GREEN TOURISM ENTREPRENEURS: A GLOBAL FORCE FOR LOCAL CHANGE

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ABSTRACT

The European Union has conducted a feasibility study into an ecolabel for hotels. If implemented, this ecolabel will be the first in a service-industry sector. One of the benefits of a European ecolabel for hotels is that it would overcome the confusing variation in objectives of the many existing environmental performance schemes for hotels. In 1999, eco-tip identified forty such schemes (http://www.eco-tip.org/). However a hotel ecolabel is only a step towards realising the unique potential of tourism for greening not only for tourism business units but tourism destinations as a whole.

One problem with standardising environmental performance by such as an ecolabel is that entrepreneurs are not given sufficient incentive to go beyond the requirement of the particular scheme. The real loss then is that the ingenuity, creativeness and determination of tourism entrepreneurs have been under utilised. Eco-labels need to be introduced together with other incentives.

This paper argues that the greening of the tourism industry and tourism destinations will be most effectively achieved by entrepreneurs. With appropriate opportunities and incentives to develop new products, new markets and new distribution systems tourism business units can lead communities to greener ways. The arguments of this paper are derived from an action research study of developing a sustainable tourism environmental protection system on three European islands, Harris in Scotland, Ponza in Italy and Samos in Greece.

The paper proceeds by introducing the distinguishing features of the business plans being developed for hoteliers and local authorities on the study islands. The crux of each plan is the equivalence between the quality of the tourism "product" and the environmental and social conditions of the destination as a whole. The plans exploit the competitive business advantages of new greener tourism products, markets and distribution systems. The benefits of the approach are described including the ability to educate and motivate small, medium and micro sized enterprises as well as communities and tourists themselves. The framework within which such entrepreneurial activities will flourish is then examined. This framework necessitates working partnerships between entrepreneurs, local authorities, local communities and the tourists themselves.

Finally, the generic potentialities of the approach are reviewed. It is argued here that the approach is not only suitable for applications within all areas of the global tourism industry but also in other sectors in which a clear competitive advantage exists for exceptional environmental and social improvements.

<u>Key Words</u>: eco-labels, European Commission, sustainable tourism, accounting for sustainable development.

Sustainable development will not be achieved unless the main thrust of our development and industrial activities are **positive** towards social and ecological systems as well as towards economics. In tourism, this integration of objectives is relatively easy to envisage ~ if not to achieve.

In order to achieve this integration, this paper argues that a new operating context for entrepreneurs needs to be established. Without this new context, actions taken to improve the sustainable development performance of industry will at some point or another become a restrictive practice.

The particular case of changing the operating context for tourism entrepreneurs is explored in this paper. First of all, a definition of sustainable tourism is provided and principal tourism impacts are identified. A summary is then provided of the European Union (EU) initiative to develop and implement their first service-sector eco-label that is to be for tourist accommodation. The development of this eco-label has recently "passed" a feasibility study stage. The debates regarding the form of this eco-label are ongoing and they are considered in this paper.

The proposed operating context for Green Tourism Entrepreneurs is then provided. This is based on the results of the EU funded STEPS research project. A conceptual change is proposed to guide such entrepreneurs and an information systems tool is developed.

Finally, opportunities for future research are identified and conclusions are drawn.

Sustainable Tourism

Tourism is one of the world's most important and dynamic economic sectors. Transporting more than 528 million people internationally. With more than 260 million employees and annual investments in capital projects of more than US\$800 billion. Tourism accounts for about 10.7% of the world GDP. By 2005, it is estimated that the industry will increase, generating US\$7.2 trillion in gross output, creating employment for 305 million people, producing 11.4 % of the world GDP, investing US\$ 1,613 billion in new facilities and equipment, and contributing more than US\$ 1,369 billion tax revenue (UNEP).

Specifically in the EC, tourism represents 5.5% of GDP, around 5% of export earnings and 6% of total jobs, including more than 7 million full time jobs. The development of the tourist sector is diverse in the Community. Over the last decade tourist activity has gone up by an average of 14% of total nights spent. The increase is much more than average in the southern part of the EC (UNEP).

The Mediterranean is the leading destination in the world, attracting 30% - 35% of the world tourism. There are 135 million people living around the basin, yet 160 – 183 million tourists arrive annually, bringing US\$ 116,000 million dollars in revenue each year. The number of tourist in the Mediterranean region could grow to as many as 380 – 760 million in the year 2025, depending on economic growth rates. This development comes in addition to the predicted demographic changes in the area. 160 million of these tourists in the year 2000 and 260 million in the year 2025 would visit Mediterranean coastal areas, as compared to 55 million in 1984 and 100 million in

1990. Such increases require twice the area by the year 2000 alone, the solid waste and water generated could more than triple by the year 2025 (UNEP).

