Tourism and climate change in New Zealand: public and private sector responses

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Tourism in New Zealand: Some Context

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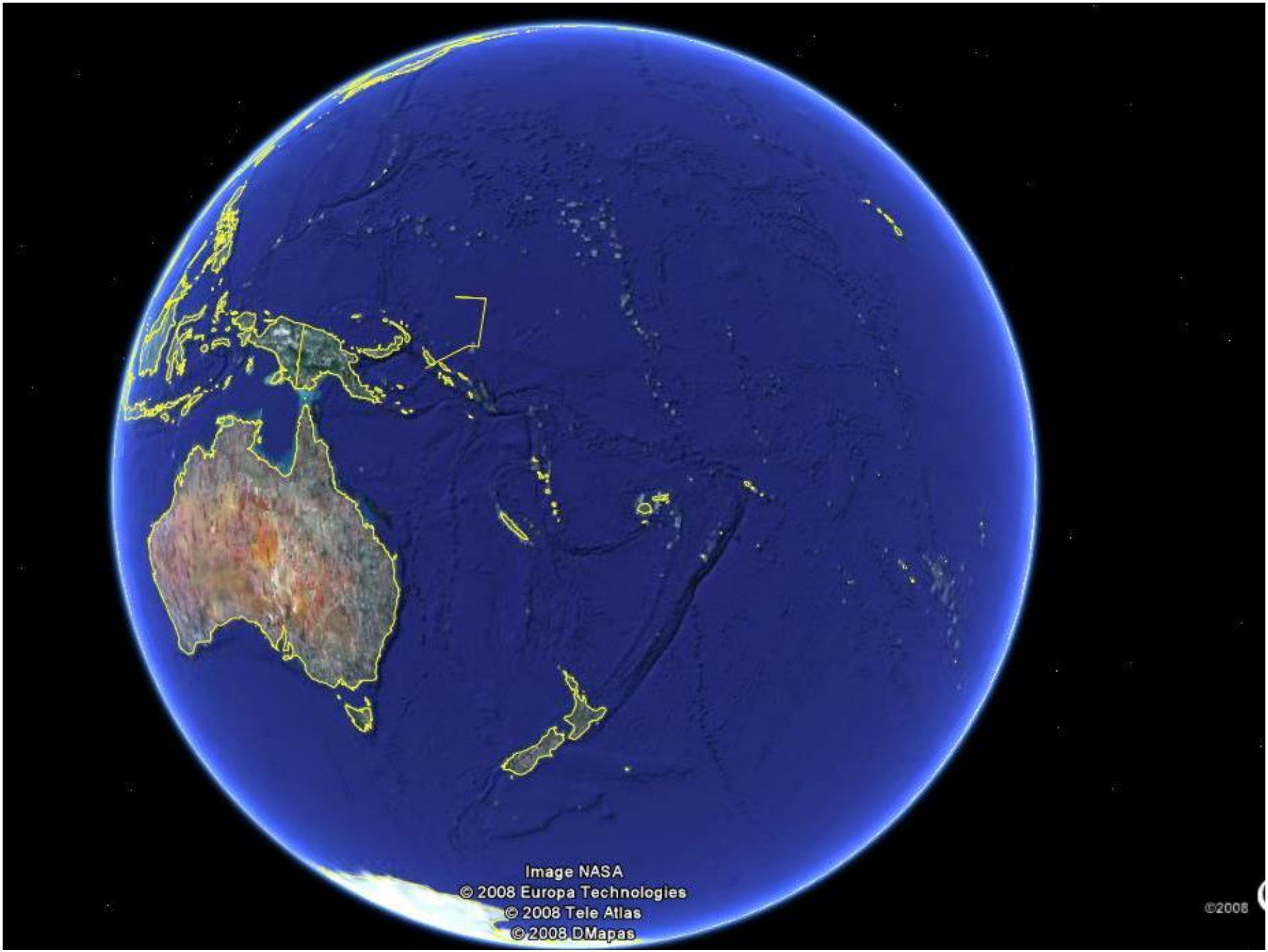
