

*EXPLOITATION OF NEW TOURISTIC DESTINATIONS  
WITH EMPHASIS IN GREEN-ECOLOGICAL  
DEVELOPMENT OF THE DESTINATION*

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## **Introduction:**

Exploitation of new touristic destinations means to take advantage of the opportunities that will rise in a destination. Furthermore, it means to re-plan, reorganize and prepare previous touristic destinations to accept the new trends in tourism industry as also to fit their needs in a more safe and ecological environment.

It is a fact now days, that tourists and people are becoming more experienced in traveling and discerning in their choice of destination, leading them to search for new places and new tourism products. They are taking shorter but more frequent holidays throughout the year and they are more active while on vacation, seeking out different activities. Also people are increasingly concerned about the environment.

Climate change gave birth to new problems and issues for the tourism industry but also gave birth to many new opportunities that appeared and to some that will appear in the future, for the destinations. With climate/weather being the proximal cause for tourists it is easy to understand that a need for green-ecological development of the destination is growing bigger.

Green-ecological development of the destinations should be a primary goal. The mitigation of Tourism's contribution in the climate change (pollution, global warming...) can be achieved only by developing new touristic destinations in a sustainable, eco-friendly environment. The implications for a destination that will not adjust on the new needs of the market and the environment are estimated to be catastrophic for the economic, social and environmental balance of the destination.

In this project, I present the climate impacts in tourism in general, as well as in every type of touristic destination. Transportation and accommodation which also play a catalyst role in tourism are being presented, with emphasis in the attenuation of harmful consequences. Also, the key role of Tour Operators for tourism and the ways to develop a destination or a potential destination sustainably. Recommendations for future measures are proposed in several categories.



## **Basic Tourism Facts**

Tourism industry contributes to global warming, and at the same time, it is a victim of climate change. Tourism is a central phenomenon of today's world and it became globalised. The number of tourists grew spectacularly, from 165 millions international arrivals in 1970, to 846 millions last year, and predictions say that the number will reach 1.6 billion by 2020. And this, without including domestic travel.

International and domestic tourism emissions from three main subsectors (transportation, accommodations, and activities), were estimated to represent between 3.7% and 5.4% of global CO<sub>2</sub> emissions (with a best estimate of 4.9%). The contribution of tourism to global warming was estimated to be between 3.7% and 5.4% .

Transport generates the largest proportion of emissions produced by tourism (75%).

In terms of radiative forcing the share of transport is larger and ranges from 82% to 90%, with air transport alone accounting for 54% to 75% of the total. The 'business-as-usual' scenario developed for 2035 shows that there will be considerable growth – more than a doubling – in CO<sub>2</sub> emissions and RF in the tourism sector

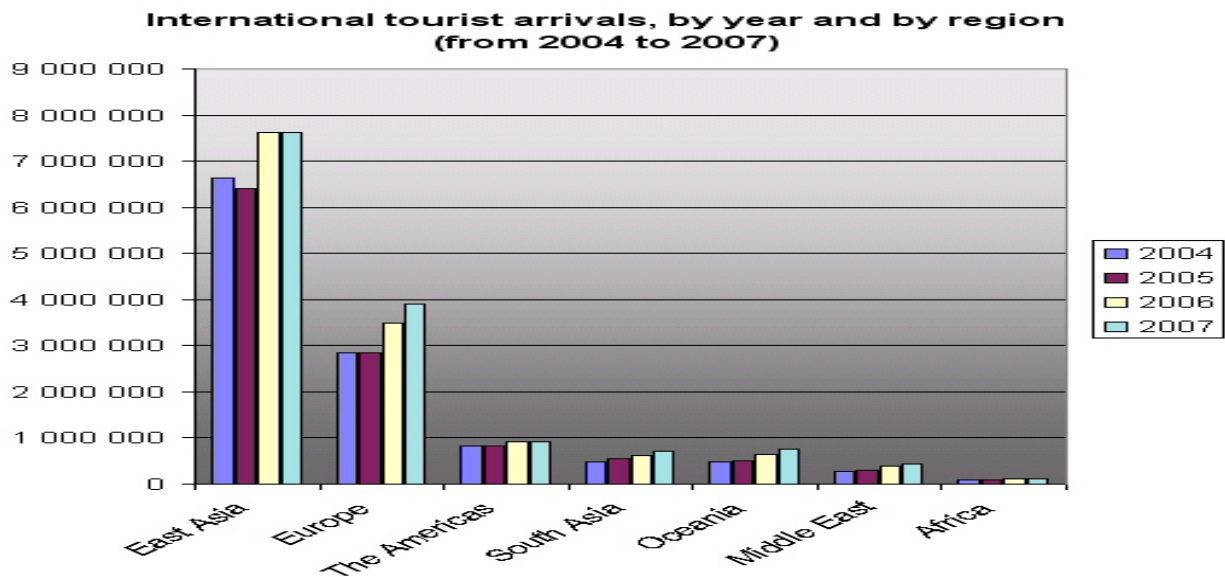
International tourism is a major source of income for many destinations. Worldwide this represents around 30% of the total exports of services, a percentage that in low developed countries goes up to 70%.

Just over half of international tourism is undertaken for the purpose of leisure, recreation and holidays (51%).

Business travel accounts for 15% of the total and the remaining 27% is related to other motives, e.g., visiting friends and relatives, religious purposes/pilgrimages, health treatment, while for 7% the purpose of visit is not specified.

Around 46% of international tourists arrive at their destination by means of air transport and another 47% use land (coach, car or rail transport). Sea transport accounts for 7%.

	Base Year	Forecasts		Market share (%)		Average annual growth rate (%)
	1995	2010	2020			
	(Million)			1995	2020	1995-2020
World	565	1006	1561	100	100	4.1
Africa	20	47	77	3.6	5.0	5.5
Americas	110	190	282	19.3	18.1	3.8
East Asia and the Pacific	81	195	397	14.4	25.4	6.5
Europe	336	527	717	59.8	45.9	3.1
Middle East	14	36	69	2.2	4.4	6.7
South Asia	4	11	19	0.7	1.2	6.2



*“Climate change as well as poverty alleviation will remain central issues for the world community.*

*Tourism is an important element in both. Governments and the private sector must place increased*



*importance on these factors in tourism development strategies and in climate and poverty strategies. They are interdependent and must be dealt with in a holistic fashion.”*

Francesco Frangialli, *UNWTO Secretary-General* (2007)