Tourism is an ambivalent phenomenon: it can contribute reaching socio-economic and cultural objectives but it can also cause environmental and social degradation. Given its scale and global extent, it is inevitable that tourism has significant environmental impacts. These impacts are related to resource consumption, pollution, waste generation and impacts from transport. At the same time, beaches, mountains, rivers, forests and biodiversity make the environment a basic resource upon which the tourism industry depends in order to thrive and grow, and threats to the environment therefore threaten the viability of the tourism industry.

A Definition of Sustainable Tourism

Many tourism products are inextricably linked to healthy environmental and social systems. From this observation, sustainable tourism may be defined as the kind of tourism that is developed and maintained in an area (environment, city, country) in such manner and at such scale that it remains viable over an indefinite period for present and future generations, and does not degrade or alter the environment (human and physical), in which it exists, to such a degree that it prohibits the successful development and well being of other activities and processes.

If care is not taken, tourism itself will gradually destroy the environmental and social resources upon which it depends. Hence, even from a "purely" business perspective, tourism needs to be based on the criteria of sustainability. It should be ecologically bearable; economically viable; and ethically and socially equitable for local communities.

Tourism Impacts

Economically, tourism creates jobs for local people and brings money to a country, but many tourists like their home comforts, and it is often necessary to import a large part of their requirements, so that much of the tourist's money may leave the country again in payment for these imports. Furthermore, if resorts and hotels have been financed by foreign investors, the investors will want to export profits. Ultimately, the remaining local benefits of tourism may be small indeed.

Negative social impacts of tourism may be observed, for example, when local people work in the tourist industry as servants, house maids, waiters, gardeners and other low-paid manual jobs and they feel a sense of inferiority. At the same time the tourists come from other societies with different values and lifestyles, and because they have come seeking pleasure, they spend large amounts of money in a short space of time and hence emphasise their economic superiority over the local, low-paid workers. Ultimately, local people have a view only of the recreational part of foreign lifestyle; sometimes they try to emulate the foreign, recreational lifestyle and thus be misled leading to a loss of cultural identity.

Other important tourism impacts may be summarised as follows: Effects of Pollution

• Air pollution: produced by cars, motorcycles, boats and planes utilised by tourists;

- Water Pollution: from the discharges of hotels, restaurants and other tourism facilities in the absence, malfunction or inadequacy of sewage treatment plants;
- Land pollution: produced by littering or the absence or inadequacy of waste disposal facilities;
- Noise pollution: created by the vehicles used for recreational purposes and by tourists themselves in leisure activities;

Loss of natural landscape

- The construction of housing, facilities and infrastructure for tourists may contribute to the loss of natural landscape and together with pollution are responsible for the disappearance of some of the flora and fauna;
- Valuable natural sites may be unavailable to public access because they are owned by hotels or individuals;
- Historic sites and monuments may be degraded;

Effects of congestion

• High concentrations of tourists causes congestion on roads, beaches, infrastructure, and resorts leads to the environmental damage and detracts from the quality of life;

Effects of competition

 Tourism competes with traditional activities and frequently causes their decline (for example less land under cultivation and less manpower means agriculture).

The Proposed European Eco-label for Tourist Accommodation

The development of a service sector eco-label is significant beyond the tourism sector since it could be developed and applied to all management/development activities. Furthermore, the eco-label is likely to incorporate regular environmental performance measures (such as resource efficiency indicators) but also measures of carrying capacity¹. (The Council of Europe adopted regulation N° 880/92 on 29 June 2000 and this allowed for the extension of the eco-label scheme to services.)

The European Commission, Directorate General Environment, commissioned a feasibility study into developing and implementing the first service-sector eco-label that is to be for tourist accommodation. This feasibility study ('FEMATOUR': Feasibility and Market study for a European Eco-label for tourist accommodations) was conducted by Dutch and Spanish consultants: Consultancy and Research for Environmental Management (CREM) in the Netherlands and CH2M-HILL in Spain (CREM and CH2MHILL 2000).

The FEMATOUR study was to:

"To carry out a feasibility and market study, focusing on the development of a European Eco-label in the tourist sector, with the emphasis on the service product group 'tourist accommodations' and its sub-groups." (*Ibid.*, p. I).

The main findings of the study are as follows:

• Environmental aspects still play a minor role in the selection of a destination and tourist accommodation:

¹ The maximum population of a given species which a particular habitat can support indefinitely, (Catton 1982, p. 272).

