

# Whale-Watching Opportunities in Northern Patagonia, Chile

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**Abstract:** During the last few decades, research into whale watching has gained significant international attention. Despite the negative effects of whale watching described in some studies, there is a body of literature recognising its positive impact including economic and environmental benefits on local communities. Following this trend, some research has examined whale watching in some particular areas of Chile highlighting its value for local communities and the environment. This paper describes the current situation and opportunities of whale watching in northern Patagonia in Chile, one of the most productive and diverse environments throughout south America inhabited by emblematic species such as blue whales (*Baleanoptera musculus*). This paper concludes that whale watching is just emerging and it is still marginal in relation to other activities despite the potential of Patagonia. Considering local operations, different strategies to increase security and quality standards have to be implemented. In addition, a marine and terrestrial planning process should be developed to ensure the natural value of the area.

**Key Words:** Whale Watching; Sustainable Tourism; Marine and Terrestrial Planning Process; Northern Patagonia

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During the last few decades the tourism industry has become an important sector of global economy. In 2009, tourism and related activities generated 9.2 per cent of Global Domestic Product, employed more than 235 million people and transported ca. 700 million travellers around the world (WTTC, 2010). Chile is not an exception to this trend and since the mid 1990s tourism has become a main economic venture in the country. In 2000 a total of 1,742,407 tourists visited Chile, while in 2007 the number of foreign visitors increased to 2,506,756, leaving USD \$1,803 million to the economy (Government of Chile 2001; 2008). Among these, special interest tourism (SIT) visitors is the dominant group in regards to total number of visitors and suggests that Chile is mainly being pursued by tourists for its natural attractions rather than by traditional attractions such as beaches or snow.

In this regard, there is enough global evidence demonstrating that well managed SIT can contribute in promoting environmental conservation, support sustainable development among local people and strengthen cultural values (WWF, 2001). Among these SIT activities, whale-watching has been one of the most rapidly increasing worldwide. This paper aims to review whale-watching situation among coastal communities of fishermen and indigenous families in Northern Patagonia, Chile.

## Whale-watching: Overview

Different definitions of whale-watching have been provided over the last decades, but Hoyt (2001) provides one of the most recognised and comprehensive definitions: “tours by boat, air or from land, formal or informal, with at least some commercial aspect to see, swim with, and/or listen to any of the

some 83 species of whales, dolphins and porpoises”. Parson et. al. (2005) identify boat based, land and aerial approaches, highlighting that the most common and preferred by the tourists is the first one.

Whale-watching probably emerged during the mid 1950s’ in San Diego (USA), when the first whale-watching

operations were conducted to observe gray whales. Over the following decades, whale-watching spread throughout the world focusing on different kinds of whales and other cetaceans (Hoyt, 2002). Hoyt (2000) reviewed the situation of whale-watching around the world and concludes that a growing number of countries are offering this



kind of tourism. While in 1993 there were 12 countries with whale-watching operations, in 1998 the number of countries was almost 100 (Hoyt, 2000). Despite the fact that most of these operations occur in the northern hemisphere and mainly in the USA (Hoyt, 2001), the industry has expanded to other countries such as Argentina, South Africa, Japan, Norway, New Zealand and Tonga (Orams, 2002).

There is a stream of literature which unfortunately concludes negative impacts of commercial whale-watching on marine environments and cetaceans. These impacts include behavioural changes, such as blow durations, surface time, fluking up and disruption of feeding, among others (Parson et al., 2006). However, there is another stream of literature which demonstrates that whale-watching, well planned and managed, can contribute to conservation and local economies. While in 1998 whale-watching generated about US\$1 billion (Hoyt, 2000), in 2008 the activity generated between US\$1.5-2.1 billion and attracted a range of 12-13 million tourists per year (Hoyt & Iñíguez, 2008; O'Connor et al. 2009). In fact, Hoyt (2001) highlights that "in many places whale-watching provides valuable, sometimes crucial income to a community, with the creation of new jobs and businesses. It helps foster an appreciation of the importance on marine conservation, and provides a ready platform for research. Whale-watching offers communities a sense of identity and considerable pride. In a number of places, it does all of the above, literally transforming a community".

Orams (2002) assesses the economic impact of whale-watching in Tonga (on humpback whales) and suggests enormous opportunities for contributing to local economies; Woods et. al. (2003) and Parsons and Woods (2003) analyse the whale-watching industry in Scotland and confirm the contribution of whale-watching to the tourism industry and local economies. In particular, Woods et al. (2003) highlight that in Scottish rural areas whale-watching provides about 12% of the local income.

