

**TOURISM IMPACT ON THE ENVIRONMENT  
OF SMALL ISLANDS  
WITH SPECIAL REFERENCE TO MALTA**

por  
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**Resumo**

A ideia fundamental deste trabalho é a de que os perigos ambientais têm implicações económicas, na medida em que constituem, a longo prazo "a cama onde nos deitamos". Isto é assim essencialmente no caso do turismo, o qual, até certo ponto, depende de um meio-ambiente agradável e atractivo. Procura mostrar-se que pequenas ilhas como Malta dependem, em larga medida, do turismo, e que existem perigos ecológicos correlacionados com essa dependência. A questão relacionada com quem pagará a degradação associada ao ambiente e o aspecto do desenvolvimento sustentado são analisados face a esta realidade. O trabalho faz referência a um número de sugestões para a adopção de uma política de turismo que integre os progressos económico, ambiental e cultural.

**Abstract**

The basic contention of the paper is that environmental dangers have economic implications, in that they "soil one's own nest" in the long run. This is especially so in the case of tourism, which to an extent depends on a pleasant and attractive environment. It is shown that small islands like Malta depend to a large degree on tourism, and that there are ecological dangers associated with such dependence. The question as to who is to pay for environmental

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degradation associated and the issue of sustainable development are discussed against this reality. The paper puts forward a number of suggestions for the adoption of a tourism policy which integrates economic, environmental and cultural advancement.

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An extreme view held by some environmentalists is that nature and its flora and fauna ought to be preserved and protected for their own sake, irrespective of the economic impact that such an exercise entails. The reason given to support this point of view is that environmental misuse has far reaching effects. Unlike many economic mistakes, such as for example, a loss of tourist inflow in one particular year which may be made up with better management the following year, environmental abuse may result in the irreversible extinction of a species or a habitat.

Some economists, on the other hand, do not give enough importance to environmental problems, principally because these are often external costs to the firm and do not fit properly into market-oriented policies. Like other undesirables, such as the stress arising from management, environmental dangers are often regarded as social costs with which society has to live in order to attain economic growth and development.

Fortunately, many environmentalists and economists do not take these extreme points of view, and take a more integrated and a more responsible approach towards economic and environmental well-being. This is the stand taken by the present author, who is an economist, in this paper. Environmental protection is considered as a good which is conducive towards economic well-being.

The paper is divided into five sections. Following this introduction, we shall briefly discuss the dependence of small islands on tourism. Section 3 considers the ecological dangers and benefits of tourism. The question as to who is to pay for environmental degradation associated with tourism is treated in Section 4, while Section 5 discusses the issue of sustainable development. Section 6 concludes the paper and puts forward a number of suggestions for the

adoption of a tourism policy which integrates economic, environmental and cultural advancement.

## Small Islands and Tourism

### *Dependence on Tourism*

The arguments proposed in this paper are to an extent applicable to all countries where international tourism exists, but they are especially pertinent to small islands, because these tend to depend to a very large extent on tourism for foreign exchange inflows and employment.

An analysis carried out by the present author indicates that during the second half of the eighties, the global average ratio of foreign exchange income from tourism to GDP is around 1.7%. The same ratio for Malta stood around 25% during the same period, which is not much different from the average for all island countries taken together. In some instances, the ratio is as high as 82%.<sup>1</sup> (Source: UNCTAD *Handbook of International Trade Statistics* 1990).

Many governments of islands have attempted to maximise their island's potential to attract tourists, and embarked on a policy to develop this industry through promotion campaigns, building of hotels and other tourist facilities, and so on. For many governments, the basic motive of their tourism policy is to earn foreign exchange.

Many small islands have a very large import bill, and income from tourism is regarded as a very important source of financing this bill. In many cases, attempts to develop export markets in merchandise in small islands proved unsuccessful or not as successful as one would have wished. The relatively easier manner in which tourism yields foreign exchange has resulted in this sector being given priority.

For example, at the present time in Malta, the manufacturing sector is experiencing a number of difficulties, while the tourist industry is booming. Tourism contribution to GDP in Malta is much smaller than that of manufacturing, but the rate of growth of the former is much faster than the rate of growth of the latter sector.

