SUSTAINABLE TOURISM AS AN ADAPTIVE PARADIGM

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Abstract: Despite owing its origins to the general concept of sustainable development, the subject of sustainable tourism appears to have evolved largely in isolation from the continuing debate on the meaning of the former. This paper argues that such isolation has resulted in the emergence of an overly simplistic and inflexible paradigm of sustainable tourism which fails to account for specific circumstances. It is suggested that the concept of sustainable tourism be redefined in terms of an over-arching paradigm which incorporates a range of approaches to the tourism/environment system within destination areas. These approaches are outlined for a variety of abstract situations with the aim of demonstrating the legitimacy of different perceptions of sustainable tourism. Keywords: sustainable, tourism development, paradigm, approaches. © 1997 Elsevier Science Ltd

INTRODUCTION

Following the popularization of sustainable development as an environmental management concept in the late 80s (WCED 1987), a growing proportion of the tourism research literature has focused on the principles and practice of sustainable tourism development. The term “sustainable tourism” has come to represent and encompass a set of principles, policy prescriptions, and management methods which chart a path for tourism development such that a destination area’s environmental resource base (including natural, built, and cultural features) is protected for future development (Lane 1994). However, this dominant paradigm has recently been criticized as being too parochial, or tourism-centric, in so far as it fails to provide a conceptual vehicle for policy formulation which explicitly connects...
the concerns of tourism sustainability with those of sustainable development more generally (Wall 1993; Wheeller 1993). In other words, the concerns of sustainable tourism have become too far removed from those of its parental concept, resulting in a gap such that principles and policies of "sustainable" tourism do not necessarily contribute to those of sustainable development (Hunter 1995a).

However, far from ending shortly after the publication of the World Commission report (WCED 1987), debate on the detailed interpretation of sustainable development still continues. It is, therefore, a considerable over-simplification of the issues merely to call for sustainable tourism to contribute to the goals of sustainable development without further elaboration of what the latter are or should be. Even if one is broadly content with the currently dominant, tourism-centric, paradigm of sustainable tourism, it is inconceivable that tourism sustainability research has nothing to learn from the ongoing debate which surrounds the interpretation of sustainable development. Conversely, those who wrestle with the abstract convolutions so characteristic of the general sustainable development debate, might benefit from a better understanding of the implications of their efforts for one particular economic sector, such as tourism.

This paper is an attempt to reconnect, conceptually, the concerns of sustainable tourism with those of sustainable development. Following a review of the underpinnings of sustainable development, where areas of debate are highlighted, the paper progresses to consider the implications for the principles and practice of sustainable tourism. A key notion to emerge from this exercise is that different interpretations of sustainable tourism are appropriate under different circumstances. Sustainable tourism should not be regarded as a rigid framework, but rather as an adaptive paradigm which legitimizes a variety of approaches according to specific circumstances.

THE SUSTAINABLE DEVELOPMENT SPECTRUM

In the general academic literature on sustainable development, much attention has recently been given to the description of different perceptions of sustainable development (Mitlin 1992; Murdoch 1993), while attempts to advance the understanding of the concept generally involve discussion of alternative views (Wilbanks 1994). In exploring the details of the concept of sustainable development, many issues have emerged as points of controversy and departure for adherents to different visions of environmentalism (Table 1). These issues have become interwoven in a complex debate on how best to achieve equity of access to natural resources which create human well-being, and in the distribution of the costs and benefits (social, economic, and environmental) which ensue from the utilization of resources (Fox 1994). Equity implies attempting to meet all basic human needs and, perhaps, the satisfaction of human wants, both now (intra-generational equity) and in the future (inter-generational equity). This means the avoidance of development which maintains, creates, or widens spatial or temporal differences in human well-being. Under
Table 1. Major Issues in Interpreting Sustainable Development

- The role of economic growth in promoting human well-being
- The impact and importance of human population growth
- The effective existence of environmental limits to growth
- The substitutability of natural resources (capital) with human-made capital created through economic growth and technical innovation
- The differential interpretation of the criticality of various components of the natural resource base and, therefore, the potential for substitution
- The ability of technologies (including management methods such as environmental impact assessment and environmental auditing) to decouple economic growth and unwanted environmental side-effects
- The meaning of the value attributed to the natural world and the rights of non-human species, sentient or otherwise
- The degree to which a systems (ecosystems) perspective should be adopted and the importance of maintaining the functional integrity of ecosystems

Some interpretations of sustainable development, equity is also applied across species barriers, in particular the inherent right of non-humans to exist above and beyond any utilitarian value imposed by humans (Williams 1994).

