



**REPORT OF THE
WORKSHOP ON
THE
EDUCATIONAL
VALUES OF
WHALE
WATCHING**

**PROVINCETOWN
MASSACHUSETTS, USA
8 -11 MAY 1997**



IFAW

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Report of the International Workshop on the

Educational Values of Whale Watching

Provincetown, Massachusetts, USA

8th May - 11th May, 1997



Sponsored by
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SUMMARY

Whale watching is a world-wide industry accepted as a “sustainable use” of cetacean populations, compatible with Agenda 21 of the 1992 Rio de Janeiro UN Conference on Environment and Development. Most assessments of whale watching focus on the monetary returns, which are estimated at US \$504 million (UK £311 million) per year, nearly doubled since 1991. In 1996 whale watching was practiced in 65 countries.

In the long view, it is probable that the most valuable thing about whale watching is its potential to educate people of all ages and from all backgrounds to appreciate, value and understand marine mammals and to connect humans in a dramatic way to another species and to the sea. It is generally assumed that whale watching is educational, but there has been no serious investigation of what this education is.

In May 1997, twenty-three whale watching experts from sixteen countries, and eleven observers, met in Provincetown, Massachusetts for five days to quantify and examine the educational values of whale watching around the world.

The goal of the Workshop was to produce a report which would encompass 1) an assessment of current educational efforts; 2) identification of problems in the transfer of education, such as a need for multi-lingual materials and the content of commercial and non-profit promotional materials on whale watching; 3) the training of guides and boat operators; 4) methods of assuring quality information on whale watches, including certification of guides and operators; 5) whale watching in a formal academic setting, including use of new technologies such as the Internet and the World Wide Web; 6) the role of Non-Governmental Organisations in whale watching promotion and education materials; and 7) the role of local communities in whale watch education.

This report contains a model whale watching trip, based on a compilation of methods known to participants and enhanced by examples of successful techniques, which can serve as a guideline for whale watching globally. Throughout the Workshop, both mature whale watching areas and those with pioneering operations were considered. The Workshop made a number of recommendations to encourage and enhance the quality of education during whale watching.

Whale watching varies considerably, reflecting differences in culture, educational methods, species encountered, and platforms of operation. Despite these differences, the Workshop felt strongly that all whale watching should contain an educational component adhering to a high standard of quality.

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ACKNOWLEDGMENTS

The venue for this Workshop was the comfortable old Provincetown Inn at the water's edge in Provincetown. The staff and administrators were unfailingly helpful and accommodating, arranging for unexpected needs quickly and cheerfully (miles of cables to hook up laptop computers, the sudden request for an easel and writing board, a critical need for a Macintosh program). Gary Knop, Matt Monroe and all of the people at the Inn have the thanks of Workshop.

Participants and observers were treated to a series of culinary pleasures during the entire Workshop. Meals at the Provincetown Inn accommodated the varying tastes of an international group with fine results. Dinners were taken at Napi's (Napi and Helen VanDerek donated part of the dinner), The Mews, The Lobster Pot, Lorraine's, and at Clem & Joe's. It was the consensus of the Workshop that Provincetown is rightly acclaimed for its restaurants.

Thanks are due to the Avellar family, whose Dolphin Fleet was the flagship whale watching operation on the East Coast of the United States. They once again knew where the whales were. When Workshop attendees went whale watching they were treated to the sight of known (and one unknown) humpback whales including a series of breaches by a juvenile humpback in the path of a blood-orange setting sun, saw a number of fin whales in interesting aggregations, and minke whales (not to mention a jaeger that robbed a tern of a fish as we watched).

Nancy Flasher at the Center for Coastal Studies in Provincetown supplied materials and arranged for displays of whale watching information and education materials. Participants and observers also contributed samples of promotional materials, education and popular science materials, and visual arts on whale watching.

