AlmaTourism

Journal of Tourism, Culture and Territorial Development

Ecotourism between Theory and Practice: Empirical Analysis of the Tourism Industry of Whale Watching in Húsavík (Iceland)

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ABSTRACT

Whale watching is a dynamic industry and, in particular in a country like Iceland, where tourism is currently playing a leading role in the national economy and where nature understood in a broad sense - represents the main attraction for visitors, whale watching, rapidly grown during the last years, shows an evident potential under an ecotouristic point of view. In recent times, an increasing need for the understanding of interactions between humans (tourists) and wildlife (whales) emerged, highlighting the interest towards environmental conservation, protection and preservation matters and towards the search for activities, and modalities, that could essentially contribute to the sustainability of tourism experiences, such as wildlife tourism ones. It is difficult to argue with the fact that whale watching uses the whale "asset" in a non-destructive way, unlike whaling, activity still commercially conducted in Iceland, but at the same time it can't be considered ecotouristic and sustainable a priori. In fact, several studies point out how tourism has a disturbing effect on wildlife and negatively affects their ecology and short- to long-term behaviours. This article, after a general introduction on the main ecotourism principles, examines the whale watching industry of the "Whale Capital of Iceland", Húsavík, and it mainly focuses on the results and data of two researches conducted in the field – respectively among whale watchers and among the local whale watching companies. The purpose of this work is to investigate if and how Húsavík whale watching is following an environmentally sustainable and ecotouristic path, and to bring into light its strengths and weaknesses as a whale watching destination.

Keywords: Ecotourism; Sustainability; Whale Watching; Húsavík; Iceland

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1. Ecotourism and environmental sustainability¹

New typologies of tourism emerged in recent decades as opposed to mass tourism, integrate more and more with the concept of sustainability and the necessity to translate the social need for a higher green content in tourist activities into operational practice. Beside the scientific interest for the contrast between "ego-" or "eco-" compatible behaviours, there is another one, in which science and everyday practice blend.

It is increasingly common the idea that tourism growth is a solution for the socioeconomic growth, even in off the beaten track areas and that new forms of tourism promote development, ensuring sustainability and equity in the use of natural resources².

Since the tourist industry is widespread on a global scale, no other industry is more motivated and responsible in promoting integrated ethics of business and environment. For this reason, the image that is a must for tourist industry, both from demand and supply, now appears to have ecological connotation. Statistics produced by the World Travel and Tourism Council (WTTC) indicate that the tourism industry generates 11% of global GDP, employs 200 million people compared to an annual displacement of 850 million people.

According to the World Tourism Organization (WTO), international tourism counts up to 36% of trade in services in advanced economies, and up to 66% in developing ones. Moreover, it generates between 3 and 10% of GDP in the advanced economies and up to 40% in the developing world. International tourism is also in the top five exports for 83% of the countries in the world and the main source of foreign currency for at least 38% of the countries.

Environmental quality, understood both in natural and artificial sense, undoubtedly is at the base of tourism. Nonetheless, tourism, and mass tourism in particular, has a complex and ambivalent relationship with the environment. There are many possible negative impacts, starting with infrastructure, but many potential contributions to the protection of those areas that form the heart of a region too (Cicerchia, 2009).

The phenomenon of tourism internationally has a prominent role in the transformation of the territory, ignoring local identities and natural values and transforming the basic economic fabric towards the search for a very short-term income. It is important, therefore, to formulate solutions with equal force for an alternative tourism development, based on a theoretical level, operationally viable and economically profitable. An intelligent tourism, non-destructive of local resources, as retention of social and natural resource values stands as a new form of economy that would guarantee profit, without loss of quality of the environment and of the right to enjoy the natural and landscape heritage in the present as much as in the future (Nicosia & Porto, 2015).

The cultural change that has characterized western thought over the last thirty years, has decisively influenced the tourism sector. If proceeding to an analysis of the tourist offer in a diachronic way, it is possible to identify the paradigm shifts that led to the production of knowledge. With the emergence of the concept of sustainability, for example, new tourist offers have been developed, centred on the possibility of buying

nature-based, environmentally educative and sustainably managed experiences, or, in other words, of doing ecotourism³.

Although the term "ecotourism" started to be used in literature only in the last few decades, the concept and practice of conservation, protection and preservation of natural areas has existed for over a century, i.e. with the first ecotourism trips practiced to admire the natural beauty of the parks established in the US since the second half of the nineteenth century (Da Pozzo, 2001; Galli & Notarianni, 2002; Madau, 2013). Ecotourism, according to the International Ecotourism Society (1991), is a responsible way of travelling to natural areas, with the goal of preserving the environment in which the local host community is directly involved in its development and in its management, and in which most of the benefits are addressed to the community itself.

An analysis of the literature on the relationship between sustainable tourism and mass tourism, Clarke in 1997 identifies four positions: opposition, continuum, motion, convergence. Weaver in 1998 identifies two parts of alternative tourism, distinguishing the tourist experience based on the fruition of cultural heritage and ecotourism, primary components of which are nature and natural resources.

According to one of the International Union for Conservation of Nature (IUCN) documents of 1996, ecotourism is a «responsible environmental journey and a visit to relatively undisturbed natural areas to enjoy and appreciate nature (and any connected equipment cultural, historic and current), a trip that promotes conservation, minimizes the negative impact of visitors and stimulate the involvement of the local population in the sharing of socio-economic benefits».

Wallace and Pearce in 1996, adhere to the same concept with the following clarification: ecotourism is «travel to relatively undisturbed natural areas for study, enjoyment or volunteer assistance. It is travel that concerns itself with flora, fauna, geology, and ecosystems of an area as well as the people (caretakers) who live nearby, their needs, their culture and their relationship to the land». Also, they lay down six principles that must be followed in order to identify a tourism product as ecotourism: the use of low-impact resources for the environment and for the local community; the promotion of increasing awareness and understanding of the cultural and natural concerning such systems; the conservation and preservation of protected and natural areas; the maximization of the preliminary and long-term participation of the local community in decision-making processes that determine the type and amount of tourism that we want to promote; the addressing to the local community of all the benefits which must be complementary, rather than overpowering or replacement of traditional activities such as agriculture, fishing and local systems; the offer to the local community and employees of specific nature tourism opportunities to use and visit natural areas and learn the wonders that visitors come to admire.

From these principles, a tourist typology that for its management requires a particularly complex approach emerges. Complex, as it requires the collaboration between natural and social sciences, but also the establishment of what Reed and Harvey define an «epistemological bridge between the two». The disciplines that have to give their contribution to the construction of a developed ecotourism product are numerous, very diverse and require careful work of multidisciplinary coordination.

Goodwin (1996) believes that tourism in natural areas includes all other forms of tourism too, such as mass tourism, adventure tourism, low-impact tourism, and even eco-tourism, which utilize the natural resources, both wild and little anthropic, which may include, therefore, species, habitats and landscapes. Nature tourism is any trip done in order to enjoy animals, wild plants and not populated natural areas. More and Goodwin (1996) identify ecotourism as a type of low-impact nature tourism that contributes to the preservation of species and habitats both directly, as a contribution to the protection, and indirectly, as it provides a sufficient income to the local community to enhance and protect natural areas.

Weaver (2001), however, is mainly concerned about the definitions with regard to the many ongoing research that, to offer valid and comparable results, must be based on firm concepts. That is why he suggests a definition referring to three attributes linked together. First of all, it must be noted that ecotourism has one main goal, the environment. Any other natural and cultural attractions should be considered secondary. Ecotourism has a mission, for which environmental education is an essential part of the trip and, therefore, must be considered with the highest level of interest. Ecotourism implies, then, an active learning. Weaver points out in this context that the main difference with the 3S tourism (sea, sand, sun) lies in the fact that the priorities of the latter are adventure and pleasure. Wood more directly and explicitly explains that the eco tourist is a person who cares, which is like saying this kind of tourist has a brain, while tourists of 3S does not care about anything, perhaps does not even have brain. As a third element of ecotourism, unlike other forms of tourism, it is most appropriate to preserve the socio-cultural and natural resources. In practice there is a direct relationship between ecotourism and ecological sustainability but, even if not equally direct, there is also a relationship between ecotourism and the protection of the socio-cultural system (Montanari, 2009, pp. 22-25).

It is therefore clear that ecotourism and sustainable development are terms that meet environment protection and then focus on what may be the tourism and territorial development of the area where this kind of "practice" is applied.

Ecotourism, in this perspective, is characterized by some distinctive features: it aims at promoting sustainable development of the tourism sector; it does not determine the degradation or the depletion of resources; it focuses attention on the intrinsic value of natural resources in response to a more <u>biocentric</u> philosophy; it requires the eco tourist to accept the environment in its reality without trying to change it or adapt it to its convenience; it is based on the direct meeting with the environment and it is inspired by a direct cognitive dimension (Wight, 1994; Honey, 1999).

According to this definition, ecotourism has a strong programmatic component and not only describes a particular segment of demand, but also a set of desirable results, which can be summarized as follows: environmental and socio-cultural compatibility as a basic condition; intake of benefits for environmental protection projects and for local people (participation, creation and wide distribution of income); growing environmental awareness and greater acceptance of nature conservation as a useful and appropriate use of the area (by the tourists and other stakeholders on local development).

Understanding how tourism is in fact the true support for the launch of the growth of an area is a multidisciplinary task, for the combination of environmental, socio-cultural

and economic aspects and, at the same time, it is a debate challenge between tour operators, administrators and scholars.

If we consider that for the postmodern individual the purchase of tourist experience is equivalent to the purchase of any good, and that it intervenes in the formation of what Bourdieu called habitus, then it is possible to study ecotourism as a reflection of a dominant speech and as part of identity formation processes, not only of individuals but also of the territory.

