov	Undisclosed	<ul style="list-style-type: none"> <li>• Academic and industry specific reports.</li> </ul>

<sup>5</sup> FY08: \$35 million in revenue

<sup>6</sup> University Research Institute

Overseas Tourism Research Agencies					
Country	Organisation	Type	Source of funding	Level of funding	Research focus
	Zealand Tourism Research Institute				For example: - Tourism and community development research - Event tourism research - Indigenous tourism development - Tourism marketing research for businesses across the industry

Of the above countries considered, New Zealand and Canada appear to have a broad range of research capability that addresses the demand and supply side, as well as the areas of policy development, industry development and marketing.

## 4 Research Needs of the Tourism Industry

Three principle areas of research have been assessed against the Section 3 current tourism industry research capability analysis to identify research needs (or gaps). The research areas include policy development, industry development and marketing, which are needed to support policy and industry development activities. Finally, where possible we have identified a level of inter-connection between all three research areas.

RESEARCH GAP ANALYSIS				
Function	Issue	Current research available to address issue	Research gap	Linkage
Policy – to support a diverse and sustainable tourism industry	<b>Policy development and engagement with key government decision makers</b> – capacity to educate and influence key decision makers	<ul style="list-style-type: none"> <li>TRA – IVS and NVS will inform demand for components of the value chain (visitation and expenditure)</li> <li>ABS – TSA, STA and OAD (economic and accommodation data)</li> <li>BITRE – transport statistics</li> <li>Roy Morgan – HTS (holiday intentions)</li> <li>TA – BHMs consumer sentiment towards Australian holidays</li> </ul>	<ul style="list-style-type: none"> <li>There is limited supply-side data to drive policy to address impediments such as tourism investment (taxation concessions)</li> </ul>	<ul style="list-style-type: none"> <li>Industry development – Industry impediments analysis</li> <li>Policy – Analysis of industry</li> <li>Policy – Trend analysis</li> </ul>
	<b>Analysis of industry</b> – an understanding of the state of the tourism industry value chain. It is important to understand the performance of key elements of the tourism value chain (for example, distribution, transportation, accommodation, entertainment, dining, shopping, activities, etc.)	<ul style="list-style-type: none"> <li>TRA – IVS and NVS will inform demand for components of the value chain (visitation and expenditure)</li> <li>ABS – TSA, STA and OAD (economic and accommodation data)</li> <li>BITRE – transport statistics</li> <li>Roy Morgan – HTS (holiday intentions)</li> </ul>	<ul style="list-style-type: none"> <li>Tourism product supply-side data, i.e. demand generators such as theme parks, attractions, events, wineries, etc.</li> <li>Transport supply-side data – taxis, hire car, etc.</li> <li>Competitor intelligence (Australia’s value proposition compared to its key</li> </ul>	<ul style="list-style-type: none"> <li>Marketing – Brand tracking</li> <li>Policy – Trend analysis</li> </ul>

RESEARCH GAP ANALYSYS				
Function	Issue	Current research available to address issue	Research gap	Linkage
Policy (cont.)	<p><b>Trend analysis</b> – develop a view on the future outlook of the tourism industry and the implications of these projections</p> <p><b>Long-term influences</b> – demographic change, political, technological, new markets</p> <p><b>Industry impediments analysis</b> – identification of policies or initiatives to address any impediments to economic growth</p>	<p>intentions)</p> <ul style="list-style-type: none"> <li>• TA – BHMs consumer sentiment towards Australian holidays</li> <li>• TRA – IVS and NVS will inform demand for components of the value chain (visitation and expenditure)</li> <li>• ABS – TSA, STA and OAD (economic and accommodation data)</li> <li>• BITRE – transport statistics</li> <li>• Roy Morgan – HTS (holiday intentions)</li> <li>• TA – BHMs consumer sentiment towards Australian holidays</li> <li>• STCRC – ad hoc academic papers</li> <li>• TRA – IVS and NVS demographic data</li> <li>• ABS census data</li> <li>• ABS – OAD data, identification of new markets</li> <li>• WTO data – new emerging markets</li> <li>• ABS – TSA, STA and OAD (economic and accommodation data)</li> <li>• BITRE – transport statistics</li> <li>• Roy Morgan – HTS (holiday</li> </ul>	<p>competitors – for each visitor market)</p> <ul style="list-style-type: none"> <li>• As above – supply-side data on key components of the tourism industry value chain</li> <li>• Economic research and analysis – CGE modelling capability that allows assessment of the economic impacts of tourism related developments, events, and external shocks</li> <li>• Overseas market demographic trends and implications for Australia</li> <li>• Global travel distribution trends and implications for Australia</li> <li>• Competitor intelligence (Australia’s value proposition compared to its key competitors – for each visitor market)</li> <li>• Supply-side data on key components of the tourism industry value chain would identify areas of declining investment, which in turn limits product development (identified</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Policy</i> – Analysis of industry</li> <li>• <i>Marketing</i> – Brand tracking</li> <li>• <i>Policy</i> – Analysis of industry</li> <li>• <i>Policy</i> – Trend analysis</li> <li>• <i>Industry development</i> – program development</li> </ul>

RESEARCH GAP ANALYSYS				
Function	Issue	Current research available to address issue intentions)	Research gap as key impediments)	Linkage
Industry development	<b>Program development</b> – fostering an industry that promotes the principles of sustainable development (maximising Australian tourism industry’s growth potential)	<ul style="list-style-type: none"> <li>STCRC – ad hoc academic papers</li> <li>TRA – IVS and NVS will inform demand for components of the value chain (visitation and expenditure)</li> <li>ABS – TSA, STA and OAD (economic and accommodation data)</li> <li>BITRE – transport statistics</li> <li>Roy Morgan – HTS (holiday intentions)</li> <li>TA – BHMs consumer sentiment towards Australian holidays</li> </ul>	<ul style="list-style-type: none"> <li>Supply-side data on key components of the tourism industry value chain to identify areas where government assistance is required.</li> </ul>	<ul style="list-style-type: none"> <li><i>Policy</i> – industry impediments analysis</li> </ul>
	<b>NTAF</b> – enhancing quality customer experiences through an accreditation and promotional framework that recognises sustainable and capable businesses	<ul style="list-style-type: none"> <li>TRA – Visitor Profile and Satisfaction (VPS) program (regional level data) – regional level only (TRA will assist destinations at their cost ~ \$22,000)</li> </ul>	<ul style="list-style-type: none"> <li>TRA’s IVS and NVS do not measure satisfaction – this or another survey instrument needs to asses key tourism value chain component satisfaction levels at a national level. However it is recognised that a large number of regional satisfaction studies have been undertaken by TRA.</li> <li>Supply-side data is required to estimate the scale of satisfaction issues identified</li> </ul>	<ul style="list-style-type: none"> <li><i>Marketing</i> – consumer satisfaction</li> </ul>
	<b>ADS scheme</b> – to facilitate Chinese visitor travel and ensure they receive a quality Australian tourism experience	<ul style="list-style-type: none"> <li>TRA – will inform Chinese product demand along the tourism value chain</li> <li>ABS – OAD (Chinese arrivals data)</li> </ul>	<ul style="list-style-type: none"> <li>TRA’s IVS does not measure Chinese visitor satisfaction levels – this or another survey instrument needs to asses key tourism value chain component</li> </ul>	<ul style="list-style-type: none"> <li><i>Marketing</i> – consumer satisfaction</li> <li><i>Industry development</i> – NTAF</li> </ul>

RESEARCH GAP ANALYSIS				
Function	Issue	Current research available to address issue	Research gap	Linkage
		<ul style="list-style-type: none"> <li>• TA – BHM's Chinese sentiment towards Australian holidays</li> </ul>	satisfaction levels at a national level. However it is recognised that a large number of regional satisfaction studies have been undertaken by TRA.	