*“Far sighted action by the US\$ 880 billion international tourism industry will send important signals to governments, industries and the public that mitigation and adaptation to the climate change challenge make economic and environmental sense. It is the kind of leadership that can encourage others to look not only to their exposure and to the risks posed by climate change, but also to the abundant opportunities and benefits of cost effective action.”*

Achim Steiner, *UN Under-Secretary-General and UNEP Executive Director* (2007)

*“It is vital for tourism destinations [...] to anticipate the coming changes and to draw their consequences, starting now. [Adaptation] is a long-term project that must be anticipated and carefully prepared beforehand; it is not easy to see this through successfully, because it entails, all at the same time, modifying economic circuits, introducing new technologies, carrying out intensive training, investing in the creation of new products, [...] changing the minds of public authorities, entrepreneurs, host communities and tourists.”*

Francesco Frangialli, *UNWTO Secretary-General* (2007)

*“Our actions over the coming few decades could create risks of major disruption to economic and social activity, later in this century and in the next, on a scale similar to those associated with the great wars and the economic depression of the first half of the 20th century.”*

The Stern Report (2006)

## **1. Climate consequences in Tourism**

Tourism and climate have a relationship between them has been studied for a long time. The suitability of a given climate (weather conditions) varies for different types of tourism, as does the satisfaction of an individual tourist depending on country of origin, age or other factors.

Future changes in temperatures and other important features of climate will manifest themselves differently across the regions of the world .According to the IPCC, it is very likely that hot extremes, heat waves and heavy precipitation events will continue to become more frequent. It is likely that future tropical cyclones (typhoons and hurricanes) will become more intense, with larger peak wind speeds and more heavy precipitation associated with ongoing increases of tropical sea surface temperatures.

Tourism could not remain without consequences for the climate on account of the greenhouse gas emissions generated by trips and stays. In turn, the warming caused by major human activities profoundly alters the conditions of tourism development. Small tropical islands and medium-altitude ski resorts are the first destinations to be affected. Others will follow those for which the product is based on forests, glaciers, biodiversity and wildlife.

There are four broad categories of climate change impacts that will affect the competitiveness and sustainability of tourism destinations.

### **1.1 Direct climatic consequences:**

Studies indicate that a shift of attractive climatic conditions for tourism towards higher latitudes and altitudes is very likely. As a result, the competitive position of some popular holiday areas are anticipated to decline (e.g., the Mediterranean in summer), whereas other areas (e.g., southern Russia or southern Canada) are expected to improve. That changes in a number of weather extremes are probable as a result of projected climate change, including:

- ⌚ higher maximum temperature and more hot days over nearly all land areas
- ⌚ greater tropical storm intensity and peak winds

- ⌚ more intense precipitation events over many land areas
- ⌚ longer and more severe droughts in many mid-latitude continental interiors

Such changes will affect the tourism industry through increased infrastructure damage, additional emergency preparedness requirements, higher operating expenses (e.g., insurance, backup water and power systems, and evacuations), and business interruptions.

### **1.2 Indirect environmental change consequences:**

Indirect environmental effects are anticipated to have an important impact on tourist demand for specific destinations, but they are not expected to affect overall tourism demand. Because environmental conditions are such a critical resource for tourism, a wide-range of climate-induced environmental changes will have profound effects on tourism at the destination.

Indirect changes that will have effect in tourism are:

- ⌚ water availability
- ⌚ biodiversity loss
- ⌚ reduced landscape aesthetic
- ⌚ altered agricultural production
- ⌚ increased natural hazards
- ⌚ coastal erosion and inundation
- ⌚ damage to infrastructure

In contrast to the varied consequences of a changed climate on tourism, the indirect effects of climate induced environmental change are likely to be largely negative. Mountain, island, and

coastal destinations are considered particularly sensitive to climate-induced environmental change, as are nature-based tourism market segments.

### **1.3 Consequences of mitigation policies on tourist transportation:**

National or international mitigation policies – that are policies that seek to reduce emissions – are likely to have an impact on tourist flows. They will lead to an increase in transport costs and may foster environmental attitudes that lead tourists to change their travel patterns (e.g., shift transport mode or destination choices). There has been substantial recent media coverage on this topic, specifically as it relates to air travel. Long-haul destinations can be particularly affected by this action. Although, opportunities may arise for low carbon emission transport modes like coach and rail. In this way we may also help to re-vitalize destinations that are nearer to main markets.

### **1.4 Indirect societal change consequences:**

Climate change is thought to pose a risk to future economic growth and to the political stability of some destinations. Although a global warming of only 1° C might benefit several destinations globally, greater climate change would eventually damage economic growth at the global scale, including the stark conclusion that unmitigated climate change could cause a reduction in consumption per capita of 20% later in the 21st century or early 22nd century.

- ⌚ Climate change is considered a national and international security risk that will steadily intensify, particularly under greater warming scenarios.
- ⌚ Climate change associated security risks have been identified in a number of regions where tourism is highly important to local/national economies.
- ⌚ Tourists, particularly international tourists, are averse to political instability and social unrest.

- ⌚ The negative tourism demand repercussions for the climate change security hotspots are very evident.
- ⌚ A security-related decline in tourism would exacerbate deteriorating economic performance in these destinations.

### **1.5 Destination vulnerability hotspots and level adaptation:**

The integrated effects of climate change will have far-reaching consequences for tourism businesses and destinations. Importantly, climate change will generate both negative and positive impacts in the tourism sector and these impacts will vary substantially by market segment and geographic region. The implications of climate change for any tourism business or destination will also partially depend on the impacts on its competitors. A negative impact in one part of the tourism system may constitute an opportunity elsewhere. Consequently, there will be ‘winners and losers’ at the business, destination and nation level.

Furthermore, the outcome most likely will depend on the extent of climate change. The impact on the tourism sector may strongly parallel that of the global economy, where a 1° C temperature rise may result in a net benefit for the world economy, but greater increases increasingly show net declines.

It is essential to emphasize that regardless of the nature and magnitude of climate change impacts, all tourism businesses and destinations will need to adapt to climate change in order to minimize associated risks and capitalize upon new opportunities, in an economically, socially and environmentally sustainable manner.

- Tourists have the greatest adaptive capacity (depending on three key resources: money, knowledge and time) with relative freedom to avoid destinations impacted by climate change or shifting the timing of travel to avoid unfavorable climate conditions.

- Suppliers of tourism services and tourism operators at specific destinations have less adaptive capacity.
- Large tour operators, who do not own the infrastructure, are in a better position to adapt changes at destinations because they can respond to clients demands and provide information to influence clients' travel choices.
- Destination communities and tourism operators with large investment in immobile capital assets (e.g., hotel, resort complex, marina or casino) have the least adaptive capacity.
- The capacity to adapt to climate change is thought to vary substantially between sub-sectors, destinations, and individual businesses within the tourism industry.

