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 of which 18 are in Europe and is providing significant revenue for many rural coastal communities. However there is increasing evidence suggesting whales and dolphins may be avoiding sites with intensive whalewatching activity or whalewatching vessels and these industries may not be sustainable. This paper presents a case study in Ireland 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 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 (Berrow, Holmes & Kiely 1996) showed that bottlenose dolphins were resident in the estuary and that it

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1 defined by the International Whaling Commission as any commercial enterprise which provides for the public to see cetaceans in their natural habitat (IWC, 1994).
was a calving ground. Encounter rates with dolphins were very high suggesting 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 area’s 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.

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 have increased by an estimated 100% over the 1999 season to an estimated 8-10,000 people. 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. These vessels represent the first significant investment (€635,000) in the whalewatching industry in the Shannon and both were supported by EU PESCA grants. The impact of these visitor numbers in terms of job creation has not been quantified but already accommodation providers and associated support industries (catering, other tourism attractions, local craft industries) are experiencing increased custom. Visitor surveys have shown that the dolphins are one of the main attractions which brought them to the area.

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:

i) to maintain the dolphin population in a favourable conservation status
ii) to raise public awareness of dolphins and the marine environment
iii) to increase volume and value of dolphin-watching visitors
iv) 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 aim is to attract and cater for 20-25,000 whalewatching visitors in 3-5 years which, using the multiplier for whalewatching in rural locations presented in Hoyt (2000), would make whalewatching in the Shannon region a million pound tourism industry and have a very significant economic impact on local coastal communities.

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. This legislation, under the Wildlife Act (1976) and the Heritage Order (1994) attempted to regulate the number of whalewatching boats in the vicinity of dolphins, impose speed restrictions and minimise disturbance, however it was never enacted as 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.

**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 fulfill 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. Adopting the precautionary principal Dúchas will attempt to fix the total time allowed on dolphins at around the 1999 level for the duration of the Conservation Plan (5 years). This season (2000) a total time on dolphins of 200 hours has been agreed and this level will not be increased unless research and monitoring show there is no detrimental effect of the dolphins or their habitat. If operators agree to fulfill 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 Failte and Shannon Development Ltd. and visitors are encouraged to support only 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.

The educational and interpretative aspects of the industry are being developed in collaboration with CERT – the State Tourism Training Agency. CERT are piloting a new course in Marine Interpretation in West Clare during 2000-2001 and it is expected that all whalewatching operators will be required to have a CERT qualified guide on each whalewatching vessel as part of the accreditation scheme.

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 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 and integrating whalewatching with other wildlife/outdoor activities 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, increase 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.
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