Far from providing set guidance on the most desirable relationship between the actions of human societies and the status of the natural world, the concept of sustainable development is malleable and can be shaped to fit a spectrum of world views. These world views encompass different ethical stances and management strategies and, consequently, range from the extreme resource preservationist stance through to the extreme resource exploitative stance (Turner 1991). Interpretations of sustainable development can be correspondingly classified as ranging from very strong to very weak (Turner, Pearce and Bateman 1994). Rather than detail here all the characteristics which accompany different visions of sustainable development, Table 2 summarizes four major sustainable development positions. Some key issues of debate are selected for elaboration.

If there is a growing consensus in defining sustainable development, then it may lie in the frequent rejection of "extreme" paradigms. Such rejection may be based on two roots. The first is an ill-defined perception of a need to become more environmentally-conscious than the traditional resource exploitative (very weak sustainability) position allows. The second is, in the case of the extreme preservationist (very strong sustainability) position, a feeling that reduced economic activity, population levels, and rejection of much recent technological innovation are so far-reaching as to defy concerted action and, perhaps, some inborn drive in the human psyche. However, alongside these vague notions run compelling arguments for a more central vision of the meaning and implications of sustainable development. Criticism can be directed at both the extreme resource exploitative and extreme resource preservationist world views for effectively ignoring the intra-generational equity principle. With the former, the distribution of socioeconomic and environmental development costs
Table 2. A Simplified Description of the Sustainable Development Spectrum

<table>
<thead>
<tr>
<th>Sustainability Position</th>
<th>Defining Characteristics</th>
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<tbody>
<tr>
<td>Very Weak</td>
<td>Anthropocentric and utilitarian; growth oriented and resource exploitative; natural resources utilized at economically optimal rates through unfettered free markets operating to satisfy individual consumer choice; infinite substitution possible between natural and human-made capital; continued well-being assured through economic growth and technical innovation</td>
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<tr>
<td>Weak</td>
<td>Anthropocentric and utilitarian; resource conservationist; growth is managed and modified; concern for distribution of development costs and benefits through intra- and inter-generational equity; rejection of infinite substitution between natural and human-made capital with recognition of some aspects of natural world as critical capital (e.g., ozone layer, some natural ecosystems); human-made plus natural capital constant or rising through time; decoupling of negative environmental impacts from economic growth</td>
</tr>
<tr>
<td>Strong</td>
<td>(Eco)systems perspective; resource preservationist; recognizes primary value of maintaining the functional integrity of ecosystems over and above secondary value through human resource utilization; interests of the collective given more weight than those of the individual consumer; adherence to intra- and inter-generational equity; decoupling important but alongside a belief in a steady-state economy as a consequence of following the constant natural assets rule; zero economic and human population growth</td>
</tr>
<tr>
<td>Very Strong</td>
<td>Bioethical and ecocentric; resource preservationist to the point where utilization of natural resources is minimized; nature’s rights or intrinsic value in nature encompassing non-human living organisms and even abiotic elements under a literal interpretation of Gaianism; anti-economic growth and reduced human population</td>
</tr>
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Source: Adapted from Turner, Pearce and Bateman (1994).

and benefits is largely immaterial (Turner 1991), following a path determined and dedicated, through traditional free market principles, to fulfilling individual (perhaps largely Western) consumer choice. With the latter, the anti-economic growth position appears to deny the world’s poor the opportunity of meeting basic needs through economic growth; this position might be described as a new form of (eco)facism (Pepper 1984). However, a counter argument to this charge can be made on the grounds that economic growth has not helped the great majority of the poor in the Third World (Trainer 1990).