- Consumers are especially interested in 'green' environmental aspects (natural characteristics, rural areas, presence of water and woods) and aspects related to health, safety, peace and quiet and quality of air, water and surroundings (including absence of litter) whilst most consumers are <u>not</u> very interested in 'grey' environmental characteristics of accommodations, like water savings, energy savings etc.;
- The majority of consumers conceive an eco-label as being a desirable and appropriate instrument to communicate environmental performance;
- Consumers are not likely to ask separately for environmental information so
 that an eco-label for tourist accommodation is best communicated through
 existing channels such as tourist information services, the Internet, television,
 travel agencies, tour operator guides and information facilities at tourist
 accommodations;
- Tour operators are likely to play a major role in the marketing of eco-labels, since the majority of consumers choose from the products presented by tour operators.

All in all, the FEMATOUR study concluded that there is a need for a European ecolabel on tourist accommodation and also that such an eco-label is indeed feasible. At this point, the European Commission has requested that the member states decide on the next steps. Given the wide divergence in kinds of tourist accommodation as well as significant differences between the attractions of resort across Europe, it will be difficult for a single institution to put together a scheme that is acceptable to all parties. Indeed, some resistance to the proposed scheme was identified within the FEMATOUR study as arising from HOTEC (the association of Hotels, Restaurants and Cafes in Europe). HOTEC pointed out that there are many tourist accommodation eco-labels already in use within Europe and that a single pan-European scheme brings no added value.

Whilst the FEMATOUR study did not really respond to the HOTEC objection, the study did identify conditions for the scheme that are required to satisfy a range of other stakeholders. These conditions include:

- The label has to be voluntary;
- The label should connect to existing environmental initiatives (e.g. existing labels and certification systems), networks and structures;
- Typical regional or local characteristics and business characteristics must be taken into account;
- The label may not be discriminating to small and medium enterprises who may not have the financial means nor the scale to comply with stringent environmental criteria;
- Regular monitoring and an efficient, competent, reliable and independent control body has to be guaranteed;
- Criteria will have to be public and people must be able to understand them;
- Social criteria should also be part of an Eco-label (to gain support of Non-Government Organisations).

In addition to these conditions, the study also observed that any scheme must be capable of allowing for local variations, which in Europe are considerable going from the Artic Circle to the Aegean Sea. The importance of local variations is further

emphasised by the report's recommendation that "carrying capacity" is one of the criteria for the proposed eco-label. Carrying capacity may well be very difficult to interpret in each local context but it is considered to be an essential criteria for the maintenance of credibility. Local variations, carrying capacity and social criteria mean that the proposed tourism accommodation eco-label is very different from previous, product-focused eco-labels. It is because of the complexity and unavoidable local-interpretation of these additional criteria that the report proposes a pragmatic 'learning by doing' approach involving a mix of mandatory standards and optional standards combined with a scoring system.

During the September 2000 workshop hosted by the EC to open discussion about the FEMATOUR study, further objections were raised. For example, the study recommends that tour operators are likely to be key players in marketing the eco-label but this was strongly opposed by HOTEC who argue that tour operators are far too influential as it is. Furthermore, HOTEC oppose a European Eco-label altogether because they fear that their members (mainly small and medium sized companies) do not have the resources to comply with such a scheme and that a precise European-wide scheme is not practically possible. HOTEC prefer to rely on the many local eco-label schemes already in existence. The Greek delegation opposed the proposal that hostels and campsites are selected as the first trial product groups for the eco-label. Hostels and campsites were proposed by the study as first-trial product groups because these groups already have established eco-label schemes (especially in Scandinavia such as the Danish 'Green Key') and are visited by customers who are identified as being more sensitive to environmental issues. However, such product groups are not so important in Greece.

In addition, the workshop also considered the merits of a *top-down* approach of a standard eco-label "imposed" by tour operators versus a more sensitive *bottom-up* approach implemented first of all at the local level. The Commission is open minded about this issue.

Lastly, much experience exists with regard to implementing and operating product focussed eco-labels but the Commission recognises the different nature of a service sector eco-label and is open to considering an altogether new approach. The Commission is also aware of the need for an approach to the first service-sector eco-label that is capable of moving on to what is to be the next step (i.e. after establishing an accommodation focussed eco-label) and that is an "Inclusive Destination Profile" eco-label.

