

ECOTOURISM: AN ECONOMIC CONCEPT FOR ECOLOGICAL SUSTAINABLE TOURISM

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I. THE ISSUE

Tourism represents one of the most environmentally compatible alternative for economic use of land and space. The euphoria, however, to view tourism as “the smokeless industry” disappeared in the 1970s, when the increasing criticism of conventional mass tourism (CMT) brought to the attention its negative ecological and socio-cultural impacts. Today tourism represents approximately 6 percent of Global National Product and provides to more than 130 million people employment, i.e., roughly 6 percent of the global work force. International tourism advanced to the second largest category in international trade (Mieczkowski, 1995, p.1). Thus, it is not surprising that nations see in tourism a viable option and strategy for economic advancement. Developing Countries (DC), rich in biodiversity and unique natural areas, are eager in promoting ‘nature tourism’ or ‘ecotourism’ as both domestic and foreign visitors are attracted to these unique areas. Environmentalists, however, are viewing at this development of increasing demand for ecosystem services with mixed feelings. Ecotourism has the potential to augment the woefully inadequate revenues for local and regional economies, to increase local and international awareness of the importance of ecosystem preservation, and to initiate and strengthen decision-makers’ conservation programs for these (and newly designated) areas. At the same time, the intense demand from tourists placed on the ecosystems and natural areas may degrade or even threaten their very existence.

This article introduces an economic concept for ecological sustainable tourism and instruments to achieve this objective.

2. ECOTOURISM - A DISCOURSE ON ITS DEFINITION

With increasing realization that tourism will also generate severe adverse environmental impacts, social scientists and decision-makers have promoted alternative options to CMT which due to reasons of convenience and economy grew in scale by dramatic expansion of highly organized package tours. An inflation of terms were invented to describe 'new' types of tourism, such as 'alternative, green, nature, simple, low-impact, low-density, small-scale, environmentally-sound, nature-based, sustainable, wilderness tourism', and many more (Mieczkowski, 1995, pp. 458). In recent years, the term 'ecotourism' as a form of alternative tourism (AT) became widely accepted. Although, these various terms are not identical, they have nevertheless one common characteristic, namely to suggest an attitude of opposing the 'undesirable' CMT, and thus, at least, attempting to minimize the negative ecological and socio-cultural impacts of visitors at the recreational locations. While the term of 'alternative tourism' is interpreted differently, even contradictory, Figure 1 summarizes the differing perceptions of AT.¹

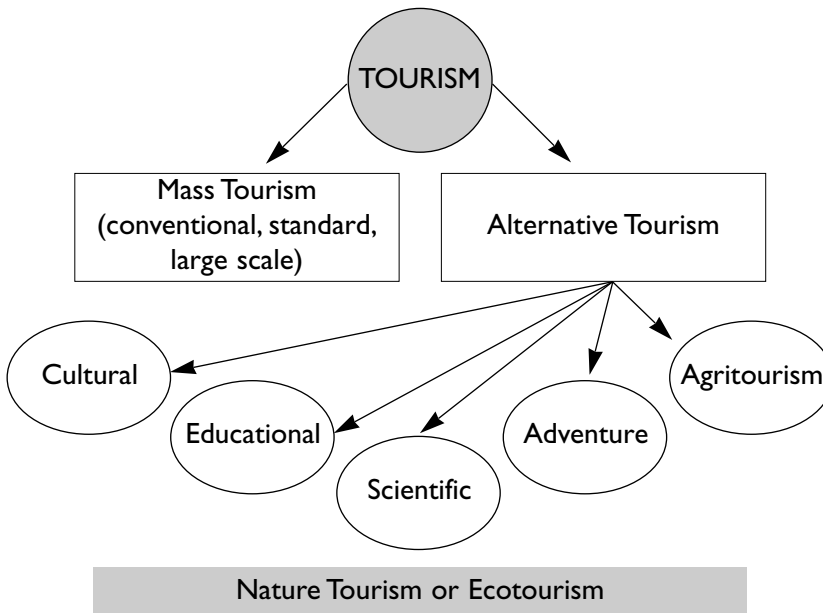


Figure 1: THE ALTERNATIVE TOURISM

Source: Mieczkowski (1995) pp. 459

In general, tourism could be subdivided at least into two components: CMT which will continue to dominate this industry, and AT which comprises several different forms. All types of AT have in common that they are essentially small-scale, low-density, and they attempt to attract a special segment of the society, namely tourists with above average incomes and higher education. In Figure 1, AT is divided into several subcategories, such as cultural, educational, scientific, adventure, and agritourism. The form of tourism on which this article is focusing, is ecotourism (or 'green' tourism). Ecotourism's main feature is that is nature-oriented and nature-based, but not always exclusively conducted in a wilderness surrounding.² Thus, ecotourism may overlap with other forms of AT. Ecotourism as part of AT, however, seems to have a higher potential of being ecological sustainable than CMT, but it does not occupy a monopoly on ecological-economic sustainability. Actually today's socio-economic-ecological imperative requires that all forms of economic activities, that including CMT and ecotourism, should attempt to attain the overall objective of ecological sustainable economic development.

