

INTELLECTUAL OUTPUT 4

Case Study IO4- Tourism

Climate Change, Tourism, Malta and the Mediterranean

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Key words: Climate, Mediterranean, Tourism, Malta.

1. Summary

Changes to our environment, mainly through climate change, are affecting the planet in potentially adverse ways. Such predictions would impact on many coastal environments, particularly island destinations, and be far-reaching.

The continued growth in tourism numbers, particularly in the peak summer period, is already creating environmental strains that are now leading to carrying capacity issues, resource, waste, and pollution impacts (Austin, 2012, Dodds, 2007 and Anon, 2014).

The European Environmental Agency's (2012, 2017), reports on climate change vulnerability in Europe, adds some quite stark predictions for environmental change across the Mediterranean region, with forecasts measuring significant increases in temperatures, proliferation of more simultaneous hot days and nights, intensification of drought, the rise of solar radiation and surges in insect infestation together with significant decreases in water availability.

Both public and private representatives, businesses, and users must make engagement with appropriate long term policy implementation measures to mitigate against and ameliorate the consequences of climate change.

2. Introduction

Over the last ten years there has been considerable publication and discourse on the topic of climate change and tourism which has stemmed from earlier research on such issues by, for example, Becken and Hay (2007), Jones and Philips (2011), Ranade (2012), Hall et al (2012) and Singh (2012).

It is now over ten years since the Intergovernmental Panel on Climate Change (IPCC, 2007/2014) and The Stern Review (MH Treasury-Cabinet Office, 2005) predicted that a change to our environment, particularly through climate change, was affecting the planet in a potentially adverse ways. It was seen, at the time, that such predictions would ultimately adversely impact on many coastal environments, particularly island destinations, and that impacts for tourism destinations, would in turn, be far reaching. The IPPC (2014) Fifth Assessment Report also reconfirmed these sentiments by stating that tourism faces profound impacts from rising temperatures and extreme weather.

Thus to date, it is probably true to claim that climate change is increasingly seen as one of the major long-term threats facing global economies both in the developed and developing world. As such tourism does not escape, especially those regions that are reliant on tourism based economies. Malta is a particular case in point.

Forecasts for global tourism remain buoyant and predictions, however conservative, show that world tourism statistics are set for further growth over the next decade (UNWTO, 2018). To this end, the recent UNWTO (2018) report on global tourism states that one-third of all international tourists arrive in the Mediterranean making it the world's most visited region. It also states that between 2000 and 2018 the Southern Mediterranean Region has seen sustained growth of approximately 5-7% annually. In turn tourism in Malta has reflected and also exceeded such growth figures by posting annual average tourism growth rates of up to 6-8% (MTA, 2018). In this respect the Maltese government's own assessment (MTA, 2012) has also highlighted significant threats posed to the tourism industry from climate change.

3. Aims

In this case study we will try to respond to:

- Climate change is increasingly seen as one of the major long-term threats facing global tourism in both the developed and developing world?

- Will its influence on coastal areas and islands Mediterranean be more severe?

4. Method

Based on the case study categories identified by Yin (1984) and McDonough (1997), the methodology will be exploratory, descriptive and interpretative.

A study will be prior fieldwork and smallscale data collection will be conducted before the research questions and hypotheses are proposed. The descriptive case studies may be in a narrative form, and it aims to interpret the data by developing conceptual categories, supporting or challenging the assumptions made regarding them.

Explanatory case studies aim to answer 'how' or 'why' questions with little control on behalf of researcher over occurrence of events. This type of case studies focus on phenomena within the contexts of real-life situations.