2. Whale watching definition

Whale watching is the practice of observing whales and cetaceans in general, in their natural environment. The International Whaling Commission (the recognized intergovernmental authority on the management of whales as a resource), in 1994, defined whale watching as «any commercial enterprise which provides for the public to see cetaceans in their natural habitat». Furthermore, whale watching was later defined (HOYT, 2001, p.3) as «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».

This activity can occur either for scientific, educational or recreational reason. In some cases, more reasons can co-exist. Also, the ways in which whale watching is conducted and developed are various: only in very few locations on Earth it is possible to see whales from the coast, and so, generally, there are operators that organize excursions. In most of the cases, we are talking about excursions by boats (with a duration that can vary from one hour to two weeks, and with different kinds of platforms, from cruise ships to simple kayaks) in places where the presence of cetaceans is particularly high. Sometimes, the interested pelagic or marine areas are flied over by aircraft (seaplanes or helicopters), for an aerial whale watching. With the development of whale watching, other activities have been added to the classical watching, such as swimming with cetaceans or tour combined with bird watching activity or the sighting of other marine fauna.

The most renowned place for this activity is North America, and then the islands of Oceania, Central America, Atlantic islands such as Azores and Canary Islands, Scandinavia.

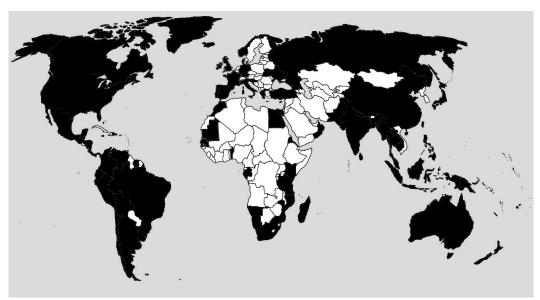


Figure 1: The countries marked in black are those which had whale watching in 2008.

Source: Whale Watching Worldwide: Tourism numbers, expenditures and expanding economic benefits. A special report from the International Fund for Animal Welfare.

3. Is whale watching always ecotourism?

The majority of researches and studies about whale watching are focused on cetacean biology and behaviour, perspectives related to environmental sustainability, in which we need to consider all the elements in relation between whale watching and the whales life in their natural habitat.

It is a widespread belief that whale watching is to be positioned as an ecotourism activity. Ecotourism includes, among its most important purposes, the conservation of biological diversities and the protection of fauna and flora. So that, in the dichotomy whale watching/whaling – which arises instinctively from a psychological point of view, especially in a place like Iceland, where the two activities co-exist – in this dichotomy, a negative opinion for the barbaric activity of whaling is immediate. As a consequence, it is as much immediate to consider whale watching as a mirror activity of whaling, a positive and acceptable and ecotourism activity, as it seems to help in the conservation and protection of whales. A part in this is played by the human perception of whales, which changed during the last 100 years, as also Van Ginkel (2007, p.399) underlines, shifting «from edible commodities to sacrosanct symbols of nature».

At the same time, and more recently, it has been seen an exponential increase of the interest and, more precisely, of the experience to sight wild animals in their natural environment. Also, this need, in opposition to the observation of animals in zoos, gives whale watching a positive identity, including it among the activities that contribute to the protection of animals in their habitat. Therefore, whale watching is legitimately considered an ecotourism activity.

The problem is that a too positive, not critic or superficial idea towards whale watching, does a disservice to the pursuit of sustainability. If there are no doubts that

whale watching uses whales in a way that is more sustainable and not destructive, compared to whaling, it is absolutely debatable that whale watching is to be automatically assimilated into what is called sustainable tourism. Moreover, a positive definition of whale watching, based just on its opposition to whaling, «likely obscures the existence of bad whale watching conduct». (Neves, 2010, p. 719) The approach that considers whale watching in any case an innocuous activity for animals, does not take into consideration the inadvertent damage that it might cause.

For instance, with the birth of what can be defined scientific whale watching, thanks to the cooperation between the Dolphin Fleet Company of Massachusetts and the Center for Coastal Studies of Mayo, the first issues related to impact of the tourist vessels on cetaceans started to arise. In particular, in 1975, the International Whaling Commission (IWC), stated its concerns about whale watching tours in several bays of Mexico, locations of mating for different species of whales, among which the Grey Whale. The following year, the IWC (1977, p.68) asked the Governments of the USA and Mexico to establish rules «to counter harassment of Gray Whales in breeding areas».

Whale watching from land (beaches or promontories) is without any doubt sustainable, since it is the observation of animals in their environment, but without the invasion of it. Moreover, this kind of activity has an educational element, and it helps in terms of awareness in conservation and protection of the environment. Whale watching from land is decreasing, while tours on boats are higher in numbers. Whale watching by boats, of course, shares the same ideals, but it needs a particular and greater attention, due to its impact on the whales' habitat.

Whale watching from boats and whaling are somehow similar for the way in which the two activities are conducted for most of the steps: whales are searched for, spotted and located, identified in their species and chased. The fact that one of these activities ends with a harpoon shot by whalers, while the other one with some people just observing the "pray" is, of course, a crucial difference, but it has a relative importance if we take on the perspective of a cetacean. Whales are intelligent animals and in both cases, a whale might feel chased.

In the years, several studies have been highlighting how the presence and density of boats influence whales' behaviour. The most common reaction is an elusive behaviour, maybe caused by the simple presence of the boat, but most of the times it is due to the boat's rigging. Unexpected changes in directions and speed have particular impacts. Furthermore, this interaction between man and cetaceans is considered to be a reason for behavioural changes, not only short-term changes, but also long-term ones, and, in particular, it is considered the cause for which cetaceans are changing their natural habitat and the cause for a lower birth rate. Cause for all of this is not just the presence of humans and boats, but the key role is played by the acoustic pollution produced by the boats. In cetaceans, hearing is the most developed sensory organ: in particular, toothed whales use a system named biosonar⁴ for all the activities, from communication to hunting to simple movements. Every boat is a source of noise, which gets in the way of the normal use of hearing, and which can confuse cetaceans even for their most simple daily life activities.

There are problems related to the development of whale watching: a higher number of whale watchers brings to a higher number of boats, so to a bigger and noisier presence in whales' habitat. This has also modified the average whale watcher. In the past,

whale watchers were sort of pioneers of ecotourism; nowadays they share many characteristics with mass tourists. The consequences are non-realistic expectations (maybe also fomented by promotional materials that are too spectacular), less sensitivity towards environment and animals, a request of closer encounters. Therefore, whale watching companies might feel under pressure by the new identikit of whale watcher, finding themselves to choose between sacrificing the (paying) tourist's expectations and cetaceans' wellness. Moreover, there is the increasing interest in faster boats, to go off shore quickly. In this case, the negative implications might concern the danger of collisions with the animal, a danger which is potentially lethal in case of a big boat and which is more probable, in comparison to a regular boat, as the whale would have a shorter response time towards unexpected changes in speed and direction. Another negative implication might be acoustic pollution.

From what has been said comes to light that a non-sensitive whale watching towards animals, and environment in general, may easily be a cause of stress for the animals themselves and a reason for dangerous alteration of their behaviours.

It is clear, then, that a regulation for whale watching tours is necessary, to avoid dangerous behaviours and to optimise the positivity of this activity, so that it can be rightly considered ecotouristic and sustainable.

The IWC has developed a series of general principles for whale watching companies, to minimize the negative impact on the whales and to make whale watching an ecotouristic activity:

- «(a) actively assist with the conservation of their resource (cetaceans), such as cooperating with research groups and other scientists and with research projects or allowing vessels to be used by scientists/research groups as platforms of opportunity;
- (b) provide appropriate, accurate and detailed interpretative/educational materials or activities for their clientele about the cetaceans viewed and their associated habitat;
- (c) minimize their environmental impact (such as reducing emissions or disposing of refuse appropriately);
- (d) adhere to whale watching regulations or an appropriate set of guidelines, if no specific regulations are available for the area;
- (e) provide some benefits to the local host community within which the company operates» (Parsons et al., 2006, pp. 250-251).

4. Whale watching outset and early development in Iceland

Whale watching has its roots in the 40s with the first observations of Grey Whales by the Scripps Institution of Oceanography students, in San Diego, California, US. However, the first commercial whale watching activities began in 1955, when fisherman Chuck Chamberlin, from San Diego too, due to the scarcity of fishing in winter, decided to offer, for 1 USD, the possibility to go on his boat to watch Grey Whales during their winter and spring migrations. In 1950, the protected area of Cabrillo National Monument, in San Diego bay, had already been converted into a whale observation point from the mainland. In some years, the interest for whale

watching increased and the areas that got mainly involved, and that played a major role, together with California, were Hawaii and New England.

In Iceland, instead, whale watching started at the beginning of the 90s. In 1991, about 100 people took part in excursions from Höfn, in southeast Iceland. After only 3 years though, whale watching in Höfn stopped, due to frequent bad weather conditions which caused the cancellation of many tours. One year later, a whale watching company started operating in Keflavík, in the Southwest of the island, but it quitted shortly after. In 1995, it was the turn of Húsavík, with the company North Sailing, followed by Gentle Giants in 2001, Salka in 2013 and Húsavík Adventures in 2015, all in the same town. Now, whale watching tours leave from Akureyri, Hauganes and Dalvík, in the North, from Ólafsvík and Grundarfjörður in the West, and from Reykjavík.

