

Tourism and Climate Change – An Overview

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Establish some facts

1. Tourism is dependent on the climate
2. Climate change will impact on tourism in various ways
3. Tourism is (increasingly) carbon-intensive
4. Consumers become (increasingly) aware of their carbon footprint
5. Current policies are inadequate to a) protect tourism or b) protect the climate or c) protect both

What are the key issues

- Climate change impacts and adaptation for tourism
- Tourism's GHG emissions and mitigation
- Tourist behaviour
- Climate change policies for tourism



Impacts and adaptation

Direct: temperature (comfort, safety, attractiveness), extreme events (safety, image), precipitation (tourist satisfaction)

Indirect: resources (water availability), ecosystems/biodiversity (coral reefs), diseases (malaria)



Adaptation

Analysis of risks => include climate change => Pro-active and no-regret measures

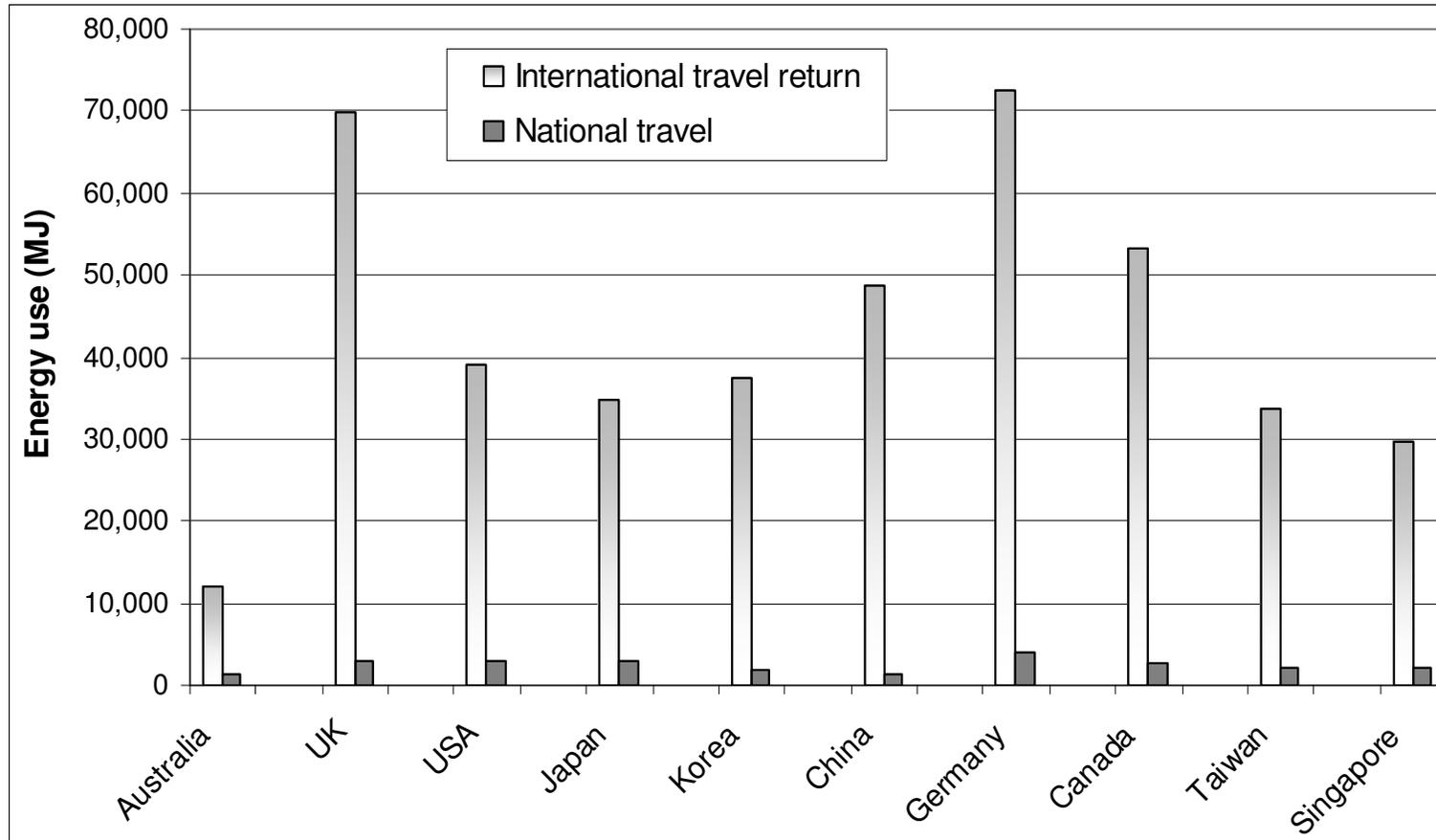
Examples at different levels:

- Mediterranean: Shift in seasons
- Great Barrier Reef: minimise all impacts to increase resilience of reef
- Hotel: Garden design to provide shade; pool cover to reduce evaporation, saltwater toilets etc.

GHG Emissions and Mitigation

- Transport TO the destination (~90% of energy use)
 - Transport at the destination (suspected to be considerable in Australia)
 - Accommodation, attractions, hospitality
- => Varies significantly between different types of tourists and tourism, and markets

Tourist transport to and in NZ



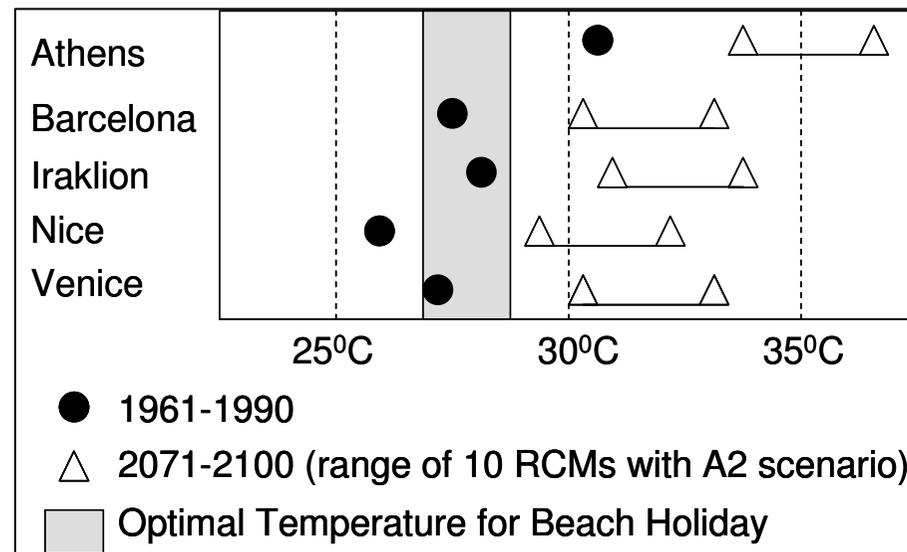
Reducing GHG emissions

- Airlines: Technology, air traffic management, partnerships, offsetting
- Destination transport: vehicle efficiency, driver training, partnerships, biofuel?
- Tourism establishments: energy efficiency, support of renewable energy sources, better energy management,
- Destination level: marketing, tourism product, policy making