Climate change is slowly entering into decision-making for a range of tourism stakeholders (e.g., investors, insurance companies, tourism enterprises, governments, and tourists). Researches, that have examined the climate change risk appraisal of local tourism officials and operators, have consistently found relatively low levels of concern and little evidence of long-term strategic planning in anticipation of future changes in climate.

Key Impacts of Climate Change on Tourism:	
⌚	decreasing natural snow reliability
⌚	increasing water shortages
⌚	loss of attractive landscapes and biodiversity
⌚	beach erosion

The summative effect of direct and indirect impacts of climate change on tourism demand patterns is anticipated to lead to wider impacts on many areas of economic and social policy in destinations, such as employment and labor demand, housing, transport, and social infrastructure.

Impacts on the tourism sector would have implications for other economic sectors, such as agriculture supplying tourism demand, handicraft industries and local small business networks that rely on tourism.

## **2. Consequences at Tourism Destinations**

The tourism industry and destinations are clearly sensitive to climate variability and change. Climate defines the length and quality of tourism seasons and plays a proximal role in destination choice and tourist spending. In several destinations tourism is closely linked with the natural environment. Climate affects a wide range of the environmental resources that are critical attractions for tourism, such as snow conditions, wildlife productivity and biodiversity, water levels and quality. Climate also has an important influence on environmental conditions that can avert tourists, including infectious diseases, wildfires, insects or water-borne pests and extreme events such as tropical cyclones.

### **2.1 Mountain and winter tourism destinations**

Despite of the fact that beach-coastal tourism holds the biggest share of tourism market, mountain and winter tourism destinations have as well a big share of the market. It is also easy to conclude that these destinations will also have effects from the climate change.

Mountain regions are important destinations for global tourism. Snow cover and pristine mountain landscapes, the principal attractions for tourism in these regions, are the features that are most vulnerable to climate change. Besides the negative impacts, climate change can also bring opportunities in mountain areas. While winter season might shorten, summer season might lengthen, providing opportunities for other types of outdoor activities and tourism business that supply them (e.g., trekking, hiking, mountain biking, etc.).

### **Recommended measures for Green-Ecological development:**

- **Stimulate product and seasonal diversification: e.g., creating spas, all-year tourism**
- **implement snow-making, and make it more efficient**
- **groom ski slopes to reduce snow depth requirements**
- **preserve glacier areas**
- **move ski areas to higher altitudes or to colder north slopes**
- **improve insurance cover in the face of extreme events and natural disasters (e.g., avalanches)**
- **promote industry partnerships (integration within resorts, cooperation between resorts) to reduce economic vulnerability and share the cost of snow-making**
- **educate and raise awareness among tourists about the impacts of global environmental change**
- **improve water use**

## **2.2 Nature-based destinations**

Nature based destinations are also very important for tourism. The climate change is expected to effect on them. In some occasions it is estimated that some nature –based destinations will change dramatically or even extinguish from the touristic options. Others will just slowly start to fade out.

Impacts that are most likely to engage the Nature-based destinations are:

- ⌚ Animal populations may be affected by environmental stress or indirectly through changes in Vegetation
- ⌚ Ecosystems that are already under stress, such as coral reefs that are not adequately protected by coastal zone management plans, will be the most likely to be severely affected by climate change.
- ⌚ Temporal shifts in seasons may increase the ranges of insects and diseases and also the flowering of plants.



- ⌚ Drought and desertification may occur in tropical and sub-tropical zones, changing patterns of precipitation and evaporation are of critical importance, and extreme flooding will have implications for large areas.
- ⌚ Increased frequency and magnitude of extreme events such as cyclones and storm surges will result in loss of land area and impacts on nesting colonies and activities for seabirds and turtles, and the migratory patterns of species.

### **Recommended measures for Green-Ecological development:**

- **improve adaptive capacity of authorities and managers of protected areas through capacity building initiatives, especially in developing countries**
- **establish scientific monitoring survey programs to assess ecosystem changes and take necessary protection measures (monitoring activities could especially focus on species and habitats most vulnerable to climate change impacts and most important for tourism activities)**
- **promote product diversification, for example: opening up new ‘micro destinations’ and attractions within and adjacent to an already popular national park or heritage site (diversification is especially important where key elements of the nature-based product are)**
- **carry out re-design or redefinition of protected areas, (e.g. revision of zoning of certain areas, extending protected area to a larger surface, creation of migratory corridors to allow threatened species to more easily find new geographic ranges)**
- **reduce or remove external stresses such as pollution and in the case of marine resources, agricultural run-off**
- **promote the application of integrated tourism carrying capacity assessment techniques (considering physical, economic, environmental, socio-cultural and managerial aspects) in protected areas as a tool for tourism planning**
- **improve visitors and congestion management to prevent overuse of sites and physical impacts of visitation**
- **promote mitigation options amongst environmentally conscious eco-tourists (e.g. through offsetting their trips to nature-based tourism destinations)**
- **ensure active participation of local communities living within or near protected areas, in policy making and management processes**
- **take into consideration local and traditional knowledge to develop coping and adaptation strategies**
- **develop replicable methodologies and share knowledge across nature-based destinations.**

## **2.3 Coastal and island destinations**

Beach tourism remains the dominating market segment. Coastal and island destinations are highly vulnerable to direct and indirect impacts of climate change, knowing that most infrastructure is located within short distance of the shoreline. This high vulnerability often meets with a low adaptive capacity. The strong seasonality of beach tourism has to be taken into consideration, as it can be influenced negative by climate change. In many beach destinations the high tourist season coincides with low water regimes in dry seasons, aggravating water management and environmental issues.

Impacts from climate change, such as extreme events, sea level rise, ocean circulations are expected to take place in coastal areas and to affect them seriously.

The impacts of climate change and global warming will vary greatly in the different coastal regions, and might bring opportunities as well. For example, in traditional summer beach destinations (like the Mediterranean) shoulder seasons might lengthen, and winter season might be more appealing to tourists, providing opportunities to reduce seasonality and expand the tourism product. Northern coastal areas might benefit from warmer summers, attracting more tourists and lengthening summer season.