5. Results

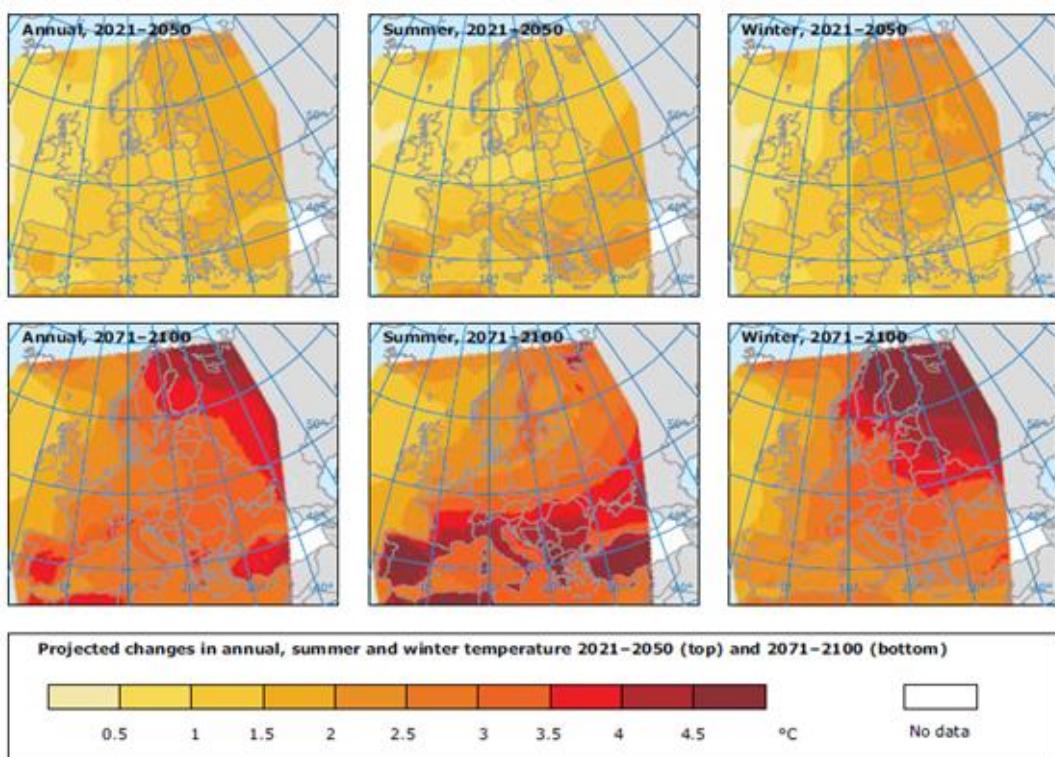
According to studies done by the MTA's Research Unit (2018), tourism has seen a steady growth year after year and it now accounts for 29% of the GDP and the largest contributor to the market services sector. Tourism now accounts for 22% of government income, 11% of imports and outflows and 17% of fulltime equivalent employment. This continued growth in tourism numbers, particularly in the peak summer period is already creating environmental strains which are now leading to carrying capacity issues, resource, waste and pollution impacts (Austin, 2012), (Dodds, 2007), (Anon, 2014). However impact forecasts for climate change particularly for Malta and its tourism industry and for the wider region as a whole remain less clear.

The European Union and other international bodies have gone some way to address current predicted forecasts for environmental change for the Mediterranean region. A joint report by the IUCN, MedPlan and WWF (2012) clarify the predicted changes to the Mediterranean marine environment illustrating considerable increases to sea temperature and salinity over the last forty year period. The European Environmental Agency's (2012, 2017) reports on climate change vulnerability in Europe adds some quite stark predictions for environmental change across the Mediterranean region with forecasts measuring significant increases in temperatures, proliferation of more simultaneous hot days and nights, intensification of drought, the rise of solar radiation and surges in insect infestation together with significant decreases in

water availability. The report particularly highlights the vulnerability of the Southern Mediterranean regions pin pointing coastal environments, areas of high population and high dependency on summer tourism at the forefront of current risks. These are very much key characteristics of the tourist economy of the Maltese Islands and provide profound warnings in this respect. The report concludes that 'the suitability of Southern Europe for tourism would decline markedly during key summer months' (EEA, 2012:209).