Ecotourism refers here exclusively to nature tourism as it is captured in the following definition: "Ecotourism is used to mean tourism based ...upon natural and archaeological/historical resources such as birds, and other wildlife, scenic areas, reefs, caves, ..., wetlands, and areas of rare or endangered species..... We define ecotourism as that segment of tourism that involves travelling to relatively undisturbed and uncontaminated natural areas.." (Kusler, 1991, p.xii).

The concept of ecotourism, therefore, embeds two components: with qualitative changes in preferences and demand tourists became more attracted by 'active' participation in their vacations and showed increasing interest in conservation and, thus, to visit new destinations and exotic places; while on the supply side of this emerging form of tourism, decision-makers and environmentalists are sensing an opportunity for integrating conservation with economic development. As the result of these trends and the high growth rates of ecotourism, ecotourism was considered, and actually became for some countries, a substantial source for financing conservation programs (Boo, 1991, pp.2).

Despite a clear conceptual demarcation of ecotourism, a meaningful statistical analysis of ecotourism is quite challenging. The statistical reality is, that any tourism in a 'somewhat' natural setting is considered as ecotourism, even if it is part of CMT and may have adverse environmental impacts. To capture some of the potential earnings from this form of AT, the tourism industry is inclined to offer 'add-on' programs with features of ecotourism as part of the CMT. Since ecotourism is expanding at a rate of more than 10 percent annually in comparison to CMT's growth rate of approximately 4 percent annually, it is not astonishing that tour operators, in pursuit of profit maximization, intend to tap this lucrative market, with the consequence that the term 'ecotourism' is excessively used,

and sometimes abused, in promotional and advertising campaigns for certain types of tourism, that in the strict sense of the definition would not have qualified as ecotourism (Lindberg, 1991, pp.20).

3. AN ECONOMIC CONCEPT OF ECOLOGICAL SUSTAINABLE TOURISM DEVELOPMENT

Ecological sustainable tourism has to be viewed as an integral part of society's policy objective of sustainable development (SD). The notion of SD, however, propagated by the World Commission on Environment and Development, is a multi-dimensional and vague concept with the consequence that much controversy is associated with its definition and its implementation (WCED, 1987). As reaction to the real or perceived threat to environmental quality from CMT has been to advance ecotourism as a form of sustainable tourism. Some case studies have shown that ecotourism can become a quite profitable niche within the wider tourist industry for some countries (Boo, 1990, pp. 27). Consequently, how far ecotourism is a genuine alternative form to CMT, rather than just a step towards it, is an open question and cannot be answered here.

Figure 2 attempts to conceptualize the challenge which countries with unique ecosystems face, namely how and to what extent to use these unique natural areas without degrading and/or destroying them in the process. The marginal net social benefits (MNSB) and the marginal social costs (MSC) are depicted on the vertical axis, while the tourist flow, e.g., measured as increasing tourist density per area and per time period, is recorded on the horizontal axis.

It is plausible to assume that the MNSB-curve is decreasing with increasing tourist density per area and per time period. The tangible net financial/economic benefits (i. e., total economic benefits minus economic costs) are captured by this curve. The benefits associated with ecotourism include e.g., the economic revenues received by those individuals and government agencies providing tourism services, such as tour operators, transportation services, hotel and lodging operators, food and entertainment providers, tax revenues and entrance fees. These financial/economic revenues represent the incentives what drives private and public sectors into tourism, ecotourism respectively. These revenues/benefits can be further decomposed e.g., with respect to their spatial incidence, i.e., into local, regional, and national. Local benefits are received by the intermediate surroundings, such as employment opportunities or additional and/or new markets for locally produced goods and services. Regional benefits are more or less the same categories, except their impact is less noticeable due the larger spatial size. At the national level, ecotourism may be a source of additional tax revenues collected from visitors, additional foreign exchange earnings, etc.³

There are at least two cost categories relevant to the country and/or communities offering the services of ecotourism:

- (i) These are the opportunity costs of foregone alternative land use. This type of opportunity costs may include, e.g., the development of conventional resort tourism, plantation agriculture, or housing development.
- (ii) The marginal social costs which occur with increasing tourist density in the protected ecosystem. Here the MSC are referring to environmental damages as negative impacts of ecotourism and are manifested in overcrowding, contamination and ecological degradation.⁴

