

A Blueprint
for
Dolphin
and
Whale Watching
Development



by Erich Hoyt

HUMANE SOCIETY
INTERNATIONAL™



A Blueprint
for
Dolphin
and
Whale Watching
Development

by Erich Hoyt

HUMANE SOCIETY
INTERNATIONAL™

Acknowledgments

I would like to thank Naomi Rose and Luke Ney (Humane Society International) and Stefan Auster­mühle (Mundo Azul) for the chance to work on this challenging project. All three made valuable comments for the final draft. Angela Moxley and Mike Blankenship (The Humane Society of the United States) helped to edit the final draft. I also received helpful suggestions from Jaime Bolaños and Birgit Winning, as well as from Philippa Gill and Wally Stone at Whale Watch Kaikoura. Thanks also to Vanessa Williams-Grey, Mark Simmonds, Nicolas Entrup, and Chris Butler-Stroud from WD­CS, the Whale and Dolphin Conservation Society, and to Carole Carlson. The background for this report was developed through my work for WD­CS, the International Fund for Animal Welfare, and others, as well as for conferences, workshops, and talks on whale watching in many countries over the past two decades.

—Erich Hoyt



Table of Contents

Executive Summary	1
Introduction	3
The Blueprint for High Quality, Sustainable Whale Watching	7
Conclusion	19
Case Study 1: Kaikoura, New Zealand	20
Case Study 2: El Vizcaino Biosphere Reserve, Mexico	25
References	27
About the Author	28



Executive Summary

High quality, sustainable whale watching and marine ecotourism have been discussed in a number of publications and at recent international conferences in Argentina, Japan, South Africa, Taiwan, and other countries (Hoyt 2001, 2004, 2005b, 2005c). Whale watching itself is defined as tours by boat or air or from land, with some commercial aspect, to see or listen to any of the 84 species of whale, dolphin, or porpoise (Hoyt 2002; IFAW, Tethys Research Institute, and Europe Conservation 1995). By this definition, at least 10 million people a year travel to some 500 communities worldwide to go whale watching, spending more than US\$1.25 billion (Hoyt 2001).

But with such large numbers of people involved, what about the issue of sustainability? Has whale watching become mass tourism, or is it still capable of being sustainable ecotourism? The answers to these questions, for the most part, depend on how whale watching is set up—on the blueprint.

The key elements of high quality, sustainable whale watching or “sustainable marine ecotourism” are (1) good, long-term financial management, (2) scientific input and output, (3) attention to conservation, (4) investment in people, local and visiting, with good customer care and community relations, (5) educational input and output, (6) enhancement of benefits, and (7) reduction of costs. Benefits and costs (including social, ecological, and financial aspects) can be evaluated using a cost-benefit analysis.

The following draft blueprint is presented in loosely chronological order as a practical task list of what needs to be done to ensure the successful development of high quality, sustainable whale watching. However, many steps

can be done simultaneously or begun opportunistically, depending on the situation.

The blueprint is envisioned as a plan to be adopted initially at the national level and then developed into a working plan by a community or group of communities that undertake whale watching, ideally aided by national and international direction, funding, coordination, and implementation as needed. Following are the key tasks that need to be completed in order to develop high quality, sustainable whale watching:

Initial Planning and Assessment (researchers, NGOs, and government representatives take the lead; other stakeholders assist)

- Identify and form a planning group to refine and approve a draft working plan (national, regional, and/or local) starting from the 14-step plan presented here.
- Devise and implement stakeholder involvement strategies.
- Organize baseline research on whales and dolphins.
- Complete an environmental impact assessment and a socioeconomic assessment.

Marketing and Tour Design (tourism agencies, operators, and supporting businesses take the lead; other stakeholders assist)

- Analyze the infrastructure available for tourism and identify gaps. Commission a tourism scoping document/feasibility study for current and possible future local attractions.
- Commission a tourism marketing analysis (including visitor background and expectations).

- Design the whale watching/marine ecotourism tours or “tour products.”
- Shape the brand and overall marketing plan for the community/region.

Focus on Business (operators, supporting businesses, and tourism agencies take the lead; other stakeholders assist)

- Set up business development, training, and assistance programs and hold whale watch operator workshops.
- Develop business plans for sustainable whale watching. Pay particular attention to value-adding techniques and impact-lowering strategies.

Management of the Resource (government including tourism agencies as well as NGOs and researchers take the lead; other stakeholders assist)

- Set the overall policies for managing the industry (licensing of operators and boats; devising and establishing regulations). Set the upper limits for whale watching.

- Examine the legal tools for managing the industry and implement them.
- Embed education and research, as well as monitoring of the development of whale watching (to determine the impact on the animals being watched).
- Develop a sustainability evaluation mechanism, both self-evaluation and periodic outside evaluation (including consideration of a big picture sustainability analysis).

This 14-step plan is the core blueprint. This document provides a fuller description of each point, with positive and negative examples. This blueprint is prepared as a generic document. The details need to be fully adapted to the national situation and then carefully tailored, ideally by stakeholders, to the appropriate coastal communities. In fact, unless most of the benefits accrue to local communities, a sustainable industry is impossible.



Introduction

Whale watching has proved to be one of the most successful and resilient types of tourism in the world, offering economic returns and solid community, educational, research, and conservation benefits. Since the late 1980s, whale watching has grown rapidly with 12 percent annual growth through most of the 1990s—a rate 3–4 times the growth rate of overall tourism (Hoyt 2001). Moreover, whale watching has transformed hundreds of communities around the world in some 87 countries and overseas territories. Whale watching has shown resilience to economic and political instability, an ability to attract

watching will be the best or most suitable activity in every area, just as not all areas are suitable for the development of tourism. But it does mean that there is a strong, worldwide, *growing* audience of whale watchers who are keen to experience these animals and to enjoy the sense of adventure, surprise, and camaraderie that comes with whale watch tours.

But with such large numbers of people involved, what about the issue of sustainability? Has whale watching become mass tourism, or is it still capable of being ecotourism, which by definition is sustainable? The answers to these questions mostly depend on how whale watching is set up—the blueprint.

High quality, sustainable whale watching and marine ecotourism have been discussed in a number of publications and at international conferences in Argentina, Ireland, Japan, South Africa, Taiwan, and other countries (Hoyt 2001, 2004, 2005b, 2005c). Whale watching is defined as air, boat, or land tours, with some commercial aspect, to see or listen to any of the 84 species of whale, dolphin, or porpoise (Hoyt 2002; IFAW, Tethys Research Institute, and Europe Conservation 1995). By this definition, at least 10 million people a year travel to 500 communities to go whale watching, spending more than US\$1.25 billion (Hoyt 2001).

The key elements of high quality, sustainable whale watching (table 1, p. 5) and whale watching ecotourism (table 2, p. 5) are (1) good long-term financial management, (2) scientific input and output, (3) attention to conservation, (4) investment in people, local and visiting, with good customer care and community relations, (5) educational input and output, (6) enhancement of benefits (table 4, p. 9), and (7) reduction of costs (table 5, p. 11).



Whale watching grows in popularity every year. There are right ways and wrong ways to behave around the animals.

foreign visitors from distant locales, and a surprising adaptability to widely varying cultures and infrastructure levels. Much of this success can be put down to the charismatic power of whales, dolphins, and porpoises.

As of 2005–2006, whale watching is experiencing particularly strong growth and interest throughout Latin America. Of course, this does not mean that whale



DEB YOUNG, COURTESY OF O'BRIEN'S WHALE AND BIRD TOURS

Smaller boats are usually faster than larger boats. Any boat, if operated without due care, can disturb whales or dolphins.



DEB YOUNG, COURTESY OF O'BRIEN'S WHALE AND BIRD TOURS

One large boat carrying many passengers is less intrusive than many small boats with a few passengers each.



SAMUEL HUNG, HONG KONG DOLPHIN CONSERVATION SOCIETY

Hong Kong's "pink dolphins" are known to few Westerners, but responsible tourism could help save these animals from extinction.

High quality whale watching also includes the concept of reducing environmental impact (table 1, p. 5). When whale watchers numbered just 100,000 worldwide, there was little need to think about limiting the impact of whale watching on whales and the environment. But, in a world with some 10 million whale watchers per year—and with these numbers likely to continue to grow—reducing environmental impact is important (Hoyt 2003). Low impact whale watching is part of a more ecological approach that spreads the impact of whale watching to other marine mammals, fish, birds, turtles, and even coastal land-based species. It includes encouraging land-based whale watching, remote viewing, listening-only tours, and museum or whale center visits, as well as one-third space and time rules, in which one-third of each day and one-third of each area is reserved for whales alone (without boats) to protect natural behavior and to give whales a break from whale watching.

For such strategies to work, there needs to be a legal component with regulations, enforcement, and education, starting with a strong emphasis on good naturalist guides. A June 2005 discussion of whale ecotourism by the International Whaling Commission (IWC) Sub-Committee on Whalewatching produced some useful working definitions that help to refine the idea of high quality whale watching and ecotourism as a commercial activity with a conservation component that aims to reduce its environmental impact (table 2, p. 5).

One thing that whale watching ecotourism is not compatible with is whale and dolphin hunting (Hoyt and Hvenegaard 2002; Parsons et al. 2003). Although some whale watch tours occur in the whaling country of Norway and in the whaling and dolphin hunting country of Japan, they operate in limited areas away from hunting grounds. There is evidence that continued whaling and hunting have impeded the growth of whale watching in these countries, and it has certainly proved problematic to the development of *high quality* whale watching. Some high-spending ecotourists avoid such locations when choosing their holidays, even though support for whale watch operators and locations in these countries may help reduce interest in hunting.