As a consequence of private communications with Professor Humprey of Sheffield University Management School regarding the yet unpublished results of an ongoing research project into audit practice within the big five accountancy firms, the authors of this paper argue that more attention is paid to the role of verification procedures for the proposed service sector eco-label. The audit practice research revealed that there is concern in the big five audit firms about sustainable development with regard to not knowing just what is involved. However, these firms are not concerned about doing environmental audits. Because of the clauses written into these audits the firms know that they have little legal responsibility with regard to what is reported in such audits. In the words of a senior partner in one of the big 5 audit firms, many audited environmental reports are misrepresenting the truth when they state that a "true and

fair view" has been given of the environmental impact of a company \sim and that a "shocking" level of confirmation is given by other audit firms with regard to what are in reality "vague and subjective statements" about environmental performance. In general, the big 5 audit firms like to have environmental audit work since such audit statements are not "risky".

But the level of typical environmental audit work performed by these firms at the moment is considerably narrower in scope than that required for the proposed European tourist-accommodation eco-label. For example, and quite rightly, the proposed eco-label will have to incorporate social and carrying capacity criteria. These two criteria are qualitatively different from such as emissions levels, and resource-use efficiency. For one thing, social and carrying capacity criteria cannot be standardised or even optimised according to a single set of measures: e.g. on the remote Scottish island of Harris, residents value quiet, nature and wildlife but also recognise the need for *sufficient* economic activity to keep a viable community on the island ~ this cannot be said for people who run say, a hotel in central London where economic *sufficiency* is perhaps not on the agenda.

It is principally with regard to these two considerations (the verification processes and the subject of verification) that the authors of this paper see a possible expectations gap with regard to the proposed eco-label and the realities of what can be delivered. There is surely a danger of establishing a system that in itself can be verified but says little of substance about real world effects in such as enclosing social and ecological systems.

There is also a need to further consider how the scheme will be useful and have meaning for the large number of smaller tourist accommodation providers. Engaging small companies is of course a problem for EMAS (the European EcoManagement and Audit Scheme). In the UK, even with the provision of very well focussed and practical information from the Department of Trade and Industry, it has been very difficult to encourage small firms to do such as simple waste management or to invest modestly in pollution control technology. One study identified the "working environment" of the small companies as being critical in this respect. It is necessary perhaps that the proposed eco-label and its verification scheme breaks new ground by addressing this "working environment" problem ~ the key lies in grasping fully the enlarged scope of the scheme incorporating as it should social and ecological aspects.

The key lies in being positive towards sustainable development, without qualification. It is the "without qualification" clause that is pertinent here. Many individuals and institutions would regard steps that they take towards sustainable development as being positive steps; for example, environmental management systems, resource-use efficiency and pollution prevention. These steps are indeed positive steps. The trouble is that they do not ring true in the wider, free-market-economy world.

What are the values that drive developments in industrial corporations, in global markets and in economic theory? To what do the majority of individuals, customers and voters, aspire? Select any number of popular newspapers or magazines make a note of their circulation numbers and consider how "resource-use efficiency" and social justice equates with idealised lives where different cars for each day of the week or houses on different continents (excluding Africa and other "under-developed

parts of the world) are the physical and desirable manifestations of success. We have no desire to detract from the rewards that hard work deserves, but neither are these rewards to be abstracted from the physical realities of the planet we inhabit.

Without a popular re-conception of the relationships between individual values and actions and the physical, ecological and social realities, all "positive" efforts to green the world's industrial systems will be viewed as negative restrictions at some point or another. The forest that is protected to preserves species, maintain the livelihood of native people, stabilise climates and ocean currents, and, ultimately to enable us to carry on breathing is to others an economic opportunity lost. A tourism accommodation eco-label that restricts tourism numbers to local carrying capacities \sim or which identifies the tons of carbon emitted to the atmosphere on a holiday flight \sim is a threat to someone's wallet.

Creating the Green Entrepreneur: Operating Context

This and the next section, "Designing the STEPS Management Tool", of the paper are adapted from the reports of the STEPS research project (funded by the European Commission, Directorate General XII, Science Research and Development; Scientific Progress Report, 1/02/00, Contract ENV4-CT98-0799).

STEPS sustainable tourism management research was, until recently, developed independently of eco-labels and the FEMATOUR study. The STEPS project developed a management tool based on practical management skills and competences (especially at the SME level) within a fundamental integrated concept of economic, social and ecological information systems. Furthermore, the STEPS tool addresses the firm in its local region and hence would provide, from first principles, an "Inclusive Destination Profile".

It is the principal argument of this paper that the STEPS management tool could be adapted to be a service sector eco-label that would comply with the criteria identified in the FEMATOUR study and which would, furthermore, overcome many of the objections raised at the September workshop, (see previous section). The STEPS tool uses leading indicators, local solutions, engagement of local community and the development of an appropriate working "environment" for tourism operators and local authorities all of which are derived from a conceptually new approach.