RESEARCH GAP ANALYSYS				
Function	Issue	Current research available to address issue	Research gap	Linkage
Industry development (cont.)	<b>TQUAL</b> – to stimulate sustainable growth in the Australian tourism industry by supporting innovative product development and high quality visitor services and experiences	<ul style="list-style-type: none"> <li>• TRA – IVS and NVS will inform demand for components of the value chain (visitation and expenditure)</li> <li>• TA – BHM’s consumer sentiment towards Australian holidays</li> </ul>	<ul style="list-style-type: none"> <li>• Supply-side data to compare and contrast with demand-side data to identify product gaps</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Policy</i> – Industry impediments analysis</li> </ul>
	<b>Best practice facilitation</b> – destination development plans, policy	<ul style="list-style-type: none"> <li>• STCRC – case studies</li> </ul>	<ul style="list-style-type: none"> <li>• International best practice case studies, e.g. destination development strategies</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Policy</i> – Analysis of industry (competitor analysis)</li> </ul>
	<b>Analysis of linkages to other sectors</b> – local and regional CGE analysis	<ul style="list-style-type: none"> <li>• TRA – IVS and NVS will inform demand for components of the value chain (visitation and expenditure) at a regional levels</li> <li>• ABS – TSA (national state and territory)</li> </ul>	<ul style="list-style-type: none"> <li>• Gaps at a regional level exist across Australia</li> <li>• CGE modelling capability that allows assessment of the economic impacts of tourism related developments, events, and external shocks</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Policy</i> – Policy development and engagement (TSA)</li> </ul>
Marketing	<b>Brand tracking</b> – measure of awareness and consideration (preference) of Australia as holiday destinations and intentions to visit	<ul style="list-style-type: none"> <li>• TA – BHM’s consumer sentiment towards Australian holidays</li> <li>• Roy Morgan – HTS (holiday intentions)</li> </ul>	<ul style="list-style-type: none"> <li>• None identified based on desktop review of TA’s high-level description of BHM’s</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Policy</i> – Analysis of industry</li> <li>• <i>Policy</i> – Industry trends</li> </ul>
	<b>Consumer research</b> – understand consumer attitudes, motivations, behaviours	<ul style="list-style-type: none"> <li>• TA – campaign research</li> <li>• STOs – customised consumer research to support their marketing activities</li> </ul>	<ul style="list-style-type: none"> <li>• None identified based on desktop review of TA’s high-level description of BHM’s</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Policy</i> – Industry trends</li> </ul>
	<b>Consumer satisfaction</b> – measure of visitor experience quality along the tourism value chain	<ul style="list-style-type: none"> <li>• TRA – Visitor Profile and Satisfaction (VPS) program (regional level data) – regional level only (TRA will assist destinations at their cost ~ \$22,000)</li> </ul>	<ul style="list-style-type: none"> <li>• TRA’s IVS and NVS do not measure satisfaction – this or another survey instrument needs to assess key tourism value chain component satisfaction levels</li> <li>• Supply-side data is required to estimate the scale of satisfaction issues identified</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Industry development</i> – NTAF</li> </ul>

Key research gaps identified in the above table include supply-side research, visitor satisfaction research and competitor intelligence. The above research areas are required to have a complete view of the tourism industry value chain. This is needed to inform policy, industry development initiatives and marketing strategy to sustain the industry's development.

Supply-side research will identify tourism product gaps (opportunities), investment needs, labour needs, etc. across the tourism value chain. Visitor satisfaction research will identify quality issues in the value chain, which can drive policy (accreditation, licensing, etc) and other industry initiatives. To enhance Australia's competitiveness it is essential to understand our value proposition compared to other destinations in our key markets.

Another gap identified was an economic modelling capability. The STOs have some capability to undertake economic modelling through work undertaken by the STCRC and other private sector organisations, although additional capability is required. This capability can be in the form of Computable General Equilibrium (CGE), Input-Output (IO) modelling or simple econometric modelling. Scenario modelling can be used to identify the implications of tourism research findings (e.g. issues - Analysis of Industry and Trend Analysis) on the wider Australian economy and industry. CGE and IO modelling in particular are able to show the impact of tourism on downstream and upstream industries, both directly and indirectly. This is of particular importance given the wide sectoral composition of the industry. Scenario modelling research will assist in policy, industry development, and marketing decision-making. The ability to investigate the impact of different scenarios on the tourism industry and hence the economy more generally will facilitate more informed forward planning.

The analysis undertaken in this report has focused on the volume of existing research available, with no assessment of the quality of the research available or the benefits of expanding current research efforts. In addition, the future of some important existing research projects, specifically TSA, could be in jeopardy due to the uncertainty of future funding sources for the STCRC. This gap analysis has been based on a desktop review of available tourism research, with significant further analysis required to determine the future demand for research programs in the tourism industry.

## 5 Costs and benefits of closing the research gap

Section 4 outlined the gaps which currently exist in tourism research. This section discusses the benefits which will flow to the industry and the wider economy from tourism research. The benefits of tourism research are then contrasted against its costs.

Like all investment, investment in research within any industry involves short-term costs which need to be weighed against long-term gains. The usual way of balancing short-term costs against long-term gains is to calculate a rate of return on each investment. By determining rates of return across different investment options, an assessment can be made to determine which will deliver the highest rate of return for each dollar of investment.

In this context, the following sub-section outline the returns to publicly-funded research across different sectors of the economy. Sub-section 5.2 then focuses on returns to tourism research that is currently undertaken. Finally a discussion on potential returns from closing the research gap is presented in sub-section 5.3.

### 5.1 Returns to publicly-funded research and development

Given the focus of this report, this section highlights the returns to publicly-funded research and development. The economic argument to why certain types of research should be publicly funded is discussed in Section 6. Parts of the discussion below were presented by KPMG Econtech in a study for Universities Australia earlier this year.

Much of the econometric literature shows consistent findings of a significant and positive rate of return to publicly funded research investments. A comprehensive survey of early literature in this field show that most of the studies in their review reach the same conclusion: that there is a positive and relatively high rate of return to research investments at the public level<sup>7</sup>. The literature survey also shows that there is great variation in the estimated rates of return by sector and by study. In spite of this variation, many studies place the economy-wide social rate of return on overall publicly funded research in the order of 20 to 40 per cent a year<sup>8</sup>.

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<sup>7</sup> Martin, B., Salter, A., Hicks, D., Pavitt, K., Senker, J., Sharp, M., and Von Tunzelmann, N. (1996), "The relationship between publicly funded basic research and economic performance.", Science Policy Research Unit, University of Sussex.

<sup>8</sup> Studies include the following: Mansfield, E., Rapoport, J., Romeo, A., Wagner, S., and Beardsley, G., (1977) "Social and Private Rates of Return from Industrial Innovations", *Quarterly Journal of Economics*, vol. 77, pp. 221 – 240; Nadiri, I., (1993) "Innovations and Technological Spillovers", NBER Working Paper Series. Working Paper No. 4423, August; Martin, B., Salter, A., Hicks, D., Pavitt, K., Senker, J., Sharp, M., and Von Tunzelmann, N. (1996), "The relationship between publicly funded basic research and economic performance.", Science Policy Research Unit, University of Sussex; President's Economic Council of Economic Advisors (1995), "Supporting Research and Development to Promote Economic Growth: The Federal Government's Role." White paper, October; National Institutes of Health, (2000), "The Benefits of Medical Research & the Role of the NIH.", NIH, May; and The Allen Consulting Group (2003), "A wealth of knowledge. The return on investment from ARC-funded research.", Report to the Australian Research Council.