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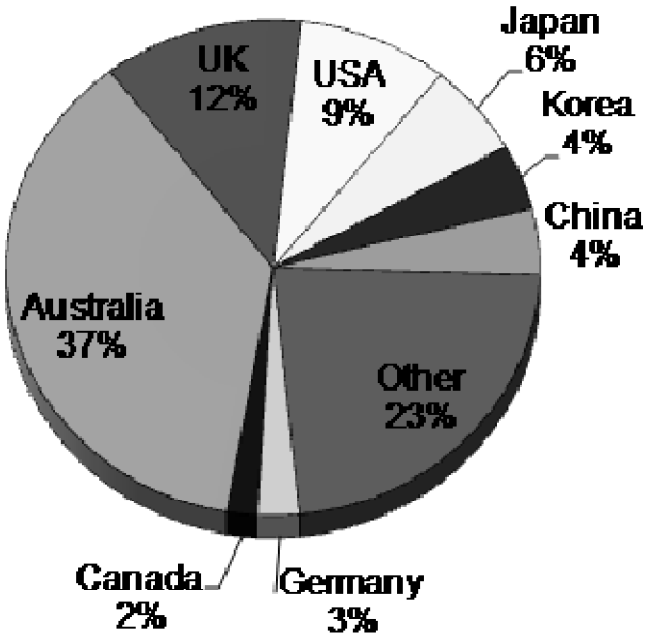
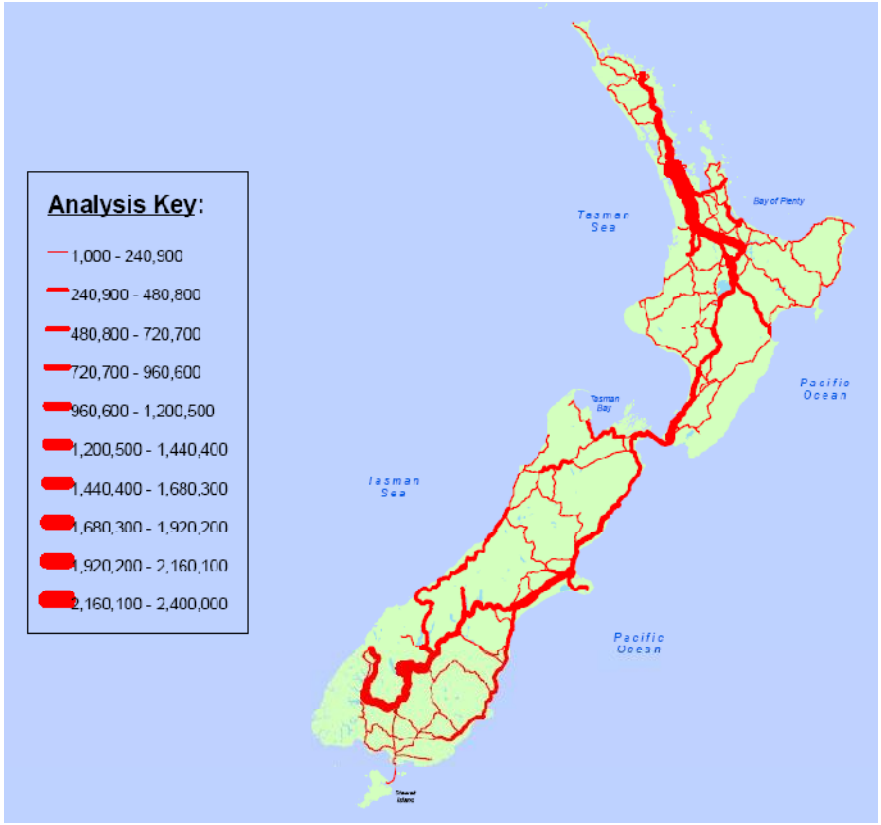
International arrivals: 2.5 million
Average length of stay: 20.8 days
Circuit Travel Destination

