Part 4

Tourism Management and Development Strategies
RE-PLANNING SEASIDE TOURISM IN ‘OLD’ DESTINATIONS: THE NORTH SEA EXPERIENCE

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ABSTRACT

The North Sea coastlines of Sweden, Denmark, the Netherlands, Belgium and England contain some of the oldest seaside pleasure resort areas that exist. In many cases traditional seaside tourism has declined dramatically, and there have been significant problems not only for the communities in the destination towns but also within wider regions.

This paper examines the geographical, climatic, social and cultural factors that have influenced tourism in these destinations, and identifies different seaside destination types as a result of these factors. It is shown that the applicability of Butler’s destination life cycle model can be limited in such circumstances, and an enhanced version of the model is offered. This in turn leads to a range of planning issues and responses, that vary quite radically around the North Sea, from a Danish environmental planning approach, through rejuvenation initiatives to holistic ‘coastal re-planning’ that seeks to generate new forms of tourism. The paper provides a paradigm for linking tourism-demand and historical factors to the type of planning initiatives that are currently being pursued or considered.

Inter-regional and international comparisons are highlighted by the nature of this research, and this paper summarises some of the work undertaken by the EU-funded North Sea Seaside Tourism Project, of which more can be found at http://www.seasidetourism.org

INTRODUCTION

The findings and discussion within this paper arise from a research project on coastal tourism around the North Sea, carried out at the University of Lincoln, together with partners from Sweden, Denmark and the Netherlands, and funded through the EU Interreg IIC programme.

Some of the oldest established destinations in existence for seaside resort tourism are to be found around the coasts of the North Sea. Spa resorts were developed in England, Belgium, the Netherlands and Sweden from the 17th century onwards, and the popularity of coasts for sea bathing was assured from the mid to late 19th century by good railway access from major population centres in Northwest Europe. As a consequence, major investment in beach- and coast-related tourism assets often dates
from the late 19th and early 20th centuries, and where those assets have survived they may be shabby, outmoded or extremely costly to maintain. This is particularly true in England and Scotland (Williams & Shaw 1997).

At the same time, the spectacular growth of cheap and fast transport access to alternative destination areas during the second half of the 20th century has provided a very large number of competitive alternative seaside destinations for tourist markets in countries surrounding the North Sea. As in any competitive market, existing suppliers who are faced with waves of new competitors either have to revise their marketing strategy constantly and cleverly, or they may lose their business. This is exactly what has happened, and continues to happen, in what may be termed the ‘old’ seaside destinations (Järkeborn & Johnsson 2001). In many of them, the decline in tourism volume and value in recent decades has been severe, and there often appears to be no coherent strategies that can successfully reverse this decline (Uyttenhove 1999, English Tourism Council 2001). The situation has been documented in several papers, reports and academic texts since the 1970s.

Some ‘old’ seaside destination areas around the North Sea have on the other hand maintained their levels of tourism, although there are few in which tourist volume is still growing. The question arises as to whether their relative success is due to superior competitive strategies adopted by operators and local authorities in these destinations, or whether there is some inherent differentiating characteristic about each destination that helps to maintain its competitive attractiveness.

**Modelling and defining seaside destinations**

Attempts to describe and model the progress of destinations have largely centred around destination life cycles based on the tourist area cycle of evolution (Butler 1980). Although several authors have commented on and noted problems with this model (see Butler (2000) for a summary), the fact that it continues to be referred to extensively demonstrates aspects of its durability and the lack of a more elegant general alternative. However, one of the main criticisms is that it is a holistic model that does not always allow sufficiently for the recognition of different economic subsystems and their impact (Bianchi 1994; Agarwal 1997), and that in particular it does not take account of competition-related factors (Prideaux 2000). Debbage (1990) is also concerned that Butler’s model does not sufficiently consider resort differentiation in imperfectly competitive and oligopolistic conditions.

For most tourists, picking a destination is one of the main choices made in a vacation-buying decision (Goodall 1991). In the market place, a resort destination can therefore be seen as a product, offered in competition with other resort products. Since no two destinations are identical, the market place may be seen as that of an oligopoly or imperfect competition, depending on the size of intending tourists’ choice sets. To help model destinations, it may then be useful to attempt to integrate the features of product differentiation and strategy in oligopolistic markets into the tourist area life cycle approach. Product differentiation implies the use of characteristics (attributes) theory in
determining both what the key determinants of demand are and what destination-related factors influence a destination’s competitive success.

Current research into seaside destinations around the North Sea has identified seven major (grouped) characteristics of the seaside resort destination product. (Mason et al 2001). These are:

- Climate and orientation
- Physical features
- Condition and aptness of tourism assets
- Access
- Social and cultural role
- The extent to which tourists are ‘tied’ to destinations
- Unanimity of operators – who speaks for the destination?

Climate, both actual and perceived, is seen as a key determinant characteristic of tourist demand for resort destinations. Hence an inherent strategic disadvantage exists in old resorts, where cheaper and faster transport allows increased access to destinations with better climates, such as the Mediterranean and the Caribbean. In the Northern Hemisphere, resorts oriented on a north or east-facing coastline are also at a disadvantage compared with those facing south or southwest. This is of particular concern to English seaside resorts on the North Sea coast. Allied with the climatic characteristic is the physical nature of the destination: its size, the nature of the foreshore and beach, whether or not it possesses features such as cliffs, a harbour, dunes or protected natural areas. The climatic and physical characteristics at a destination scale are largely inherent, and very expensive to modify (viz., for example the investment cost of Brighton Marina, England or West Edmonton Mall, Alberta).

The condition and aptness of tourism assets form as characteristic whose role is more ambiguous. Whilst much tourism investment in old resorts is shabby, unplanned or out-of-date, some destinations have successfully upgraded and rebuilt assets such as accommodation stock, public buildings, parking, promenades and recreation areas. Noordwijk and Scheveningen provide examples of strategic reinvestment of this kind, in full contrast to, for example, the record of recent investment in promenades and piers in England (Easdown 1996).

Planning regimes, in the UK, Denmark and Sweden that often tend to favour urban preservation over renewal can especially complicate the situation. A similar problem affects the nature of access to old seaside resorts, where that access is itself old-fashioned and unsuitable for modern tourist traffic needs. The North Sea coasts of Belgium, the Netherlands and Sweden are generally easily accessible from a modern coastal highway, whereas those of England, Denmark and parts of Scotland are not, and the cost and environmental impact of providing such access may be prohibitive.

The remaining three groups of characteristics are non-physical ones. Social and cultural roles of seaside destinations have not been widely explored in research, which often assumes that there are more similarities than differences between destinations, simply because they are the object of tourist visitation and are by the sea. However, a
destination may gain a particular social and cultural ethos, through its history and development that is difficult to change. For example, resorts in England are often differentiated by the social class of the tourists, in the Netherlands by age groups, and in Denmark by activity type such as ‘artists’, ‘sun worshippers’ and so on (Järkborn & Johnsson 2001). Cultural identities thus develop, superimposed on the destination’s original cultural history, such as that of fishing culture or sophisticated beach spa; but a cultural identity can become a strategically variable characteristic if needed, as at Varberg, Scheveningen or Bridlington.

Tying tourists to destinations for repeat visitation is accomplished by second home ownership, fixed caravans/chalets and timesharing arrangements. A guaranteed tourist market must be set against the income that such tourists generate, which is usually lower per capita than from tourists occupying serviced accommodation, and against issues of foreign second home ownership. Nevertheless, it is a feature of many resort areas in Scotland, England, Denmark, Sweden and Norway.

Finally, the strength of a destination’s ‘brand’ is influenced by the degree of unanimity in marketing by operators and tourist boards. Middleton (1998) notes the difficulty of getting all partners in a destination to share a common focus in tourism, its management and marketing. Seaside resort towns, particularly in England, thus provide the paradox that the larger they are, the better known they should be as ‘brands’ but the more difficult it is to get the greater number of stakeholders to act in unanimity (English Tourism Council 2001).

**Developing the model**

A number of particular values of each characteristic will define each resort destination, so that to this extent at least a destination may be treated as a product, clearly differentiated from other products available to tourists in an oligopolistic or imperfectly competitive market. Therefore, it should be possible to treat an ‘old’ destination in the same way as any (differentiated oligopolistic) product in the latter stages of its product life cycle when facing issues of strategic marketing and management.

The literature in marketing normally uses the product life cycle concept as a ‘flag’ to initiate strategic management action rather than as an end in itself. Butler (2000) echoes this point himself who notes that discussion of the tourist life cycle has concentrated overly on the nature of the cycle, and insufficiently on the fact that resorts are products requiring the management of resources. This is particularly true if the goal is sustainable development. In the marketing literature, there are generally three main strategies open to the supplier of a product entering the “decline” stage of the life cycle: product deletion, spin off, or revitalisation / renewal (Ferrell et al 1998).

**Product deletion** has rarely been considered an option for failing resort destinations, firstly because of political pressure (and perhaps perceived economic necessity) to maintain some level of tourism, and secondly because each resort is a single product supplier with sunk costs, and cannot ‘shift’ to another product. Cooper (1992) notes that the ending of tourism is not possible because of its integration into a destination’s
heritage and way of life. However, the removal of all marketing support for tourism has been an option (e.g. Cuxhaven, Hornsea, Askim) where alternative economic activity exists and where communities are perhaps more forward-looking than past-conscious. **Spin off**, in the generic sense, has been used to describe selling off a product or line to a new supplier. Clearly, a local council cannot do this for tourism to a whole destination area. It may however be possible to delegate tourism ventures to a separate body, such as the sale of a harbour area to a development company for marina and recreational development, who then carries the onus for subsequent marketing. No seaside destinations in the North Sea region have done this in a major way, although it has been considered as an option (Mason *et al* 2001).

**Revitalisation or renewal** is frequently peddled as the key and obvious option for declining resorts. Agarwal (1994) and (1997), notes this as part of a post-stagnation ‘rejuvenation’ phase of the tourist area life cycle. But what does this really mean? Ferrell *et al* (1998) identifies four different renewal strategies: developing a new image, finding new users for a product, changing the product’s application (to a new product), and employing new technology. The cheapest and most commonly used strategy is the first, an attempt to re-brand perhaps supported by some infrastructure investment. However, as can be seen from the above analysis of product-differentiating characteristics between ‘old’ and ‘new’ destinations, this is unlikely to be successful if the absolute disadvantages of climate or physical features remain unchanged. Finding new users is also difficult in relatively saturated tourist markets such as those in northwest Europe. In a tourist destination sense, changing a product’s application (or employing new technology) implies changing the resort characteristics to suit a different market, or using tourism assets for non-tourism purposes. This is where a full analysis of differentiating characteristics and tourists’ determinant needs is vital.

The situation facing ‘old’ destinations is then a decision-making model based on perceived advantages and disadvantages amongst their tourism-related characteristics (let us assume that a public authority representing the destination is empowered to review such decisions). The decision-making model is summarised below:
A key issue that arises is the local authority’s ability to obtain unanimous, or significant majority support, for its action. Since the unanimity of operators is itself one of the differentiating characteristics, the likelihood of success in gaining community support can be built into the model.

Actual strategies and plans

There has been a marked increase in the professionalism of approaches to strategic planning for North Sea coastal destinations over the last decade (Järkeborn & Johnsson 2001). Some of the ad hoc approaches of the 1970s and 1980s, that were initial attempts to hold on to existing markets by using any possible promotional and pricing techniques, have given way to more fundamental realisations of the need for the type of analysis employed here. These have been, and are being, undertaken within the paradigm of Integrated Coastal Zone Management (ICZM) that attempts to involve all relevant stakeholders, including tourism ones, under a competent public lead agency (Norcoast 2001). Many planning approaches are then, by necessity, regional or sub-regional rather than relating to single tourist destinations. In this way a more holistic view of a region’s issues, characteristics and opportunities can be achieved. Some examples of recent and current strategies follow.
EXAMPLE 1
Problem: Declining levels of traditional ‘seaside’ tourism in small/medium fishing and holiday towns/villages, together with a loss of income from reduced fishing stocks, activities or quotas.

