Sustainability and Climate Change

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'Each generation needs to regard itself not as owning the assets of society but as taking care of them; it has inherited a treasure from the past which it is its duty to pass on, augmented if possible but at any rate not depleted, to future generations'

Edmund Burke, British 18th Century Philosopher¹

Preamble

Sustainability is now an important agenda item for tourism (Hall and Lew, 1998). That said, issues of sustainability are complicated by the threat of climate change, presenting the tourism industry with considerable negative impacts. Depletion of resources and the modification of tourist destinations through climate shift, will exacerbate the already strained systems of mass tourism destinations (UNWTO, 2008; Jenkins 2011). Climate change, combined with sustainable development, will inevitably engineer new 'successful' tourist locations, as a result of managers and policy makers developing innovative ways to manage tourist destinations, perhaps changing the tourism industry irrevocably (UNWTO, 2008). Certainly, the development of new forms of tourism, incorporating niche and eco-tourism products, may well herald the demise of the mass tourism market as we know it today.

There will be a need to look at linking the strategies of climate change with those of sustainable development (SD). In many cases there is not, necessarily, a conflict, as the environment and human society are the main focus of both tourism and sustainable development. The difficulty, perhaps, is in trying to synergize the management strategies of both approaches, especially where conflicts might occur. Hence, there appear to be a number of paradoxes that climate change and sustainable development might engender.

It appears that tourism resources will have to be carefully managed, possibly resulting in the decline of mass tourism markets and the emergence of different types of tourism and tourists. Development of niche tourism

¹ Quoted by Bryan Magee, Burke the Supreme Conservative, in the book ,The Story of Philosophy

destinations and use of renewable resources with sustainable transport networks now seems to be tourism's future *golden egg* with far more domestic tourism being developed and limits on international travel.

The Predictions of Climate Change

The phenomenon of climate change although presented as being recent, originated in the 1970s when 'environment damage' was on the agenda of a number of important organisations; however, this was very much tangential and evolved from the 'Hippy' and 'Green Movements' of the 1960s. Out of this era emerged organisations such as Friends of the Earth (FOE) and Greenpeace who are currently the driving force in tackling climate change (Greenpeace 2010). These organisations have now become socially acceptable (no longer pariahs) and pivotal to the movement tackling climate change. Interestingly, the main environmental concern of the 1970s was not global warming but global cooling! (Pearce 2010). This highlights, to some extent, the problem of predictive climate (Pearce, 2010). Global warming is now the main dictum of these environmental lobbying bodies and it is asserted by many, that the science of global warming is now proven, although protagonists still exist who challenge this (Pearce, 2010).

As most students of statistics will know, *proven*, is rather an emotive word, suggesting certainty, which in statistics is never wholly the case. However, the body of evidence and the eminent scientists who support this strong assertion of global warming are difficult to argue with (Black, 2010). What becomes apparent is that man's population growth and the concomitant resulting strains on resources, inevitably impacts upon the planet and its assets. As a consequence, global warming has proffered an excellent platform to support the dictum of sustainability and can now be strongly linked to future success of global economies (Scott, 2011).

The science of climate change has produced some useful predictions that can be linked and associated with changes in tourism and its products. The predictions can be summarised as follows:

- Changes in weather patterns
- More droughts
- More severe weather conditions
- Rise in sea levels

All these predictions seem rather simplistic, but have the potential for massive change to economic activity and in particular, tourism. Weather is a primary resource for tourists and tourist choices, therefore changes to weather patterns will engender changes to tourism. The unseasonable snow in Northern Europe in December 2010, demonstrated the chaos this can bring to transport, resulting in the closure of many northern European airports causing huge travel disruption (Millward *et al.*, 2010).

Additionally, the transferability of tourism from one part of the globe to another is now incredibly quick and can cause economic shocks for tourist destinations that do not address many of the issues. One good example of this relates to Alpine destinations. Over the last 20 years they have received unpredictable snow falls, with the resultant transfer of tourists to alternative global destinations. Although not decimating European destinations, the destinations of Canada and USA benefited, while having a profound effect upon the ski tourism market, especially the development of artificial snow, which now seems to be 'standard' for most major ski resorts (Responsible Skiing, 2010). This demonstrates the global nature of tourism and how markets can unexpectedly change from one destination to another and from one year to another.