The Steering Committee is grateful to its member, Carole Carlson, for arranging all the amenities. It also thanks Alison Smith, Erich Hoyt and Kate O'Connell for their seemingly endless fund of names and addresses. They are very busy people who were generous with their time. Betty Curry at IFAW handled the maze of airline, car and hotel reservations with aplomb and a smile.

Funding for the Workshop was provided by The International Fund for Animal Welfare, with additional assistance from World Wildlife Fund and the Whale and Dolphin Conservation Society.

It was, finally, the participants themselves who made the Workshop a success. They were knowledgeable, compatible, generous with their expertise, hard-working and courteous. The chemistry among people at the Workshop was unusually pleasant and exuberant.

INTRODUCTION

An authoritative examination to yield guidelines, ideas and methods for enhancing the education practiced on whale watches was undertaken by a Workshop on the Educational Values of Whale Watching organised by The International Fund for Animal Welfare (IFAW). Information from this Workshop is meant to be shared, further developed and adapted to assure humane, responsible and meaningful whale watching everywhere the activity is undertaken.

The Workshop therefore was designed to play a significant role in the development of whale watching as a benign “sustainable use” of cetaceans. To establish the parameters to be discussed, a Steering Committee was appointed by IFAW, consisting of Phoebe Wray (Chair), Carole Carlson, Michael Williamson and Hanne Strager. This small group developed the agenda and the list of participants. Experts and those directly involved in education and public information about whale watching were invited to prepare short briefing papers (listed in Appendix C) prior to the Workshop. The report from this meeting is meant to be of value to a broad range of disciplines, including government officials, tour operators and guides, scientists, teachers, non-governmental organisations (NGOs), naturalists, marine policy makers, and national, international and inter-governmental organisations.

Education is here viewed in a broad context: not just what is taught/learned in an informal way aboard whale watching vessels, but how whale watching can be used in a formal educational setting, how ecotourism planners and operators can educate themselves as well as their clients, and how the whales can (once again) be the flagship species to teach a wider environmental awareness.

Whale watching is a kind of safari, and, like a safari, it has a sense of adventure about it because the whole reason for the activity is to observe a wild animal in its own territory. In educational terms, this is wonderful. People expecting an adventure have a heightened awareness, a light heart, an anticipation of pleasure and thrill. Such audiences can be excellent students.

This Workshop on Educational Values was the third in a series of five Workshops on whale watching activities to be sponsored and organised by The International Fund for Animal Welfare. The first considered the scientific aspects of whale watching, the second focused on the special problems of sperm whale watching, the fourth will encompass the economic aspects and the fifth, the legal ramifications.

1.0 OPENING OF THE MEETING

The Workshop was opened with welcoming comments from Dr. Carole Carlson, Steering Committee Member, and the Chairperson, Prof. Phoebe Wray. Dr. Kevin Chu, Special Assistant to the Regional Director of the United States National Marine Fisheries Service read a letter of goodwill and encouragement from Dr. D. James Baker, Under Secretary for Oceans and Atmosphere of the US Department of Commerce and US Commissioner to the International Whaling Commission. Good wishes from Dr. Ray Gambell, Secretary of the International Whaling Commission, were also conveyed by Prof. Wray.

The Workshop was dedicated to Steve Leatherwood in memory of his dedication to science and education and his great generosity of spirit. He was an inspiration to many people and made significant contributions to marine mammal science and conservation.

Rapporteurs were approved, being David Wiley of the International Wildlife Coalition and Cathie Swanson of IFAW. With some amendments and additions, the agenda was adopted (see Appendix A).

The Observers were welcomed. Their direct participation was invited at the breaks and later when sessions broke into small-group meetings to review the draft report.

The Chairperson then gave the charge to the meeting, noting that 16 countries were represented as participants at the Workshop.

2.0 EDUCATIONAL VALUE OF WHALE WATCHING: THE CURRENT EFFORT

The Workshop recognised that all whale watching should have a strong education component and that education should be the driving force behind the whale watch experience. Although education opportunities and resources vary by site and platform of operation, efforts should be made to maximise all opportunities.