Whale-watching operations in Chile are still part of an emerging activity. During the early 1990s there were no registers of whale watchers in the country and in 2006 there were only 13,720 tourists reportedly involved in

some kind of whale-watching activity (Hoyt and Iñíguez, 2008). Throughout the country, whale watchers are primarily concentrated in the central-north and south-end areas. In central-north of Chile, fishermen communities offer one day tours to watch bottlenose dolphins and whales in the areas of Chañaral, Carrizalillo and Punta Choros. In the extreme south of the country, whale-watching tours have been mainly implemented by entrepreneurs and tour operators in the Magellan Strait. There are three tour operators which offer three-day tours to navigate in proximity of humpback whales within a Marine Protected Area (Francisco Coloane Marine Park in Carlos III Island).

Despite the fact that whale-watching is mainly concentrated in the above mentioned areas, Chilean northern Patagonia has emerged during the last years as a hotspot with a great potential for this kind of tourism. Ancient rainforests, fjords, archipelagos, unique wildlife, as well as local communities with rich and little known traditions, are part of the area's exceptional characteristics which provides important opportunities to promote whale-watching.

### **Whale-watching in northern Patagonia, Chile**

The area of the Gulf of Corcovado (photo) is one of the most productive and diverse marine environments throughout South America, inhabited by emblematic species such as Peale's (*Lagenorhynchus australis*), Chilean (*Cephalorhynchus eutropia*) and bottlenose dolphins (*Tursiops truncatus*), as well as humpback (*Megaptera novaeangliae*) and minke whales (*Balaenoptera bonaerensis*) and is also home to arguably the largest feeding and nursing ground for blue whales (*Balaenoptera musculus*) in the entire Southern Hemisphere (Hucke-Gaete et al., 2003). It is this diversity of marine life, complemented by striking natural landscapes and rich local culture, which provide important opportunities to promoting community based whale-watching in Northern Patagonia.

Due to the relatively unpolluted waters of the fjords, the great amounts of freshwater runoff, and the low human population density nearby, the Chiloe-Corcovado area is being increasingly sought for use by large industrial activities such as intensive aquacul-

ture (one of Chile's main exporters), fishing (already facing problems due to resource overexploitation) and other industrial projects, all of which represent a potential threat to the adequate functioning and sustainability of the ecosystem. Increases in industrial maritime traffic, marine pollution and habitat loss in riverine/estuarine ecosystems, all pose significant threats if bad practices do not change in the near future.

However, during the past five years whale-watching has emerged as a potential business for national tour operators and has created opportunities for coastal local communities. Hucke-Gaete et al. (2010) identify 11 national tour operators with programmes of one or more days, which include whale-watching in the whole area of the Gulf of Corcovado. In addition, local communities have implemented whale-watching tours in different areas of the Gulf. In the north of Chiloé Island -in the area of Puñihuil- the local community and a fishermen association have organised tours for watching whales, dolphins and penguins. In the south extreme of the same island, in a town called Quellón, there are at least three local fishermen and entrepreneurs promoting tours to watch blue whales and other wildlife. In addition, the local council has become an important actor on this regard, and has organised different events and fairs related to whale-watching in order to attract visitors and consolidate the region as a whale-watching hub in southern Chile (e.g. Fuentes y Heinrich 2007). Further south, in Melinka, there are two local fishermen who offer tours to watch blue and humpback whales in the Gulf. These fishermen also offer several days tours navigating through Las Guaitecas archipelago although not only focused on whale-watching. In this case, the tour includes bird watching and snorkeling. The experience of these fishermen has promoted interest among the local community for implementing whale-watching tours and during the past two years a local entrepreneur has become interested in also implementing this activity with higher quality standards, starting operations during 2010.

Despite the fact that these initiatives contribute in adding value to national tourism supply and provides new opportunities to local communities, a recent research carried out by Hucke et



al. (2010) emphasises that to take advantage of the opportunities arising from whale-watching, several aspects need to be developed. Some of these aspects include market information, quality standards and most importantly, best practices at the local level of operation. The heterogeneity of touristic services, the differences on tourism-related infrastructure and equipment between companies or localities, differences on the human capital (or technical level of tour operators) and stakeholders identified during this research, seem to be the most important gaps. When bettering these aspects, a more competitive SIT could be developed at the international level while implementing best practices. Marketing strategies that allow controlling businesses at the local level and a fair distribution of the generated income, together with implementing an integral ecotouristic development plan point towards the adequate direction.

