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## **Tourism megatrends**

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Tourism is affected by social, political, economic, technological and environmental changes at all scales. Population growth, redistribution of wealth, geopolitical changes and conflicts, rising fuel costs, climate change and its consequences, new technologies and work patterns, and all forms of social fashion influence who wants to travel where, for how long, to do what, and at what prices. Here, we examine six large-scale exogenous trends for the global tourism sector over the next 30 years: (1) The social, economic and environmental consequences of gradual warming and of extreme weather events associated with climate change; (2) The effects of higher fuel costs and social concerns on mass long-haul travel; (3) The role of new technologies, including social media, in marketing, managing, experiencing and monitoring tourism; (4) Economic growth and social change in the highly populous and newly wealthy BRICS nations, especially India and China; (5) The consequences of armed conflict and geopolitical negotiation for tourism, and the use of tourism as a tool for geopolitical interests; (6) The increasing linkages, and also conflicts, between tourism and conservation in many countries. Improved understanding of these megatrends, and the interactions between them, are priorities for future tourism research.

**Keywords:** future trend; geopolitics; wealth; population; economics; peak-oil; technology; communications; climate change; conservation

### **Introduction**

In this contribution, we identify and examine six macro-scale trends that are likely to be particularly influential in the tourism sector over the next 15–30 years. We suggest that these are driven principally by exogenous social, political, economic, technological and environmental trends, more powerful than the internal dynamics of the tourism industry itself. We focus on changes that have already begun, are highly likely to continue, and will influence tourism development at a global scale.

There are other potential changes (Aramberri, 2009) which are also possible but less predictable, and which we do not consider here. There are distinct but as yet unquantified possibilities of: large-scale systemic failures of global financial systems; new large-scale epidemic diseases; failure of food supplies for large parts of the world's population; severe shortages and/or pollution of water supplies in various parts of the world; and/or severe worsening of air quality in large cities. It is also worth noting that all of these trends are strongly linked to increasing human population growth. Any lasting and large-scale reduction in human fertility, either social or biological in origin, would therefore override many other effects. There are also possibilities, albeit small, that new technologies for energy generation, water purification or waste treatment may become available at large enough scale to modify *per capita* human environmental impacts significantly. Any or all of these would have strong influences on the tourism sector, but they are all currently too uncertain to serve as the basis for reliable predictions. We therefore focus here on six global megatrends whose consequences for tourism can be interpreted with some confidence.

### **Climate change**

In 2009, the United Nations Secretary General Ban Ki-moon characterized climate change as '...the pre-eminent geopolitical and economic issue of the 21st century. It rewrites the global equation for development, peace, and prosperity'. While the implications of climate change are often considered to be decades into the future, the Intergovernmental Panel on Climate Change's (IPCC, 2013) most recent assessment of climate science presented compelling evidence that the global climate system has changed compared with the pre-industrial era and that the impacts of climate change are not consigned to some hypothetical future, but are an observed reality for many. Each of the last three decades has been successively warmer than any other since 1850 (IPCC, 2013). The last 30 years have also seen changes in extreme weather and climate events, some unique in strength and impact, and consistent with a warming planet (IPCC, 2013; World Meteorological Organization, 2010). The IPCC (2013) also reported with new and unprecedented certainty that human activities have dominated changes in the climate system since the 1970s, with carbon dioxide emissions far outweighing the contributions from natural drivers. Discernible human influences now extend to other aspects of climate and many changes are unusual or unprecedented on time-scales of decades to many hundreds of thousands of years (IPCC, 2013). Noting the pervasive impacts of climate change on nature, on economies and society, the World Economic Forum (2012)

ranked climate change among the top five likely and impactful risks to the global economy and society in the next 10 years.

Tourists, travel and tour operators, and tourism events and destinations are strongly influenced by natural climate seasonality; by anomalously warm, cool, wet or dry years; and by extreme weather events (Becken & Hay, 2012; Scott, Gössling, & Hall, 2012a; Scott & Lemieux, 2010). Examples are reported from: ski tourism (Dawson, Scott, & McBoyle, 2009; Federal Reserve Bank of San Francisco, 2010; Pickering, 2011; Steiger, 2011); dive tourism (Klint et al., 2012; Klinthong & Yeemin, 2012; Sarnsamak, 2011); regional tourism within Europe (Lagadec, 2004; Létard, Flandre, & Lepeltier, 2004; Scott & Lemieux, 2010); and the timing of visitors to US National Parks (Buckley & Foushee, 2012).

