



Exploring the Climate-and-Tourism Relationship

Tourism is an industry on the rise. According to the latest World Tourism Barometer issued by the World Tourism Organization (UNWTO), international tourist arrivals have increased from 25 million in 1950 to over 842 million in 2006 and they are expected to increase further, to 1.6 billion, by 2020. "This confirms that tourism is now a key component of the global economy and a truly vital one for many countries, in particular for the developing countries including small island developing states", said Michel Jarraud, Secretary General of the World Meteorological Organization (WMO), in his statement at the Fifth International Tourism Forum for Parliamentarians and Local Authorities held in Yasmine Hammamet, Tunisia, 14 June 2007.

In fact, for many developing countries, tourism has become a fundamental contribution to the local economy and one of the principal options for them to combat poverty. The reduction of extreme poverty and hunger as well as the attainment of sustainable development are prime objectives of the UN Millennium Development Goals.

However, the increasingly important travel and tourism sector is highly vulnerable to the effects of climate variability and change. Favourable climatic conditions at destinations are key attractions for tourists, especially in beach destinations. Mountain tourism or winter sports are also highly dependent on specific climate and weather conditions. Climate change will not only have direct impacts on tourism, but will also affect tourism through changes to the natural environment through coastal erosion, by damaging coral reefs, wildlife and other sensitive, biodiversity-rich ecosystems; or by

increasing the risk of wildfires. Climate change can also affect the availability of water supplies, especially during the peak tourist season, and may increase the risks of outbreaks and epidemics of infectious diseases.

Why are climate and weather services so essential to the infrastructure and services in the tourism sector? WMO and the National Meteorological and Hydrological Services (NHMSs) of its Members can assist the tourism sector in its efforts to build resilience and to further increase adaptability, in order for it to remain viable and safe on a long perspective for both the tourists and their hosts. By enhancing climate observations and improving the accuracy and lead times in the provision of appropriate weather and climate information, WMO can help to reduce the adverse consequences of extremes and changes in weather and climate.



The tourism sector is highly vulnerable to the effects of climate variability and change while, at the same time, contributes to greenhouse gas emissions. Image source: Morgue Files.

Climate variability and change not only pose risks to some segments of the tourism sector but may also represent opportunities. For example, warmer and more favourable temperatures in the mid-latitudes might reduce the tourists' motivation to travel to the tropics and to

choose nearby destinations instead. However, while "WMO is (also) aware of the possibility of some potentially beneficial changes to tourism owing to climate change, it is likely that the negative impacts will by far outweigh them", stated Michel Jarraud, adding: "the provision of timely, reliable research-based information for planning should help to reduce the risks to the sector". WMO therefore urges governments and the private sector to increasingly use the climate information, advice and services of the NMHSs, and to take additional steps towards incorporating climate considerations in tourism policies, development and management plans.

WMO has long been working in partnership with the World Tourism Organization on the climate and tourism relationship. In 1998, WMO and UNWTO issued their *Handbook on Natural Disaster Reduction in Tourist Areas*. Both, the handbook and the Third IPCC Assessment Report issued in 2001, which recognized the existing and potentially worsening anthropogenic impact on climate, showed the emerging need to explore the complex relationship between climate and tourism.

WMO's commitment to explore the climate change-tourism relationship took on more momentum in November 2005, when the Commission for Climatology established its new Expert Team on Climate and Tourism. This team was tasked to develop methodologies to establish statistical relationships between meteorological conditions and tourist frequency and destination; and to assess the impact of climate variability and climate change on the tourism industry, to include changes in precipitation patterns and extremes; changes in ocean temperature as the latter contributes to coral bleaching and to high-energy tropical cyclones, amongst others; the impacts on tourism of sea-level rise, shifts in biodiversity, storm surge waves, erosion of shores and beaches, shifts in seasonality; the role of weather, climate and water in infrastructure damage and disruption to key services in terms of availability of water, energy and food. The Expert Team contributed strongly to the new publication *Climate Change and Tourism: Responding to Global Challenges*

(in press), developed jointly by the UNWTO, UNEP and WMO. This study outlines not only the impacts of climate change on tourism, but also recognises that tourism activities are a contributor to greenhouse gas emissions, and recommends actions to mitigate these effects.

The First International Conference on Climate Change and Tourism, convened by UNWTO in Djerba, Tunisia, in April 2003, was an innovative effort to bring together many of the officials, UN bodies including WMO, UNFCCC, IPCC, UNEP, researchers, experts and operators involved in the fields of climate change and tourism. The Djerba conference issued important recommendations, known as the *Djerba Declaration*, to international organizations, governments and the private sector, promoting collaborative actions at the international, national and local destination levels. An essential outcome of the Djerba conference was the general recognition of the reciprocal relationship between tourism and climate change, as tourism clearly has the responsibility to minimize any adverse impact on the environment, such as the emission of greenhouse gases through travel activities, which further contribute to climate change. The Djerba Declaration also requested governments and academia to implement adaptation and mitigation measures that respond to climate change impacts, and encouraged the tourism industry to support energy-efficient and clean technologies and logistics in the tourism sector. In addition, consumer associations, tourism companies and media were urged to raise consumer's awareness in order to change the consumption behaviour and make more 'climate friendly' tourism choices.

The Djerba Declaration was considered an internationally agreed framework and 'roadmap for action' in the tourism industry; four years later, the time was ripe to follow up on the agreements.

In 2007, after the IPCC Fourth Assessment Report had made clear that global climate change was only just beginning with impacts of climate change on the tourism sector steadily intensifying, particularly under higher emission

scenarios, a series of benchmark meetings with strong WMO support has taken place.

At the Second International Conference on Climate Change and Tourism, organized by the UNWTO, UNEP and WMO (Davos, Switzerland, 1-3 October 2007) the 450 participants agreed that there was "a need to urgently adopt a range of policies which encourages truly sustainable tourism which reflects a 'quadruple bottom line' of environmental, social, economic and climate responsiveness". The *Davos Declaration* tied together tourism, climate and the environment, and development, and called for concerted government, industry and consumer action around the commonly agreed Kyoto (and post-Kyoto) framework led by the United Nations.

The Davos Declaration was presented to parliamentarians and decision makers at the Ministers' Summit on Tourism and Climate Change held in London, UK, 13 November 2007, which was hosted at the World Travel Market (WTM). The meeting participants "strongly endorsed the declaration and urged all tourism stakeholders to follow its recommendations".

The Davos Declaration was submitted to the United Nations Climate Change Conference in Bali, 3-11 December 2007. A UNWTO side event on *Climate Change and Tourism: Responding to Global Challenges* was planned for 11 December with addresses from representatives of WMO and UNEP. [c arndt]

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References and links

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