Industry specific studies within this area have tended to focus on the impacts of publicly funded research within the manufacturing sector and the agricultural sector. A number of studies have also examined the link between publicly funded research and the output of pharmaceuticals and health related industries. Such studies have generally found that publicly funded research contributes significantly to productivity by improving production processes and lowering production costs, and also by underpinning product innovation and development. This in turn implies a high rate of return to publicly funded research and development.

More general studies have also found high rates of return to publicly funded research. A literature review was undertaken in 2003<sup>9</sup> on the rates of return to public research carried out in government labs and universities. This review pays particular attention to studies that focus on the relationship between research expenditures and productivity growth across countries of the OECD. The estimates on the social rate of return to public research presented in Dowrick's survey range from 5.8 per cent to 8.7 per cent. Nonetheless, the survey indicates that these are under-estimates of the true social rate of return because studies measure the cost savings only for a sub-set of the economy.

A summary of these econometric studies on rate of return to publicly funded research is shown in Appendix 8.5. The rate of return to publicly funded research generally varies from 28 to 67 per cent (apart from a few outliers) depending on the subject of the study and the methodology. All the authors point out that it is important to understand the difficulties associated with measuring the economic returns to research and the limits to this approach.

## 5.2 Returns to current tourism research

As discussed above, much of the industry-specific studies into the returns from research has focused mainly on the agriculture and manufacturing industry; there has been very little study conducted into the economic benefits of research into the tourism industry.

The most recent study into the economic contribution of tourism research was undertaken as part of a wider study into the economic impact of the CRC programmes in 2006 for the Australian Government Department of Education, Science and Training (DEST)<sup>10</sup>. Specifically, the study analysed the economic contribution of the Sustainable Tourism CRC (STCRC). The study identified that the STCRC generated benefits by improving access to internationally generated knowledge, this includes:

- STCRC's participation in the global Green Globe accreditation program;
- the development of the Earthcheck tool which enables a quantitative measure of a business environmental sustainability to be developed; and

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<sup>9</sup> Dowrick, S. (2003) "A Review of the Evidence on Science, Research and Productivity", Report prepared for the Department of Education, Science and Training, DEST.  
[http://www.dest.gov.au/sectors/science\\_innovation/publications\\_resources/profiles/review\\_evidence\\_science\\_productivity.htm](http://www.dest.gov.au/sectors/science_innovation/publications_resources/profiles/review_evidence_science_productivity.htm).

<sup>10</sup> Department of Education, Science and Training, "Economic Impact of the CRC Programme", October 2006

- the establishment of the Asia Pacific Economic Cooperation International Centre for Sustainable Tourism.

The DEST study reports that as a result of the above initiatives, the STCRC had the following impacts the tourism industry<sup>11</sup>.

- Over \$80 million in net cost savings for end users between 2003 and 2010 through the application of the Green Globe standards.
- Increasing gross output in the tourism industry by \$30 million between 2005 and 2010 from the use of Encore reports and VIC kits.
- Increasing gross output in the tourism industry by \$30 million between 1997/98 and 2007/08 based on delivered and projected revenues from spin-off companies.

Following an aggregation across these impacts, the dynamic path of cost savings to the tourism industry as a result of the STCRC is shown in the following table below.

Cost saving in Tourism as a result of the STCRC (\$ 2005 million)										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Cost Saving	0	0	6.1	7.1	8.2	28.4	20.9	21.7	22.3	23

Source: CoPS, Insight Economics

Note: *Cost Saving* in this table is the sum of the net cost saving and increased gross output listed above.

The authors of the study note that these benefits are an estimate of non-contingent benefits. This is because most of the benefits are expected to occur in future (the report was finalised in 2006) and/or the valuation of the benefit is based on a relatively small sample of end users. However, given that it is not possible to capture and measure all the benefits, the authors highlight that the economic impact analysis conducted in this study is only a partial account of the benefits of the CRC Programme.

The study does not assess the return to the STCRC independently. However, the DEST study did estimate the returns to the CRC Programme as a whole. Specifically, the return from all existing CRCs funded through Rounds One to Nine of the Programme<sup>12</sup>, which includes the STCRC, was estimated. Using economy-wide modelling they found that for each dollar that is invested in the CRC Programme:

- Gross Domestic Product is cumulatively \$1.16 higher than would otherwise have been the case;

<sup>11</sup> Department of Education, Science and Training, "Economic Impact of the CRC Programme", October 2006

<sup>12</sup> The study excluded five entirely new CRCs established in Round Nine of the Programme.

- Consumption is \$1.24 higher than would otherwise have been the case; and
- Investment is \$0.19 higher than would have otherwise been the case.

These estimates incorporate the cost of raising funds invested in the Programme through taxation. This analysis assumed that the funds which would otherwise have been invested in the Programme, would be used to reduce taxation. As will be discussed in the following Section, the cost of publicly funding research is greater than the direct expenditure cost, because the taxes used to raise these funds create distortions in the economy. It is important that this efficiency cost is incorporated in any economic analysis of the public-provision of research.

A quantification of the returns from closing the tourism research gap is outside the scope of this report. However, given that the returns to current tourism research is positive, this indicates that the returns to closing this research gap are also likely to be positive. The channels through which closing the gap will benefit the industry are discussed in Section 4.

## 6 Assessing Market Failure in the Provision of Research for the Tourism Industry

The previous section discussed how there are benefits from closing the research gap which exist in the tourism industry. Importantly, in certain instances the benefits of this research outweighs the cost. Although the benefits outweigh the cost, there is no provision of such research at the present time from private providers. This situation is one example of a market failure.

The following sections outline more generally the type of situation where market failure occurs and discusses the different ways market failure can be addressed. The discussion outlined below draws on the following resources:

- Hindriks, Jean and Garreth D. Myles, *Intermediate Public Economics*, The MIT Press, 2006
- Jones, Chris, *Applied Welfare Economics*, Oxford University Press, 2005
- Jha, Raghendra, *Modern Public Economics*, Routledge, 1998

### 6.1 Market Failures

Market failures arise when economic efficiency is not achieved by a competitive market. One instance where this can occur is the provision of certain types of goods, such as public goods. To consider why this occurs, it is useful to contrast the characteristics of different types of goods, using private goods and public goods as the benchmark.

Two important characteristics of private goods is that they are rivalrous and excludable. Private goods are rivalrous because if the good is consumed by one individual, then none of the good is available to be consumer by another individual. Private goods are also excludable at little cost. Most consumables fall into the private good category. In contrast, the consumption of a public good by one individual does not diminish the amount of the good available for another individual. Also, once a public good is supplied, no consumer can be excluded from reaping its benefits. A classic example of a public good is national defence.

Market failure in the provision of public goods occur because of its non-rivalrous and non-excludable characteristics. These characteristics lead to each individual relying on others to provide the good, a phenomenon known as free-riding. Thus, in a competitive market there is under-provision of the public good.

In reality, it is difficult to find instances where a good is perfectly rivalrous and perfectly excludable. The following table below illustrates the different types of goods and the characteristics attached to them. As shown in the table, common property goods is rivalrous but non-excludable and this tends to lead to overuse of the good; examples of common property goods include a lake that can be used for fishing. Club goods on the other hand are non-rivalrous but are excludable; a sports facility is one example.