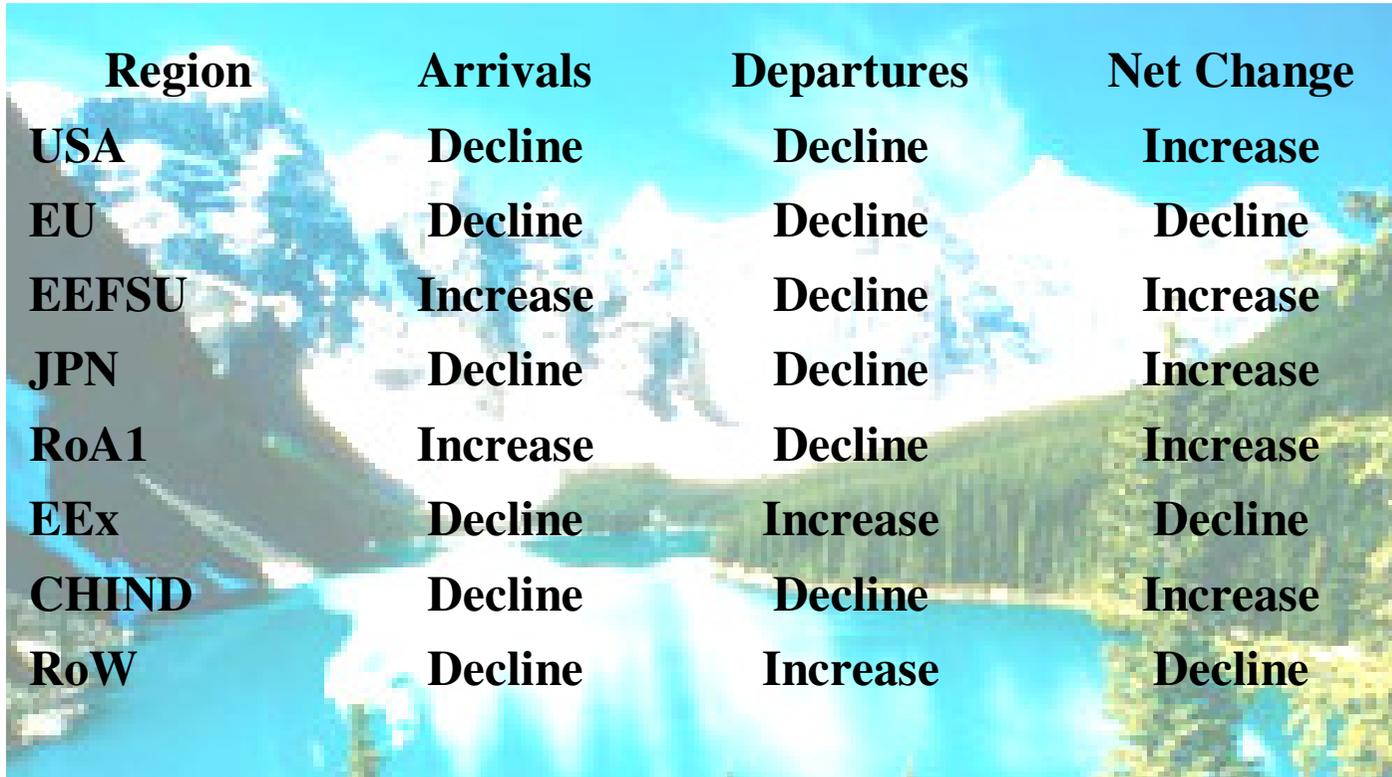


Tourist Behaviour

- Temperature is a key driver
- Perceived climate
- Destination attributes (e.g. wildlife)



Example of research on flows



Region	Arrivals	Departures	Net Change
USA	Decline	Decline	Increase
EU	Decline	Decline	Decline
EEFSU	Increase	Decline	Increase
JPN	Decline	Decline	Increase
RoA1	Increase	Decline	Increase
EEx	Decline	Increase	Decline
CHIND	Decline	Decline	Increase
RoW	Decline	Increase	Decline

Region abbreviations: [EU] European Union, [EEFSU] Eastern Europe and Former Soviet Union, [JPN] Japan, [Rest of Annex 1 Nations – developed nations, including Canada], [EEx] Energy Exporters, [CHIND] China and India, [RoW] Rest of World – developing nations, including Caribbean]

Response to carbon footprint

- “What is the real price of cheap air travel?” The Observer, January 29 2006
- “‘It’s a sin to fly,’ says church” The Sunday Times, 23 July 2006
- “Flugreisen als Klima-Killer” Abendblatt, 6 July 2004
- “Flight or fright?” The Listener, March 3-9 2007
- “Climate conscious may ditch air travel.” New Zealand TV One, 9 April, 2007

The current response is carbon offsetting...

Climate change policies

- What policies?
- Tourism-specific?
(EU-ETS...)
- Contradicting policies!
- Leadership?
- Support the industry
- Policies need to cover both adaptation and mitigation



Research questions

- How aware is the tourism sector of climate change?
- What are the key impacts in Australia's tourism destinations (Tropics, Outback, Cities, Coastal)?
- What cost-effective adaptation measures can be implemented at business and destination level?
- What are tourists' expectations when visiting specific destinations and are these influenced by climate change?
- How do climatic parameters change in key destinations? (e.g. Tourist Comfort Index)
- How sensitive are visitors to Australia of their carbon footprint?
- What is the GHG profile of the Australian tourism industry?
- Which tourist types are the least carbon intensive?
- What are the potential mitigation policies for different types of tourism businesses?
- What are current adaptation and mitigation policies and do they support tourism?
- What role can carbon offsetting play in Australia?
- What is tourism's role in relation to other sectors (e.g. agriculture)