Iceland is now living a boom in tourism, which started in 2011, with an average increase, in number of foreign visitors, of 22% per year. In just 5 years, the number of foreign tourists almost tripled, from 488 thousands in 2010, to about 1,3 million in 2015. Of course, this trend reflects also on the number of whale watchers: from the 2.200 passengers in 1995, the number constantly increased till 125.000 in 2009. Then, in 2010, there was a small decrease, with 117.000 people, but this figure doubled in four years. As a matter of facts, in 2014 the total number of passengers was about 230.000 in the period from the beginning of April to the end of October, with obvious peaks in summer months. The figure kept growing in 2015 for a new record of about 272.000 whale watchers during a likewise record season, from mid-March to the end of November. Since 2001, whale watching is an activity which 20-25% of the foreign visitors takes part in, with Reykjavík being the main location for it in terms of passengers: from 2003 to 2013 the vessels from the capital area carried almost 60% of the total amount of whale watchers in Iceland. Same kinds of data are not available for 2014 and 2015 but, surely, Reykjavík still plays the leading role in the Icelandic whale watching scenario, leaving a minor part to all the other locations except for Húsavík, its only real rival.

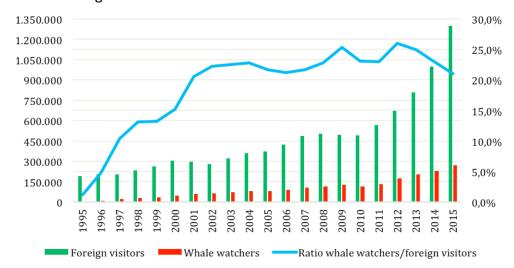


Table 1 Foreign visitors and whale-watchers in Iceland: 1995-2015

Sources: http://www.ferdamalastofa.is/en/recearch-and-statistics/numbers-of-foreign-visitors and http://www.icewhale.is/whale-watching-in-iceland/

5. Húsavík whale watching

Húsavík is a town in the North of Iceland, part of Norðurþing municipality and of Norðurland eystra region. Positioned on Skjálfandi bay, it is 70 km away from the Polar Circle. Inhabitants are about 2.200, packed in the sketch of land along the North-South axis, with the Húsavíkurfjall (the hill of 417 m, which takes its name from the town) on the eastern side, and the sea of the bay on the western side.



Figure 2: View of Húsavík and of Skjálfandi bay from the top of Húsavíkurfjall. Source: Photo by F. Perini

The first tours in Skjálfandi bay took place in the 80s and, at the beginning of the 90s, the company Sjóferðir Arnars started to operate, lasting until 2000. These tours were not at regular schedules and they were not exclusively dedicated to whale watching. The turning point for Húsavík was in 1995, with the first real whale watching tours. From that moment, the town has been having a key role in the development of this touristic industry in Iceland and it has been included among the 10 best places on Earth for whale watching.

Since 2001, 40% to 30% of the total whale watchers in the country choose every year the "Whale Capital of Iceland". This relatively low number may seem strange, considering the status of Húsavík, now even officially recognized with a brand and a logo. It has to be considered, though, that Keflavík international airport, entrance point

to Iceland for almost all foreign tourists, is very close to Reykjavík and the whale watching companies there give the possibility to experience a whale safari also to whom, as many do, decides to stay in the country just a few days, without enough time to travel to the opposite corner of the island. In light of these considerations and of the fact that the trend of Húsavík whale watching industry shows a very stable position and an uninterrupted growth in step with the national figures, the 78.100 passengers of 2014 and the 89.500 of 2015 can be considered a great result, that demonstrates the recognition by tourists of the title "Whale Capital of Iceland".

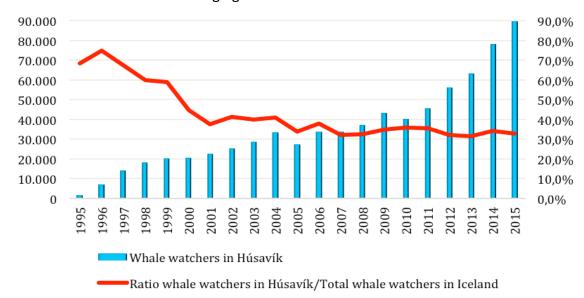


Table 2: Húsavík whale watching figures: 1995-2015.

Sources: http://www.icewhale.is/whale-watching-in-iceland/ and Rögnvaldsdóttir, 2014.

At the moment, there are 4 whale watching companies in Húsavík.

North Sailing, the first one to be establish, in 1995. In 2014, its fleets consisted of seven boats: four *oak boats* and three *schooners*. All the boats are restored old fishing vessels, like the *oak boats* of the other companies. In 2015, North Sailing added one *schooner* to its fleet.

Gentle Giants, second company to start its business in Húsavík, in 2001, had in 2014 two *oak boats* and two *RIB boats*, rigid-hulled inflatable boats that can reach very high speeds. In 2015 a third *RIB boat* was added.

Salka has been active only since 2013 and it operates with one single oak boat.

In summer 2015, a fourth company, Húsavík Adventures, started to operate, with a fleet of two *RIB boats*.



Figure 3: Húsavík harbour with whale watching companies' docks, Húsavíkurfjall in the background and part of the town in an overall view from a boat leaving the harbour.

Source: Photo by F. Perini

During the years, the rate of successful tours⁵ in Húsavík has always been high, much higher than the 90% Icelandic average. In the last years, for example, the successful tours have been 98% of the total. The most common species to watch in the bay are the Humpback Whales, followed by Minke Whales and White Beaked Dolphins but the crown jewel of Húsavík whale watching are Blue Whales. Moreover, it is possible to spot Fin Whales, Harbour Porpoises and, occasionally, Killer Whales, Sperm Whales and Pilot Whales.

7. Methodology of the researches

In summer 2014, with the purpose of examining the current situation of Húsavík whale watching, the expectations and opinions of passengers and the point of view of the companies, I conducted four different researches, based on two questionnaires and two interviews.

I carried the first one out on the boats. After taking part in 25 tours, with all the three companies operating at the time and on all the boat of the fleets, therefore after directly experiencing a wide enough range of events and situations that occur during

the tours, I developed a questionnaire in two parts. Between August 3 and September 11, 2014, I took part in 22 excursions, divided as follows: 8 North Sailing *oak boats* (2 tours per boat), 3 Gentle Giants *oak boats* (2 tours on the main boat, 1 on the smaller one), 3 Salka *oak boats*; 3 North Sailing *schooners* (2 tours on the smaller one, 1 on the middle one – the bigger one, from July, is used for long excursions in Greenland and it is not available for whale watching); 5 Gentle Giants *RIB boats*. Of course, I could not make any research with Húsavík Adventures, which was not active in 2014.

Each tour on the *oak boats* lasts around 3 hours. Generally, the vessel needs 45 to 60 minutes to reach the sighting area, 60-80 minutes are spent to watch the giants of the sea emerging from the water, and again 45 to 60 minutes are necessary to go back to the harbour. Obviously, there are different situations to take into account: a cetacean particularly far away or close which requires more or less time to be reached; three hours spent in vain without the sight of any cetacean is another possibility, even if not frequent.

After leaving the harbour and after the indications about security by the guides, I gave the first part of the questionnaire to those who voluntarily decided to take part in the survey. The second part was given to the same people one the way back just before reaching the harbour.

The tours on the *schooners* are slightly different: they last 4 hours, because the circumnavigation of a small island on the North of the town is included. This small island is Lundey, where it is possible to see the famous Puffins. Anyhow, the way I conducted the survey and distributed the two parts of the questionnaire was the same as on the *oak boats*.

The excursions on the *RIB boats*, instead, are very different and I distributed the questionnaires in a different way. Due to the small space on the boat and to its high speed, I had to give the papers on land, before departure and after the arrival.

In total, the questionnaires I gave were 200: 25 on the *RIB boats*, 42 on the *schooners* and 133 on the *oak boats*.

The second research was addressed to the whale watching companies in Húsavík and, in particular, I asked to have the chance to interview one person from every company: each subject was chosen by the companies themselves. The questions were the same for all the three interviews, and I conducted this part of the research between September 2014 and January 2015.

In the following paragraphs, some results, figures and relevant answers from these two researches will be reported. The other two researches, a questionnaire distributed inside the Húsavík Whale Museum and an interview to four inhabitants of Húsavík, instead, are not displayed in this work.

8. Passengers' point of view

The tourists who took part in the survey on the whale watching vessels were 200, 55% males and 45% females. As regards their age, 40% of them were under 30, 39,5% were between 30 and 45 and 15,5% between 45 and 60. Only 5% of the participants were over 60.

Germany and Italy were the most represented countries (with 17,5% each) followed by France (11%), USA (6,5%) and British Islands (6,5%). A significant number of visitors were also from Israel, Asian countries and Scandinavia (5% each).

The education level was generally high; as a matter of facts, 70,5% of the participants was attending university at the time of the survey or already had an academic degree. Instead, 22,5% earned a high school diploma and 7% only completed secondary school. 94,5% of the passengers answered they travelled to Húsavík principally for whale watching. The reasons that made them decide to go on a whale watching tour were mainly four: passion for wildlife and nature (67,5%), to experience some adventure (58,5%), to take good pictures (40,5%) and to learn something about whales (32,5%).

To the question about the reasons for the choice of Húsavík for the tour, and not another of the many places in Iceland where it is possible to do whale watching, 76,5% answered that they had read or known that this is the best place in the country and maybe in all Europe for this activity.

70% of the people interviewed were at their first experience with whale watching. 25% had taken part in marine safari outside Iceland, 3,5% were at least at their second experience with whale watching in Húsavík and 1,5% had taken part in at least another tour in a different place of the country.