Typology of Goods		
	Rivalrous	Non-Rivalrous
<b>Excludable</b>	Private good	Club good
<b>Non-Excludable</b>	Common property resource	Public good

Source: Hindriks, J., and Myles, G.D., “Intermediate Public Economics”, 2006

It is important to note that the table above is a mere simplification of the continuum of goods that exist with varying degrees of rivalry and excludability. Within this continuum, tourism research is non-rivalrous, however, to some degree, it is possible to exclude individuals from benefiting from the research. For example, it is possible for tourism operators to only have access to the research after they have paid a fee, similar to other research subscription services.

In addition, as the focus of the research becomes more specific, the direct benefit of the research to wider industry participants is reduced, and thus there is less incentive to free-ride. This type of research is closer in typology to a private good. For example, market research on a specific tourist attraction such as Movie World is only of benefit to the operators of Movie World and to a lesser extent on operators of theme parks in general. There is little or no direct benefit gained from such research for other tourism-industry operators. Hence, in this instance, there is no market failure and private operators will commission such research as long as the benefits exceed the costs. Although such specific research has limited direct benefit to wider industry participants, they may still reap indirect benefits. Continuing with the earlier example, if Movie World were to act on the results of the research and increase their visitor numbers, other businesses connected to Movie World, such as their suppliers would also benefit. It is also likely that the business in the region surrounding Movie World would also benefit indirectly from a boost in visitors.

As illustrated above, the degree of rivalry and excludability of a good determines how to best address the market failure in the provision of the good in question. This is discussed further in the following sub-section.

## 6.2 Addressing Market Failures

Continuing to use public goods and private goods as a benchmark; the criteria for an efficient allocation of a public good is similar to that for a private good. An efficient allocation of a public good occurs when the additional cost of providing an additional unit of the good equals the additional benefit from this extra unit. However, unlike for a private good, the benefit from an additional unit of the public good is the additional benefit enjoyed by all individuals in the community, not just a single individual<sup>13</sup>. This is because once a public good is provided, all individuals reap the benefit.

As discussed previously, competitive markets will not provide the efficient amount of the public good due to the free-rider problem. There are several methods by which market failure can be

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<sup>13</sup> In other words, efficiency is achieved when the marginal costs of providing the public good is equal to the sum of the marginal benefit across all consumers.

addressed and this depends on the degree to which the good is rivalrous and excludable. For example, the market failure surrounding common property goods can be addressed by establishing private property rights to govern access<sup>14</sup>. For tourism research which is non-rival but to some degree excludable, there are several options for addressing the under-provision of research.

### 6.2.1 Subscription Campaign

In theory, the provision of a public good can be funded through a subscription campaign<sup>15</sup>. This finding applies where there is a target level of funds which must be reached before the public good can be supplied. Individuals participating can pledge multiple contributions throughout the campaign. Importantly, individuals do not make payment until the target level of funds is achieved. This ability to make a conditional commitment to contribute in the future and the fact that there is a threshold of funding before which the public good can be provided, mitigates the free-rider problem. The maximum amount of funds that is able to be raised in this manner is equal to the sum of the valuation of the public good across all contributors.

In reality, this method of public good provision is unlikely to be successful. The success of the subscription campaign relies on individuals committing to the pledges which have been made. Even if there was a way to ensure commitment, it may take too long in practice for the pledges to be made and for the pledges to be collected for the public good to be of use to individuals<sup>16</sup>. In addition, the transaction cost of carrying out such a campaign may be prohibitive.

The hindrances discussed above applies to any public good, but is particularly acute for tourism research. The tourism industry, who would directly reap the benefit of such research, is highly fragmented and characterised by many small operators. In fact, over 90 per cent of tourism businesses employ less than 20 staff<sup>17</sup>. The costs of conducting such a campaign in the tourism industry would be higher than in other industries which comprise of only a handful of operators, and hence it is unlikely that tourism research will be provided in this manner.

### 6.2.2 Formation of Clubs

One option for the provision of a non-rival but excludable good is through the formation of a club. Since individuals are able to be excluded from deriving benefits from the good, it is possible to charge payment and exclude those who do not pay. One example is a sporting club which provides sporting facilities, but only to its members. By ensuring that the cost of

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<sup>14</sup> This is the key implication of the Coase Theorem.

<sup>15</sup> Hindriks, Jean and Garreth D. Myles, *Intermediate Public Economics*, The MIT Press, 2006

<sup>16</sup> The framework of a subscription campaign does allow for discounting of the benefit received from the public good.

<sup>17</sup> Sustainable Tourism CRC, *New Sustainable Tourism Cooperative Research Centre: Informing the future of Australian Tourism*, 2008.

provision at the margin is equal to the marginal benefit derived by all members, a club is able to provide the efficient level of the good for its members.

To some extent, this already occurs within tourism industry organisations. Section 3.5 identified a number of key industry organisations that produce tourism-related research and statistics. Tourism operators pay a fee to join the organisation, and membership provides them with access to the research the organisation conducts<sup>18</sup>. By their very nature, industry organisations represent only the interests of its members. Hence, the research produced by them would mainly be tailored to the issues facing its members. Since there is no guarantee that the entire industry will join the one club or organisation, it is unlikely that these organisations would conduct research that have an industry-wide perspective. Non-members would also benefit from such industry-wide research (and thus diminish the value of membership).

The likelihood of tourism industry operators joining the one club is quite low, given the highly diverse nature of the industry. This is also evidenced by the relatively large number of tourism-related industry organisations.

### 6.2.3 Government provision

So far, the options analysed to address the market failure have not necessarily required government intervention in the market, the next option is of course for government to provide the public good. The costs and benefits of government provision of public goods are different to the costs and benefits of private sector provision of non-public goods<sup>19</sup>. This is because when government provides goods or services, the cost of doing so is more than just the actual expenditures outlaid. Additional costs include the following:

- the efficiency costs to the economy of raising taxation revenue to pay for the additional expenditures; and
- the impact that the provision of the public good will have on raising taxation revenue in other markets.

Hence, the cost of government provision of the public good depends on the type of tax, the tax base and the characteristics of the public good provided.

In terms of tax types, the most efficient of all taxes are lump-sum taxes. Since the value of a lump sum tax cannot be altered by an individual's behaviour, they do not lead to any distortions in individual choice. In contrast, an individual is able to determine the amount of commodity tax and income tax they pay by changing their behaviour. Thus, commodity taxes and income taxes distort the choice between goods purchased and the choice to work, respectively. In reality, lump-sum taxes are difficult and costly to enforce as individuals are mobile and have a strong incentive to evade.

In terms of the tax base, the tax can be applied to all individuals in the economy or only to those individuals who receive a direct benefit from the government-provided good. The most

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<sup>18</sup> Although some research conducted by these industry organisations are made publicly available.

<sup>19</sup> Jones, Chris, *Applied Welfare Economics*, Oxford University Press, 2005

efficient and equitable outcome would be that the tax is applied only to those individuals who benefit from the provision of the good.

Finally, it is important to note that in a general or economy-wide equilibrium context, the provision of the good and the taxes raised to fund this good will have an impact on the government's total collection of tax revenue. For example, take the case of a commodity tax on good A. A tax raised on good A would increase its price and reduce demand for good A. This reduction in demand will have implications for the demand of other goods, namely those goods which are complements or substitutes to good A. If these other goods are also taxed, then the total revenue collected by government will also change as a result of the tax on good A.

The assessment of whether public provision of Tourism research is beneficial is outlined in the next section.

## **7 Public Provision of Research for the Tourism Industry**

This section brings together the findings of the other sections, and draw some conclusions as to the research areas to be covered by the new research capability, as well as the source of funding for the capability.