The effects of extreme weather events on tourism infrastructure, businesses and reputations frequently receive high media profiles. Systematic analysis of economic impacts are rare (Scott, Gössling, & Hall, 2012b), but there are case studies showing drops in visitation by up to 50%, and economic impacts up to US\$800 million, for: hurricanes in Mexico and southern USA (Barell, 2010; Bhatnagar, 2005; Covington, 2005; Pack, 2004; Scott et al., 2012b); drought-related wildfires in the USA, Greece, Spain, Portugal, Australia, Russia and Canada (Butler, 2002; Cioccio & Michael, 2007; IUCN, 2007; Sanders, Laing, & Houghton, 2008; Sharp, 2008); and drought-related water quality and water levels in the USA, Australia, East Asia and a number of small island states (Becken, Rajan, Moore, Watt, & McLennan, 2013; Gössling et al., 2012; International Joint Commission 2012).

Climate changes over the past 40 years, although significant, are only the beginning (IPCC, 2013). If emissions continue to rise at the current rate, global average temperature is projected to increase a further 2.6–4.8°C by the end of this century. Most aspects of climate change will persist for centuries even if greenhouse gas concentrations can be stabilized, due to the effect of past human greenhouse gas emissions already present in the atmosphere (IPCC, 2013). Weather extremes will become more frequent and severe, with intensifying impacts (Becken & Hay, 2012; Hall, 2008; Scott et al., 2012a). The Davos Declaration on Climate Change and Tourism concluded that climate change ‘must be considered one of the greatest challenges to the sustainability of tourism in the 21st century’ (UNWTO–UNEP–WMO 2008, p. 38).

Recent extreme weather events have heightened demands by institutional investors and financial markets for disclosure of physical climate risk. While the business case for climate change adaptation has been made extensively (Ceres, 2011; Mercer, 2013; PricewaterhouseCoopers, 2010), this has not yet translated to the tourism sector (Scott et al., 2012a, 2012b). An assessment of tourism sector adaptation preparedness in 18 countries found that, ‘... current (national) policy, with few exceptions, is inadequate to the scale of the challenge, both on mitigation and on adaptation’ (OECD and UNEP, 2011, p. 4). Assessments of the state of climate change adaptation by tourism operators and local tourism officials have consistently found low, although improving, levels of climate change awareness and relatively low perceived climate change risk (Scott & Becken, 2010; Scott et al., 2012a). A similar conclusion comes from the business community, where KPMG’s (2008) assessment of diverse climate change risks and the level of preparedness across 18 major global economic sectors, found tourism to be one of six sectors in the ‘danger zone’. Tourism cannot afford to remain one of the global sectors least prepared for climate change if it is to have a meaningful place in the green economy of the future (Scott, 2012).

### **Fuel costs**

There is no doubt that the growth of tourism in recent decades has been (literally) fuelled by cheap oil. Global oil prices have been less than US\$20 per barrel for most of the last century – with the exception of the 1970s oil crises; however, prices have increased markedly since the early 2000s. Many analysts put this down to an increasing physical constraint on supply (Deffeyes, 2003). Prices reached an all-time high in 2008 at a level of US\$145 per barrel, sending shock-waves through the global economy and travel industry. Since then, prices have been extremely volatile in response to any changes in the socio-political environment (e.g. Arab Spring) or global oil infrastructure (e.g. Hurricane Katrina in 2004), but have generally remained around the US\$100 level. Recent dramatic decreases in oil prices highlight the ongoing volatility of global oil markets and the sensitivity to geopolitical tensions, as well as to global economic cycles.

It is well established that tourism is both highly income and price sensitive (e.g. Song, Kim, & Yang, 2009). As demonstrated by Schiff and Becken (2011) and Becken and Lennox (2012), an increase in global oil prices affects income from tourism (e.g. as a result of macro-economic changes such as reduced GDP and increased unemployment) and, as a result, impacts negatively on travel propensity, especially to long-haul destinations. In addition,

higher oil prices lead to higher transport costs. Airlines, for example, have addressed this by implementing fuel surcharges, up to several hundred dollars on long-haul sectors. Depending on price elasticities for different market segments, tourist demand for air travel decreases in response to higher airfares, especially for those tourist corridors where high-carbon tourist transport (e.g. short-haul air travel) can be replaced by lower carbon alternatives (e.g. high speed rail) (Becken, 2015).