In particular, Hucke-Gaete et al. (2010) indicate that there is not enough information available on regard to tourist profiles or number of visitors demanding whale-watching tours in the area. This aspect is critical in many respects, including assessing the real contribution of whale-watching to local economies or defining strategies to improve whale-watching operations. In relation to this last feature, the lack of systematised information does not allow evaluating satisfaction level of tourists during the tours and therefore impedes defining strategies related to business management. Another aspect highlighted in the abovementioned report is related to quality in aspects such as vessels characteristics, security standards and best practices for whale-watching. With regard to the vessels used by local entrepreneurs, the report highlights that in several cases the boats used for whale-watching operations are the same boats used for fishing activities. This means that vessels may have not been necessarily adapted for tourism requirements, and therefore may affect tour quality. In addition, security equipment and standards are described in some cases as deficient, highlighting the need of progressing on this regard to ensure safe trips for tourists. The report also emphasises the fact that most of the local supply lacks formal adoption of best practices. The adoption of these practices during tours is relevant to avoid impacts on animals and thus



Whale Watching Area in Northern Patagonia

guarantee sustainability. With the exception of certain local communities which have been trained on this regard mostly by NGOs, the report highlights that the adoption of best practices is not compulsory in most of the local supply.

In consequence, to move forward in whale-watching opportunities arising in northern Patagonia businesses and government require advancing in two ways: (i) adopting strategies where whale-watching can coexist with other activities in a sustainable manner, and at the same time (ii) promote better standards and practices among whale-watching operations at the local level.

### The way forward

In due consideration of the multiple human activities developed in the

study area and the conflicts arising between stakeholders, whale-watching is an as yet underrepresented activity in terms of presence and influence over decision makers, mostly owing to its condition of an emerging activity. To provide an opportunity for sustainable development which could endow with additional income to local communities and Chile in general, there is a need to develop an integrated and effective conservation strategy for this marine ecosystem as a whole, possibly through the creation of one or various Multiple-Use Marine Protected Areas (MUMPA). The MUMPA concept as a cross-cutting issue, would foster the harmonization of current uses bringing stakeholders together to discuss their interests on a participatory process and decide the best way on how to



minimize conflicts, possibly through the creation of a zoning plan as described by Kelleher (1999) and Day (2002).

Under such a scenario, local people would have an opportunity to discuss the value and need to continue their respective activities within the objectives set for the protected area, and also express their concerns, so that the area has the conservation impact that everyone wants, but also accommodates for some of the local uses of biodiversity of the region, including tourism for instance, and also incorporating a major theme such as ecosystem based management.

This MUMPA initiative has proved extremely ambitious in light of the complexity of both the threats faced and of the heterogeneity of interests affecting the area. Stakeholders encompass local inhabitants (poorer than the national average), salmon farmers and artisanal fishermen (facing resource shortages due to overexploitation), among others, together with authorities at various levels. In fact, the proposed protected area overlaps two different Chilean administrative "Regions", which entails the participation of a number of local, "provincial", and federal authorities, each with different interests and representing different constituencies. Even local conservationists have highly disparate views as to how to protect the local environment (ranging from the very radical, to those that are willing to tolerate some level of extractive and other disruptive activities). Interestingly, the highest level of support has been felt from local islanders.

Locals are often keen to capitalize on the potential for ecotourism and this is good news since a well established and sustainable tourism industry could generate a most needed change of attitude towards the marine environment. Local communities also often wish to preserve their natural environment unspoiled from what is sometimes perceived as outsiders eager to rip away the area's resources for their short term gain. However, due to its relative novelty in Chile, the MUMPA concept/proposal has had periodic outbursts of opposition by a range of political actors, NGOs and stakeholders. In such a scenario, Huckle-Gaete et al. (2006) and Huckle-Gaete & Lo Moro (2010) propose elevating stakeholder activity standards (such as the salmon

farming industry, shipping companies, local communities, ecotour operators, the Chilean Navy, and others) using a zoning scheme that harmonizes these activities and thrusts a positive spill-over effect that changes bad-practices currently undertaken. Special Interest Tourism could become the main driver to conserve this remarkable area rich in biodiversity and home to the world's largest animal, the blue whale, while also elevating it to a world-class destination where conservation is effective and takes management seriously, involving all stakeholder considerations in the decisions made.