Of the total amount of survey (200), 64,5% were conducted on North Sailing boats, 25,5% on Gentle Giants, and 10% on Salka. Analysing the reasons related to the choice of the company, it comes to light that North Sailing is mostly chosen because recommended by a guidebook/website/someone (31% of the 129 North Sailing passengers), for the timetable of the tours (27,1%), for the boats offer (17,8%) and for the history of the company (10,9%). A high percentage chose randomly, without a specific reason (23,3%), and a relevant percentage said the choice was made by the agency or by the group leader (9,3%). Gentle Giants was chosen in particular for the boats offer (43,1% of the 51 passengers. In all likelihood, particularly relevant was the presence of the two RIB boats). Other reasons were that the company was recommended by a guidebook/website/someone (29,4%), the timetable of the tours (23,5%) and the history of the company (21,6%). Just 5,9% made the choice without a particular reason. Salka was mainly chosen, instead, for the price (45% of the 20 passengers). 30% chose Salka for the timetable of the tours, 15% because it was recommended by a guidebook/website/someone, and 15% because of the history of the company. 30% said they chose Salka for the less crowded tours. 20% chose without a specific reason and 15% because the other companies were fully booked.

As already said, during the whale watching season of 2014, Salka had just one *oak boat* in its fleet, while North Sailing, in addition to the four traditional boats, also counted on three *schooners* and Gentle Giants operated its tours with two *oak boats* and two *RIB boats*. The reasons for an excursion on an *oak boat*, probably considered the basic boat by tourists compared to the other and more particular ones, are linked to the timetables (27,8% of the 133 passengers), and to the price (15%). 28% answered to have chosen the *oak boat* without a specific reason. Examining the answers of the other passengers, it comes to light that the *schooner* was chosen for a cool experience (59,5% of the 42 passengers) and because this boat is considered an attraction itself (19%). It surely is understandable that, among the reasons that drove the 25 *Rib boats* passengers to choose the most expensive whale watching tour, the main ones are

having a cool experience (76%), sailing on the fastest boat to approach a whale (72%), and having a higher chance to get very close to whales (64%).



Figure 4: RIB boats Source: Photo by F. Perini

Lastly, the overall expectations were considered high by the 57,5% of the tourists, and average by 32%. A much lower percentage of whale watchers defined their expectations as extremely high (6,5%), low (3%) and close to zero (1%). If we separately analyse the answers of the passengers on the different kinds of boats, tourists' expectations on the *oak boats* generally follows the results just illustrated, while passengers on the other boats seems more excited. In particular, 80% of the tourists on the *RIB boats* had high expectations and 16,7% of the people on the *schooners* had extremely high expectations.

In the second part of the questionnaire, the first interesting figure is the one related to the sightings. Of the 22 total surveyed tours, 17 were successful and 5 unsuccessful. The most common sightings were Humpback Whales, followed by White Beaked Dolphins and Minke Whales. Among the 5 unsuccessful tours, one was actually not without sightings, since a very large pod of dolphins was spotted. Anyhow, such tour, for a fair development of the survey data interpretation and analysis, is considered unsuccessful because of the general perception of the passengers and because the company offer a second, free, excursion, as if the first one was unsuccessful.

Question number 9, in the second part of the questionnaire, underlines that the level of satisfaction is generally high, but it highly depends on the success or failure of the tour. Among the successful tours, different factors made "extremely satisfied" or "very

satisfied" more than 50% of the passengers, with a peak of 80% with regards to "landscape" and "crew assistance" concern. The only exception is the entry "photography", with just 42% of satisfaction over the average, but also with 22% with no opinion. This highlights both the low satisfaction in the outcome of the pictures taken (in particular, probably, if compared to the advertisement images), and the fact that not many tourists take pictures during the excursion. In any case, for successful tours, the answer "not satisfied" has very low percentages, less than 10% for each entry. Among the unsuccessful tours, instead, the percentage of satisfaction drastically decreases. The higher peak is at the entries "landscape", "captain navigation", "crew assistance" (all around 50%). The lower peak is 2,5% at the voices "whale encounter", "whale activity" (in the tours where there were seen just dolphins of course); and it is not surprising that, with regard to these two entries, 50% of the passengers who took part in unsuccessful tours answered they did not have an opinion and 40% said they were unsatisfied.

The result of the tour influences also the work of the guides and the opinion of the passenger about that. 16 of the 29 total negative adjectives (boring, disturbing, too talkative, not very talkative, difficult to understand and lacking in information/knowledge) ascribed to the guide have been chosen by passengers of unsuccessful tours. It has to be underlined that passengers of the unsuccessful tour with the sighting of dolphins used positive adjectives only (interesting, captivating, pleasant, talkative enough, plentiful of information, easy to understand) to describe the guide of the tour.

To the question about the comparison between the excursion of the day and other ones previously done, 70% answered they did not have terms of comparisons, because it was their first whale watching, 18% said the experience was as satisfying as the previous one, for 8% it was better, for 4% it was worse. Moreover, the overall opinion is positive, when it is about successful tours. As a matter of facts, 91% described the tour as "good" or "excellent". Even the unsuccessful tours received not negative opinions, as 71% defined the tour "acceptable" or "good". But it must be taken the 26% that described the tour as "disappointing" into consideration too. Lastly, the comparison between the expectations before and after the tour once more highlights a difference between successful and unsuccessful trips. In the first case, 69% of the passengers said their expectations were satisfied or exceeded. In the second case, the expectations of 76% of the people were not satisfied. It is clear, then, that the presence of a whale is the discriminating factor for a tour perceived as positive or, instead, as negative in the eyes of a whale watcher.

The success or failure of a tour, instead, does not seem to have influence on a possible repetition of this experience. Figures are very similar to each other in both of the cases. Taken as a whole, just 3,5% would do an excursion with a different company, and only 10% would not repeat the experience. It has to be considered that the majority of the ones who would not repeat the experience had been seasick during the trip. 45,5% of the passengers would repeat the same experience, 21,5% would like to try e different kind of boat and 19,5% would like to go whale watching again, but not in Húsavík.

To the question if they would recommend a whale watching tour in Húsavík, 92% answered yes. Of the 16 people who would not recommend it, 11 took part in an unsuccessful tour.

Other data and figures will be analysed in the next chapters.

9. Whale watching companies' point of view

For simplicity, I will use the acronyms NS for North Sailing, GG for Gentle Giants, and S for Salka.

With regards to the story of the company and its development, and the development of whale watching in Húsavík, the answers were obviously different, but they have some elements in common.

NS: «North Sailing started whale watching in 1995. The first boat, Knörrinn (still in the fleet) was bought with the purpose of saving it from the scrapyard, as for new technologies the conventional Icelandic oak fishing boats were being replaced by more practical plastic or steel boats. By finding the oak boats a new purpose, important heritage and skills associated with wooden boat building are preserved. [Over the years] more operators are going into the business and some are just copying what others have previously been doing, not adding anything new for the customers».

GG: «I have been involved in the tourism business in Husavik since 1982, when my father and I, together with other friends, started sailing with tourists out on Skjálfandi bay for hobby in a co-operation with the hotel in Husavik. Those trips were the first scheduled trips out on Skjálfandi bay with tourists for nature, bird and whale watching and fishing of course. We had been doing this until 1990 on and off. After that, Sjóferðir Arnars was established and took over the role of sailing out with visitors from Húsavík. North Sailing was established in 1995 and competed with SA until the year 2000. In 2001, together with 10 more people, I founded Gentle Giants. We restored an old oak boat, originally a fishing and whale hunting boat, and put it back into commission sailing visitors around Skjálfandi bay searching for whales, not for hunting but for watching. I bought the company shortly after being established and I have been building it up step by step, keeping in high regard our family history and traditions, strongly linked to the bay and the fishing. [Over the years] I noticed a rapidly growing competition within the whale watching sector and also with regard to other activities in the tourism industry in Iceland. Moreover, more different species and bigger animals year by year are entering the bay; that is caused by a climate change, without a doubt. Other changes I can underline are the higher number of people taking part in the tours most of which are travelling on their own or in smaller groups than in the past. Also, bookings come now with shorter notice. Lastly the research work increases every year».

S: «The family who owns the company was not new in the field as they were among the co-founders of Gentle Giants. After few years, they decided to sell their share of that company to the current manager and to focus on the main activities that they are still conducting: the restaurant and the bistrò. Then, in 2013, the family received an offer for purchasing and restoring an old oak fishing boat, so they chose to undertake the activity again and Salka Whale Watching was born. The history of the company is still quite short, but a few changes occurred from last season (2013) to this season (2014): for example the number of passengers has increased by 50% even if two of the

twelve Salka whale watching weeks were negatively influenced by the Bárðarbunga eruption. Luckily, the collaboration with the other companies, despite some obvious competition, has been good all long. Salka has less scheduled tours than other companies and, sometimes, from our ticket office, we recommend to possible clients to check other companies' tour timetables, in order to not wait too much time for the next trip, or we even accompany them to other companies' ticket offices».

Among the elements in common, the most important ones are those related to the connection between tradition and experience in Húsavík whale watching industry. The old fishing boats, in particular, are a very important element, which identifies the companies of this area of Iceland, and the companies themselves are very proud of their boats and of the work they did with those. Moreover, as predictable, the increasing number of passengers year after year is the most underlined among the changes and developments of the local whale watching.



Figure 5: One of the traditional fishing boats, or oak boat, now serving as whale watching vessel.

Source: Photo by F. Perini

The opinions about the current Húsavík whale watching industry and about its possible developments show, instead, partly opposing ideas:

NS: «I wish that whale watching operators in Húsavík would stick to operating on traditional oak/wooden boats and not work with high speed boats that affect the overall experience of other passengers enjoying peace and tranquillity out on the bay and create a stressful environment for the whales».

GG: « I miss many of the old buildings that used to be at the harbour site. Anyway I do appreciate how well we have managed to build up the tourism industry in Húsavík step by step. I do also appreciate the increasing understanding by the inhabitants of the importance of this business for the society. I wish we could manage to hold on more to the "old fishing history" in our small town and not make it too much of a stereotypical tourist attraction. I hope future developments will be well planned and also we have to be very careful in Húsavík not to lose the nice nature and clean image that has been built up the past decades; that is if we want this industry to develop in the future and in a good attractive way».