Clearly, global oil production is moving down the 'resource pyramid' (Heinberg, 2013). This means that, increasingly, oil resources that are low in energy density or to be found in remote and inaccessible locations are being exploited. Further, previously uneconomic exploitation techniques, such as 'fracking' have now become viable. While production volumes have been maintained through these alternative sources for the time being, the gain in net energy that is available for human use is diminishing. The outcome of a peaking of conventional (and cheap) oil reserves (Aleklett et al., 2010), and the move towards unconventional (and expensive) sources is that prices for oil will continue to rise in the near and long-term future, despite temporary reductions. In addition, concerns about the carbon intensity of fuels, especially new resources such as tar sands, and future implementation of climate change mitigation policies mean that tourist travel will inevitably become more expensive and restrictive.

Changes in the availability and affordability of oil have the potential of revolutionizing tourism, with major social implications for countries of origin as well as destinations (Becken, 2011). While moral discussions about tourism's oil intensity and aspects of equity and ethics are rare (Lloyd, 2007), increasing oil prices are likely to result in 'de-growth', a re-localization of tourism and new forms of travel such as slow tourism (Dickinson and Lumsdon, 2010). Developing countries and remote destinations, such as some island-states, would be the likely losers in a low-carbon tourism world.

Thus, to manage the risk of future increases in oil prices, both destinations and businesses will have to assess their oil vulnerability. Vulnerability depends on a number of factors, including market composition and price sensitivities, fossil fuel intensity of operations and substitutability to alternative energy sources, competitiveness and uniqueness of the product(s), and distance from markets. Destinations that have experienced sudden growth due

to the establishment of low-cost air travel routes might be particularly vulnerable (Becken, 2011).

While the topic of fuel costs and tourism is not well researched, it appears that the price of oil is a critical input factor into tourism. Moreover, due to an increasing blending of work, leisure and travel, societal changes and tourism impacts in response to high oil prices are intimately interwoven. Changes in lifestyles will induce changes in travel, and vice versa. Analyses of the future of tourism, including those related to megatrends, cannot ignore the central role of 'cheap oil' that is so often taken (misguidedly) for granted in approaches that seek to predict the future by looking into the past.

### **Technology**

Technology enables, facilitates and mediates many aspects of travel and tourism (Werthner & Klein, 1999). Therefore, technological advances impact tourism on many fronts, including transportation cost, speed and opportunities. We focus here only on progress in information and communication technology as an increasingly central driver of change in the structure of the tourism industry and the fabric of the core tourism experience. While information and communication technology (ICT) has traditionally connected businesses with other businesses, Internet technologies – and specifically social media – created new opportunities for businesses to connect directly with consumers, and for consumers to establish connections with other consumers (Gretzel & Fesenmaier, 2009; Sigala, Christou, & Gretzel, 2012). This has and will continue to have implications for the way tourism-related information is produced, shared and consumed, as well as the way tourism products and services are distributed (Berne, Garcia-Gonzalez, & Mugica, 2012).

Social media, on one hand, have led to the democratization of information in tourism, shifting the power more towards consumers who now have access to information and recommendations from fellow travellers and locals, and also more towards smaller operators who can use the inexpensive platforms to market their products and nurture customer relationships similar to big companies. In addition, in some circumstances, traditional commercial tourism establishments/distribution channels are circumvented all together (Couchsurfing.com; Airbnb.com). On the other hand, social media have created new avenues for businesses to collect and mine customer information and use such market intelligence for ever more targeted marketing.

In general, the gigantic amount of tourism information available on the Internet and the plethora of online interactions among the various players in tourism constitute digital traces that are spurring technological developments and drastic changes in business models. Often referred to as 'big data', meaning large volumes of complex and unstructured data of great variety and emerging with great velocity (Davenport, 2013), the systematic and strategic analysis and productive use of these digital traces provides new opportunities for the travel industry to align company offerings with customer needs and enhance customer care. The big data phenomenon is therefore believed to spur a whole suite of new technological developments in the areas of recommender systems, and specifically context-aware systems, i.e. systems that understand the specific needs of a traveller at any given point and provide relevant and personalized information. However, big data also means that big data specialists such as Google® have the opportunity to infiltrate the travel space (see Google Flights, <https://www.google.com/flights/>).