Section 4 identified that the key research gaps in the tourism industry are as follows:

- industry supply-side research;
- economic modelling;
- visitor satisfaction research for Australia; and
- competitor intelligence

Prior to the commitment of additional public resources to fill the identified gaps in tourism industry research, the cost of the proposed action must be assessed against the cost of alternative actions and compared with the benefits. Section 5 highlighted that there is a benefit flowing to research already undertaken in the tourism industry, and that when included as part of a wider initiative, reaps positive returns. This indicates that the returns to closing this research gap are likely to be positive. However, given the competition for investment funds and without more detailed research it is difficult to determine whether the returns to tourism research provide the highest return for each dollar invested.

Although the benefits to tourism research exceed the costs, the existence of a research gap indicates that the private market has under-provisioned research into the tourism industry. This constitutes a market failure, as the outcome of the private market has not resulted in economic efficiency. Section 6 described the instances where market failure in the provision of a good could occur. In particular, market failure occurs where individuals are not able to be excluded from reaping the benefits of the good once provided (non-excludable), and where the consumption of the good by one individual does not diminish the benefit enjoyed by others (non-rival). A public good has both these characteristics and suffers from the free-rider problem where individuals rely on others to provide the good.

There exists a continuum of goods with varying degrees of excludability and rivalry. Importantly, the methods by which market failure can be addressed depend on the extent to which a good is non-rival and non-excludable. Even within the area of tourism-industry research, the type of research conducted will determine how to best address the market failure. For example, research that is quite specific to a particular attraction suffers only minimally from the free-rider problem, as the benefit of the research to the wider industry is limited. The private market is then able to provide an economically efficient level of provision for this type of research and there is no need for government intervention.

Tourism research is to a certain degree excludable. Hence, industry operators can form a club or industry organisation to provide such research. The club is able to fund the research by charging a membership fee, and only members are granted access to the research<sup>20</sup>. Clubs are run only for the benefit of members. Since there is no guarantee that the entire industry would join the one club or organisation, as evidenced by the relatively large number of tourism-related industry organisations, it is unlikely that the club will produce research that would lead to industry-wide benefits. Therefore, there is an argument for government to intervene and fund research in those instances where the research is likely to lead to industry-wide benefits; the key research capability gaps outlined above, fall within this category.

Research focused on improving Australia's attractiveness as a travel destination to international travellers is one particular area which would benefit from improved research capabilities. A boost to the number of international travellers visiting Australia would be of benefit to the entire industry. Indeed, given the diverse sectoral composition of the industry relative to others, including the six characteristic industries and a further 14 tourism connected industries outlined in the ABS's Tourism Satellite Account, a boost to the tourism industry is likely to have far-reaching effects in the economy.

There are different methods by which the government can raise funds for the additional research. The government may be able to fund the additional tourism research by placing a levy on tourism-industry operators. The distortionary effects of taxation are potentially minimised by focusing the tax base to those who directly benefit from the research. In addition, by focusing the burden of funding the research to those who directly benefit from the research, a levy is also more equitable.

There are several difficulties involved with this approach, most stemming from the structure and nature of the industry. Tourism is not a clearly defined industry and its fragmented nature means that it is difficult to identify industry operators. The tourism industry value chain ranges from small bed and breakfasts to large hotel chains, transportation, restaurants and retailers. Although accommodation services are clearly within the tourism industry, other types of businesses may rely on both travellers and residents for revenue. Retailers for example, derive sales from both travellers and residents. Industry operators would have an incentive to under-report about the reliance of their business on travellers so as to avoid paying the levy.

If industry operators we able to be identified, there is still a need to collect the appropriate level of levy from each operator. From both an efficiency and equity perspective, operators should contribute to the research in proportion to the value they receive from it. However, this relies on the operators truthfully revealing the value they receive; operators would have an incentive to under-report the value so as to avoid paying the levy. In other industries, the simpler alternative would be for the levy to be dependent on the level of output benefiting from the research. In a very simple example, if an improved pesticide for wheat was developed, the cost of the initial research into this pesticide could be spread across wheat growers based on the size of each grower's wheat crop. It would also be relatively easy to verify the size of a wheat crop. This manner of implementation is not practical within the tourism industry as the output (mainly

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<sup>20</sup> In some cases the organisation chooses to publicly release this research.

in the form of services) is difficult to measure. As with the first issue discussed above, industry operators would have a strong incentive to under-report their reliance.

Given the difficulties in identifying operators and ensuring that each operator pays the correct levy, the costs associated with collecting and enforcing such a levy may be prohibitive. This cost would be particularly burdensome for the tourism industry given that it is characterised by a large number of small operators, relative to other industries which are composed of a large number of small operators. As previously indicated, over 90 per cent of tourism businesses employ less than 20 staff<sup>21</sup>.

The other fund-raising avenue available to government would be to spread the cost over all individuals by raising taxes. Lifting taxes creates a distortion in the economy and reduces efficiency. This additional efficiency cost, is on top of the direct government expenditure and must be accounted for. However, a DEST study has shown that even after accounting for the distortionary effects of taxation, the returns to publicly funded research (including tourism research) is positive.

There are other funding models which involve both government and industry participation. For example, the government can match, dollar for dollar, an industry's expenditure on research. By matching industry contributions, the government reduces the cost to industry from investing in research and thus increases the incentive for industry investment. This is the model that underlies rural Research and Development Corporations (RDCs). The rural RDCs raise funds from a combination of levies on production as well as Commonwealth government grants. The highly fragmented nature of the industry, the large number of small operators and the difficulty with placing a levy on output means that implementing this model would be challenging. Although this model does not overcome all the challenges associated with the provision of research from the tourism industry, it does provide an example of how industry operators can contribute to the provision of research.

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<sup>21</sup> Sustainable Tourism CRC, *New Sustainable Tourism Cooperative Research Centre: Informing the future of Australian Tourism*, 2008.

<sup>24</sup> In conjunction with Statistics South Africa (the national body that collects, produces, and disseminates official statistics)

## 8 Appendices

### 8.1 Summary of TRA Initiatives (since formation)

Summary of TRA Initiatives	
Initiative	Description
TRA Online	<p>The implementation and launch of the TRA website in December 2006 has given a broader range of users' access to TRA tourism data and research in a more accessible manner across the internet.</p> <ul style="list-style-type: none"> <li>• Users can now download over 200 research publications <i>free</i> in PDF format</li> <li>• The website averages 6,000 unique monthly visitors and approximately 6,000 publications are downloaded each month.</li> <li>• The website also provides access to a new service called TRA ONLINE DATA. This facility allows <i>paid</i> subscribers authorised user access to real time research information using TRA's unit record IVS and NVS databases.</li> </ul>
Timely regional tourism expenditure data	<p>Implementation of regular quarterly reporting of regional IVS and NVS tourism expenditure results. This is an important aid to Government agencies allowing consideration of the strength of regional tourism performance.</p>
Enhanced analysis of domestic tourism performance	<p>As a result of the previous paucity of analysis of domestic tourism performance, from late 2004 TRA began a more systematic analysis of the performance of domestic tourism.</p>
Introduction of Destination Visitor Surveys	<p>In 2005 TRA developed the methodology for destination surveys. This methodology complements the NVS/IVS collections while addressing quality issues such as representativeness of samples and the consistency and comparability of results between survey collections (benchmarking). This work has also involved creating 'modules of questions' including a 'satisfaction' and 'expenditure' modules.</p> <p>TRA has delivered over 30 projects reaching over 70 destinations Australia wide. A total of \$2.9 million over the four years between 2004-05 and 2007-08 had been provided to TRA for this initiative under TWP funding.</p>
Development of measures of economic value	<p>With input from TA, TRA developed a methodology for measuring the economic value of both inbound (TIEV – total inbound economic value) and domestic (TDEV – total domestic economic value) tourism yield. These provide measures of tourism industry performance and the contribution of the industry to the wider economy in more timely and accurate fashion than was previously available.</p> <ul style="list-style-type: none"> <li>• TIEV is calculated from total trip expenditure by inbound tourists to Australia derived from the IVS and benchmarked to the ABS Tourism Satellite Account (ABS Cat. No.5249.0) and ABS Overseas Arrivals and Departure data (ABS Cat. No. 3401.0).</li> <li>• No description of TDEV on TRA's website</li> </ul>