Analysis: Accommodation often small and old-fashioned, land access often poor, few wet weather activities for beach-oriented families, but positive characteristics of fishing or marine heritage, attractive built landscape, harbour, and deep local fishing/maritime knowledge and folklore.

Strategy: Target heritage/culture tourists and sport sea anglers. Seek investment to provide maritime attractions such as historic ship museum or fisheries interpretation centre, and to upgrade small-scale accommodation to high quality, with retraining for boat skippers and crews. Access remoteness re-imaged as a positive feature. Sustainability is then a shared focus within the community.

Typical locations: Wick, Crail, Hartlepool, Whitby, Bergen-aan-zee, Kristiansand

EXAMPLE 2
Problem: Declining numbers of staying tourists, with loss of accommodation revenue (and its multiplier effect), but a very large number of day visitors on few peak hot, sunny days causing congestion but providing limited income.

Analysis: The destination offers insufficient attractions for long stays, but has a positive natural coastal attraction that is heavily weather-dependent. The ‘season’ is getting shorter and visitation days are not predictable.

Strategy: There are multiple strategies in the face of this problem, including investment in off-peak events of 1-3 days duration that are less weather-dependent than beach trips, park and ride schemes, conversion of accommodation to first/second homes, and other measures to boost or reduce tourism supply cheaply or temporarily to match demand. Evidence of the sustainability of these approaches is not conclusive.

Typical locations: Zeeland islands, Texel, Blokhus, Skagen, Mablethorpe

EXAMPLE 3
Problem: Reduced tourist interest in destinations that are seen as outliers or almost suburbs of large cities, with no separate identity.

Analysis: The destination may have originally been at the end of a rail link from a city that generated its tourists. City expansion and, paradoxically very good road access make the destination nothing special and too close, in terms of distance-decay models. The destination may also have few inherently interesting physical characteristics.

Strategy: Remove most marketing support for tourism, and encourage conversion into good quality dormitory residential accommodation for city, leading to range of new local service industries to supply all-year residents. Tourism is allowed to end as a major function.
**Typical locations:** Cleethorpes, Southend, Blankenberge, Bloemendaal, Katwijk-aan-Zee, Kungsbacka

**EXAMPLE 4**

**Problem:** Large, traditional family holiday destinations losing market share to more modern, cheaper and climatically dependable Mediterranean destinations.

**Analysis:** Tourist assets and infrastructure old-fashioned, accommodation expensive to maintain and therefore not cheap for guests, entertainment and recreation facilities of good quality required to counter risk of poor weather; but a large stock of accommodation, strong image as a holiday destination, and perceived community dependency on tourism.

**Strategy:** Seek major investment in asset regeneration to high standard, to attract existing holiday market and/or penetrate new markets such as conventions. Re-brand the destination with a higher quality focus. To be sustainable, this high cost strategy requires community unanimity and support, and at least one major key investor.

**Typical locations:** Ostend, Scheveningen (pier and conventions), Bridlington (marina), and Skegness/Ingoldmells (entertainment centres)

At present, it is not possible to assess whether those destinations using a structured approach to the analysis of their tourism problems and the development of a resulting strategy are markedly more successful in terms of sustainability, community well-being and development. Comparison is also made more difficult by differences between countries in the legislative and statutory frameworks for planning. Planning can be subject, for example, to Danish Coastal Planning Rules, Swedish Regional Growth Agreements, and English local authorities under Department of the Environment Planning Policy Guidelines. There is frequently a division of responsibility between authorities responsible for physical planning and those responsible for economic and commercial development. This strengthens the case for ICZM initiatives and for joint proposals such as that of the Local Government Association (2000) for coastal strategy in England.

**Conclusion**

This paper has reviewed elements of the situation facing many seaside tourism destinations around the North Sea, where tourism is in decline or has at least peaked, largely owing to their reduced level of competitiveness with newer or warmer destinations. It has placed this situation in the framework of a competitive oligopoly where the destination-differentiating characteristics are vital in determining tourist demand. A destination well targeted as a market, with bases of product differentiation that are costly or impossible to duplicate, should be able to create sustained competitive advantage (Barney 2002: 281-287) in maintaining its chosen position in tourism.
Such a framework can be useful in helping to operationalise management initiatives implied by a destination reaching the decline stage of the tourist area life cycle, and it is helpful to re-visit the general marketing strategy literature relating to product life cycles in this context. Some destinations are knowingly incorporating analyses of this type into their decision making, whilst other may be doing so unconsciously. What is certain is that a more coherent approach to ICZM and a greater sharing of knowledge about tourism issues will help in the development of more sustainable futures for many seaside communities.

Further information about the research project from which this paper is derived may be obtained from http://www.seasidetourism.org and http://www.kustopdekaart.nl/. The project has been funded through the EU Interreg IIC Programme.
References

FUTURE U.K. COASTAL MANAGEMENT AND TOURISM: CONFLICT OR HARMONY?

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ABSTRACT

Coastal management in England and Wales has been based since the late 1990s on Shoreline Management Plans (SMPs). SMPs represent the first attempt at integrated coastal management in Britain, with management strategies more firmly rooted in an appreciation of coastal processes than before, and with less emphasis being placed on managing the shoreline from within local political/authority boundaries. Although these SMPs mark a significant step forward in formulating coastal management strategies that will be effective, nonetheless, deficiencies in the plans were recognised. Specifically, insufficient attention was paid to longer-term coastal evolution and to the details of coastal processes. Currently, planning for the second round SMPs is in progress, lead by MAFF, which is seeking to rectify these deficiencies. This rectification is to be based within a systems approach to coastal processes, whereby the shoreline will be divided into a number of Shoreline Behavioural Units (SBUs), that share common coastal processes, patterns of change and other characteristics.

By placing the strategy for management firmly in the coastal physical process arena, recommendations on coastal management are also likely to reflect this paradigm shift, and these are likely to manifest themselves in forms of coastal protection that may be in conflict with tourism. For example, if a strategy of 'holding the line' is adopted for a stretch of coastline, currently, this is most probably enforced by beach recharge, either of gravel or sand, which may well have a harmonious relationship with tourism objectives. However, there are serious doubts whether recharge is a long-term sustainable defence strategy. Concerns about environmental impacts on the source areas for sediment, the availability of sediment and the behaviour of recharge sediment once on the coastline suggest that alternative strategies will have to be found, especially if the scenarios of near-future sea-level rise hold true. The main alternative contender is beach armouring by concrete or granite blocks, which by their nature could be in conflict with tourism development.

A further, linked issue will arise over the long-term strategy for defending yacht marinas; especially those built on eroding coastlines. Sovereign Harbour, near Eastbourne, has been built on a gravel coast that has had a long-term trend of severe erosion, mitigated, at least in the short-term, by a combination of beach recharge and groyning. Neighbouring Pevensey Bay has been identified as a possible area for coastal setback, but it is unclear what consequences this could have on the harbour. Defending Sovereign Harbour as the Pevensey Bay shoreline was allowed to 'realign'
would trigger significant extra investment in coastal defence, with the need for armouring at least along the boundary between the harbour and Pevensey Bay. These issues suggest that long-term viability of marinas such as that at Sovereign Harbour might have to be re-assessed. Planning by coastal communities for the next few decades will have to involve some hard decisions on the balance between defending the coastline and maximising tourism potential. A possible area of conflict might exist where the boundaries of local authorities, that determine local tourism policies, do not overlap with SBU boundaries. It is likely that a number of authorities may lie within a single SBU, or that one authority might straddle the boundary between two SBUs.

KEY WORDS

Coastal management, gravel beaches, Shoreline Management Plans, tourism, yacht marinas

Aims

This paper explores possible future conflicts between coastal management and marine tourism in the UK. These conflicts may arise as a result of new policies to manage the UK coastline, introduced as the basis for the second round Shoreline Management Plans (SMPs). The focus of the paper is on gravel beaches, which comprise an important component of the UK coastal system. At the centre of future conflicts is the requirement to manage (gravel) beaches in a sustainable way, which will only be achieved through the recognition that natural supplies of gravel to many beaches are scarce to non-existent, while beach recharge is not likely to be a sustainable management option. Response to this severe sediment supply problem is likely to result in management strategies of coastal re-alignment and armouring (where the position of the beach crest has to be maintained) that are not conducive to many forms of marine tourism. In particular, the sustainability of some marinas will become increasingly problematic.

Gravel beach processes

Gravel beaches are common where former (and extant) glacial and periglacial processes have been (are) active. Such processes result in the extensive weathering of gravel-bearing strata. For the British Isles, the most recent phase of glaciation and periglaciation occurred during the last cold climatic episode from approximately 80,000 years ago to 10,000 years ago. Jennings and Smyth (1990) have argued that most of the gravel on the beaches of south east England originated during this period as a result of severe frost weathering of the chalk upland of the Weald, with the probability that gravel has also been inherited from earlier cold climatic episodes. Therefore, many gravel beaches of southern England owe their origin to the re-working of a finite amount of sediment by rising sea-levels since the main phase of global deglaciation around 14,000 to 8,000 years ago. Furthermore, Jennings et al. (1998) and Orford et al.
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(2001) have proposed that the major decrease in the rate of sea-level rise from approximately 6,000 years ago has effectively reduced the volume of new material being eroded at the coastline and entering the coastal transport system. Thus, the much slower rates of sea level rise presently being experienced (1 - 2 mm/yr) compared to 10,000 to 6,000 years ago (> 5 mm/yr) has had a detrimental effect on coastal sediment supplies, and lies at the heart of many coastal management problems. It may seem perverse, but it can be argued that slow rates of sea-level rise pose more severe, long-term problems for coastal management than faster rate of sea-level rise. Unfortunately, because of both coastal defence works and the exhaustion of 'inherited' gravel supplies, any future acceleration of sea-level rise as a result of climate warming, will not trigger the compensatory release of fresh material into many coastal systems.

Orford et al. (2001) have examined the possible response of gravel beaches to failing sediment supplies, and identify a critical transition between beach consolidation and breakdown. Under consolidation the crest of the beach builds up to the elevation of storm wave activity by the process of overtopping. This is achieved by material being transported from the beach face to the crest during storms. However, under a regime of failing sediment supplies and (slow) sea-level rise, consolidation can not be maintained. The beach face becomes oversteepened so that the crest becomes a narrow, single ridge, vulnerable to storm wave attack. At this point, consolidation is replaced by breakdown as overtopping is replaced by overwashing of the crest during storms. The beach may undergo a catastrophic change with the crest being flattened and possibly shifting several metres inland during the course of a single storm, as happened at Porlock in 1996 (Jennings et al. 1998, Orford and Jennings 1998). Orford et al. (2001) warn that many of the gravel beaches of Britain have passed the threshold between consolidation and breakdown, with the natural consequences of this masked by expensive and ongoing coastal engineering. It is against this backdrop of severely failing sediment supplies and the corresponding response of gravel beaches, that future UK coastal management is being formulated, which will have a major impact on marine tourism activities.

Coastal management strategies of the 1990s

The 1990s witnessed a revolution in the approach to managing the UK shoreline. In essence this has involved a move away from piecemeal responses to erosion problems at the local level, to a more holistic approach based on an understanding of coastal processes, and the fact that they transcend local authority boundaries (Johnson 1996, Hooke 1998).
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This new approach has been delivered through the first round Shoreline Management Plans, co-ordinated by MAFF (Ministry of Agriculture, Fisheries and Food), subsequently renamed EFRA (Ministry of Environment, Food and Rural Affairs) following the Foot and Mouth epidemic of 2001. As Leafe (1998) points out, the main aim of the first round SMPs was to deliver a sustainable coastal defence strategy. The incorporation of 'sustainability' into SMPs is part of the growing adoption of the green agenda into planning following the Bruntland Report of 1987 and Agenda 21 of the Rio Earth Summit of 1992 (Johnson and Seabrooke 1996). The drive towards sustainability in coastal management has also resulted in the replacement of 'hard engineering' (e.g. use of concrete and wooden groynes) by 'soft engineering' strategies (e.g. boulder groynes and beach recharge). Much of this new way to manage Britain's coast has not posed many problems for tourism, indeed the adoption of beach recharge has provided a number of beaches with enhanced tourism potential. However, a number of problems with current coastal management have been identified, and their resolution may not be so amenable to marine tourism development.

