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The potential for marine wildlife tourism in Ireland

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The island of Ireland is surrounded by some of the richest marine flora and fauna and most abundant populations of a wide range of marine species including, whales, dolphins, seals, sharks, turtles and seabirds in Europe. However, although the potential for marine wildlife tourism is huge it is considerably under-developed. Ireland has a lot of similarities in terms of species diversity and environmental conditions with Scotland. A number of studies have quantified the volume and value of wildlife tourism in Scotland and identified key areas for development.

The Scottish Tourism and Environment Initiative co-funded with the Scottish Natural Heritage a study to assess the economic value of marine wildlife tourism in the Highlands and Islands of Scotland (Anon, 1998). This study estimated that total revenues generated by marine wildlife tourism in 1996 was in the order of £57 million and supported 2,670 FTE (Full-Time Equivalent) jobs. A survey of whalewatching in West Scotland estimated 241,952 tourists were involved in whale-tourism activities annually in West Scotland and whalewatching alone generated direct incomes of £1,767,971 per annum and £7.8 million in whale-related tourism (Warburton et al. 2001). In remote coastal areas, whale-related tourism accounted for 12% of the area's total tourism income. Seal-watching in the UK was worth an estimated £4.75 million in direct revenue and up to £36 million in indirect revenues per annum the UK in 1996 (Young, 1998). An estimated 0.5 million people went seal-watching in 1996 supporting 193 full-time jobs, 322 part-time or seasonal and 152 voluntary positions in seal-watching establishments alone (Young, 1998).

A similar potential for marine wildlife tourism exists in Ireland, however there are a number of constraints and limitations, but many of these factors are predictable and should be incorporated into

the planning process. In this paper the species and habitats suitable for marine wildlife tourism in Ireland are identified and possible constraints discussed.

Current volume and value of marine wildlife tourism in Ireland

There have been no studies attempting to quantify the value and volume of marine or other types of wildlife tourism in Ireland although a few surveys have attempted to quantify some specific industries.

Whalewatching¹

Whalewatching in Ireland was estimated to be worth €1,480,000 in direct revenues and €7,973,000 in indirect revenues in 1998 (Hoyt, 2000). The majority of the 177,600 whalewatchers in Ireland visited the wild, solitary, dolphin in Dingle Harbour, Co Kerry but whalewatching is now expanding rapidly in the Shannon estuary. Although whalewatching trips have been available off the south coast since 1992 (Hoyt, 2000) a dedicated whalewatching operator has recently become established off the southwest.

An estimated 150-200,000 people visit the Dingle dolphin each year, making this a multi-million pound industry, but there is very little information available on the visitor profile or value of this tourism to Dingle and Co Kerry. A small survey in August 1999 (Berrow & Whooley, 1999) suggested most visitors to the dolphin were Irish holidaymakers (55%) and visiting Dingle only for the day (67%). Three-quarters of Irish, and 42% of overseas people interviewed said that the dolphin was the main reason for visiting Dingle, with 5% of overseas visitors stating the dolphin was the main reason they decided to holiday in Ireland.

Whalewatching on bottlenose dolphins in the Shannon estuary started in 1993 and by 1995 around 2,500 people were visiting West Clare to go whalewatching. In 1999 visitor numbers increased to 4,000 and in 2000 there was a 300% increase to about 12,000 people. Whalewatching was estimated to be worth between €108,000-241,000 to the local economy in 1997-98 (Berrow & Holmes, 1999) and about €400,000-876,000 in 2000 (SDWF, unpubl. data). A visitor survey (Holmes & Berrow, 1998) of 400 people carried out on tour boats from Kilrush and Carrigaholt, Co Clare during July 1997 and 1998 showed that whalewatchers were casual, locally based Irish people (47%) or from the UK (32%) who

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).

were holidaying (84%) in the area. Only 5% of visitors had made special trips to go whalewatching and most of these people lived in Munster.

According to Hoyt (2000) whalewatching in Ireland has considerable potential at various locations along the south and west coasts.

Seal-watching

Young (1998) estimated there were 113 seal-watching establishments in Britain in 1997 and 3 in Northern Ireland but only 1 in the Republic of Ireland. This operator was based in Kenmare, Co Kerry. however others do exist, for example in Glengarriff, Co Cork.

