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**SUSTAINABLE TOURISM ON  
THE SMALL ISLAND OF GOZO**

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# **SUSTAINABLE TOURISM ON THE SMALL ISLAND OF GOZO**

**Lino Briguglio\***

## **1. INTRODUCTION**

Gozo is the second largest island in the Maltese archipelago, situated to the North West of mainland Malta, with a land area of about 67 square kilometres and a population of just under 30,000 i.e about 8% of the population on the Maltese Islands.

Tourism is an important source of employment and income in Gozo (Briguglio, 1997. West Midlands Enterprises, 2002). The importance of the industry to the Gozitan economy is probably higher than it is for mainland Malta, although precise statistical data in this regard are not available. One major difference between tourism in Gozo and Malta is that the former depends more on domestic tourism. Most international tourists visit Gozo as day-trippers.

Sustainable tourism has been defined as “tourism which is developed and maintained in such a manner and scale that it remains viable in the long run and does not degrade the environment in which it exists to such an extent that it prohibits the successful development of other activities” (Butler 2002). This definition highlights the need for a balance between economic and environmental concerns.

It is well known that many, if not all, economic activities have an impact on the environment and that this has a feedback effect on the economy itself. This is especially so in the case of tourism which utilises the environment as a resource. This paper will focus on environmental and economic impacts, and proposes approaches that while attempting to maximize income and employment from tourism, as the same time minimize the negative impacts on the physical environment.

The paper is divided in six sections. Section 2, which follows this introduction, briefly discusses the economic impacts of tourism on small island jurisdictions, while Section 3 assesses the environmental impacts. Section 4 focuses on Tourism in Gozo, referring to some problems faced by this industry. Some pre-emptive and corrective measures for the promotion of sustainable tourism are suggested in Section 5. Section 6 concludes the paper on the optimistic note that tourism itself is sharpening our awareness of the evils of environmental degradation, and that this could be conducive towards the adoption of sustainable tourism policies and measures.

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## **2. THE ECONOMIC IMPACTS OF TOURISM**

Small island jurisdictions tend to find it very difficult to compete internationally in the production of manufactured products and agriculture, mostly due to their limited ability to reap the benefits of economies of scale. This is not the case in tourism, in which many small island jurisdictions enjoy a competitive advantage due to their natural attractions, such as a pleasant climate, sandy beaches and an exotic image. As a result, many small island jurisdictions depend heavily on tourism for their economic development (McElroy, 2003; Ellul, 1999; McElroy and Olazarri, 1997; Liu and Jenkins, 1996).

### **The Economic Benefits**

The relatively high dependence of small island jurisdictions on tourism, as is the case in Gozo, means, among other things, that a large proportion of employment occurs in the tourist industry or in tourism-related activities. It is not always possible to give precise estimates of such employment because it does not occur solely in activities usually associated with tourism, such as hotels, restaurants, airports, seaports, transport, travel agencies, souvenir shops and restaurants, but also in agriculture, fishing, banking, printing, and other activities, including public sector services, with which the tourists do not come directly in contact,

Tourism is also thought to have a relatively large multiplier effect (see Archer, 1982; Briguglio, 1992, Vanhove, 2005) due to the fact that its import content is relatively small compared, for example, to merchandise, given that it has a large services content and also because of it has relatively large inter-industry linkages.

Tourism is also economically important because it is a source of foreign exchange. Many small island states would register large balance of payments deficits in the absence of proceeds from tourism.

There are also a number of indirect economic advantages associated with tourism. These include a renewed interest in local arts and crafts, improvements in leisure, communication, medical and other facilities in the host countries, and a general awareness of the natural and man-made aesthetic assets.

### **Undesirable Economic Effects**

Tourism however, tends to usher in a number of undesirable economic effects. Tourists exert demand on the public infrastructure, such as roads, water and electricity, for which they are not normally charged. In addition, the governments of host countries often undertake relatively large advertising expenditures. If tourists' expenditure is netted out so as to take into consideration the price that the host country pays to attract and host tourists, the economic contribution of tourism would be much smaller than that usually reported.

