Global Environmental Change and Small Island States and Territories: Economic and Labour Market Implications of Climate Change on the Tourism Sector of the Maltese Islands

Prof Andrew Jones  
Institute for Tourism, Travel and Culture  
University of Malta

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Abstract: This position paper reviews threats to, and consequences of, current environmental change (particularly climate change predictions) on tourism destinations. In this respect, the impacts that this will particularly have upon tourism development and operations in Malta and the wider Mediterranean region will be the case study focus. The paper reviews recent published research on the impacts of environmental and climate change and consequences of such on the physical social and economic character of tourism operations. The validity and practicality of management options to tackle the complex nature and juxtaposition between tourism growth, environment and climate change and tourism destination management are considered, including an evaluation of management responses, the efficacy of local governance and consequent policy options and choices. The research methodology is primarily focussed upon a qualitative evaluation of contextual issues from case studies drawn from different regions of the world and from the immediate locality of the study area. These are used to highlight and illustrate particular sensitive issues and points for contention and how these in turn might relate to tourism in Malta and its future prospects. Conclusions from the research aim to demonstrate and discuss the efficacy of current predictions and how tourism infrastructure and destination management issues should be tailored to more strategic policy responses from all key tourism and environmental stakeholders in both the private and public sectors. In this respect the paper highlights the current impasse between public perception and policy implementation which, to date, largely continues to ignore immediate threats and thus fails to provide adequate strategic management responses or responsible governance. In conclusion, strategic and combined management strategies are considered and advocated for managing tourism destinations and for addressing the increasing demands from the often complex tiers of stakeholder groups that are represented. In this context implications are further drawn for the future prospects for tourism with the Maltese Islands.

The Research Approach

The research for this paper is based upon a phenomenologist-qualitative approach, focussing primarily on and reviewing existing case study literature that can provide indicators for ‘new or consolidated’ research evidence. As already stated the availability of empirical data is thus far limited. The basis of this approach, therefore, is to develop a sense of contemporary consolidation of material associated with the researched subject.
(Veal, 1994). In this respect Ryan’s (1995) reference to Moutinho’s (1989) statement - such techniques are ’designed to find the “emotional hot buttons” ... in relation to a particular subject, by bringing hidden stimuli up to the level of conscious awareness’ It is an interesting notion which goes some way to justify the methodological approaches adopted. In this respect, using case study approaches by undertaking a review of existing published literature to evaluate issues and contemporary debates or 'emotional hot buttons' as Moutinho suggests, and how this might relate to the tourism dynamics of Malta, was very much the key objective and focus for this paper.

The case study approach thus provided the basis for the detailed research focus in reviewing information and discourse. Yin (1984; 2003) has written much on the application of case study research and the way in which this technique has grown extensively and been increasingly applied to the social sciences especially practice orientated fields such as urban planning, public policy and managerial science. The case study method allows investigators ‘to retain the holistic and meaningful characteristics of real-life events such as organisational or managerial processes and the maturation of industries’ (Yin, 2003:2). Adopting such a technique can lead to concerns regarding the lack of rigour and the ability to make wider scientific generalisations. However such concerns can be offset by using case studies to generalise results to theoretical propositions as opposed to populations and that a case study can be used to expand and generalise theories or in this instance provide indicators for future tourism policy formulation (Yin, 2003).

The methods adopted were thus, to 'probe and explore' the current and contemporary planning and policy issues pertaining to tourism development, climate change and tourism planning, particularly in Malta and the Mediterranean. Reviewing key issues from a range of contemporary case study sources certainly helped facilitate a contemporary assessment of the pertinent key policy and planning issues in this respect.