Debate in the “center ground” of the sustainability spectrum largely revolves around the compatibility of sustainable development with continued economic growth. Those who advocate a strong interpretation of sustainable development reject the possibility of
limitless economic growth (Daly and Cobb 1989), arguing for a steady-state global economy on the grounds of a perceived need to preserve natural resources and the contribution of ecosystems to maintaining the functional integrity of natural processes (Table 2). Here, most, or at least many, natural resources are regarded as critical natural capital and sustainable development is regarded as requiring adherence to the constant natural assets rule (Pearce, Markandya and Barbier 1989), such that the total stock of natural capital assets should remain constant, or rise, through time in terms of quantity and quality. For non-renewable resources this implies minimizing loss for future generations through greater efficiency of use, reuse and recycling, where possible. Likewise, the utilization of renewable resources (such as fresh waters, soils, natural ecosystems, etc.) should be restricted to operate within the limits imposed by sustainable yield and/or carrying capacity.

Alternatively, for advocates of weak sustainable development (Pezzey 1989), a greater degree of substitution is possible between natural capital and human-made capital (encompassing economic wealth, built goods, technologies, and the human knowledge base). However, some aspects of the natural environment, such as the stratospheric ozone layer, may be regarded as critical natural capital and, therefore, worthy of absolute preservation. Thus, in general terms, it is enough to maintain, or increase, the total (natural plus human-made) capital stock through time. Essentially, this constitutes a managed and modified global economic growth paradigm so that economic growth can continue if decoupled from major unwanted environmental side-effects via a range of regulatory and market intervention management tools (Table 2; Turner, Pearce and Bateman 1994).

Something of the contradictory nature of this ongoing debate in the center ground of the sustainable development spectrum can be appreciated by reference to the perceived role of natural resources in fulfilling the intra-generational equity aim of sustainable development. For example, Pearce, Markandya and Barbier (1989) argue that this aim is most likely to be achieved by adherence to the constant natural assets rule for the poor of the Third World, because in such areas ecosystem productivity is essential to human livelihoods and environmental degradation has a more direct effect on well-being than in rich areas of the First World. Alternatively, Karshenas (1994) uses the link between poverty and environmental degradation to justify a more growth-oriented (weaker) vision of sustainable development, arguing that below certain levels of economic growth, and in the absence of some required substitution between natural and human-made capital, environmental degradation becomes forced.

Certainly, the World Commission (WCED 1987) recognized a need for economic growth in poverty-stricken areas of the Third World in order to meet basic needs. The question of whether or not continued economic growth can be justified in areas of developed countries where such needs are already met and greater well-being largely equates to the satisfaction of wants (e.g., more vacation opportunities), has become contentious, at least among academics. The absence of any preclusion to continued economic growth in developed countries under
the vision of sustainable development described in the World Commission report, may explain the ease with which sustainable development has become adopted by Western politicians and institutions of economic investment and resource allocation. Thus, the interpretation of sustainable development most frequently presented in governmental policy documents in the West can be described as a weak sustainability position entailing a resource-conservationist, managed growth world view (Turner 1991; Wilbanks 1994). Brundtland (1994), who chaired the 1987 World Commission, has recently endorsed a growth-oriented, weak interpretation of sustainable development by arguing against any suggestion that sustainable development requires a decline in the standard of living for industrialized countries as a means of bringing total global consumption to a sustainable level.

However, while flexibility of interpretation may be a source of concern for those who seek or propose a definitive, universally applicable vision of sustainable development for political purposes, others recognize the inevitability of diversity. Indeed, some recent work has highlighted the value which flexibility can bring in terms of understanding human/environment interactions—Healey and Shaw (1994) with reference to land-use planning—and in finding the most appropriate development pathway to follow under often widely different social, economic, and ecological settings (Rees and Williams 1993). In short, different interpretations of sustainable development will have applicability according to circumstance, involving a different set of trade-off decisions between the various components of sustainability. Turner, Pearce and Bateman, for example, acknowledge that "several levels of greenness can coexist within one individual depending on the situation and context under study" (1994:30).