S: «Skjálfandi is a huge bay and it is usually needed a lot of time to reach the whales spotting sites. This is so true for us and for our boat, equipped with the least powerful engine of all the vessels operating in Húsavík whale watching. I believe that faster boats, which would allow a faster approach and a faster way back, might positively develop passengers' experience, letting them more time to enjoy the sightings of whales and less time "on the road", and it also might contribute to a higher natural environment protection and to a lesser animal disturbance. For the rest, I think that the general conditions in which Húsavík whale watching is conducted are perfect for the climate, the sea, the amount of whales, the number of daily tours. I expect the number of tourist to keep growing in the next years and I will not be surprised if amount and species of whales grew too, as occurred in the past. About that, in case of a behavioural change that regularly brought whales into the bay even in winter, it might make sense extending the whale watching season».

It is common in all the people interviewed, in a way or another, the sensitiveness towards the environment, the will to preserve it and not damage it. The same cannot be said about some specific ideas for a possible development of the industry. For example, if NS wishes that *RIB boats* to be removed from the Húsavík whale watching offer, S talks about more powerful engines that let the boats go faster and further.

10. Steps towards an environmental sustainability of Húsavík whale watching

In Iceland, the International Fund for Animal Welfare (IFAW), in collaboration with IceWhale (a no profit association formed by Icelandic whale watching operators), launched the campaign "Meet Us Don't Eat Us", to raise awareness among tourists about the consumption of whale meat, to let them know that whale meat consumption by Icelanders is not that common and that whale hunting is not a traditional activity in Iceland either. 75% of Icelanders do not buy whale meat and around 40% of the total whale meat is eaten by tourists, indeed and the reason could be the curiosity of foreign visitors to try what is considered to be a typical dish. Probably, a lower request of whale meat by tourists would put pressure for ceasing whale hunting⁶. It is also important to know that over 80% of the Minke Whale meat is thrown away. To support this campaign, in May 2015, a smartphone and tablet app was created, the *Whappy*, with the aim to make it easier for tourists to have a positive impact during their visit to Iceland by making whale friendly choices. In particular, with the app it is possible to find restaurants that do not serve whale meat (in addition to the possibility to book a

responsible whale watching tour and to learn about the different species of cetaceans). The results of the campaign "Meet Us Don't Eat Us", after the first 5 years, are certainly positive: from 2009 to 2014, the percentage of tourists who ate whale meat passed from 40% to 18% and the number of restaurants that do not serve whale meat increased, particularly in Reykjavík.

Húsavík can be considered a *whale friendly city*, since all its 5 restaurants do not include whale meat in their menus (in 2015, though, one of the restaurants included this course in its menu for a few weeks, before reconsidering this decision under the pressure of the local community and, in particular, of the subjects operating in whale watching and scientific research fields). Moreover, outside of Reykjavík, there are 14 restaurants that are officially *whale friendly*, 4 of them are in Húsavík. And Skjálfandi bay, as all the maritime area in the North of Iceland, is not a whaling ship territory. Without any doubts, the whale watching industry has contributed to this situation, together with the Húsavík status of "Whale Capital of Iceland".

There are other important elements, in the current reality of Húsavík, that help the local whale watching industry be an environmental sustainable activity: the refusal of sonars to locate whales during the tours, the collaboration of the companies with the local research center and other institutions with projects of preservation, consciousness and research. In the past years, it had been observed a worrying correlation between the use of sonars in whale watching tours in Australia and the stranding of cetaceans, confused and disoriented by a device which puts their biosonars out of order. In Húsavík, the only tool used to locate the whales are the eyes, maybe helped by binoculars. Moreover, captains and crews, even of different companies, help each other with regular communications via radio, so that it is possible to cover the huge area of Skjálfandi bay with more eyes.

Húsavík Research Center, part of the University of Iceland, works and does researches, in collaboration with the whale watching companies, which make their tour boats available as research platforms, avoiding the use of other ships by researchers, ships that would not only mean higher costs, but also higher acoustic pollution for the whales.

On July 22, 2014, at the Whale Museum of Húsavík, the first "Whale Congress" was held, an event that has become a regular annual appointment, organized in collaboration with Húsavík whale watching companies. In this event, subjects operating in whale watching industry and representatives of IFAW, IceWhale and Research Center take part. The aim is to discuss topics that could help in the development of a more responsible whale watching, through the sharing of knowledge in the fields of biology, ecology, and the relationship between this activity and society (local community and tourists).

Furthermore, apart from its commitment, the presence of the Húsavík Whale Museum itself, as a prominent cultural and educational institution, contributes to the creation of an ecotouristic whale watching destination. The collaboration between whale watching companies and the museum is also put into effect through discount tickets — in the amount of 20% of the price — which is given by the companies to their passengers, to encourage them to visit the museum and, by this mean, to promote a deeper knowledge of animals and their environment.

11. Towards a shared regulation

Unlike other countries, in Iceland there are no official regulations for whale watching. From a personal conversation I had with Maria Gunnarsdóttir, IceWhale secretary and treasurer, on March 4, 2015, emerged that, at the beginning of 2000 Ásbjörn Björgvinsson, the founder of the Húsavík Whales Center (the current Whale Museum), developed a series of guidelines. Even if not binding, these guidelines have been unofficially followed by several companies all over the country and by all the companies in Húsavík, at least during the last years.

These guidelines are mainly pertaining to the ways in which the boats approach the whales. Among them, the most important ones are those related to the approaching trajectories, from one side or from the back; those about the use of engines and screws near a whale, those about the distance to keep from the animals; those related to the sudden change in speed and directions when close to a whale; those that dictate to avoid chasing animals that clearly show to not appreciate the human presence.

As said, all the whale watching companies in Húsavík have been following these guidelines for years. North Sailing, in particular, has developed them and made a brochure in English, which can be consulted also online, listing them. Many of these guidelines echo Ásbjörn's ones, for example those about the approaching trajectories and the changes in speed and direction, but other precepts are more detailed:

- «- Reduce speed to less than 5 knots when within 200 meters of the nearest cetacean [...]
- Avoid driving towards any cetacean closer than 100 meters while the engine is in gear, unless you are approaching from the right angle [...]
- Limit your time engaged in viewing to a maximum of 30 minutes [...]
- Limit the number of boats around an animal to 2 and try to stay on the same side where possible» (northsailing.is/files/north-sailing-guidlines-for-whale-watching.pdf, p. 3)

Unfortunately, the reality does not always reflects these guidelines: as a matter of facts, it is possible to witness approaches not in conformity with them, or to see several boats (even 6) around the same whale at same time. Often, the time spent sighting the same animal exceeds 30 minutes and sometimes a boat follows a whale that does not seem to appreciate the human presence.

All of this is probably due to different reasons. There are not effective rules with penalties in case of violations; the pressure caused by the contrast between whales conservation, protection and passengers' satisfaction, two purposes that can be conflicting and that are surely difficult to handle.



Figure 6: Humpback whale about to dive at a short distance from an oak boat. Source: Photo by F. Perini

An important step forward was taken at the beginning of 2015. In Iceland, now, there is a Code of Conduct, fostered and voluntarily adopted by the whale watching companies, for the development of a sustainable and responsible whale watching. The promoter of this project was IceWhale, the association founded by the whale watching operators themselves in 2014, in collaboration with the staff of some companies and some international experts.

Because of the limited regulation and its scarce implementation on whale watching tours, IceWhale «initiated the development of this code of conduct with the aim of minimising impact on cetacean for the future and the sustainability of whale watching operation in Iceland, ensuring the best possible encounter, both for animal welfare and passenger enjoyment, increasing development, understanding and awareness of appropriate practices when watching cetaceans». (www.icewhale.is/code-of-conduct/) Future modifications are not excluded, so that the Code can be as updated as possible, and in line with new knowledge about cetaceans and the interaction humans/cetaceans.

Practically, the Code of Conduct for responsible whale watching, taking the several variables during a tour into consideration, dictates different behaviours depending on the zone the boat occupies.

In the *Searching Zone*, within 3.000 meters from the cetacean, the speed has to be reduced and sudden changes of direction and speed have to be avoided.

In the *Approaching Zone*, within 300 meters from the cetacean, the distance has to be initially maintained, so that the animal can get used to the presence of the boat, the speed has to be reduced till a maximum of 5-6 knots (8 knots if the whale swims fast), switching off the main engine. Moreover, it is forbidden to approach the whale directly from the back, or from the front; it always has to be approached at an oblique angle from behind, and the boat has to follow the animal with parallel movements, once close to it. In case one boat is already in the *Approaching Zone*, this one has to give the ok to other boats for entering the area. Also, boats inside this area should interchange, to avoid the presence of too many boats at the same time. As a matter of facts, it was established that the maximum time to spend with a whale is 20-30 minutes. Talking about dolphins, that, differently from other cetaceans, swim in groups, it is determined that the boats are not allowed to pass through a pod, and they have to maintain or gradually reduce the speed, if the dolphins get close to the boat or surround it, as often happens. It is also specified that a particular care has to be taken for birds and, in particular, the vessel must ensure not to disturb them.

Entry in the *Caution Zone*, within 50 meter from the whale, should happen only if the whale approaches the boat. In this case, the engine has to be switched off and not switched on until the cetacean leaves the area: the boat, therefore, should remain inert. In any case, the encounter with the whale should always be as natural as possible and whales and dolphins are not to be touched, it is forbidden to swim with them or feed them.

The Code of Conduct made by IceWhale was signed on February 20, 2015, by 8 companies, including North Sailing and Gentle Giants. Salka has signed it before the beginning of 2015 whale watching season. Húsavík Adventures became a member of IceWhale in 2016.