**Introduction: Global tourism, Environmental change, Contemporary polemics**

This paper focuses on current strategic management issues that are critical to the growing complexity of relationships between global tourism, predicted environmental change (particularly associated with climate change) and policies for tourism destination management. Over the last two years there has been considerable publication and discourse on the topic which has stemmed from earlier research on such issues by, for example, Viner (2006) and Smithers (2006). In this context, Smithers highlighted the fact that some of the world's most famous tourist destinations – such as Venice – could be closed to visitors by 2020 because of worries about environmental damage and climate change. Areas particularly highlighted in the Mediterranean included tourist areas such Pueta de Marrozon and the Murcian coastline of Spain, the island of Crete, the Amalfi coast of Italy, and Athens including the Attica region of Greece. Again, such sentiments have, more recently been supported and evaluated by authors such as Becken and Hay (2007), Jones and Philips (2011), Ranade (2012), Hall et al (2012) and Singh (2012) in their current assessments of environmental and climate change and the consequent predicted impacts on global tourism destinations.
From such evidence, it seems that there is a growing concern that the continued development of tourism destinations is under mounting physical and socio-economic pressure. With future predictions of environmental and climate change, albeit the exact science still remains uncertain (Booker, 2009; Hulme 2009; Dessler and Parson, 2010; Henson, 2011; Giddens, 2011), ongoing predicted increases in extreme environmental and climate phenomena together with other socio-economic and physical manifestations, suggest growing threats. In this context, the socio-economic and environmental well-being of many tourism destinations including resorts in Malta and the Mediterranean Basin, will remain, at best, uncertain and in the longer term may be severely compromised with perhaps critical consequences for future survival.

The Intergovernmental Panel on Climate Change (IPPC, 2007) and The Stern Review (MH Treasury-Cabinet Office, 2005) had already predicted that changes to our environment, particularly through climate change, were affecting the planet in 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. Such concerns were also initially highlighted by findings from authors such as Agnew and Viner, (2001), Lohman (2002) and Hall and Higham (2005) and more latterly from discussions drawn from, Becken and Hay (2007), UNEP (2008), UNEP/OECD (2010) and Hall (2011). Interestingly, all confirm common concerns regarding assessments of environmental and climate change and its predicted impacts on existing tourism destinations. The most recent IPPC (2014) Fifth Assessment Report has also (with alarming warnings) reconfirmed that tourism faces profound impacts from rising temperatures and extreme weather (Gosden, 2014).

Thus to date, it is probably true to claim that environmental and 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. It is now clearer that predicted threats could potentially lead to the loss of many tourist destinations whose appeal depends on their natural environment, amiable climate and coastline settings. In this respect many low-lying coastal regions are specifically at risk from adverse environmental change. Evidence of this process is already underway with many examples of coastal tourism destinations experiencing at least early signs of stress or significant signs of negative impact. Ridderstaat (2014) work on the island of Aruba in the Caribbean, Meyer-Arendt’s work on the Gulf coastline of Louisiana, USA and Turton’s work the Queensland coast and Great Barrier Reef in Australia are good illustrations in this respect. UNESCO’s (2007) assessment of impacts on world heritage sites has already illustrated and predicted that many of the world's tourist sites may be under threat from environmental change particularly through rising sea levels, increased flooding risks and depleted marine and land biodiversity. Such predictions claim that this could have disastrous effects on over 830 designated UNESCO world heritage sites.
Such alarming predictions should also be considered within the context of the continued growth of broader global tourism markets, and Malta cannot be excluded in this context. Despite the current economic gloom, 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, 2014). To this end, the recent UNWTO (2014) 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 1990 and 2013 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 tourism growth rates for 2013 in excess of 9%. The statistical report publish by the Malta Tourism Authority (MTA) in 2014 also suggests that sun, sea, climate and culture contribute the key motivational factors of why visitors choose to visit Malta. These figures present quite a conundrum. The demand across the region for such growth raises the mounting question of how growing demand for tourism can be sustained, balanced or for that matter strategically managed in the light of the ongoing predictions for environmental change and its consequences.

The concept, however, is not a new one. In the mid-1990s organisations such as the United Nations began to highlight such issues, particularly in developing tourist regions such as the Caribbean (UNEP, 1997). The Townsend and Harris assessment in 2004 was also significant in this respect. A 2007 report by The World Wildlife Fund (WWF, 2007) suggested that the tourism industry’s heavy reliance on the local environment and climate to sell holidays means that it could face serious challenges as a result of environment and climate change. (WWF, 2007). More recent reports from UNEP (2008) and UNEP/OECD (2010) have reinforced such concerns.