New Zealand's International Visitor Markets 2006



Road Flows by international tourists



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New Zealand and Climate Change

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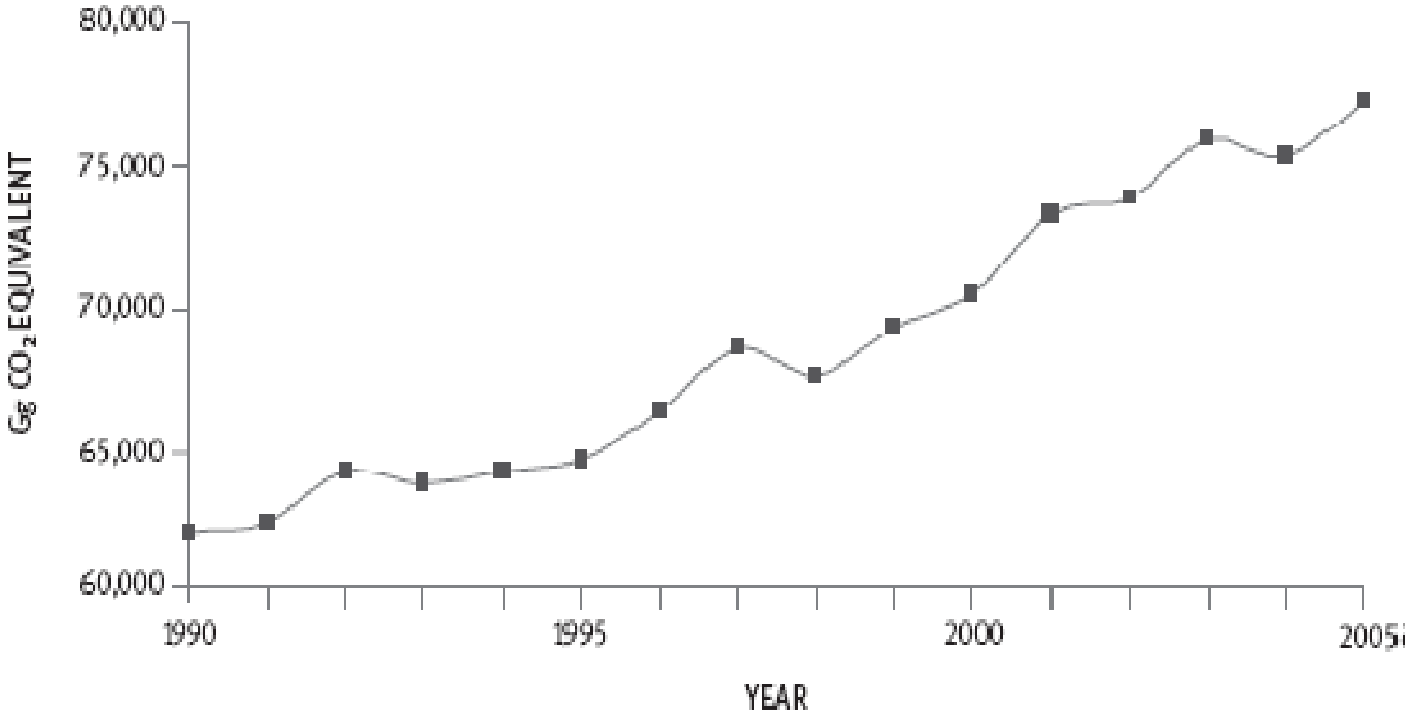
Kyoto Obligation: net emissions of GHG to 1990 levels by 2012