These trends are accelerated by the development of increasingly powerful and cheap mobile technologies, which allow businesses and consumers who had previously not adopted ICTs to leapfrog to higher levels of technology adoption and use (Goldenberg & Oreg, 2007). Greater market penetration of mobile technology goes hand in hand with efforts to expand mobile service availability to cover even less populated and remote areas of the world. More widespread connectivity allows tourists to forego advance planning, encourages less experienced travellers to venture out into unknown territory and makes it possible for providers to connect with potential consumers and actual customers in new ways. Effects of these developments on tourism experiences are already visible (Gretzel, 2010), and it is expected that such technological-mediation will continue to increase with smartphones becoming widely adopted and travel-related apps being ubiquitously available (Wang, Park, & Fesenmaier, 2012).

Another big trend to watch in tourism and technology is the Internet of Things, which allows a new type of connection to emerge, namely, connections among objects. Chui, Löffler, & Roberts (2010) define it as sensors and actuators embedded in physical objects, linked through wired and wireless networks. Such an Internet of Things allows for new levels of tracking behaviour, enhanced situational awareness, decision support, automated control and optimized resource consumption (Chui et al., 2010). For tourism, this could mean better



monitoring of fragile ecosystems visited by tourists, visitor flow management in theme parks, better road safety and traffic management in highly visited tourist resorts, etc.

In addition, developments in robotics and artificial intelligence mean that technology can and will increasingly takeover the delivery of services to tourists (Yeoman, 2013). Robots are critical in that they allow for quasi-human interactions. Much of robotic development actually aims at making robots as human-like as possible (including the sensing and communication of emotions) in order to overcome the artificiality that such service encounters would otherwise entail.

Last but not least, tourists will increasingly turn into cyborgs, meaning humans whose physical and sensory capabilities are extended through mechanical elements (*Oxford Dictionary*, 2013). We already see this happening with tourists becoming ever more attached to their mobile phones and technologies becoming more wearable (e.g. Google Glass; RFID powered watches used by ski resorts) (Yeoman, 2012). Augmented reality applications build on these technologies to provide tourists with enhanced experiences by overlaying reality with additional, often personalized, information (Yovcheva, Buhalis, & Gatzidis, 2013). Such advanced technologies also make a greater number and variety of tourism experiences accessible to individuals with cognitive or physical disabilities (Buhalis & Darcy, 2011). On the other hand, it is also likely that a growing number of tourists will seek out experiences that will allow them to disconnect from technology, e.g. through travel to technological dead zones where neither Internet nor mobile phone connections are available (Pearce & Gretzel, 2012).

### **Highly populous newly wealthy nations**

Increasing wealth and political freedom in countries such as China, India, Russia, Brazil and several South East Asian and South American nations has led to major changes in the ethnic and cultural mix of international travellers. Domestic tourism in China now comprises over 2 billion trips annually, several times larger than all international tourism combined. Domestic tourism within India and Brazil may well be of similar scale. As these tourists begin to travel overseas, they bring different demands, expectations and behaviour to in-bound tourism markets in countries previously dominated by North American and European tourists.

Urban tours for North American and European customers, for example, may focus first on architectural landmarks and artistic performances, with shopping as an optional extra at individual discretion. Urban tours for Asian customers, in contrast, focus largely on shopping, especially if they are structured so that tour guides are paid principally through commissions. The Chinese government recently passed tourism legislation designed to curb this practice. Asian tourists may prefer larger group sizes and higher levels of socialization than their European or American counterparts. Independent out-bound travel from Asian nations, however, is also on the increase, especially for the younger, active, English-speaking parts of their populations. For outdoor tourism, most customers from Asian nations, although less so from Latin America, have less experience in outdoor adventure activities, requiring different management approaches to ensure safety. Some also have less experience in minimal-impact behaviour for nature-based tourism such as wildlife watching, so that they do not experience the full advantage of such opportunities, and create conflicts with tourists of different origins, who have different expectations.