A valuable technique to promote high quality whale watching is a full analysis of all the values and costs of whale watching, followed by a systematic attempt to increase the benefits and lower or eliminate the costs (Hoyt 2004, 2005b, 2005c). These benefits and costs (tables 4 and 5, pp. 9 and 11) include not just financial aspects but a broad suite of ecological and social aspects, with the fullest range of possible benefits and costs

Table 1—Aspects of High Quality Whale Watching	
HIGH QUALITY WHALE WATCHING:	
■	Is a prime recreational and educational experience that motivates participants to care about whales and the sea and to work for marine conservation
■	Provides scientific information about cetaceans through researchers to managers and the public
■	Is built around a naturalist or nature guide who can tell good, accurate stories; help find the whales and describe their behavior; and build the bridge between the urban participant and the sea
■	Can be practiced by independent businesses, researchers, communities, conservation groups, or cooperatives and is well managed
■	Seeks to reduce the impact on whales so that they are watched with the lightest “footprint” possible
■	Involves communities or regions so they have a financial and personal interest in whale watching and the conservation of cetaceans and the sea

Source: Hoyt 2005c

accruing primarily in the destination region but also in the transit and generating regions.

The goal of high quality, sustainable whale watching is not just for it to be commercially successful and sustainable, although that is important. Many people feel that whale watching has a central mission to educate large numbers of people about the sea and the need for its conservation. In this scenario, communities are effectively entrusted with a mission to act as bridges for the largely urban humans (who have lost touch with nature) to reawaken their inner biophilic sense and to inspire them to help preserve and protect the marine environment. This blueprint for developing high quality, sustainable whale watching is dedicated to that vision.

Table 2—Aspects of Whale Watching Ecotourism	
WHALE WATCHING ECOTOURISM:	
■	Refers to a commercial operation that can include whale-related tourism businesses such as visitor centers and museums
■	Includes all cetacean species, not just whales
■	Actively assists with the conservation of the cetacean resource, such as cooperating with research groups or projects and other scientists by allowing them to use vessels
■	Provides appropriate, accurate, and detailed interpretative and educational materials or activities for clientele about the cetaceans viewed and their associated habitats
■	Minimizes environmental impact (such as by reducing emissions or disposing of refuse appropriately)
■	Adheres to whale watching regulations or, if no specific regulations are available for the area, appropriate guidelines
■	Provides some benefits to the local host community, such as preferentially employing local people, selling local handicrafts, or supporting (either financially or through in-kind donations) local community-based conservation, education, cultural, and social projects or activities (for example, supporting a voluntary marine rescue service or providing trips for local schools)

Source: Adapted from IWC Scientific Committee 2005



The Blueprint for High Quality, Sustainable Whale Watching

The following draft blueprint is presented in loosely chronological order as a practical task list of what needs to be done to ensure the successful development of high quality, sustainable whale watching. However, many steps can be done simultaneously or begun opportunistically, depending on the situation.

This blueprint is envisioned as a plan to be shaped and adopted initially at the national level and then developed into a working plan by a community or group of communities that undertake to start whale watching, ideally aided by national and international direction, funding, coordination, and implementation as needed. This blueprint assumes that one or more (ideally most) stakeholders have a strong interest in developing whale watching and are providing development funds or seeking a funding source. The amount of funds needed varies depending on the situation. If the tourism infrastructure is in place and operators already have boats that can be used, the investment may be mainly in time

and energy to get things started, with further developments fueled by reinvestment in the business.

If the prospective whale watching industry is entirely driven from the outside, or internationally, then it may be necessary to provide funding throughout the process. However, ideally the wider community (the town, region, or country) will benefit substantially from whale watching and will be able to help pay for the tasks required to enact the blueprint. Certainly, the ultimate goal—and an essential part of making whale watching truly sustainable—is for the wider community to be able to assume the funding of the management plan and other initiatives that grow out of the blueprint process, drawing on tourist levies, profits, or taxes, or a combination of the three.

Below are the 14 key tasks that need to be addressed in order to develop high quality, sustainable whale watching. They are divided into four categories: initial planning and assessment (points 1–4), marketing and tour design (points 5–8), focus on business (points 9 and 10), and management of the resource (points 11–14). For each of these categories, varying groups of stakeholders will take the lead (table 3, p. 8).

Initial Planning and Assessment

The first four steps focus on the initial planning and assessment needed to determine whether whale watching is possible and feasible and, if so, under what circumstances. For these points, researchers, nongovernmental organizations (NGOs), and government representatives can take the lead, with other stakeholders encouraged to assist as they are identified and brought into the process.



Whale watch vessels should keep an adequate distance from the animals to avoid disturbing or harassing them.

Table 3—Whale Watching Stakeholders

TYPOLGY OF STAKEHOLDERS	EXAMPLES*
One-Person Operations	Marine naturalists or nature guides; land-based hiking and whale watching guides; sea kayak tour guides; scuba diving instructors; charter fishing boat operators; small and artisanal boat fishers; small whale watching boat operations
Medium-Size Operations	Whale watching fleets; marine nature watching companies; charter yacht companies
Large and Multinational Corporations	Cruise ship companies
Supporting Businesses	Coastal resorts; scuba tank fill shops; windsurfing rental shops; charter air companies; fishing equipment suppliers; island ferry services; souvenir shops; boat maintenance shops; artists and photographers; refuse or rubbish collectors
Government Agencies	Marine park management authorities; fisheries control officers; tourism marketing and promotion boards; law enforcement agencies; marine safety organizations (coast guards, navies, etc.)
NGOs	Clubs for scuba diving, surf lifesaving, yachting, windsurfing, surfing, and fishing; birding groups; whale and dolphin conservation groups; other conservation groups involved in ecosystem or wildlife protection
Researchers	Wildlife biologists; ecologists; oceanographers; tourism researchers

Source: Adapted from Orams 1999 and Hoyt 2005b

*These are examples only, showing the wide range of possible stakeholders; some communities may have only a few of these at the beginning, although more stakeholders may join in later.

1. Identify and form a planning group to refine and approve a draft working plan (national, regional, and/or local) starting from the 14-step plan presented here. In smaller communities, the planning group can potentially comprise all the stakeholders and interested community members. In larger communities, it may be wise to have an elected or chosen steering group comprising key people representing each sector (and in some cases one representative for several sectors). See table 3 (above) for a potential list of stakeholders, although some areas of the world will have only a few of these represented, particularly at the outset.

This stakeholder planning group will then meet to discuss, flesh out, and allocate the rest of the tasks on the list. This will form the draft or working management plan. The planning group should also prepare a production schedule to show the overlapping time frames for each task. The time frames will depend partly on the funding and personnel available for specific points and other pragmatic issues. In some cases, even before this first meeting, great progress can be made and preliminary

work achieved, such as the literature review in point 3 or parts of points 4, 5, and 6.

Making stakeholders the starting point of the plan is essential for maximizing local focus and control and ensuring that the benefits accrue to the community. Case studies such as Belize (France 1997, 98–101) reveal that communities often struggle to obtain or keep control of their ecotourism industries. Another key issue is “leakage” of tourism revenue from the destination communities back to the origin country, such as the United States, Japan, or a European country. The World Bank estimates that 55 percent of gross tourism revenue in the developing world leaks back to developed countries, with leakage from Latin America and the Caribbean ranging from 45–90 percent

(Mowforth and Munt 1998, 194). For ecotourism to work, stakeholders must remain focused on retaining as much of the tourist revenue as they can while recognizing that there are trade-offs (for example, engaging in foreign company partnerships or paying for marketing versus doing all of one’s own international marketing). In any case, communities do not own their own airlines, so it is impossible to retain 100 percent of tourism revenue. A 25–40 percent leakage, with the community retaining 60–75 percent of gross revenue, would generally be considered a success story.

Some candidate whale watch communities starting from zero may have trouble identifying and involving potential stakeholders. In this case, it may not be as important where or how to begin as it is just *to* begin. The lesson from Venezuela’s central coast (Bolaños, pers. comm.) was to increase teachers’ and children’s awareness of whales and dolphins and to persuade local and regional tourism and environment authorities of the potential value of whale watching. Time scales for starting whale watch tours expanded from one to three years.

Table 4—Sample Values of Whale Watching

TYPOLOGY OF VALUE	EXPLANATION
Recreational	Provides enjoyment
Scientific	Generates increased knowledge about cetaceans, their habitat, etc., including information about ecological services provided by cetaceans through whale watching (“ecological services” implies the human life support function provided by the continued survival of whales within the ocean ecosystem; see full definition below)
Educational	Generates educational value
Financial	Contributes to the financial stocks and flows of the economy
Cultural	Contributes to cultural values (community identity and solidarity)
Heritage	Can play an important role in and contribute to heritage values (benefits to community and local cultures)
Social	Contributes to social values through opportunities to be with family and friends; includes the social experience of the local host community and impact on issues such as social equity and income distribution caused by the arrival or presence of or changes in the local whale watch industry
Aesthetic	Contributes aesthetic value (scenic beauty, whales and other wildlife scenery, serenity of the ocean experience)
Spiritual/ Psychological	Value provided through perceived sense of connection based on cultural, mythological, and psychological aspects such as increased self-esteem, sense of accomplishment, and health benefits
Political	The political impact caused by the existence of the whale watch industry and from information that participants obtain on whale watches
Vicarious Experience	The experience from listening to the stories of those who have been whale watching
Remote Viewing	Value derived from observing whales on TV, the Internet, and DVDs and in books and magazines, which would not have occurred without the existence of whale watching
Environmental Quality (Amenity)*	Closely or partially related to the functional condition, the physical quality of the environment is of itself a direct service that society may choose to value; includes environmental disturbance quality, defined below
Ecological (Services) Function*	Consists of many components, from water runoff to marine plant life; the scientific member of the assessment team must delineate a comprehensive list of these functions and identify the impact of each option on each function
Environmental Disturbance Quality*	An environment can be used in an ecologically sustainable manner, with good environmental quality, while being very disturbed by human activity; the low level of disturbance of an environment may make a contribution to the physical services it provides
Combination Value	In combination, some of these values are worth more than the sum of their parts; for example, a beautiful view, combined with a high level of other ambient values, may be more valuable than the two values when separated

Source: Adapted from IFAW 1999

*Environmental quality, environmental disturbance quality, and ecological function values are sometimes lumped together as the ecological services value. In fact, the ecological services value could be said to consist of these three components. The physical existence of the environment around whale watch sites provides services to humanity labeled as “values.” These three items are intended to describe the physical characteristics of the object called “environment” that are valued of themselves.