A characteristic of tourist trade is that while it is generally a good economic proposition [see Eadington and Redman (1991), Briguglio (1991), and Sathiendrakumar and Tisdell (1989)], it often leads to abuse of the environment [see Pigram (1980) and Budowski (1976)].

### *The Ecological Dangers of Tourism*

Although, as will be shown in a later section, environmental problems should not all be placed at the door of tourism, it cannot be denied that tourism development does add problems in this regard. To be sure, no development is environmentally neutral. Even proenvironmental activity itself generates a degree of pollution.

In the case of Malta, and probably in the case of other islands, the growth of tourism has brought about the following environmental dangers:

- Increase in demand for building
- Increase in demand for waste disposal
- More use of environmentally dangerous products
- Increased demand for space
- Dangers to marine environment

### *Increase in demand for Building*

Building of tourist accommodation, notably hotels and blocks of flats, have increased at a very rapid rate as a result of intensive development in certain areas. In some cases, building development is so fast that tourist facilities are offered long before sanitary and other facilities are installed. In a small island like Malta, where land area is one of the scarcest resources, such development reduces the space assigned to "green areas" and completely changes the character of the town/village where it occurs. The St. Paul's Bay and St. Julians areas in Malta, which used to be lovely little fishing villages, have been completely transformed by building earmarked for business associated with tourism. Many would agree that, from an aesthetic point of view, this transformation was not desirable.

### *Increase demand for waste disposal*

In many islands, one of the most dangerous environmental problem is disposal of human and domestic wastes, mostly caused by a system which has not developed in line with the demands for the native population — a problem made worse with the onset of tourism. Small islands tend to be quite densely populated. In Malta, without counting tourists, the population density exceeds 1000 per square kilometre. For this reason, the sewerage network in Malta is already very heavily taxed by the native population alone. The relatively large number of tourists, increasing the population by an equivalent of around 12% during the summer months and by as much as 70% in some tourist areas, renders the problems much worse.<sup>3</sup> The outcome, as of this year (1991), is that the sewerage problem has gone out of hand, with most of the beaches contaminated. The same can be said regarding household wastes. This is a very big problem in Malta, and tourism has of course accentuated it. One of the commonest sights in Malta are overfilled rubbish bins, and waste disposal areas within a short distance of residential centres.

### *More use of Environmentally Dangerous Products*

The increase in tourism has brought with it increased use of environmentally dangerous products, such as plastic containers for water, and more emissions of toxic gases from cars, power stations, and barbecue grills. Coupled with this, there is also an increase in noise pollution, from cars, incoming airplanes, speedboats, air-conditioning units, water treatment plants, and so on. Again here, the increase in demand for such products should not be attributed to tourism alone.

### *Increased Demand for Space*

In many small islands, the space area is naturally very limited which gives rise, as already stated, to relatively very high population densities. The intensive use of space on beaches, restaurants, roads, and so on, renders life quite intolerable for the residents, especially

those living in tourist areas. Again referring to Malta by way of example, tourist concentration in the Sliema, St. Julians and St. Pauls Bay areas, has, during the second half of the eighties, reached 70% of the population during the July-September period. (The average stay per tourist in Malta is around 12 days, which is approximately 10% of all days in June, July, August and September. The number of tourists in these months in 1990 was around 415,000 which is equivalent to 41500 tourists staying the full summer or to 12% of the total population on the whole island. However, tourists in Malta tend to concentrate in a few localities and hence the high ratio localities mentioned).

#### *Dangers to Marine Environment*

In many instances, projects associated with tourism are on coastal areas. Their building and utilisation often fail to take into consideration the environmental requirements of the location. Apart from aesthetic considerations, which at times leave much to be desired, such projects, and the coastal roads leading to them, often lead to the destruction the fauna and the flora of the area, and increase the problem of dumping human waste into the sea.

Having listed a number of dangers, and the list is by no means exhaustive, it is pertinent to emphasise that:

1. the environmental dangers listed above would have probably existed in the absence of tourism. Tourism has intensified these problems but not created them.
2. the problem could probably have been avoided or drastically reduced with proper planning. Once a country embarks on a policy of attracting tourists, it should expect an increase in demand on all the amenities, and it should also expect that the 'get rich quick' entrepreneur would place personal profit first before long-term environmental conditions.

#### *Some Ecological Benefits of Tourism*

Although tourism is usually associated with environmental degradation in small islands, there are instances where this area of economic activity may be beneficial to the environment.