**Future coastal management and tourism**

A number of future conflicts may arise between tourism and coastal defence:

1. Despite a recognition that the UK has moved towards a unified and holistic approach to coastal management, nonetheless, a plethora of statutory and non-statutory bodies have input into the management process. For example, Johnson (1996) highlights a distinction between 'Shoreline Management Plans', which are primarily concerned with coastal defence, and 'Coastal Management Plans' which cover a range of planning issues, including tourism and recreation. Within the scope of the SMPs, conservation of the coast (which has both geological as well as ecological concerns) can be in conflict with defence strategies, a tension that is likely to be a major discussion point with the second round SMPs. The establishment of coastal groups acting as forums for a wide range of interest groups, for example SCOPAC on the south coast (<biblio>) can lessen this tension. However, tourism, despite its economic clout, will still have problems making its voice heard among the spectrum of interest groups. It is also unlikely to play much of a role in the formulation of SMPs, as the focus of the concern in the second round SMPs is the understanding of coastal processes and future coastal response to a combination of declining sediment supplies and the impacts of climatic warming.

2. MAFF had become concerned with deficiencies in the first round SMPs. Although these plans heralded the first attempt at integrated coastal management based upon an understanding of coastal processes, their focus was the sediment cell. These cells were seen as being distinct coastal units, thereby providing a mechanism for dividing the coast of England and Wales into management units that form the geographical boundaries for SMPs. However, sediment cells exist at different spatial and temporal scales. The coastline of Britain can be divided into a number of different cells according to which level of the cell hierarchy is chosen. Also, through time, cell boundaries are not fixed points being able to migrate due to a number of geomorphologic factors. Indeed, it was the lack of appreciation of longer-term coastal
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processes and responses within first round SMPs that prompted MAFF (EFRA) to reappraise the formulation of SMPs for their second round. The new basis for coastal management is a systems approach to coastal processes whereby the shoreline will be divided into a number of Shoreline Behavioural Units (SBUs), that share common coastal processes, patterns of change and other characteristics.

By placing the strategy for management even more firmly within the coastal physical process arena, recommendations on coastal management are also likely to reflect this paradigm shift, and these are likely to manifest themselves in forms of coastal defence that may be in conflict with tourism. For example, beach recharge could be replaced increasingly by beach armouring using concrete or granite blocks, which by their nature will be in conflict with tourism development. Recharge of beaches is seldom a 'one-off' activity, often requiring further replenishment. The subsequent engineered crest line may not be a stable feature. Gravel barrier beaches that lie close to the threshold between consolidation and breakdown often exhibit a natural tendency to periodically breach. Recharge may artificially fix the crest unsustainably, rendering it prone to catastrophic failure (Orford and Jennings 1998).

Additionally, concerns over environmental impacts on the source areas for sediment add to the questioning of the sustainability of recharging beaches. Where the crest line has to be held, beach armouring, perhaps supplemented with some recharge material and offshore structures is a more sustainable option.

The division of the coastline into SBUs will maintain the problem of coastal management boundaries not overlapping with local authority boundaries that govern tourism development locally. It is likely that a number of authorities will lie within a single SBU, or that one authority will straddle the boundary between two SBUs.

**Sustainability of marinas - the example of Sovereign Harbour**

Sovereign Harbour at Eastbourne on the south coast of England is a waterside development of housing and other services centred on a yacht harbour. The site utilises old gravel pits as the basis of the yacht basins, and has a locked entrance between the outer and inner harbours.

**Developing the model**

There is an artificially dredged and maintained approach channel leading between two harbour breakwaters. The harbour has been constructed on a large gravel cuspate foreland (the Crumbles Shingle), the shoreline of which requires extensive defence against coastal erosion by groyning and recharge. This defence imparts an apparent short-term 'stability' to the coastline, but Jennings and Smyth (1990) and Orford *et al.* (2001) point to the longer-term instability of this coast as being a major concern for the sustainability of the harbour. Jennings and Smyth (1990) provide evidence that the Crumbles Shingle is an ephemeral coastal feature when viewed over longer time scales.
The foreland formed rapidly around the 12th century, and, according to cartographic evidence, had experienced severe erosion between the 17th and 19th centuries, a process artificially slowed by extensive groyning. The failure of sediment supplies to this coast is part of the natural long-term trend discussed above, and highlights the need to understand long-term trends and processes for coastal management and tourism development.

Downdrift of the harbour lies Pevensey Bay, which has been identified, as a possible area for coastal re-alignment. However, it is unclear how the realignment of Pevensey Bay will affect the harbour, except that to maintain the harbour while the neighbouring coastline is allowed to erode back will entail considerable expense that was probably not recognised when the harbour was being planned. There will probably be a need for armouring at least along the boundary of the harbour and the retreating Pevensey Bay. These issues suggest that planning for the long-term sustainability of marinas such as that at Sovereign Harbour must take account of coastal processes that operate on decadal to century time-scales, and supports the adoption of a geomorphological systems approach to formulating future SMPs. The challenge for the marine tourism industry is to adapt to this new approach early enough to minimise the potential conflicts between coastal defence strategies and optimising tourism development.
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THE POTENTIAL FOR MARINE WILDLIFE TOURISM IN IRELAND

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ABSTRACT

Ireland has some of the most diverse and abundant populations of marine species in Europe, however the potential for marine wildlife tourism is considerably under-developed.

Wildlife tourism tends to target sentinel species especially large mammals and birds rather than communities or species assemblages. In Ireland there is a wide range of sentinel marine species with the potential for tourism product development including whales and dolphins, seals, seabird colonies and basking sharks. To date 23 cetacean species have been recorded in Ireland, of which 11 are frequently observed. Grey seals are widespread around the coast and common seals locally abundant. Some of the largest seabird colonies including gannets, kittiwakes, guillemots and terns occur off the Irish coast and the basking shark, the second biggest fish in the world growing up to 10m, was once very common in Ireland and is still seen seasonally in some locations.

Although whalewatching in Ireland was estimated to be worth €1,480,000 in direct revenues and €7,973,000 in indirect revenues in 1998 there is still considerable potential as the bulk of the 177,600 visitors are directed toward the wild solitary dolphin at Dingle (Hoyt 2000). There were estimated to be 116 seal watch establishments in the UK in 1997, worth an estimated £36 million, but only one such establishment in Ireland (Young 1998). Although there is a great interest in visiting seabird colonies around Ireland, the value of this marine tourism is not known.

However, there are many constraints to developing marine wildlife tourism in Ireland including restrictions due to weather, high cost of purchasing and running boats and the fact that most species of interest have a high conservation status and are entitled to protection under national and international legislation.

In this paper I will identify key species with tourism potential, discuss some of the development and marketing strategies that are relevant to marine tourism and address the potential constraints to marine wildlife tourism in Ireland.
Whalewatching is one of the fastest growing tourism industries in the world worth an estimated $1 billion in 1999 and increasing at around 12% per annum (Hoyt 2000). Whalewatching already occurs in 87 countries worldwide and is providing significant revenue for many rural coastal communities. This paper presents a case study where we are seeking to develop a model for sustainable wildlife tourism which provides maximum benefits to rural communities while maintaining, and if possible enhancing, the conservation importance of the site.

**Whalewatching in the Shannon estuary**

The concept of developing commercial whalewatching in the Shannon estuary based on bottlenose dolphins (*Tursiops truncatus*) was first discussed with the community run West Clare Development Co-operative in 1991. In 1992 a study was commissioned by Shannon Development Ltd., a semi-state agency responsible for promoting economic growth in the Shannon region, to assess the feasibility of commercial boat trips to see the dolphins in the estuary. This study showed that bottlenose dolphins were resident in the estuary and that it was a calving ground.

Encounter rates with dolphins were very high suggesting that this was one of the best locations in Europe to see dolphins. The presence of a resident group of dolphins facilitated long term planning and investment but the study recommended that whalewatching should be marketed with other sites of wildlife and cultural interest. However, any development of whalewatching must also consider the conservation implications, as bottlenose dolphins are entitled to full protection under the Irish Wildlife Act (1976).

A study commissioned in 1997 to examine the potential of special interest marine tourism in the West Clare peninsula identified the dolphins as the areas unique product which could be the basis for an image that is special to West Clare (Marine Institute, 1999). This study recommended that the dolphins should be integrated with existing tourism products to provide a package aimed at promoting West Clare as an activity zone, thus maximising the revenue and economic benefits to the region.

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3 defined by the International Whaling Commission as any commercial enterprise which provides for the public to see cetaceans in their natural habitat (IWC, 1994).
Innovation in Tourism Planning

Whalewatching in the Shannon estuary developed slowly at first with only a small number of trips (c10-20) carried out during 1993 and 1994 (Berrow & Holmes 1999). In 1995 trip numbers increased significantly to 192 and between 1995 and 1997 about 200 trips were carried out annually involving around 2,500 people. This was estimated to be worth between €108,000-241,000 to the local economy (Berrow & Holmes 1999). During 1999 there was a 30% increase in the number of trips and during the 2000 season visitor numbers increased by 300% to about 12,000 people (Fig. 1). There has not been a concurrent increase in trip numbers as two new purpose built whalewatching vessels, with three times the capacity of previous vessels were launched during 2000 (Fig. 2).

Framework for Sustainable Development

In response to the recognised potential of whalewatching to the Shannon region the Shannon Dolphin and Wildlife Foundation (SDWF) was formed in March 2000 to formulate and implement a plan for the development of sustainable whalewatching. The SDWF objectives include:

1. to maintain the dolphin population in a favourable conservation status
2. to raise public awareness of dolphins and the marine environment
3. to increase volume and value of dolphin-watching visitors
4. to integrate dolphin-watching with eco-tourism activities in the region

The SDWF was established by a range of national, regional and local authorities and agencies including Dúchas, Marine Institute, Shannon Development Ltd., Clare County Council, Kilrush Urban District Council, Carrigaholt Development Association and Kilrush Chamber of Commerce. The initial aim was to attract and cater for 20-25,000 whalewatching visitors in 3-5 years, by using the multiplier for whalewatching in rural
locations presented in Hoyt (2000), it would make whalewatching in the Shannon region a £1 million tourism industry and would mean a very significant economic impact on local coastal communities.

Figure 1. Number of whalewatching trips in the Shannon estuary (1993-2000).

Implicit in the concept of any sustainable development is that the resource is not overexploited or degraded due to the activity. A critical element in creating the framework for sustainable development was the designation of the Shannon estuary as a Marine Protected Area for bottlenose dolphins. Legal status for the estuary was first discussed in 1995 and a Refuge for Fauna Order drafted in 1997. It was, however, never enacted. The site and species involved fulfilled the appropriate criteria for nomination as a Special Area of Conservation (SAC) under the EU Habitats Directive (1992) and thus inclusion in the Natura 2000 network as bottlenose dolphins are listed under Annex II – species whose conservation requires the designation of SACs. The Shannon estuary was advertised locally as a candidate SAC in April 2000 and transmitted to Europe in November 2000.