Reading the Code, it is noticeable that the guidelines for a correct whale watching have become more accurate than the ones of 2000 and, at the same time, that there is a continuity from those, to the North Sailing's ones and lastly to the recent ones from IceWhale. Another inevitable continuity is the lack of penalties, in case of violation of the Code, fact that represents one of the main problems. For example, from the survey it comes to light that only 3,2% of the passengers from successful tours had the feeling that the whale was more than 100m far from the boat, 49,4% that the whale was not more than 10m far out, 20,3% that the whale was very close to the boat and 27,1% that the whale was between 10 and 100m far. Obviously, the perception of distances on the sea is arguable, but the data is without any doubt not in line with the instructions of the Code for *Approaching Zone* and *Caution Zone*.

«Since it's a Code of Conduct and not rules we [IceWhale] have no authority. We want guests to express their concerns during the tours and/or contact the IceWhale office. It's our belief that it's best to solve (or discuss) all incidents before coming to shore but in case we get many complaints to the IceWhale office we will naturally contact the manager(s) of the company(-ies)». (Conversation with María Gunnarsdóttir, IceWhale secretary and treasurer, March 4, 2015)

Despite the lack of penalty, the Code of Conduct represents an important step forward for a sustainable and more responsible whale watching. The IceWhale Code is not something originated from a third authority, but it has been fostered and voluntarily adopted by the companies themselves, being IceWhale an association formed by these

companies. This fact demonstrates interest and awareness toward the protection of those animals that, in addition to representing a source of profit, are also part of a natural environment to be taken care of. Moreover, in case of presumed or real violation of the Code, in particular in case of a collision with a whale, passengers (and operators too) are invited to report it. The supervision by IceWhale, as described by the secretary of the association, can be unexpectedly incisive, because it is conducted as an internal supervision, in which not only the association can punctuate bad behaviours, but the companies themselves, IceWhale members, can do that, directly or through the association.

12. Environmental sustainability from tourists and local operators' point of view

The results of the survey I made on whale watching boats show two different and apparently conflicting perspectives on the approach of tourists and their sensitivity toward whales and environment concerns.

First of all, it has to be underlined that, among the reasons that make tourists choose a company over the other, only 4,5% selected "Environmental policy/Commitment towards responsible whale-watching of the company". This low percentage, however, could not be due just to the lack of sensitivity or the lack of interest in the topic. Another possible motivation is that the three companies work in a very similar way, so that it is difficult to identify a company more active toward the environment than the others.

It has already been said that the reasons behind the choice of the kind of boat are the desire of a cool experience, the tours schedule, the possibility to get as close as possible to the whale, or, simply, the choice of the boat is totally random. On the contrary, just a small percentage of the people, 8%, said to have chosen a boat over another because they knew or read that it is the least disturbing for the whales. Analysing the figures of the passengers on the *schooners*, this kind of boat turns out to be considered the best kind, in terms of minor impact on whales, as 11,9% of them selected this answer. A similar situation emerges with regard to the reasons motivating the choice of a certain kind of boat because considered more eco-friendly: 4% of the total passengers answered that, and, considering the passengers of the *schooners* separately, the percentage amounts to 7,1%. No passengers of the *RIB boats*, instead, indicated this answer.



Figure 7 : Schooner Source: Photo by F. Perini

The two results above can be read as in support of one another, therefore revealing a general lack of interest and sensitivity towards animal and environmental protection issues. Other data go against this interpretation.

First of all, regarding the expectations of the tour, 52% of total passengers imagines to get between 10 and 100 m far from a whale, 35% between 2 and 10 m away, 7,5% to less than 2 m away and 5,5% to be more than 100 m far from the animal. The whale activities that the tourists hope to see the most are the ones more photographed and shown: blowing and showing the back (60%), jumping out of the water, or breaching (47,5%) and diving lifting the tail (40,5%). With a relevant percentage, being curious and approaching the boat (32%) and swimming calmly around and under the boat (31%). The lobtailing is in the hopes of 25% of the passengers; 20% would like to see a group of whales swimming together; 15% and 10% expect, respectively, to see a whale swimming in the opposite direction of the boat and to see a whale swimming alone.



Figure 8: The powerful blow of a Humpback Whale

Source: Photo by F. Perini



Figure 9: Humpback Whale highly arching the back right before lifting the fluke and going for a deep dive.

Source: Photo by F. Perini



Figure 10: Humpback Whale diving and lifting the fluke

Source: Photo by F. Perini



Figure 11: The spectacular jump, or breach, of a Humpback Whale Source: Photo by F. Perini

All of this shows generally reasonable and aware expectations. The only exception is the breach, something out of the ordinary, both for the emotional impact and the

frequency. Such "frailty" shown by tourists must be forgiven, though, because the breach is only at the second place among the wished behaviours and because the jump itself is by far the most stereotypical image of whales. For example, searching for words like "whale" and "whale watching" on Google Images, most of the pictures are of different cetaceans performing their famous breach.

The same awareness is shown by the people interviewed, as far as the question about cetaceans' intelligence concerns. 62% thinks they are very intelligent animals, able to interact with the environment around them, to take voluntary decisions and to adapt their behaviours to the events. Even if it is difficult to say which is, if there is, a correct answer, this is probably the closest to describe cetacean intelligence. Among the other answers, 7% thinks whales are among the most intelligent animals on the planet and that they have a free will, 16,5% thinks they have an average intelligence and that their behaviour is due to instinct, 2,5% considers cetaceans animals not very intelligent and interested just to satisfy their primary instincts. 12% declared to not have opinions about that.

The point of view of the people working in the whale watching industry confirms, with a substantial unanimity, the sensitivity and awareness of tourists came to light from my survey.

NS: «Most visitors are aware of what to expect after collecting information from websites, tour operators or friends and family».

GG: «Probably tourists come to Húsavík whale watching as it's know as the best whale watching spot in Iceland and probably Europe. Usually passengers' expectations are reasonable, few times too high, like they are going to a zoo. 99% of them are very happy with their experience and they normally get more than expected».

S: «Tourists doing whale watching in Húsavík usually are well aware of what to expect from an excursion. Moreover, I have the feeling that they are broadly more informed and have higher expectations than people taking part in whale watching tours in other parts of Iceland. This probably is the reason why our whale watchers come to Húsavík, the best spot in Iceland and maybe Europe».

I find particularly interesting the answers of the passengers who had the luck to take part in a successful tour, with the sight of at least one whale – 79% of the total 200 people interviewed – regarding the perceptions from the boat. 44,1% said they had the feeling that the boat was silent and so it wasn't a bother for the whales. On the contrary, 7,6% thought that the engine was too loud and it bothered the whales. Therefore, in general, the impression about the acoustic pollution is positive, but the most important thing to highlight is that more than half of the people who could spot a whale had a central interest about the concern for human presence, showing, again, sensitivity for the wellness of the whales and for the protection of their environment. Other most common perceptions were to see a relaxed or sleeping whale (37,3%) and to notice joyful behaviours (20,9%). Nobody noticed an aggressive behaviour and only 6,3% had the feeling that the whale was afraid. 17,7% thought that the whale was swimming towards the boat, showing interest, and 21,5% noticed elusive behaviours. Lastly, for 18,4% the whale was not enough close to the boat and for the 1,3% it was too close.

With regards to the sensations about the relationship between the captain – and so, the boat – and the whale, 54,4% of the passengers observed harmony between them

and 18,4% declared that the captain showed respect towards the whale but the whale, being just an animal, probably did not notice the boat at all. 1,3% noticed aggressive behaviours despite the respectful navigation and only 2,5% thinks that the captain got too close and too fast to the whales. Lastly, 23,4% declared to not have an opinion about this matter or to not understand how a boat can be respectful towards a whale and vice versa. The data above is extremely positive, because 74,1% of the passengers who could spot a whale during the tour evaluated captains' behaviours as positive and responsible towards the animals and only 2,5% of the tourists had the impression of a negative human behaviour.

Turning to the analysis of the opinions of the guides work, taken the answers as a whole, 53,5% answered to have improved their knowledge on whales as expected, 10,5% believes to have learned more than expected, 8,5% less than expected and 27,5% states to have learned nothing. If figures from successful tours are individually observed, the following ones are the results: 63,3% improved their knowledge on whales as expected, 12% more than expected, 8,9% less than expected and 15,8% learned nothing. Data from unsuccessful tour, instead, are tragic: 71,4% declared to have learned nothing about whales during the tour. A similar difference between successful and unsuccessful tours can be noticed also with regard to the question about possible explanations of the guides on whale protection, environment conservation, responsible whale-watching, non-harmful whale research and similar topics. From successful tours, 55 passengers out of 158 answered "no", from unsuccessful tours, 34 out of 42. Among those who said "no", 72% thinks the guide should have talked about the above-mentioned matter. Among those who answered "yes", instead, 71,2% believes the guide was effective with his/her speech, 21,6% thinks it could have been more effective and only 7,2% has a negative opinion about it. Truthfully, with the exception of a catastrophic unsuccessful tours in which the guide did not say a word for the whole 3 hours, all the guides of the other 21 tours talked, more or less efficaciously and exhaustively, about whales, environment, research. But the fact that the tourists interviewed did not grasp these explanations especially highlights the difficulty that guides encounter in keeping passengers interested and captivated.

The general impressions, certainly good, of the visitors in relation to Húsavík whale watching, prove that the effort for a responsible and sustainable whale watching conducted by the operators is noticed and appreciated by tourists, probably more interested in the matter and aware than what could be thought. An effort, the effort of the companies, which has grown over the course of the years and which is confirmed by the sensitivity shown by the representatives of the whale watching companies, under different points of view.

NS stresses that «whale watching should be conducted under strict codes of conduct to minimize possible effects on whales and other wildlife. The use of environmental friendly material and the use of traditional oak boats, which are silent and environmentally friendly by the means of a low fuel consumption rate, is meant to reduce any potential impact of whale watching on the environment. North Sailing fleet includes four sailboats on which wind power is utilized whenever possible – making the engine power unnecessary. On board, the crew maintains respect for the wildlife at all times and the captains slow down as much as possible before reaching the area where

the animals are. If conducted correctly and with concern for the environment, whale watching can be an environmental friendly activity». Similar concepts can be found in North Sailing's *Guidelines for Whale Watching and Environmental Policy*.