The STEPS project proceeded by first identifying essential criteria to incorporate within the developing tool. Some of these criteria were considered 'obvious' or without contention such as: uses an information systems approach; is a practical tool for management; provides informative to policy makers; integrates with other sustainable development initiatives (such as EMAS and Agenda 21); and makes full use of existing tools and skills where ever possible. But some of the criteria have yet to be clearly discerned or justified and it is a summary of these that is included below.

A Human Focus

The human focus for the tool is to be neither cosmetic nor reflexive. Rather the tool needs to work to inform and involve people. This is to be done by designing a tool that:

• makes use of local knowledge and not expert knowledge alone;

- motivates communities by recognising and makes use of their key role in sustainable development;
- does not impose goals for sustainable development but rather facilities the building of informed local solutions;
- develops goal congruence between the business unit and a range of stakeholders by consultation and consensus building; and
- allows for a community to learn about Sustainable Development, make mistakes and revise goals.

Develops Economic, Ecological and Social Efficiency

Practical and realistic opportunities must be identified by the tool to implement economic, ecological and social efficiency (Von Weizsacker, Lovins et al. 1997; Hawken, Lovins et al. 1999). In many ways, existing management tools could adapt to a mix of economic, ecological and social realities with a change of focus, (Maunders and Burritt 1991). The constraint of ecological carrying capacity, for example, could easily be incorporated within limiting factor analysis. The "conservative principle" in financial accounting has already been applied to ecological realities: "Our Best Bet: Expect the Worst.... we would insist on strict enforcement of ecosystem preservation policies. We would also do our best to stretch out remaining supplies of fossil acreage, instead of competing to hasten their consumption. We would painstakingly revise our cultural values to reduce resource appetites. We would foster non-consumptive modes of human enjoyment, and we would learn to reckon our wealth in terms of our environmental assets rather than in terms of the rate at which we plunder them." (Catton 1982, pp. 262-263).

However, a management tool will have to embrace more than ecological and economic efficiency to work towards sustainable development. The social dimension is required. In "Eco-justice", this dimension is introduced by with the idea of equity: "Eco-justice is concerned with:

- 1. inter-generational equity,
- 2. intra-generational equity, and
- 3. protecting the biosphere; preserving natural, social and cultural capital.

Eco-justice is environment-centred and life-centred (especially future generations), not business centred.... Eco-justice will at least challenge and probably reject the notion of economic growth as the dominant driving force and measures of economic health for nations, for organisations and for individuals." (Stone 1995, pp. 97-98).

The STEPS tool needs a broad notion of efficiency that works effectively with economic, ecological and social realities. For most practical purposes, it is necessary that the tool places business activities within a social and ecological context: "Sustainable Development (SD) refers to a combination of a need to adjust economic growth to remain within bounds set by natural replenishable systems, subject to the scope for human ingenuity and adaptation via careful husbanding of critical resources and technological advance...", (O'Riordan and Jager 1994, p. 18).

Fosters Sustainable Values

Sustainable values are defined, in this report, concomitantly with balanced knowledge. What we gain as knowledge does not exist in isolation from the experiences, meanings and values that shape lives. The acquisition of knowledge is a

process of selecting things worth knowing from the rest that is then forgotten or tagged "unimportant".

Contemporary market-based values are biased to economics. Such economic valuations are widespread and attempts have been made to express social and environmental values in economic terms. Hence, in order to promote the truly balanced knowledge of a triple-bottom line approach, care must be taken not to bias values in favour of economics by recognising only market-derived values. The sustainable values that the STEPS tool needs to use will overcome any bias to economic values by allowing for a range of measures or expressions of value.

Relationships as the Metric

To make use of balanced knowledge and sustainable values, the STEPS tool will adopt a measurement framework based on relationships. By this means, the tool brings together relationships from economics, accounting, business, engineering, stakeholder analysis, ecology, sociology, geography and other disciplines.

The procedures for selecting those relationships to be included in the tool are as follows:

- significant relationships are to identified in communication with informed stakeholders including customers, suppliers, investors, local authorities, national and international authorities and local community in addition to management;
- only those relationships are to be selected that can be represented by practical management techniques; and
- balance in the tool's relationships framework is to be sought by selecting from at least the three disciplines of economics, sociology and ecology.