Otters

A single operator based near Westport Co Mayo offered otter-watching trips for a number of years. In the Skye an estimated 20,000 people per annum visit a hide overlooking a single otter *Lutra lutra* holt (Anon, 1987).

Fish

The only marine fish species that has potential for wildlife tourism, outside of angling, is the basking shark *Cetorhinus maximus*. A successful basking shark tourism industry has been developed in the Isle of Man (see <http://www.isle-of-man.com/interests/shark/holiday.html>).

Seabirds

It is hard to quantify the value of seabirds and waders to tourism as bird-watching is often integrated with other attractions in an area, such as walking and cultural heritage. There is a market for dedicated bird-watchers such as on Cape Clear, Co Cork but there are no data on the value of this wildlife to tourism. There is however a great interest in visiting seabird colonies around Ireland, especially off the south-east and south-west coasts, but again the value of this marine tourism is not known. Many thousands of people land on the Saltee Island, Co Wexford and the Skelligs, Co Kerry each year but for a variety of reasons. It is estimated that two-thirds of visitors to the Salties are there to watch the birds whereas only one-third of those people visiting Ireland's Eye off Co Dublin go bird-watching (Steve Newton, *pers. comm.*). More people visit the Skelligs for historical/cultural reasons but the seabirds are also an important element. Other colonies, e.g. Blasket Islands are observed from boats as part of

wildlife tours, but the potential interest can be gauged by the fact that 3 eco-tourism boats, at a cost of around £0.75 million were launched in Dingle, Co Kerry last year for trips around the Blaskets.

Seabirds and other species such as waders can readily be seen on the mainland. A seabird colony of local and regional tourism importance is that of the little terns *Sterna albifrons* which nest on the shingle beach at Kilcoole, Co Wicklow. The number of visitors averages 50-60 per day, mid-week and 60-200 per day during weekends (Wilson et al. 1999). Of those visitors queried, on average, 30% stated the presence of the birds was the primary reason for them visiting that section of coastline. The colony is also regularly visited by local bird-watchers and naturalists' groups, (Breen et al. 2001).

Potential species and habitats for marine tourism

Species diversity in the marine environment compares favourably with of terrestrial species and habitats. There have been 13 marine mammal species recorded breeding in Irish waters and 13 non-breeding. Around 24 species of seabird are also present, including those on passage such as skuas, and 19 species of wader or wildfowl. Many of these have potential for marine tourism, some seasonally while others throughout the year.

Although there is a wide range of potential target species and habitats the actual species suitable for marine tourism is much less as many factors must be considered including geographic and seasonal distribution, accessibility and visitor appeal. Wildlife tourism tends to target sentinel species especially large mammals and birds, often referred to as “charismatic megafauna” or large aggregations of birds or mammals, rather than communities or species assemblages. Marine wildlife tourism can be both land-based or on boats, both have benefits and disadvantages and provide a different experience for the visitor. Target species must be predictable enough to ensure a reasonable level of encounter, the actual rate required to support tourism depends on the attraction of the species and visitor expectations. The potential species that could be the target of marine wildlife tourism in Ireland is shown in Table 1.

Cetaceans

Although Ireland already attracts an estimated 176,000 whalewatchers per annum, as the majority of these are visiting the solitary dolphin in Dingle, Co Kerry this tourism is not sustainable. If we remove

these whalewatchers from the statistics then less than 15,000 people partake in whale-related tourism per annum.

Some species have more potential for tourism than others. Dolphins that occur close to shore throughout the year include common *Delphinus delphis* and bottlenose dolphins. Bottlenose dolphins may be resident in some coastal areas (e.g. the Shannon estuary). Other species are seasonal but still maybe the target of whalewatching (e.g. fin whales *Balaenoptera physalus*).

One operator that recently started dedicated whalewatching in West Cork, demonstrates the potential of whalewatching in Ireland. West Cork Wildlife Tours carried out about 200 trips during 2001 and only failed to observe cetaceans on 2 trips. On 90% of trips minke whales *Balaenoptera acutorostrata* were observed and on 70%, sei whales *Balaenoptera borealis*. Common dolphins are the most frequently observed species followed by harbour porpoises *Phocoena phocoena* and bottlenose dolphins. Usually 3-4 species are seen on each 4 hour trip (Colin Barnes, *pers. comm.*).