Tourism and Sustainable Development

Given the likelihood that tourism will become the largest single sector of world trade early in the next century, the potential of tourism to contribute to sustainable development (however defined) from local to global scales is substantial. Since tourism so often relies on high quality and stimulating destination environments in terms of natural, built, and cultural attributes, one might expect tourism researchers to be at the forefront of the debate concerning the meaning and implications of sustainable development. But as argued below, this is not the case and the following observation by Lanfant and Graburn, indicates that the divorce of tourism research from the evolution of general sustainable development thinking occurred some time ago:

At Zakopane in August 1989, the members of the Academy [International Academy for the Study of Tourism] considered Alternative Tourism as a means to contribute to the 'sustainable development' of a society, whereas by October at the WTO meeting in Tamanrasset, Alternative Tourism had become co-opted as a way to ensure the sustainable development of tourism itself. That should give us something to think about (1992:112).

Unfortunately, with a few exceptions, there is little evidence in the tourism literature that many researchers or policymakers responded
to the prompting of Lanfant and Graburn. Any such lack of effort cannot be blamed on the absence of a suitable theoretical framework. As Eadington and Smith (1992) point out, the positions or platforms formulated by Jafari (1989) (advocacy, cautionary, adaptancy, and knowledge-based) provide a conceptual basis for the study of mainstream and alternative tourism. These positions could easily have been used as the starting point for detailed analyses of different interpretations of sustainable development and formulations of sustainable tourism within these interpretations. However, as suggested by Hunter (1995a), a combination of the complexities of sustainable development, the difficulties of operationalizing any kind of change in the tourism system, and an understandable tendency to approach any new idea from a perspective which is dominated by the familiar concerns of one particular field, can all too easily facilitate a highly parochial approach to the construction of a "new" paradigm of sustainable tourism. Thus, the perception grows that the general sustainable development debate is somehow external to the process of interpreting sustainable tourism, reducing the potential for advancement through the exchange of ideas, increasing the confusion over the relationship between sustainable tourism and sustainable development, and (as argued below) producing a dominant theoretical interpretation of sustainable tourism which lacks clarity and depth.

Tourism researchers who have attempted to look closely at the general concept of sustainable development frequently reject or berate "extreme" interpretations. McKercher (1993a), for example, simplifies views of sustainable development into two camps, economically sustainable development and ecologically sustainable development, and proceeds to outline the threat to tourism's survival and continued growth should either of these approaches be imposed on the tourism sector. McKercher concludes by arguing that for tourism to survive sustainability, the industry must become a proactive leader in shaping the debate on sustainability. Ironically, however, McKercher still appears to see sustainable tourism as concretely defined in terms of the need to maintain tourism's growth, and thus not amenable to other interpretations which might flow from the re-engagement of tourism sustainability research with that of sustainable development. More conventionally, Farrell (1992) interprets sustainable development as the need to find a balance in the development system between economy, environment, and society, such that no single aspect is regarded as more important than the other. Similarly, Owen, Witt and Gammon provide the following interpretation:

The concept of sustainable development need not be in conflict with the notion of economic growth. Proponents of sustainable development accept that economic vitality is essential in order to combat poverty, improve the quality of life and drive the process of environmental protection. However, balances have to be struck in order to ensure that growth does not make excessive demands on natural resources. Furthermore, proponents of sustainable development do not claim that this is a prescription for doing nothing or for standing in the way of change (1993:463).

In the context of much of the current general debate on sustainable
development, this vision appears rather naive, skates over many contentious issues, and most closely resembles a weak sustainability approach. However, at least a vision is offered. All too frequently, sustainable tourism is discussed without reference to sustainable development, or the latter is defined solely as meeting today’s needs without compromising the ability of future generations to do likewise (WCED 1987), as if this somehow provides an end point for discussion rather than the beginning (Butler 1991; Forsyth 1996; Klemm 1992).