In addition, when inward tourist traffic is organized by foreign-owned tour operators, often with enough bargaining power to dictate prices for accommodation in the host country, the net proceeds tend to be low.

A related problem is that tourism as an industry depends on the whims and fancies of foreigners, whose decision to visit a particular island are often influenced by conditions outside the control of the island itself, including economic conditions in their country of origin and reports in the popular press about island destinations.

Other economic pitfalls often associated with tourism in any country, but which are especially significant in small islands due to their relative large dependence on this form of economic activity, include pronounced seasonal unemployment and rapid increases in the price of land, often accompanied by land speculation.

### **3. THE ENVIRONMENTAL IMPACTS**

In the absence of tourism, small island jurisdictions would still have faced environmental problems associated with their geographical and natural characteristics. They tend to have unique and fragile ecosystems. For example, industrial development often leads to a rapid loss of biodiversity in small islands.

Islands also have a relatively large coastal zone in relation to the landmass. Thus, a relatively large proportion of land is exposed to forces that lead to coastal erosion and, in tropical islands, render them very prone to be affected by extreme events such as cyclones. Small islands are also very vulnerable to sea-level rise (IPCC, 2007), which would submerge a large proportion of the land mass, including their beaches, which are major attractions for tourists.

Although these environmental impacts are not caused by tourism, they can be exacerbated by tourism. International air and sea transport, for example, are required even in the absence of tourism, but the increased traffic caused by tourism places severe strains on many islands. Airports and seaports in islands take up very large areas in proportion to the total space available, posing increased land-use pressure, as well as air and sea pollution. In the case of air traffic, flying craft also contribute considerably to noise pollution, often affecting practically the whole population of small islands.

The large amount of waste generated by tourist-related activity gives rise to major waste management problems, leading to health hazards and reducing the aesthetic qualities of the place. Similarly increased demand for water exacerbates the water shortages in many small islands, particularly those located in the Mediterranean region.

Of particular importance in the case of small island jurisdictions is the fact that tourism is generally of a coastal nature. Many charming fishing villages in small islands have been transformed into tourist playgrounds, many beautiful beaches have been degraded, and many coastal areas have been subjected to noise and fuel pollution from sea craft.

Tourism may also cause inland problems. For example, in islands where eco-tourism is promoted, distances are so short that ecologically important areas are also easily accessible to tourists who may not have a special interest in ecological matters. As a result tourists, sometimes unknowingly, damage delicate vegetation and their presence may threaten rare species. In islands where cultural tourism is promoted, as is the case in Malta, considerable damage can be caused to historical places through frequent tourist visitations.

Another problem faced by small island jurisdictions is related to population density and carrying capacity. Many islands experience high tourism densities in relation to their population and land area. The concept of carrying capacity is very important in this regard, since small islands tend to very quickly reach that threshold level beyond which the natural ecosystem will be irreversible damaged (McElroy and de Albuquerque, 1998: 164; Mangion, 2001).

### **Can Tourism help the Environment?**

The adverse environmental affects just described are to an extent mitigated by some positive ones, as there are instances where tourism can actually be conducive towards the protection of the environment. One reason for this is that tourism tends to create an awareness that the country needs to be attractive, that the air needs to be clean and that the sea needs to be unpolluted. In the case of many small island jurisdictions campaigns for protecting biodiversity and keeping the island clean are often based on the need to keep the place attractive for tourism.

Also, on a policy level, the dependence on tourism often forces the authorities of the islands to take a more serious view of planning, monitoring and market-based incentives, precisely because in the absence of such measures, the negative effects of tourism on the environment could, in the long run, destroy tourism itself.

### **The Balance**

Such environmental benefits and downsides of tourism are, of course, not present in equal doses in all small island jurisdictions, since different islands have different characteristics. Some are more isolated and more remote than others, some are smaller than others and some are more environmentally fragile than others.

The next two sections will describe the specific experiences of a small island jurisdiction, namely Gozo.

## **4. TOURISM IN GOZO**

Gozo forms part of the Maltese Archipelago, and is located in the centre of the Mediterranean. The population of the island is around 30,000 with a total land area of about 67 square kilometres.