Table 1. Selected species with potential for marine tourism in Ireland.

Species		Distribution	Season	Potential	
Cetaceans	Whales	Fin/Sei whale	South coast	**	
		Minke whale	All coasts	***	
	Dolphins	Bottlenose	Locally abundant	All year	****
		Common	South and west coast	All year	***
		Risso's	Locally common	May - Oct	**
	Porpoises	Harbour porpoise	All coasts	Jul - Mar	***
Seals		Grey	South and west coasts	All year	***
		Common	NE and west coasts	All year	****
Otters			South and west coast	All year	***
Fish		Basking sharks	Local but unpredictable	May - Aug	*
Seabirds	Colonies		East and west coasts	Apr - Sep	****
	Pelagics		All coasts	Jun - Oct	***
	Wintering		All coasts	Sep - Apr	****

Potential scored from 1-4: * = minimal, ** = some, *** = good, **** = excellent

Seals

Although the locations of haul-outs for grey *Haliichoerus grypus* seals are not well known around the Irish coast there are a number of very large breeding colonies in the Blaskets, Co Kerry and Inishkea Islands, Co Mayo and a large number of regular haul-outs outside of the breeding season are scattered along the entire coast (Cabot, 1999). Common seal *Phoca vitulina* distribution is more discrete with most occurring between Donegal and Co Clare and in Strangford Lough. Common seal colonies are often easily accessible.

Although seal-watching is already probably part of a range of existing marine cruises the potential for seal-watching here is significant potential for seal-watching in Ireland. The seal-watching season in Britain and Ireland usually ranges from March/April to September/October although 205 of operators reported they were active throughout the year (Young, 1998).

Otters

The otter is primarily a freshwater species but they are common and widespread along the western seaboard of Ireland. Excellent opportunities exist to observe otters along the shore especially with the provision of facilities such as hides to minimise disturbance.

Fish

The basking shark was once seasonally abundant at sites along the west coast of Ireland but has declined considerably, probably due to over-exploitation. A survey in 1993 (Berrow & Heardman, 1994) showed that the best locations for observing basking sharks were in north Co. Dublin, North Kerry and Co Antrim. The potential for wildlife tourism based on basking sharks in Ireland is limited as there occurrence is still very seasonal and unpredictable.

Seabirds

The tourism potential of seabird colonies is under-developed especially off the west and northwest coasts. The season can be quite long from May to October at sites such as Saltees as bird-watchers visit the island for passage migrants in the autumn as well as the breeding seabirds in the summer.

Habitats

The value of marine habitats from the seashore to the shallow sub-littoral (<50m) is hard to evaluate as many people, both visitors and locals, will use the seashore for recreation. Although there has been significant investment in SCUBA dive centers and facilities in recent years in Ireland there is no information available on the number and spend of diving tourism in Ireland.

Constraints to marine tourism in Ireland

There many potential constraints to developing marine wildlife tourism in Ireland including restrictions due to weather and seasonality, high capital 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.

Weather and seasonality

The weather is generally the single biggest factor influencing marine wildlife tourism in Ireland. However the weather is not unpredictable and good records are available from the met service and regional airports on the mean wind speed and direction which can be used to calculate the number of days in each region when conditions are favourable for marine tourism.

Information

Our understanding of where, when and why species occur in Irish waters is very poor for the majority of groups and what knowledge we do have is sometimes inaccessible or poorly disseminated. Improving our knowledge of the seasonal and geographical distribution of target species will improve operators' ability to observe and experience marine wildlife.

For example in the Shannon estuary a study (Berrow, Holmes & Kiely, 1996) was carried out prior to the development of whalewatching to determine the encounter rate with dolphins and attempt to understand how bottlenose dolphins use the estuary in order to increase boat operators chances of encountering dolphins. This provide potential tour operators information on the probabilities of encountering bottlenose dolphins and the best sites to find them.