Interpreting Sustainable Tourism

The tendency of researchers to avoid detailed theoretical analysis is less marked when it comes to defining sustainable tourism itself, although such efforts are usually still far from wholly illuminating. It is not uncommon to find published work in which either tourism’s sustainability is mentioned but never explained (as if the reader must have an intuitive understanding of what is meant, or the meaning is so obvious as to render any elaboration unnecessary), or sustainable tourism is addressed in vague, headline form as tourism development which is integrative, harmonious, compatible, balanced, or synergistic in its relationship with the environmental resource base (Butler 1991; Dearden and Harron 1994; Dowling 1991; Economic Intelligence Unit 1991; Klemm 1992; May 1991). Other studies do offer greater depth by deconstructing the tourism/environment system at destination areas, thereby outlining the factors which must be considered in sustainable tourism.

This approach often leads to the production of a (wish) list of desirable features or principles which can be summarized as the need to satisfy the needs and desires of tourists (demand), the needs and desires of private and public tourism industry operators (promotion/supply), the needs and desires of the local host community, and the protection of the (natural, built, and cultural) resource base for tourism (Bramwell and Lane 1993; Catter 1993; Cronin 1990; Forsyth 1996; Muller 1994; Unwin 1996). Implicit in this kind of list is the rejection of extremes. In the words of Pigram, “Ecological determinism alone is no more defensible than economic determinism” (1990:6). Thus, the dominant perception of sustainable tourism is a destination area tourism/environment system in balance, where none of the above aspects can be allowed to dominate (Farrell 1992; Muller 1994).

However attractive the notion of sustainable tourism as balanced development, difficult questions remain to be addressed. For example, what does protecting the environmental resource base really mean? Many aforementioned authors appear to use the words “protection”, “conservation”, and “preservation” interchangeably and with no explicit reference to the particular resources (e.g., renewable or non-renewable natural resources) to be protected, conserved or preserved. In the context of the preceding debate on interpretations of sustainable development, such lack of detail and clarity appears increasingly inadequate. Furthermore, despite forceful reminders to the
contrary (Butler 1991; McKercher 1993b), the illusion still apparently persists that tourism development can occur in a manner which absolutely preserves natural resources.

In reality, it is impossible to imagine any kind of tourism activity being developed and then operating without in some way reducing the quantity and/or quality of natural resources somewhere. One could assume that those who talk of preserving the natural environment actually mean conserving it, and that protection means trying to create a situation where tourists and tourism operators behave within carrying capacity and sustainable yield limits for the utilization of renewable resources and in ways which reduce the consumption of non-renewable resources. Yet, questions still remain. For example, does reducing the consumption of non-renewable resources mean minimizing use? How far should a precautionary approach to development (O’Riordan 1995) which risks exceeding carrying capacity limits be taken, especially as determining carrying capacity, sustainable yield, or a safe minimum standard (Pigram 1990) involves considerable scientific uncertainty?

Addressing such questions is fast becoming the norm in the general sustainable development literature. The same cannot be said for the majority of work published under the banner of sustainable tourism, where much of the detail of sustainability remains hidden behind the rhetoric of balance, or obscured by a variety of labels, such as ecotourism or alternative tourism, which may amount to little more than an attempt to give the impression of environmental stewardship (Butler 1991; Cater 1993; Wheeller 1993). Furthermore, recent analyses of the meaning of environmental sustainability in the context of land-use planning suggest that a focus on balance reflects an anthropocentric and utilitarian ethos, indicative of a bias towards a weaker interpretation of, and approach to, sustainable development. In the words of Healey and Shaw,

> preference for the conception of balances and trade-offs not only sits more comfortably with economic priorities, it is also more easily subverted by imperatives of economic growth in that environmental limits to a trade-off are not set (1994:434).

Thus, it could be argued that the currently dominant perception of the meaning of sustainable tourism favors a growth-oriented (weaker) vision, albeit with growth managed to take more account of the environmental resource base through the use of techniques such as environmental impact assessment (Hunter 1995b). Given that tourism has always involved the commodification of nature and other aspects of a destination area’s environment as a product which is sold to the tourist (Lanfant and Graburn 1992), this bias towards a weaker stance is not surprising.