Growth of Sustainability

The importance of sustainability, as noted in the last section, can be seen as the product of the environmental movements of the 1970s. It has taken some 40 years to get to the phase of development where tourism companies now have to take notice and consider sustainability as part of their product. A quick review of the media will identify clear signs of tourist companies using sustainability as key components of their products, with even air transport eulogising about the importance of sustainability and climate change (Virgin Atlantic 2010). For example, 'responsible tourism' has now become an important tourism maxim, raising concerns about the ethics of tourism products and the transport used to arrive at and travel within destinations. Concerns focus on: flights to long haul locations, use of resources while at a destination and tourism products and experiences. Companies are switching to responsible tourism products reflecting this transformation in the market.

A good exemplar of this change can be illustrated through the product known as 'Five Responsible Tribal Experiences'. This is designed to allow tourists' access to native Indians in South America (Hammond 2010). It is also argued that 'tribal visits can be mutually rewarding and enlightening encounters - or, they can be excruciating and exploitative, even seriously damaging.' (Hammond, 2010, p. 71). This emphasises the need to manage and consider the impact of tourism on sensitive cultural and environmental destinations (WTM, 2010).

There is evidence that perhaps all sectors of the industry are now considering the notion of responsible tourism, which is linked very closely to the ideals of sustainability. Even major tour operators such as Thomas Cook appear to be fully embracing the need for SD (Thomas Cook, 2011). The 'Virgin Responsible Tourism' awards certainly go a long way in emphasising this development and the need for more and more companies to try and engage with sustainability and climate change (Virgin Holidays, 2011). Nonetheless, there is a paradox here; Virgin's image is associated with transport (aircraft, trains and holidays), which is concomitant to the burning of fossil fuels that contribute to global warming. That said, Virgin is cautious to emphasise that they are trying to ensure a tradeoff between the contribution to climate change through their carbon footprint and the benefits that tourism can bring to guests and hosts (Virgin Holidays, 2010).

What is also apparent when talking to providers is how much consumers are really aware of the importance of sustainability and the types of products that they are consuming: in essence do they care? In a recent research study of adventure tourism operators, although some companies are attempting to address sustainable development, many customers are simply not interested. For example any 'over burdening' of the concept of sustainability on the website or marketing material, has been cited by some operators as simply a 'turn-off' for many consumers (Jenkins *et al.*, 2010). Some companies do not exhibit any clear delineation of sustainability in their products and their websites usually reflect this (Jenkins *et al.*, 2011).

However, at the other end of the spectrum there are also companies that clearly extol the virtues of sustainable approaches. One such company which is clearly evangelical about both the product and the environment is The TYF Group in St David's, Wales, UK. Their website is embedded with environmental controls, sustainability and the impact of climate and its effects on the product that they offer (TYF, 2010). Their philosophy appears to be one of 'educating the client'. Also, as noted above, there are many responsible tourism companies that try to ensure that the customer does have a truly sustainable experience from their tourism adventures (Jenkins and Clark, 2010; TYF, 2010).

To a greater extent the growth of National Parks has also reflected the importance that society is now putting upon nature and sustainable methods of delivery (Wheeler, 2005; PCNP, 2010). Certainly, in the UK conservation is 'king' over recreational activities and the need to preserve the environment for

future generations. This has also been reflected in the way that National Park policies are trying to incorporate elements of employment and sustainable communities as guardians of the parks and living organisms rather than fossilised museums (ENPA, 2010). Interestingly, TYF is located within the Pembrokeshire Coastal National Park, which may be one reason why the Company is geared towards sustainability.