Educational focus must include local, regional and international information, as well as an overview of historic, present and future environmental and other relevant issues. High standards must apply equally to the operation of vessels around whales and such operation should enhance the educational experience.

The Workshop felt that there has been a modest improvement in the quality, content and presentation of educational materials pertaining to whale watching, but that more is needed.

The Workshop recommended that all international, inter-governmental and governmental organisations (e.g., International Whaling Commission (IWC), United Nations Environment Programme, national regulatory and development agencies) adopt this common vision when reviewing or considering whale watch activities.

2.1 Summary of types of information

The goal of the Workshop was to provide recommendations for maximising the educational experience of a whale watch. The Workshop recognised that there are differences in the quality and quantity of educational materials, involving culture, species being observed, platforms of observation, locality, maturity of the industry, audience, and the personal skills of the educators.

The first question was: how do people get information about whale watching? This information is received in a number of ways which were categorised as:

- 1) Public information and outreach specifically about whale watching, and
- 2) general information dissemination.

Specific items under these categories were defined as:

1) Public information and outreach:

a) Primary

Media: radio, television, newspapers, magazines

Audio-Visual: videos, audio tapes, CD ROMs, slide shows

Literature: books, field guides

b) Secondary

Consumer products: souvenirs, memorabilia, marketing items such as tee shirts, decorative or commemorative mugs, posters, badges

Whale watch companies, ecotours, festivals, conferences

2) General information dissemination:

Interpretive centres

Interpretive signs

Research institutions

Word of mouth

Museums, zoos, aquaria

The world wide web

Schools/classrooms

Naturalists

The Workshop defined the following working terms for the purposes of discussion.

Whale: Whale was used in a generic sense to mean any of the 81 species of whales, dolphins and porpoises except where discussion centred on a specific species.

Whale watching: Watching cetaceans in the wild. Almost invariably, whale watching is conducted from a platform (e.g., ship, shore, airplane). The definition also includes whale watching with a commercial element and opportunistic amateur whale watching.

Education: The Workshop believed that education is more than the mere transfer of information. It agreed that education should be a normative process, resulting in increased awareness. It was a strong feeling of the Workshop that education include the goal of changing human attitudes while maintaining respect for other cultures and individual ideas.

Educational whale watching: Any experience which, through exposure to wild cetaceans, advances education as defined above.

Whale watching is diverse depending upon species, locale, culture and facility of the operator. Attempting to discuss each of these variations was beyond the scope of the Workshop. However, it was necessary to recognise and

EDUCATIONAL VALUES OF WHALE WATCHING:

1. Whales are emblems for promoting awareness of endangered species and habitat protection.
2. Whale watching provides the opportunity for people across all ages and cultures to become familiar with environmental issues and to become involved in conservation efforts on a personal, local, regional, national and international level.
3. The development of education programs forges links between the whale watch industry and local communities as well as building bridges between the general public and scientific communities.
4. Natural history knowledge gained through whale watching has intrinsic value.
5. Whale watching provides an opportunity to observe animals in the wild, transmitting factual information and dispelling myths.
6. Whale watching is a model for marine educational programs in adventure travel and ecotourism.
7. Whale watching provides the opportunity for appreciation and understanding of local history, culture and environment.

identify the range of whale watch opportunities. It is thereby possible to make specific suggestions as well as provide general recommendations.

The Workshop acknowledged that techniques and materials for dolphin watching trips are sometimes different from those for large cetaceans. Dolphins tend to be very active, and while this may inspire the watchers with excitement and delight, it is a greater challenge for guides, as they must interpret a variety of behaviours, many occurring simultaneously and recurring in a short period of time. Therefore, the education process is likely to be approached differently, at least sometimes, i.e., interpretation could be shorter during the encounter and longer afterwards.