Figure 1 shows the projected annual temperature changes in summer and winter in Europe. During the last three decades of this century, the significant temperature increases in the Mediterranean area, in summer, and in Northern Europe, in winter, should be highlighted.

Figure 1. Projected changes in annual, summer and winter temperature across Europe



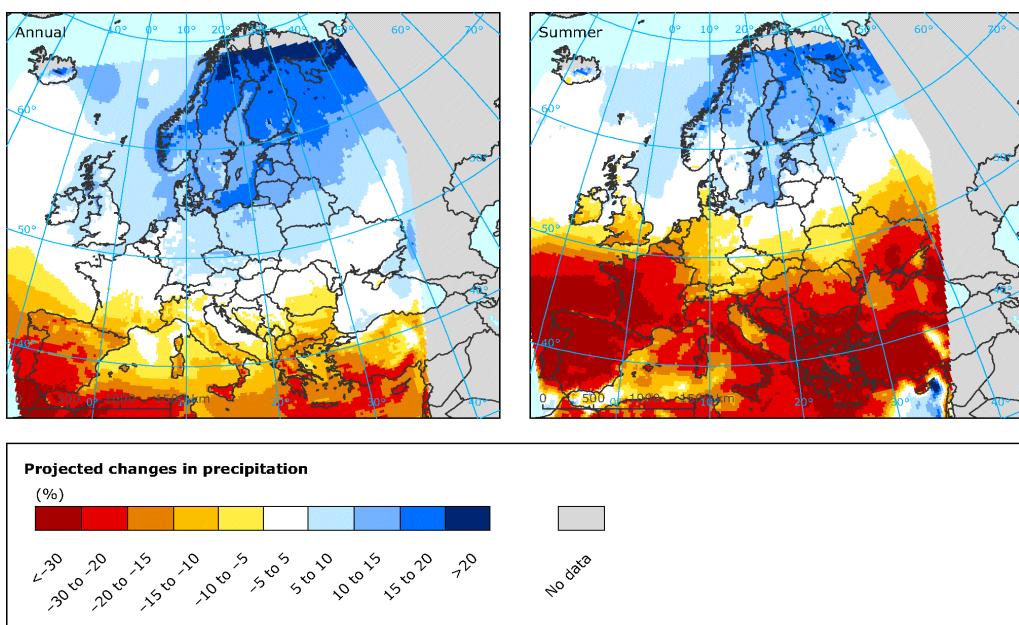
Source: European Environmental Agency (2012) Climate Change, impacts and vulnerability in Europe 2012, EEA 12/2012, Copenhagen, Denmark.

Apart from such data which provides some substantiated research on current changes to Mediterranean environments there remains little firsthand empirical data supporting evidence of climate change and impacts on tourism.

This is particularly true when data for such is considered for Malta. There is however a growing volume of more circumstantial evidence, particularly emerging from the local media sources that more than suggest emerging climate change issues and the resulting impacts on the current Maltese tourist economy.

For example, Mercieca (2012a) has indicated that Malta is among the ten poorest countries globally in terms of water resources. Osbourne (2014) also confirms such concern suggesting that water shortages are one of the most significant dangers to the economic well being of the Mediterranean region.

Figure 2. Projected changes in precipitation across Europe



Source: European Environmental Agency (2012) Climate Change, impacts and vulnerability in Europe 2012, EEA 12/2012, Copenhagen, Denmark

In the same vein, Tremlett (2013) has highlighted that the changing ecology of the islands is now significantly affecting tourism by suggesting that the record surge in for example, jelly fish blooms, is not only transforming local Maltese eco systems but also now threatening the health of tens of thousands of tourists. In a similar vein Mercieca (2012b) and Chetcuti (2012) also highlight the rise in numbers of victims bitten by the 'Asian Tiger Mosquito' and the rise in incidence of severe attacks during the recent summer months.