Eagles and McCool's (2000) model of sustainability (see Figure 1) illustrates admirably the complex and interactive relationship between tourism and the environment. Here again there is clear emphasis on the economic benefits and costs that tourism brings to a community, which appears to be an essential element in the model of National Park sustainability. This is often lost in some of the images and debates about tourism, where the emphasis is on the environment rather than the notion of employment and also employment practices. A clear linkage here is the perception of community involvement in tourism and sustainability measures, highlighting the importance of employment; especially that of local employers and the idea of equity of employment for locals. By employing local residents and ensuring that monies go to them, money is maintained within the community and the impact of leakage from tourism reduced (Zeppel, 1998). The ideology of sustainability is also related to the use of local goods and services again ensuring employment within the locale. This is also beneficial to climate change as it reduces the carbon footprint of transporting goods and services. However, one comment that was given to the author by a tourism operator, relates to cost-benefit of using local goods (Jenkins et al., 2010). It is evident that buying locally is not always the most cost effective. Simply buying bread locally for an adventure centre, can add thousands of pounds to the running costs rather than sourcing from a supermarket.

Sustainability also raises the issue of how food is produced and transported together with the carbon footprint it produces. In addition, there are moral issues relating to how some goods are produced; for example the use of child labour, unfair wage structures and poor working conditions. Once more, considered action should be given to the goods that foster sustainable practices in developing countries, rather than simply cost benefit analysis to the company. One such company that seems to consider climate change and sustainable development is Patagonia, where the emphasis is upon the production of goods from recycled clothes and other carbon reduction measures (Patagonia, 2011).

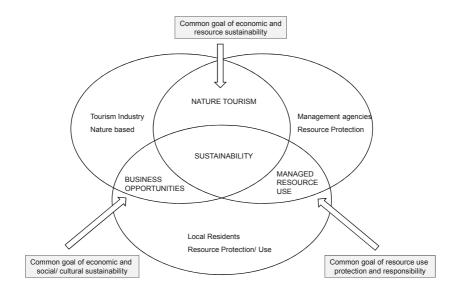


Figure 1: Shared goals for sustainability in the tourism industry, the community and park resources (Eagles and McCool, 2000), adapted

Clearly the importance and growth of sustainability in tourism has created new ways of thinking about and using, resources for tourism. These new paradigms would not have come about were it not for the revivifying gaze on the environment and how the planet might be sustained for future generations. The growth of sustainability has also permeated into less obvious establishments related to tourism, such as universities. The Copernicus network (Copernicus Campus, 2005) and also government authorities (HEFCE, 2009) such as the EU, now expect these organisations (universities) to be sustainable not only in their buildings, but also their educational courses (Copernicus Campus, 2005).

Paradox of Climate Change

Evaluating the latest news reports seems to imply that climate change has never previously occurred. As is evident from historical records, there has always been climate change and the emergence and extinction of species is not a new phenomenon. Without climate change human beings would not be here on earth and climate change catastrophes probably allowed humans to evolve. That said, the current debate appears to hinge upon the speed of exponential change rather than change itself (UNWTO, 2008). As with all change there will be some winners and some losers; but to what extent will this really affect present tourism products and tourists? As with all predictions this is difficult to calculate but what can be recognised are some aspects of trends, indicating a shift in the consumption patterns of tourist products. Ironically climate change has also emphasised the need for sustainable policies (Scott, 2011) and these policies need to go beyond the simply environmental. If anything, climate change has enhanced the sustainability agenda. Yet it is difficult to ascertain to what extent the public and consumers are convinced of the immediacy of the affect of climate change on their everyday lives and concomitantly their holidays (see above text on consumer attitudes).

A growing contributor to climate change is that of air transport, now allegedly at 2-5% of global carbon emissions (depending on which statistic you accept). It is also predicted that this form of transport will grow over the next 50 years (RAE, 2005). If society were to limit growth or encourage reduction in transport how would this affect the tourism industry? To encourage the growth of domestic tourism would result in a reduction in GDP for poorer countries that rely heavily upon tourism and would have substantial economic consequences for development, growth and sustainable development in those countries. Yet, if carbon reduction targets are not reached the weather systems of the globe may change to the extent that current products of tourism, based on climate, would be completely different, resulting in massive disruption to mass tourism patterns (UNWTO, 2008). For example, increased tropical storms and the extension of the storm season in tropical regions would affect current mass tourism destinations, reducing demand and thereby restricting tourism income or if the patterns continue, changing tourism flows entirely.

Returning to consumption of seasonal goods seems to be sensible, rather than transporting goods thousands of miles. So climate change or the prevention of climate change is certainly a supporter of sustainable development relating to the consumption of local goods (Scott, 2011). It is asserted that this must be a sound approach for the support of global local communities. But again a paradox arises: if developing countries do not export their goods globally, how are they to grow economically without global trade?