It was recognised that the educational content will vary, dependent upon a number of factors such as the composition of the whale watching group (e.g., general public, school class, special tour group); different types of whale watching platforms; and differences in educational methods of various countries (see Table 1, below).

To approach the educational values of whale watching the Workshop asked the question “What *should* be included in whale watching education?” A model was prepared.

Educational activity was envisioned as a five-part whale watch journey:

- A. Pre-journey
- B. The journey to the whales
- C. The encounter
- D. Return trip
- E. Post-trip and follow-up.

A. Pre-journey

The Workshop had previously identified how people find out about whale watching. The pre-journey discussion centred on the advertising content of commercial and non-commercial whale watching brochures, the level of client expectations, and educational tools which would encourage people to go whale watching.

A.1 Client expectations

The level of client expectation must be realistic so that whale watchers are not disappointed. Whale watching resembles other wildlife safaris where there are no guarantees that lions, tigers or other charismatic creatures might be seen. Using a slogan such as "Nature is not predictable" was suggested as way to remind the public that every cruise might not be successful. The use of the legend "Nature Tours" instead of "Whale Watching" has been used in some cases, as in Dominica, and has been successful in promoting whale watching. It was believed that tour operators who set forward true statements about the possibility of seeing whales would have more credibility with the public.

A.2 Whale watching brochures

Conservation awareness should start with the whale watching brochure, which should contain information about species and ecological systems. Such brochures are often passed along to children, or to friends and become a part of the educational effort. Brochures should reflect a concern for the welfare of the species to be watched and the ecosystem in general.

Without sacrificing aesthetics or the "business side" of whale watching, the Workshop stressed the need for accuracy in promotional materials, including the visual impact of the brochures. Highly dramatic action photos of cetaceans should be balanced with other scenes, and only species which are commonly seen ought to be shown.

A note in the brochure stating that the tour operator adheres to a code of conduct when encountering whales would, it was felt, induce confidence in clients. The clients also then become a part of the monitoring of good whale watch practices.

The Workshop noted that in some places where whale watching is or will be conducted, operators do not have the money to produce brochures. It was felt strongly that brochures need not be fancy. The text is most important. In some cases, NGOs assist tour operators who lack funds for promotional materials. The NGOs can benefit as well by placing a subscription blank or other information about their group in the brochure.

The Workshop strongly encouraged high standards among tour operators in the production of their advertising and brochures.

A.3 Other tools

There are many ways to pass along information cheaply and without sophisticated technology. These include as posted signs (commercially done or hand-lettered), bulletin boards, and simplest of all, verbal communication. Educational tools such as displaying the logbooks of whale watching vessels in the ticket office for potential clients to see the reality of cruise sightings was another suggestion. Media coverage of whale watching cruises should be encouraged but should, if possible, level expectations with reality. Such coverage is also free and effective advertising.

B. The journey to the whales

The journey to the whales provides the opportunity to inform passengers about safety regulations, codes of conduct, how to take good photographs, and the whales and other wildlife likely to be seen.

B.1 "Dock-side"

At "dock-side," which may be on the dock, on the boat as it begins to go to sea, at the starting site of on-shore whale watching, or at an interpretation center, several educational components were identified as important:

- General information: safety regulations and features of the boat or the site; a head-count of watchers; a code of behaviour expected from the watchers and the tour operators. This code of general principles should also be posted in the boat and/or handed out as a leaflet.
- Practical information: identification of species; where the boat is going; what whales may be expected; and how to locate cetaceans. The "clock system" of sighting.
- Photographic information: shutter speeds and tips about getting good photos; the use of photo IDs to identify specific whales.

Once the boat or the walk is underway, other kinds of information can be presented, including:

- Research information: if conducted on the vessel, its components and significance, including why the research is being done, why whales are studied, what is known about cetaceans of the area, and how research helps conservation.
- Ecosystem information: the reasons for the presence of whales in the location; information about species other than whales; geographical features.
- Historical information: the history and significance of coastal cultures; the history of whales and whaling in the region, if applicable.