<b>Recommended measures for Green-Ecological development:</b>
• coastal protection to prevent erosion
• enhanced design, sitting standards and planning guidelines for tourism establishments
• integrate climate change factors into regulatory frameworks for tourism development
• implementation of tourism development plans within the framework of Integrated
<b>Coastal Zone</b>
<b>Management (ICZM) processes and spatial planning such as zoning</b>
• shade provision and crop diversification
• reduce tourism pressures on coral reefs
• water conservation techniques, such as rainwater storage, the use of water-saving devices, or waste-water recycling
• diversification of the tourism product to less-climate dependent and seasonal activities, such as ecotourism
• education/awareness raising among tourism businesses and their staff, as well as tourists
• awareness and preparedness to face extreme climatic events and disasters at the national and local levels through improved coordination between disaster management offices, tourism administrations, businesses and host communities
• improved provision of climatic information to the tourism sector through cooperation with National Meteorological Services
• insurance cover (or alternative schemes) for the recovery of infrastructural and other damage
• drainage and watershed management to reduce flood and erosion risks
• support protected area management, and other means of the conservation of coastal ecosystems in order to enhance their resilience.

### 3. TRASPORTATION

Almost half of all international tourists arrived over land by road (43%) or rail (5%) to their destination. Air transport represented 45% of arrivals and transport over water accounted for 7%.

For the past two years the trend has been for air transport to grow at a faster pace than transport over land or water. Current trends show a strong growth of air transport at the expense of car, coach and rail in the developed world, while in the developing world, both car and air transport grow to the disadvantage of public transport (bus, rail).

Transportation causes around 75% of the CO<sub>2</sub> emissions generated by tourism, with aviation representing the bulk part of it (40%). Although tourism transport has a relatively small share in current global emissions, there is a need to develop effective mitigation measures. In the mitigation efforts technological development is still a key tool, but it is unable to solve the problem of climate change on its own.

The challenge for tourism transport is to increase fuel efficiency of all transport modes, and to facilitate a modal shift towards rail and coach. Furthermore, the growth in distances travelled demands strong attention. At the moment it is thought that the ultimate reductions of fuel consumption per km that can be achieved through technological change are in the order of 50%. However, this for economical reasons is not likely to be achieved. Furthermore, it should be noted completely new aircraft configurations like the blended wing body or a propulsion system based on fuel cells and hydrogen\* have a large temporal lag of several decades between the conception of a new technology and the full operational use of it in the total fleet. Therefore, for effective mitigation in the transport sector there is a need to implement a mix of measures, including technological improvements, regulatory and market based measures, as well as behavior changes.

\* See for example technology break-through proposed by Masson, P. J. et al. (2007), *HTS Machines as Enabling Technology for All-electric Airborne Vehicles*.

### **3.1 Air traffic management**

Optimization of air traffic management will be facilitated through new navigation systems such as the Galileo satellite navigation system being developed in Europe. Also, achieving higher load factors would decrease the emissions per km. Currently, load factors typically vary between 70–

75% on international routes (and up to 90% for charter planes). Fuel use also depends on the density of the seating, as more people carried in the same space will increase the overall weight of the aircraft, but reduce per capita fuel use. Seating density can vary substantially. Boeing, for example, offers the 777-300 with in between 368 to 500 seats. Low cost carriers and charter planes typically have the highest seat densities, which can result in fuel reductions per seat kilometer of up to 20–30%.

IATA outlines four challenges on their pathway to a ‘zero emissions future’.

- 🕒 Air traffic management
- 🕒 Technology
- 🕒 A global approach
- 🕒 Green businesses

### **3.2 Car transport**

The car is the most widely used mode of surface-bound transport for tourism. Most cars used by tourists are privately owned, but rental cars take an increasing share of car use at destinations.

In car transport, most vehicles still operate with traditional petrol or diesel based combustion engines. Improvements in fuel efficiency have been made through advanced engine technology and more efficient transmission. Tourism businesses could build on this leadership role and promote fuel efficient vehicles. In some countries, rental vehicle fleets are more efficient than the average vehicle as they tend to be newer and have smaller engines.

Alternative engine technologies include electricity-powered vehicles, hybrid vehicles and the use of Biofuels.

Electric vehicles are very energy efficient and they have no emissions of harmful pollutants, which makes them attractive for tourism. Disadvantages of electric vehicles, mainly related to battery capacity, battery loading and unloading energy losses, added weight and volume of batteries, as well as energy losses at power stations.

Hybrid vehicles have two power sources, namely electricity and petrol or diesel. The hybrid vehicles differ from the original battery vehicles in that they recharge the battery using the petrol or diesel engine. Emission reductions of CO<sub>2</sub> can be in the order of up to 50% for hybrid cars compared with those only having combustion engines

### **3.3 Rail transport and busses**

The main advantage of rail and coach is their high energy-efficiency compared to other transport modes. Rail and road mass transit systems using electricity from the grid can be made carbon neutralizing renewable energy.

It could be argued that railway and bus systems can offer advantages such as their central location in many cities, frequent departures, and punctuality.

There are a number of technological developments that can improve the energy efficiency of trains, such as:

- ⌚ hybrid locomotives
- ⌚ regenerative breakage and
- ⌚ kinetic energy storage systems

Bus Lines and Companies have rapidly developed and got modernized. With new services added, and the basic ones updated to the needs of new age, always based on the latest adoptions of technology. Such services as:

- ⌚ New buses on segregated busways
- ⌚ pre-board fare collection
- ⌚ safe and user-friendly transit stations
- ⌚ simplified transfers and routings
- ⌚ superior customer service

### **3.4 Modal Shift**

As rail and coach transport have lower emissions than air and car transport, a modal shift from air and car transport to rail and coach will help to reduce tourism transport emissions. High-speed trains have become important links between major European cities. Eurostar has proved to be a strong competitor and dominant market player in comparison with airlines (such as BA or Air France) on the London-Paris route. Similarly, other countries try to boost their high-speed rail network to substitute train for short-haul flights.

### **3.5 Destination Mobility Management**

The management of mobility for every destination now plays a significant and critical role for the development. It is considered to be a proximal cause for the transportation planning of new tourism destinations. Destination management can also include a closer cooperation with destination marketers. Marketing campaigns could, in the future, take issues such as energy. Here are some examples of European cities that had adopted such kind of measures.

#### **• Copenhagen Free Bike Program (Denmark)**

Between May and September, the city of Copenhagen offers visitors to use free bicycles all over the inner city. The 1,300 bicycles can be borrowed at 125 stations all over the inner city for a deposit of about € 3. 695



- City of Malaga Tourist Mobility Management Plan (Spain)

This new plan includes the implementation of the following services: design of a new website for tourists, new tourist bus service, tourist maps and leaflets, funicular to the Gibralfaro castle, and the creation of the Metropolitan Transport Authority (MTA).