## The Location of Gozo



Although the population density of Gozo is much lower than that of mainland Malta it is still relatively high as can be seen from Table 1.

**Table 1**  
**Population Density in 2005**

	<b>Population</b>	<b>Persons per sq.km</b>
<b>MALTA</b>	404,039	1,282
Malta	372,986	1,513
Gozo	31,053	452

Source: Census of Population and Housing 2005 – Preliminary Report

There are five main types of tourists visiting Gozo, namely:

- Maltese residents who visit Gozo for a few days annually. In 2007 these amounted to about 33,400 with an average length of stay of about 2 days per person.
- Maltese residents who visit Gozo as day-trippers. Their number is not known with a sufficient degree of precision, but they could have amounted to about 150,000 in 2007.
- International stay-over tourists who spend most of their visit in Gozo. These amounted to about 40,400 in 2007, with an average length of stay of 5.8 nights.
- International tourists who visit Gozo as day-trippers. Again here, their number is not known with a sufficient degree of precision, but they could have amounted to about 650,000 in 2007.
- Gozitan emigrants, who sometimes stay in Gozo for a relatively long time, often a few months, mostly in summer.

In 2007, there were 10 hotels plus 8 guesthouses offering 1767 beds for tourists. The annual occupancy rates are rather low amounting to about 54% in 2007. This is principally due to the low turnout in the winter months and the under-utilisation of potential lucrative niche markets, such as agro-tourism and conference/business tourism.

Self-catering farmhouses (mostly rural villas with swimming pools) also attract tourism to Gozo. In 2007 these offered 2700 beds.

### **Economic Benefits of Tourism in Gozo**

#### *Direct benefits*

Economic activity associated with tourism generates considerable income and employment in Gozo, since a high proportion of tourism expenditure goes on transport, food and accommodation, sectors in which Gozitans tend to have a high stake. However the income generated from tourism is not known with any degree of certainty, although it can be as high as 30% of the GDP of the island.

With regard to employment, it is known that the number of jobs in hotel and catering establishments amounted to 950 in 2007, but there were many other jobs in economic activities related to tourism, such as transport, souvenir retail outlets and banking.

#### *Other economic benefits of tourism*

Tourism may have been an important factor in the revival of certain traditional arts in Gozo and crafts such as lace-making, filigree work and pottery. Demand by tourists for these products has rendered their production economically viable.

The Maltese Islands, including Gozo, are renowned for their wealth of historical and archaeological heritage, which, before the advent of large-scale tourism, were probably not appreciated enough. The places of cultural importance are, even now, more valued by tourists than by the locals. However awareness of cultural heritage among the Gozitan population has increased as a result of tourism.

### **Main Problems faced by the Tourist Industry in Gozo**

Gozo is characterised by two main features, namely small economic size and insularity. These features pose major economic constraints on the economy of the island (Briguglio, 1995).

#### *Small size*

Due to its very small size, Gozo has a very small domestic market, and has to rely on expenditure by non-residents to generate sufficient income and employment. Gozo also finds it impossible to compete in products which require economies of scale for efficient

production. This is the case for example for most manufactured products. The island also lacks natural resources. For this reason, Gozo has limited options with regard to economic development.

### *Double Insularity*

Gozo suffers from what is known as double insularity, since it is on the periphery of another small island. This gives rise to heavy dependence on sea with mainland Malta, leading to a number of problems, including relatively high transport costs. This problem affects tourism in Gozo, since all tourist traffic passes through Malta, and there are no international passenger flights directly landing in Gozo.

### *Transport problems*

Transport between mainland Malta and Gozo is not sufficiently developed for international tourism, not only because it involves risks due to service disruption, especially in inclement weather, but also because it is not customised to individual flights from abroad.

For this reason, transport problems between the airport and the Gozitan hotels, and the inter-island transport in general, tend to discourage direct tourism to Gozo.