2. Devise and implement stakeholder involvement strategies. One key to sustainability is keeping the stakeholders involved in helping to manage the resource. Strategies for doing this include regular meetings (sometimes before and after every season), dolphin or whale festivals and other special events, and programs to encourage stakeholder investment in research, education, and conservation of the resource (whales, dolphins, and the marine ecosystem). It is essential that the stakeholders meet to evaluate the success or failure of their efforts and to improve their plans and develop new strategies.



Supporting local dolphin research helps boat operators learn more about the animals and how to protect them.

3. Organize baseline research on whales and dolphins. Commission a literature review. Identify studies that need to be done. Studies should be carried out to assess the distribution and seasonality of cetaceans within the range of existing and possible future boats available for the existing (or possibly future) ports. Studies need to be seasonal in order to cover more than one year and confirm consistency. The goal of these studies should be practical, on the one hand, to determine if whale watching is feasible and which species can be watched when and where (useful information for operators and whale watchers), but the studies should also provide helpful information for the environmental impact assessment (see point 4) and for all aspects of managing the resource (points 11–14).

4. Complete an environmental impact assessment (EIA) and a socioeconomic assessment. An EIA and a socioeconomic assessment should be completed, looking not only at the resource (point 3) but at the overall social, economic, and environmental impacts of whale watching on the local community. All stakeholders who are users in the marine sector will need to be considered: commercial, artisanal, and sport fishers; recreational and commercial divers; recreational, sightseeing, and

commercial boat owners; and gas, oil, and mineral extraction agencies. There must also be a consideration of any areas specifically protected or proposed for protection, such as how whale watching would affect a proposed or existing marine protected area. There should be different levels of analysis based on the potential sizes of the business, as well as probable time frames for the growth of the business and the associated infrastructure.

EIA is a term used widely, but, for example, in Venezuela, specific environmental evaluation—a simpler form of EIA—is used. This may be fine, as long as it covers the main points of analysis. In Venezuela, the evaluation was done as part of a student project. With adequate supervision, this could be a cost-effective way of obtaining both EIAs and socioeconomic assessments.

Marketing and Tour Design

For the following four points, tourism agencies, operators, and supporting businesses would usually take the lead, with other stakeholders assisting as needed.

5. Analyze the infrastructure available for tourism and identify gaps. Commission a tourism scoping document and feasibility study for current and possible future local attractions. Infrastructure research should include numbers of hotel rooms, restaurants, docks with boat facilities, boats, roads, and parking. In some places this may just be a check-mark exercise. In other areas it will result in a shopping list of things to be done. In that case, scoping reports and community meetings will be necessary to determine the direction and extent of tourism development desired.

For example, a 400-room hotel could be built in a coastal village to expand the capacity for visitors, but at the same time it could disturb the pristine coastal ecology and thus discourage the kinds of visitors who would want to go whale watching. In recent years, the community of Kaikoura, New Zealand, has faced this dilemma. Stakeholders have debated whether to encourage visitors to stay another day by building a state-of-the-art whale/science center—aware that such a center would require more hotels and guesthouses, restaurants, parking spaces, and waste collection, moving the town to even higher tourism levels and possibly decreasing the town's core tourism appeal.

Attractions include natural, cultural, historical, and geological features as well as existing and potential future attractions that could be packaged with whale watch tours. For example, whale centers or museums, land-based whale watch lookouts, gift shops or centers with

local items, and cultural or historical attractions are all part of the greater “whale watch experience.” A certain number of such attractions help bring more people to an area, but a careful infrastructure analysis is also necessary. In Iceland, the creation of the world-class Húsavík Whale Center has brought greater attention and more visitors to Húsavík, with benefits to the larger community. The facility acts as a coordinating center for whale watch tours all over Iceland with national workshops and special events, helping the industry internationally as well as locally and nationally.

However, before a center or other attraction is built, it is necessary to consider points 6 and 7, too.

6. Commission a tourism marketing analysis (including visitor background and expectations).

Investigate the kinds of visitors coming to the country and region, whether they would be interested in whale watching and, if so, what kind, and how long they would stay given existing and potential future attractions. Would new tourists come to a country if whale watching were available? Such an analysis should also look at regional competition, including nearby countries with coastal whale watching. Would visitors to nearby countries visit if whale watching were offered? Evaluate other untapped markets.

7. Design the whale watching/marine ecotourism tours or “tour products.”

The tour products should be based on the resource and logistical research and on the analysis of the infrastructure and the market, including consideration of and possible integration with existing tourism products in the community, region, and country (points 3–6). The marketing analysis should be the key factor in determining the kinds of tours to be made available. For example, do visitors want day trips or two-hour trips? Do they want dedicated whale watching or broader-based nature and cultural trips? Will they consider adding days to their trip and staying overnight in a new area of the coast if there is whale watching alone, or only if other attractions are available? Consideration must also be given to what tour operators want and can provide.

8. Shape the brand and overall marketing plan for the community or region.

Drawing on the tourism marketing analysis and the design of the tourism products, develop a campaign for the community or region to market whale watching nationally, regionally, and internationally. Approaches may vary; marketing expertise can help shape the image and approach.

If the area has been made a marine protected area (point 12), this may be a powerful “brand” that will attract

Table 5—Sample Costs of Whale Watching

TYPOLOGY OF COST	EXPLANATION
Destination Region	
Ecological	Use of boat gas, water pollution, litter in water and from visiting whale watchers, disturbance to whales and other wildlife (short- and long-term costs)
Social	Job losses in some sectors; loss of or strain on local services due to influx of tourists; conflicts with local fishing, boat, and other community interests; “invasion” of whale watchers
Economic	Infrastructure problems from more whale watchers; cost implications of managing marine sector; opportunities possibly foregone
Transit Region	
Ecological	Jet plane and car emissions (greenhouse effect)
Social	Implications of travel choice if greener alternatives not used
Economic	Implications of travel choice if greener alternatives not used

Source: Based on Hoyt 2004 using Leiper 1990 tourism model

many people to an area. For example, the 1986 designation of Silver Bank Humpback Whale Sanctuary in the Dominican Republic attracted new visitors and contributed to the rapid rise of whale watching in Samaná Bay, even though only a few visitors were going to the sanctuary itself (Hoyt 2005a). Another example: South Africa has been successful with its Whale Route and the town of Hermanus has a worldwide reputation for its land-based whale watching, even possible from one’s hotel room bed, with right whale sightings along the coast announced by the whale crier’s horn.

In essence, marketing must help operators and the local community compete in the world tourism industry, showing them how to influence the behavior of customers located (and making travel decisions) sometimes thousands of kilometers away (Mowforth and Munt 1998, 194).

Focus on Business

The next two points are crucial to the ultimate success of whale watching. In some cases operators can learn on the job or adapt skills learned from other business occupations, but in other cases training or retraining



NAOMI ROSE



GREGORIO VILLEGAS

is necessary. Taking the lead should be the operators themselves as well as supporting businesses, tourism agencies, and in some cases government ministries, with other stakeholders assisting or providing support.

9. Set up business development, training, and assistance programs and hold whale watch operator workshops. The stakeholders who will become whale watch tour operators (whether land- or marine-based) and shop owners may need training in one or more of the skills required to run a successful small tourism business. Fishing boat skippers and owners who change to whale watching (for example, in Newfoundland, Canada, and Ogata, Japan) know boats and the sea but tend to be less personable and aware of the needs of tourists compared to, for example, tour boat operators who take up whale watching. Prospective operators also benefit from learning about basic business practices in the tourism industry. One issue, for example, is dealing with seasonality. In the town of Westport, in western Washington State in the United States, many operators who take visitors to

see migrating gray whales may fish or offer general nature and sightseeing tours in the off-season.

Operators new to whale watching (and even many who have already started) must learn the following techniques: approaching whales without disturbing them, working with naturalist guides, meeting customer expectations and taking good care of customers, and presenting whale watch trips that will create good word of mouth and keep customers coming back. One way to do this is to interview potential whale watch operators to find out what they expect and want and to provide information to them, emphasizing the benefits of high quality, low impact whale watching.

Practical demonstrations can include on-the-water instruction. Group workshops may be more practical if a number of potential operators have been identified. WDCS, the Whale and Dolphin Conservation Society, in the United Kingdom and Argentina, has developed multiday workshops designed to teach operators (these workshops have been successfully given in the Canary Islands, Costa Rica, Iceland, Panama, and Spain). A June 1995 WDCS workshop in Iceland, attended by most of the operators working today in the country, has been credited with helping to launch the now large and successful Icelandic whale watch industry.