Knowledge of the distribution and relative abundance is much greater and can be used to encourage people to watch birds. An excellent example of providing simple but detailed information on bird sites and access is the East Cork bird trail

Conservation status

Many of the species and habitats that could be the target of marine wildlife tourism are entitled to protected under a range of national and European legislation. For example all cetacean species are on Annex IV of the EU Habitats Directive and two species (harbour porpoise and bottlenose dolphin) are included on Annex II species whose conservation requires the designation of Special Areas of Conservation (SAC). Both species of seal are also on Annex II together with a number of seabirds, wildfowl and waders. However protected status does not necessarily preclude tourism, indeed correctly managed it can enhance the conservation of protected species.

The little tern is Ireland's rarest breeding tern (Hannon et al., 1997) and has been recorded breeding at Kilcoole since 1879 (O'Brian & Farrelly, 1990). During the 1980s the breeding success of the colony was consistently low due to predation and human disturbance. Birdwatch Ireland set up a protection scheme in 1995 which aimed to address these issues by providing a 24hr wardening service. This section of coastline has been increasing in popularity with a wide variety of visitors using the beach for recreation and amenity purposes. Located within easy distance of the fast growing North Wicklow/South Dublin catchment area it is now extremely popular with walkers, nature-lovers and fishermen. The vulnerability of a rarest breeding tern to human disturbance allied with the amenity and recreational value of this coastline next to a major urban area is a good example of the necessity for managed of this potential but fragile tourism resource.

Capital costs

A critical element of marine tourism is the opportunity to board a boat and go to sea. The Department of the Marine and Natural Resources licences vessels for carrying passengers and ensures they fulfil safety requirements. The cost of equipping and licensing a vessel suitable for carrying passengers runs into many hundreds of thousands of pounds as well as significant annual commitments on insurance and inspections.

Marketing

An important criteria in marketing marine wildlife tourism is not creating expectations that cannot, or are unlikely to be fulfilled. Visitor surveys (Orams 2000) have shown that the enjoyment of a whalewatching trip for example can be strongly influenced by many factors unrelated to the whales such as comfort, refreshments, information etc and many peoples expectations are not as high as the operators may predict. However there has to be a certain probability in observing the target species but with experience, great success rates can be achieved. In the Shannon estuary dolphins are observed on 95% of trips (Berrow & Holmes, 1999) and this could be improved further if trips are only carried out in favourable weather conditions. Anon (1998) considered the economic additionality of marine wildlife tourism in Scotland was poor because the marine wildlife resource was not being used to attract new tourists rather it was adding value to an existing market.

Planning for marine tourism in Ireland

Weatherproofing

The inclement weather in Ireland is a constraint that must be considered during planning. If favourable conditions are only met on a small number of days then this may be too few for a successful tourist product. However if unfavourable days are few or periods short then the industry can mitigate by providing alternatives or complementary experiences that is not influenced by the weather. Thus customers may wait until the weather is favourable again.

Integration

The most successful wildlife tourism will be in those areas where it can be integrated with other complementary products. This will mitigate against not witnessing the wildlife experience anticipated. Tourism clusters occur in those areas where there are a number of activities which can appeal to a wider range of people in a relatively limited area. For example; the proximity of the nearby Kilcoole marshes reserve to Broadlough and Kilcoole Marshes SPA and the Murough SAC adds additional interest to this section of coastline for birdwatchers, naturalists and walkers. Illustrative leaflets on both the Kilcoole marshes and the little tern protection scheme have been produced by Birdwatch Ireland and form the basis of an educational programme initiated in 2000 where-by 400 school children visited the colony (Wilson et al. 2000).

Visitor management

Managing wildlife is as much about managing people (Orams, 2000). This can be achieved by providing car parks and features which channel people to less sensitive sites or restrict access to vulnerable areas. Hides overlooking bird sites or otter holts minimise disturbance while providing excellent views of wildlife.

Codes of conduct and best practices are important tools in minimising impact and promoting codes of conduct. A recent attempt to promote sustainable tourism through marketing is the development of the IRRUS brand in West Clare. Developed by the Marine Institute through the META- project IRRUS is a brand image and logo for sustainable marine eco-tourism providers and each business is expected to agree to abide by specific criteria to minimise impact when adopting the IRRUS logo (see www.irus.com).

Multipliers and leakages

Tourism is an economic activity and marine wildlife tourism is often carried out in marginal areas. To obtain maximum benefits from wildlife tourism communities should try and develop value added products. The best way to provide economic benefits to the region is by encouraging visitors to stay in the area.