Summary of TRA Initiatives	
Initiative	Description
Forecasting research and development	<p>The additional funding made available through the TWP has enhanced the provision of tourism forecasts. For example, TRA is now better placed to provide forecasting expertise to stakeholders across federal and state governments and industry. In addition TRA works more closely with the Department and STOs to develop their understanding of the future trends and potential of the tourism industry.</p> <p>The Tourism Forecasting Committee (TFC) was also formed as an initiative of the White Paper. Compared with its predecessor, the Tourism Forecasting Council, the TFC draws upon a wider range of industry experts and is thus better positioned to provide independent and respected forecasts of tourism activity to government, industry and potential investors. INTERESTING!</p>

## 8.2 Potential ABS indicators for tourism activity

Potential ABS Indicators for Tourism Activity		
Indicator	Details	ABS comments
Productivity	<p>The National Long Term Tourism Strategy (NLTS) discussion paper notes the importance of the measurement of tourism industry productivity to provide better products and increase competitiveness in an increasingly competitive global market. While "tourism industry" productivity is not directly measured by the ABS, productivity data by ANZSIC industry division is available.</p> <p>Key ABS data/information on productivity, in relation to tourism, includes:</p> <ul style="list-style-type: none"> <li>• Annual updates of multi-factor productivity (MFP) estimates (including separate capital and labour productivity estimates by ANZSIC industry division (data available up to 2007-08);</li> <li>• A detailed information paper on experimental industry productivity estimates, grouping ANZSIC industries into "high", "medium" and "low" compound annual growth in value added based MFP growth over 1985-86 to 2005-06;</li> <li>• Annual data on hours worked and value added by ANZSIC industry division; and</li> <li>• Quarterly estimates of GDP per hour worked for the market sector and for the whole economy, and quarterly and annual GDP per capita.</li> </ul>	<p>According to the paper, research into the feasibility of producing "tourism productivity" estimates would require the derivation of chain volume estimates of tourism gross value added and a tourism hours worked series for labour productivity estimates. The ABS would need to examine the feasibility / resources required for this.</p>

Potential ABS Indicators for Tourism Activity		
Indicator	Details	ABS comments
Profitability and investment	<p>While "tourism industry" investment is not directly measured by the ABS, investment data by ANZSIC industry division is produced. Profitability data is combined with investment here as the two may be combined to estimate returns on assets by industry.</p> <p>Key ABS data on profitability and investment, in relation to tourism, includes:</p> <ul style="list-style-type: none"> <li>● TSA annual data on "profits", measured in terms of Gross Operating Surplus (GOS)</li> <li>● Annual data on industry ratios such as profit margin and investment rate</li> <li>● Annual industry estimates for aggregates such as capital stock, gross fixed capital formation and consumption of fixed capital; and</li> <li>● Quarterly estimates of actual and expected new capital expenditure by private businesses for selected industries in Australia.</li> </ul>	<p>Research conducted to explore options for deriving investment in tourism related industries (without tourism's share); an aggregate tourism industry investment estimate (and maybe by asset type); or more detailed industry investment by tourism related industries. The ABS would need to understand the priorities for such work.</p>
Innovation	<p>Key ABS data on innovation, in relation to tourism related industries, are collected through the Business Characteristics Survey (BCS). Data are collected annually on business use of IT and innovation indicators, with a more detailed set of items for each of these topics collected in alternating years. Examples of industry data items included are: innovation activity by employment size; and drivers and barriers of innovation.</p>	<p>Research would be required into deriving more closely aligned tourism related measures of innovation, potentially via expanding the sample size or scope of the Business Characteristics Survey to target tourism specific ANZSICs.</p>
Labour market	<p>Labour is a key input for tourism as a service industry: Not only the supply of labour, but also the quality of the labour inputs and the capacity of the industry to attract, retain and develop staff.</p> <p>Key ABS labour market data, in relation to tourism, includes:</p> <ul style="list-style-type: none"> <li>● The annual TSA which provides an estimate of "tourism employment" by detailed tourism industries;</li> <li>● Annual Counts of Australian Business Entries and Exits by detailed industry by ANZSIC industry subdivision and industry class; and</li> <li>● Other industry level data labour force data, including level of education / qualification; quarterly Average Weekly Earnings ; and biennial Employee Earnings and Hours which contains detailed information at the ANZSIC division level about the earnings, hours paid for, and selected characteristics of employees. Information is also collected about the characteristics of employers.</li> </ul>	<p>In terms of future developments in this area, the ABS sees a couple of possibilities:</p> <ul style="list-style-type: none"> <li>● There is significant potential for collating the information across collections for tourism related industries e.g. Census data with Labour Force Survey data; and</li> <li>● Second, expanding the range of employment estimates in the TSA.</li> </ul>

Potential ABS Indicators for Tourism Activity		
Indicator	Details	ABS comments
Household demographics and consumption	<p>The ABS has some data sources which may be useful in assisting to measure household characteristics in relation to the tourism industry. However, these data sources are not as regular or timely as those listed under the other themes.</p> <p>Key ABS data on household demographics and consumption which may be useful for tourism, include:</p> <ul style="list-style-type: none"> <li>• Irregular Time Use Survey which collects tourism related activities under the broad data items of 'social and community interaction' and 'recreation and leisure' activities.</li> <li>• The Household Expenditure Survey, which is a five-yearly survey collecting detailed information about the expenditure, income (including equivalised income), assets, liabilities and household characteristics of household residents in private dwellings throughout Australia.</li> <li>• The Census of Population and Housing (2064.0), which is conducted every five years. The main data items collected in the Census which may be useful are 'field of study of non-school qualifications', 'ANZSIC industry of employment' and 'occupation'.</li> </ul>	<p>More targeted tourism related data from these collections would likely be expensive and require significant methodological review.</p>

## 8.3 Industry Organisations and Associations

### 8.3.1 National Tourism Alliance (NTA)

The National Tourism Alliance (NTA) is an advocate for the Australian tourism and hospitality industry, with membership comprising national and state industry associations and all State Tourism Industry Councils. This means that the NTA indirectly represents over 45,000 or 95% of tourism businesses in Australia.

NTA pursues high-level engagement on national issues common across all aspects of the tourism and hospitality industry. A key role of the NTA is to facilitate industry engagement with external stakeholders and provide a vehicle for those stakeholders to communicate with the industry. The NTA provides research on policy positions and options to Governments

### 8.3.2 Tourism & Transport Forum (TTF)

The TTF is the peak industry group for the Australian tourism, transport, aviation and investment sectors. It is a national, member-funded CEO forum, and advocates public policy interests of the 200 most prestigious corporations and institutions in these sectors. They produce tailored tourism related research and have access to a wide range of qualitative research data for Australia and abroad.

A review of the TTF website identified 15 research reports produced between February 2007 and June 2009. Of the 15 reports, it appears that two (2) incorporated supply-side research, i.e. "Convention and Exhibition Space in Sydney" and "Australian Transport Capacity".