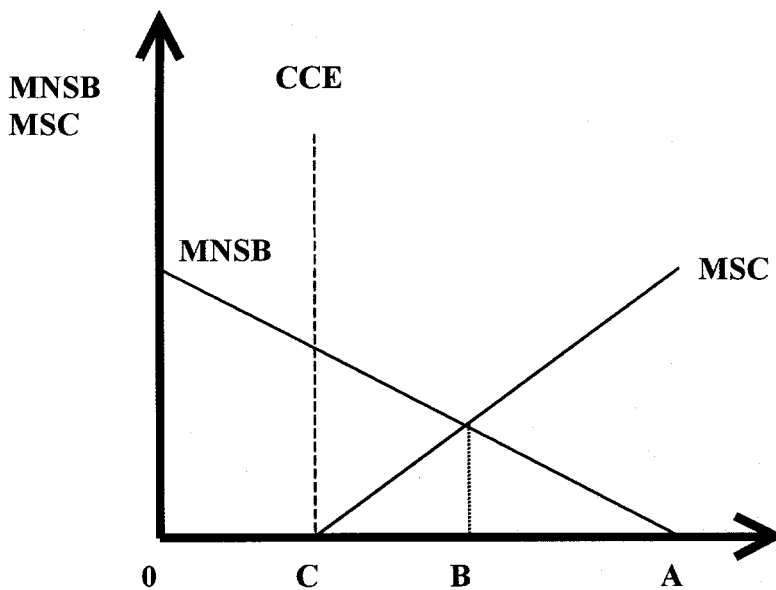


Figure 2. Ecological Sustainable Tourist Flow

In a static context, Figure 2 shows the MNSB- and MSC-curves and identifies three different 'equilibria', representing different levels of tourism density:

- (i) Point A depicts the situation of maximization of net tourism revenues, i.e., MNSB equal zero. Beyond this point revenues become even negative due to the effects of diminishing returns and due to congestion caused by too many visitors. The tourist area maximizes its short-run unconstrained net economic benefits and is indifferent with respect to ecological damages caused by the tourism density.
- (ii) The intersection of MNSB- and MSC-curves in point B determines the socially optimal tourist flow (SOTF). The SOTF occurs, in economic terms,

where MNSB are equal to MSC, i.e., where the net social gain from ecotourism is maximized; an outcome identified by conventional cost-benefit analysis.

(iii) The 'equilibria' at point A and respectively at point B do not indicate an ecological sustainable tourist flow. A maximum density of tourist flow which is ecological sustainable (or ecosystem-safe) can be identified instead at point C, where the MSC (here only referring to environmental costs) are zero. A tourism density level beyond the point C would generate adverse ecological impacts, because the carrying capacity of the ecosystem (CCE) of this particular tourist destination is trespassed. Thus, point C has to be regarded as ecological constraints to economic activities, including ecotourism. If, however, the flow ecotourism exceeds this threshold over an extended period of time, then in a dynamic context, the point C would move closer to the point of origin, depicting a situation of ecosystem disintegration and collapse. Obviously, a scenario which should be avoided. (Müller, 1997, pp. 116).

A prerequisite in discussing preventive and corrective measures with respect to ecotourism's ecological damaging impacts, is to understand the conceptually simple but practically quite difficult notion of the carrying capacity. In general, the concept implies that there are limits and thresholds to any kind and type of ecosystem services, products, and uses. The origin of the concept arises from humans' concerns that local, regional, and/or global ecosystems can irreversible be impaired as a result of overuse, and, thus, may reach the limits of its resilience or sustainability, i.e., of its 'carrying capacity' (GFANC, 1997, pp. 77). The concept 'carrying capacity' is not exclusively restricted to ecosystems, but may refer also to social, recreational, cultural, etc. carrying capacities. The application of environmental impact assessments (EIA) may help to identify these limits and thresholds.

The economic valuations of MNSB and MSC, in Figure 2, simplified represented as straight curves, demand a caveat. The argument is that neo-classical economics appears to be naïve by attempting to determine the 'correct' price and/or value of ecosystem's services and products and by placing individual preferences above the collective will of communities. Throughout the various valuations techniques there is a tendency to consider only the use value of consumers, in this case the tourists (Hanley and Spash, 1993, pp. 53). Relatively little importance plays the use value of e.g., the local residents, hosts, or the receiving communities. Thus, the problem is that policy decisions may become distorted in favor of the ecotourism industry. Furthermore, and more fundamentally, the mainstream economic approach is utilitarian in that goods in general, and ecosystem services and biodiversity in specific, only matter to the extent that consumers want them; it is anthropocentric in that only humans are assigning values, and finally, it is instrumentalist in that ecological goods and services are utilized to enhance human satisfaction. This approach emphasizes consumer

sovereignty which allows individuals to be their own judge of what is desirable for them. But what occurs if these individual consumer preferences are unstable, capricious, or easily subject to manipulation, or what if consumers even just do not know their preferences ? Thus, valuing ecosystem's services and biodiversity in economic terms is at best a challenging task.