Together with these global assessments more local evidence assessing coastal destinations and national tourist economies has been reviewed by Williams and Micallef (2009) and Mushi (2011) who highlight the key economic and social impacts from climate change on coastal tourist communities. In a similar light, research by Epaedia (2005), the European Union’s Environmental Agency, also suggested that the biggest driver of development in the European coastal zone in recent years has been the demand for tourism and the growing concern on the need for more sustainable management strategies to offset continued growth demands and adverse environmental impacts. In a similar vein, Greenpeace (2007) issued controversial warnings by predicting a hypothetical future Spanish coastline at La Manga: a visual analysis illustrated the consequences of severe flooding if steps are not taken to stop the effects of severe environmental damage caused by climate change. In this respect Greenpeace advocates a much more strategic approach to offset such threats by promoting a much more vigorous approach to problem recognition and stakeholder engagement and in turn encouraging wider impact adaptation and amelioration measures. However, such predictions as well as proposed actions still remain highly controversial.

The Maltese government’s own assessment (MTA, 2012) also highlighted significant threats posed to the tourism industry from environmental change. Such recognition stems
from earlier assessments particularly from the Maltese Ministry of Rural Affairs and Environment (2004) which, at that time, highlighted potential threats from adverse environmental change predictions. These included for example the deterioration of potable water supplies and quality, more frequent extreme weather events, soil degradation, erosion and an accentuated desertification process, threats to public health, changes in sea water mass characteristics and effects on fish stocks, coastal erosion and inundation together with biodiversity reduction. The resultant possible impact on the tourist economy of the islands was specifically highlighted. In turn the recent MTA (2012) strategy for tourism 2012-2016, albeit rather ambiguous on the subject, does to some extent highlight the need to promote better sustainable approaches for future tourism development across the Maltese islands. Little advice, however, on the tangible ways in which this can be achieved are effectively offered.

Despite ongoing discussion and rhetoric, the outcomes thus far are still not entirely transparent or altogether constructive. Such predictions are still not an exact science and there still remains a gap in measurable empirical research on the subject. A report in Time (2011) suggested that decaying ecosystems can account significantly for a decline in tourism GDP (Quiret, 2011). Despite, however, the lack of empirical data, there has been much other discourse. For example, in 2009, the consulting firm KPMG claimed that tourism is one of the global industries least prepared and one of the most vulnerable to environmental and climate change. It suggested that the tourism industry has yet to come to terms with the associated risks and costs it is facing as threats from heat waves, droughts and rising sea levels are just some of the factors that will continue to adversely impact upon the industry, especially in terms of social conflict and continued economic viability (KPMG, 2009). In the same year a review by the United Nations Environment Programme (2009) in association with the French Government and the United Nations World Tourism Organisation highlighted growing concerns between the need for better integrated coastal management and the need to adapt tourism destinations for climate change (UNEP, 2009). In this context, the review by Jones and Phillips (2011) of ‘Disappearing Destinations’ highlights the need for a much more coordinated and strategic approach. Such an approach promotes a three-pronged management push to ensure: i) problem recognition, ii) meeting stakeholder expectations and iii) delivering sustainable solutions. Their review of specific case studies from around the world that illustrates current practices and challenges provides a platform from which to determine new thoughts and concepts for future policy directions.

In 2014, these concerns remain pertinent. Issues explored by Turton and Wilson (2011) in their review of the Queensland coast in Australia or Meyer-Arendt’s work (2011) on the Gulf of Mexico seaboard or Jones’s review of coastal destination issues in the UK (2011) together with Jones and Phillips broader strategic assessments on coastal tourism issues (2011), Prats (2011), (Hall et al, 2012) and Singh (2012) provide contemporary assessments. Ridderstaat’s et al (2014) recent work on environment and climate change and the effects on tourism demand also goes some way to address the current discourses. However, most tend to raise a whole host of pertinent unanswered questions that still
have implications for tourism destination management and how such destinations can move forward or adapt more effectively.

Paradoxically, such issues have become quite complex, with adverse climate events and associated assessments for environmental damage, now threatening to destroy the very nature of tourism (sun sea and sand) that, in the past, amenable climate, has so successfully exploited. Most recently it has been suggested that concern, particularly regarding erosion, poses a threat to all stakeholders, especially tourism infrastructure as the ever growing demands for recreational and tourism facilities along coastal fringes increases. Predictions also suggest that this will also be exacerbated by ever increasing concerns and debates over the continued need and merits for remedial actions such as ‘hard’ and ‘soft’ mitigation measures (e.g. hard engineering options, smart technology and smart design options, skills and training through capacity building) to offset such problems and the need to protect such facilities. Who takes responsibility for the implementation and funding of such actions remain key questions that still need to be answered. (Argawal and Shaw, 2007), (Jones and Phillips, 2011) and (Prats, 2011).