### **8.3.3 Business Events Council of Australia (BECA)**

BECA provides a formalised umbrella structure for the key industry players operating in the Australian business events sector. The Council develops industry views and matters of common interest and communicates those views to government and business. Members of BECA include the Association of Australian Convention Bureaux (AACB); the Exhibition and Event Association of Australasia (EEAA); Meetings Events Australia (MEA); Australian Convention Centres Group and ICCA Australian Chapter .

Research undertaken by the Council, including the National Business Events Study (NBES) has been undertaken in conjunction with the STCRC.

### **8.3.4 International Congress and Convention Association (ICCA)**

ICCA represents the main specialists in organising, transporting and accommodating international meetings and events, and comprises more than 850 member companies and organisations in 85 countries worldwide.

The Association is funded through membership and provides the most comprehensive research on the number and type of congresses held worldwide, providing a rating of countries and cities based on the number of congresses held and the number of delegates attracted.

### **8.3.5 Pacific Asia Travel Association (PATA)**

PATA is a membership association acting as a catalyst for the responsible development of the Asia Pacific travel and tourism industry. In partnership with PATA's private and public sector members, they enhance the sustainable growth, value and quality of travel and tourism to, from and within the region.

PATA focuses predominantly on producing demand-side research for the Asia Pacific region. However, they do produce one-off supply-side publications which appear to identify opportunities or gaps in the market. These include: *The Development and Future of Aviation Hubs in Asia*; *Developing Partnerships with The Airline Industry: Understanding the Role and Benefits of Travel Industry Partnership with Airlines*; and *Cairns - A Review of Increased Tourism Potential*.

### **8.3.6 World Tourism Organisation (WTO)**

WTO is a specialized agency of the United Nations and the leading international organization in the field of tourism. It serves as a global forum for tourism policy issues and a practical source of tourism know-how. It promotes the development of responsible, sustainable and universally accessible tourism, paying particular attention to the interests of developing countries. WTO released a set of general guidelines on *Measuring Tourism Supply*, which provides valuable information on the development of statistics about tourism supply and offers guidance for the completion of tables / outputs.

### **8.3.7 Australian Tourism Export Council (ATEC)**

ATEC is the national peak body for the \$24 billion export (inbound) tourism industry. Their key services include lobbying and advocacy, tourism industry development and policy development; and their functions are business facilitation, export-market development and industry representation. ATEC has produced a number of supply-side tourism research reports including:

- *Destination: Health - Australia and the global Medical Travel sector*: Examines Australia's future in the global Health and Wellness travel market.
- *Australia's Future Infrastructure Requirements*: a discussion paper into the Federal Government Review and its implication on the tourism sector.
- *The Missing Link*: a paper outlining ATEC's concerns over the priority placed on tourism demand over supply.

## 8.4 Overseas Research Tourism Agencies

### 8.4.1 South Africa

South African Tourism <sup>24</sup>	
South Africa's national tourism body that focuses on development and implementation of tourism marketing strategies. The main provider of tourism research statistics. The body has 2 principal researchers as well a sub-teams.	<b>Government entity</b>
	<b>Government Funded</b> FY07: \$78 million <sup>25</sup>
Research focus: <ul style="list-style-type: none"> <li>• Domestic and international tourist arrivals (volume, mode and purpose of travel; spend behaviour and trip type, travel patterns, including length of stay and provincial distribution).</li> <li>• Market research into each of South Africa's key tourism trade markets.</li> <li>• Tourism growth strategies: market-focused research that identified which markets and consumer segments to focus on and how to activate growth through marketing and brand positioning.</li> <li>• Global competitiveness of South African tourism against other nations. In 2004 a co-operative effort between the departments of Environmental Affairs and Tourism and trade and industry, and South African Tourism produced a document which gave insight into the drivers and barriers to growing tourism in South Africa in the competitive global arena.</li> </ul>	

Source: South African Tourism

<sup>25</sup> \$137 towards South African Tourism and \$319 towards marketing partnerships

## 8.4.2 Canada

Canadian Tourism Commission (CTC)	
National marketing organisation that advertises and markets Canada across the world, conducts industry research and studies and promotes product and industry development.	<b>Government entity</b>
	<b>Government Funded<sup>26</sup></b> FY08: \$85 million
<p>Research focus:</p> <ul style="list-style-type: none"> <li>• Domestic and international tourist arrivals (volume, mode and purpose of travel; spend behaviour and trip type, travel patterns, including length of stay and provincial distribution).</li> <li>• Market knowledge on target markets and potential customers (focus on key geographical markets).</li> <li>• Product demand research and industry capacity assessments, including identification of niche markets, trends, consumer motivations and traveller behaviour and choices.</li> <li>• Research on lodging, transport, economic and political factors and affecting the tourism industry.</li> <li>• Trends and outlook on travel volume, consumer sentiment and travel intentions; economic overviews of key domestic and international tourism markets to Canada.</li> </ul>	

Source: Canadian Tourism Commission

<sup>26</sup> Receives partnership contributions from Canadian and foreign organisations for conducting marketing activities.

<sup>28</sup> Through the fees charged for services to the private and public sectors.

Canadian Tourism Research Institute (CTRI)	
Part of the Conference Board of Canada. Provides conference management, networking services, and organisational development services; publishes and disseminates research. Specialists in economic trends and public policy issues.	<b>Not-for profit applied research organisation</b>
	<b>Self Funded<sup>28</sup></b>
<p>Research focus:</p> <ul style="list-style-type: none"> <li>• Travel market outlooks: national and regional travel information and forecasts for key inbound markets.</li> <li>• International travel activity: trends in outbound travel (airline ticket sales, economic conditions, air capacity and passenger traffic by destination).</li> <li>• Travel indicators: hotel trends, non-resident trips and airline bookings. Key economic indicators and forecasts at both the national and provincial level.</li> <li>• Tourism Economic Assessment Model (TEAM) which estimates the direct, indirect and induced economic impact for 60 measures including employment, compensation, and gross domestic product.</li> <li>• Traveller surveys which include habits, motivations, destination images, future intentions, trip planning behaviour, Internet use etc.</li> </ul>	

Source: Canadian Tourism Research Institute

Statistics Canada	
Collects, compiles, analyses, abstracts and publishes statistical information relating to the commercial, industrial, financial, social, economic and general activities and conditions of Canada.	<b>Government entity</b>
	<b>Self Funded<sup>29</sup></b> Undisclosed for Tourism Arm
<p>Research focus:</p> <ul style="list-style-type: none"> <li>• Tourism related research focuses on: domestic and international travel, tourism employment, and tourism indicators.</li> </ul>	

Source: Statistics Canada

<sup>29</sup> Through the fees charged for services to the private and public sectors.