B.2 Codes of conduct

Initial information given to clients should include a code of conduct, ethics, and regulations. This information should be verbal and also, if possible, written (posted or included in hand-out material). This should include the importance of guidelines to protect both the animals and their habitat. Education should emphasise the animals' welfare as a priority. Information should be presented in a variety of ways, since people's attention span and mental focus is scattered and directed more at the voyage or walk to a whale viewing site than in listening.

If codes or regulations do not exist, the Workshop strongly suggested that they be developed. Guidance can be provided by information contained in the IWC's General Principles for Whale Watching (see Appendix B), or the Report on the Scientific Aspects of Managing Whale Watching (reprints available from IFAW).

B.3 Teaching methods

Guides should not talk too much. Constant noise from a public address system or the tour leader can be annoying, and people can only absorb so much information at any one time.

One technique to keep the public's attention is to use story-telling and narrative, to create a goal for the trip. Visual aids such as maps, pictures, even a chalk board, and simple scientific apparatus can be used to complement the information transfer.

C. The encounter

At the first encounter with a whale, usually seen at a distance, there is generally great excitement on board. Tour guides may at this point identify the species and its precise location on the clock system. When whales are up close, talking generally stops except for a quick identification of species and behaviour. Some tour guides prefer to remain silent, and to encourage silence so that each watcher can have a personal encounter with the cetacean.

C.1 Interpreting the encounter

Interpreting the encounter depends on the moment. When, what and how much information is given is largely based on the guide's intuition.

In shore-based whale watching, a far longer segment of the trip is often in the presence of whales. For instance, in South Africa or Argentina, the watcher could be seeing the Southern right whale for over two hours. Consequently, most of the educational effort takes place while whales are present.

Information given in the presence of whales will vary depending upon the audience, but must be specific to the moment of the encounter. Education in the presence of whales is in real time, people and whales sharing the same space and moment. It will vary from species to species. An example: sperm whales stay at the surface for short periods, generally without moving, and then dive for long periods. When the whale dives, there is ample time to talk about biology, behaviour, and the history of sperm whale/human encounters.

It can be stressed that whales are seen at the surface for brief moments and that they live in an underwater world of sound. Waiting for whales to resurface after a dive is an opportunity to emphasise research on acoustics, and paint a verbal picture of cetacean habitat.

After the excitement of the initial contact has dissipated, the Workshop felt strongly that it is important to allow time for people to experience whales in their own individual ways. Listening to the blow of the whale, or the sounds of birds and the "music" of the natural world, provides an effective learning moment, and helps create an emotional contact. To this end, silence is an effective tool and should be encouraged. However, educators should always be ready to capture the interpretive instant and take advantage of any situations which might arise.

Encounters with whales (especially the first one) can be emotional moments, and the tour guide should take that into consideration and respect the watchers' sensitivities.

C.2 Individual identification

Attempts should be made to identify the animal as an individual and not just as a generic "whale." This can most easily be done in areas where animals have extensive sighting histories dating back years, as with the humpback whales off the New England coast. However, most educators are unlikely to have such data, unless they work closely with researchers, which is itself recommended. The individual nature of the animal can also be emphasised by pointing out unique body markings and have the people help track the animal(s), observing characteristic individual behaviours, mother/calf pairs or other associations, and any visual or behavioural oddities the guide may see which may not be apparent to an untrained eye.

Animals should be personalised without being anthropomorphic. An example from New England waters: the ages of some humpback whales are known, as are the number of calves some females have had over the years. There may be an opportune sighting of specific animals which have also been identified in the Caribbean. Where such information is not available, the guide can personalise the whales by discussing, for instance, feeding habits, behaviour and migratory paths.