### *Seasonality*

Another problem relates to the seasonal nature of the industry. The bulk of international tourists (about 70%) visit Gozo during the summer months, and this gives rise to seasonal fluctuations, with a very high level of demand in summer and very slack demand in the winter and shoulder months. The seasonal nature of the industry indirectly impacts many other areas of the Gozitan economy. This is particularly true with regards the supply side of the labour market. Gozitans are perennially worried about job security, this preoccupation with having a “stable”, “secure” job discourages people from entering the hotel industry. Such a situation, which will be discussed in further detail later on, leads to an unbalanced labour market situation. The EU report just referred to (West Midlands Enterprises, 2002) also proposed that the tourism strategy for Gozo should aim to promote Gozo as an all-year-round destination for international as well as Maltese tourists and to develop niche tourism products towards this end.

### *Marketing Gozo as a Tourist Destination*

One of the major problems associated with tourism in Gozo is that the island is not marketed adequately as a separate tourist destination, and publicity is carried out by the Malta Tourism Authority, with Gozo treated almost as an annex. This may account for the fact that the overwhelming majority of international visitors to Gozo reside in Malta and are day-trippers. A report commissioned by the European Union (West Midlands Enterprises, 2002) recognized this problem and proposed that the island's special tourist attractions should be the basis for marketing the island as a unique destination and not simply as an extension to Malta. As a strategy, the report proposed that the Gozitan

tourism product should be differentiated from that of mainland Malta, stressing high quality accommodation, attractive rural features and rich cultural heritage.

### **The Impact of Tourism on the Gozitan Environment**

Although, as argued above, environmental problems in small islands should not be exclusively blamed on tourism, it cannot be denied that tourism development does pose a major problem in this regard. This section lists the most important areas where, in Gozo, the environmental impact of tourism is most conspicuous.

#### *Increase in demand for building*

Building of tourist accommodation, notably hotels and blocks of flats, has increased at a very rapid rate as a result of intensive tourism development in certain areas. The Malsalforn and Xlendi areas have been completely transformed by such development.

Other negative outcomes of this development include the intense noise arising from construction activity, the vast amount of waste material and dust from demolished structures and from excavations. Newly developed tourist structures have also obliterated habitats in the Maltese countryside.

Additional negative tourism impacts in Gozo are associated with aesthetics, especially where new high-rise concrete structures have replaced beautiful traditional houses. Moreover, since limestone is used extensively in building, ancillary activities in quarrying have given rise to unsightly scars in many parts of the Maltese islands, besides causing considerable environmental damage to natural habitats and water tables.

#### *Increased waste management problems*

The sewage network in Gozo is very heavily utilised by local residents. The relatively large number of tourists intensifies this problem. Tourists are likely to be heavy users of water due to the fact that they are likely to use bathrooms and sanitary facilities more often than the locals. One outcome of this reality is that, in recent years, a number of popular bays were closed for swimming due to sewage pollution. This has caused considerable discomfort associated with foul smells and inability to swim in the bays, and, perhaps more importantly, has damaged marine and coastal life and induced an accumulation of toxic substances in marine organisms. This problem has however been practically solved due to the construction of EU funded sewage treatment plants. However, constructing and running the plants is still a very expensive exercise.

The generation of construction and household waste by the resident population is also a major problem in Gozo due to the high population density, and tourism tends to accentuate it. Up to 2006, a huge waste disposal area, called Tal-Qortin, became a very visible mound within a short distance of tourist and residential centres. Again this problem has been resolved, however again, at a very high cost.

In addition, tourism tends to increase the use of environmentally dangerous products, such as emissions of toxic gases from cars, power stations. Again here it should be said that the main culprits in this regard are local residents, but tourism intensifies the generation of harmful waste.

#### *Destruction of habitats*

As already stated, tourism tends to intensify the demand for transport, accommodation and beach use. This has led to increased destruction of habitats (especially beach habitats). Habitat destruction is however not confined to coastal tourism. High visitation rates to archaeological and historical sites tend to have a negative impact on these sites, especially on the fragile archaeological one.