It is also well known that whale-watching requires the adoption of best practices to guarantee no risks and impact on tourists and animals. Some of these best practices were included in a Fishery Regulation under review by the Chilean Undersecretary of Fisheries (Reglamento Observación Mamíferos, Aves y Reptiles Marinos), where basically most relevant aspects of whale-watching codes of conduct are established, such as vessel speed and the procedure to approach the animals, minimal distances, observation time, some vessel's characteristics and complementary regulations to minimize environmental impacts such as garbage management or impacts on tourists such as vessel equipment and security procedures, as well as crew qualifications. Outreach and educational programmes focused on tourism and conservation issues are an important tool to increase technical and human capabilities and to prevent some bad practices already observed in whale-watching operations elsewhere.

## Conclusion

The natural values of northern Patagonia, in particular the Gulf of Corcovado, offer a remarkable potential for promoting whale-watching activities. Described as a terrestrial and marine biodiversity hotspot, this area is rich in landscapes, wildlife and marine biodiversity. In fact, nearly 40 marine mammal species, including whales and dolphins, have been identified and described in the area. This natural richness represents an important potential for promoting whale-watching in the area, which is confirmed by the number of tour operators and local communities starting to offer tours throughout different areas of the Gulf of Corcovado during the past five years.

Whale-watching supply at the local level has been basically implemented by local entrepreneurs or fishermen. This supply is brand new and is described as basic in terms of quality. Most of the tour operations need to improve infrastructure (such as vessel characteristics) to guarantee good service and security standards for tourists should be put into practice decidedly. Additionally, implementation of best practices that warrant minor impacts on whales and dolphins should be compulsory to assure sustainability for the activity.

Despite the fact that literature describes economical benefits from whale-watching on local revenue, it is not yet possible to approximate this for the emerging activity of tours offered by local communities in the Gulf of Corcovado. The lack of registers does not allow estimating the amount of tourists received and the economic impact of whale-watching on local communities. Future efforts should move forward in at least three directions: sustainability, quality standards and markets.

It is also relevant to define and effectively implement best practices for whale-watching in order to guarantee minimal impact based on sound and local scientific research. These practices ought to include approaching strategies, safe distance to the animals, kind of vessels, engines and propeller protection devices, environmental education and interpretation, for instance.

A second direction is related to quality standards, including tourism equipment and security issues. Local communities necessarily need to consider investment and capacity building in terms of quality when venturing on implementing whale-watching. In the case of infrastructure, it is relevant to advance in guaranteeing adequate vessels. These must be appropriate for whale-watching activities, and at the same time provide high-security standards to tourists. In addition, a complete training programme must be carried out to develop skills in several issues, including overseeing management, quality service, as well as tour operations based on best practices, interpretation techniques and environmental education, among others.

Developing tours and programmes must be related to markets. Since there is no systematised information in the cases described here, it is impractic-

cable to identify markets demanding whale-watching in the area. Thus, establishing a systematised information platform will be useful for estimating who demands whale-watching tours in the area and at the same time define marketing strategies.

Finally, to guarantee a sustainable ecotourism in the area it is not only necessary to regulate whale-watching operations and protect whales and dolphins, but also the other activities occurring in the area, especially those more intensive and/or polluting in order to maintain a healthy and functional ecosystem through an integral conservation plan under a legal figure such as a Multiple Use Marine Protected Area. Because of the highly dynamic characteristics of marine ecosystems, research and monitoring data must be an important aspect on the future management and administration of the area, in order to accurately assess habitat use predictability and enhance the chance to observe target species such as blue and humpback whales. Research on key ecological aspects and monitor the impacts of activities developed in the area must be also be a priority within the area's management plan. It is worthwhile noting that for attaining such conservation objectives the consensus, participation and support of local communities, stakeholders and authorities is essential.

## References

Day, J. (2002). Zoning - lessons from the Great Barrier Reef Marine Park. *Ocean & Coastal Management* 45: 139-156.

Fuentes M. & S. Heinrich. (2007). Technical Report: Toninas en el sur del archipiélago de Chiloé, Chile. Ecolo-

gía de Conservación del Delfín Chileno y Delfín Austral. Tourism Department, Municipalidad de Quellón. 14pp

Gobierno de Chile, & Servicio Nacional de Turismo. (2001). *Comportamiento del turismo receptivo 2001*. Retrieved 28/07/10, 2010, from <http://www.sernatur.cl/institucional/archivos/documentos-estudios/turismo-receptivo/comportamiento-2001.pdf>

Gobierno de Chile, & Servicio Nacional de Turismo. (2008). *Comportamiento del turismo receptivo 2008*. Retrieved 28/07/10, 2010, from <http://www.sernatur.cl/institucional/archivos/documentos-estudios/turismo-receptivo/COMPORTAMIENTO-2008.pdf>