However, is this the only valid conceptualization of sustainable tourism? Munt (1992) is unusual in recognizing explicitly that different interpretations of sustainable tourism may be appropriate for developed and developing countries. Writing specifically with reference to new forms of alternative tourism, Munt suggests that in indebted developing countries an economic imperative might be
emphasized, in opposition to other (stronger) interpretations of sustainable tourism based upon a "quintessentially Western environmentalism" (1992:213). He goes on to argue that divergence in the interpretation of sustainable tourism might be indicative of a coming crisis in attempts to produce a greenprint for tourism in developing countries. Although this argument is of obvious concern in terms of global sustainable development, it is at national, regional, and local levels where attempts to operationalize sustainable tourism tend to appear most immediately relevant, although by no means easy (Wheeller 1993).

With this in mind, many researchers have recognized, through the use of zoning for example, that the magnitude and type of tourism development should vary from location to location according to environmental characteristics (Dowling 1993; Lane 1994; Sanson 1994; Wall 1993). However, the need for such flexibility has generally not been contextualized broadly enough to engage with the full spectrum of views on sustainable development. Additionally, few authors consistently and explicitly consider both the potential role of other sectors and activities in also contributing to sustainable development (a truly holistic approach), and question the assumption that tourism always has a "right" to develop in some form. Finding appropriate forms of tourism development according to the characteristics of destination areas must not end with policies such as proactive zoning; sustainable tourism is also about how tourists and tourism operators actually behave and function in relation to the utilization of natural resources.

Towards an Array of Theoretical Interpretations

Perhaps the most appropriate way to perceive sustainable tourism is not as a narrowly-defined concept reliant on a search for balance, but rather as an over-arching paradigm within which several different development pathways may be legitimized according to circumstance. In other words, there may always be a need to consider factors such as demand, supply, host community needs and desires, and consideration of impacts on environmental resources; but sustainable tourism need not (indeed should not) imply that these often competing aspects are somehow to be balanced. In reality, trade-off decisions taken on a day-to-day basis will almost certainly produce priorities which emerge to skew the destination area based tourism/environment system in favor of certain aspects. Even over the long term, across several generations, it may be appropriate to abandon any notion of balance in favor of a skewed distribution of priorities. What is crucial, is that tourism development decision-making should be both informed and transparent.

In this vein, four possible sustainable tourism approaches, based loosely on interpretations of sustainable development, can be outlined and illustrated, in an abstract sense. These are advanced here with the hope of stimulating debate, rather than as solid prescriptions. The reader is reminded that all of these approaches are predicated
on the belief that sustainable tourism should be about more than just considering tourism as such. The remit of sustainable tourism is extended to consider the role of tourism in contributing to sustainable development more generally.

1. **Sustainable Development through a “Tourism Imperative”**. This approach could be seen as going as far as is possible towards a very weak interpretation of sustainable development. It is heavily skewed towards the fostering and development of tourism, and would be primarily concerned with satisfying the needs and desires of tourists and tourism operators. The approach might be most easily justified under three sets of specific circumstances, although tourism would be a new phenomenon, or at least poorly developed, in each scenario. First, in areas where there exists a strong and demonstrable link between poverty and environmental degradation which is characterized by a self-reinforcing cycle. Second, where tourism activity would represent a real improvement upon more overtly degrading current economic activities (e.g., uncontrolled logging, forest clearance for agriculture, or minerals extraction), especially if these bring little benefit to local communities and tourism would create more well-being for more people. Third, where tourism development would pre-empt the utilization of an area or its resources for other, potentially more degrading, activities.

In all three circumstances, tourism could provide the means for some degree of environmental (including local community) protection and environmental education, with tourism-related side-effects resulting in the reduced loss of natural resources in terms of quantity and/or quality. This interpretation of sustainable tourism might itself involve the substantial loss of natural resources. However, as long as this loss is less than would otherwise occur and does not affect the ability of the area to attract tourists, then circumstances are such that there is no immediate need to aim for tourism development which is particularly sensitive to the local environment, seeks to minimize the consumption of non-renewable resources, or operates within the carrying capacity of local renewable resources.