C.3 Conservation “messages”

Whale watching gives people a perspective and understanding of their environment they can't get any other way. Conservation and other “messages” should be linked to the individual whale being watched or the specific situation.

Most interpretation should focus on the activities taking place. However, seeds for more elaborate conservation themes can be planted to be expanded upon later in the trip. Questions should be solicited from the watchers and these should be repeated for the whole group before being answered.

The Workshop developed examples of conservation messages which have been and can be used.

CONSERVATION MESSAGE SUGGESTIONS

1. Whales, dolphins and porpoises have no borders and do not recognise human boundaries.
2. Whales lived in this area before humans arrived; we are visitors to their territory.
3. Whales have been living on this Earth successfully for millions of years. Their problems derive from our presence and use of the sea. Some areas are suitable for them, some are not. We need to respect them and the habitat they require.
4. Take pride in your whales, they are part of your environmental community.
5. Many of the same things that are good for cetaceans — clean air, clean water, abundant fish, freedom to live with their families — are also important for us.
6. As whale watchers, you are a part of a global effort to teach people to protect whales and their environment.

D. The return trip

Tour guides have a unique opportunity on the return trip. Once the passengers get off the boat, or, in shore-based watching, return to the starting point, the full attention of the audience is lost. Guides should maximise the time they have.

D.1 Summarising the experience

The return trip allows the guide to expand upon points raised during the encounter. The guide ought to summarise what was seen and recapitulate the specifics of the trip. It is important to offer a balance between interpretation and allowing people to internalise the experience.

The journey back is the time to encourage the watchers to ask questions. If the guide has been speaking from the pilot house or somewhere apart from the watchers, he/she ought to become available on deck to answer questions. Personal interaction between the naturalist/guide and participants is an important part of the learning loop.

D.2 Conservation education

The amount and timing of conservation information to be disseminated was discussed at length, with several suggestions emerging. Some felt that most conservation education should be confined to this part of the journey; others thought it should be interspersed throughout the trip. Differences in the types of cetaceans encountered on trips will also influence the timing of conservation information. Trips focusing on dolphins, for instance, can be different from those focusing on long-diving animals such as sperm whales.

It is important to talk about why people go whale watching and what whale watchers can do to protect whales. This is a time for anecdotal stories of whales and whale watching, to entertain and thereby educate.

D.3 The Whale-less trip

On whale-less whale watch trips, the journey back is a critical time. It is a time when some other natural sites could be visited – a bird colony, an especially interesting geographical feature, fish schools, etc. Whale guides ought to have some “set piece” to soothe the disappointed whale watchers so that they are philosophical about the event and will try it again (e.g., an anecdote about the time a week was spent in stormy seas waiting for whales to show up).

Education about the local environment and culture can be both valuable and entertaining. Ideally, guides should know enough about the locality to be able to talk about it in a personal way and to make it interesting, especially to people who may not be in a happy frame of mind. The need to provide as pleasant a trip as possible on a whale-less journey points up dramatically how important it is to level client expectations with reality.

E. Post-trip and follow-up

The hope and goal of whale watching education is to translate the whale watch experience to a wider audience and to inspire greater involvement and follow-up activity from those who participated.

E.1 Encouraging additional involvement

How does the educator prolong the whale watching experience? Participants can be encouraged to stay involved by joining museums, local NGOs, etc. Guide/educators should be able to provide names and addresses of such groups.

For special groups, such as school classes, a video of the trip can be taken and given to the teacher(s) for further use by the class. This is not always possible. A camera operator might be unavailable and the cost of equipment might be out of the reach of some tour operators.

Conservation activism may be encouraged after the journey is finished. This can take the form of encouraging monetary gifts for research and education, joining an NGO or going on a mailing list to receive further information. Such tools as “adoption” of whales could be suggested. Some tour operators request that watchers send copies of their best pictures to add to the photo ID catalogue. It was acknowledged that this can also lead to an expectation of involvement in the research program which the tour operators cannot fulfil.