New Management Paradigms

Sustainable management appears a key element in the future of establishing SD and a reduction in climate change. Put simply, it is about the efficient and

effective control of resources; optimising the enjoyment of tourists, while maintaining the environment (natural and human, social/economic) in a way that future generations can enjoy the benefits that society currently enjoys.

It is asserted that levels of management for sustainability are seen on a number of geographical scales: global, national, regional and community. The polemic is possibly how these interact with each other and who should manage which resources?

Pender and Sharpley 2005 (see Figure 2) note three types of management, not necessarily on a geographical scale but more on the resource side of the tourism industry. Firstly, physical resources; secondly, management of visitors; and thirdly, the management of sustainable developments. As can be seen from the model the idea seems to be that the guiding principles of sustainability are to be incorporated as follows:

Principles of sustainable tourism development: a summary

- "The conservation and sustainable use of natural, social and cultural resources is crucial. Therefore, tourism should be planned and managed within environmental limits and with due regard for the long-term appropriate use of natural and human resources.
- Tourism planning, development and operation should be integrated into national and local sustainable development strategies. In particular, consideration should be given to different types of tourism development and how they link with existing land and resource uses and socio-cultural factors.
- Tourism should support a wide range of local economic activities, taking environmental costs and benefits into account, but should not be permitted to become an activity which dominates the economic base of an area.
- Local communities should be encouraged and expected to participate in the planning, development and control of tourism with the support of government and the industry. Particular attention should be paid to involving indigenous people, women and minority groups to ensure the equitable distribution of the benefits of tourism.
- All organisations and individuals should respect the culture, the economy, and the way of life, the environment and political structures in the destination area.
- All stakeholders within tourism should be educated about the need to develop more sustainable forms of tourism. This includes staff training and raising awareness through education and marketing tourism responsibly of sustainability issues among host communities and tourists themselves.

- Research should be undertaken throughout all stages of tourism development and operation to monitor impacts, to identify problems and to allow local people and others to respond to changes and to take advantage of opportunities.
- All agencies, organizations, businesses and individuals should co-operate and work together to avoid potential conflict and to optimize the benefits to all involved in the development and management of tourism."

(Pender and Sharpley, 2005, p. 269)

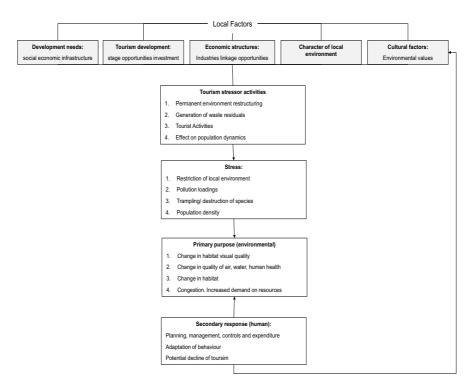


Figure 2: A model of the study of the tourism-environment relationship (Pender and Sharpley, 2005), adapted

Pender and Sharpley's model reflects the principle of amelioration which can be developed and help identify the needs of all stakeholders to form coherent sustainable policies. Added to this, there is now the spectre of climate change and how this will affect the elements of each of these principles. Perhaps management needs to be related to who has the greater influence: 'top down or the bottom-up', that is to say experts or communities. The debate over the importance of giving gravitas to communities and their interests has been a long running one, but the often forgotten maxim is that a community is not homogenous and often has divisive and competing interests. Consequently, the community does not always 'know what is best' for the location. The community level is further complicated by macro climate change policies and how these might affect micro scale management (community level). This is certainly an important issue (linkage between Macro and Micro Scales) if climate change is to be halted or seriously addressed. Amelioration of global, national and local tourism is required to ensure cohesive and agreed management policies at destinations. How power and executive control is devolved will be a crucial point for success.