Implications of SAC status
Under the SAC legislation in Ireland (Statutory Instrument 94 of 1997, made under the European Communities Act 1972 and in accordance with the obligations inherent in the Council Directive 92/43/EEC of 21 May 1992), the operation of commercial recreational activities such as whalewatching is a notifiable activity and all persons must obtain the written consent of the Minister for Arts, Culture, Gaeltacht and the Islands before whalewatching within the SAC. In order to obtain permission from the Minister, operators must fulfil certain requirements namely: abide by the Codes of Conduct and Conservation Plan, provide monitoring data and demonstrate competence in environmental education and species identification. The Codes of Conduct refer to the behaviour of vessels on the estuary and the Conservation Plan aims to control the total time whalewatching vessels are in the vicinity of dolphins. If operators agree to fulfil these requirements they are accredited under a scheme called Saoirse na Sionna
(Freedom of the Shannon) and are awarded a dolphin flag to fly from their whalewatching vessels. The strength of this scheme lies in its promotion and only those accredited operators will have access to marketing and promotion from tourism agencies such as Bord Fáilte and Shannon Development Ltd. Visitors are also encouraged to only support accredited operators with the assurance that these vessels are monitored and adopt good practices. The Codes of Conduct also apply to recreational craft using the estuary and they and the Conservation Plan are enforced by Dúchas.

Adopting the precautionary principal, Dúchas will attempt to fix the total time allowed on dolphins to around 200 hours and this level will not be increased unless research and monitoring show that there is no detrimental effect of the dolphins or their habitat.

The operators agreed this limit for the 2000 season and monitoring showed the total hours on dolphins last year was 207 hours. Although there is no evidence of any disturbance of the dolphins by tour boats the 200 hour limit was maintained for the present season after consultation with the operators.

Future Challenges

At present, the whalewatching industry in the Shannon estuary is small but is expanding rapidly. To develop a sustainable industry, where the resource is not degraded, we must determine the carrying capacity of dolphins to tour boats and ensure that this is not exceeded. If the target of 20-25,000 visitors is to be achieved then, assuming a typical season of 100 days and an average ferry of 25 passengers, then the environmental impact becomes 800-1,000 trips per season or 8-10 trips per day. Under the present Codes of Conduct vessels are limited to 30 minutes per group per trip, which means dolphins could be subjected to between 4 and 5 hours of whalewatching per day. The ability of dolphins to tolerate this level of whalewatching is not known but if monitoring suggests that the dolphins are avoiding their preferred habitats or are avoiding tour boats then the industry can be controlled under the SAC legislation. A strong scientific element to whalewatching is not only essential to ensure the industry is sustainable, but can greatly enhance visitor experience through education and interpretation.

In order to maximise the economic benefits of this tourism product to the local economy, facilities must be provided to ensure visitors stay in the area to add value to the present industry. This includes developing onshore facilities including land-based whalewatching as dolphins can easily be seen from headlands around the estuary. It would also involve integrating whalewatching with other wildlife/outdoor activities in order to increase the time visitors stay in West Clare. The provision of onshore facilities, including teaching and education, extends the range of "wildlife" and outdoor activities and can extend the season by catering for school and special interest groups. Furthermore, onshore facilities can act as an alternative activity during periods when weather prevents tour boats from going to sea or for visitors who are unhappy on boats. Onshore activities consolidate the industry, making it less susceptible to weather, increasing the average length of stay and spend per head by visitors as well as the carrying capacity of the entire range of activities.
Acknowledgements
The Shannon Dolphin and Wildlife Foundation is supported by Dúchas, Marine Institute, Shannon Development Ltd., Clare County Council, Kilrush Urban District Council, Carrigaholt Development Association and Kilrush Chamber of Commerce. Members of the Steering and Management Committees are thanked for their time, enthusiasm and commitment to this project and the concept of sustainable development.

References
PROFILE OF A MARINE & WATER LEISURE PROJECT IN COUNTY DONEGAL

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ABSTRACT

The Task Force Report on Employment in Donegal (1999) identified that the marine and water leisure sector as a primary target for investment. A recent ESRI/Marine Institute survey of water-based leisure in Ireland valued the sector at £303m nationally. County Donegal has the potential to greatly expand the economic importance of water-based leisure and the Marine Institute has prepared a framework report for the development of the sector in the county. This was published in December 1999 and set eight development objectives as follows:

- Appoint a co-ordinator and advisory forum.
- Develop leisure products and improve access to the resources for locals and visitors.
- Promote water leisure and codes of best practice, e.g. information and training.
- Conserve the natural resource through coastal zone management initiatives and preservation programmes for fish stocks.
- Develop overseas marketing of Donegal product.
- Develop new infrastructure and encourage best practice in co-ordinated management of quays, piers and slip ways to avoid conflict among user groups.
- Develop training packages for marine/water leisure providers to improve the quality of services to the customer.
- Develop a county database on number, origin, behaviour and attitude of participants (to inform management priorities in the future).

Mr. Kevin O'Connor has been appointed to the Donegal County Development Board (CDB) to act as co-ordinator for a period of three years. His role is being co-funded by Donegal County Council, the Northern Regional Fisheries Board, Udarás na Gealtachta, the Marine Institute and North West Tourism. In addition to pursuing the objectives set out above, he has been closely involved with the CDB Marine Working Group in developing an agreed strategy for the overall marine sector in Donegal. He has been forging alliances with a multitude of development agencies, public servants, elected representatives, service providers, project promoters and the general public. He sees a need to temper enthusiasm and politics with sound financial decision making and warns of emerging conflicts between local leisure and tourism and between enterprise development and preservation of the natural environment.
Emerging priorities since taking up the co-ordination role include the county marine development strategy, game and sea angling, marinas and piers, beach management, marine interpretation, coastal walking and marketing.

INTRODUCTION
This paper presents a short account of progress in the implementation of a co-ordinated approach to marine and water-based leisure development in Co. Donegal. While in existence for just eight months, the project has served to concentrate minds on development issues and difficulties. Activity and interest in State Agencies and in the Private Sector is good and people are coming forward with progressive ideas. The paper sets out the background to the project, its impetus, some development obstacles and examples of proposals in three operational areas, i.e. coastal zone management, marinas/ferries, angling/boats.

Background
The Task Force Report on Employment in Donegal (1999) identified the marine and water leisure sector as a primary target for investment. A recent ESRI/Marine Institute survey of water-based leisure in Ireland valued the sector at £303m nationally. County Donegal has the potential to greatly expand the economic importance of water-based leisure and the Marine Institute has prepared a framework report for the development of the sector in the county. This was published in December 1999 and set eight development objectives as follows:

Appoint a co-ordinator and advisory forum
Develop leisure products and improve access to the resource for locals and visitors,
Promote water leisure/tourism and codes of best practice, e.g. dissemination of information to visitors and tourism service providers on activities/accepted practice/rules/prices etc.
Conserve the natural resource through coastal zone management initiatives and preservation programmes for fish stocks
Develop overseas- marketing and promotion of the Donegal product
Develop new infrastructure and encourage best practice in co-ordinated management of quays, piers and slip ways to avoid conflict among user groups
Develop training packages for marine/water leisure providers to improve the quality of services to the customer
Develop a county database on number, origin, behaviour and attitude of participants (to inform management priorities in the future).

These objectives were identified at meetings/seminars hosted by the Marine Institute to seek the views of a wide cross-section of people in the marine/water leisure sector. A co-ordinator was appointed in January 2001 and is based in the County Development Board offices at Lifford. The appointment is sponsored by Donegal County Council, Udaras na Gaeltachta, the Northern Regional Fisheries Board, NorthWest Tourism and the Marine Institute. The co-ordinator works with an advisory forum consisting of
senior officials drawn from all of the relevant development agencies in Donegal as well as from the Department of Marine and the Marine Institute. To date, he has been involved mainly in product development, infrastructure (particularly harbour and marina development) and in the County Development Board’s review of the marine sector. He has highlighted a need to find a consensus on management of marine resources and public property, e.g. harbours, piers, slips, beaches, rivers, fish stocks. In most cases, this will require at least a loose association of people drawn from state agencies, local government, industry and the private sector, e.g. to establish a forum on coastal zoning leading to agreement on conservation, management and regulation. There may be a requirement to set up more formal links in particular cases, e.g. private public partnerships on infrastructure investment or development of specialised visitor attractions, e.g. marina development. In both situations, links should be established with best-practice examples in Ireland or abroad. A good example of best-practice foreign linkage has been established between Iceland and Donegal in the development of the county’s salmon angling.

Development Obstacles and Themes
The first six months of the project period have been used to foster alliances with a multitude of development agencies, public servants, elected representatives, service providers, project promoters and the general public. Good progress has been made in this but the enormity of the task should not be underestimated. Political brokerage is a way of life in rural Ireland and much pressure is brought to bear on elected representatives to deliver large amounts of funding. In addition to requests from individual constituents, politicians, both national and local, are coming under increasing pressure from community groups (over 700 in Co. Donegal). These groups have learned to organise and are particularly good at lobbying for major projects. While not wishing to publicly criticise any particular group (and some have made major contributions to society), many of the projects funded in the past have not been based on sound financial principles and it is clear that some of the projects currently proposed in marine leisure are heavily reliant on NDP funding. This will present difficulties in terms of financial sustainability.

Some other issues causing concern are the emergence of conflicts between local leisure usage and tourism and between business development and preservation of the natural environment.

A good example of the former concept lies in the development of game angling. The county has a very valuable salmon resource but has not developed market recognition to the same extent as the Mayo or Galway fisheries (e.g. Moy, Erriff or Galway Weir). This has happened because Donegal angling clubs feel threatened by tourism and are unwilling to share space with visitors on an organized marketable basis. Examples of business/environment conflicts are found in the development of aquaculture/wild salmon angling, commercial sea fishing/sea angling, tourism activities such as jet skiing/traditional seaside holidays, holiday home development/wilderness holidays and the siting of marinas/maintenance of habitats. These types of issue need to be addressed in a co-ordinated fashion (see section on the role of County Development Board). A full description of development obstacles and bottlenecks is contained in the Marine Institute Framework Report referred to above.

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In general terms, the table below sets out the main development themes that have emerged in the co-ordinator’s discussions and meetings over the past six months.

<table>
<thead>
<tr>
<th>Emerging Development Themes across the Marine &amp; Water Leisure Sector</th>
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<tbody>
<tr>
<td><strong>Water Quality / need to maintain or improve / need for formal trials on best practice</strong></td>
</tr>
<tr>
<td><strong>Conflict Resolution / both within marine sector and with other sectors</strong></td>
</tr>
<tr>
<td><strong>Access to leisure resource for locals and visitors, e.g. land to sea, sea to land, rivers &amp; lakes, designated walks over farm land</strong></td>
</tr>
<tr>
<td><strong>Interpretation of marine heritage, sea life and fish farming</strong></td>
</tr>
<tr>
<td><strong>Best Practice (copy successful approaches elsewhere, develop partnerships with successful practitioners) – the co-ordinator has had a number of meetings with successful enterprises with a view to establishing in Donegal. A party has also travelled to Iceland to look at angling organisation.</strong></td>
</tr>
<tr>
<td><strong>Health &amp; Safety (legislation, insurance, information, management)</strong></td>
</tr>
</tbody>
</table>
Role of Donegal County Development Board
As part of the re-organisation of local government and local development systems, Development Boards have been established in every city and county in Ireland. Each board is currently in the process of preparing a strategy for the long-term growth of the economic, social and cultural resources. In the Donegal case, sixteen working groups have been established to tackle this task at a micro level. Each group comprises key sectoral interests and actors. They were asked to consult widely on development issues in their respective sectors and to come forward with a development vision. The groups were asked to work within an agreed set of national guidelines and timescales governing all County Development Boards.

A paper on each group’s established vision, goals, objectives and development options is due for discussion by the Donegal County Development Board in September. An agreed county development strategy must be published by December 2001. It is important that the published strategy is proofed in advance against the existing policies of statutory/regulatory bodies. At first glance, this may appear to reduce the county strategy in terms of innovation and effectiveness. However, those involved in the working groups have found many of the current policies to be either ineffectively managed or managed in an uncoordinated way vis-à-vis other state bodies or local interest groups. Therefore, the main objectives of the county strategy will be:

- to ensure that relevant agencies effectively implement policy in the best interest of the county
- to assist such agencies to develop implementation partnerships at a local level where deemed necessary
- to enable the County Development Board to take initiatives where policy gaps are found to exist.