The first whale watch operators in California and New England in the United States came from the fishing industry, with off-season fishing boats used to transport whale watchers. More than anything else, some degree of crisis has led fishers to consider whale watching (in these and other areas such as Iceland, Japan, Newfoundland, and Scotland) (Hoyt 2001). Sometimes, as in the case of Newfoundland cod, the fishing season is greatly reduced or eliminated or the restrictions and expenses of fishing have been made onerous, and this leads fishing boat owners to try whale watching. The change happens readily in areas where the fishers are sitting at home not using their boats and whales or dolphins can be found easily. Usually one enterprising fisher tries it and then word gets around. In some parts of the world, fishers who make the transition to whale or dolphin watching or marine ecotourism switch full-time, finding an easier or steadier source of income with whale watching. The best approach, however, may be to maintain flexibility and develop, if possible, alternatives for earning money in the low season or off-season or in years when tourism declines for whatever reason.

10. Develop business plans for sustainable whale watching. Pay particular attention to value-adding techniques and impact-lowering strategies. This refers primarily to individual operator and community business

plans, but there could also be an overall regional or national “business plan.” Most whale watch operations are operated as sole proprietorships, partnerships, or small companies, but other models sometimes used are fishers or community cooperatives (such as in Ogata, Japan), as well as nonprofits run by conservation groups or researchers (for example, WDCCS “out of the blue” trips in Argentina and other countries and Richard Sears’ Mingan Island Cetacean Study in Canada and Mexico). No single system is better than others, but for each it is essential to have a well-organized plan that uses the elements of this blueprint.

An important determination is whether to have a pilot or test season or two. This removes the urgency for success while allowing the business to get started in a supportive, less pressured atmosphere. It is also a good idea to encourage operators to form operator associations to support communication and best practices. Every operator should develop a mission statement to be reviewed, improved, and enhanced every year. To keep as much income as possible in local communities and countries, local tour companies could be set up to sell tour packages or at least to develop partnerships with foreign tour companies that market whale watching internationally.

One way to maintain sustainability is to do a cost-benefit analysis of a community’s whale watch industry, followed by a program to enhance benefits and reduce costs. Value-adding to tours means increasing the educational and scientific value of the tours, adding guides and researchers, and setting up whale centers. Impact reduction includes reducing boat-based pressure on whales, such as spreading whale watch impact to other marine species and cultural features; adopting land-based whale watching as a component of the trips; and promoting one-third space and time rules in which one-third of each day and one-third of the area is reserved for whales to be left alone, to protect natural behavior patterns.

Management of the Resource

The final four points are vital to creating a well-managed, sustainable industry. Sometimes these points are neglected or postponed until several years after whale watching starts, when problems begin to appear. These points are positioned last in the 14 steps, but they should be started, if and when possible, concurrently or pragmatically with the early points so that everything is in place when whale watching begins. For these points, national and local governments, including tourism agencies, and NGOs and researchers should take the lead, with other stakeholders assisting.



TATYANA IVKOVICH (EAR EAST RUSSIA ORCA PROJECT, WDCCS)

Orca sightings are the key to successful whale watch tours in the Northwestern United States, Canada, Norway, the Strait of Gibraltar, and Kamchatka, Russia.



EARL W. HORN, COURTESY OF O'BRIEN'S WHALE AND BIRD TOURS

Combining whale watching with other nature viewing, including of dramatic coastlines, can maximize the tourist experience.

11. Set the overall policies for managing the industry (licensing of operators and boats, devising and establishing regulations). Set the upper limits for whale watching. Overall management policy needs to be determined. Taking into account the upper limits (see below), management needs to (a) set a permit or other system of licensing controls (limiting the number of boats and/or operations allowed to watch whales), (b) devise whale watch regulations, (c) recommend whale watch codes of conduct and guidelines, and (d) establish educational and enforcement tools (monitoring boats).

While regulations are essential, codes of conduct and guidelines also can play an important role (Holden 2000, 154–160). In some parts of the world, such as Japan, Tonga, and Venezuela, codes of conduct provide valuable



MICHAEL LUCK

Whale and dolphin watching can generate other tourism-related benefits and revenues for the local community.



DEB YOUNG, COURTESY OF O'BRIENS WHALE AND BIRD TOURS

Whales voluntarily approaching a drifting vessel can offer tourists the most spectacular moments with the animals.



MICHAEL LUCK

The best whale watch operations have naturalists on board to explain the animals' behavior and answer questions.

guidelines when regulations are absent or in the process of being enacted as law. Most critical of all management provisions is the permit licensing and limitations on numbers of operators to just a few in each area (1–3 operators maximum using each area is probably a good starting point, depending on the size of the area and intensity of use). This simple approach has been used in surprisingly few countries, notably New Zealand and South Africa, both of which restricted permits to 1–2 operators in most areas. In both cases the restrictions have helped limit the impact on whales and allow the tour businesses to grow without competitive price wars. To a lesser extent, the restrictions have also encouraged businesses to invest in quality product development.



LUKE NEY

Educating boat operators, local officials, and other stakeholders about the dos and don'ts of whale watching is essential.

Both New Zealand and South Africa also enacted whale watch regulations after the permit licensing; Chubut, Argentina, is still working on this and needs both regulations and an enforcement regime. The province has regulations limiting the number of operations to six at Puerto Pirámides (with none allowed in nearby communities). This restriction has been largely positive but has led to 60 percent of the business concentrating in the hands of one operator, who has been able to buy and run multiple boats. The New Zealand approach of regulating the number of operators *and* boats seems most useful and allows for more regulatory control. (It could also be possible to control the size and kind of boats, allowing or encouraging those best for whales and whale



MICHAEL LOCK

The sustainability of whale watch operations must be evaluated in view of the overall intensity of local vessel traffic.

watching.) However, to the degree that whale watching works in Chubut (and it is largely successful), it is the direct result of having limited the permits to just six operators over the past some two decades. New Zealand asks that permit holders demonstrate educational quality for their trips but has not appeared to accept or refuse permit applications on these grounds. A strong permit system based on mandatory naturalists, high quality education programs, and cooperation with researchers would go far toward creating high quality whale watching.

On the other side of the spectrum are two examples, one from the Canary Islands, at Tenerife, and the other in Taiwan. Off south Tenerife, in a limited area where pilot whales and bottlenose dolphins are reliably found in waters close to shore, whale watching grew in 4–5 years, without licensing or regulations, from nothing to more than 150 boats on the water. Not only were the boats unlicensed and uncontrolled from the perspective of whale watching, but there were also quite a few boats unlicensed to take tourists or even to operate in Spanish



DAVID SELWOOD

Table 6—Marine Protected Area (MPA) Requirements

FOR BEST RESULTS, AN MPA MUST HAVE:

- Scientific background research into the critical habitat requirements of cetaceans and other species, as well as the marine ecology and an inventory of the area
- Early multidisciplinary input to choose, plan, implement, and review the MPA
- A good relationship between local community members and other stakeholders in the MPA process because they see tangible benefits for themselves and others
- Sensible boundaries or networks in view of the species, ecosystems, and ecosystem processes that are being protected
- Good MPA design, built around substantial World Conservation Union (IUCN) Category I core areas, with additional zones or levels of protection such as in the biosphere reserve model
- A comprehensive socioeconomic and ecosystem-based management plan
- Legal recognition as well as broad public acceptance
- An educational program that is interactive, reciprocal, and continuous for those who will use, travel through, or visit the protected area, directed at communities living near the area, fishers, tourists, and other commercial users of the sea within and outside the MPA
- Management of pollution, both marine- and land-based (from nearby or adjacent land areas)
- An enforcement program
- Monitoring and reevaluation (both self and third-party) at periodic intervals with stakeholder input

Source: Hoyt 2005a

or Canary Islands waters. Foreign yachts were arriving in the islands, putting up signs offering whale watching, and making quick money before moving along. On the northeast coast of Taiwan, unregulated whale watching led to a price war among whale watch operations competing for tourists. The tours were brief, unguided, and so cheap that operators have been losing money yet are forced to continue working to make boat payments.

Part of setting management policy is determining the funding for adequate management, which includes research and education programs and enforcement. Such funding can come from license fees, taxes, fines, and tourist levies. Ideally, a combination of all of the above will fund conservation, research, and enforcement. The “user pays” concept can be employed to support and sell the establishment of tourist levies.

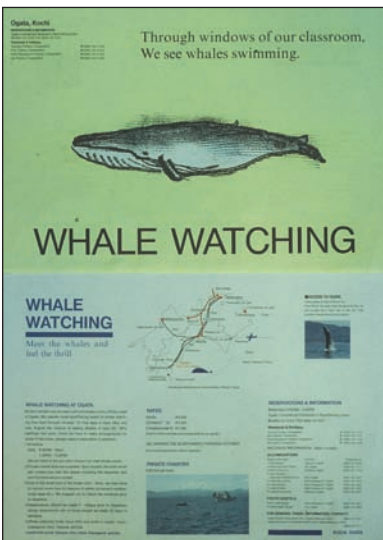


DEB YOUNG, COURTESY OF O'BRIEN'S WHALE AND BIRD TOURS

For some, a whale watch trip becomes the experience of a lifetime.



GREGORIO VILLEGAS



ERICH HOYT

Responsible whale and dolphin watching is possible even in less developed areas, as long as public education, operator training, and monitoring are provided or included in the management plan.