### 8.4.3 United Kingdom

Office for National Statistics (ONS)	
<p>The Office for National Statistics produces independent information on the UK's economy and society. ONS is the UK government's single largest statistical producer.</p>	<b>Government entity</b>
	<b>Government Funded</b> Undisclosed for Tourism Arm
<p>Research focus:</p> <ul style="list-style-type: none"> <li>• Travel and tourism statistics predominately focus on demand side including: air travel, car access, difficulty accessing local services, overseas travel and tourism</li> </ul>	

Source: Office of National Statistics

VisitBritain	
<p>VisitBritain is funded by the Department of Culture, Media and Sport with the aim of building the value of tourism by creating world-class destination brands and marketing campaigns, and by building partnerships with other organisations with a stake in British tourism.</p>	<b>Government entity</b>
	<b>Government Funded</b> FY08: \$100 million
<p>Research focus:</p> <ul style="list-style-type: none"> <li>• Key Tourism Facts: facts and figures on the value and volume of tourism in the UK</li> <li>• Domestic Tourism Statistics &amp; Research: ad hoc and continuous data and research on tourism by UK residents within the UK itself</li> <li>• Inbound Tourism Statistics &amp; Research: information on overseas visitors, visits and visitor spending by international travellers to the UK</li> <li>• Country &amp; Trade Profiles: market &amp; trade information by country</li> <li>• Tourism Forecasts: the latest forecasts for the volume and value of inbound tourism</li> <li>• Tourism Trends: trends in the industry impacting on British tourism</li> </ul> <p>A recent publication by VisitBritain, <i>British Tourism Framework Review</i>, highlights a number of supply side tourism topics. This includes competitor analysis, transport infrastructure issues as well as strengths of the British tourism industry as a destination.</p>	

### 8.4.4 New Zealand

Ministry of Tourism - Research	
<p>The Ministry of Tourism is responsible for the provision of quality information, research and forecasts to meet the needs of a wide range of tourism sector users.</p> <p>The rationale for the Ministry undertaking this work is to ensure the tourism industry has the information it needs to support policy, marketing and commercial decisions relating to the sector.</p>	<p><b>Government entity</b></p> <hr/> <p><b>Government Funded</b>            Level of funding undisclosed</p>
<p>Research focus:</p> <ul style="list-style-type: none"> <li>• Managing the Core Tourism Data Set - International Visitor Survey, Domestic Travel Survey, International Visitor Arrivals, Commercial Accommodation Monitor, Tourism Satellite Account and Forecasts.</li> <li>• Developing and managing data collections in partnership with industry.</li> <li>• Undertaking research of importance to the sector.</li> <li>• Conducting analysis of tourism and other data covering a wide range of topic areas.</li> <li>• Undertaking communications of research outputs, including the research website, publications, analysis papers and a range of face-to-face communications</li> </ul> <p>Supply-side research reports include:</p> <ul style="list-style-type: none"> <li>• Yield Research – examination of drivers of financial and economic sustainability in the tourism industry. Main research areas covered: Yield in the Private Sector; Operator’ Motivations and Behaviours; Yield in the Public Sector; Yield Generated by Different Tourist Types.</li> <li>• The impact of adverse events on NZ Tourism</li> </ul>	

Source: Ministry of Tourism (New Zealand)

The New Zealand Tourism Research Institute	
<p>The New Zealand Tourism Research Institute is based at the Auckland University of Technology and undertakes research solutions for the tourism industry and those who depend on it. Its focus is on helping to develop a profitable and sustainable industry which provides tangible benefits for business, residents and visitors. Includes a team of 14 researchers</p>	<b>University Research Institute</b>
	<p><b>Private and Government funding</b>          Level of funding undisclosed</p>
<p>Research focus:</p> <ul style="list-style-type: none"> <li>• Academic and industry specialist reports including Marine Tourism (fisheries and community), and Northeast Iceland Culinary Experience</li> </ul> <p>Research areas:</p> <ul style="list-style-type: none"> <li>• <i>Cultural and Heritage Tourism</i> - supports the sustainability of museums, art galleries, historic buildings and other cultural and natural heritage enterprises.</li> <li>• <i>Tourism and Technology</i> - strengthens collaborative and interdisciplinary research and development projects integrating the key themes of technology, tourism, social and economic well-being.</li> <li>• <i>Tourism and Community Development</i> - assists local destinations in their efforts to meet the challenges and opportunities associated with the rapid globalisation of the travel and tourism industry.</li> <li>• <i>Coastal and Marine Tourism</i> - key themes of coastal and marine tourism, the associated impacts, wildlife watching, education and interpretation, aquaria and marine parks, community development, small island tourism, the cruise industry, and related themes.</li> <li>• <i>Tourism Marketing</i> - applies marketing theory and marketing research techniques to an understanding of tourists and the performance of businesses across tourism, travel and hospitality industries.</li> <li>• <i>Indigenous tourism</i> - brings together people from a wide-range of backgrounds to support the development of appropriate indigenous tourism across the globe.</li> <li>• <i>Pacific Islands Tourism</i> - strengthens collaborative and interdisciplinary research and development projects that integrate tourism development with the social, cultural, environmental and economic well-being of the people in the Pacific Islands.</li> <li>• <i>Event Tourism</i> - research that adds value to industry, the professionals that work within it and the communities that they serve.</li> </ul>	

Source: New Zealand Tourism Research Institute

## 8.5 Rates of Return to publicly funded research

Rates of return to publicly funded research			
Author (s)	Subject	Methodology/ Framework <small>a,b,c,d</small>	Annual rate of return to public R&D <sup>e</sup>
Griliches (1958)	Hybrid corn	Economic surplus approach	21-40%
Griliches (1964)	Aggregate agricultural research	Production function approach	35-40%
Peterson (1967)	Poultry	Production function approach	21-25%
Schmitz-Seckler (1970)	Tomato harvester	Economic surplus approach	16-46%
Bredahl and Peterson (1976)	Cash Grain	Production function approach	36%
	Poultry		37%
	Dairy		43%
	Livestock		47%
Knutson and Tweeten (1979)	Aggregate agricultural research	Production function approach	28-47%
Mansfield (1980)	Industrial R&D	Total factor productivity approach	12%
Davis and Peterson (1981)	Aggregate agricultural research	Production function approach	37%
Norton (1981)	Poultry	Production function approach	27-33%
	Dairy		56-66%
	Livestock		30%
	Cash grain		44%
Scobie and Everleens (1986)	Aggregate agricultural research (New Zealand)	Total factor productivity approach	30%
Mansfield (1991)	All academic science research	Return on investment approach	28%
Huffman and Evenson (1993)	Aggregate agricultural research	Production function approach	43-67%
Nadiri and Mamuneas (1994)	Twelve manufacturing industries	Production function approach	6-9%
Mullen and Cox (1995)	Agricultural research: broadacre (Australia)	Total factor productivity approach	15-40%
Mullen, Cox and Hu (1997)	Agricultural research: broadacre (Australia)	Total factor productivity approach	12-20%
Health Economics Research Group, Office of Health Economics, RAND Europe (2008)	Cardiovascular research	Return on investment approach	0.39

Rates of Return to publicly funded research (cont.)			
Author (s)	Subject	Methodology/ Framework <small>a,b,c,d</small>	Annual rate of return to public R&D <sup>e</sup>
Mamuneas (1999)	Six high-tech manufacturing industries	Production function approach	12-21 %
Toole (1999)	Pharmaceuticals	Return on investment approach	11-32 %
Cockburn and Henderson (2000)	Pharmaceuticals	N/A – study presents a literature review	30% +
Johnson (2000)	Nine industries	Total factor productivity approach	-27-1 %
Scobie and Hall (2006)	Agriculture	Multifactor productivity approach	0-32% <sup>f</sup>

Source: Martin et al. (1996), OTA (1986), Mansfield (1980), Industry Commission (1995), and Scott et al (2002).

- a The economic surplus approach evaluates productivity changes that can be attributed to research. Productivity changes are interpreted as shifts in the supply function.
- b The production function approach relies on the estimation of production functions that contain research expenditures as an explanatory variable.
- c The total factor productivity approach is a variant of the production function approach where, instead of relating research to output, research is related to the growth in total factor productivity (TFP).
- d The return of investment approach estimates the rate of return that makes the discounted flow of costs and social benefits of research add up to zero.
- e Figures in this table are average values.
- f Annual average rate of return.