

TOURISM

Tourism, as one of Malta's main economic sectors, is greatly influenced by the local environment, climate and available natural resources. However, the effect of climate change on tourism can also be strongly influenced by tourist perceptions. In this case, what becomes important is the 'thermal comfort' rather than the average air temperature. Similarly, what counts as a quality tourist experience is the frequency and length of rainy days rather than the average precipitation.

Island destinations are highly vulnerable to such perceived direct and indirect impacts of climate change (such as higher incidence of heat waves, storms and extreme climatic events, coastal erosion, physical damage to infrastructure, sea level rise, flooding, water shortages and water contamination). In Europe, Malta has the most to lose from future climate projections since it hosts the highest percentage of foreign tourists in Europe, and derives the highest portion of its GDP from its tourism industry.

The impacts of climate change might bring opportunities as well. For example, the shoulder seasons during the traditional summer destination might lengthen, and winter season might be more appealing to tourists, providing opportunities to expand Malta's tourism product.

As a result, climate change has the potential to radically alter tourism patterns by inducing changes in destinations and local seasonal demand structure. At the same time, tourism is a non-negligible contributor to climate change through greenhouse gas emissions derived mainly from the transport and accommodation of tourists. Tourism must seek to significantly reduce its gas emissions within the context of the broader international sustainable development agenda.

Future predictions for the Mediterranean area suggest a northward shift of tourism¹ at the detriment of Mediterranean countries which will become too hot and dry during summer². These effects will make the Mediterranean Sea area less attractive as a holiday destination as early as 2020. By 2050, the zone with good tourist conditions in the spring and autumn and the loss of these conditions in the summer will probably have spread to almost the entire northern Mediterranean coastal area.

However, one must keep in mind that tourism and recreational activities are subject to many influences including technological, social and economic influences, which may override the influence of climate change.

¹ Southern Europe, which currently accounts for more than half of the total EU capacity of tourism accommodation, is projected to face a decline in bed nights, estimated to range between 1% and 4% by the 2080s compared with the 1970s, which is translated to losses ranging from Euro 1.8 to 12.9 million depending on the climate scenario.

² The thermal discomfort of tourists and their inability to acclimatise to a region prone to high temperatures and frequent occurrence of heat waves may aggravate itself, which could lead to an increase in spring and autumn tourism. The additional demand for potable water could also affect the sector even more than the consequences of climate change on tourism comfort, and competitiveness of the tourism industry, substantially limiting its growth and sustainability.

According to UNEP there are two broad categories of climate change impacts that will affect tourism destinations their competitiveness and sustainability³:

1. **Direct climatic impacts:** changes in the length and quality of climate-dependent tourism seasons could have considerable implications for competitive relationships between destinations and therefore to the profitability of tourism enterprises. As a result the competitive position of some popular holiday areas are anticipated to decline, whereas other areas are expected to improve.
2. **Indirect environmental change impacts:** changes in water availability, biodiversity loss, reduced landscape aesthetics, altered agricultural production, increased natural hazards, coastal erosion and inundation, damage to infrastructure and the increasing incidence of vector-borne diseases will all impact tourism to varying degrees.

Salient points:

1. *With its close connections to the environment, tourism is seen as a highly climate-sensitive economic sector similar to agriculture, energy, and health.*
2. *The varied impacts of a changing climate are becoming evident at destinations around the world and climate change is already influencing decision-making in the tourism sector.*
3. *Local impact of a rising ambient temperature can translate into an prolonged summer season and consequently, increasing the possibilities for tourism and recreation.*
4. *Given tourism's importance to Malta's GDP, there is an urgent need to adopt a range of policies which encourages truly sustainable tourism that reflects a balanced environmental, socio-economic and environmental responsiveness in the face of a changing climate.*
5. *The tourism sector is a non-negligible contributor to climate change through GHG emissions⁴. The local tourism sector can only address the challenge of climate change within the context of the broader international sustainable development agenda⁵.*

³ An additional two impacts have been included by UNEP which are indirectly related to climate change, namely those *related to impacts of mitigation policies on tourist mobility* and those termed as *indirect societal change impacts*. Source: Climate change and tourism – Responding to Global Challenges, UNEP, 2008.

⁴ derived especially from the transport and accommodation of tourists, which must be reduced.

⁵ Tourism sector needs to develop a coherent policy strategy that decouples mass tourism from increased energy use and greenhouse emissions.

Phenomenon	Shift in tourism patterns	Transport	Tourist-related amenities, services and attractions	Nature esthetics
Increased air temperature	<p>Decrease in peak summer tourism, associated with a seasonal shift in tourist distribution in spring and autumn.</p> <p>Altered seasonality due to lack of acclimation and adverse health effects.</p>	Increased cooling costs, raising transport expenses.	Increased cooling costs, raising expenses of accommodation and use of other amenities.	<p>Changes in ecosystems and biodiversity.</p> <p>Aesthetics of landscape reduced.</p> <p>Projected reduction of ecosystem services.</p>
Increased frequency of heat-waves and drought conditions	<p>Decrease in summer tourism, associated with a seasonal shift in tourist distribution in spring and autumn.</p> <p>Altered seasonality due to lack of acclimation and adverse health effects.</p>	Increased cooling costs, raising transport expenses.	<p>Increased cooling costs, raising expenses of accommodation and use of other amenities.</p> <p>Increased competition over water between tourism and other sectors.</p> <p>Decreased output from agriculture, agritourism and local food produce.</p>	<p>Increased desertification, wildfires.</p> <p>Projected reduction of ecosystem services.</p>
Increased torrential rains, flooding and severe storms	Altered seasonality due to lack of acclimation and adverse health effects.	<p>Increased incidence of injury and immobility.</p> <p>Damage to transport infrastructure.</p>	<p>Increased risk of damage to tourism infrastructure and tourism facilities.</p> <p>Increased insurance costs/loss of insurability.</p> <p>Increased business interruption costs.</p> <p>Damage to historical architectural and cultural assets.</p> <p>Damage to tourism infrastructure.</p>	<p>Increased fluctuations in salinity, turbidity and nutrient levels due to increased surface runoff, reducing coastal water quality.</p> <p>Increased risk of eutrophication in semi-enclosed bays.</p>
Sea level rise		Increased coastal inundation, erosion, inland migration of beaches, increased potential damage from storm surges and tsunamis, reduction in slope stability where blue clay formation outcrops at sea level.	<p>Increased risk of damage to tourism infrastructure and tourism facilities.</p> <p>Higher costs to protect and maintain waterfronts and connections to infrastructure, including transportation, and energy.</p>	Increased risk of coastal erosion, loss of beach area.
Increased sea surface temperature			<p>Decreased fishery products.</p> <p>Decreased coastal water quality due to water stratification in semi-enclosed bays</p>	<p>Marine resource and aesthetics degradation in dive and snorkel destinations.</p> <p>Increased risk of eutrophication in semi-enclosed bays.</p>