Destinations such as Australia, which currently host high-volume urban tours from newly wealthy nations, are keen to disperse these visitors into rural areas and national parks. Their aim is to boost regional economies and hence political support, through increased tourism revenues. They promote this approach in their international marketing campaigns and through in-bound agents. Typically, however, they do not consider that residents and road signage in these rural areas are unlikely to be bilingual, or that visitor management approaches in national parks are implicitly tailored to particular cultural norms, such as obeying instructions not to drop litter, disturb wildlife, or remove any plants or animals. These instructions are commonly also embedded in regulations, but the resources to police such regulations on the ground are not available, because park agencies rely on behavioural compliance by visitors. Tourists with different cultural backgrounds, however, may perceive public parks as places for outdoor sports and games, large social gatherings, or free collection of foodstuffs and other natural resources. When the proportions of international visitors are small, they are likely to copy locals; but if numbers increase so that locals are swamped, international visitors will import their own cultural norms.

As another example, domestic whitewater rafting in China is a largely passive activity for the participants, whereas whitewater raft tours in many countries expect paying participants to paddle vigorously, follow paddling instructions promptly, and swim actively if they fall out

of the raft. Out-bound Chinese tourists who take part in a raft tour without appreciating this difference may well be dismayed, disappointed and potentially in danger. At the same time as promoting increased in-bound visitation from these highly populous and newly wealthy nations, therefore, destination countries need to consider how to manage the expectations and behaviour. One potential approach is to study how different tourism subsectors operate in the countries of origin, since it is these that form the cultural expectations for out-bound tourists from those nations.

### **Geopolitics**

An important but relatively subtle trend is the increase in the utilization of tourism as a tool to achieve specific geopolitical objectives, mirroring what Weaver (2010a) regarded as the emerging field of 'geopolitical sustainability'. Such utility has a long history, with Weaver pointing out how Caribbean planters in early nineteenth century regarded tourists as potential settlers who would reinforce the diminishing white population. More recently, similar strategies were adopted by the Apartheid regime of South Africa (Weaver, 2000), while the track-two diplomacy of table tennis matches was instrumental in opening the door for the re-establishment of good relations between China and the USA during the early 1970s (Fan & Xiong, 2002). Such geopolitical motivations are likely to be amplified given ascendant globalization narratives which advocate the erosion of national boundaries and the expansion of interactions between countries and people, and nationalist or ethnic counter-narratives (sometimes pursued concurrently) that seek to strengthen those barriers or establish new lines of spatial demarcation. The growth and ubiquity of tourism are concurrent factors that are likely to stimulate its employment as a vehicle for achieving geopolitical aspirations.

This trend is discernible at three levels. Internationally, tourism has long been touted for its potential as a potent force for world peace (Tomljenovic & Faulkner, 2000), and this noble aspiration will be increasingly reflected, explicitly, in such phenomena as trans-frontier protected areas and regional initiatives such as the Silk Road and Ruta Maya. The consolidation and expansion of regional blocs such as the European Union and North American Free Trade Agreement will both stimulate and be stimulated by the liberalization of tourist movements within these multilateral entities. As an emerging world power, China is using tourism as a projection of its soft power, extending Approved Destination Status (ADS) to selected countries and encouraging positive bilateral relationships and travel through its network of Confucius Institutes. Discounted retail tours are also being offered to reconnect

overseas Chinese tourists with the Motherland (Wang, Kwek, & Weaver, 2013). This link between tourism and soft power was formally recognized through the formation of the Tourism Confucius Institute in Australia during 2010. We may also anticipate the increased role of tourism as an instrument of track-two rapprochement, already indicated by wrestling competitions featuring American and Iranian competitors. There is potential on the Korean Peninsula for North and South to improve relations by encouraging visitors from the north to visit attractions associated with national icons such as the novelist Kim Yujeong, who is celebrated in a Literary Village near the border (Lee & Weaver, 2014). Geopolitically sustainable tourism through sport is also implicated in the Commonwealth Games, which are branded as the 'friendly games' which help to unite the disparate membership.