#### *Is tourism the worst culprit?*

A note on the environmental impact of non-tourism economic activities is in order here. Although tourism is often associated with environmental degradation, it should be kept in mind that non-tourism economic activities also have major negative impacts on the environment and, therefore, the fact that tourism harms the environment should not be construed as a case for alternative forms of economic development.

For example, the manufacturing industry, with its reliance on fuel for machinery and its high rate of water consumption, may at times be more environmentally unfriendly than tourism. The agriculture sector, with its reliance on pesticides and fertilizers, also brings about irreversible environmental damage to habitats and human health. The construction sector is also very harmful to the environment and to human health. To be sure, no economic activity is environmentally neutral, and tourism is not always the worst culprit in this regard.

### **Some Environmental Benefits of Tourism in Malta**

Although tourism has many negative environmental impacts, and the list presented above is by no means exhaustive, it also has a number of positive environmental effects on the island of Gozo.

Tourism has increased environmental awareness among the Gozitan population. Factors such as waste management, clean bathing waters, coastal zone management and well-planned land-use tend to attract tourists and this has possibly led the resident population to assign more importance to environmental protection than would have been the case in the absence of tourism.

## 5. REDUCING THE NEGATIVE ENVIRONMENTAL IMPACTS

As already explained, in Gozo, the economic benefits of tourism are relatively large and in the absence of tourism income and employment would be drastically reduced. For this reason the authorities, the operators and the majority of the local population would like to see it grow<sup>1</sup>, as much as possible without harming the environment and creating social problems.

The issue in this regard is not therefore whether or not Gozo should continue to encourage tourism but rather how best to reduce the environmental and social harm caused by this type of economic activity, respecting the carrying capacity of the island (MTA, 2002; Mangion, 2001). The remedies often suggested in this regard relate to the development of alternative forms of tourism or to certain pre-emptive and corrective measures.

### **“Alternative” Tourism**

One possible solution sometimes proposed to reduce the environmental impact of tourism is to replace “mainstream” tourism with “alternative” tourism, with the intention of attracting more responsible tourists and reducing inflows. The question arises here as to whether on not small islands like Gozo could reduce their dependence on “mainstream” tourism and instead foster alternatives, such as cultural tourism and eco-tourism.

In general, what is termed “alternative” tourism turns out to be very small scale, and not sufficiently financially rewarding on its own. In the case of Gozo, for example, there would seem to make a case for promoting cultural tourism given that the island has a rich historical and archaeological heritage. However, relying on this form of tourism alone is unlikely to be viable. Most tourists who come to the Maltese Islands state categorically in the various surveys that they visit the Islands mostly because of its Mediterranean climate, and its sea and sun attributes (Ashworth and Tunbridge, 2003).

Also, Gozo’s Mediterranean location, to an extent, conditions the type of its tourist inflows. In all tourist brochures, Gozo’s cultural heritage is given prominence, but more prominence is given to its “sea-and-sun” attractions. Gozo’s climatic and geographic endowments sell and, as is well known, these attractions appeal mostly to what one may call “mainstream” tourists.

Another factor which may not permit drastic diversification towards “alternative” tourism relates to the existing structures of hotel and tourist facilities, which are geared mostly to “mainstream” tourism, and their objective is to increase occupancy rates, which would be very low if Gozo relies exclusively on “alternative” tourism. It will not make much sense for the authorities to force the existing hotels, which operate on the basis of the profit motive, to aim for low occupancy rates.

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<sup>1</sup> This conclusion clearly emerged during a consultation process on sustainable development in Gozo, in which the present author was directly involved, held on 26 November 2004

In general, measures that reduce tourism inflows are likely to have a negative impact on the economy, given that from each tourist there remains a net contribution to the Island's income and gainful employment.

One is tempted to conclude therefore that reliance on "alternative" forms of tourism is viable only if these supplement traditional "mainstream" tourism, in which case the objective of reducing tourism inflows will not be achieved.

These realities by no means contradict the argument that "mainstream" tourism is associated with certain environmental dangers and negative social impacts. The thrust of the argument here is that, given the attraction of "mainstream" tourism on economic grounds, pre-emptive and corrective measures to reduce its negative impacts may be more meaningful and operationally useful than policies to reduce the inflows.