Mass versus Niche Tourism

Perhaps the main emphasis is to reduce the consumption of mass tourism and move to micro or niche tourism markets (Cusicka *et al.*, 2010). But can the current mass tourist be persuaded to pay more and have fewer holidays? This might be the outcome of a move to a niche tourism market. Would this be the outcome of reducing mass tourism? The economic model of mass tourism is akin to that of supermarkets where volume rather than price and quality is important. Clearly, there is an impetus to move to a more qualitative experiential experience than the current mass tourism model of *volume* rather than *quality*. It is argued that the low volume high quality paradigm is based upon certain principles that would benefit all:

Principles such as appropriate pay, use of local rather than global resources, developing renewable energy. Moving to smaller scale tourism will, to some extent, have limited and more manageable impacts upon the environment and possibly encourage the development of local skills, based upon the cultural tenets of the destination; further supporting local communities (Cusicka *et al.,* 2010).

This change seems a positive one for destinations that are environmentally and culturally sensitive, but how would this work in cities and urban areas, or is there indeed a need for this? By their nature cities are quite robust at absorbing tourists. Studies have shown that little animosity to tourists is to be found in large cities and the contribution that tourism makes is important but not necessarily a dependent source of GDP (Financial Info., 2012). The balance between mass tourism and niche tourism is certainly shifting and it appears that the rise of niche tourism is growing (Novelli, 2005; Jenkins, 2006). Moving to more sustainable niche product led markets could be helpful in reducing climate change. The milieu of niche tourism is to some extent far more controllable than that of mass tourism; but could niche tourism also be more vulnerable? By its very nature niche tourism is possibly less competitive, as its character is to be highly specialized, therefore having narrow market appeal (Jenkins, 2006). It is suggested that education of tourists to these possible product changes, might be necessary; but how can this be achieved? Educating tourists is asserted as being somewhat controversial and difficult to accomplish especially in a market led economy.

There is an assumption that mass tourism is still linked to less well educated tourists. Mass tourism could also be linked to those corporations who see tourist damage being a part of the products, choosing quick profits over longer term gains through sustainable products. Consequently, it is asserted that the mass tourism market is likely to have more difficulty changing consumers' attitudes and expectations. However, the example of cigarettes is a useful one. 50 years ago it would have seemed highly unlikely that cigarette smokers and their damaging smoke would eventually become pariahs. So why not mass tourism? Surely the spectre of global warming and climate change has greater imperative than the humble cigarette? The pillorying and shunning of companies and products that are not sustainable could be a useful policy instrument and act to encourage positive sustainable policies for mass tourists.

Hence, the policy to reduce mass tourism and emphasise the development of niche tourism seems a sagacious response to the delivery of sustainable developments and the reduction of climate change. It simply needs determination and policies (legislation if necessary) to do this. An interesting perspective is that niche tourism does not necessarily mean a small number of tourist visitors, it can be in the millions (Jenkins, 2006) which seems to some extent a paradox and perhaps this component of niche tourism needs to be clearly redefined towards a more common understanding of what a niche tourism market is: small, specialised and limited (Jenkins, 2006). Surely, the development, far more than the current mass tourism market, which in some destinations has little regard for the environment, or the economic and social values of employees and community.

Problems of Persuasion

The essence of the current climate debate and the sustainability vernacular seems to be that of persuasion. It is evident that neither climate change nor SD are ever very far from the news and the importance of both is consistently emphasised (Black, 2010). However there appears to be little evidence illustrating what the consumer really thinks about these two issues. To what extent do ordinary citizens worry about climate and ensuring that future generations are not adversely affected by our current consumption of resources?

The media is trying to produce a case for immediate action which can be seen from a number of perspectives such as a focus on unseasonable weather and linkage with climate change. Yet consensus on this is not clear as illustrated by a number of organisations, the public and companies. The climate summits in Copenhagen and Cancun (2010) possibly illustrate the lack of consensus at government level, consequently how much less consensus at consumer and citizen's level? (Black, 2010). This seems reemphasized in the latest and significant summit of Rio+20, where once again little, if any, progress has been made. Black notes, 'Environment and development charities say the Rio+20 agreement is too weak to tackle social and environmental crises. Gro Harlem Brundtland, author of a major UN sustainable development report 25 years ago, said corporate power was one reason for lack of progress.' (Black, 2012).

This seems a very bleak outlook and emphasises a pressing need for ensuring reduction in carbon output and conserving/preserving the environment for future generations. It is asserted that persuasion and the need to change people's attitudes and habits are important ways to achieve this.