One of the working groups, of which the marine leisure co-ordinator is a member, dealt specifically with the development of marine resources in five sub-sectors, namely, commercial catching, processing, aquaculture, leisure/tourism and offshore oil/gas. An analysis of strengths, weaknesses, opportunities and threats (SWOT) was prepared for each. These analyses were then critically appraised in terms of cross-sectoral effect. In some cases, it was found that sub-sectors had common interests, e.g. good water quality, stock conservation, improved infrastructure, grant support, marketing and training. However, there were also numerous cross-effects that were perceived to limit development, e.g. power craft/navigation, use of shorefront and beaches, visual intrusion, marina/ferry development, lack of co-ordinated planning, misinformation, job displacement, management of aquaculture sites, licensing objections, negative public perception/poor PR, salmon/sea trout disease/cross-breeding, organic build-up on seabed, use of chemicals/antibiotics, inadequate management of wild fish stocks.

While some trade-offs may be unavoidable in the long run, the marine working group wishes to facilitate mutual development of the entire sector. Critical appraisal of the SWOT analyses identified development conflicts and bottlenecks. These occurred almost exclusively between the leisure/tourism and aquaculture industries or between the leisure/tourism and catching industries. Relatively few problems arise between
leisure/tourism and processing or between catching and aquaculture. The catching and processing sectors share some bottleneck problems such as inconsistent supply and poor regulation. A summary of development issues arising between the marine leisure/tourism and aquaculture industries is included at appendix 1. This sets out areas of perceived conflict and areas of common interest between the two sub-sectors and makes proposals for their mutual development. Similarly, appendix 2 contains an analysis of fish stock exploitation by the sea angling and commercial fishing sectors together with development and conservation proposals put forward by fishermen and by Bord Iascaigh Mhara (BIM).

The Board’s working group has identified a clear need to organise a more integrated approach to the management of the marine sector that takes account of the views of all interests groups. This is particularly important in light of the obvious requirement to sustain an increasingly fragile natural resource. The need for conservation is clearly understood by people on the ground as evidenced by the 1999 BIM survey of fishermen. The lobster v-notching programme was very much a bottom-up initiative and this type of response now needs to be expanded to the broader management of marine and water resources.

As it would be very difficult to make such sweeping change on an immediate countywide basis, the introduction of a pilot demonstration project seems logical. Lessons learned can be applied gradually to other areas. On this premise, the marine working group has recommended the establishment of a local area forum to manage the consensual development of all marine sub-sectors in Donegal Bay. This proposal is in line with the recommendations set out in all of the recent marine/fisheries policy documents and reports. The proposal is underpinned by the scoping study of the National Spatial Strategy Planning Unit on coastal zone management:

"There is no CZM [clear coastal zone management] structure, however, CZM will need better co-operation between Local Authorities similar to Waste Management Strategy co-operation, i.e. viable logical groupings of Local Authorities"

"EU Water Quality (Framework) Directive requires the preparation of River Basin Plans which have to include estuaries and coastal waters up to 1km from shore. Cross-Border catchments must be managed as an International Basin District" [the Erne and Melvin are cross-border river systems discharging to the sea in Donegal Bay]

"a Coastal Zone Management policy is required urgently to guide Local Authority Development Plans".

Donegal Bay is proposed because it possesses significant industries in the catching, processing, aquaculture and tourism sub-sectors. Each of these is relatively well organised in their own right but overall co-operation in management of the bay is weak. The proposal has been discussed informally with each sub-sector. The reaction was very positive and, at the request of the County Development Board, the marine leisure co-ordinator has prepared a position paper on integrated CZM to enable further consideration of the proposal.
Marinas / Ferries

Donegal County Council estimates a need for three or four marinas around its coastline to facilitate the development of the ‘national necklace’ of sea-to-land and land-to-sea access. Engineering surveys have been commissioned for all piers and harbours in the county to establish their state of repair and potential for development. The Council has led the development of two marinas and a car ferry in Lough Swilly at Buncrana (38 berths) and Rathmullan (104 berths). Planning permission is in place and a foreshore licence is awaited. Prior indicative notices for construction contractors have been published in the EU Journal. A business plan has been prepared and management options are under consideration. The Council has also been pro-active in a cross-border agreement to establish a car ferry across Lough Foyle between Magilligan (Derry) and Greencastle (Donegal). Terminals are currently under construction.

A private proposal has been made to develop a marina at Carrickarory or Moville on Lough Foyle on a PPP basis (public provision of marina infrastructure and private provision of ancillary accommodation, retail, management and marketing). Bore hole testing has just recently been completed. If this proves structural and cost feasibility, funding will be sought for a full scoping study, engineering and architectural design. The private promoter is developing a business plan and hopes to bring in investment partners.

Killybegs Community Council in conjunction with Killybegs Sea Angling Club is proposing to develop a small boat berthing facility for their local leisure industry. DoMNR has been asked to consider funding this as part of the overall development of the commercial fishing harbour on the basis that leisure craft are endangered by current berthing arrangements close to much larger vessels. A need for 50 berths has been identified in their feasibility study. It is proposed that management of the facility would lie with the harbour master. This development would be linked to another community proposal to build a maritime interpretative arts centre.

A private company has received planning permission for a small berthing facility (35 berths) at the quay in Donegal Town. Application has been made for a foreshore licence. The company is also proposing to build a small visitor centre incorporating multi-media interpretation of the local history and heritage (Four Masters’ Abbey and story of emigration ships).

A Community Trust Company has proposed the development of a marina at Bundoran. Funds have been raised to carry out a wave study. This will determine general feasibility but, more importantly, will indicate whether the proposal would be damaging to surfing in the area.

A comprehensive proposal for marina placement in the west of the county has not yet emerged. A steering group has been at work in Burtonport and a tentative proposal has been made for Arran Mor Island. The County Council commissioned engineering reports on Bunbeg (west coast) and Downings (north west) but no further action has been taken.
In practical terms, marina placements on Loughs Foyle and Swilly, the general area of Downings and Bunbeg or Burtonport and in Donegal Bay would allow circumnavigation of the north west coast connecting Scotland and Northern Ireland to the West of Ireland.

Placements in Donegal Bay need to be carefully considered in light of the number of proposals coming forward coupled with proposals for Rosses Point and Mullaghmore in Co. Sligo. In addition to fairly large-scale marina developments, there appears to be justification for the development of a number of small specialist centres of excellence for marine leisure, e.g. sea angling, boat tours, wild life watching, diving. This would generally involve improvement of existing piers such as Bunagee, Bunbeg and Creevy/Ballyshannon or placement of pontoons. The management of these facilities needs to be considered in detail to comply with health & safety legislation and the new regulations on use of personal power craft and passenger boats. A possible solution might be to consider the appointment of ‘district harbour masters’ covering a number of smaller locations and this could include aspects of beach management.

Angling / Boats
The co-ordinator has been asked by the Regional Fisheries Board to sit on a working group for angling organisation. The group has been given until the end of October to produce recommendations for consideration by the Board, the Donegal Game Angling Federation and those involved in sea angling. At that point, the Board may also wish to discuss the recommendations with relevant statutory bodies. The working group travelled to Iceland in June 2001 to examine its salmon angling management and marketing. Details of their findings are contained at appendix 3. While a small number of local angling clubs in Donegal have entered into formal space sharing arrangements to attract visitors to State-owned waters (based on beat systems agreed with the Regional Fisheries Board), most clubs in the county expect visiting anglers to put up with overcrowding during peak angling periods. In addition, some regular visitors to the county use personal contacts to secure club membership thus fishing for about £50 per year while others pay £20 daily on the same waters. Apart from being inequitable and undemocratic, this defeats all efforts to market the county as an international angling destination. It is also clearly a wasted opportunity to create stable employment and to conserve fish stocks. Donegal’s salmon numbers exceed those of Iceland yet the latter has an international angling business valued at $35m per year. The Donegal value is c. £1m.

Quite a number of people are seeking grant support for sea angling and sight seeing vessels. With the introduction of a mandatory passenger boat licensing system, there is likely to be increased demand for such grants next year. The Fisheries Board and the marine leisure co-ordinator are working on a proposal to consolidate the industry in the county and to market all licensed boats on a co-operative basis.

Conclusion
In keeping with the report of the National Spatial Policy planning unit referred to above, the County Development Board is anxious to ensure that all of the marine sub-sectors play a full role in development of the county. The overall aim must be to
maximise social and economic benefits while simultaneously preserving the natural environment for future generations. The marine leisure co-ordinator has been asked to assist in finding ways to get consensus from stakeholders on sensitive development of a shared environment.
### Appendix 1: Reported views of sea anglers and commercial fishermen on status of stocks in Donegal (by national value of commercial landings for relevant angling species)

**Sources:**
- Northern Regional Fisheries Board comment August 2001*
- Irish Inshore Fisheries Sector, Review & Recommendations, May 1999 (Bord Iascaigh Mhara)

<table>
<thead>
<tr>
<th>SPECIES COMMON TO COMMERCIAL FISHING &amp; SEA ANGLING (by commercial importance)</th>
<th>NATIONAL COMMERCIAL LANDED VALUE 1997 (total all vessels inshore &amp; offshore)</th>
<th>FISHED BY ROD &amp; LINE (Donegal Bay)</th>
<th>FISHED COMMERCIALLY (Donegal Bay)</th>
<th>COMMENTS OF SEA ANGLERS</th>
<th>COMMENTS BY FISHERMEN ON ALL STOCK STATUS &amp; CONSERVATION IN DONEGAL (BIM Appendices III and IV)</th>
<th>BIM MANAGEMENT RECOMMENDATIONS FOR DEVELOPMENT OF SEA ANGLING (Appendix I)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mackerel</td>
<td>£34,012m</td>
<td>Yes (also popular bait)</td>
<td>Yes</td>
<td>Good runs generally but sometimes brings large trawlers into bay</td>
<td>Stocks under pressure Seal control needed to reduce loss of white fish Introduce grading system Keep big boats out Boats of 50ft and over should fish 40 miles off</td>
<td>Improving access to sites Modernisation of sea angling fleet Attracting young skippers to sector Achieving secure and higher incomes for skippers &amp; crew (but need to avoid displacement, para. 9.6) Extending the sea angling season Standardising the quality of the product offered</td>
</tr>
<tr>
<td>Monkfish/ Anglerfish</td>
<td>£6.959m</td>
<td>Yes</td>
<td>Yes</td>
<td>Scarce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cod</td>
<td>£3.847m</td>
<td>Yes</td>
<td>Yes</td>
<td>Very scarce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Whiting</td>
<td>£5.902m</td>
<td>Yes</td>
<td>Yes</td>
<td>Scarce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haddock</td>
<td>£4.925m</td>
<td>Yes</td>
<td>Yes</td>
<td>Scarce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuna</td>
<td>£2.886m</td>
<td>Yes</td>
<td>No</td>
<td>3 captured by R&amp;L in Donegal Bay autumn 2000. Very valuable tourism angling species if it can be developed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plaice</td>
<td>£2.383m</td>
<td>Yes</td>
<td>Yes</td>
<td>Scarce – too many undersized fish taken</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ray / Skate</td>
<td>£1.800m</td>
<td>Yes</td>
<td>No</td>
<td>In serious decline – tagging programme planned in Clew Bay and be extended to Donegal Bay</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Turbot</td>
<td>£1.667m</td>
<td>Yes</td>
<td>Yes</td>
<td>Scarce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>White Pollack</td>
<td>£0.905m</td>
<td>Yes</td>
<td>No</td>
<td>Reasonable numbers but evidence of decline in 2001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lemon Sole</td>
<td>£0.880m</td>
<td>Yes</td>
<td>Yes</td>
<td>Scarce – too many undersized fish taken</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ling</td>
<td>£0.848m</td>
<td>Yes</td>
<td>Yes</td>
<td>Reasonable supply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spur Dog</td>
<td>£0.832m</td>
<td>Yes</td>
<td>Yes</td>
<td>Scarce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Codling</td>
<td>£0.387m</td>
<td>Yes</td>
<td>Yes</td>
<td>Very scarce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>John Dory</td>
<td>£0.264m</td>
<td>Yes</td>
<td>No</td>
<td>Scarce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spotted Dog</td>
<td>£0.238m</td>
<td>Yes</td>
<td>No</td>
<td>Reasonable supply</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conger Eel</td>
<td>£0.094m</td>
<td>Yes</td>
<td>No</td>
<td>Losing numbers through by-catch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gurnard</td>
<td>£0.048m</td>
<td>Yes</td>
<td>No</td>
<td>Scarce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mullet</td>
<td>£0.048m</td>
<td>Yes</td>
<td>No</td>
<td>Plentiful (estuaries)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dabs</td>
<td>£0.044m</td>
<td>Yes</td>
<td>No</td>
<td>Losing numbers through by-catch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shark</td>
<td>£0.035m</td>
<td>Yes</td>
<td>No</td>
<td>In decline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sand Sole</td>
<td>£0.016m</td>
<td>Yes</td>
<td>No</td>
<td>Scarce</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flounder</td>
<td>£0.005m</td>
<td>Yes</td>
<td>No</td>
<td>Losing numbers through by-catch</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pouting</td>
<td>£0.005m</td>
<td>Yes</td>
<td>No</td>
<td>Reasonable supply</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Anglers generally are expressing concern about by-catches and the taking of undersized fish through indiscriminate trawling in Donegal Bay (esp. by larger vessels).