It is not only with regards to the external relationships of an industrial entity that the limitations of traditional economics have become apparent. The managers of Toyota car manufacturing plants in Japan saw two disadvantages in the use of microeconomic cost-accounting systems. First of all, such systems in themselves cost money without adding to the customer value of Toyota cars. Secondly, these systems were seen as unnecessary and obfuscating intermediaries between those doing the work (labourers, technicians and engineers) and the work itself. Toyota's way of overcoming these difficulties was to remove the micro-economic cost-accounting system. In its place, a concept of continual improvement was introduced and this is known as Kaizan (Blocher, Chen et al. 1999). Workers at the plant continually seek to improve efficiency: to work better today than they did yesterday.

Each of these examples can be seen as an attempt to express more about the physical relationships of industrial activities that have become veiled by placing too much emphasis on monetary measures. Physical relationships are described better by science. These measures of the health of the physical relationships of industrial activity need to be matched with similar measures of the health of social and economic relationships. This kind of integration is essential is sustainable development is to be achieved. Such integration is the declared goal of Wilson, the Harvard sociobiologist, who observes: "The time has come for economists and business leaders, to acknowledge the existence of the real real world" (Wilson 1998, p. 326).

The STEPS Management Tool in Conception

Ultimately to be sustainable, industrial managers need to find their main business opportunities in pursuing the kinds of activities that are in themselves sustainable. To this end, the STEPS tool recognises that a key contribution of a tool for the sustainable management of industrial activities would be to formally recognise the relationships by means of which industrial activity is embedded in social and ecological systems. With these relationships, it is essential for motivation purposes to identify new opportunities for appropriate business activity. In this way, a business may then diversify by participating in social and ecological systems.

Whilst the details on such relationships are necessarily complex, it is essential that a simple, holistic concept is provided to guide understanding and interpretation. For the STEPS project, this concept is based on a transition from existing economic systems, to 'environmental economics' and finally onto an 'economic ecology', see *Figure 1*, (Birkin 2000).

Step 1: From Economics to Environmental Economics

This step has already received much attention worldwide. The foundations for this step in business have been established by several authors, (Pearce 1989; Owen 1992; Gray, Bebbington et al. 1993; Rubenstein 1994; Ditz, Ranganathan et al. 1995; Hawken, Lovins et al. 1999).

Whilst environmental issues remain at the margins of business or industrial activity, formal business information systems may be expanded to accommodate environmental impact. But this expansion marginalizes environmental issues because of: 1) the subsequent denatured view of the environment, 2) production/consumption bias, 3) financial risk bias, and 4) anthropocentrism, (Shrivastava 1997, pp. 28-29).

Because of the dominance of an economic core understanding, there are limits imposed on the relationships between business and the surrounding social and ecological systems. In this situation, it is unlikely that mainstream business information systems will change on their own. It is more likely that such systems will change as a result of changes in the context in which business operates, i.e. new relationships will be imposed. Contextual change includes such as:

"The development of environmental pressure indicators and indices, satellite accounts to existing national accounts and, in the long run, of integrated economic/environmental national accounts..", (EC 1994, p. 20); and

"The ultimate goal would be the integration of environmental and economic accounting in national accounts, and Agenda 21 proposed a programme to develop such systems, at least in satellite format, in all countries", (HMGovernment 1994, p. 218).

In response to such contextual changes, environmental performance improvements may be made at no or minimal cost but ultimately environmental performance gains will equate to additional costs or, worse still, economic inactivity. Neither additional costs nor a hands off approach will help the development of a positive attitude towards preserving the basic life systems of this planet.

This paper proceeds on the assumption that dealing with sustainable development will, by necessity, become a wholly positive core business activity. This shift in

values among the business community will come about either as a result of increasing external pressure from even worse levels of environmental deterioration, or by choice informed by participation in wider conversations about the true nature of business activity. Such a shift reflects an underlying ontological change and it is this step that is considered in the step.

Step 2: From Environmental Economics to Economical Ecology

Business activity is beginning to be understood as taking place within the ecosystem. The 1996 Greening of Industry Conference had the title "Global Restructuring: A Place for Ecology?", the Journal of Industrial Ecology from Yale University was launched in the spring of 1997 and the chief executive officer of a German company has written: "If our successful social market economy is also to integrate the preservation of the environment in its control circuit system, then ecology must become relevant for the market", (Kunert AG 1994, p.5).

An ecosystem may be described as an integrated unit consisting of the community of living organisms and the non-living, or physical, environment in a particular area. An ecosystem or, rather, ecological thinking supports this paper's use of relationships since it is the ecosystem as a whole that determines the characteristics of all within that ecosystem. Hence, a wolf is a wolf not because of some discrete, stand alone "wolfishness" but because the climate, flora, prey, competitors, genetic properties, energy flows and so on interact to create the dynamic, semiautonomous phenomenon which we call "wolf".