In light of the EIA and the socioeconomic assessment (point 4), the recommended upper limit of whale watching ecotourism (sometimes loosely referred to as the carrying capacity or the limit of acceptable change) should be set to help ensure that whale watching remains sustainable in the future (Hoyt 2004, 2005b; Mowforth and Munt 1998, 105–111, 250). The upper limit can be defined by (a) the maximum number of boats permitted to operate, (b) the maximum number of whale watchers or total visitors to the area per day, (c) the maximum number of licenses allowed, or (d) other factors; the upper limit should ideally take into account all of the above. The recommended level or upper limit must be shaped by how the community feels about development, using a precautionary approach with a generous margin of error, and should be subject to regular review (for example, every 2–5 years). Because whale watching sites are only beginning to think about setting limits, few long-term precedents can be used as examples, except for sites such as Kaikoura, New Zealand, for which limits have been defined by (a) and (c) (see case study 1, p. 20).

12. Examine the legal tools for managing the industry and implement them.

These tools include regulations not just to protect whales from poor or excessive whale watching but to protect whales and other marine life from pollution, overfishing, illegal nets, and other threats. Some of these regulations may be in place but need stronger teeth, i.e., enforcement (which requires funding). A key consideration is whether a marine protected area (MPA) or marine reserve is necessary and/or useful in terms of (a) protecting the critical habitat of the whale “resource” and its ecosystems, (b) improving the ability to manage whale watching and other uses of the marine ecosystem through zoned areas, and (c) attracting visitors and whale watchers through the attractive “brand” of an MPA (Hoyt 2005a). See table 6 (p. 15) for a summary of the main requirements for setting up an MPA. (Lawyers and other legal specialists, as well as MPA specialists and government representatives, need to join the stakeholders for some of these meetings, particularly when actual legal protection is being sought.)

Legal tools also should be contemplated for protecting the industry, maximizing local control, and minimizing “leakage,” as stated in point 1. For example, the restrictions of local ownership of companies and boat types and sizes are legal tools that have had some success in helping to keep tourism revenues inside a community or country.

A good example of legal tools to protect an industry occurs in Mexico’s Baja California Sur, where there is a requirement that only Mexicans can drive pangas in

Table 7—The Key Importance of the Naturalist Guide

There is probably no more important person for a successful whale watch than the naturalist guide. A surprisingly large number of tours rely on the boat captain or operator as the sole guide (Hoyt 1998). This is sometimes necessary in the short term due to small passenger capacity or economic factors. It may be that the captain is a warm, knowledgeable, friendly guide in some cases. But this is rarely ideal or even suitable in the long term. The captain or boat operator needs to concentrate on driving the boat and navigating carefully in the presence of whales and dolphins. Passengers appreciate a short talk by the captain in order to gain confidence on the boat trip (often a source of nervousness for first-time whale watchers) and appreciate the captain's insight, but the job of guiding the passengers throughout the journey should be the full-time job of one or more naturalist guides.

In ideal circumstances, a well-trained, knowledgeable, and personable guide (or guiding staff on larger cruise ships) can accomplish all or most of the following tasks:

- Manage customer care and answer questions before, during, and after the trip
- Give safety briefings before trips and take the lead in introducing passengers to the boat and making them feel comfortable and safe (including dealing with seasickness)
- Introduce passengers to the natural, cultural, geological, and oceanographic features of an area
- Become the bridge between the largely urban world of most passengers and the natural world of whales, dolphins, and the sea
- Impart essential take-home conservation messages
- Help passengers with photo tips
- Tell good sea and whale stories and be entertaining
- Help forge the essential link between passengers and the sea and ensure that their first whale watch trip is a success, no matter how many or even whether whales are seen at all
- Show passengers how to identify individual animals and point out the names, identification details, and life histories of individual whales when known
- Make passengers realize the nature of a wildlife watching trip—nothing is certain and every trip is different; the more time and more trips one takes, the more likely one is to experience extraordinary things

Source: Text excerpt from Hoyt 2006

the lagoons (see case study 2, p. 25). This ruling effectively put more money into local pockets. In other countries—for example, Tonga—there are restrictions on foreign ownership of vessels and companies; foreign owners must have a Tongan partner to get a license. In the Canary Islands, it was a free-for-all (completely unregulated), with many foreign boats operating as

outlaw boats, until the late 1990s, when laws were made and enforced, driving out many opportunistic boats so that more income would go to local people. The whale watching quality improved as well, with fewer problems from too many boats on the water around the same whales.

Most tourism industries have examples of legal controls (some successful at least in part and others not working so well) that have been put in place to prevent foreign operators from taking control. These controls can also be put in place to help whale watching. However, a balance must be struck between protecting local businesses—a practice that may discourage foreign investment—and being able to use the marketing expertise of foreign-based operators.

13. Embed education and research, as well as monitoring of the development of whale watching (to determine the impact on the animals being watched).

This step is crucial during every phase of whale watching development, from early to mature industry. A broad education program needs to be a regular part of whale watching in every community (IFAW, WWF, and WDCS 1997). Typically, people consider that it is the tourists who need to be educated, but the education must start with the operators (see point 9), as well as the guides, local community members, even local and regional tourism representatives, and sometimes researchers. An annual or biennial conference, a seminar or workshop for the community, or a dolphin or whale festival with presentations from local researchers and others are all good starting points. Education facilitates feedback from the researchers and increases community interest and “buy in” to whale watch developments.

The greatest need, however, may be the training of naturalist guides (table 7, left), the main presenters and deliverers of educational information. The quality of their presentation is responsible, arguably more than anything else, for the success of every whale watch tour (in terms of satisfying visitors and developing word of mouth and repeat business). Educational training of naturalists can be set up locally, nationally, or internationally (some initiatives already exist through WDCS work in Costa Rica, Panama, and other countries, but much more is needed). Part of a company and community's business plan and education program should be the design and production of high quality, accurate educational brochures, information sheets, websites, and signage. Content should follow from points 7 (tour product design) and 8 (brand and marketing plan).



Too many boats can harass the whales and detract from the tourist's experience—instead of whale watching, it becomes boat watching.

In addition, a program of research and monitoring should build on and be able to compare results with the baseline research (point 3). This will not only reveal the fascinating behavior and biology of the cetaceans being watched—of great interest to operators, guides, local community members, and whale watchers—but also may indicate whether the whales or dolphins are declining due to pollution, fishing gear entanglements, or bycatch or even if they are bothered by whale watching and their short-term behavior or long-term conservation is being affected. Results then need to be considered as part of periodic revisions of management plans.

14. Develop a sustainability evaluation mechanism, both self-evaluation and periodic outside evaluation (including consideration of a big picture sustainability analysis). This may require the development of a sustainability report card (see table 8, right) as well as a cost-benefit analysis and other systems to evaluate success. Research and monitoring (point 13) will help with the evaluation in terms of cetaceans, but degradation of the environment also needs to be considered in the evaluation of true sustainability. Of course, definitions of “success,” “acceptable changes,” and “sustainability” must be developed in order to make an evaluation. While most of the effort is focused on the destination at the national and especially the local level, to be truly sustainable there must be a consideration of the big picture too—such as where the tourists are coming from, how they are traveling, and what, if any, changes in their behavior take place after a whale watch tour.

Whale watch and ecotourism tours should ideally help create in tourists a truly ecological conscience. Is the whale watch industry being developed capable of carbon neutrality, not just at the local level but in terms of tourists' air travel? It may be useful to investigate climate care and

Table 8—Sustainability Report Card

Below are starting point suggestions for a sustainability report card, which would need to be developed further, possibly with a scoring method.

IMPACT OF WHALE WATCHING	WHAT TO LOOK FOR
Is the wildlife resource degraded or in the process of degrading?	<ul style="list-style-type: none"> ■ Is the population growth (births minus deaths) positive? ■ Is the population growth rate/ birth rate/mortality rate the same, higher, or lower? ■ Are animals leaving the area? ■ Are animals being approached or watched closely, causing them to change their behavior, even in subtle ways?
Is the overall environment degraded?	<ul style="list-style-type: none"> ■ What is the quality of the water system? ■ What about effluent? ■ A pollution assessment of local waters and coastline is needed (periodic regional assessments of beaches can sometimes be used as a check on measurements).
What is the tourist profile?	<ul style="list-style-type: none"> ■ Are the visitors local, national, or international? ■ Did the visitors travel by air? How far? ■ Did the visitors arrive by private (car) or public transportation (bus, train)?
What is the operator and naturalist profile?	<ul style="list-style-type: none"> ■ Are they knowledgeable about marine mammals, the local environment and culture, and whale watching? ■ Are they personable and good teachers? ■ Do they have a sense of responsibility toward the activities of visitors in their “care”? ■ Are business practices compatible with sustainable tourism? ■ Does marine wildlife watching contribute to the community?

Source: Hoyt 2005b

other schemes for sustainability, but it is also necessary to uncover ways that the industry can be structured to make it more sustainable. It is as important that the operators and other stakeholders make self-evaluations as it is that international experts familiar with whale watching and ecotourism are invited to make evaluations.



Conclusion

This 14-step plan is the core blueprint. After reworking, approval, and adoption of the plan at the national level, the individual points and details of this generic document need to be tailored to the coastal communities of the country in question, through the process of stakeholders adapting this plan to their local situations. The challenge is to create a sustainable industry that maximizes the benefits to local communities. Unless most of the benefits accrue to local communities, a sustainable industry, justified in being referred to as “ecotourism,” is impossible.