- United Kingdom's National Cycling Network

The network offers over 10,000 miles of walking and cycle routes on traffic-free paths, quiet lanes and traffic-calmed roads. An up-to-date map can be downloaded from the web.

### **Recommended measures for Green-Ecological development:**

- **increase efficiency in routing and air traffic management systems;**
- **develop and install global guidance for off-setting schemes specifically for use amongst businesses;**
- **encourage partnerships between different transport and tourism stakeholders with the objective to reduce emissions through optimizing the value chain;**
- **promote the use of public transport by integrated actions to boost the use of train and coach in developed countries (investment in infrastructure such as large scale high speed train, improvement of international train booking systems, regional train and transport 'on demand', improve intermodal connections)**
- **actions to safeguard and improve the still highly used rail and coach systems in most developing countries**
- **improve consumer awareness and transparency by indicating emissions on transport tickets and product brochures**
- **create a standard for carbon footprint labeling on all tourism products, like transport tickets, accommodations, activities and packages**
- **involve destinations through actions to create and improve low-carbon transport access**

## 4. Tour Operators

There is a real need for effective communication between the climate change science community and tourism operators at the regional and local scale, particularly with respect to the development of climate change scenarios and indicators catered toward local tourism decision-making.

In the highly fragmented tourism sector tour operators can play a key role in influencing a range of small tourism facilities and services they own or sub-contract. There is also some evidence that local tourism operators may be overestimating their adaptive capacity (e.g., capacity to make snow under the warmest scenarios).

There are numerous examples of tour operators that incorporate alternative transport arrangements into their packages. German tour operator Studiosus, for example, offers ‘Anreise mit der Bahn’ (travel by train). Other organizations are also seeking to provide energy-efficient transport solutions to tourists. The Deutsche Verkehrsclub (VCD), for example, worked with 10 German holiday destinations to provide ‘new paths to nature’ by developing and marketing car-free packages for visitors. Similar initiatives have been undertaken by the Swiss Alpine Club and the German Forum Anders Reisen

Other options for tour operators are to increase length of stay, which would effectively reduce the carbon footprint per tourist day. It has to be noted that tour operators already seek to increase average length of stay, for example through measures such as ‘buy 6 nights, stay another night for free’.

Tour operators could play a central role in mitigation, through their capacity in influencing the whole tourism supply chain, and shape demand patterns. They thus could play a role in customers’ awareness raising and soft mobility product development. Compared to the transport sector, tour operators and travel agents are probably less sensitive to the possible impacts of mitigation policies: they sell complete products where travel forms part of a complex holiday

experience, well-being and pleasure. Innovation is a key factor for effective and timely adaptation.

#### **Recommended measures for Green-Ecological development:**

- **Develop and implement soft mobility products (low emissions modes of transport, especially train and coach, as well as low emissions in accommodation and activities)**
- **improve and develop partnerships between tour operators and railways, especially within reservation systems**
- **integrate climate change mitigation criteria within existing initiatives of the tour operator industry, such as the Tour Operators' Initiative**
- **improve computer reservation systems and global distribution systems (CRS and GDS) in order to calculate GHG emissions, so as to allow travel agents to propose soft mobility products**
- **adapt national, regional and local promotion and marketing plans, so as to direct the marketing efforts towards the less carbon intensive markets**
- **promote tourism at short-haul distances, domestic or between neighboring countries, specifically within the often less developed regions near the borders**
- **develop products with increased length of stay, especially for long-haul and mid haul destinations**
- **support destinations to introduce adaptations and mitigation measures**
- **use the tourism industry as a 'lobby' for more ambitious national and regional mitigation strategies.**

## **5. Tourist Behavior**

Except of the globally coordinated actions that are taken, individually, tourists should become more aware when it comes to select their touristic product. Tourists still have relative autonomy in the choice of tourist products. It is likely that a greater awareness of the dangers of climate change will affect tourist attitudes (some of these changes can already be seen) and lead to changes in travel behavior. Tourist Behavior is also a key for maintaining an ecological balance in updated touristic destinations.

Tourists can have alternative consumer choices. Choices, which contribute in the reduction of environmental pollution caused by tourism. Some alternative options that tourists should consider are being proposed next:

- ⌚ Decide to replace a long-distance holiday with a short-haul one.
- ⌚ Choose an airline for its performance in fuel efficiency, environmental initiatives and direct routing. The more stops during the journey the larger the carbon.
- ⌚ Consider how much luggage they want to take on their trip, particularly on long haul flights. (Scandinavian Airlines has just increased passenger baggage allowances to 40 kg, but environmentally responsible travelers should rather attempt to reduce the weight of their baggage).
- ⌚ For shorter distances tourists can replace air travel with energy efficient land transport, for example train systems.
- ⌚ Tourists have the choice to minimize their transport emissions at the destination. Options include the use of public land transport, renting fuel efficiency vehicles, walking and cycling, switching off equipment in hotel rooms and supporting green businesses.

## **6. Accommodation**

The accommodation sector represents approximately 20% of emissions generated from tourism activities, and is an intensive energy user, but there is huge potential for improving its carbon efficiency. Even using existing technologies and best practices, emissions from the

accommodation sector could be reduced by 30–40%. For tourist establishments good energy management should mean good business, due to the savings in the energy bill.

Hotels use generally more energy per visitor than other types of accommodation, as they have energy intense facilities, such as bars, restaurants, pools, and more spacious rooms.

Hotels tend to become more and more luxurious resorts seem to use large amounts of energy, specifically in the booming market for long haul destinations in developing countries. The hotel sector is particularly well organized (especially the larger hotel chains) and there are a number of practical sources of information to help managers implement energy conservation and efficiency measures. An increasing number of hotel chains, motivated by external and internal drivers are documenting their energy use and taking action in order to improve energy-efficiency, reduce energy use and apply renewable energy sources. Some hotel chains have even established climate funds where a small percentage of the profits generated in their hotels are transferred.

Energy management issues form integral part of the numerous certification systems and eco-labels working with accommodation establishments on a voluntary basis, and are also actively promoted through international schemes. There is no explicit evidence that, at present, tourists willfully select their accommodation because of such ‘green’ initiatives. Other factors, including comfort, price, and facilities dominate, but there is reason to believe that tourists are supportive of energy-efficient environments. Tourists on holiday expect and pay for certain luxuries. However, clients may be willing to participate in energy reduction efforts, if it does not greatly diminish their holiday experience, if it is easy (or mandatory), or if it saves them money.