When the foundations of business practice and accountancy were being established, knowledge about ecosystems and carrying capacity was minimal and hence it was not a significant factor. Times have changed: "The new information on the earth's carrying capacity brings with it a responsibility to educate and to act that, until recently, did not exist", (Brown 1994, p. 196).

The argument presented here is that business and accountancy practice needs to be based on the same principles that are seen to operate in ecosystems in order to achieve sustainable development. Failure to co-ordinate in this way will at worse lead to serious damage to fundamental life systems and will at best be inefficient. Such inefficiency arises in several ways:

- duplications in effort;
- conflicting interpretations of operating principles and priorities;
- creation of stress and other dysfunctional attributes;
- inappropriate performance appraisal;
- loss of simplicity; and
- conceptual inconsistencies (such as adaptation versus progress).

Following on from this, practical steps may be taken towards an economic ecology by pursuing goals of efficiency (Von Weizsacker, Lovins et al. 1997). This is the same situation as for the implementation of environmental economics except that ecosystem relationships can bring about fundamental revisions to values, strategies and goals. For example, co-operation would become important than competition (Goldsmith 1992, pp. 202-215) and such as water companies could supply not only water but information and added values relating to ecological security for human and non-human species.

In many ways, business could adapt to ecosystem realities with a change of focus, (Maunders and Burritt 1991). The constraint of ecological carrying capacity could be used as an accounting tool such as limiting factor analysis within an ecologically aware culture. The "conservative principle" in accounting could be readily applied to ecosystem appraisals: "Our Best Bet: Expect the Worst... we would insist on strict enforcement of ecosystem preservation policies. We would also do our best to stretch out remaining supplies of fossil acreage, instead of competing to hasten their consumption. We would painstakingly revise our cultural values to reduce resource appetites. We would foster non-consumptive modes of human enjoyment, and we would learn to reckon our wealth in terms of our environmental assets rather than in terms of the rate at which we plunder them." (Catton 1982, pp. 262-263). Such depth of vision may also be found within the European Commission: "The work of ensuring acceptance of environmental policies and sustainable development involves more than getting instruments to work. It is also changing the way we live." (EC 1996, p. 5).

The STEPS Management Tool

In order to implement the transition to an economic ecology, a first requirement is that appropriate relationships for management are identified. This has been done in the STEPS project by means of an information flow diagram known as the "Cloverleaf Concept" (Cloverleaf henceforth), *Figure 2*. The complete diagram of Cloverleaf is complex but it may be divided into four parts for ease of comprehension. At the centre of the diagram is the business entity. The four parts of Cloverleaf may be related to the business entity as follows:

Resource Flow - the strong line going from left to right through the middle of the diagram that represents an Inventory of the resource, product and waste flows caused by the activities of the business entity;

Resource Flow Impact - the strong line going from the bottom to the top of the diagram that represents the Impact that the Resource Flows have on social, ecological and economic systems;

Stakeholder Analyses - these define two sections of the diagram ~ well-defined stakeholders are represented as the information flow lines that provide the leaves of a four-leaf clover stakeholders (the investors, suppliers, customers and regulators), and less well-defined stakeholders are shown as the Human Community (such as local, non-local and future communities) that is the area containing the four-leaf clover within the thick black "Carrying Capacity" line; and

Carrying Capacity Assessments - shown as the thick black "Carrying Capacity" line with the undefined, enclosing ecosystem as the outside area (Birkin 2000).

These four Cloverleaf sets of relationships then represented in a benchmark matrix, the Sustainable Development Matrix (SDM). An outline version of the SDM is provided in *Table 1*. Essentially, the SDM uses leading indicator benchmarks to identify the level of sustainable development achieved by a company within each of the four sets of relationships. Exactly what is entered within each band is to be determined for each industrial sector but the entries would identify management tools as leading indicators that could realistically be used to comply the band's

distinguishing criteria. Obtaining agreement about which particular benchmarks will be entered in each band of the SDM is a critical issue involving research, consultancy, negotiation and mediation. It is necessary to use benchmarks that are acceptable and meaningful to both the companies and important stakeholders to gain commitment to the results and objectives of Cloverleaf. Politics and diplomacy are far more relevant here than other technical skills.

At some point in the future, it will be necessary to reappraise the entries in the SDM. As more becomes known about the relationships between industrial entities and the enclosing social and ecological systems; as management tools develop and as our understanding of sustainable development progresses then the SDM may be revised accordingly.