GG underlines how whale watching produces a «minor impact on nature» and that, considering the intelligence and the skills of the cetaceans, the presence of the boats are not a problem for them. The interviewee affirms that «whales are free to choose places and the amount of disturbance they can handle in these waters».

S, lastly, thinks «whales are able to swim more or less twice as fast as boats, except for *RIB boats*. Usually, whales themselves decide if and how much getting close to whale watching vessels, and they often show relaxed, unconcerned behaviours in the presence of boats. There are, of course, situations in which whales show signs of stress. These signs can be various but they are easily distinguishable. In these cases, whales have to be left alone. This is what we do, both because it is the right thing to do and because it would be anyway impossible to follow a whale that does not want to be seen. Furthermore, I'm certain it is a strong point for Húsavík whale watching the presence of traditional oak boats in the fleet of all the companies, rather than plastic and steel boats as it usually happens elsewhere, even in Iceland out of Húsavík. Oak boats are part of the local heritage and the recovering, restoring and recycling of fishing boats which, otherwise, would have been destroyed, is an element that contributes to the sustainability of the local whale watching industry».

13. SWOT analysis

In conclusion, for the realization of this work, a SWOT analysis was carried out, analysis addressed towards the prospect of an eco-tourism development that would be balanced, integrated and united for the territory under investigation, and the instruments needed to achieve that goal were identified. The proposed ecotourism, in fact, should be planned from the perspective of sustainability, the spreading of the benefits throughout the country and in the logic of self-propelling resulting involvement of key players (tourists, local community members, public administrators, entrepreneurs etc.). In this way, the area would benefit from a requalification and an enhancement, in a sustainable way, of the offer, taking advantage of a potential opportunity for development in line with the historical and territorial identity and not destructive of the local delicate environmental balance. For this purpose, we used the SWOT Analysis to represent the set of factors that may facilitate or, on the contrary, hinder local development.

The elaboration of a SWOT analysis is not a simple procedure since it is not easy to identify the strengths, weaknesses, opportunities and threats of a tourism complex product composed of factors that can facilitate or otherwise hinder the development of the territory and simultaneously meet the demands of the market and its potential users. The table provides a SWOT analysis, taking into account the economic, cultural and environmental of the area in which Húsavík settles. Its strengths highlight the various tangible and intangible resources that have become tourist resources and have contributed to its fame (typicality of the structures, attention to environmental

sustainability of facilities, collaboration between institutions, etc.). The weaknesses are mainly related to logistics that is difficult and expensive to reach Húsavík. The main opportunities on which it should be invested are essentially the further increase in tourist flows, local heritage and infrastructure links system.

In our opinion the more reduced are the number of factors included in the four constituent elements of the SWOT analysis, the more effective is the analysis. An overly extensive list might seem more exhaustive and complete; in reality, this could determine an overabundance of description that threatens to overshadow the (few) factors that more effectively than others generate strength, weakness, opportunities and threats.

Table 3: SWOT Analysis

1 able 3. 3WO	Titlatysis			
Strengths	Typical local facilities			
	Rich wildlife and diverse nature			
	Care for preserving culture and heritage, nature and environment			
	Attention towards environmental sustainability			
	Strong and tight collaboration among the various local institutions			
	Excellent location			
	Online tourist information on the town and its surroundings			
Weaknesses	Pronounced seasonality of tourism			
	Lack of accommodation			
	Complicated and expensive logistics			
	Increase of tourist flows			
Onnortunities	Tourism deseasonalization			
Opportunities	Further development of tourism educational components			
	Local heritage			
	Infrastructure development			
Threats	Pressure of competing areas (Reykjavík, Akureyri)			
	Future possibility of becoming a mass tourism destination			
	Change of long-term behaviours of the whales (desertion of the bay, less)			
	sociable behaviours, etc.)			
	High rate of young people moving to the cities			

Source: personal elaboration

Conclusions

Today, it is increasingly growing the demand for ecotourism and alternative forms of recreation; the tourist is looking for the "manifold", a collection which blends culture, sports, nature, entertainment, rest, and highlights the desire of discovering cultures, customs and history of the places they visit. Whale watching can provide many socioeconomic benefits, and it also could potentially aid conservation and/or allow the public to view cetaceans as being an economically important resource, alive rather

than dead. Today, there are many direct and indirect impacts on the target species. To be sustainable environmentally and economically, these impacts need to be minimized. Húsavík is a perfect ecotourism destination and universally recognized as the "Capital of Iceland whale" and the sea safari tourism industry is undoubtedly the principal in the local tourism sector.

In spite of the predominance of Reykjavík whale watching in terms of passengers, probably due to logistic reasons, Húsavík maintains an important segment of the national market in this field. The main reason for tourists travelling to Húsavík is whale watching itself and, globally, they show a good level of information and awareness, with reasonable expectations and an upper-middle/high level of satisfaction. Also, they prove to be rather sensitive towards environmental protection and preservation issues. In this respect, whale watching should not be considered as an ecotouristic activity a priori, for the only premise of using the whale "asset" in a non-destructive way, unlike whaling, activity which is still commercially conducted in Iceland. The risk is to exclude the possibility that bad whale watching practices are likely to occur. With regard to this, few behaviours that would make Húsavík whale watching industry go off the rails of a sustainable practice have been underlined. Among these, the navigation of trajectories and angles that can be dangerous for the animals, the presence of too many boats at the same time in the proximity of a whale, the fact of getting too close to cetaceans and of chasing individuals that clearly do not enjoy human presence.

The above-mentioned behaviours are not, anyway, part of the habitual conduction of tours by the operators. As emerged from the results of the survey conducted on the whale watching boats, passengers have positive opinions about the management of the single tours by each company with regard to those components that differentiate ecotourism and sustainable practices from those without such features. This testifies that, even if there surely is room for improvement, whale watching in Húsavík, at the current state already, is appreciated by the consumers in respect of these matters.

Furthermore, there is an array of elements that, more or less strictly related to whale watching tours, evidently addresses the industry to an environmentally sustainable and ecotouristic path. Húsavík is a whale friendly town and none of the restaurants serve whale meat. Whale watching companies work together with the local Research Center, making their boats available as research platforms. The partnership includes the Whale Museum too, partnership expressed with museum discount coupons given to the passengers and, more important, with an annual congress about responsible whale watching. Vessels do not use sonars to locate whales, the only spotting tools are bare eyes and binoculars.

To all of this, the guidelines for a responsible whale watching are to be added, guidelines that have been followed by the different operators for years and that, recently, have been formalized in a Code of Conduct, realized by the association IceWhale and officially adopted by the companies in Húsavík and by most of the companies of the country. The Code of Conduct does not contain enforceable rules, though, and no penalties are provided for eventual violations. In any case, IceWhale is an association created by the Icelandic whale watching operators, and so the Code of Conduct has been not only adopted by the companies, but also, the companies themselves have been the promoters of an internal regulation. For this reason, even if

not binding, the Code of Conduct has a fundamental value in the ecotouristic and responsible whale watching scenario.

The actual respect of these guidelines by the operators is to be verified and confirmed, but, under an environmental point of view, on the whole, Húsavík whale watching industry can be considered ecotouristic. In any case, it would be desirable, in the future, the development of a binding Code of Conduct and the implementation of a whale watching educational component, both for the pre and post tour, and during the tour. In this last situation, giving to and pretending from the guides, substantial competences and ability to interest and engage tourists, even during the complicated tours without whales.

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Appendix

WHALE-WATCHING BOAT SURVEY #1

YOUR INITIALS:
 Gender Male Female Year of birth Nationality
4. Highest level of education
□ Primary school □ Secondary school
☐ High school ☐ University degree
5. Please explain why you chose to come to Húsavík (it's possible to select more than 1 answer):
☐ Whale-watching ☐ To visit the town ☐ Bird-watching ☐ Horse Riding
☐ Trekking ☐ Close to Mývatn/Dettifoss/Ásbyrgi/Akureyri ☐ Museum
☐ I didn't choose, it was already in the plan of the tour ☐ To visit
friends/relatives
6. Why did you choose to go whale-watching? (it's possible to select more than 1 answer)
Passion for wildlife and nature □ To experience some adventure □ It's a
must to do
☐ To take good pictures ☐ Activity recommended by a
guidebook/website/someone
☐ To learn something about Icelandic culture ☐ To learn something about
whales
 My travel companion/s wanted to go
7. Why a whale-watching trip in Húsavík? (it's possible to select more than 1 answer) □ I know/read/heard it's the best place to do it in Iceland/Europe
☐ I thought it was the only place to do it in Iceland
☐ To match the activity with a visit to the Whale Museum
☐ I tried in another place but it was fully booked ☐ Random choice/No
special reasons
□ I didn't choose, this activity in Húsavík was already in the plan of the tour
8. Have you been whale-watching before?
□ No □ Yes, in Húsavík □ Yes, in Iceland □ Yes, but not in Iceland
9. Are you on a boat of which whale-watching company? □ North Sailing □ Gentle Giants □ Salka