The accommodation sector must take steps to develop more environmentally sustainable, even if initially there are costs for implementation of the changes (most energy efficient choices prove cost-effective in the longer term), and even if the customers do not demand it as part of their

expectations. In order to meet the sustainable development goals for energy-efficient operations, the sector must find a way to avoid the fragmentation driven by competitiveness, and work together in order to shape policies, not just react to them.

**Recommended measures for Green-Ecological development:**

**• Energy conservation and efficiency in buildings and tourist attractions:**

— setting targets and benchmarking, apply certification

— integrating sustainability and customer comfort

— motivating employees and customers through awareness-raising and through incentives for energy reduction

— reducing the need for air conditioning where possible

— installation of devices that permit heating, cooling and lighting only when the room is occupied

— use of energy-efficient appliances (light bulbs, heat exchangers, etc.)

— frequent maintenance and cleaning of heating, cooling and refrigeration equipment

• use of alternative fuels and renewable energy sources (e.g., wind, photovoltaic, solar, thermal, geothermal, biomass and waste)

• wider environmental management (e.g., waste), designating manager specified on environmental management systems (EMS)

• awareness-raising among customers on recycling

• development of an environmental ‘Code of Ethics’, (checklist or criteria that a hotel chain can provide to its suppliers/providers, to help them perform their services to the sector in an environmentally respectful way

• capacity building, and climate change and environment related education for managers of the accommodation establishments and in related sectors; such as architecture, construction and engineering

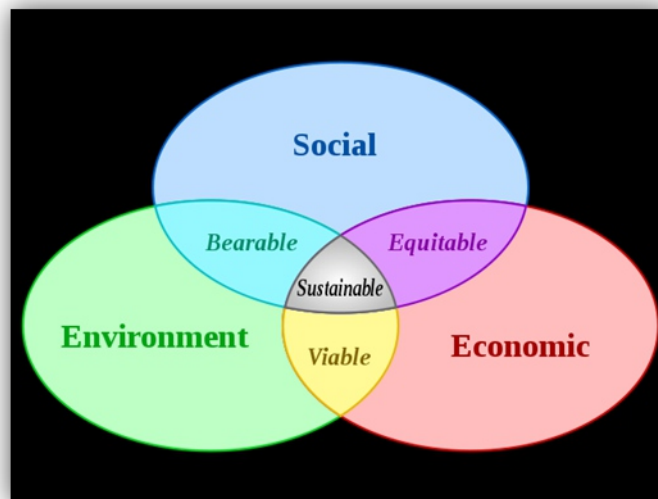
• development of a network of climate change focal points in the accommodation sector to promote activities

• development of links with international policies (e.g., Clean Development Mechanism), cooperation and standards.

## 7. Sustainable tourism

Tourism is considered to be a highly climate-sensitive economic sector similar to agriculture, insurance, energy, and transportation. Tourism is no exception and in the next few years, climate change will become an increasingly pivotal issue affecting tourism development and management. Climate change would impede the ability of many nations to achieve sustainable development.

Green-ecological development of a destination can only be achieved with the help of a sustainable tourism business and economic plan. In existing touristic destinations, sustainable development seems to be a need and the only vital solution. In new destinations, that can be advantaged from the climate change, the implementation of a sustainable touristic plan can be easier and also can have a good impact for the future balance of vital economy and environment of the destination.





### **Definition of Sustainable Tourism :**

Sustainable tourism is an industry, committed to making a low impact on the environment and local culture, while helping to generate income and employment for local people. The aim of sustainable tourism is to ensure that development is a positive experience for local people, tourism companies and tourists themselves. It is envisaged as leading to management of all resources in such a way that economic, social and environmental (aesthetic) needs can be fulfilled while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems.

In order to keep in balance these three main parts of sustainable tourism (social, environment and economic) some basic principles of sustainability should be studied and enforcement. These principles are divided for each one part:

<b>Social</b>	<b>Environmental</b>	<b>Economic</b>
<b>Participation and information</b>	Minimization of negative tourism impacts	Importance of policy, planning and management
<b>More meaningful tourism experiences</b>	Natural and cultural preservation and conservation	Emphasizes of limits to tourism development
<b>Promotion of visitor observation and comprehension - culture</b>	Promotion of visitor observation and comprehension – the environment	Generation of economic profit for local people
<b>Sensitivity towards local people &amp; other stakeholders</b>	Efficient use of resources in tourism	Economic independence of local people

There are four types of sustainable tourism. These are:

- ⌚ Nature tourism
- ⌚ Culture tourism
- ⌚ Education tourism
- ⌚ Adventure tourism

Activities related to the type of Tourism

<b>Nature tourism</b>	<ul style="list-style-type: none"> <li>⌚ <b>Walking, hiking, cycling</b></li> <li>⌚ <b>General sightseeing and outdoors admiring scenery, picnicking, swimming...</b></li> <li>⌚ <b>Wildlife viewing: bird watching, whale watching...</b></li> <li>⌚ <b>Visiting nature reserves and park visitor centers</b></li> <li>⌚ <b>Canoeing, cross-country skiing, horse riding, sailing, boating</b></li> <li>⌚ <b>Hunting, fishing, harvesting (berry picking)</b></li> <li>⌚ <b>Participating in nature conversation: removing scrub, mowing fields</b></li> </ul>
<b>Culture tourism</b>	<ul style="list-style-type: none"> <li>⌚ dog sledding, skiing, ski-dooing</li> <li>⌚ white water rafting, body surfing, rock climbing, mountain biking, paragliding</li> <li>⌚ orienteering, leadership building               <ul style="list-style-type: none"> <li>○ incentive tours</li> </ul> </li> </ul>
<b>Education tourism</b>	<ul style="list-style-type: none"> <li>⌚ field courses in conservation, species identification, rehabilitation</li> <li>⌚ courses in local cuisine, making</li> </ul>

	<p>handicrafts, restoration</p> <ul style="list-style-type: none"> <li>⌚ courses in music, painting, language, photography</li> <li>⌚ learning about local history, art, heritage</li> </ul>
<p><b>Adventure tourism</b></p>	<ul style="list-style-type: none"> <li>⌚ festivals and events, banquets</li> <li>⌚ music, theatre, shows</li> <li>⌚ village life and rural life (e.g. farms, Sunday markets)</li> <li>⌚ gastronomy, visiting/tasting local products</li> <li>⌚ enjoying village buildings, “atmosphere” and lifestyle</li> <li>⌚ visiting historic religious monuments or vernacular buildings, ruins</li> <li>⌚ famous people in the region</li> </ul>

The success of the implementation of a sustainable plan depends on some factors that have to be accounted and taken into consideration. These factors are the key for a successful plan. They have to be studied and adjusted to the needs of every market-destination so that they will ensure the healthy growing of the market and the success of the business plan. These factors are presented next:

Sustainability: Conserving natural and cultural heritage and resources is fundamental to sustainable tourism. Includes adoption of strict guidelines relating to usage, the use of tourism revenues to help fund conservation and, potentially, getting the tourist involved in conservation actions e.g. restoring wetlands, maintaining trails, replanting trees, removing scrub, etc.