Figure 3. Changing ecology of the islands

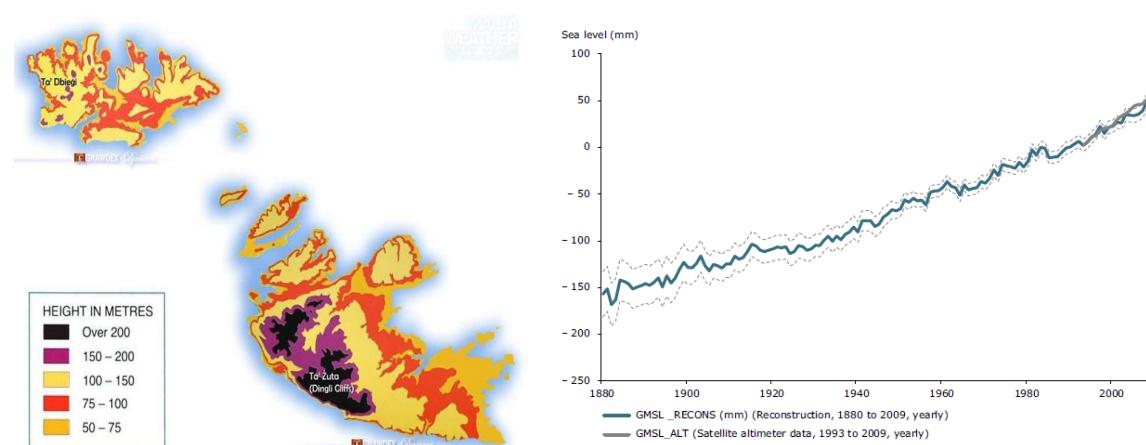


Source: Tremlett, G. (2013) Jellyfish surge in the Mediterranean threatens environment and tourists, *The Guardian*, 3rd June.

Source: Mercieca, F. (2012b) More fall victim to Asian Mosquito, *The Times of Malta*, 12th October

Source: Fritz, A (2014) Wicked Mediterranean Storm whips up 95 mph wind gusts in Malta, *The Washington Post*, 7 November, Washington

Figure 4. Predicted sea level in Malta and change in mean sea level 1860-2009



Muscat, .C. (2014) Predicted sea level rise will hit the whole of Malta, *The Times of Malta*, 8th June.

Source: European Environmental Agency (2012) Climate Change, impacts and vulnerability in Europe 2012, EEA 12/2012, Copenhagen, Denmark

Added to this, there has also been a growing discourse on the increased frequency of severe weather events, severe storm damage, increased heat stress and the growth of heat related illness (Fritz, 2014). The growing awareness of sea level rise and the potential flood risk to existing tourism resorts have also been increasingly highlighted.

Figure 5. Impacts and Implications for Tourism



6. Discussion

The potential impacts of predicted climate change, particularly for the Maltese Islands will undoubtedly pose a significant threat to natural coastal environments, tourism infrastructures and the tourist 'communities' at specific localities in Malta.

Contemporary evidence illustrates that perceived and actual threats are, indeed, real although accurate predictions and current assessments still remain at best ambiguous and at worst suffer from vagueness, apathy and to some extent 'media' hyperbole.

In summary it seems fair to conclude that there still remains continuing uncertainty regarding climate change and the validity of current predictions. However, general perceptions demonstrate that there is recognition of adverse climatic events such as ecological change, resource depletion, heat stress, increased incidence of storm surges and a general rise in sea level.

Perceptions also recognise predicted, erosion, disruption and structural damage that will result from such incidents. There are however mixed responses when resolutions, responses and actions are considered. Here, knowledge gaps and disagreement can frustrate options to take ameliorative action.

7. Conclusions and Recommendations

Despite remaining uncertainties, there is evidence to suggest that there is an unequivocal necessity to maintain strategic momentum for all tourism

stakeholders, and this includes both public, private, business, user and community representatives to engage and integrate more fully with decision making and policy processes. Pertinent to this, is engagement with appropriate long term policy implementation measures.

These should perhaps include frameworks to promote measures to mitigate against and ameliorate the consequences from climate change. It is still a challenge that the tourism stakeholders in Malta still need to fully recognise.

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