In the above 14 steps or points, examples are given from many existing whale watch communities around the world. It is important to emphasize that every community started out having no whale watching

and with a variety of obstacles to overcome in order to start whale watch tours. It was only over time that whale watching was turned into a long-term, successful business. One of the more unlikely success stories has been the community of Kaikoura, New Zealand, where local Maori people turned a depressed community into a friendly, attractive whale watching tourism destination in the space of a few years. A detailed case study analyzing Kaikoura’s success is presented here (see case study 1, p. 20). A second case study—from the opposite side of the Pacific, in Mexico’s Baja peninsula—examines the impact of an MPA on managing whale watching, as well as managing whale watching in a place where large tour operators threatened to overtake and marginalize local socioeconomic considerations.



Case Studies

Case Study 1: Kaikoura, New Zealand

Source: Text excerpt from Hoyt, in preparation

In Kaikoura, New Zealand, between 1986 and 1991, the small town's residents transformed a severely depressed economy solely through whale and dolphin watching. Following the success of Kaikoura, seven more New Zealand communities started whale or dolphin watching in the early 1990s. By 2000, more than 30 communities were engaged in marine ecotourism, which included cetaceans and other marine mammals. At present about 1 in 12 New Zealand visitors go whale watching and 1 in 7 go dolphin watching. How did New Zealand, a country far from all tourist markets, succeed in attracting so many whale and dolphin watchers? What is the secret?

The transformation started in the town of Kaikoura, population 3,400, in the mid 1980s. Prior to whale watching, residents had survived by practicing a mix of fishing and farming and some held government jobs, although many were also on benefits or reduced income. A restructuring of the local government had led to loss of government jobs and high unemployment. Enterprising residents began to consider the possibility of whale and dolphin watching, although only a few believed visitors would come just for this. No one thought that it could become as successful as it has become and so quickly. In only six years, whale watching transformed the community. According to Bronwen Golder (pers. comm.), who did three studies of whale watching in Kaikoura in the early 1990s, "Whale and dolphin watching have quite literally changed the face and fate of Kaikoura."

From 1986 to 1991, Golder found, whale watching added more than 44 new businesses to the community—restaurants, galleries, souvenir stores, and marine tourism operators, plus 30 new accommodation facilities. Even with

the large number of additional rooms, hotel occupancy rates increased from 55 to 75 percent. By 1998, more than 100 new businesses had been started in Kaikoura.

The overall increase in tourism to the town can be estimated from visitor counts at the local visitor center. In 1986, before whale watching began, 3,400 people visited. By 1992, more than 10 times as many were arriving—some 37,000 visitors a year. In 1993, visitor numbers more than doubled, to an estimated 80,000. About 68 percent of the respondents on a 1993 visitor survey came to Kaikoura to go whale or dolphin watching. Most of the whale watchers (79–83 percent) came from outside New Zealand. The core market for whale watch visitors to Kaikoura is the United Kingdom, followed by Europe and the rest of the world, fairly evenly split. Even the 17–21 percent domestic whale watchers largely come from some distance away, due to Kaikoura's relatively remote location from New Zealand's large population centers (Simmons and Fairweather 1998).

By 1998, according to Simmons and Fairweather, the total visits to Kaikoura were an astonishing 873,000 per year, with 356,000 staying overnight, 137,000 staying two hours to a day, and 380,000 staying fewer than two hours. An estimated 278,000 visitors expressed a desire or intention to go whale watching and 130,000 visitors (some overlapping the 278,000) wanted to go dolphin watching or swimming.

Estimates for whale watch numbers for all of New Zealand in 1998 ranged from 230,000–330,000 for the year. Approximately 64 percent were dolphin watchers and 36 percent whale watchers (Hoyt 2001). Recent numbers (2004) are 425,000 whale and dolphin watchers with US\$22 million in direct expenditures and US\$72 million in total expenditures (Economists@Large & Associates 2005; see table 9, p. 22).



DAVID SELLWOOD
WILLIAM ROSSITER, CETACEAN SOCIETY INTERNATIONAL



The possibility of setting up whale watch tours at Kaikoura was first considered in the early 1980s. In 1982, biologist Steve Leatherwood told me that Kaikoura might be a good place for dolphin and sperm whale watching, and I included a page on the land-based possibilities for whale watching in Kaikoura in the first edition of *The Whale Watcher's Handbook* (Hoyt 1984). In 1986–87, a group of local families (later to form Kaikoura Tours) approached the New Zealand Department of Conservation (DOC) about establishing a commercial whale watching operation in Kaikoura. Based on recommendations from the DOC, photographer Barbara Todd and a team of researchers led by Steve Dawson and Liz Slooten were approached to assist in establishing the feasibility of running a commercial whale watch. Not long after this, Barbara Todd set up Nature Tours. This was followed by Kaikoura Tours, which eventually became Whale Watch Kaikoura Ltd. and the operator of both Nature Tours and Kaikoura Tours.

At the same time, the DOC indicated that it would only allow one boat-based whale watching permit in Kaikoura (one company but they could have multiple boats). This move, protective of both the resource and the business, was very important, especially in the early stages. Of course, along the way there have been disagreements between the government, the Maori community, and other tourism operators who wanted Kaikoura permits. As early as 1993, there were 13 applications for permits to become the second boat-based whale watch company in Kaikoura and there have been many more since then, but the DOC has not permitted any other operator.

Whale Watch Kaikoura, although set up as a business, is very much a community Maori operation. Part of its success has been its ability to use pragmatically the talents and abilities available in the larger Kaikoura community, regardless of whether residents were of Maori descent. By 1992, Whale Watch Kaikoura had expanded to 30 full-time and 20 part-time staff to handle some 30,000 whale watchers that year. At the same time, the DOC did allow separate permits to several other local tour companies to do dolphin

watching tours only and air-based tours of whales. Each tour company added several more jobs, and all of these “direct” jobs have been matched by new tourism employment from the expanding local economy needed to support whale watching. By 2000, there were 73 full-time and 45 part-time jobs in Kaikoura created by the whale and dolphin watching industry.

The industry relies on two species—the sperm whale and the dusky dolphin. The sperm whale is the sole object of whale watch tours (found through a clever, inexpensive system of placing a hydrophone in the bend of a lead pipe, putting the pipe down, and turning it around to find the location and loudest sound source of the whales; total cost is NZ\$125). The tour features the loud sperm whale clicks echoing up from the deep canyons as they search for squid, sounds the tour operators have learned to read—slow, loud clicks followed by silence can mean that a whale will surface in 5–7 minutes. An estimated 60–80 mainly young bachelor male sperm whales are semi-resident, moving in and out of the main 30 nautical mile (nm) zone. During the austral spring and summer, they move farther offshore, making them less accessible to tour boats. Tour guides know more than 20 sperm whales by name and sometimes tell passengers stories about them.

Dusky dolphins are found mainly from October through March. They live in large schools of as many as 1,000 animals, although a few dozen is more common. They are often playful and acrobatic. The rare Hector's dolphins indigenous to New Zealand are also sometimes seen, as well as several other dolphin species, but other communities around New Zealand that more reliably see these other species tend to specialize in tours to see them. The sperm whale and dusky dolphin tours can promise as high as a 97–98 percent success rate, so operators focus on these two species. Important extra features for the tourists on the whale and dolphin watching boats are the spectacular view of Kaikoura with the backdrop of snow-capped peaks, as well as the visits to various bird and pinniped colonies along the rocky islands just off the peninsula.

Table 9—New Zealand Whale and Dolphin Watching Numbers

YEAR	NUMBER OF WHALE WATCHERS	DIRECT EXPENDITURES*	TOTAL EXPENDITURES*
1991	40,000	\$1,095,000	\$8,400,000
1994	90,000	\$3,900,000	\$12,500,000
1998	230,000	\$7,503,000	\$48,736,000
2004	425,432	\$22,477,154	\$72,338,157

Source: Hoyt 2001; Economists@Large & Associates 2005

*Expenditures are given in U.S. currency.

The main ingredients of the success of whale and dolphin watching at Kaikoura are:

- **The whales are reliably present and fairly close to shore.** Sperm whales feed in the deep canyons of 325–875 fathoms (600–1,600 meters) favored by squid. In most areas of the world these are further offshore, but Kaikoura’s 550-fathom (1,000-meter) contour is only 2 kilometers (km) from shore. All the whale watching takes place within 56 km (30 nm) of shore.
- **The dolphins are also present and accessible most of the year.** Dusky dolphins are “A-list dolphins,” as are most *Tursiops* populations around the world—they are playful, acrobatic, and reasonably accessible.
- **Offering several kinds of boat tours, as well as air tours (helicopter and fixed wing) and even land-based whale and dolphin watching in the area, helps create a variety of opportunities.** Some people prefer dolphins to whales, while others like to try both types of boat tours, as well as kayak and air trips. Separating the tours into different businesses diversifies whale watching and provides more income possibilities and more reasons for people to stay overnight or for several days.
- **New Zealand’s permit-based system helps control the number of tour businesses and boats to protect the resource and the business.** Originally this was done for conservation reasons, but there are valuable benefits to the business climate, as a young, growing industry can be protected from too much competition and the ecotourism character maintained.
- **An international airport is located within a 2–3 hour drive and there are good road connections.** Although Kaikoura is not a main international tourism destination—and in fact it grew from not being a tourism destination at all—it is accessible. Most travelers to other areas in New Zealand can visit by adding 1–2 days to their holidays. Most international visitors stayed one night in Kaikoura in the early 1990s;

by the late 1990s, with improved facilities and diversity of tours, many visitors were staying 2–3 nights or more.