#### *Enhancement of Environmental Awareness*

In some cases tourists are more environmentally aware than the local residents. For example, in Malta, dumping waste in residential areas, throwing rubbish in the streets, and littering the beaches is associated more with Maltese residents than with tourists. Building without any aesthetic and environmental considerations is more common in domestic residences than in hotel and tourist complexes. The typical tourist in Malta, and in many islands, comes from Western Europe, North America and other affluent countries, where environmental education is given more importance than is often the case in the host-islands themselves. There are instances where tourism may in fact be conducive to environmental care. For example, 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, if tourists are to be attracted. Looked at as an investment good, environmental protection is a prerequisite for touristic development. In the case of Malta, where civic awareness as to cleanliness is not the order of the day, campaigns for keeping Malta clean are often based on the need to keep the island attractive for tourists.

#### *Conservation of Trades and Places*

It is possible that tourism helps promote the conservation of certain trades and places. There are many cases where traditional trades and crafts have been revived because of demand from tourists. Certain places of cultural heritage are more appreciated by tourists than by the islanders themselves. Such trades and places might have been neglected in the absence of tourist trade.

#### *Alternatives to Tourism*

Tourism industry has to be viewed in relation to alternative forms of production. Tourism in fact is much less environmentally dangerous than some forms of primary and manufacturing production. In many islands, such non-tourist industries have had

devastating effects on the environment. Phosphate mining in Nauru is often cited as an example. One can also mention oil refining, transshipment, shipbuilding, intensive development of crops for exports and so on. In Malta for example, the building industry, mostly for Maltese residents, is the source of dust, devastation of the countryside, digging of quarries in scenic sights, etc. The drydocks is the source of air, sea and noise pollution, and a major eye-sore in the Cottonera area.

### **Who is to pay for the degradation**

#### *Tourism and Externalities*

The environmental cost of tourism is often borne by society in general, and not by the polluters themselves (although the latter may also pay indirectly, if they form part of society suffering from pollution). The reason for this is that such costs are external to the producers and users of the tourist service.

A serious discussion on the environment, be it in relation to islands or to larger land masses, cannot disregard the theoretical implications of such externalities. There are goods which are common property in the sense that they are owned by no identifiable individual or firm and used by all with free access. Therefore no individual, as an individual, has an incentive to protect, conserve or improve it. Examples related to tourism are the sea, the air, and the landscape. The environment in general may be defined a common property resource because no one has a defined property right over it.

An externality is a direct accidental by-product on a person's welfare or firms' profits arising from the action of the person or the firm. The characteristics of externalities is that their cost or benefits are not reflected in market prices. For a very long time, economists have argued that if private consumption and production decisions have to be modified to take externalities into account, social welfare would increase.

An example of a positive externality of tourism is the benefits that the native population would obtain by environmentally

beneficial tourist amenity, whereas an example of a negative externality is the pollution and waste emitted from hotels.

Unlike other types of resources, choices regarding public goods cannot be left to individuals acting on individual interests, since the market fails in this case. For example, tourist establishments do not include in the costs of production resource destruction and waste disposal. This is generally offered free of charge by the public authorities. These environmental disutilities are not therefore paid for by the perpetrator of the disutility, and private costs would therefore be lower than the actual cost to society.

#### *The Polluter Pays Principle*

Since the costs just described are externalities, there must be some general principle on which the government should work. One solution often proposed is called "The Polluter Pays Principle". (Garavallo 1991).

The Polluter Pays Principle has a number of attractions

1. it allocates costs of pollution prevention on the producer.
2. it serves as an incentive to minimise costs associated with environmental dangers.
3. it has some ethical advantages since the one who benefits from production bears the cost.

If the principle is to work, it must be a no-subsidy principle, so that the polluter has no incentive either to delay controlling pollution or to take insufficient methods to do so.

This principle of course is not easy to apply. First of all the polluter has to be identified. For example, the contribution of a hotel to sewage pollution may be (a) caused by inadequate public sewage network lying somewhere else in the island and (b) the hotel may be the last chain in sewage and the individual contribution is difficult to monitor.