2. **Sustainable Development through “Product-Led Tourism”**. This approach may be equated in many ways with a weak interpretation of sustainable development. The environmental side of the tourism/environment system at destination areas may well receive consideration, but is secondary to the primary need to develop new, and maintain existing, tourism products, with all this entails in terms of marketing and the enablement of tourism operators so that growth in the tourism sector can be achieved as far as is feasible. A wide range of environmental and social concerns may be seen as important within the destination area, but, as a general rule, only in so far as these act directly and in an immediately apparent sense to sustain tourism products. This approach might be most easily justified in relatively old and developed tourism enclaves or areas, especially if tourism has come to dominate the local economy. This is because without the wealth generated by tourism, the well-being of local
communities might be compromised to an unacceptable degree, even beginning a spiral of poverty and further environmental degradation [see, for example, English Tourist Board (1991) with reference to the future of small English seaside resorts]. In such places, alteration of the natural environment may well already be extensive, and attention might focus on actions to beautify the local environment and maintain or improve the built assets (including indirect supporting infrastructure such as roads or sewage treatment plants) created by utilizing natural resources. These actions might then enable new, perhaps more “up-market”, tourism products to be developed, given an appropriate development climate created through public/private sector partnerships.

Illustrative examples of this perception of sustainable tourism can be found in the case studies of Majorca (Morgan 1991), Conwy in Wales (Owen, Witt and Gammon 1993), and Languedoc-Roussillon in France (Klemm 1992). If tourism can be sustained in this manner in specific locations, through a primarily economic approach, this might carry the additional benefit of avoiding tourism-related damage to nearby pristine locations where tourism is either unwanted by locals and/or would occur in environmentally sensitive locations. Thus, environmental protection within a wider geographical region may actually depend on the continued success of tourism in popular and well-defined tourism centers. However, an enlightened vision of tourism development under this approach, might also see national or local governmental authorities earmarking some portion of tourism revenues to decouple the local economy slowly from reliance on tourism towards greater diversity and, therefore, resilience to external change; a position in keeping with many interpretations of sustainable development more generally.

3. Sustainable Development through “Environment-Led Tourism”. In this approach, decisions are made which skew the tourism/environment system towards a paramount concern for the status of the environment. Perhaps most applicable in areas where tourism is non-existent or relatively new, the aim would be to promote types of tourism (e.g., ecotourism, but as more than a mere label) which specifically and overtly rely on the maintenance of a high quality natural environment and/or cultural experiences. The goal would be to make the link between tourism success and environmental quality so strong that it is transparent to all interested parties what the risks to tourism’s continued survival would be should tourism not be strictly controlled and ultimately limited to within the carrying capacity or sustainable yield of the least robust aspect of the environmental resource base. Arguably, there is still a very strong product focus with this approach, but it differs from product-led tourism in prioritizing environmental concerns over marketing opportunities. An example which reflects some aspects of the environment-led interpretation of sustainable tourism can be found in the work of Sanson (1994) with respect to ecotourism in sub-Antarctic islands.

However, the environment-led approach must entail more than finding the most appropriate form of tourism for a particular area, or
even zoning to limit access to some sites. Under this interpretation of sustainable tourism, opportunities to work in harmony with, rather than compete against or exclude, other locally-important economic sectors would be seized, as would opportunities to create touristic experiences which highlight environmentally-conscious living through reducing impacts on the immediate and wider environment. Small tourism centers might, for example, promote themselves on the basis of the efficient use of water and energy resources and through materials recycling. Conceivably, environment-led tourism may also be an appropriate strategy in larger, developed centers or areas seeking a new market niche, where promotion is based on genuine and visible attempts to reorient tourism activities along more ecocentric lines. Reorientation might be attempted through a variety of regulatory and/or market based techniques designed as "sticks and carrots" to change the behavior of tourism operators and tourists themselves. The importance of regulation and encouraging the greater use of waste-free and low-waste technologies by tourism businesses has recently been highlighted by Lukashina, Amirkhanov, Anisimov and Trunev (1996) in the more environmentally-conscious development of the Sochi region of the Black Sea coast in Russia.