- **Reasonable tourism amenities and accommodations include backpacker camping, guesthouses, bed-and-breakfast rooms, lodges, and motels.** Good restaurants and cafes serve familiar food as well as local specialties such as crayfish. Kaikoura has yet to build large, high quality hotels that would make it an overnight destination for package tours and would start to encourage mass tourism. The debate in the town has centered on whether to keep the ecotouristic character or to expand steadily toward mass tourism. In general, most local people and operators feel that limitations on development to keep the ecotouristic character are important, although there has certainly been some degrading of this character over the past decade. My impression from two extended visits in 1995 and 1997–98 was of a very attractive whale watch “gold rush” town that was attracting a variety of people (varied ages, incomes, and nationalities, as well as singles, families, and retired people). There was a wonderful sense of discovery for people who came to the town and enjoyed relaxing in the town’s cafes, walking along the shore, hiking in the mountains, and participating in the variety of whale and dolphin watch trips, many of them taking several trips during their visits.

- **Key motivations for visitors to Kaikoura** are (1) access to marine mammal species, (2) the small coastal town atmosphere in an unspoiled natural environment, and (3) the friendliness and acceptance of local residents (Simmons and Fairweather 1998). There was high overall satisfaction by visitors to Kaikoura and both a willingness to return for a visit and to refer Kaikoura to others.

Kaikoura was able to overcome a variety of negative or limiting factors and either turn them to its advantage or largely eliminate them. Initial limiting factors included lack of accommodations and restaurants, inexperience with whale watching and tourism, and distance from markets. The main limiting, or negative, factor at Kaikoura that has yet to be overcome is the weather. Although whale watching in Kaikoura has become a year-round operation, about 20 percent of whale watch trips are canceled mainly due to weather. However, weather and presence of whales are limiting factors to some extent in every whale watch community. Some seasonal whale watch communities (for example, Iceland) are successful despite much shorter seasons and even higher rates of cancellation.

“The evolution of the community as a result of the whale watch operation started by the local Maori has ... complications as well as rewards,” says Golder (pers. comm.). “Now as the community looks at the projected growth of visitor numbers over the next decade and the increasing competition from elsewhere around New Zealand, they are having to face a whole new range of issues.”

In the mid 1990s, Golder did a feasibility study on the tourism potential of a US\$2 million marine center for Kaikoura. It was envisioned that this would enrich the tours’ educational value by giving whale watchers a preview to help them interpret and appreciate what they see on the water. It would also provide something to do on the frequent bad weather days, encouraging some visitors to stay an extra day or two and have a second chance to go whale watching. Ideally, the center would become a magnet for more visitors within New Zealand and internationally.

Whale Watch Kaikoura and Dennis Buurman’s dolphin watch operation Dolphin Encounter, as well as the Visitor Center, all expanded their premises to have exhibit spaces for photographs and information boards on cetaceans and cetacean research as part of the gift shop/ticket center atmosphere. So to some extent, this fulfills some of the educational mandate, but there is no doubt that an attractive marine science center, with hands-on exhibits about the sperm whales and dolphins around Kaikoura, could provide the community with a partial solution to poor weather days and attract even more tourists. Such a center would enrich the whale watch experience with better education and give a focus for future research. As of 2007, plans to build the center were still active, but final agreements had not been reached.

Kaikoura has experienced growing pains from so much fast, essentially unplanned development over the past 15–20 years. Yet, given the rewards and opportunities that growth has brought the community, it is now starting to plan a future that would not be possible without whales and dolphins. Whale watching was largely responsible for enabling the Maori to move from a position of relative powerlessness and low socioeconomic status to becoming a major employer and powerful economic force in the community (Hoyt 2001). The tourism operations in general and whale watching in particular are mainly locally owned and operated by small-scale businesses, with the benefits of tourism spread relatively well throughout the community (Simmons and Fairweather 1998). And it must be said that whale watching at Kaikoura is not just a successful business; the Maori are reinterpreting a culturally significant animal and have seen what amounts to a cultural revival (IFAW 1999).

In addition to the above, there are a number of other observations that can be made about Kaikoura and New Zealand that may be useful for the development of coastal whale and dolphin watching in other countries:

- Separating whale and dolphin watching permits may provide the opportunity for more income within the community.
- Although whale watching of large cetaceans is popular and easily available in New Zealand, dolphin watching is nearly twice as popular. Of course, this may partly be because dolphin watching alone is offered from more ports than whale watching. But it indicates that dolphin watching has strong innate popularity, even in the face of competition with whale watching. In some countries, it may well be that inshore dolphins are more suitable for small boat watching, while sperm and other whales offshore must be accessed by larger boats (i.e., different operators).
- New Zealand has a variety of dolphin species, all of which are successful focuses of tours, including dusky, bottlenose, and Hector’s dolphins. There may be some concern that dolphins who are accidentally caught in nets (such as Hector’s and to some extent the others) might be less accessible for watching, but this doesn’t seem to be a problem. Of course, there is evidence that dolphins and whales in areas where hunting has actively and recently occurred are more skittish and tend to move away from boats. However, we must remember that virtually all the whale watching countries had whaling and dolphin exploitation at some time in their history. The periods have overlapped in many countries, not just in Iceland, Japan, and Norway. The United States, for example, had gray whale exploitation until the early 1970s, some 17 years after gray whale watching had started. The eastern Caribbean has some level of dolphin exploitation, yet operators usually manage to find enough accessible dolphins to make a good trip. Of course, as exploitation disappears, there is evidence that animals will be more accessible, so the situation will improve. But the fact that populations have been recently exploited does not seem to preclude setting up a dolphin watching industry.
- In Kaikoura, greatly reduced rates are offered to school and community groups to participate in marine nature tours; in effect, the operators are providing a subsidy for education—a community benefit of whale watching. At the same time, schoolchildren and local groups provide a solid customer base. They also recommend the tours to visitors, serving as “ambassadors” for their communities.

- Kaikoura and many other locations have concerns about their weather. Of course, many tourists prefer sunny climates and time on the beach, and they may expect sun when they go to tropical areas. But the experience of whale watching communities around the world is that people will come to see charismatic whales and dolphins no matter the weather conditions. For blue and humpback whales, for example, whale watchers off Iceland and Québec frequently encounter very cold conditions with heavy rain, big waves, and even snow at times. Bottlenose dolphin watching in the Moray Firth of northern Scotland is sometimes conducted in misty, rainy, cold conditions. Certainly whale watchers in key, popular locations (Alaska; British Columbia; Peninsula Valdés, Argentina; Stellwagen Bank, southern New England; and the St. Lawrence River and Gulf, Québec) always go to sea wearing heavy coats, hats, and gloves, with rain gear accessible. These account for more than half of all whale watching worldwide. The tropical sunny whale watch area is more the exception than the rule. The important thing is to make the tourists comfortable. Having rain gear and extra gloves ready and other shelter and comforts accessible goes a long way toward creating a friendly environment that overcomes weather and other obstacles. Also, discomfort, including seasickness, is quickly forgotten upon seeing and experiencing dolphins and whales.
- What has been the effect of Kaikoura's whale watching on the rest of New Zealand, as many other communities have tried to do it themselves? There was concern initially that its spread to other communities around New Zealand would lead to a decline in Kaikoura, but this has not happened; Kaikoura continues to have a solid growth rate. At least 30 communities in New Zealand have some involvement with whale or dolphin watching. Four of the main areas with 20,000 or more whale watch visitors are Kaikoura and Akaroa (Banks Peninsula) on the east coast of South Island and Bay of Islands and Bay of Plenty on North Island (and Fiordland has also shown strong growth), but some marine mammal watching extends to 10 of the DOC's 14 conservancies, often combined with seal watching. In 1998, there were more than 50 operators offering whale and dolphin tours in New Zealand. According to Rob Suistead (March 1999 DOC survey, pers. comm.) there were 82 marine mammal permits granted around New Zealand, with 21 still under application. Two focused on whale watching and 21 on dolphin watching. The rest were seal-oriented or included whales and dolphins along with seals and other marine wildlife. Some companies have more than one permit and run a number of boats;

some permits cover two boats. By 2004, there were 90 active permits under which whale and dolphin watching was being conducted. From 1998 to 2004, whale watching grew at an average annual rate of 11 percent per year, higher than the overall growth rate of arrivals to New Zealand ports of 7.9 percent per year, for the same period. Whale and dolphin watching is considered one of the fastest growing businesses in New Zealand over the past 15 years (Economists@Large & Associates 2005).

- Part of the important success of whale and dolphin watching in Kaikoura and around New Zealand is that it has attracted visitors generally to areas outside of major cities with lower population and less tourism. Also, although it is mainly seasonal, it has succeeded in extending the tourism season to shoulder and even off-peak periods (Economists@Large & Associates 2005). Any tourism business that can help fill capacity outside of a country's main tourism season and locations is especially valuable.

In closing, I reproduce an assessment of the potential of whale watching in Kaikoura written in 2000 (from Hoyt 2001). It shows that even after widely perceived success beyond all expectations, there are still problems to be solved and dilemmas to be faced. As of 2006, Kaikoura is still facing these transition problems of becoming a mature, long-lasting, and sustainable whale watching destination, but there is every indication that it will be successful.

In general, New Zealand is a model country in terms of careful government management of whale watching including the funding of research and the requirement that operators have an education program. Still, the educational offerings could be improved with the addition of trained naturalists on every boat and more community programs. But some would argue that there are already too many permits given in some areas, not enough in others. Yet, with whale and dolphin watching flourishing in New Zealand and providing a major draw to international tourists, there remains outstanding potential to increase the socioeconomic benefits. In Kaikoura, more than twice as many visitors come to the town wanting to go whale or dolphin watching but are unable to due to an inability to get reservations or poor weather. The growing number of visitors to Kaikoura, and the profile of the visitors' motivations, means that the town faces some difficult decisions regarding whether to limit growth or face the degradation and possible destruction of the community and environment that originally made it a successful tourism destination.