Malta and the Mediterranean: Tourism Growth & Predicted Environmental Change

Key to these debates are, of course, the impact that current and predicted environmental and climate change threats are currently having on tourism within the Maltese islands and over the broader Mediterranean basin. From 2007 to 2011, tourism attained record yearly performances mainly attributed to increased air routes and more effective marketing initiatives placing Malta as a year-round destination. MTA statistics illustrated this as arrivals exceeded 1.4 million visitors in 2012, with an expenditure exceeding 1.3 billion euros, a 16% increase on the previous year. Statistics for 2013 show that Maltese tourism again grew by another 9.3% per annum and despite a slight divergence to niche markets traditional forms of tourism based upon sun and sea still remains the predominant market share. (MTA, 2014).

According to studies done by the MTA’s Research Unit (2014), 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). That said the tourism policy for the Maltese Islands 2012-2016 (MTA, 2012) primarily sets out to ensure that tourism works towards the sustainable development of Malta’s tourism industry. In turn it encourages the tourism industry to adapt to tourism trends as they evolve. The Maltese Government’s policy directions for future tourism growth are thus fairly clear. However impact forecasts for environmental change particularly for Malta and its tourism industry and for the wider region as a whole remain less clear and less well-defined. A report from the Malta Independent (2009) did attempt to start a serious debate on the consequences of climate change for tourism on the islands. This highlighted
predicted threats from severe climate events, flooding, infrastructure damage and adverse ecological change. In a similar vein the Maltese Government also established a Climate Change Committee on Adaptation – CCCA (2010) which reported on a national climate change adaptation strategy (CCCA, 2010) which again contributed to the ongoing debate and stressed the tourism industry as a specifically vulnerable sector.

Such reports have provided a framework for the contemporary understanding of threats in Malta. More recent research by the European Union does provide a number of additional indicators and more tangible forecasts. For example the Commission 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. In a similar vein a report by NASA (2013) maps global temperature increases during 2008-12, showing an average temperature rise across the Mediterranean of over 3°C during this period. The European Environmental Agency’s (2013) report 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, pinpointing 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).

Given the evidence thus far, current predictions present some stark warnings for tourism in Malta and associated economic and labour markets. Evidence would suggest that the summer season will become less sustainable due, particularly, to periods of prolonged high temperatures, resource shortages, high solar exposure and increase risk from ecological hazards. The additional economic costs and security questions for the continuity in supply for public utilities such as electricity and water are also a growing concern. Such issues would suggest that seasonality and shift in tourism numbers to shoulder and off season tourism periods might be a real actuality in the short to medium term. Whilst this is not an exact science this will in turn provide challenges to the existing tourist labour market and the way in which the economic wellbeing of the islands can be sustained. A move to more specialised niche markets away from traditional ‘sun and sea’ markets will inevitably be a major challenge. In turn the need to adapt the labour market and economy to less numbers of tourists during the summer and the need to promote better quality, higher spending tourists that do not wholly rely on the sun and sea factors during the spring, autumn and winter should perhaps be a starting point in this respect. The availability of summer seasonal workforce (particularly the availability of students) and additional more highly trained personnel presents a quandary and may also lead to
some sizeable difficulties for human resource management. The need to increasingly move toward new opportunities for sustainable tourism niche market development will in turn present new challenges for the Maltese tourism industry.

Apart from such data which provides some substantiated research on current changes to Mediterranean environments, there remains little first-hand empirical data supporting evidence of environmental 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 anecdotal evidence, particularly emerging from the local media sources that more than suggest emerging environmental change and the resulting impacts on the current Maltese tourist economy. For example Mercieca (2012) has indicated that Malta is among the ten poorest countries globally in terms of water resources per inhabitant (172 out of 180) stating that nowhere else in Europe is water more scarce. Osbourne (2014) also confirms such a concern, suggesting that water shortages are one of the most significant dangers to the economic wellbeing of the Mediterranean region. Clearly this also has profound resource and environmental implications for continued and sustainable tourism growth in Malta.