4. IMPACT AMELIORATION MEASURES

The environmental management literature provides various instruments which are applicable to impact amelioration in the tourism industry: environmental impact assessment (EIA) and eco-auditing (EA) (Hunter, 1994, pp.122). A full discussion of the functioning and operation of these instruments is beyond the scope of this article. Derived from the premise that 'preventive policy is better than reactive policy', these instruments are fundamental in identifying ecological threats and encouraging early adjustments and corrections of current tourist services and practices before irreversible ecosystem damages have occurred. For a number of years EIA and EA have been employed as effective environmental instruments by public and private companies seeking to ensure that their economic activities and/or products do not generate unacceptable environmental damages during its planning and, later on, during its operational phase. EIA of tourist projects has proven to be useful for assessing economic benefits of ecotourism projects and predicting negative impacts on ecosystems and as well on social and cultural conditions at the ecotourism site. EIA, therefore, can be regarded as a complementary procedure to conventional cost-benefit analysis, by providing the necessary quantitative and qualitative information about diverse environmental impacts resulting from ecotourism projects. At present, however, there are no standardized EIA criteria available, but attempts are underway to set up a quick, quantitative procedure for assessing tourist projects, the so-called 'Rapid Assessment Matrix' (Taverne, 1995, pp. 38).

In contrast to EIA, which have the purpose to appraise the environmental stress of certain programs and projects in advance, eco-auditing (EA) has the objective to monitor the environmental impacts while the ecotourism activities are taken place (and after) as well as to determine the efficacy of corrective measures. A fundamental concern of an 'eco-audit' is the constant performance improvement, i.e., the outcome of an eco-audit of an ecotourism project should always be better than the previous one. Ideally, EA should be conducted by a neutral, impartial, and/or governmental certified examiner. Eco-audits are intended also to support and/or improve public-relations between ecotourism operators and the public, and to serve furthermore as an early-warning system recognizing critical environmental situations in advance and therefore to minimize costs of corrective measures. EA, thus, helps to set benchmarks of 'good' tourism practices to be developed and to be maintained, and to establish

environmental -friendly corporate strategies. Environmental auditing, in addition to EIA, has to be viewed as an emerging potentially powerful instrument within the overall comprehensive environmental management strategy of the ecotourism industry.

5. CONCLUSIONS

Ecotourism, obviously, is not a panacea for the conservation and protection of ecosystems and biodiversity, nor can it alone become a economic bonanza to liberate local communities from the pain of poverty. In fact, unless ecotourism is well planned and monitored and, in addition, seeks wide participation of local communities, the pursuit of maximizing economic benefits may actually accomplish the opposite, namely to harm the ecosystem and deprive the local communities even further. But when ecotourism is perceived as a part of a strategy of SD, which incorporates amelioration measures, like EIA and EA, then indeed ecotourism has the potential to enhance the welfare of both the tourists and the visited communities of these natural unique areas.

With these reservations in mind, a concept of ecological sustainable tourism was presented, which seeks to integrate economic and ecological concerns, and, thus, attempts to provide a conceptual framework necessary to encourage a more comprehensive and multi-disciplinary approach to ecotourism research.

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NOTES

- ¹. Examples of different interpretation are given by Butler, who understands AT as up-market tours of high-income tourists, while Becker sees it as rucksack hiking by young persons. (Butler, 1990, pp.40-45, and Becker, 1988, pp. 585-601).
- ². Ecotourism is actually not really such a new form of AT, e.g., the "Wandervogel" movement at the turn of the century, particularly in the German-speaking countries, was such a form of nature-oriented AT. (Mieczkowski, 1995, p. 461).
- ³. If all these financial revenues will ultimately benefit the country/region and its population will depend upon the 'leakage', i.e., how much of the tourism revenues is leaving again the country due to foreign ownership or required imports. A detailed discussion of benefits and costs of ecotourism is provided by Sherman and Dixon. (Sherman and Dixon, 1991, pp. 94).
- ⁴. Other marginal social costs may include socio-cultural costs, like changing traditional life-styles and customs.