Tourism and Climate Change – New Zealand response

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Abstract
There is a two-way relationship of cause and effect between tourism and climate change. Tourism is both an important contributor to climate change as a user of fossil fuels, and tourist destinations are threatened by the consequences of a changing climate. New Zealand has recognised the role tourism plays in this context, and the New Zealand Tourism Strategy 2010 has set the goal of carbon neutrality for the whole industry. To achieve this ambitious goal, both Government and industry have supported research on tourism’s contribution to national carbon dioxide emissions, and commissioned several research projects in this context. Past research includes a top-down analysis of the tourism sector using environmental accounting methods, and a bottom-up approach that investigated the transport, accommodation and attraction sub-sectors, as well as the travel behaviour of international and domestic tourists in New Zealand. Present government-funded research includes tourists’ transport behaviour and travel itineraries, as well as a trend analysis of energy efficiency in the tourism sector. Both industry and Government are aware of New Zealand’s geographical isolation and the heavy dependence of the tourism industry on air travel. For this reason, the attention placed on the issue goes beyond improving industry practices (e.g. Green Globe benchmarking programme) and changing tourist behaviour internally. The development of carbon sinks schemes and a greenhouse calculator (http://www.ebex21.co.nz), for example, helps tourists offsetting emissions resulting from their international and internal travel.
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The New Zealand Situation

• In 2000, NZ emitted 30,850 kt of CO₂, of which 43% came from transport
• New Zealand ratified the Kyoto Protocol in December 2002
• Tourism contributes about 6% to national CO₂ emissions and 4.9% to GDP
• International tourism is growing at a rate of about 7% per annum (now more than 2 million arrivals per year)
New Zealand Tourism Strategy 2010

Securing and Conserving a Long Term Future

[...] develop and promote resource efficiency initiatives and environmental management systems to achieve agreed international benchmarks (including carbon neutrality) by 2010.
Promoted as touring destination

... implies dependency of tourism on transport and fossil fuels.

Situation analysis

• Top-down analysis using Environmental Accounting (Patterson & McDonald)
• Bottom-up analysis involving businesses and tourists (Becken & Simmons)
• Integration of both analyses for industry report

=> Need to manage energy use
**International and Domestic Tourists**

- International tourists travel on average 23000 km return to countries of origin
- International tourists drive on average 1950 km, domestic 640 km
- Transport makes up 69% of an international tourists’ energy use, 85% for domestic tourists
International air travel

Total energy use in 2000: 2 × 28 PJ

Energy Use: Transport and Accommodation

- Air travel: 32%
- Road transport: 43%
- Sea transport: 2%
- Rail transport: 1%
- Accommodation: 22%
Energy Use by different travel styles

Energy use per day (MJ)

- Coach tourist
- Visit friends/rel.
- Camper
- Backpacker
- Auto tourist
- Soft comfort
- Gateway-only

Further Research Programmes

- Three-year government-funded programme on ‘tourists’ travel patterns and energy use’
- Energy efficiency analysis of the tourism sector commissioned by the Energy Efficiency and Conservation Authority
- Involvement in Green Globe 21 benchmarking programme
- Carbon off-setting schemes (tourism calculator on www.ebex21.co.nz)