10. Please specify the reason of your choice (it's possible to select more than 1 answer):							
☐ Price ☐ Schedule ☐ History of the company ☐ Boats offer ☐ The other/s was/were fully booked for the time I wanted to go							
☐ Less crowded than other company/ies ☐ Nice logo/brochure/ticket							
office/website □ Recommended by a guidebook/website/someone □ Random choice/No							
special reasons □ Environmental policy/Commitment towards responsible whale-watching of							
the company							
☐ I didn't choose, the tour operator/guide I'm travelling with chose for me							
11. Please specify which kind of boat you chose for your tour:							
□ Oak boat □ Schooner □ Speed boat							
12. Please specify the reason of your choice (it's possible to select more than 1 answer):							
$\ \square$ Price $\ \square$ Schedule $\ \square$ The other/s was/were fully booked for the time I							
wanted to go							
☐ Cool experience ☐ Random choice/No special reasons ☐ Stability on the waves							
☐ Recommended by someone ☐ To get as close as possible to whales							
☐ I want to learn about navigation and local history ☐ Fastest to approach a							
whale							
☐ I think/read/know it's the best boat to see whales ☐ More space on the							
boat to move ☐ I think/read/know it's the boat that least disturb the whales ☐ Boat itself							
☐ I think/read/know it's the most eco-friendly boat							
☐ I didn't choose, the tour operator/guide I'm travelling with chose for me							
, , , , , , , , , , , , , , , , , , , ,							
13. How would you define your knowledge on marine mammals							
(whale/dolphins/porpoises)?							
□ Aren't they fishes? □ Deficient □ Passable □ Good							
☐ Over the average ☐ Excellent ☐ Whale-whisperer is my middle name							
name							
14. Do you expect to improve this knowledge of yours during this whale-watching tour?							
☐ No ☐ Yes, but it's not the main point of my tour ☐ Definitely yes, I'm							
here for this							
15. How would you define your knowledge on local culture?							
☐ Romans invaded Iceland in the XV century ☐ Deficient ☐ Passable							
□ Good							

☐ Over the average ☐ Excellent ☐ I'm a direct bloodline descendant from Garðar
16. Do you expect to improve this knowledge of yours during this whale-watching tour? □ No □ I'm here for whales but everything more is welcome □ Definitely yes
17. How close do you hope to get to a whale? □ Enough to touch one □ Enough to take a close-up pic □ Enough to see the whole body □ Enough to spot it without disturbing it □ Enough to see a blow in the distance
18. How close do you expect to get to a whale? □ less than 2 m □ 2 to 10 m □ 10 to 100 m □ 100 m or more
19. What do you hope the whale/s will do? (it's possible to select more than 1 answer) □ Swimming calmly around and under the boat □ Staying away from the boat □ Being curious and approaching the boat □ Blowing and showing the
back □ Diving lifting the tail (fluke) □ Jumping out of the water (breaching) □ Splashing the tail on the water (lobtailing) □ Swimming in group □ Swimming alone
20. In your opinion, how intelligent are whales? Are they able to interact with their environment? □ No idea
 They are not more intelligent than a beer can so they passively submit to the environment They are not very intelligent, they mostly just swim around with the only purpose to satisfy their primary needs They are as intelligent as most of the animals, they can interact with their environment but most or all of their behaviours are led by their instincts They are intelligent animals, able to interact with the environment, to make voluntary decisions and to adjust their behaviour to the happening events They are the most intelligent animals on Earth with feelings and with a strong free will
21. How would you define your expectations for this tour? □ Close to zero □ Low □ Average □ High □ Extremely high

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WHALE-WATCHING BOAT SURVEY #2

YOUR INITIALS:
 Gender
 4. Did you spot and see whales on this tour? (if yes, please specify the number and the species) □ No □ Yes
PLEASE ANSWER QUESTIONS 5, 6, 7, 8 ONLY IF YOU MARKED "YES" IN QUESTION 4
5. How many times did you see the whale/s surfacing the water during this tour? □ Less than 5 □ 5 to 10 □ 10 to 20 □ More than 20
6. How close did you get to the whale/s? □ It was right next to the boat □ Less than 10 mt □ 10 to 100 mt □ More than 100 mt
7. Your sensations from the boat (it's possible to select more than 1 answer): □ The whale wasn't close enough □ The whale was swimming towards the boat
☐ The whale was being playful ☐ The whale seemed to be scared of the boat
 □ The whale was swimming away from the boat □ The whale was too close □ The whale seemed relaxed/asleep □ The whale was behaving
aggressively ☐ The engine of the boat was too loud and probably disturbed the whale ☐ The boat was silent enough for us tourists and probably didn't disturb the
whale
 8. Do you think the whale and the captain of the boat were respecting each other? The captain seemed to be respectful to the whale, but the whale it's just an animal and it was only swimming here and there probably not noticing the boat at all No, the captain got too close and approached too fast the whale
☐ No, the whale showed some aggressive behaviour because of the captain sailing
 No, the whale showed some aggressive behaviour despite the captain was really respectful Yes, I got a nice feeling of harmony between the boat and the whale
☐ Tes, I got a fince feeling of flatfillony between the boat and the whale ☐ I have no idea, I didn't notice

☐ How could a boat res	pectuful	l of a whale	and how a	whale could b	e
respectful of a boat?					
9. Level of your satisfaction aft X=no opinion – 1=not satisf satisfied		- -			
landscapeadventurewhale encounterwhale activity	□ X □ X □ X	1111	□ 2 □ 2 □ 2 □ 2	□ 3 □ 3 □ 3	4444
boat/sea experiencephotographycaptain navigationcrew assistance	□ X □ X □ X □ X	□ 1 □ 1 □ 1 □ 1	□ 2 □ 2 □ 2 □ 2	□ 3 □ 3 □ 3	□ 4 □ 4 □ 4
10. How would you define the select more than 1 answer) Boring Interest Interest Information Lacking in information understand	iting kative er	□ Captiva	ating Not very tal	□ Disturbing kative □ Plei	
11. Has your knowledge on wh Yes, more than expected No Has your knowledge on loca Yes, more than expected No	Yes, as	expected e improved	□ Yes, lo	ess than expec	
12. Did the guide/s tell someth wellness and protection/enviror research? (please answer the or question) If no, do you think that would be lif yes, do you think that was effort If yes, do you think people about	nment/r ther 3 qu Pe necess ective?	esponsible uestions accessary?	whale-wate cording to your representation represent	ching/non-hari your answer to es but not enoug	mful whale this
13. How was this tour compare ☐ It has been my first w ☐ I liked this one less	hale-wa	tching trip	□ I liked		er
14. How would you overall defi ☐ Awful ☐ Disappoin Outstanding			□ Good	□ Excellent	

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15. How would you define the pre-tour expectations compared to the post-tour impressions?
$\ \square$ I expected more $\ \square$ Expectations fully matched $\ \square$ The tour was better
than expected
 My expectations were matched but the tour could have been even better
16. Would you go back on the same whale-watching tour?
□ Not at all □ Not in Húsavík again □ Yes, but I'd rather try another
kind of boat
☐ Yes, but with a different company ☐ Yes, same place, same company, same boat
17. Would you recommend a whale-watching tour in Húsavík to someone? ☐ No ☐ Yes
18. Did you already visit or you are going to visit the Whale Museum? □ What museum? □ No, don't have time □ No, don't want to spend money
for the ticket
$\ \square$ No, it's not in the itinerary of the tourn $\ \square$ Yes, I want/ed to see some real
whale skeleton
☐ Yes, because of the 20% off the whale-watching tour gives me on the ticket of
the museum
 Yes, because I want/ed to know more about these animals and their environment
19. How many days are you going to spend in Iceland in total? □ 2 to 5 days □ 5 to 10 days □ 10 to 20 days □ 20 to 30 days □ More
than 1 month
20. How much time are you going to spend in Húsavík in total? □ Few hours □ 1 day □ 2-3 days □ 4 to 7 days □ More than
1 week
21. How much money per person are you planning to spend per day, on average,
during your trip in Iceland?
☐ Less than 30EUR/40USD ☐ 30EUR/40USD to 75EUR/100USD
□ 75EUR/100USD to 150EUR/200USD □ More than 150EUR/200USD

WHALE-WATCHING COMPANIES INTERVIEW

- When and why did the company start whale-watching?
- What did you notice changing in the whale-watching business and in your company over the course of the years?
- Opinion on the impact of the whale-watching on the environment (including whales)
- Opinion on the impact of the whale-watching on the local society
- Opinion on the impact of the whale-watching on the local economy
- Opinion on tourists (why they're here, what they expect, if the like the
 experience, if their perception of the reality is wrong or correct before going on
 a tour)
- What do you appreciate and what you don't of the present industry in Húsavík compared to the past? Is there anything you wished to be different?
- How do you think the whale-watching industry will or should develop in the next future in Húsavík?

¹ Despite common reflections: paragraphs 1, 13 and Conclusion are attributable to Enrico Nicosia; all other paragraphs to Francesco Perini.

² The favourite tourist destinations, according to WTO, are countries such as Costa Rica, Ecuador, Mexico, Brazil, Kenya, Namibia, Thailand, Indonesia and Vietnam.

³ The definition of ecotourism (contraction of the words ecological tourism in English) derives from the principles of the Quebec Declaration of 2002, declared by the United Nations International Year of Ecotourism. On this occasion the UNEP (United Nations Environment Programme), the UNWTO (World Tourism Organization) and the International Ecotourism Society organized the World Ecotourism Summit in Quebec attended by 1.169 delegates from 132 different nations who contributed to the drafting of the Quebec Declaration on Ecotourism.

⁴ Animals using biosonar emit calls out to the environment and listen to the echoes of those calls that return from various objects near them. Echo is helpful to locate and identify objects and to determine distance from them.

⁵ Tours in which at least one whale or a group of dolphins is spotted.

⁶ Whaling in Iceland ceased in 1989, but it was resumed, in 2003, for a research program before going back to commercial whaling in 2006. The hunted species are Fin Whales and Minke Whales, with annual quota set by the Icelandic government: 40 for each species between 2003 and 2008. No quota were set in 2009 and 2010. From 2011 and 2015 quota were raised to over 200 for Minke Whales and to over 150 for Fin Whales. In 2016 Fin Whales hunt, endangered species, was suspended.