Table 1: Diversity of Whale Watching Platforms

This table shows the diversity of whale watching platforms and the resulting diversity of educational potential and needs.

Platform	duration	education type or potential	scope	audience
<i>cruise ship (large)</i>	d-w	A	G	GP
<i>cruise ship (medium)</i>	d-w	A, B	W, N, G	GP, WE
<i>purpose-built large w/w boat</i>	h-w	A, B, D	W	all
<i>research vessel</i>	d-w	A, D	W	HE, WE
<i>sailboat</i>	d-w	B, D	W, N, G	all
<i>dinghy</i>	h	C	W, N	HE, WE
<i>zodiac/panga</i>	h-d	C, D	W, N	HE, WE
<i>fishing/whaling boat</i>	h	B, C	W	all
<i>ferry</i>	h	B, C	W, N	all
<i>swim with/feeding dolphins</i>	h-d	B, C	W	WE
<i>aircraft</i>	h	C, D	W, N, G	all
<i>shore-based</i>	h-d	A, B, C, D	W, N	all

Duration: h - hours; d-days; w - week or more.

Education type/potential:

- A sophisticated infrastructure availability on board and/or land
- B medium infrastructure
- C basic infrastructure
- D based on interfacing with research group. Large interface between whale watcher and researcher

Scope:

- W whale watching only
- N nature tours on which whales are seen
- G general tours with some natural component (including whales)

Audience:

- G general public
- HE higher education (students 13+)
- WE whale and nature enthusiasts

2.1.1. Multi-lingual difficulties

All whale watch operations face some difficulties with interpretation and education for tourists who do not speak the language of the locality. This problem can exist even within a multi-lingual country, such as South Africa where eleven distinct languages are recognised. One of the problems in production of education material is the very high cost of printing in more than one language. In some operations, this is prohibitive.

The problems of presenting multi-lingual information may be remedied by having both verbal and written information. Both methods present challenges: verbal repetition in too many languages may be tuned out by the watchers and printed material can become litter. It therefore becomes a matter of quality of information rather than quantity.

The Workshop suggested some ways of dealing with this problem.

- Having generic whale watch information (species identification, basic whale biology) available on the Internet in a number of languages, to be downloaded by whale watch operators as needed. Information can be modified by guides for specific needs.
- When the group is a special tour, translators with the tour group are invited to become translators for the whale watch guides. This effort is successful in Iceland.
- The use of audio cassettes with information in various languages which are available at the beginning of the whale watch. This is successful in South Africa.
- The use of multi-lingual brochures and posters is already done in Massachusetts (USA), Argentina and Japan.
- The use of multi-lingual interpretive signs is used in South Africa, where leaflets in various languages are available at the whale watching site.
- Hiring extra guides and multi-lingual guides is current in Argentina, Norway, Iceland and Dominica.
- In small-boat operations, watchers may be grouped by language. In Colombia, where small boats are used to view the river dolphins, this solution has been successful.
- The use of multi-lingual videos on the boats and at interpretive centres is successful in Norway.

There is no easy solution to this problem. It is especially acute in developing countries and at pioneering whale watch venues. It may be possible for NGOs to provide multi-lingual materials to operators who cannot afford them.

The importance of interaction between the guide and the watchers becomes even more important in the presence of language difficulties. Examples were provided of guides spontaneously using drawings and sounds in the presence of a language barrier.

It was pointed out that using enthusiastic local people tends to mitigate the problem. Even though the language is not understood, with goodwill and pantomime, the information may be conveyed. The example from South Africa, where only shore-based whale watching is available, shows that a community-based guide program increases tourist satisfaction dramatically, despite the language difficulty, because watchers are given spontaneous information about the local culture as well as the whales.

The Workshop acknowledged that many technological “fixes” are not available in developing areas. In these cases, site-specific written information is of increased importance, because local guides may lack extensive information to share and may have difficulties interacting with the public. There are major differences in what interpretive resources are available based on the maturity of the whale watch activity at the site.