4. Sustainable Development through "Neotenous Tourism". This, very strong, sustainability approach is predicated upon the belief that there are circumstances in which tourism should be actively and continuously discouraged on ecological grounds. In some places, including nature reserves of national or international importance, tourism growth should be sacrificed for the greater good. Tourism can never be totally without environmental impacts; but one can take the precautionary approach to environmental protection to a point where the functional integrity of natural ecosystems at the destination area as a whole is protected as far as is feasible. Absolute preservation may also be possible at some exceptionally sensitive sites in the sense of maintaining an ecologically viable range of habitats and species [see, for example, Hall and Wouters (1994) with respect to nature tourism in the sub-Antarctic].

Clearly, neotenous tourism could only apply in areas largely devoid of tourism activity. The word "neotenous" implies that tourism activities would be limited to the very early, juvenile, stages of tourism development through, for example, the use of permits for access, or through land-use planning development control to prevent the expansion of tourism-related infrastructure. Borrowing from Butler's (1980) tourist-area cycle of evolution, the aim would be to keep tourism development to exploration or involvement stages, perhaps dominated by a small number of individual adventure travelers, small groups of tourists, or those engaged in legitimate study. Likewise, in keeping with a very strong sustainability position, the aim would be to minimize the utilization of renewable and non-renewable resources within these areas.

Those who hold a narrow, inflexible, vision of sustainable tourism in which sustainability is equated to spreading tourism activity in space and time, might not recognize neotenous tourism as a form of
The isolation of sustainable tourism research from the continuing debate on the meaning and implications of sustainable development
more generally has resulted in the emergence of a dominant paradigm of the former which is shallowly defined. However, attractive it is to view and describe sustainable tourism as a destination area tourism/environment system which balances often competing aspects, such rigidity offers little in the way of guidance which is sensitive to location-specific factors, such as environmental characteristics and the extent and nature of existing tourism development. Sustainable tourism research would benefit from a closer inspection of the broader sustainable development literature which frequently demonstrates greater flexibility in charting potential development pathways. It could also benefit from a more penetrating appreciation of the complexities involved in human/environment interactions allowing for more detailed analyses of the interactions between economic sectors, the degree of precaution to be adopted in environmental management, potential environmental management techniques, and the extent to which these should be employed according to the degree of efficiency sought in the utilization of natural resources. A conceptual reconnection with general sustainable development research offers greater maturity for the formulation of policies of sustainable tourism.

Based upon redefining the concept of sustainable tourism according to the current spectrum of sustainable development interpretations, at least four interpretations or models of sustainable tourism can be advanced as conceptual vehicles for tourism development policy formulation. Although described in abstract terms, it is suggested that these constitute more meaningful guidance for tourism development given the variety of antecedent conditions at actual or potential destination areas. The sustainable tourism approaches can be labeled as tourism imperative, product-led, environment-led, and neotenous tourism. In the most simplistic terms, one can consider these in terms of how tourism might contribute to distinctive positions within the sustainable development spectrum, ranging from very weak to very strong interpretations.

This paper has been written, however, not so much as a means for the postulation of concrete prescriptions for sustainable tourism, but more as an attempt to open up much needed debate on how sustainable tourism should be considered under different circumstances. The key point to emerge from the preceding analyses is that sustainable tourism must be regarded as an adaptive paradigm capable of addressing widely different situations, and articulating different goals in terms of the utilization of natural resources. Clearly, much more clarification is still required, not least, who should decide on the most appropriate pathway of sustainable tourism development? It is extremely difficult to imagine the formulation and implementation of any approach to sustainable tourism in the absence of strong local (including regional) authority planning and development control, and without the involvement of local communities in the planning process to some degree. This latter point may, however, be particularly problematic given that ecological conservation objectives may not be compatible with the desires of local communities (Stocking and Perkin 1992) and the various levels of public participation possible (Pretty and Pimbert 1995). It may well be that different levels of community
involvement in tourism development decision-making are appropriate for different pathways of sustainable tourism.

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