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. Similar assessments by Piraino (2014) and summarised by Tremlett (2013) shows that the island of Lampedusa (some 160 km from Malta) has only one swimming week a year free from jelly fish and that the social-economic impact on tourism will result in the loss of millions of Euros per annum. In a similar vein Mercieca (2012) 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. These incidents again present serious hazards and risks associated with the continued growth in tourism across the Maltese Islands. 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. The consequences for public utilities and the disruption to supplies on the island are also highlighted. These issues present some real evidence of the current situation of where strains are emerging. Less tangible but still perceived as a potential real threat is the growing awareness of sea level rise and the potential flood risk to existing Maltese tourism resorts. These potentially include for example the beaches and resorts of Mellieha Bay, Ramallah and Golden Bay, Sliema (ferries), St Julians and Spinola Bay, Marsaxlokk and Birzebbugia (Sansone, 2013) (Muscat, 2014a; 2014b) (Micallef, 2012). In turn such occurrences will have significant implications for local infrastructure and the local tourist economy across the islands. Again, Muscat’s (2014) illustration and visual projection of how Manoel Island and The Strand, Sliema, would look with a 0.5m sea level rise is a dramatic case in point.

Clearly evidence from the literature, thus far, shows that threats derived from environmental change will ultimately impact upon the long term future viability of
tourism environments and, of course, ultimately their continued survival. From the evidence presented thus far, the future for tourism in Malta appears to be at a cross roads.

As such, over the last decade two factors have clearly emerged. One suggests that tourism is having a major environmental impact on many established tourism destinations and the second suggests that potential threats from environmental change are likely to create considerable adverse impacts to tourist economies unless managed effectively. Thus we can begin to infer that a clear juxtaposition and paradox has emerged between, on the one hand, tourism, itself, creating many undesirable impacts at tourism destinations and on the other, environmental and by association climate change threatening to adversely impact on tourism infrastructure, ultimately threatening the very nature, character and socio-economic wellbeing of many tourist destinations. This so-called ‘double whammy’ and the resulting implied threats to the Maltese tourist economy are again very real in the context.

From the existing literature it looks as if several complex dynamics, tensions and pressures now present some real tangible challenges to the tourism industry. These are largely concerned with the synergies (or lack of) between the, often disparate stand points and interests that attempt to i) recognise predictions for environmental change, ii) represent the environmental lobby, iii) meet economic and social needs from tourism growth demands and iv) meet the ever growing aspirations of the tourist industry and its diverse stakeholders. It is probably still too early to speculate on definitive outcomes, but the interaction and relationship between these concerns will, as time will tell, ultimately determine the future sustainability and viability for Maltese tourism and the future prospects for tourism growth. A better coordinated and strategic approach to problem recognition and management solutions is now overdue and one that presents a real challenge for the continuation of tourism growth prospects across the Maltese Islands. From the literature reviewed, such complex relationships raise several questions on the continued need for tourism destinations including Maltese resorts to address key management issues. These, in summary, would appear to include a collection of what would appear to often be quite disparate interests that require a more strategic and coordinated approach in order to address both the impacts of environmental change and the need to sustain tourism economic wellbeing. These might include for example management responses that go some way to: i. acknowledge and recognise problems, ii. accept responsibility, - particularly from private stakeholder groups iii. ensure governance structures that are fit for purpose, iv. be richer in skills - particularly through education and training, v. respond to sustainable and ethical needs- vi. be leaner on resources, particularly through ‘smart’ technologies and ‘smart’ design. vii. have social media savvy, viii. recognise risk and liability and ix. meet tourism industry expectations.

The synergies between these factors would appear to be critical if Malta is to sustain its tourist economy. However, the implications from such varied discourses suggests that it has become increasingly important to nurture and develop destination management principles and practices that in essence reflect better strategic vision (dare we say even a strategic long term plan) that effectively addresses the challenges highlighted. These, as
already stated, are often complex and vary according to localities and destination characteristics. A one size fits all solution to setting strategic objectives is not perhaps the final answer. A flexible solution that can adapt to the recognition of problems, that can be adaptable to finding and implementing solutions and in turn meet stakeholder expectations (both nationally and within specific tourism localities) would seem to be fundamental. The key challenge, in this context, still remains one which requires better synergy between all the interested parties within tourist economic and social structures – and this is especially the case for each Maltese, tourist locality, resort or destination.

**Conclusion: Identifying problems, understanding challenges and advancing resolutions**

From the issues drawn from the literature 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 from the literature 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 conclusion this review presents a broad assessment of key contemporary threats, key challenges and possible resolutions to current threats to Maltese tourism from perceived environmental and climate change predictions.