New Zealand's total GHG Emissions 1990-2005

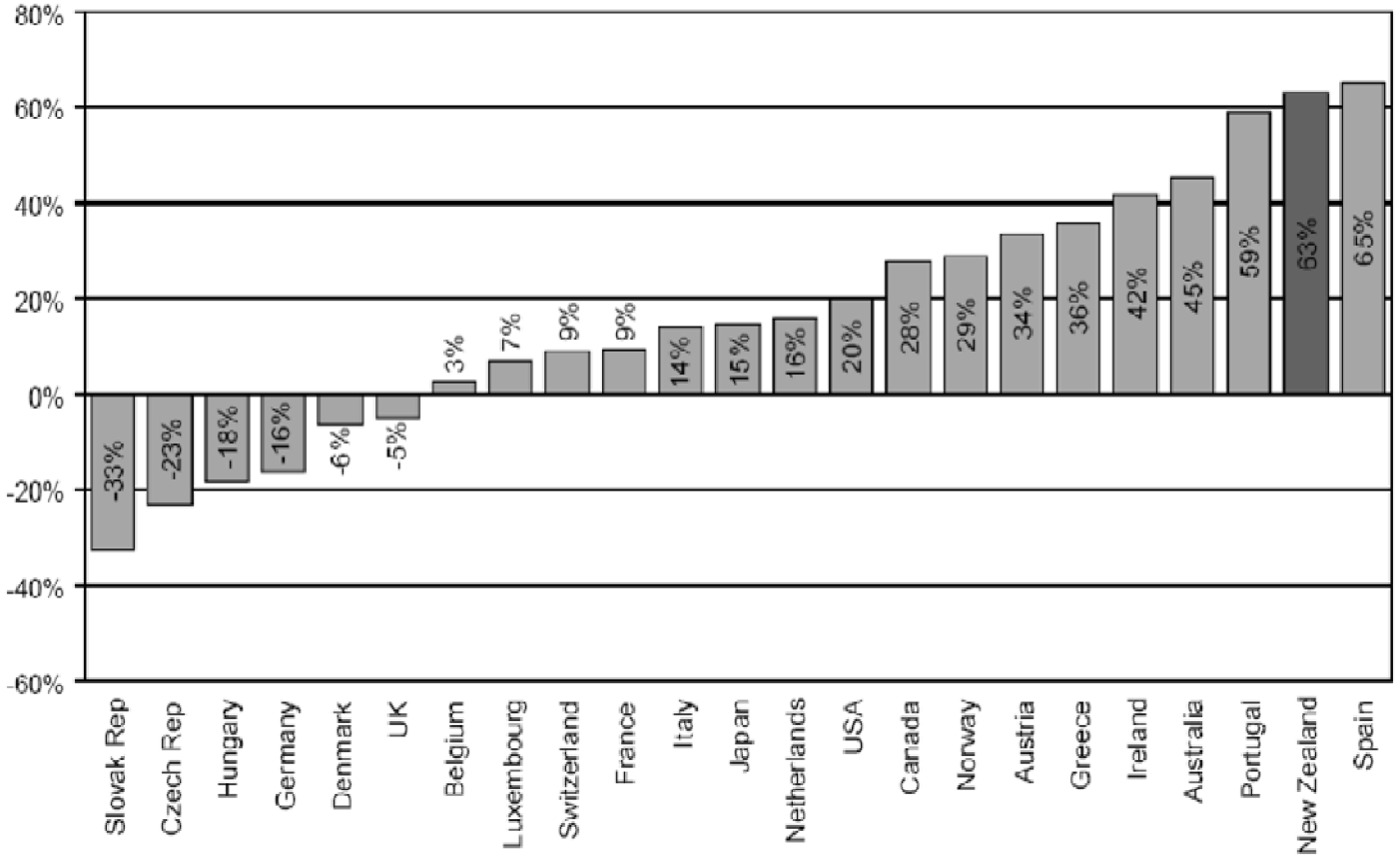


Main sources of emissions in 2005:

- 49% Agricultural sector (mostly Methane)
- 43% Energy sector (mostly CO2)

Of all Energy emissions: 45 % generated by transport (domestic : road, aviation, rail and marine)

Percentage Change in CO2 emissions from Fuel Combustion 1990-2005



The challenge for New Zealand

ÅTourism is a significant sector of the economy

ÅNZ is predominantly a long-haul destination (3hrs min)

ÅTourism depends on the clean and green environment as a point of differentiation

Key concerns:
Åindirect (economic) impact of climate change
(consumer attitudes and cost of travel)

ÅDirect environmental impact
(as it affects New Zealanders and NZ as a destination)

New Zealand's Response to Challenges of CC

- **Adaptation**
  - Few adaptation initiatives - fragmented and mostly small in scale
  - Adaptation strategy appears to be focused on education of what to expect
- **Mitigation**
  - Public sector (tourism and cross-sectoral) launched numerous initiatives (including an emissions trading scheme)
  - Tourism private sector has been driving innovation in sustainable management for over 10 years
  - Recent public-private sector partnerships in tourism have delivered the most effective frameworks for action

Public-Private Sector Tourism Partnerships

(Ministry of Tourism, Tourism Industry Association and Tourism New Zealand)

FOUR STRATEGY OUTCOMES:

1. NEW ZEALAND DELIVERS A WORLD–CLASS VISITOR EXPERIENCE
2. NEW ZEALAND'S TOURISM SECTOR IS PROSPEROUS AND ATTRACTS ONGOING INVESTMENT
3. THE TOURISM SECTOR TAKES A LEADING ROLE IN PROTECTING AND ENHANCING THE ENVIRONMENT
4. THE TOURISM SECTOR AND COMMUNITIES WORK TOGETHER FOR MUTUAL BENEFIT

Qualmark Environmental
(Automobile Association and Tourism New Zealand)

Emphasising link between quality and environmental protection

ÅEnvironmental criteria increased in star rating in 2008

ÅQualmark Enviro label for those that exceed base criteria (Bronze, Silver, Gold)

ÅMarketing benefits for those that achieve silver and gold label

Air New Zealand
(Part owned by New Zealand government)

ÅMore efficient aircraft

ÅReducing weight on aircraft

ÅMore efficient use of in-flight catering

ÅTest flight with GPS technology

ÅTest flight with biofuel – aim for 10% of fuel to be biofuels by 2013

ÅOff-setting facility

ÅEnvironmental Trust (revegetation)

Key Conclusions

(see full paper for more detail)

ÅBroad consensus that CC is a serious issue

ÅChallenges identified are direct and indirect impacts of CC – indirect impacts maybe most damaging to NZ's economy

ÅResponses to challenges of CC are focused on mitigation - being a leader in combating environmental degradation and protecting the clean, green image

ÅCross-sectoral responses focus on GHG emissions, while tourism sector enlists comprehensive sustainability framework

ÅDespite numerous (positive) initiatives GHG emissions from international air travel remain to be most critical challenge for tourism - no immediate solution available

Åevidence of adaptation to indirect impacts: more research and marketing investment in Chinese visitor market (also fastest growing)

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Critical Question for New Zealand

How will GHG emissions from international air travel be dealt with after 2012?

Gracias

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New Zealand Climate Change Projections for 2040 and 2090

Climate Variable	Direction of Change	Magnitude of Change	Spatial and Seasonal Variation
Mean temperature	Increase (****)	All-scenario average 0.9°C by 2040, 2.1°C by 2090 (**)	Least warming in spring (*)
Daily temperature extremes	Fewer cold temperatures and forests (****), more high temperature episodes (****)	Whole frequency distribution moves right	
Mean rainfall	Varies around country, and with season. Increases in annual mean expected for South; decreases in annual mean in the North of North Island (**)	Substantial variation around the country and with season	Tendency to increase in South and West in the winter and spring (**) and to decrease in the Western North Island in summer and autumn (*)
Extreme rainfall	Heavier and/or more frequent extreme rainfalls (**), especially where mean rainfall increase predicted (***)	No change through to halving of heavy rainfall return period by 2040; no change through to fourfold reduction in return period by 2090 (**)	Increase in heavy rainfall most likely in areas where mean rainfall is projected to increase (***)
Snow	Shortened duration of seasonal snow lying (***), rise in snowline (**), decrease in snowfall events (*)		
Glaciers	Continuing long-term reduction in ice volume and glacier length (***)		Reductions delayed for glaciers exposed to increasing easterlies
Wind (average)	Increase in the annual mean westerly component of windflow across New Zealand (**)	About a 10% increase in annual mean westerly component of flow by 2040 and beyond (*)	By 2090 increased westerly in winter (>50%) and spring (20%) and decreased westerly in summer and autumn (20%) (*)
Strong winds	Increase in servere wind risk possible (**)	Up to a 10% increase in strong winds by 2090	
Storms	More storminess possible, but little information available (*)		
Sea level	Increase (****)	At least average 18-59 cm rise between 1990 and 2100 (****)	
Waves	Increased frequency of heavy swells in regions exposed to prevailing westerlies (**)		
Storm surge	Storm tide elevation will rise at the same rate a mean sea-level rise (**)		
Ocean currents	Various changes plausible, but little research or modelling yet done		
Ocean temperature	Increase (****)	Similar to increase in mean air temperature	Patterns close to the coast will be affected by winds, upwelling, ocean current changes (**)