Studies on local multipliers and economic leakages will identify where monies are being spent and where products or services required by visitors but not supplied locally are limiting the potential economic gains. As many species and habitats subjected to marine wildlife tourism are of high conservation importance it is likely that they may be restrictions on the carrying capacity of the wildlife resources to tourism, thus it is even more essential to maximise the economic benefits of this type of tourism compared to more conventional products.

Recommendations

The potential for marine wildlife tourism in Ireland is huge. In order to identify potential species, sites and providers a national survey and inventory is encouraged. This should include a review of best practices and conservation status and a framework for developing sustainable tourism.

There is great potential for suitably qualified wildlife tour guides who can enhance peoples experience, manage visitor impact, promote the conservation message and increase economic benefits from the wildlife resource.

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References

- Anon (1998) Marine Wildlife Tourism: developing a quality approach in the Highlands and Islands. A report for the Tourism and Environment Initiative and Scottish Natural Heritage. 39 pp.
- Anon (1997) Review of Wildlife Tourism in Scotland. A report for the Tourism and Environment Initiative. 75 pp.
- Berrow, S.D. & Heardman, C. (1994) The basking shark *Cetorhinus maximus* (Gunnerus) in Irish waters - patterns of distribution and abundance. *Biology and Environment. Proceedings of the Royal Irish Academy* 94B (2), 101-107.
- Berrow, S.D., Holmes, B. & Kiely, O. (1996) Distribution and abundance of Bottle-nosed dolphins *Tursiops truncatus* (Montagu) in the Shannon estuary, Ireland. *Biology and Environment. Proceedings of the Royal Irish Academy* 96B (1), 1-9.
- Berrow, S. & Whooley, P. (1999) Day trippers support the Dingle dolphin phenomenon. *IWDG News*. 16, 6.
- Breen, D., Archer, E., McDonnell, C. & Newton, S. (2001) Kilcoole/Newcastle Little Tern protection scheme. Birdwatch Ireland (in press).
- Cabot, D. (1999) Ireland: a Natural History. HarperCollins Publishers.
- Hannon, C., Berrow, S.D. & Newton, S.F. (1997) The status and distribution of breeding Sandwich *Sterna sandvicensis*, Roseate *S. dougallii*, Common *S. hirundo*, Arctic *S. paradisaea* and Little Terns *S. albifrons* in Ireland in 1995. *Irish Birds*. 6, 1-22.

- Holmes, B. & Berrow, S. (1998) Tour Boat Survey. Marine Research Measure (1994-1999). IR.95.MR.022. 32pp.
- Hoyt, E. (2000) Whale Watching 2000, Worldwide tourism numbers, expenditures and expanding socioeconomic benefits. Whale and Dolphin Conservation Society, Bath, UK. 36 pp.
- IWC (1994) Report of the Forty-Fifth Annual Meeting, Appendix 9. IWC Resolution on whalewatching. Report of the International Whaling Commission 44, 33-34.
- O'Brian, M. & Farrelly, P. (1990) Breeding biology of little terns at Newcastle, Co Wicklow and the impact of conservation action, 1985-1990. *Irish Birds*. 4, 149-168.
- Orams, M. (2000) Tourists getting close to whale, is it what whale-watching is all about? *Tourism Management* 21, 561-569.
- Warburton, C.A., Parsons, E.C.M., Woods-Ballard, A.J., Hughes, A.J. & Johnston, P.J. (2001) Whale-watching in West Scotland. *Hebidean Whale and Dolphin Trust*. 73 pp.
- Wilson, F., Thornton, M., Archer, E. & Newton, S.F. (2000) Kilcoole/Newcastle Little Tern protection scheme. *Birdwatch Ireland Conservation Report*, 2000. 00/3.
- Wilson, F., Phalan, B. & Lander, R (1999) Kilcoole/Newcastle Little Tern protection scheme. *Birdwatch Ireland Conservation Report*, 1999. 99/5.
- Young, K. (1998) Seal watching in the UK and Republic of Ireland. Report published by the International Fund for Animal welfare, Warren Court, Park Road, Crowborough, East Sussex, UK, TN6 2GA.