Hoyt, E. 2000. *Whale watching 2000: Worldwide tourism numbers, expenditures and expanding socio-economic benefits*. Report from the IFAW, USA. 36 pp

Hoyt, E. 2001. *Whale Watching 2001: Worldwide Tourism Numbers, Expenditure, and Expanding Socioeconomic Benefits*. International Fund for Animal Welfare, Yarmouth Port, MA, USA. 159 pp

Hoyt, E. 2002. "Whale Watching". In *Encyclopedia of Marine Mammals* (Perrin, W.F., B. Würsig and J.G.M. Thewissen, eds.) Academic Press, San Diego, CA, 1305-1310

Hoyt, E. e Iníiguez, M. 2008. *Estado del Aristamiento de Cetáceos en América Latina*. WDCC, Chippenham, UK; IFAW, East Falmouth, EE.UU.; y Global Ocean, Londres

Hucke-Gaete, R., L.P. Osman, C.A. Moreno, K.P. Findlay & D.K. Ljungblad (2003). Discovery of a blue whale feeding and nursing ground in southern Chile. *Proc. R. Soc. Lond. Ser. B (Suppl.) Biology Letters* 271: 170-S173.

Hucke-Gaete, R., F. Viddi & M. Bello (2006). *Marine Conservation in Southern Chile: The importance of the Chiloe-Corcovado region for blue whales, biological diversity and sustainable development*. Centro Ballena Azul (CBA). Imprenta América. ~109 pp.

Hucke-Gaete, R., R. Álvarez, M. Navarro, J. Ruiz, P. Lo Moro y A. Furiás (2010). *Investigación para Desarrollo de Área Marina Costera Protegida Chiloé-Palena-Guaitecas. Informe Final de estudio financiado por FNDP - BID TURISMO Cód. BIP N° 30040215-0, Gobierno Regional de Los Lagos. Unidad técnica mandante: CONAMA. Ejecutado por Universidad Austral de Chile*. 786 pp. [Disponible en [www.conama.cl](http://www.conama.cl)].

Hucke-Gaete, R. y P. Lo Moro (eds.) (2010). *CONSERVANDO EL MAR DE CHILOÉ, PALENA*

Y GUAITECAS. Síntesis del estudio "Investigación para el desarrollo de Área Marina Costera Protegida Chiloé, Palena y Guaitecas", ejecutado por la Universidad Austral de Chile, mandatado por Conama Región de Los Lagos y financiado por el Gobierno Regional de Los Lagos, Chile, a través del Fondo Nacional de Desarrollo Regional (Código BIP #30040215-0). Imprenta América. ~320 pp.

Kelleher, G. (1999). *Guidelines for Marine Protected Areas*. IUCN, Gland, Switzerland and Cambridge, UK.

O'Connor, S., R. Campbell, H. Cortez, & T. Knowles (2009). *Whale Watching Worldwide: tourism numbers, expenditures and expanding economic benefits, a special report from the International Fund for Animal Welfare*, Yarmouth MA, USA, prepared by Economists at Large.

Orams, M.B. 2002 *Humpback whales in Tonga: An economic resource for tourism*. *Coastal Management* 30, 361-380.

Parsons, E.C.M. and Woods-Ballard, A. (2003). Acceptance of voluntary whale watching codes of conduct in West Scotland: The effectiveness of governmental versus industry-led guidelines. *Current Issues in Tourism* 6 (2), 172-182

Parsons, E.C.M., Levandowski, J. and Lück, M. (2005). Recent advances in whalewatching research: 2004-2005. *Tourism in Marine Environments*, 2(2), 119-132

Parsons, E.C.M., Fortuna, C.M. Fortuna, Ritter, F., Rose, N.A., Simmonds, M.P., Weinrich, M., Williams, R. and Panigada S. 2006. Glossary of whalewatching terms. *Journal of Cetacean Research and Management* 8 (Suppl.), 249-251

Woods-Ballard, A., Parsons, E.C.M., Hughes, A.J., Vealander, K.A., Ladle, R.J. and Warburton, C.A. (2003). The sustainability of whale-watching in Scotland. *Journal of Sustainable Tourism* 11, 40-55.

World Travel and Tourism Council. (2010). *Travel and tourism economic impact*. Retrieved 28/07/09, 2009, from [http://www.wttc.org/bin/pdf/original\\_pdf\\_file/2010\\_exec\\_summary\\_final.pdf](http://www.wttc.org/bin/pdf/original_pdf_file/2010_exec_summary_final.pdf)

Word Wildlife Fund (2001). *Guidelines for community-based ecotourism development*. Ledbury, UK.

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