Attitude change is one of the key success factors in combating climate change and ensuring a more sustainable environment. Attitudes can be changed and economic penalties can certainly be a motivator. An example illustrating this is from the Canton of Fribourg, in Switzerland, which operates a strict recycling regime with a monetary perspective. Official orange bags are the only means of disposing of rubbish that is non-recyclable and these cost approximately £1.50 per bag. The perspective of paying this fee for disposal has certainly galvanised the citizens, including the author, into recycling 80 % of consumer rubbish. Switzerland is often cited as an example of sound environmental policies and it could be argued that other countries could easily follow given the right pressures (Confederation Suisse, 2010).

This simple example perhaps demonstrates the motivation for change to be one of economics and this is also an issue that is constantly identified by sustainable transport experts who point out that the car is still much cheaper than public transport (RAE, 2005). But there are clear examples where cost and legislation can reduce the use of cars. Most major cities of the world now have public transport systems that are overall cheaper and more efficient than using private transport. London has high car parking charges and also congestion charges, which means that unless you are visiting briefly, private transport is clearly more expensive and inefficient to use. Zermatt in Switzerland is an example where private transport is prohibited and seems not to have had a detrimental effect upon the destination or the popularity of the product (Rough Guide, 2006). Perhaps similar policies need to be enacted in other mass tourism destinations.

If attitudes can be changed towards rubbish disposal and recycling, then it seems fair to assume that it would also be possible for future tourists to adopt sustainable attitudes. Perhaps SD should be the main focus at all destinations. Indeed there is evidence to suggest that tourists, while on holiday, can be more receptive to adopting/adapting to new attitudes and ways of thinking (Jenkins *et al.*, 2010).

Interestingly, some destinations have adopted tourist visas and limitations on visitor numbers, for example Bhutan. "With careful planning and management of the industry and the appropriate inputs, the tourism industry in Bhutan could well surpass its economic expectations without eroding the cultural and environment of the country." (Bhutan Excursions, 2010, p. 1)

Why not take this one step further, especially for less popular destinations such as eco-sensitive destinations? Tourist tests for entry could be introduced, the idea being to encourage education and change. This could be particularly relevant for either environmental or culturally sensitive destinations. Perhaps what is needed are environmental and cultural visas which are destination specific, these visas only being issued through the tourist producing evidence of cultural and environmental awareness.

Motivations for Change

Consumers are the driving force in a market economy. However, recent studies with adventure tourism operators and National Park providers manifestly identify moderate to low interest by consumers in sustainability and climate change (Jenkins *et al.*, 2010). Tourists simply want the experiential outcome from the product they have bought and are not really engaged in the practice of sustainability or interested in climate change. It can be postulated that for many these are, to a large extent, abstract concepts with little tangibility. Only if the tourist is affected directly will there be an immediate effect.

As discussed above, changing consumer behaviour is possibly the biggest challenge for sustainability. It can be postulated that attempts to persuade the consumer to change have been met with mute resistance. The FAIRTRADE Certification Mark is an example of attempts to motivate the consumer to embrace sustainable policies but which has taken some considerable time to be accepted.



This symbol is now established worldwide and there has been increasing growth of products with this logo (Fairtrade Foundation, 2010; 2011). Perhaps, what is needed is an independent certification system, similar to the Fairtrade system, for tourism. The consumer will then be aware, that by purchasing this product, there is some sustainable benefit.

Secondly, businesses supposedly produce services and goods for customers, so if customers do not really want sustainable goods why provide them? This is a conundrum that is not easily solved and as has been detailed earlier, some companies are making great efforts to be environmentally friendly and sustainable (TYF, 2010; Virgin Holidays, 2010). Virgin is now offering niche holidays called Human Nature Collections which aim to: "Sample true local flavour, give something back to your host communities, go on truly authentic adventures that take steps to look after the environment and take you away from the crowds. Our Human Nature Collection is all about balancing unforgettable experiences with more responsible travel choices – holidays that are good for the soul!" (Virgin Holidays, 2010, p. 1). This must be regarded as a step in the right direction and a good example of responsible tourism linked to sustainable development, illustrating that tourism can be a vanguard for these types of products.