Appendix 2: Donegal County Development Board marine working group paper on general public perception of the relationship between marine leisure and aquaculture.
<table>
<thead>
<tr>
<th>Key Development Areas for Both Sectors</th>
<th>Possible Conflicts Leisure &amp; Aquaculture (perceived and not to be read as statements of fact)</th>
<th>Common Interests/Concerns Leisure &amp; Aquaculture (perceived and not to be read as statements of fact)</th>
<th>Possible Proposals Leisure &amp; Aquaculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management &amp; Strategic Planning (for expansion)</td>
<td>General lack of co-operation in planning and development between sectors Use of 6 inch maps makes it difficult to determine the full impact of aquaculture licence applications Negative visual impact of sea cages etc. Reduction of aesthetic quality and wilderness value Displacement of tourism Aquaculture expansion planned to gain economies of scale and continuity of supply Poor management of aquaculture sites (equipment storage, pier congestion, litter, untidy or unsightly infrastructure) Limited space to culture certain aquaculture species because of leisure development Public objections make it difficult to obtain aquaculture licences Best use of bays, e.g. holiday homes v. aquaculture</td>
<td>Need for better COMMUNICATION between these industries Inadequate exchange of information on development proposals between the sectors Many interests in common especially water quality, ecology, infrastructure, safety and the need for a positive public image</td>
<td>Establishment of an inter-agency/industry FORUM to resolve conflicts and to pursue common interests Establishment of an agreed pilot demonstration project for COASTAL ZONE MANAGEMENT (CZM) to be overseen by the forum Pilot to include research on environmental impacts, single bay management and further development of innovative measures such as the aquaculture C.L.A.M.S. initiative and the wild salmon catchment management programme Pilot should establish agreed zoning for conflicting activities and oversee experimental programmes in boat practice, training, safety and a code of conduct (e.g. harbour management, navigation, safety at sea) Funding should be sought for the pilot project to include environmental impact assessment, public consultation and data gathering, investment in innovative measures</td>
</tr>
<tr>
<td>Water Quality / Environmental Sustainability</td>
<td>Aquaculture often perceived as a polluting industry Tourism can damage aquaculture through negative impacts on water quality, influx of visitors, sewage, anti-foulants, bilge water, ballast water, oil slicks, marina development Build-up of organic matter under fish cages Use of chemicals and antibiotics to treat fish / disposal of mortalities Displacement of angling tourism Proximity of salmon cages to rivers / smolt runs / escapes / disease transfer / inter breeding / chemicals / sea trout collapse Potential damage to blue flag beaches</td>
<td>Increased discharge to bays especially holiday homes / septic tank overflows Inadequate sewage treatment especially tourist resorts Other contaminants, e.g. oil, fuel, slurry, fertilisers</td>
<td>Reactive: Identify and agree locations of greatest concern Carry out risk assessments at these sites Seek agreement on remedial action with relevant authorities and other users Proactive: Establish Pilot Project as above at a location common to all marine industry sectors, e.g. Donegal Bay has major fish catching and processing sectors as well as significant aquaculture and tourism sectors. Water quality is also set to undergo substantial improvement with large-scale investment in treatment facilities. The pilot ‘Catchment Management’ project (Minister for Marine) for wild salmon is also located in this area. Tourism College in Killybegs. National Water Sports Training Centre in Ballyshannon. Air-sea rescue at Finner.</td>
</tr>
<tr>
<td>Health &amp; Safety and Quality Assurance</td>
<td>Aquaculture may pose problems to leisure in navigation, use of beaches, diving, development of marinas &amp; ferries Jet skis and power boats may pose problems for aquaculture in terms of speed and proximity to installations</td>
<td>Need for zoning and regulation under agreed coastal zone management policy</td>
<td>See FORUM proposal</td>
</tr>
<tr>
<td>Infrastructure</td>
<td>Need codes of conduct and, in some cases, activity zoning (applies equally to catching,</td>
<td>Develop in agreed way: roads, piers, harbours, marinas, boats, toilets,</td>
<td>Make full use of funding opportunities available under NDP, Interreg III etc. (room for creative approach under</td>
</tr>
</tbody>
</table>
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<table>
<thead>
<tr>
<th>Key Development Areas for Both Sectors</th>
<th>Possible Conflicts Leisure &amp; Aquaculture (perceived and not to be read as statements of fact)</th>
<th>Common Interests/Concerns Leisure &amp; Aquaculture (perceived and not to be read as statements of fact)</th>
<th>Possible Proposals Leisure &amp; Aquaculture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing, aquaculture and leisure sectors</td>
<td>showers, waste management/water quality systems, ferries, visitor centres/information</td>
<td>partnership arrangements)</td>
<td>Include interpretation as an integral part of the pilot CZM project, e.g. science, habitats, species, history of catching sector development of aquaculture development of marine leisure economic impact, jobs, value purpose of demonstration project coastal zone management the future - balanced development</td>
</tr>
</tbody>
</table>

Interpretation of marine heritage, sea life and fish farming

| Selection of demo project location is important (should try to avoid tensions) | Opportunity to inform and educate public through interpretative centre | Public face of pilot demonstration project on CZM | Recruitment base for young people (schools etc.) |

Appendix 3: Observations by Donegal Angling Group on Study Visit to Iceland

<table>
<thead>
<tr>
<th>Observations on Icelandic Visit</th>
<th>Applicable in Donegal?</th>
<th>Comment at de-briefing meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angling is a valuable and marketable resource</td>
<td>Yes – but not organised &amp; marketed</td>
<td>Not available for publication</td>
</tr>
<tr>
<td>A high level of organisation is applied</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Stock conservation is the basis of Iceland’s angling industry</td>
<td>No – data collection poor and spawning assessment consists mostly of redd counting</td>
<td></td>
</tr>
<tr>
<td>Iceland’s angling industry worth US$35m per year</td>
<td>Donegal angling business worth US$2m</td>
<td></td>
</tr>
<tr>
<td>Iceland has 93 catchments / 13 rivers have average catches in excess of 1,000 fish per season / no netting catch / total of about 30,000 salmon to rod per season</td>
<td>Donegal has 50 catchments / about 9 rivers are capable of 1,000 rod caught fish per season / many more fish caught in nets / Foyle system on its own produces more salmon than Iceland</td>
<td></td>
</tr>
<tr>
<td>Local anglers in Iceland contribute significantly to their sport / up to £250 per day for best salmon fishing but have much cheaper access to trout lakes</td>
<td>No Anglers in Donegal fish salmon for around £60 per season in licence and club fees</td>
<td></td>
</tr>
<tr>
<td>Iceland has about 4,000 local anglers</td>
<td>Donegal has about 2,000</td>
<td></td>
</tr>
<tr>
<td>Each fishery in Iceland is managed by the landowner under law</td>
<td>No – but county is fortunate to have significant rivers in State ownership / also has a number of good private fisheries</td>
<td></td>
</tr>
<tr>
<td>A limit on daily rod numbers per river</td>
<td>No – but models developing on Owenea and Eske. Some rod assessments done in the county.</td>
<td></td>
</tr>
<tr>
<td>Limit on number of fishing days</td>
<td>Yes – but much longer season in Donegal</td>
<td></td>
</tr>
</tbody>
</table>
# Innovation in Tourism Planning

<table>
<thead>
<tr>
<th>Observations on Icelandic Visit</th>
<th>Applicable in Donegal?</th>
<th>Comment at de-briefing meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Limit on numbers of fishing hours each day</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Catches recorded accurately each day</td>
<td>No - Owenea model developing but no local catch statistics. Tagging system should help.</td>
<td></td>
</tr>
<tr>
<td>Income distributed between owners on basis of catch record, i.e. number of fish on his beat = share of rental (up to £300,000 per year)</td>
<td>No – but could be model for distribution</td>
<td></td>
</tr>
<tr>
<td>Mandatory Association of River Owners</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Federation of Angling Clubs</td>
<td>Yes - but weak</td>
<td></td>
</tr>
<tr>
<td>Fisheries let at open market rent / clubs, syndicates and international lease operators bid (up to 10 years)</td>
<td>Bidding system for public waters is weak because fisheries are poorly managed / do not attract international bidders</td>
<td></td>
</tr>
<tr>
<td>Has a vibrant service sector depending on angling, e.g. lodges, restaurants, pubs, tackle stores, guides</td>
<td>No – but can be copied</td>
<td></td>
</tr>
<tr>
<td>Some fisheries supplemented by hatchery programmes</td>
<td>Eske only</td>
<td></td>
</tr>
<tr>
<td>Some fisheries are entirely ranched</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>State funded fish cultivation fund</td>
<td>TAM / NDP – but competitive / small money</td>
<td></td>
</tr>
<tr>
<td>State gives legal direction through Directorate of Freshwater Fisheries under Icelandic Salmon Fisheries Acts 1970 to 1999 (final arbiter)</td>
<td>Law there but complicated and vague – needs strong leadership from authorities</td>
<td></td>
</tr>
<tr>
<td>State policy to use angling business to keep farmers living in rural Iceland (spatial strategy)</td>
<td>Could be considered in Irish Spatial Strategy</td>
<td></td>
</tr>
<tr>
<td>Iceland subscribes fully to the North Atlantic Salmon Fund (NASF) - Philosophy is to sustain angling industry: Management of fish life cycle Suspension of mixed stock fisheries Generous compensation for netsmen Business applied solutions Exchange of property rights Public and private sector co-operation</td>
<td>Need to look at draft nets in the fisheries we intend to manage – should win support of local anglers</td>
<td></td>
</tr>
</tbody>
</table>
Innovation in Tourism Planning

<table>
<thead>
<tr>
<th>Observations on Icelandic Visit</th>
<th>Applicable in Donegal?</th>
<th>Comment at de-briefing meeting</th>
</tr>
</thead>
<tbody>
<tr>
<td>Icelandic delegation to travel to Donegal in September 2001 to: Advise on angling plan progress Advise on how to win support of angling clubs for organised approach Advise on the draft net situation on managed fisheries Advise on international marketing</td>
<td>Donegal County Development Board fully supports this approach and will become involved to help the Regional Fisheries Board and other State Bodies.</td>
<td></td>
</tr>
</tbody>
</table>

References:


SCUBA DIVING: CAN IT HELP ENHANCE THE COASTAL TOURISM PRODUCT IN GREECE?