### **Pre-emptive and Corrective Measures**

#### *Self-regulation and labelling*

Self-regulation can be advocated as a means of reducing the negative environmental impact of tourism. As has been pointed out earlier, it is in the interests of the tourism industry itself to protect the environment. Moreover, in some cases, firms can make substantial financial savings by promoting good environmental practices such as for example, laundering of linen on request only, and automatic switching-off of electric lighting, air conditioners and tap water.

Self-regulation and voluntary action can be stimulated through recognised, credible certification schemes, such as eco-labels. In the case of tourism these are often employed for accommodation services and are aimed at helping tourists identify which accommodations are environmentally friendly. (Hamele, 2002).

Yet past experience in Gozo has shown that self-regulation alone may not be sufficient to ensure adequate environmental protection. This is especially so for hotel operators that pursue short-term gains. It would be wishful thinking to expect, for example, that such operators would not erect structures on beaches if no control by the authorities were in place. There exists a case, therefore, for government intervention of various forms, ranging from planning and monitoring to direct control.

#### *Government Intervention: Legal Controls and Planning*

In a small island, where land is one of the scarcest commodities, legal constraints as to land use are indispensable. In Gozo, such constraints have, since the early 1990s, been placed within the framework of the national Structure Plan and a series of local plans, with the aim of regulating development. Although the legally binding Structure Plan is not site specific, it recognises the severe land-use competition in the Maltese Islands but also suggests proactive measures for the enhancement of the environment, as well as

other measures to ensure efficient use of resources and a better quality of life in the Islands.

Inevitably, tourism-related developments feature prominently in the Structure Plan. Before the introduction of the Plan, haphazard tourism development was common. There is now a general consensus in the Maltese Islands that planning of tourism structures is essential, primarily because of the growing concern about their impact on the environment.

### *Impact assessments*

Planning generally involves direction-setting on the basis of overarching policies. In the case of land use more specific measures involving a project-by-project assessment, are required. It is generally necessary to examine certain individual project proposals before their commencement, in order to reduce the chances of conflict between an individual project and the Plan's overall objectives. Environmental and social impact assessments are generally undertaken for this purpose. Such assessments contain a description of the potential direct, indirect and induced effects on the environment and on society at large.

The exercise is often accompanied by suggestions as to how the adverse environmental and social effects can be mitigated. The negative impact should of course be compared to the positive economic impact – an exercise which requires the participation of expertise from different fields, including the physical sciences, economics and sociology. These types of assessments are especially important for projects associated with tourism, where various considerations are involved other than economic benefits, including land use, protection of the environment, transport planning and social impacts.

In the Maltese Islands, environmental impact assessments are required by law for projects that are likely to have a “substantial” impact on the environment (see Planning Authority, 1994). Since the coming into effect of this requirement, there has been a slowing down of developments which harm the environment.<sup>2</sup>

### *Setting standards and monitoring*

Many environmental problems arising from tourism are associated with the absence of standards and effective monitoring. Certain activities need to be controlled and monitored on an ongoing basis, either because they cause damage due to certain unforeseen circumstances, or because, with improved knowledge, the requirements of environmental protection may become more stringent over time.

Monitoring implies setting quality and quantity standards and codes of good practice in the first place. In the case of tourism this could include, for example, levels of permitted

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<sup>2</sup> This requirement, however, has also given rise to what has been described as unacceptable bureaucratic delays, and there is a feeling of dissatisfaction among developers whose proposals are trapped in an overly long waiting list.

tourist capacity in certain beaches, maximum levels of pollution (arising from waste, fuel and noise), and so on. The monitoring exercise would then involve assessing the degree of compliance with these standards and codes by the industry itself within a self-regulatory regime or by the public authorities in a command and control framework.

Such standards have their downside, as they can create rigidity when circumstances change; a certain degree of flexibility, according to environmental and other circumstances should therefore be allowed. For instance, standards can be varied as waste disposal becomes more efficient, or as public transport becomes more commonly used and can effectively replace hired private transport.