The notion of Corporate Social Responsibility (CSR) is an important axiom in the sustainability/climate debate if there is to be change by the tourism industry towards embracing climate change. As indicated earlier in this chapter, some companies are clearly now engaging with sustainability and also ensuring that their products and operations are carbon neutral (Kasim, 2009; TYF, 2010). The example of TYF (TYF, 2010) is an exemplar, but it is also evident that this has not been achieved simply through customer demand. The policy seems to have been management driven displaying high CSR emphasising the image the Company wishes to project. Interestingly, in 2008-9 during the global recession the number of TYF's customers was significantly higher than previous years, possibly reflecting that sustainable environmental policies can be also profitable (Jenkins *et al.*, 2010).

Unfortunately, there are also clear examples where the sustainable image of a company can be seriously questioned; the tragic disaster of summer 2010 and the Gulf of Mexico oil spill is one such example of a company, BP, which claims to be an environmentally friendly corporation. The oil spillage is possibly the worst ever in North America and the Company will find it hard to recover from its image as a sustainable energy company that has stated that the environment and tackling climate change is part of its raison d'être (BBC, 2010).

Thirdly, change can also be brought about by governments and the policies that they adopt for the protection of their citizens and the environment that they inhabit (Kasim, 2009). Unfortunately, this is usually the preserve of rich developed nations, although attempts have been made by less developed nations and sustained by agencies such as the United Nations. The establishment of National Parks and the legislation relating to employment and the environment are all worthy actions that can help in the reduction of climate change and the support for sustainable future (PCNP, 2010). The actions of governments to ban certain products and trade goods that are not sustainable are sensible ways to reduce the demand for goods which are endangered or contribute to poor living standards. Ensuring economic support for projects can only be seen as positive and essential resources for establishment of frameworks that will endeavour to support motivations for change (Kasim, 2009). Governments also have an important role to play in being a significant agency for change, through education and the need to educate future generations in terms of climate management and sustainable measures, by supporting universities and their research outputs (Kasim, 2009; Copernicus Campus, 2005).

Fourthly, NGOs are lobby organisations and motivators, able to pressurise governments, citizens and businesses to transform (Wiemers, 2010). As mentioned earlier, Greenpeace, FoE, SAS (Surfers Against Sewage) and Tourism Concern have been successful in introducing important policy decisions and also encouraging the 'powers' to change their approach to environmental and sustainable issues. SAS is a classic example of this and their campaign to ensure the continued cleanliness of the UK's coastal water has been very successful. They can certainly be seen as an organisation that has helped to rejuvenate the UK's seaside for future generations ensuring that many of the beaches are now blue flags (SAS, 2010).

Sadly, it is asserted that the consumer will only change as a result of two extreme measures: firstly, governments and world travel organisations enforcing conformity to carbon reduction targets together with the development of policies that enhance social and cultural sustainability. Secondly, that there is such cataclysmic climate change that the market has to transform to ameliorate the weather patterns which will severely disrupt global tourism and transport systems.

Perhaps, human nature being what it is, the latter will be the most likely outcome, especially as the latest Climate Summits of Copenhagen and Cancun (2010) seemed to reflect a lack of global agreement and action needed to impede the accelerating impacts of climate change (Black, 2010).

Conclusions

Climate change has clearly heightened the debate relating to sustainability and in many respects the two are closely linked. Reduction of man-made climate change can only be seen in terms of a sustainable policy that can benefit future generations. Sustainability is now firmly fixed on the agenda of all governments, tourism organisations and some tourism companies. However, persuading people to change seems a long way off, although there are glimmers of hope. Some companies are clearly encouraging consumers to adopt sustainable measures and attitudes. However, evidence seems to indicate that consumers still feel that the experience of the holiday takes precedence over the importance of sustainability. A move away from mass tourism towards niche tourism seems a sensible way forward, but with emerging economies and developing nations yet to have had their experience of mass tourism will this be a sensible or achievable global policy?

It is hoped governments will act to reduce the effects of man-induced climate change. If this does not happen then the weather will surely force a new regime of tourism upon us; as with past generations adaptation to change will be essential. Possibly the new tourist order will be an exponential growth of local tourism niches, using local products and local labour.

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