National-level discourses in geopolitically sustainable tourism tend to deliberately or implicitly situate as counter-narratives, since they are usually designed to strengthen national identities and cohesion. As such, they are centripetal counterparts to the centrifugal effects of globalization, and 'sustainability' is properly understood as a strategy for sustaining the integrity of the state. Battlefield commemorations, as demonstrated by the co-operation between Turkey and Australia for the centenary recognition of the 1915 Gallipoli campaign, are sometimes positioned in the globalization space. More common, however, is the emphasis on national cohesion, with Gallipoli and Vimy Ridge (1917), respectively, celebrated for their effects in forging the Australian and Canadian national identities (Cheal & Griffin, 2013). Such associations will become even more forceful and widespread in tandem with the acceleration of centrifugal globalization effects. Accordingly, the participation of increasingly multicultural elementary and secondary school groups in mandatory fieldtrips to capital cities will become more prevalent so that increasingly diverse populations are exposed to the unifying effects of national icons.

Finally, distinctive manifestations of geopolitically sustainable tourism are evident at the subnational scale. Weaver (2010b) proposed that indigenous people in Australia, New Zealand, Canada and the USA are using tourism as a mechanism for attaining greater political and economic control over residual political spaces (e.g. reservations) that they currently control as well as traditional lands long ceded to European colonists. Ironically, previous stages of indigenous tourism involved the display of traditional culture as a counterpart in world fairs to the demonstration and celebration of the technical prowess of the modern colonizing state. Contemporary indigenous re-empowerment is especially likely to be

pursued through ecotourism interpretation strategies that emphasize continuous or historical long-term occupation of land and sea, and deep connections (Weaver, 2008). Comparable impulses exist and are likely to be increasingly pursued by ethnic interest groups in places such as Scotland and Cataluña to promote the cause of secession or autonomy (Palmer, 1999). All three levels described here indicate the increased ‘geopoliticization’ of tourism as an instrument to facilitate or impede the seemingly relentless forces of globalization.

### **Conservation**

The world’s population is increasingly urbanized, and mean per capita wealth is higher in urban than rural regions. Therefore, most tourists originate in cities. Sometimes, they travel to other cities; but increasingly, they take holidays in rural areas with cleaner air and water, locally grown food, a wider range of recreational activities, and the aesthetic attractions of nature and scenery. National parks are popular destinations because they are open for public access and have publicly funded visitor infrastructure including roads, parking, tracks, toilets and lookouts (Buckley, 2009a, 2009b, 2011). Some national parks receive tens of millions of visitors annually, more than many cities. Visitor management costs have grown correspondingly. Parks agencies have turned to tourism to fund part of their recurrent expenses, and also to provide political support for government budget appropriations. In addition, private and communal conservancies rely increasingly on tourism to generate revenue. The role of tourism as a tool in conservation finance is increasingly important in view of accelerating global loss in biodiversity, and insufficient protection of a representative suite of ecosystems.

The economic and political connections between tourism and conservation have thus become increasingly powerful and contentious. Tourism property developers apply political pressure to obtain private development rights in parks, where the attraction, access, infrastructure and marketing are all publicly subsidized (Buckley, 2009b). Tourism industry associations lobby along similar lines to promote eco-certification programs, which are very weak substitutes for environmental regulation (Buckley, 2013). Currently, most tourist accommodation is outside park gates, and most visitor infrastructure is owned and operated by parks agencies. In some countries, however, some visitor services in some parks are operated privately under concession agreements. There are also a small number of privately owned facilities inside parks, but almost all of these are either enclaves, or gained their position through historical land transfer arrangements.

Public park agencies continue to promote tourism, and consequently incur costs, risks and impact, both financial and ecological. In many countries, parks agencies rely partly on tourism to fund routine operating costs. Since park operations include conservation of threatened species, tourism may be seen as contributing proportionately. These contributions can be quite significant, supporting more than 10% of remaining global populations for 28% of threatened mammal species (Buckley et al., 2012), 24% of birds (Steven, Castley, & Buckley, 2013) and 15% of frogs (Morrison, Simpkins, Castley, & Buckley, 2012).

An increasing number of private and community enterprises now operate their own conservation reserves, funded by tourism. These conservation tourism enterprises have become significant contributors to both tourism and conservation in many parts of the world (Buckley, 2010a, 2010b; Buckley & Pabla, 2012). In 2012, for example, conservation tourism operators in India and Africa funded large-scale translocations of endangered wildlife (&Beyond, 2013; Wilderness Safaris, 2013). In 2013, the Lewa Wildlife Conservancy, funded by tourism, was added to the Mt Kenya World Heritage Area (IUCN, 2013).