The legal and institutional set-up in the Maltese Islands is sufficiently developed to enable the Government to set standards and back them by legal measures. Unfortunately, certain standards are difficult to enforce, either because of lack of inspectorate or policing personnel or due to non-availability of technical tools for proper assessment and monitoring. In some instances there may also be lack of political will to enforce certain standards due to possible negative impacts on business or to possible loss of votes to the party in government.

#### *Economic Instruments: Internalising Costs*

Given that legislation is not always effective, especially because it requires a well-developed enforcement apparatus, and self-regulation is not forthcoming from the private sector, economic instruments may need to be put in place to allow the market itself to reduce environmental damage. Instruments such as taxes, fees and subsidies can be used to actually alter prices in order to cover also environmental costs. Unfortunately, such instruments are not commonly used in Gozo with regard to tourism.

The most important advantage of these methods is that they provide an incentive for the tourism operators to economise on environmentally damaging activities in ways that ensure an efficient allocation of environmental resources, hence promoting their sustainable use. Such methods also provide an incentive for the development of technological improvements to limit pollution activities. Charges also represent a source of revenue which can subsequently be used to offset subsidies for environmentally beneficial activities or to manage environmental resources.

Finally, such instruments foster the awareness that pollution and environmental services do come at a cost, even if this is not usually demonstrated in terms of market prices.

Such instruments are becoming increasingly utilised in the Maltese Islands. A recent example is the introduction of a tax on cars, depending on their harmful emissions.

The success of economic instruments will depend primarily on the efficiency of the public administration, particularly with regard to the speed with which those who comply are sufficiently rewarded (in the case of subsidies) and those who do not (in the case of taxation) are detected and punished.

### *Spreading the Impact*

One of the problems associated with tourism inflows in Gozo is that such inflows tend to be concentrated in some locations and in some months. In the Maltese Islands such concentration is very pronounced and poses serious threats to the environment. This suggests that if the impact could be spread, the carrying capacity of the Islands would be lighter and subsequently the environment less threatened. For such an approach to succeed, it is important to develop a tourist product which does not depend on “sea and sun” attributes, such as walking cultural tourism and agro-tourism (in the case of spreading the space) or walking tourism or health tourism in the case of spreading the time).

This approach, however, has its weaknesses in that the negative impacts of tourism would then extend to areas which are as yet unspoilt. In addition, increasing the flow in the winter months would mean that the host community would not have a “quiet” season. In other words, spreading the impact over space and time has its cost.

## **6. CONCLUSION**

This paper has described the most important economic and environmental impacts on the island of Gozo. It was shown that the economic benefits of tourism are often very large. It has also been argued that the negative impacts on the environment on the islands tend also to be relatively large. The objective of sustainable tourism is therefore not very easy to attain, and it often involves walking on a very tight rope.

The paper has argued that a policy of reducing tourist inflows would not find much support – except perhaps among those very keen on environmental protection – in an island where a large proportion of income and employment is generated from tourism and tourism-related activities, and where tourism growth has been instrumental in securing a respectable level of material welfare for the citizens, albeit accompanied by considerable environmental damage.

It was therefore argued that there is the need to find ways of minimising environmental damage without compromising the current and future economic well-being of the host country.

A few pre-emptive and corrective methods towards this end have been described, although it was shown that their success cannot be guaranteed. Voluntary self-regulation, planning, carrying out impact assessments, setting and monitoring standards, internalising environmental costs through economic instruments and spreading the impact over time and space, are likely to halt the pace of environmental damage, but, as shown above, they also have their downsides.

Like all other economic activities, tourism will never be environmentally neutral. Hotels will always emit sewerage, tourists will always add to water shortage and to the space constraints, air, land and sea-based traffic will continue to cause air and noise pollution.

Fortunately, tourism, being natural resource based, has quickly made the host island more appreciative of the benefits that are offered by the environment. In addition, as goods, such as clean air, clear seas and quiet spaces, previously abundant and free, become scarce, people tend to become more and more aware that environmental degradation is a great loss, not only in terms of long term or sustainable development, but also in terms of current well-being.

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