Christos Petreas,
Business & Tourism Economist (MBA – USA).
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ABSTRACT

Scuba diving has long been a “higher” form of tourism activity. In Greece, however, a country of extended coastal areas and many islands, this activity until recently has been strictly banned. In the last years, following public pressure from interested organizations and individuals, some coastal areas have been “de-regulated” and tourist scuba diving is allowed. The subject is still raising much controversy between the various diving “schools” and the Ministry through the Archaeological authorities.

The paper, if accepted, will undertake a survey among the diving schools and clubs in different areas in Greece, to identify the existing and potential interest for this “tourism activity”. It will also try to determine if there is the necessity or not to further liberate coastal areas, and will try to survey tourists at “liberated” coastal areas with a view to identifying the “recognition” of this activity as part of the local tourist product.

The aim of the paper will be to develop an initial basis of reference for this tourism activity in Greece (to the best of the author’s knowledge no such work has been undertaken thus far). It also aims to obtain some criteria for the potential development and enhancement of the local tourism product with respect to this activity in coastal areas. It will examine both “liberated” areas and “restricted” areas in an effort to obtain comparative information.

Comparison of findings will be sought, with the views of the regulating agencies, (National Tourism Organization, Ministry, Archaeological Authorities), and those of local tourism professional organizations both in “restricted” and “de-regulated” areas.

KEY WORDS

Greece, Scuba Diving, Tourism
INTRODUCTION

The emergence of Greek tourism started mainly in the 50’s and was developed primarily as coastal/ resort and culture tourism, in that the government interventions of that period emphasized the construction of infrastructure on the coastal areas, near known historical/ archaeological sites and cultural events. In the latter decades, government intervention was furthered with health tourism facilities been developed in some of the more popular spas and a number of mountain refuges (in collaboration with the Alpine Federation of Greece). Subsequently, the coastal areas were again emphasised with the development of a number of port facilities and yachting marinas. In the latter part of the 60’s the main casinos of Athens (Mount Parnes), Rhodes and Corfu, were put into operation.

In the mid 70’s the first efforts to develop specialist facilities were undertaken with the ski resorts of Central Greece (Mount Parnassos) and in Macedonia. At the same period the first rural tourism interventions are the re-construction of traditional residences in the Mani and other regions.

However, despite all these developments and the increasing tourism flows, Greek tourism in the beginning of the 90’s suffered from a multitude of difficulties (Tsekouras et al, Ch. I & VI). These included a number of uncoordinated efforts undertaken by many organisations (governmental and professional), inconsistencies in government tourism policy, lack of special tourism infrastructure and facilities, long drawn procedures, and an overall low and insufficient investment in tourism.

The government, therefore, instituted a number of policies to treat the ailments: a new incentives law supporting accommodation installations with specialised facilities such as skiing, conference centres, private marinas, health spas; rural and agro tourism. European initiatives such as the LEADER also emphasised tourism related developments and a major effort is undertaken to include interventions for tourism activities in the inland and mountainous areas.

Coastal tourism, being the central and main tourism activity – the three “s” tourism (sun, sea, sand) is the major bread earner of the Greek tourism industry and relies heavily on organized, operator directed mass tourism, primarily from Germany and the United Kingdom. In the Table below the main origin countries statistics are presented, since they have a bearing on the Scuba diving activity (see survey analysis, below).
TABLE 1
DISTRIBUTIONS OF TOURISM ARRIVALS IN GREECE BY COUNTRY OF ORIGIN
percentages of total arrivals – selected countries

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>20,8</td>
<td>17,3</td>
<td>17,0</td>
<td>18,7</td>
<td>20,0</td>
</tr>
<tr>
<td>Germany</td>
<td>21,2</td>
<td>19,5</td>
<td>19,8</td>
<td>19,6</td>
<td>20,1</td>
</tr>
<tr>
<td>Italy</td>
<td>6,0</td>
<td>5,0</td>
<td>5,3</td>
<td>6,0</td>
<td>6,1</td>
</tr>
<tr>
<td>France</td>
<td>5,2</td>
<td>4,7</td>
<td>4,2</td>
<td>4,5</td>
<td>4,5</td>
</tr>
<tr>
<td>Scandinavian countr i es (Sweden, Norway, Denmark, Finland)</td>
<td>9,6</td>
<td>10,5</td>
<td>11,2</td>
<td>10,4</td>
<td>10,4</td>
</tr>
<tr>
<td>Low Countries (Netherlands, Belgium, Luxembourg)</td>
<td>7,0</td>
<td>6,8</td>
<td>6,9</td>
<td>7,5</td>
<td>7,8</td>
</tr>
<tr>
<td>U.S.A.</td>
<td>2,2</td>
<td>2,3</td>
<td>2,4</td>
<td>2,0</td>
<td>1,9</td>
</tr>
</tbody>
</table>

The main emphasis of the last decade’s tourism development policies has been in (a) extending the tourism season and (b) improving the quality of the tourism product. Related to these main goals have been the efforts to attract higher income generating tourists, increase the average accommodation occupancy, the development of new “alternative” so-called forms of tourism, and to achieve a better distribution of the tourism activity in the country.

In practical terms, however, little has been effectively achieved to-date, although there are actions and interventions on all of the above fronts.

Coastal tourism activities per se, have not been in the forefront of government intervention, except in respect of the emphasis on improving the tourism product offering, and adding ancillary facilities (such as conference centres, golf courses, pools, etc.) to existing installations or businesses.

The activity of underwater diving – scuba diving – has not been considered either separately or individually. In effect it has not even been mentioned as part of the “new forms” of tourism, despite the fact that the geographic nature of the country with extensive coastline and many islands, would justify such consideration.

There are three main reasons for this:

- Most important was the fact that no free diving was permitted because of the need to protect underwater archaeological finds and the fear of either destruction of the sites or unauthorized removal of the items.
- Greece had not been developed as a “diving” destination and had not created an image for this either locally or internationally.
- The framework governing the operation of scuba diving activities (both in terms of training and in terms of offering pleasure dives) was unclear, difficult to satisfy, and complicated to apply.

Thus, little scuba activity existed in Greece up to 10 years ago and there were few Greek divers and schools, although some foreign tourists and some locals were practicing scuba diving, often unauthorized and in locations officially restricted.

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Scuba diving legal framework in Greece
Man dived underwater many thousand of years ago in search of food. Historical testimony exists even at 5000 BC for diving done in order to collect sponges, corals and pearls. Homer makes reference to sponge diving at the depth of 25 meters and notes that tying a large piece of rock around their waist assisted divers. The historian Thucidides (Ch. Z, 40 of the “Histories”) notes that the Syracuse sailors were diving to hinder the rowing of enemy battleships and attack their crews; Arrianos, also, in the Second Book XXI-6 of “Alexander’s Anavasis” notes that divers would block holes in enemy ships and cut the retaining ropes of ships anchored.

It seems the most ancient “pleasure diver” was Alexander the Great himself, who, according to Aristotle, went underwater inside a wooden cone, in order to enjoy the views and the scenery.

Since the days of Alexander, man has improved the techniques and equipment. The most recent and most renowned underwater explorer was the Frenchman Jacques-Yves Cousteau, who, in 1943, designed a first type in France and later developed the “self contained underwater breathing apparatus” scuba, and also carried out many underwater explorations with the oceanographic ship “Calypso”.

In 1993 the then Minister of Culture signed a decree making pleasure diving possible in 10 locations around the country. This gave the various diving clubs and Greek divers the satisfaction of being able to practice their sport legally. In Greece, until 1994, scuba diving activities were covered by the general regulations included in the Port Operation Code; their inefficiency had been recognized as far back as 1985, but the efforts to update and create an appropriate legal structure had been disparate and did not come to fruition.

In 1994-95 a series of exchanges and collaborations took place among the relevant competent authorities and organizations, primarily the following:

- The Ministry of Merchant Marine,
- The Secretariat General of Sports,
- The Hellenic Tourism Organisation,
- The Ephorate for Underwater Archaeology of the Ministry of Culture,
- The Hellenic Federation of Associations of Underwater Activities, Sport Fishing and Swimming Techniques.

The result of these meetings was the creation of a new legal structure for underwater activities, which was put into effect in January 1997 and was added to by special regulations in April 1999. Thus the regulatory framework is relatively very new in Greece.

The new framework distinguishes between Centres for Learning Underwater Swimming with an independent breathing apparatus (for all effects pleasure scuba
Innovation in Tourism Planning

diving) and Diving Centres (which operate a craft for the purpose of organised pleasure dives by certified divers). The framework also defined the requirements for a “diver training instructor” and designated the tourist period for pleasure dives as from 1 April to 31st October of every year.

The individual Coast Guard Authorities are involved in the process for issuing licenses to the Training and Diving Centres. The license is valid only for up to two years (expiring on 31st December of the following year). Initial issuance of a license is dependent on having relevant and required facilities, a craft, and necessary personnel duly trained and certified.

In terms of activity the sport of scuba diving is included under the coordinating responsibility of the Secretariat General for Sport, which is part of the Ministry of Culture, while the athletic responsibility rests with the appropriate Sports Federation (there are about 40 Federations having responsibility for different sports), in the particular case the Hellenic Federation of Associations of Underwater Activities, Sport Fishing and Swimming Techniques. The Federation has approximately 120 member associations all over Greece; the difference is that the Federation’s activities are so broad that scuba diving is really only a small part of its activities.

On the other hand, member associations are authorized to practice scuba diving for their members (including training and organizing dives). It is not possible to assess the extent of such activities without a detailed survey of these associations, since scuba diving may be one of many interests or activities undertaken, and association members may be involved in more than one activity in their association (i.e. scuba diving and others).

**The Scuba diving tourism product**

Among the various tourism activities, “sports or athletic tourism” includes either the participation in, or the audiencing of, sports events or activities. In recent years, with the increased interest in sports and adventure tourism, a number of activities have been described as “alternative forms of tourism” in contrast to the coastal sun-sea-sand tourism. Within the definition of sport tourism activities are such sea activities as water skiing, snorkelling, spear fishing and pleasure scuba diving.

These activities, while co-existing within the offering of the coastal / resort tourism, have not normally been promoted separately and have, traditionally, been included in the “facilities” descriptions of various resorts, or as optional activities in a “sea resort package”. In this context, they have not been the objects of any particular examination of the interest of tourists by any of the official organizations.

Underwater activities, primarily individual scuba diving, and underwater photography (these activities also include spear fishing and snorkelling) have become more popular in the coastal locations and in the island in the last few years (mainly 7-8), particularly with the official “deregulation” of a number of areas allowing scuba diving. While internationally scuba diving has seen substantial development and is being practiced
even as a weekend sport, in Greece, with the exception of the main cities most scuba diving is offered at or near tourism resorts.

On the other hand not only the sea floor of the country but particular locations offer interesting possibilities. We should remember that Greece’s underwater treasures include the wreck of the “Britannic” (sister ship to the Titanic) at 100 meters depth off the island of Kea in the Cyclades complex. In 1993 the first (and only) underwater park was created by Presidential Decree, in the vicinity of Alonissos Island in the Sporades complex (western Aegean), as an underwater nature reserve area, primarily for the protection of the Mediterranean seal.

A number of underwater activities specialized magazines are circulating and although only two deal more specifically with underwater diving, most of the others (underwater fishing, inflatable boating, etc.) carry articles on underwater scuba activities on a regular basis.

Of course, underwater diving has a centuries old tradition in Greece with the sponge divers, particularly originating (and continuing still today) at the island of Kalymnos in the eastern Dodecanese. Since 1998 a special exhibition has been organised in Athens “Thalassa”, which deals with sea sports and related activities, runs successfully every year.