Clustering: Natural and cultural heritage can often be scattered. One site on its own is unlikely to be of much interest, but if they can be pooled together with others, they may be collectively provide enough interest to attract a critical mass or tourists.

Branding: Branding is a way to encourage the customer to buy a particular ‘product’ by creating an image around it e.g. developing a label for a range of products from tourist attractions, restaurants, crafts, guides, etc. Helps create an image for an area as a whole.

Access: The weather and distance of the destination are deciding factors for many tourists when choosing a destination. Proximity to major towns works particularly well for regional and local markets. The more remote the area and extreme the weather, the harder it is generally to attract tourists. Particular attention needs to be paid, in these areas, to choosing the market well-remoteness and extremes in weather can be a selling point-especially for small guided package tours.

Ease of understanding: This is distinct from access, as it is about presenting the natural and cultural heritage of the area in an understandable and enjoyable way so that the tourists will be able to learn from them. If this is not done properly the tourist is unlikely to recommend the area to anyone else. Interpretation is important for awareness raising and enhancing visitor experience. Also includes having certain elements on a tourist circuit be in common with one another i.e., brochures, tickets, information points, signage, etc. all produced the same way.

Seasonality: It is often a major problem for the tourism industry, but in the case of heritage-based tourism it should be viewed as an opportunity to overcome it. Natural and cultural heritage, in particular, attracts markets that are not so weather dependent.

Corporation: The motivation factor behind the development of sustainable tourism is particularly important for non-traditional tourist destinations. Often development starts thanks to the initiative of one particular body, whether public, private or an organization, interested in the conservation of the natural or cultural heritage. Regardless, the initiating group will have to create partnerships with other private and public organizations in order to create, market and offer a sustainable tourism package.

Significance: The importance of the cultural or natural heritage is a decisive factor. Having a significant feature, on the other hand, is a major asset as it acts as a beacon for the area.

Distinctiveness: This is different from significance in that it refers to all that makes one particular area distinct from another, giving it a unique selling position.

Tactical planning: Developing an overall tourism strategy involving all key players is an essential tool for developing a successful and sustainable tourism product-should include input from local residents and information from market research.

On the other hand the potential of failure should also be considered. Common causes that leads to failure should be paid further notice. Causes like these are:

- the lack of consideration of the need for an infrastructure to support the product,
- an over-estimation of the tourism potential leading to more supply than demand,
- lack of market research to determine who would be interested in this type of tourism,
- conflicts and lack of cooperation with other sectors

## **8. Evaluating the Potential of the Destination**

Trying to evaluate the potentials of a destination several analysis and projects should take place in order to reach safe conclusions and be able to program a sustainable developing plan.

Applying a development plan in a touristic destination premises that the tourism supplies and tourism demands of the destination will be studied and measured. This information should be gathered on a wide range of aspects relating to tourism supply (potential heritage sites, business structure, infrastructure, etc) and tourism demand (potential markets, visitor target groups, etc).

### **8.1 Tourism Supply and Tourism demand**

#### **Tourism supply:**

## **Inventory**

- Compiling the monuments, reserves, geological features, traditions, gastronomy, festivals, etc.
- Considering the whole area in terms of overall attractiveness, scenic value and 'character'. Also, its location in relation to major cities, airports and other tourist destinations.
- Also noting the physical state of the features and how much investment may be necessary to make them accessible for tourists

## **Assessing tourism potential**

- Strong-strong enough to incite people to come to the area
- Moderate-moderate enough to complement the primary attractions and diversify the offer
- Little or no tourism interest

## **Vulnerability and potential carrying capacity**

- Attempting to estimate the carrying capacity of the different sites will help determine the conservation methods necessary, the number of tourists that can be accommodated and, consequently, how the overall package will be marketed.

## **Stakeholder identification**

- Public authorities-city hall, county administration or tourism associations
- Nature or culture interest groups-NGO's, environmental clubs
- Tourism enterprises-hotels, restaurants, tour providers
- Related enterprises and land users-agricultural interests, timber companies, etc.
- Local residents-especially important in rural areas

## **Quantify existing infrastructure:**

- Accommodations-how many beds are there to house people
- Restaurants-relates to above. May also note what kind of food they serve and if food is locally produced or brought in.
- Existing attractions: type of attractions currently available, location, number or tourists attending, where they are from (Romanian or foreign), etc.
- Existing marketing channels: How is tourism currently being promoted, who is doing it, what

## Tourism Demand:

<p><b>Assess current markets</b></p>	<ul style="list-style-type: none"><li>⌚ How many tourists are there annually?</li><li>⌚ When do they come and how long do they stay?</li><li>⌚ Where do they come from and how do they get here?</li><li>⌚ Where do they stay and what do they do/visit?</li><li>⌚ How much money do they spend locally?</li><li>⌚ Who are they (age, sex, size of group, profession, main interests, and motivation for coming)?</li><li>⌚ What were their expectations?</li><li>⌚ What did they particularly like/dislike?</li><li>⌚ Have they been before, will they come again?</li></ul>
<p><b>Look for potential new markets</b></p>	<ul style="list-style-type: none"><li>⌚ Strength based: look at what the region has to offer in terms of attractions and then search for appropriate markets to tap into.</li><li>⌚ Opportunity based: assess which particular types of tourism activities are showing strong growth potential, or are under-represented in the region, and then to adapt the products accordingly. (in practice a combination of both approaches is best)</li></ul>

## 8.2 SWOT Analysis:

**SWOT** analysis is a strategic planning method used to evaluate the **Strengths**, **Weaknesses**, **Opportunities**, and **Threats** involved in a project or in a business venture. It involves specifying the objective of the business venture or project and identifying the internal and external factors

that are favorable and unfavorable to achieving that objective. A SWOT analysis simply means summarizing and categorizing the main pros and cons and presenting the results in tabular form.

## 9. Tourism Strategy for the Development of the Destination

**Objective:** Tourism strategy should be focused in keeping a balance between the three pillars of sustainability. The Economic sustainability, the Social sustainability and the Environmental sustainability of the destination. Every strategy ought to have an overall objective for the kind of tourism it wishes to have-who it wants to attract, who is to benefit locally, how it will interact with other economic sectors and with the natural and cultural resources.

