

Identifying Indicators to Measure Tourist's Views on Climate Change

**Professor Bruce Prideaux
and
Dr Alexandra Coghlan
School of Business
James Cook University
Cairns**

Research Aims

- The major aim is to develop a methodology to identify **indicators** that point to changes in consumer behaviour towards climate change
- The point at which change occurs is referred to as a *tipping point*
- The project will extend over 3-4 years (depending on funding)
- A similar project has been established in Hong Kong to develop an international comparison

Background - IPCC (2007)

- The Fourth IPCC Report (2007:1) contained the following sobering statement –
‘Warming of the climate system is unequivocal, as is now evident from observations of increases in global average air and ocean temperatures, widespread melting of snow and ice and rising global average sea level’.
- The report further stated that -
‘Observational evidence from all continents and most oceans shows that many natural systems are being affected by regional climate changes, particularly temperature increases’

What Can We Expect

- Retreating glaciers, reduced snow fall in some areas, shifts in the range of some species, longer and more severe drought, flooding, sea level rises, reduced summer flows of snow feed rivers in many areas, coral bleaching, increasing acidification of the oceans, more intense fire events and so on...
- Recent research suggests that the models published by the IPCC (2007) may underestimate the severity of climate change rather than overestimating it

The Tourism Context

- There is a substantial risk that failure to develop an understanding of the likely impacts will create large scale disturbances in most tourism markets.
- However, little of the work that is being carried so far in this area has acknowledged two important issues
 - (i) tourism is a non-essential commodity that may soon be challenged by the current global financial crisis as well as new levies and taxes imposed upon it (carbon taxes, etc.), and
 - (ii) tourism is essentially a supply-driven sector heavily influenced by the choices of tourists in source markets.
- Tourism can exacerbate climate change through its fossil fuel, transport-dependent nature and the carbon footprint which this entails

Impact on Tourism Behaviour

- Climate change can be expected to impact on tourist behaviour and demand in two ways.
- The most obvious is simply that climate change will affect the destination resource base (**supply side**) to such an extent that it becomes unappealing to tourists (lack of snow or healthy coral reefs)
- Second, ethical, moral, and economic issues of tourism and climate change will impact on tourist behaviour (**demand side**). Public perception of green house gas emissions for non-essential commodities or the cost of climate change mitigation strategies may give rise to changes in tourist demand patterns.

Understanding the Implication for Tourism

- To understand the relationship between climate and possible impacts on tourism demand it is necessary to understand the importance that climate and climate change has on the decision making strategies of consumers planning holidays.
- If not significant already, it is likely that climate related decision making will begin to influence tourism markets in the near future particularly as tourists become aware of their personal carbon foot and the carbon cost of various forms of travel.

Tipping Points

- Currently people use neutralization techniques to exonerate themselves from personal responsibility
- The claim that *everyone is doing it*
- The *metaphor of the ledger* - On balance I am a good person
- Once the tipping point is reached consumers are likely to assume responsibility and change the way they travel.
- This may mean travelling less or the demand for carbon neutral travel

Research Findings – The First Sample

- 339 completed surveys were collected in January 2008 at the Cairns domestic airport.
- The sample consisted of 48% males and 52% females.
- Over half of the respondents (52%) were domestic tourists,

Concerns about climate change

- Most pressing concern was that sea levels would rise. On a scale of 1 to 4, where 4 was “very concerned”, the statement that climate change would lead to rising sea levels scored an average of 3.51/4.0.
- Other concerns included the increase of extreme weather events (3.50), extinction of Australian animals (3.36), damage to the Great Barrier Reef (GBR) and damage to the Wet Tropics World Heritage Area (WTWHA) (3.29).
- Less important concerns included the impact of climate change on the quality of life (3.12), international stability (2.95) and the impact of respondent’s daily activities on the environment (2.91).
- There was no statistical difference in the way international and domestic visitors rated their concerns.

Behaviour at Home

Respondents were asked to rate nine environmentally-friendly behaviours that they undertake when at home, using a scale of 1 (not at all important), 4 (important) and 5 (very important). The most common activities or behaviours reported were:

- Recycling my rubbish (4.20/5)
- Purchasing energy efficient home appliances (4.00/5)
- Reducing the amount of packaging on consumer products (3.97/5)
- Using energy efficient lighting (3.95/5)
- Purchasing bio-friendly products (3.49/5)
- Using public transport instead of a private car to reduce carbon (3.03/5)
- Buying green electricity (2.97/5)
- I prefer to purchase products that include carbon offset schemes (2.81/5)
- I prefer to shop at stores that offer carbon offsetting schemes (2.65/5)

A mean of 4 indicates that the activity is seen as important and may indicate a change in behaviour that is leading to a tipping point

Carbon Footprint

Respondents were asked about their carbon footprint. Highlights include:

- 13.5% of respondent had measured their carbon footprint at home
- 11.3% of respondents were aware of the carbon footprint of this trip to Tropical North Queensland
- 33.6% of respondents expressed interested in finding out about their carbon footprint at home
- 32.7% of respondents were interested in finding out about their carbon footprint on holidays
- Of particular interest was the high level of interest in finding out about personal carbon footprints at home and when travelling.

Potential Indicators of Tipping Points

- Changes in the number of people who currently measure their carbon footprint
- The number of people who are interested in finding out the size of their carbon footprint
- Willingness to pay a carbon offset
- Percentage of respondents who will fly less
- Purchasing carbon offsets from airlines
- Percentage of respondents who participate in conservation programs
- Changes in consumer behaviour including buying green electricity
- Purchasing products that include carbon offset schemes
- Shopping at stores that offer carbon offsets

Where to From Here

- From the next airport survey we hope to measure any changes in the possible indicators initially identified
- Continue working on identifying possible tipping points
- Increase the numbers of international partners
- The next study is a survey of Gen Y university students in 10 countries which should yield about 4000 responses