Also the "pollution value added" of each producer needs to be identified, so that not all costs are placed on the final polluter. Generally the final polluter uses as input products which have already caused a degree of pollution. In other words, the principle should also

apply to intermediate goods, which in tourism are substantial. Moreover, it often happens that tourism becomes environmentally dangerous only because there is inadequate infrastructure. For example an underdeveloped sewerage network in the household sector could be the reason why a hotel waste is pollution.

There is also the problem of establishing how much environmental danger is to be allowed to go free of charge? As stated earlier, no human action is environmentally neutral, and it is virtually impossible to privatise all these costs.

Having established how much should go free, there remains the problem of translation of environmental damage into monetary terms. This in turn would require the expertise of physical and ecological scientists, economists, geographers to identify the damage and cost it.

The next problem relates to the magnitude of environmental costs as a ratio to local cost. Will a country lose competitiveness if it forces producers to pay their pollution? Assuming that the costs of environmental dangers are identified, there still remains the problem that if certain environmental standards are imposed, tourism prices will increase, and the country would lose on international competitiveness compared to other countries which allow lower standards. As against this argument one can argue that tourism would be attracted as a result of better control on the environment and that new investors can be attracted as a result of serious environmental protection.

#### *Enforcement vs Incentives*

The Polluter Pays Principle can be applied in two principal alternative ways namely:

- (1) enforcement
- (2) providing incentives.

Enforcement and imposition of pollution costs on the producer by the government is not generally regarded as a good proposition. Overall setting of standards is of course very important in this regard, but it is generally not possible for the government to impose such

standards to a satisfactory degree. The polluter would always find ways and means of avoiding or going round regulations. Apart from this, strict regulations tend to be expensive to administer and check. Again, once an offender is caught, and taken to court, he could take ages to pay fines (which generally do not compensate for the social irreversible damage done).

Moreover regulations only encourage the polluter to meet the minimum standards. The objective becomes one of avoiding detection or at most to appear as if the standards are being adhered to.

There are instances however when government should interfere directly and foot the bill itself. These include:

- (a) grave socio-economic problems
- (b) aid given to develop new anti pollution technology
- (c) aid given to even out discrepancies in cost of controlling pollution, limited to a well defined transitional period.

The incentive based approach has generally received more support from economists. Such incentives include indirect taxation on polluting activities, charges on affluents, and auction of polluting rights. There are formidable problems here to establish tax rates and charges, but this is also true with any taxed-based incentive policies. The most important consideration should be to make the producer economise on polluting activities.

### **Sustainable Development**

#### *The Definition of Sustainable Development*

Apart from the question of who is to pay for environmental degradation, there is the more important one related as to how such degradation is to be avoided or minimised. The question of sustainable development is often mentioned in this context, especially when considering touristic development. A review on this topic, given in O'Riordan (1988), shows however that the term is given many interpretations. As Tisdell (1991) shows, it may refer to economic sustainability, ecological sustainability, sustainability of the resource base, and sustainability of cultural and community life.

There is however an attempt to propose a working definition of the term (Farrell 1991).

The definition that we shall adopt here is that proposed by the Bruntland Report (WCED 1987) which loosely interpreted states that no form of economic development can be maintained in the long-term unless the economy is linked with environment and with society interactively. This is especially true of tourism since, in this sector of economic activity, long-term development is incompatible with environmental degradation, principally because tourism itself is dependent, to varying degrees, on beautiful natural surroundings, absence of health risks and stable social relations.

#### *Sustainable Development and Tourism*

As stated elsewhere in this paper, economic advancement of whatever type will always involve changes, including environmental ones. Some of these are undesirable and irreversible. The sustainable development objective is an attempt to minimise the negative effects of change, without allowing any one of the three elements just mentioned to change to the detriment of the other.

Since, as indicated above, tourism tends to have a large impact on the environment, the issue of sustainable development is of direct relevance to this type of economic activity (Farrell and Runyan (1991). Moreover, since small islands are of themselves already fragile environment wise, the issue becomes more important when island tourism is considered. As Beller et al (1991, p. 369) note, "nature allows very little margin of error for people living on small islands".

In general, the attainment of sustainable tourism development implies a multidisciplinary and integrated approach. This is of course not an easy objective to attain since it requires fine-tuning between a large number of what may be termed sub-objectives related to economics, ecology, culture, resource base and so on. Different people assign different importance to different aspects of development.

