

# ICONS AT RISK: CLIMATE CHANGE THREATENING AUSTRALIAN TOURISM



# Thank you for supporting the Climate Council.

The Climate Council is an independent, crowd-funded organisation providing quality information on climate change to the Australian public.

Published by the Climate Council of Australia Limited

ISBN: 978-1-925573-48-0 (print)  
978-1-925573-49-7 (web)

© Climate Council of Australia Ltd 2018

This work is copyright the Climate Council of Australia Ltd. All material contained in this work is copyright the Climate Council of Australia Ltd except where a third party source is indicated.

Climate Council of Australia Ltd copyright material is licensed under the Creative Commons Attribution 3.0 Australia License. To view a copy of this license visit <http://creativecommons.org.au>.

You are free to copy, communicate and adapt the Climate Council of Australia Ltd copyright material so long as you attribute the Climate Council of Australia Ltd and the authors in the following manner:


Icons At Risk: Climate Change Threatening Australian Tourism.  
Authors: Professor Lesley Hughes, Petra Stock, Louis Brailsford and Dr David Alexander.



Cover image: "Whitsunday islands Australia" by Flickr user Richard Rydge licensed under CC-BY-NC-ND 2.0.

This report is printed on 100% recycled paper.

 [facebook.com/climatecouncil](https://facebook.com/climatecouncil)

 [info@climatecouncil.org.au](mailto:info@climatecouncil.org.au)

 [twitter.com/climatecouncil](https://twitter.com/climatecouncil)

 [climatecouncil.org.au](http://climatecouncil.org.au)

# Preface

Tourism is a multi-billion dollar industry in Australia, providing more than half a million jobs and accounting for 5% of the workforce. Iconic natural destinations such as the Great Barrier Reef, Kakadu National Park, Uluru, and our world-famous beaches such as the Gold Coast are the backbone of this industry. But current and future climate change impacts pose great risks for these icons, and for the communities they support.

This report provides a summary of the value of the tourism industry to the Australian economy and to communities, and the risks posed to this asset by climate change. We also describe how the industry can play an important part in the vital transition to a low carbon economy.

The Climate Council thanks our reviewers Prof. Susanne Becken (Griffith University) and Prof. Steve Turton (Central Queensland University) for their very helpful feedback. We also thank Dylan Pursche, Martyna Kotowska, Felipe Avancine and Divya Venkataraman for their assistance in preparing the report.



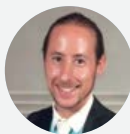
Professor Lesley Hughes  
Climate Councillor



Petra Stock  
Senior Energy and Climate  
Solutions Analyst



Louis Brailsford  
Researcher



Dr David Alexander  
Researcher,  
Climate Council

# Key Findings

## 1

**Climate change poses a significant threat to many of Australia's iconic natural areas that underpin our tourism industry.**

- › The United Nations has identified the Australia/New Zealand region as one of five Climate Change Vulnerable Hotspots for the global tourism industry.
- › The top five attractions for international visitors - Australian beaches, wildlife, the Great Barrier Reef, wilderness areas and national parks - are all at risk from climate change.
- › The timing, frequency and severity of extreme weather events, such as heatwaves, storms and bushfires, could affect where and when tourists choose to travel, and the viability of tourism operations.

## 2

**Australia's most important tourist destinations are already feeling the effects of climate change and these impacts will accelerate over coming decades.**

- › **The Great Barrier Reef:** Australia's most valuable tourist icon - contributing \$6 billion to the Australian economy - is also the most vulnerable to the effects of climate change. Record hot ocean temperatures in 2016-17 resulted in the most catastrophic bleaching of the reef system on record.
- › **Red Centre:** Uluru-Kata Tjuta National Park and other tourist destinations in inland Australia face increasing extreme heat and water scarcity. In 2030 the Red Centre could experience more than 100 days above 35°C every year (19 days more than the current average). By 2090, there could be more than 160 days per year over 35°C.
- › **The Top End:** Kakadu National Park is threatened by extreme heat and rising sea levels as saltwater progressively invades freshwater wetlands. Darwin could see an increase in hot days (temperatures above 35°C) from 11 (1981-2010 average) to 43 by 2030, and up to 265 by 2090.
- › **Beaches:** Australia's number one tourist destination - the beaches - are threatened by rising sea levels.
  - 17-23% of surveyed tourists would respond to beach damage scenarios by switching destinations, with an estimated \$56 million loss per year for Sunshine Coast in QLD and \$20 million per year for the Surf Coast in Victoria.
  - Sydney, Melbourne, Hobart, Cairns, Darwin, Fremantle and Adelaide are all projected to have at least a one hundred-fold increase in the frequency of coastal flooding events with a 0.5m sea level rise.
- › **Ski tourism** has been visibly affected by climate change, both globally and in Australia. Declines of maximum snow depth and decreasing season length at Australian ski resorts have been reported for over 25 years, increasing the need for artificial snow-making.

## 3

**Climate change is increasing some health risks for domestic and international travelers.**

- › The deadly irukandji jellyfish is spreading further south and their season is lengthening. Irukandji have been observed as far south as Hervey Bay and Fraser Island and could eventually be found as far south as the Gold Coast.
- › Increased temperatures and changed rainfall patterns in northern Australia can increase the risks of mosquito-borne disease and may lead to the re-emergence of other tropical diseases such as malaria.

## 4

**Tourism is one of Australia's most valuable and fastest growing industry sectors.**

- › Australia received 8.6 million international visitors in 2016-17, an increase of 8.1% on the same period in the previous year.
- › In 2016-17, Australia's tourism industry recorded \$40.6 billion expenditure, a rise of 7% compared to the previous year.
- › Tourism is now Australia's second most valuable export earner after iron ore.
- › Australia's tourism sector employs 580,000 people, accounting for approximately 5% of the workforce. Tourism employs around 15 times more people in Australia than coal mining.

## 5

**The tourism industry is both the most vulnerable and the least prepared to manage climate risks.**

- › The tourism industry in Australia is extremely vulnerable, mainly due to its reliance on nature-based attractions that are already feeling the impacts of sea level rise and increasing extreme weather events.
- › Federal and state governments have generally underplayed or ignored climate change risks to tourism, with the Australian government's *Tourism 2020* plan making no mention of the need to reduce emissions or increase sustainability of the tourism industry.
- › But many individual tourism enterprises - hotels, resorts, agencies, airlines and operators - are increasingly becoming part of the solution by embracing renewable energy, energy efficiency and other positive initiatives.