<p><b>Economic sustainability</b></p>	<ul style="list-style-type: none"> <li>⌚ <b>Competitive enterprises and tourism</b></li> <li>⌚ <b>Availability of workforce and production resources needed</b></li> <li>⌚ <b>Economic cohesion and wealth</b></li> <li><b>High yield/revenue</b></li> </ul>
<p><b>Social sustainability</b></p>	<ul style="list-style-type: none"> <li>⌚ Environmentally friendly production and consumption patterns along the whole tourism chain</li> <li>⌚ Sustainable management and conservation of the natural resource base for tourism installation and activities</li> </ul>



### **Environmental sustainability**

- ⌚ Job supply (number, quality, inclusion and equal opportunities)
- ⌚ Tourism for all
- ⌚ Quality tourism; value for money and respect of tourists' interests
- ⌚ Contribution to the development of humanity (peace, knowledge and education)
- ⌚ Respect and ethical behavior regarding the population and individuals confronted with tourism

### **Product modification:**

In addition to the classic tourism products: attractions, accommodation, facilities, information, etc, there are other complementary activities to consider when developing or re-orientating tourism around natural and cultural heritage. These can diversify the offer, increase visitor satisfaction, help prolong the tourism seasons and spread the economic and social benefits to other sectors. Visitor attractions with an informed staff, quality information about the attraction and the possibility of small guided tours are extremely popular with tourists interested in nature and culture.

### **Marketing:**

Even the most impressive attraction will fail without proper promotion, this is especially true for destinations that aim to attract more specialized markets. Tourism based on natural and cultural heritage is already geared towards particular market segments, this means that the marketing strategy should also be clearly targeted at these types of tourists. Sometimes thought it can take up to five years before the marketing strategy begins to take real effect. Consequently, the strategy must be seen as a long-term activity to be constantly reviewed and updated according to changing market needs and visitor feedback.

## **Packaging:**

It is well worth exploring whether there are any overall packages that can be created, which would include local transport, accommodation, food and a number of attractions or events over a given period of time.

They could also be offered to specialized tour operators outside the tourist destination. These tour operators have the experience of selling such packages and have their own well developed marketing channels. Other forms of packages might also be considered on a more localized level, for instance a pass that would entitle a visitor to one free entrance for every three attractions visited, a museum pass or a souvenir book for staying at three hotels within the same network... It is up to the imagination and inventiveness of the different businesses.

## **10.Implementation:**

### **10.1 SMART projects:**

One very useful tool for designing and managing a tourism product is the so-called SMART method. This helps conceive a project that is:

- ⌚ **Specific:** where you know exactly what you want to happen.
- ⌚ **Measurable:** related to clear targets which are capable of being quantified and measured.
- ⌚ **Appropriate:** reflective of the resources available and that is both customer orientated and in keeping with the local environment.
- ⌚ **Realistic:** that has a good chance of success compared to the investment needed.
- ⌚ **Timebound:** linked to a logical timetable which specifies when each objective or critical activity will be done.

## 10.2 Business Plan:

The SMART method can be put to use in developing a business plan. Writing a business plan may be a time consuming exercise but it does not necessarily require any particular business management skills. The only real skill is the ability to think logically about what it is you want to develop and how.

In devising a business plan the following steps should be followed:

- ⌚ *Establish a business objective*: what is your final goal, what do you want to get out of developing a tourism product
- ⌚ *Carry out internal and external research*: to ensure that the business venture is going to be realistic and feasible. Make sure that there are sufficient resources to cover all of the initial outlays.
- ⌚ *Prepare your SWOT analysis*: to determine your own strengths and weaknesses and the potential opportunities and threats.
- ⌚ *Plan what needs to be done when*: looking at all aspects from basic infrastructure to staffing, equipment, promotional material, etc.
- ⌚ *Consider how to tailor the product to customer needs*: depending on the type of tourists to be targeted, e.g. quality, hospitality, fidelity services.
- ⌚ *Seek additional sources*: of financing and advice or training while developing the idea.
- ⌚ *Devise a marketing strategy*: to determine how to make your product know, how to encourage return visits, fidelity, and year round interest. Bear in mind the 4 Ps that make up a marketing mix-product, price, promotion and place.
- ⌚ *Write up the business plan*: that is an honest and realistic reflection of the above. There is no point painting too drawing a picture of the potential returns as you will be the first to suffer if this turns out to be unrealistic or over-ambitious.

### **10.3 Monitoring:**

A typical tourist destination life cycle normally runs through six stages (exploration, involvement, development, consolidation, stagnation and, finally, decline or rejuvenation). To be able to respond to these changes and avoid the ultimate stagnation and decline scenario, it is vital that the tourism strategy has a dedicated monitoring program in place. This is especially true for the relatively smaller more specialized markets.

There are four imperatives around which the monitoring program should be developed, these find their roots, once again, in the pillars of sustainability.

- ⌚ Impacts on the local economy
- ⌚ Impacts on the environment
- ⌚ Impacts on society
- ⌚ Needs and expectations of tourists

Designing a monitoring plan around these four factors will help to:

- ⌚ Identify the positive effects of the strategy in these four areas
- ⌚ Identify any negative effects
- ⌚ Establish trends over time
- ⌚ Provide a feedback loop for initiating an appropriate management response



## **Conclusions:**

After completing this document we are in position to know which are the problems generated in tourism from climate change. The consequences of the changes are also estimated.

Tourists will play a pivotal role in the eventual impacts of climate change on the tourism industry and destinations with their capacity to adapt to the effects of climate change by substituting the place, timing and type of holidays in their travel decision.

A wide range of mitigation options for tourism within the aviation and other transport systems, tourism establishments, tour operators and tourists has been presented.. Mitigation measures range from low-cost initiatives (e.g., using energy-efficient lighting in hotels, monitor energy use) to those that require more effort and investment, for example purchasing more fuel-efficient vehicles, designing a sustainable transport system at a destination, changing transport mode choices or travel patterns. It becomes clear that a combination of measures will be required to reduce the carbon footprint of tourism. This means a wide number of stakeholders need to be involved – airlines, vehicle- and aircraft manufacturers, transport companies, tour operators and travel agents, hotels-resorts, attractions, international organizations.

The tourism sector has already entered into an era where the observed and potential consequences of global climate change are defining new realities for consumer, business, and government decision-making. While much more work is needed in this rapidly developing area of science and policy, the evidence is clear that the time is now for the tourism community to collectively formulate a strategy to address what must be considered the greatest challenge to the sustainability of tourism in the 21st century.

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