Moreover, and perhaps more importantly, implanting a policy based on sustainable development requires working definitions of

"social profit" and of "long-term", since essentially sustainable development implies trade-offs between social and private profit and between short-term and long-term gains.

Fortunately, attitudes seem to be changing in favour of a more integrated — and a more responsible — approach towards tourism development, where economic, environmental and cultural advancement are considered as mutually sustainable. This tendency is more obvious in affluent countries (eg. Canada, where the Bruntland Report recommendations have had a large influence on development planning there) but it is increasingly taking root in small islands. In Malta, for example, special attention is being given to environmental protection, and environmental impact assessments are being required before the approval of tourist projects.

Ironically, the enhanced awareness of the need to protect the environment and to conserve the cultural heritage is perhaps the result of the economic affluence that tourism development — albeit creating environmental havoc in the past due to lack of regard in this respect — has brought in its wake. The rapid increases in personal incomes in Malta, partly generated by tourism itself, may have created a demand for ecological and cultural wellbeing — a type of demand which may be associated with education and affluence.

#### **Conclusion and some suggestions**

Most goods are scarce, and fall under the principle of "you can't have the cake and eat it too". In other words, if we decide to have absolute environment protection (if this has any meaning at all, and if it can be attained in the absence of economic development), we may have to forego other things, including tourism. The question of environmental protection is therefore basically the same as that pertaining to other goods, namely using the environment, which is a scarce resource, for maximum progress, in conjunction with other goods.

In this paper, we have sought to propose a balanced view of the environmental dangers of tourism. It has been stated that many governments of islands, and it can be added here, as well as the native

population, consider tourism as a very good source of foreign exchange earnings and employment.

Many small islands are trying to develop or expand their tourist industry, and the degree of dependence on this form of economic activity is increasing. Even if it can be shown that such activity is environmentally detrimental, its economic advantages are formidable, and economic considerations often tip the balance at the expense of other considerations. After all, in many small developing countries, the most pressing need is to upgrade their standard of living through economic development — which, fortunately, would eventually give them the luxury to indulge in the environmental debates and to take concrete steps in its protection.

The question hinges not on whether tourism should be relied upon, but on whether or not the environmental damage it exerts can be reduced.

Many suggestions as to how this can be done have been proposed by other authors, and I shall highlight a few of them here for the sake of emphasis.

#### *Environmental Impact Assessment*

In many cases it is possible to examine certain projects before they are actually given the go-ahead. This is done by what is known as an Environmental Impact Assessment. The exercise involves the examination, analysis and assessment of planned activities with a view of ensuring that they are environmentally sound and promote sustainable development.

The assessment should contain a description of the potential direct, indirect and induced effects on the environment, and a description of alternative sites which can be used for the same projects. The exercise should also propose suggestions as to how the adverse environmental affects 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 and economics.

#### *Reduce Concentration*

Some of the problems associated with tourism arise because too many tourists are concentrated in the same area at the same time. The solution to this problem would seem to be the promotion of low-season tourism and of cultural tourism in terms of the temporal dimension, and dispersion of tourist resorts in terms of the spatial dimension.

#### *Setting of Standards*

The government has to set certain standards which have popular support and which the producers would be expected to observe. Certain incentives need to be developed in this respect with the aim of internalising environmental damage, on the basis of "The Polluter Pays Principle".

The setting up of standards presuppose a definition of sustainable development.

#### *Sustainable Development*

Tourism development implies activities which support and improve the standard of living and natural amenities, including the environment, of the citizens in the long run. This necessitates the conservation of natural environment and cultural heritage when implementing development plans and stresses the need to combine economic with ecological and cultural wellbeing.

#### *Planning and Monitoring*

Many environmental problems arising from tourism are associated with lack of long-term planning and monitoring exercises. The problems would probably have existed just the same in the absence of tourism, since, as stated earlier, in general tourism did not create these problems, but have only intensified them. With proper planning — which implies taking a long term view of environmental use and abuse — and with proper monitoring of activities affecting



the environment, the problems can be reduced. This of course applies to abuse by natives and by tourists, to islands and to larger land masses. The argument is of special significance to small islands in view of their small size and higher degree of dependence on tourism. It should be noted here that planning and monitoring exercises need to be financed, and tourism is often one of the most important sources of finance for small islands.

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LINO BRIGUGLIO

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