Climate Change: Implications for Tourism

Key Findings from the Intergovernmental Panel on Climate Change Fifth Assessment Report

June 2014
Climate Change: Key Findings

Climate change impacts are projected to raise **global average surface temperature 2.6–4.8°C** by 2100, exposing the tourism sector to numerous direct and indirect impacts.

As temperatures rise, the attractiveness of many destinations will fade.

Tourism will also be affected by **policy changes and efforts to reduce emissions**. The contribution of tourism to global CO₂ emissions ranges from **3.9% to 6% of human emissions**, with 4.9% the best estimate.

Generating more than **USD 6 trillion in revenue each year** and providing **livelihoods to more than 255 million people**, the tourism sector is particularly important for some of the world’s poorest countries.
Climate Change: Impacts

**Sub-sectors** at risk include:

- Mountain and Snow tourism
- Forest and Lake tourism
- Biodiversity and Agricultural tourism
- Cities and Urban Centre tourism
- Beach and Coastal tourism
- Ocean and Sea Life tourism

**Operational level impacts** will include:

- Reduced water availability
- Extreme weather events
- Expensive or unavailable insurance
- Efforts to cut emissions

Climate change, among other factors, will impact **destinations** and **operations**.
Climate Change: Physical Impacts

Alongside other drivers, **physical effects of climate change** on tourism include:

- **Sea-level rise** and **more acidic oceans** threatening coastal tourism infrastructure and natural attractions.
- **Rising temperatures** shortening winter sport seasons and threaten the viability of some ski resorts.
- **Changes in biodiversity** affecting eco-tourism.
- **Changing precipitation** affecting water availability.
Adaptation options exist, but many are likely to add costs and offer only short-term relief.

Under scenarios that see high emissions and higher temperatures, adaptation may not be possible.

- **Locations at risk** can invest in more resilient infrastructure.

- **Winter sports** providers can turn to artificial snow makers, move to higher elevations, or market themselves as year-round destinations.
The tourism sector’s contribution of greenhouse gas emissions is rising. Much of its mitigation potential will be dictated by reductions from transport and the built environment.

- **Behavioural changes**, such as holidaying locally in favour of long-haul destinations, would reduce the impacts of tourism.
- **Retrofitting the built environment** or **energy-efficient new builds** would cut emissions.
- **New aircraft** typically offer 20-30% improvement in efficiency.
- **Shifting from kerosene to biofuels** offers 30% + cuts in direct emissions.

The sector’s emissions are on course to grow 130% between 2005 and 2035.
Climate Change: Conclusion

As the world becomes more affluent, the sector is expected to grow by an average of 4% annually and reach 10% of global GDP within ten years. There is considerable uncertainty about how tourists will respond to the effects of climate change.

Academic research provides much detail on likely impacts, and on possible changes in tourism demand.

These changes are likely to create opportunities at both the destination and business level. But overarching conclusions are hard to draw.
For more information

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