In summary, it seems fair to state that there still remains continuing uncertainty regarding the science of environmental change and the validity of current predictions. However, as already stated, the very recent findings and conclusions from the IPCC report (2014) would confirm worst assertions. In this regard, general perceptions from the literature demonstrate that there is recognition of adverse environmental and 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 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. In essence there remains a complex relationship of interrelated processes or multi-faceted dynamics that combine at differing levels and stages of the tourism destination management cycle. This multi-faceted dynamic involves processes associated with several parameters including, tourism destination management, processes of problem recognition, balancing strategic policy decisions, meeting stakeholder expectations and providing solutions to the key challenges, problems and threats currently at hand. At many Maltese tourism resorts, these are ongoing processes, the dynamics of which are often complex consisting of multiple layers of diverse stakeholder interests. Synergies between these diverse groups would still appear to remain in their infancy with little strategic direction being taken. More disappointing perhaps is that these dynamic processes, particularly the predictions for adverse environmental change vis-à-vis ever ongoing strides to promote further tourism growth, are increasingly and clearly in conflict or at odds with one another. The current growth strategy from the private sector to boost tourism visitors to over 2 million
per annum is a case in point. This does not bode well for the future prospects for Maltese tourism in the short term.

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 which connect more closely with existing, environmental, governmental, legal, financial and technological frameworks. These are themes now commonly explored in the literature for example by (UNEP/OECD, 2010), (Jones and Phillips, 2011), (Hall et al, 2012) and (Sing, 2012). In essence such discourse means creating or ensuring structures for management and decision making that are fit for purpose. At present evidence suggests that such structures and organisational frameworks remain lacking. The future success in managing tourism, and this is particularly pertinent to the Maltese Islands, is a need to promote effective measures that support a strategic cyclic process of problem recognition, addressing challenges and implementing effective resolutions at destinations. There have been many initiatives and measures already taken that demonstrate that new approaches can be effective. These albeit not extensive can, for example, include hard and soft engineering works that protect tourism assets and resources, passive and active design measures particularly in hotels that help to mitigate against environmental change, strategic planning, environmental design and zoning regulations, smart marketing, labelling and promotion that ‘influences’ visitor choice, introduction of carbon related charging and ‘green’ taxation, visitor management and capacity controls together with supporting green transportation, adaptation and initiation of environmental management systems and increased levels of professional training that build ‘capacity’.

Outside of Malta there are now many initiatives that go some way to promote some of these more effective and sensitive forms of tourism that are both sustainable and mitigate against threats from environmental and climate change. The World Tourism and Travel Council (WTTC) through its tourism tomorrow awards is a case in point (WTTC, 2014). The Responsible Tourism Awards coordinated by Responsible Travel (2014) at the London World Travel Market provide other examples. In this respect there are the beginnings of change in Malta too. Evidence from projects such as the environmental management initiatives implemented at the Radisson Blu Hotel complex and resort at Golden Bay and the Hilton hotel at St Julians demonstrate that environmental management systems that conserve resources and reduce impacts (particularly in carbon) can be economically sustainable. The more comprehensive ‘ECO GHAWDEX’ project on Gozo which promotes broader sustainable tourism practices also provides a good starting platform. In Malta and elsewhere, however, these tend to remain largely a loose uncoordinated patchwork of schemes and unfortunately, because of this, their wider influence and impact remains somewhat marginal. This is especially the case across the wider tourism sectors in Malta.
On a final note, and time will only tell, it will be the most strategically aware, most innovative, most environmentally informed, best coordinated, most efficiently managed, most sustainably aware, most professionally skilled and most technological advanced tourism destinations that will be best placed to survive on going threats from both environmental and climate change and thus ultimately endure and prosper in the longer term. The evidence is now clear. Maltese tourism will inevitably have to adapt to changing patterns of tourism growth with shorter summer seasons and longer spring autumn and winter seasons. The impact on existing patterns of employment and related economic factors of demand and supply in the labour markets will also inevitably need to adapt and adjust. The challenge also remains one which requires action in the form of better coordinated mitigation initiatives (already mentioned above). Without such measures the risks from environmental change and the predicted negative impacts this will have on the Maltese tourism economy will inevitably escalate, threatening the very nature, economic sustainability and even the continued existence of the industry. These are nevertheless threats and challenges that all the tourism stakeholders in Malta still need to fully recognise.

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