

Responsible whale watching and whale welfare

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Background

Whale watching is defined as tours by air, sea or land to view any of the 86 reported species of whales, dolphins and porpoises in their natural habitat where a commercial aspect exists (IFAW 1999). Whale-watching platforms include small boats, sailboats, cruise ships, inflatables, kayaks, helicopters and airplanes, and the activity can also include observation from land-based sites and approaches made by swimmers. In addition to being non-disruptive to the cetacean population, 'responsible whale watching' has many potential educational, environmental, scientific and socioeconomic benefits for human communities (Hoyt & Iñíguez 2008). As a result, tourism of this kind can have a positive effect on nature through the promotion of a general interest and awareness in cetaceans, sustainable economic growth for local economies (which are often otherwise struggling), therefore providing multiple benefits, including improved motivation to preserve marine wildlife.

The growth of the whale-watching industry

Whale watching has a long history and there is increasing interest in whale watching in general. In 1955, the first commercial whale-watching operation was developed by a fisherman named Chuck Chamberlain, who charged US\$1 to view grey whales (*Eschrichtius robustus*) on their winter migration off the coast of San Diego. Over the course of a few years, the activity slowly spread up and down the west coast of North America, involving the US, Canada and Mexico. In the 1970s, whale watching spread to the east coast of the US and Canada, and in the 1980s expanded to Europe, South America as well as elsewhere in the world (Hoyt 2002). In 2008, 13 million people participated in whale watching in 119 countries and territories, generating a total expenditure of US\$2.1 billion (O'Connor *et al* 2009). As well as Chamberlain, who was recognised as the first commercial whale-watching operator, the late

Robbins Barstow, former President of the Cetacean Society International, worked passionately to promote responsible whale watching and organised the first IWC 'Global Conference on the Non-Consumptive Utilisation of Cetacean Resources' in 1983 (Connecticut Cetacean Society [CCS] and Animal Welfare Institute [AWI] 1983).

The business of whale watching is still expanding. For example, in 2006/2007, there were 91 communities offering whale watching across 18 Latin American countries, nearly all of which were outside the main cities and industrial centres. From a comprehensive review completed in 2008, this eco-tourism activity had a steady growth of 11.3% per year (1998–2006). This rate of growth is three times that of world tourism and almost five times the rate of Latin American tourism over approximately the same period. In 2006/2007, whale-watching trips generated US\$79.4 million in ticket sales and US\$278.1 million in total expenditure (Hoyt & Iñíguez 2008).

A unique aspect of whale watching in Latin America, relative to other areas around the world, is that whale watching in this region is often managed within marine protected areas (MPAs). This allows for a tourism experience that is more benign and the sustained success of whale watching in sanctuaries and reserves further supports the concept and maintenance of such MPAs.

Species involved

Many species of cetacean are involved in whale watching, but the most frequently 'watched' are the grey, humpback (*Megaptera novaeangliae*), northern right (*Eubalaena glacialis*) and southern right whales (*Eubalaena australis*), common minke (*Balaenoptera acutorostrata*), sperm (*Physeter macrocephalus*), killer (*Orcinus orca*) and pilot whales (species of the genus *Globicephala*), common bottlenose dolphin (*Tursiops truncatus*), Indo-Pacific bottlenose dolphin

(*Tursiops aduncus*), pantropical spotted dolphin (*Stenella attenuata*), Atlantic spotted dolphin (*Stenella frontalis*), striped dolphin (*Stenella coeruleoalba*), spinner dolphin (*Stenella longirostris*), common dolphins (species of the genus *Delphinus*) and harbour porpoise (*Phocoena phocoena*).

The need for and development of responsible whale watching

The International Whaling Commission (IWC) has been working on whale-watching issues since the mid-1990s. In 1996, the Scientific Committee developed guidelines for responsible whale watching which focused upon three key areas: (i) managing the development of whale watching to minimise the risk of adverse impacts; (ii) designing, maintaining and operating platforms to minimise the risk of adverse effects on cetaceans, including disturbance from noise; and (iii) allowing cetaceans involved to control the nature and duration of 'interactions' (IWC 1997). The IWC-endorsed workshop on the science for sustainable whale watching was held in Cape Town in March 2004. It reviewed available scientific and management tools for regulating whale-watching operations (IWC 2005) and held two subsequent workshops: one on long-term impacts, held in Australia in 2007 (IWC 2008) and the most recent held in Puerto Madryn, Argentina, in November 2010, to develop a five-year strategic plan for whale watching (IWC 2011). The main recommendation of the Puerto Madryn workshop was to consider:

...the development of a web-based flexible handbook on whale watching to achieve the objectives of the strategic plan. This handbook would be an important tool in assisting relevant authorities to develop national/local best practice approaches to whale watching.

The handbook will consider management, development, capacity building and research as regards whale watching.

A variety of studies provide scientific evidence to show or suggest there can be an adverse impact on cetacean populations through whale watching, particularly on resident populations of small cetaceans (IWC 2003, 2007; Lusseau 2005; Lusseau *et al* 2006; Stockin *et al* 2008) but these are mainly caused by irresponsible or unregulated whale-watching activities. The impacts of whale-watching activities on cetaceans can include: boat collisions with cetaceans, noise pollution, chemical pollution, or changes in behavioural patterns resulting from disturbance by boats, aircraft, associated noise, and swimmers (Van Waerebeek *et al* 2007; Arcangeli & Crosti 2009; Jensen *et al* 2009; Sousa-Lima & Clark 2009). There have also been a number of preliminary studies that have monitored the impact of observation from aircraft, most probably associated with noise impact (IWC 2010). The number of studies on noise at sea have increased recently, and direct observations and theoretical considerations both suggest that cetacean communication calls can be masked by engine noise (Foote *et al* 2004; Jensen *et al* 2009).

There are also a number of important conservation reasons to protect certain *critically endangered* cetacean populations through, for example, reducing the exposure of dolphins and whales to vessel-based tourism.

Different but similar recommendations have been developed by the IWC, governments, NGOs and also tour operators to reduce the potential for detrimental impacts upon cetacean populations through whale-watching activities. Long-term impacts are very difficult to determine and, in this regard, the IWC's Scientific Committee is planning a large-scale whale-watching experiment to assist in describing such effects, improve understanding of the mechanisms involved and develop mitigation measures (IWC 2008, 2009).

Responsible whale watching includes the protection of whale, dolphin and porpoise populations as one of its main objectives, with the aim of reducing the impact on the focal cetacean population as much as possible. In order to maximise wildlife conservation and ensure the welfare of focal populations, education of tour operators is necessary, especially where tourism growth may occur rapidly. It is also necessary to regulate activity from inception to enforce requirements for all whale watchers (commercial, scientific and recreational). Otherwise, new entrants, seeking economic opportunity, may not fully understand the importance of and requirements for responsible tour operation, or the potential impacts upon cetaceans and, by association, the human communities dependent financially on their well-being and the sustainable development of the industry. Where it can be managed properly and responsibly, whale-watching-based tourism presents an important and sustainable opportunity to improve the welfare and lifestyle of these coastal communities (ie Puerto Pirámides, Argentina; Kaikoura, New Zealand; Provincetown, USA).

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