Table 1: Outline Sustainable Development Matrix

Onnortunities for Further Research						
	Resource	Resource	Stakeholders	Carrying		
	Flow	Flow Impact		Capacity		
Economic						
Ecology						
Ecological	Main	Body of	Table	to be		
Economics						
Environmental	completed	with	appropriate	Leading		
Economics						
Economics		Indicator	Benchmarks			

Gap, further research is needed particularly with regard to just what could be verified by the scheme. Such research needs to address issues such as:

- Progress up the dallening lighter hine reasing sustained the development performance ~ progress is
- cumulative that verification means in this capacity. Cloverlear symbol awards publicise the level of sustainable development achieved by an institution white capacity is to yellow (Environmental Economics), to blue (Ecological Entirorings the of hiral-parter lie bihities of the scheme;
 - What do applicants and others expect to get out of the scheme (in a sense of operating the scheme as opposed to the desirable outcomes identified in the FEMATOUR study); and
 - What new styles of verification could there be for the proposed ecolabel?

Conclusion

Among the many skills that successful entrepreneurs need is the ability to foretell the future. With regard to tourism, some of this future is becoming clear:

- Adverse environmental and social impacts of tourism reduce tourism product quality, reduce margins and restrict market diversification; and
- The development of the proposed EU eco-label on tourist accommodation recognises that social and carrying capacity criteria have to be included.

Whilst a top-down, tour-operator driven eco-label will bring about some change, the proposed eco-label really needs to encapsulate a wholly positive attitude towards, basically, sustainable development. Such a sea change is essential if it is going to change the goals, objectives, working environment and practices of the many and varied tourism operators to the "required degree".

Nobody likes constraints, restrictive practices and too many regulations and law. Unfortunately, much of the public and many companies logically regard the transition to sustainable development as a constraint encountered during the pursuit of existing core economic values \sim and the proposed eco-label will be yet another obstacles to be overcome in order to augment a bank account. The broad scope of the proposed tourism eco-label means that the simple compliance-with-standard techniques of existing product eco-labels will not work. The proposed tourism eco-label needs local interpretation, needs to be adapted to \sim and to change \sim local needs, knowledge, skills, values and aspirations. It is likely that these factors are not amenable to audit. Senior managers in industry know that this kind of change will not succeed even within the narrow confines of a single company if hearts and minds are not first of all won over.

The concept of transition to an "economic ecology", Cloverleaf and the Sustainable Development Matrix provides an example of how a new system may be developed to maintain economic development whilst fostering minds and hearts that are wholly positive towards sustainable development. The proposed tourism eco-label needs to adopt an approach such as this. If this kind of change is achieved, then green tourism entrepreneurs will take the sustainable development initiative of the hands of governments and charities. If this is achieved, the need for prohibitive regulations, taxes, laws and eco-labels is eliminated. This surely is the *sine qua non* of sustainable development.

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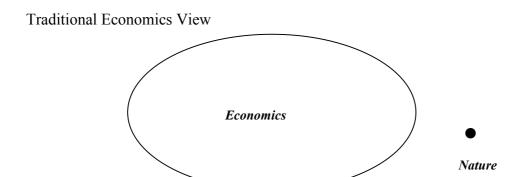
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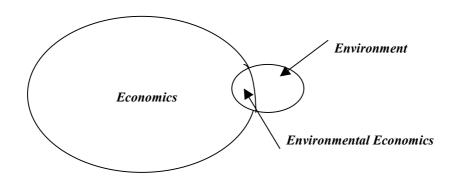
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Environmental Economics View



Economic Ecology View

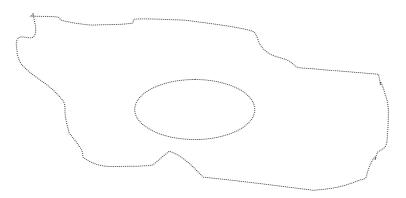


Figure 1: Transition from an Economic to an Economic Ecology View

Table 1: Outline Sustainable Development Matrix

	Resource Flow	Resource Flow Impact	Stakeholders	Carrying Capacity
Economic	•	•		
Ecology				
Ecological	Main	Body of	Table	to be
Economics				
Environmental	completed	with	appropriate	Leading
Economics				
Economics		Indicator	Benchmarks	

N.B.

- 1. Progress up the table indicates increasing sustainable development performance ~ progress is cumulative
- 2. Cloverleaf symbol awards publicise the level of sustainable development achieved by an institution going from Red (Economics), to yellow (Environmental Economics), to blue (Ecological Economics) and finally green (Economic Ecology).