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## Extending the TSA to states and regions: a case study from Australia

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Sustainable Tourism Cooperative Research Centre Established by the Australian Commonwealth Government



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## Sustainable Tourism Cooperative Research Centre (STCRC)

- **National research body with funding from state and federal governments, industry and 16 member universities**
- **STCRC Centre for Economics & Policy (CEP)**
  - **Range of tourism economic research – impacts of demand shocks, mega trends, yield, climate change, carbon footprint, productivity**
- **CEP Team**
  - Ray Spurr** Director, Senior Research Fellow, University of New South Wales, Sydney
  - Prof. Larry Dwyer** Qantas Professor of Travel & Tourism Economics, University of New South Wales
  - Prof. Peter Forsyth** Monash University
  - Dr. Tien Duc Pham** University of Queensland, Brisbane
  - Dr. Thiep Van Ho** Monash University
  - Dr. Daniel Pambudi** Monash University
  - Dr. Serajul Hoque** Monash University
  - Dr. Shusaku Yamamoto** University of Queensland
- **Accidental statisticians**
  - **TSA work now a significant commitment**



## TSA in Australia

### Australian Tourism Satellite Account (ATSA)

- National TSA
- government statistical agency:  
the Australian Bureau of Statistics (ABS)
- annually since 2000
- Not produced below national level

### STTCRC TSA Projects:

1. State & Territory TSA
2. Regional Tourism Economic Accounts (RTEA)



## 1. STCRC State & Territory TSA

- **8 separate TSA:**
  - one for each of Australia's 6 states and 2 territories
- **Funding from STCRC and state governments**
- **2003-04 & 2006-07 reports published during 2008**
  - 2007-08 - August this year (16 month lag)
  - then annually
- **Benchmark individual updates every 3 years**
  - summary spreadsheet report for interim years

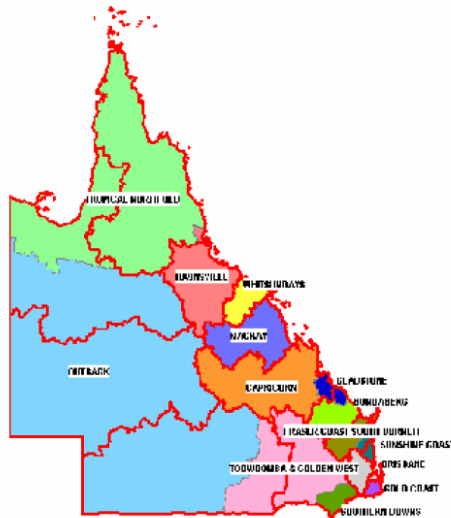
## Australia: State & territories



## 2. STCRC Regional Tourism Economic Accounts (RTEA)

- Pilot project - currently underway
- Initially for state of Queensland:
  - STCRC and Queensland government funding
  - 9 regions
  - to be completed end 2009
- Future roll out to regions across Australia:
  - <50-60 regions
- Seen as experimental
  - Indicative, basis for education & further development

## Queensland: Tourism Regions



## Method

- **Hybrid approach**
  - top down – ATSA tourism ratios
  - bottom up – survey expenditure data; regional I-O tables
- **Australia has relatively good tourism & industry statistics**
  - But national statistical bureau does not produce state or region I-O tables

## Demand Side: expenditure data

- **Tourism Research Australia TRA**
  - federal government's tourism statistics and research agency
- **Expenditure data from two major surveys:**
  - international visitors – IVS
  - domestic visitors – NVS
- **Expenditure data shares allocated to regions by TRA on basis of overnight stays/day visits**
- **Small area errors**
- Expenditure data is then used to derive**
  - regional shares of national tourism expenditure by commodity

## Supply Side:

- **Input-Output Tables**
  - Centre of Policy Studies, Monash University in Melbourne
  - Use of MMRF model data base for state TSA
  - TERM (The Enormous Regional Model) for RTEA
- **Expenditure shares of tourists by commodity used to derive proportion of tourism purpose production by industry**
  - the 'tourism ratio'
  - assumes ratio similar for tourism & non-tourism production within each industry classification
- **Derive output for tourism activity – hence Tourism GVA/GRP**
- **I-O ratios to derive compensation to employees, GOS, and taxes**
- **Employment**
  - by applying tourism ratios to number employed by industry



## Features of STCRC Method

- **No “modelling”**
  - uses real data
  - closely mirrors ABS approach
- **Requires mapping of TSA Tourism Characteristic and Tourism Connected Products to TRA expenditure items**
- **Mapping of expenditure to industry sectors**



## TSA/RTEA

- **Follows ATSA framework**
  - and in turn the RMF methodology
- **Outputs:**
  - all principal tables from the RMF
  - slightly abbreviated for RTEA
- **Extensions:**
  - indirect effects
  - tourism taxation
  - yield from types of tourists
  - Greenhouse gas emissions

## Outcome

- **Reconciled for consistency against ATSA**
  - all region results sum to national totals
  - discipline and credibility
- **Results comparable:**
  - between regions, states and with national ATSA
  - across industries and industry segments
  - over time
- **Rigorous and credible process**
- **not perfect**
  - small region survey problems
  - I-O table development
  - Can enhance results by further research and consultation at region level
- **Supports further research –**
  - STCRC CEP developing set of tourism Computable General Equilibrium (CGE) models for impact and policy related analysis
  - total suite of data and models across Australia based on consistent methods, definitions, and data sources

## Transferability of STCRC model

- **Highly valued by stakeholders**
  - Similar benefits perceived to those from a national TSA
- **Regions forced to accept real world estimates**
- **Approach could be replicated by other countries**
- **Basic requirements:**
  - a national TSA
  - tourism expenditure data at state or regional level or means to estimate it
  - consistent Input-Output Tables down to the level of region selected
  - committed funding
  - retention of skilled research staff



## Sources

### For STCRC State TSA methodology:

see Appendix B: “Concepts, Sources and Methods Used in Developing Tourism Satellite Account (TSA) for the Australian States and Territories” in STCRC state TSA reports, e.g.  
[http://www.crctourism.com.au/WMS/Upload/Resources/TSA\\_SA%20-%20Final.pdf](http://www.crctourism.com.au/WMS/Upload/Resources/TSA_SA%20-%20Final.pdf)

### For STCRC RTEA methodology:

T. Duc Pham, L. Dwyer, R. Spurr (2009) “Constructing a Regional TSA: The Case of Queensland”, forthcoming in Tourism Analysis



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EC3, a wholly-owned commercialisation company, takes the outcomes from the relevant STCRC research; develops them for market; and delivers them to industry as products and services. EC3 delivers significant benefits to the STCRC through the provision of a wide range of business services both nationally and internationally.



### KEY EC3 PRODUCTS



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