Conservation tourism operations have received high accolades within the mainstream tourism industry. In 2013, Mombo conservation tourism lodge in Botswana (Wilderness Safaris, 2013) was awarded the title of world's best hotel by *Travel & Leisure* (Flowers, 2013); and North Island in the Seychelles was listed as the world's most expensive hotel (Luxury Hotels, 2013). Links between tourism and conservation have thus become mainstream in both sectors. As the global human population continues to grow, and natural environments and human economies come under increasing pressure, these links are likely to intensify. In the short term, tourism will be promoted increasingly as a means to funding conservation, with greater convergence between public, private and communal land tenures; but in the longer term, other funding mechanisms will replace it for greater stability and reliability.

## **Conclusions**

A number of broad conclusions may be drawn, with different degrees of confidence. Predictions based on powerful trends such as increasing global populations, for example, are more reliable than those based on possible social or cultural changes. The various factors outlined above also interact with each other, and these interactions influence future scenarios in ways which are more difficult to predict. The same applies for many attempts to forecast

large-scale social-biophysical trends and interactions (Howell, 2013). There are corresponding patterns in the historical evolution of tourism, also greatly influenced by exogenous drivers. Examples include: social and political changes such as wars and government ideologies; development and distribution of mass communication media such as radio and television; and transport technologies such as cars and aircraft.

At the broadest scale, tourism will be affected by demographic developments such as differential fertility and population growth. Europe, Japan and North America, historically the principal countries of origin for international tourism, exhibit rapidly ageing demographic profiles which indicate population stagnation and, in the case of migration-unfriendly Japan, decline. Contemporary levels of demand will continue over the next 15–30 years, but this will be manifested increasingly as ‘geriatric tourism’ where ample discretionary income intersects with concerns about security and well-being. Other parts of Asia, and China and India, in particular, will become the new engine rooms of international tourism, with youthful profiles persisting and continued rapid growth expected. By the 2040s, sub-Saharan Africa may also become a significant new centre for demand, given high domestic fertility rates and increasing international investment. Continuing migration from Africa, Asia and Latin America to North America and Europe will increase racial and cultural diversity in these markets.

Over the next three decades, long-haul air travel is likely to become more expensive. We anticipate an initial period of continuing growth, fuelled largely by out-bound tourism from newly wealthy highly populous nations, notably China. Many countries are already experiencing this, and planning for more. Climate change will affect the relative attractiveness, accessibility and sustainability of different destinations, potentially transforming major current markets and requiring greater investment in adaptation. Increased policy pressures to reduce greenhouse gas emissions will alter capital and operating costs, and perhaps over time create a negative social perception of travel-related carbon footprint. As travel costs increase and as costs, restrictions and social pressures associated with greenhouse gas emissions and climate change continue to evolve, it seems likely that middle and down-market mass tourism will decrease or become more localized.

New technologies, particularly in information and communications, but also in transport, are likely to exert increasing influence on travel plans and patterns, including short-term tourist

responses to changes in travel costs, safety and security, and local-scale market supply. The world will still have wealthy individuals keen to travel, and we can anticipate that many areas currently restricted by geopolitical factors will in future become important new tourism destinations. These include most of West Africa, war-torn parts of central Asia, and previously little-visited nations of northern South America. At the same time, however, these areas are especially vulnerable to climate change and related constraints such as freshwater availability. Particularly in the Asia-Pacific region, rapid economic development coupled with insufficient water supply and treatment infrastructure, and the exacerbating effects of climate change, will require much improved systems for water governance. The link to geopolitical challenges is particularly well publicized for the great rivers of Asia.

These examples indicate that future tourism research should consider not only individual megatrends as outlined above, but interactions between these trends. For tourism destinations to receive visitors, they need comfortable climate, low risk of extreme weather events, adequate freshwater, natural and cultural attractions, geopolitical stability, safety and security, and accessibility within the context of changing transport modes and costs and information technologies. Changes in each of these factors may act in different directions. The next step is to predict more precisely how, when and where such interactions will operate.

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