Case Study 2: El Vizcaino Biosphere Reserve, Mexico

Source: Hoyt 2005a

El Vizcaino Biosphere Reserve, which started as a collection of gray whale reserves on the west coast of Mexico, shows how a protected area can work effectively in a number of ways in conjunction with marine ecotourism.

In January 1972, Laguna Ojo de Liebre (Scammon's Lagoon) became the world's first MPA specifically set up to protect cetaceans (Hoyt 2005a). Established by the Mexican government, it attracted attention to the gray whale mating and calving lagoons while at the same time providing protection, initially only on paper. In 1979 and 1980, protection of nearby Laguna San Ignacio and Guerrero Negro followed, and in 1988, the entire lagoon complex was officially designated a biosphere reserve under the United Nations Man and the Biosphere program. United Nations Educational, Scientific and Cultural (UNESCO) World Heritage status followed in 1993.

At first, whale watching was uncontrolled, but later the MPA helped provide the muscle to enable laws and enforcement to control boat traffic, the fishing gear and nets used in the lagoons, pollution from local settlements, and industrial degradation of the surrounding land. The MPA also closed some sensitive gray whale habitats entirely to tourism, providing the zoned protection that many researchers and MPA practitioners believe is the best way to manage whale watching.

Beginning in the late 1960s and early 1970s, large California-based tour operators organized self-contained, 7–10 day tours to the lagoons, departing from San Diego. These were high-quality tours, often with naturalist guides such as Ray Gilmore and later Ken Norris. With these tours, a growing U.S. audience saw that there was a market for whale watching and enjoyed the trips. However, the trips left little or no money in Mexico, providing no economic support for local communities.

Watching the escalating problem and eager to help Baja fishermen whose fishing was seasonal, the Mexicans made a law that only the small pangas could go in the lagoons. This automatically meant that the big boats had to stay out and hire the pangas. The use of pangas meant additional income for fishers, and it eventually led to local inns, restaurants, and other guesthouses being built, so substantial money was left in the area.

It should be mentioned, however, that the U.S. tour

operators helped establish the location internationally and publicized the activity of whale watching, so their role was important. In fact, the boats out of San Diego still bring many tourists to the lagoons, but there is now much more integration and cooperation with the local communities. In effect, the U.S. operations attracted the "tourism pioneers," the early ecotourists, to visit the lagoons and gave them a good trip so that these tourists told others and made the place popular. The U.S. operators continue to do good international marketing, so they are still valuable to the whale watch industry in Mexico.

The challenge in countries where whale watching is just starting is how to involve the more professional business people without them taking over and working just for their own profit. With controls and caveats, it is possible. The important thing is to have an effective MPA management system or a permit system, as discussed elsewhere in this document, because then limitations and restrictions can be put on the permit



DAVID SELLWOOD



NOAA

such as allowing only one professional in each area and giving the other permits to local people. This Mexican case study example shows that it is possible.

In the mid-1990s, the Mitsubishi salt works lobbied the Mexican government for expansion of their activities in the lagoons. They were determined to push ahead with development in the gray whale's protected habitat, but an international support group joined with Mexico's Grupo de los Cien, a coalition of influential Mexicans, to protect the lagoons and stop Mitsubishi. Against the odds, the campaign was successful, showing that support for the gray whale had become solid in Mexico and that the MPA designation was much more than just on paper.

Details of the El Vizcaino management plan are available at http://conanp.gob.mx/anp/programas_manejo/vizcaino.pdf.



References

- Economists@Large & Associates. 2005. *The growth of the New Zealand whale watching industry: A socioeconomic assessment*. Surry Hills, New South Wales: International Fund for Animal Welfare, 26 p.
- France, L., ed. 1997. *The Earthscan reader in sustainable tourism*. London: Earthscan, 259 p.
- Holden, A. 2000. *Environment and tourism*. London: Routledge, 225 p.
- Hoyt, E. 1984. *The whale watcher's handbook*. New York and Toronto: Penguin and Doubleday, 216 p.
- Hoyt, E. 1998. Watch a whale; learn from a whale: Enhancing the educational value of whale watching. In *Proceedings, Swan Festa, Third International Whale Watch Forum*, July 1998, Muroran, Japan, 5–19.
- Hoyt, E. 2001. *Whale watching 2001: Worldwide tourism numbers, expenditures, and expanding socioeconomic benefits*. Yarmouth Port, Massachusetts: International Fund for Animal Welfare, 157 p.
- Hoyt, E. 2002. Whale watching. In *Encyclopedia of marine mammals*. Ed. W. F. Perrin, B. Würsig, and J. G. M. Thewissen. San Diego: Academic Press, 1305–1310.
- Hoyt, E. 2003. Toward a new ethic for experiencing dolphins and whales. In *Between species: Celebrating the dolphin-human bond*. Ed. T. Frohoff and B. Peterson. San Francisco: Sierra Club Books, 168–177.
- Hoyt, E. 2004. *Socioeconomic research into whale watching: Is it helpful for recommending and implementing regulations and regulatory frameworks and for managing whale watching?* Working paper WW/2004/os/2 presented at the Workshop on the Science for Sustainable Whalewatching, March 6–9, 2004, Breakwater Lodge, Cape Town, South Africa.
- Hoyt, E. 2005a. *Marine protected areas for whales, dolphins, and porpoises: A world handbook for cetacean habitat conservation*. London: Earthscan, 512 p.
- Hoyt, E. 2005b. Sustainable ecotourism on Atlantic islands, with special reference to whale watching, marine protected areas, and sanctuaries for cetaceans. In *Biology and environment: Proceedings of the Royal Irish Academy*, 105B, no. 3: 141–154.
- Hoyt, E. 2005c. *Enhancing the value of whale watching: Strategies for true sustainability*. Working paper presented at the First International Workshop on the Management and Non-Lethal Use of Cetaceans, September 27–29, 2005, Salón Municipal de Puerto Pirámides, Península Valdés, Chubut, Argentina.
- Hoyt, E. 2006. *Whale watching and marine ecotourism in Russia*. Chippenham, Wiltshire, United Kingdom: Far East Russia Orca Project and WDCS, the Whale and Dolphin Conservation Society, 84 p.
- Hoyt, E. and G. Hvenegaard. 2002. A review of whale watching and whaling with applications for the Caribbean. *Coastal Management*, 30, no. 4: 381–399.
- International Fund for Animal Welfare (IFAW). 1999. *Report of the workshop on the socioeconomic aspects of whale watching*. Kaikoura, New Zealand: IFAW, 88 p.
- International Fund for Animal Welfare (IFAW), Tethys Research Institute, and Europe Conservation. 1995. *Report of the workshop on the scientific aspects of managing whale watching*. Paper presented as SC/47/018 to the annual meeting of the International Whaling Commission (IWC) Scientific Committee, May 1995, Dublin, Ireland, 40 p.
- International Fund for Animal Welfare (IFAW), World Wildlife Fund (WWF), and WDCS, the Whale and Dolphin Conservation Society. 1997. *Report of the international workshop on the educational values of whale watching*. Provincetown, Massachusetts: IFAW, WWF, and WDCS, 40 p.
- International Whaling Commission (IWC) Scientific Committee. 2005. *Annex M: Report of the sub-committee on whalewatching*. Ulsan, Korea: IWC.
- Leiper, N. 1990. *The tourism system*. Palmerston North, New Zealand: Massey University Press.
- Mowforth, M. and I. Munt. 1998. *Tourism and sustainability: New tourism in the Third World*. London: Routledge, 363 p.
- Orams, M. 1999. *Marine tourism: Development, impacts, and management*. London and New York: Routledge, Taylor & Francis Books, 136 p.
- Parsons, E. C. M., C. A. Warburton, A. Woods-Ballard, A. Hughes, P. Johnston, H. Bates, and M. Lück. 2003. Whale-watching tourists in West Scotland. *Journal of Ecotourism*, 2, no. 2: 93–113.
- Simmons, D. G. and J. R. Fairweather. 1998. *Towards a tourism plan for Kaikoura*. Tourism Research and Education Centre (TREC), Report no. 10. Lincoln University, New Zealand: TREC.

Many of these references are available as PDFs on request from erich.hoyt@mac.com.



About the Author

Erich Hoyt is a cetacean researcher and lecturer and the author of more than 450 publications, including 15 books (such as *Marine Protected Areas for Whales, Dolphins and Porpoises*; *Orca: The Whale Called Killer*; *Whales, Dolphins & Porpoises*). His work has been translated into 16 languages in 25 countries. He has acted as an advisor to governments and conservation groups on marine protected areas (MPAs), whale watching, and marine ecotourism. An American-Canadian dual citizen, Erich is now based in Scotland, where he is senior research fellow for WDCCS, the Whale and Dolphin Conservation Society, and codirector of the Far East Russia Orca Project. He was recently invited to join the Cetacean Specialist Group of the World Conservation Union (IUCN) Species Survival Commission, and he serves as an invited expert for the Scientific Committee of the Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and contiguous Atlantic area (ACCOBAMS). His current work focuses on the identification of cetacean critical habitats and the creation of MPAs throughout the Mediterranean and Black Seas and in other parts of the world.



HUMANE SOCIETY INTERNATIONAL™

2100 L Street, NW, Washington, DC 20037 USA
1-301-258-3010 ■ Fax: 1-301-258-3082
www.hsi.org