Scuba diving offering in Greece can be grouped in three categories:

1. The training and leisure diving activity offered by training centres in the Athens and Thessaloniki area (and a couple of other larger towns), which is directed to residents, as a form of “adventure” or sports activity
2. The training and leisure diving activity offered by various centres, primarily located in sea resort areas and large hotel complexes and available for the tourists there (either hotel residents or visitors in the area)
3. The leisure diving activity offered in a number of locations for certified divers, either Greek residents or tourists (foreign or Greek), in a number of locations, by Diving Centres or combined Training / Diving establishments.

Based on data from the Ministry of Merchant Marine, the responsible authority for licensing Underwater Diving Schools and Underwater Diving Centres, there were 87 licensees at the end of 1999 in Greece, out of which it is estimated that about five ceased operations in 2000. They are distributed in a number of areas in the country – directly related to the authorized diving locations – and were the following at the end of 1999.
TABLE 2
DISTRIBUTIONS OF DIVING SCHOOLS AND CENTERS IN GREECE

<table>
<thead>
<tr>
<th>LOCATION</th>
<th>Training Centre</th>
<th>Diving Centre</th>
<th>Training and Diving Centre</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patras</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Ag. Nikolaos – Crete</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>9</td>
</tr>
<tr>
<td>Volos</td>
<td>1</td>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Zakynthos</td>
<td></td>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>Heraklion – Crete</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Thessaloniki</td>
<td>4</td>
<td>1</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Santorini</td>
<td></td>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Kavala</td>
<td>2</td>
<td></td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Kalymnos</td>
<td></td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Kerkynia (Corfu)</td>
<td>5</td>
<td>7</td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Kefallonia</td>
<td>3</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>Lefkada</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Mykonos</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Paros</td>
<td></td>
<td>2</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Piraeus</td>
<td>8</td>
<td>1</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Porto Cheli – Peloponese</td>
<td>1</td>
<td>1</td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Rethymno – Crete</td>
<td>4</td>
<td>2</td>
<td></td>
<td>6</td>
</tr>
<tr>
<td>Rhodes</td>
<td>3</td>
<td>1</td>
<td></td>
<td>4</td>
</tr>
<tr>
<td>Sitia – Crete</td>
<td>1</td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Skiathos</td>
<td></td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Chalkida</td>
<td>2</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Chania – Crete</td>
<td>2</td>
<td>1</td>
<td></td>
<td>3</td>
</tr>
<tr>
<td><strong>TOTALS</strong></td>
<td><strong>45</strong></td>
<td><strong>34</strong></td>
<td><strong>8</strong></td>
<td><strong>87</strong></td>
</tr>
</tbody>
</table>

We see in the table that there are 52% Training centres, 39% Diving centres and 9% combined centres. The centres are mainly located in the islands on Crete 27.6% and on the other islands 46.0%, while only 26.4% are on the mainland.

They are located in 22 different locations in Greece, in five locations on the island of Crete (the largest concentration) plus 10 other islands, with another seven mainland locations out of which the Athens-Piraeus and Thessaloniki area; in MAP 1 the locations are indicated.
MAP 1
GEOGRAPHICAL DISTRIBUTION OF TRAINING & DIVING CENTERS
We should note that at present three important regulations affect the diving activity:

- Diving is permitted only in the designated areas in different locations in Greece, which have been “deregulated” (or freed from the archaeological restrictions) by the Ephorate of Underwater Archaeology of the Ministry of Culture.
- Night (between the hours of sunset and sunrise) diving is not permitted.
- Spear fishing or other fishing while wearing scuba equipment is forbidden.

There is one positive (but often loosely interpreted) regulation that helps the tourist product offering. It is permitted for persons not certified as divers to practice a so-called “discover scuba” dive, at a depth not exceeding five meters, for a period of up to 10 minutes, for one time only, for the express purpose of acquainting themselves with underwater diving.

As in other parts of the world, the regulatory framework for scuba training requires a medical examination and statement to be done, and to have both theoretical and practical training before a certification is awarded.

The Greek authorities recognize the international diving certifications and offer a “Greek” certification, similar to the others, of Diver 1-2-3 stars/levels.

Survey of suppliers of scuba diving services
In order to assess the present situation of the “scuba diving tourism product” a survey was carried out among the authorized scuba training centres and the diving centres (these were presented in the previous section). A questionnaire was distributed and a follow-up by telephone was affected in order to obtain a 34% response, which is actually estimated to be closer to 40% since it is understood that some of the listed centres were no longer in operation at time of the survey.

The survey is considered preliminary in that it became apparent following the responses and the telephone discussions with some of the owner/operators that a more in-depth examination of the scuba diving activity as a tourist product should be undertaken in the future.

The questionnaire included four sections of questions:

- some basic characteristics of the Centre
- details of the type of services offered
- some general information on the clients
- an indication on the problems and prospects for the future.

The responses received on the survey originated 27% from Crete, 43% from the other islands and 30% from the mainland. The date of original establishment ranged from 1982 (oldest) to 1999 (most recent) with an average age of operation of seven years. Full year operation is by 33% of the centres, while the rest operate on a seasonal basis, on average for seven months.
There are a variety of services offered, as shown in the Table below.

**TABLE 3: SERVICES OFFERED BY SCUBA DIVING CENTERS**

<table>
<thead>
<tr>
<th>TYPE OF SERVICE</th>
<th>% OF CENTERS OFFERING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scuba Training</td>
<td>86%</td>
</tr>
<tr>
<td>Accompanied (guided) dive</td>
<td>100%</td>
</tr>
<tr>
<td>Un-accompanied dive</td>
<td>40%</td>
</tr>
<tr>
<td>Equipment rental</td>
<td>60%</td>
</tr>
<tr>
<td>Tank filling</td>
<td>80%</td>
</tr>
<tr>
<td>Transport by car</td>
<td>83%</td>
</tr>
<tr>
<td>Transport by boat</td>
<td>96%</td>
</tr>
<tr>
<td>Other service (Discovery Dives, Rebreather Dives)</td>
<td>6%</td>
</tr>
</tbody>
</table>

In terms of training different Greek and international certifications are offered. The details are shown in Table 4, following; it is noted that over half of the centres offer more than one choice of certification.

**TABLE 4: SCUBA TRAINING CERTIFICATIONS OFFERED**

<table>
<thead>
<tr>
<th>TYPE OF CERTIFICATION</th>
<th>% OF CENTERS OFFERING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greek certification</td>
<td>16,7%</td>
</tr>
<tr>
<td>PADI</td>
<td>70%</td>
</tr>
<tr>
<td>CMAS</td>
<td>56,7%</td>
</tr>
<tr>
<td>Other (SSI, NAUI, INTD)</td>
<td>16,7%</td>
</tr>
</tbody>
</table>

The types of clients of the Centres are both Greek and foreign. On average they indicate 25% Greeks and 75% foreign clients, indicating that they primarily address the foreign tourists and not the Greeks or the residents in their area. It interesting to note that the Greek clients represent up to 5% of all clients in 36,7% of all the centres, while the foreign component is at 90% or over, for 50% of the centres surveyed.

The length of the training offered ranged from as low as 16 hours to as high as 45 hours, with an average of 31 hours. The Centres surveyed charged from 70.000 drs (205 Ecu) to 160.000 drs (470 Ecu) for the training course, with an average of 107.000 (314 Ecu).

The usual diving activity is done in dive excursions; most Centres offered 2-dive excursions with an average cost of 22.160 drs (65 Ecu); alternatively they stated that they also offered individual dives at an average cost of 13.862 drs (40 Ecu).

The distribution of the foreign clients origin (they were asked to state up to three origins) are shown in the following table, where the percentage of overall tourism arrivals from the same country is shown (see also Table 1 above).
TABLE 5: SCUBA DIVING FOREIGN CLIENTS COUNTRY OF ORIGIN

<table>
<thead>
<tr>
<th>COUNTRY of ORIGIN</th>
<th>Percentage of Centres stating this nationality among their 3 most important foreign clients</th>
<th>Proportion of Greek Tourist arrivals 1999 (Table 1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>United Kingdom</td>
<td>46.7</td>
<td>20.0</td>
</tr>
<tr>
<td>Germany</td>
<td>76.7</td>
<td>20.1</td>
</tr>
<tr>
<td>Italy</td>
<td>6.7</td>
<td>6.1</td>
</tr>
<tr>
<td>France</td>
<td>13.3</td>
<td>4.5</td>
</tr>
<tr>
<td>Scandinavian countries (Sweden, Norway, Denmark, Finland)</td>
<td>30.0</td>
<td>10.4</td>
</tr>
<tr>
<td>Low Lands (Netherlands, Belgium, Luxembourg)</td>
<td>-</td>
<td>7.8</td>
</tr>
<tr>
<td>U.S.A. (in Mykonos and Santorini)</td>
<td>6.7</td>
<td>1.9</td>
</tr>
<tr>
<td>Austrian</td>
<td>6.7</td>
<td></td>
</tr>
</tbody>
</table>

In terms of the problems holding back the development of the sport offering, 96.7% felt that there was inadequate promotion of the product offering, while 100% felt the authorities should expand the un-restricted areas.

There was a general consensus that there is potential for attracting more clients: 90% of the Centres surveyed indicated they felt there was potential for more clients in general; 86.7% felt there was potential Greek clients, while slightly more, 90% felt there was potential for foreign clients. It is interesting to note that 10% responded that they did not feel their clientele could expand, but we do not have explanations on the reasoning behind this position.

As a final comment, it should be noted that in some more popular resorts, we received information of “unauthorised” diving activities offered to tourists, within the services of a resort hotel complex. However, we were not able to obtain any data both because of the fact that these “centres” are not nationally listed, and secondarily that in the case they obtain a temporary license for operation from local Coast Guard authorities, which is either not confirmed or not renewed, they will probably never find their way into the official list of the Ministry of Merchant Marine.

Additionally, such diving activities are carried out (quite legally, since they are not required to obtain a separate license) within the activities of athletic associations or clubs related with sea, sailing, swimming and fishing activities, members of the responsible Federation (see above).
It is interesting to note that an overview of diving destinations listed in British diving magazines, indicates primarily to the diving centres located in the popular destinations of the particular nationality (Corfu, Rhodes, Crete, Zakynthos). Of course we consider that the listings usually are the result of promotion of the individual operators, and cannot be taken as guiding indications of what the foreign visitors know about the diving areas of Greece.

Conclusions - recommendations
It is obvious from the survey results that the foreign tourists do engage in the scuba diving activity, and that the product has potential for expansion. It seems that the important underlying item for further development is the opening up of more areas for pleasure diving, since the services offered are quite adequate. This is supported by the survey results.

The general characteristics of the activity in other countries suggest that this can be a “new” form of tourism for Greece, even if it supports mostly existing coastal destinations. It can, however, help towards achieving the goal of “extension of the tourist season” since scuba diving is not necessarily restricted to “good weather” conditions.

Where to, from here? Based on the discussions with Rear Admiral Angelos Argyrokopoulos, Ret. of the Hellenic Merchant Marine, who was responsible for the coordination and the execution of the revision of the legal framework and is probably one of the most experienced persons in Greece as to the implementation of the regulations, and on the information given by the persons contacted on the survey, three areas require further work:

Scuba diving as a pleasure activity should be officially included in the tourism products policy of the governmental organizations and the private sector initiatives should be supported. The Hellenic National Tourism Organization, as the official entity for promotion of Greek tourism, should designate scuba diving as one of the alternative forms of tourism activity in Greece and give it the status and promotion given to other similar such activities. With the collaboration of the competent authorities more locations should be freed up for scuba diving and areas designated as “underwater parks” with the appropriate interventions (signposting, positioning of wrecks, restriction of fishing, etc.) allowed to develop for an underwater pleasure visit.

Needless to say, a survey of different clients of diving centres would assist in providing evidence as to the way the tourists end up doing the particular activity, and as to whether promotion of the sport in their own country of origin would change their demand for this tourist service.

However, the author feels that given the experience of underwater scuba diving activities in other countries, there is no reason why Greece cannot develop formally this tourism form, and benefit both from the increased tourism flows and from the higher spending that is associated with pleasure diving.
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Innovation in Tourism Planning

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