2.2. Kind and quality of science information to be provided

The kinds of science information to be provided was discussed in depth. It is recognised that guides can be anecdotal, relating first-hand experiences. Detail (but not accuracy) in science information may be sacrificed to establish a good guide/watcher relationship. Printed materials can present information in more depth.

It was suggested that the general rule used by museums — that of gearing materials to the level of 10-12 year olds — be followed in the creation of educational materials. The initial information is simple and understandable, then, depending upon the age and sophistication of the watchers, more elaborate data may be provided.

2.2.1 General information transfer

The need for accuracy in whale watching education is paramount. What the guide says is taken to be true. Three kinds of information are generally transferred on most whale watch cruises: natural history (includes biology, ecology, oceanography, ecosystem data), cultural history (includes local history and folklore) and conservation history (local, regional and global levels).

Information given should have depth and breadth, but this is not critical. There is a difference between verbal and written information, not just how it is perceived but in actual content. The talk of a guide may be anecdotal and lack sophistication. It should be accurate but a guide/naturalist should interpret only to the level of their expertise. Written materials can have more depth and detail. If the educational content is seen as an “onion,” how much of it is peeled depends upon the knowledge of the guide and the needs and desires of the watchers.

The Workshop felt that interpretation should move away from being “whale-centric” and progress towards other taxa and the environment in general. Difficult groups (language barriers, some school children, or those with a lack of any conservation knowledge), present special challenges which the guide must overcome with accurate information and good humour.

The behaviour of the educator must be consistent with the message. If the guide emphasises that whales are important but is not behaving in a respectful manner towards them, a confusing message is sent. Throwing trash overboard, for instance, tarnishes the value of the encounter with cetaceans.

2.2.2 The guide as researcher

The issue of guides who are also active researchers was presented. Are the two tasks compatible? The guide’s job is to encourage and direct the watchers’ powers of observation. Can this be done if the guide is also collecting data? It was concluded that the scale of the research is more important than the size of the whale watch operation in making the two tasks compatible. For instance, if the data collection must be continuous it is likely to interfere with interpretation. Most experienced guide/researchers have not found problems, and most have interns to assist them. However, it was acknowledged that certain research is intensive and would preclude simultaneously acting as a tour guide.

The scientist/guide has the unique opportunity to educate the public about the research being conducted by sharing the experience as it happens, explaining its components, its significance to the whales under study and its further value to conservation and management.

In some small scale research efforts, such as those in Colombia and Argentina, local people are invited to participate in river dolphin and Commerson’s dolphin research, respectively. This participation is also educating, not just information transfer but providing the reasons for research and the spirit of it. Involving the community in the research teaches respect for the local environment and stresses its uniqueness and importance.

The contribution of such research organisations as Earthwatch (USA-based) and Tethys (Italy-based), which use amateurs as part of the research work force, was noted as an important contribution to whale watching education. The Workshop recognised that research funding is difficult to obtain and such collaborations are mutually beneficial.

The Workshop concluded that whale watching is a tool for educating people at all levels, in all localities and at all ages in natural history, cultural history and conservation. It believed strongly that whale watching everywhere must have an educational component.

2.3 *Whale watch guides*

The time has come for whale watch tour guides to be professionals. The job should be viewed as a career, even if it is only part-time in many areas.

A certification process for whale watch guides is highly desirable. Guilds or associations of whale watch operators might provide the sponsorship of such certification. Guides could receive certificates from Workshops, with additional recognition as they study and gain experience. NGOs, both local and international, could assist in the certification process.

Where certification systems may be difficult to implement, standards of operation and skills should be promoted. It may be possible to use a local permit system, whereby awarding of permits could only occur if the applicant demonstrates the existence of a solid, continuous educational component in the operation.

2.3.1 Local guides as educators

Guides (naturalists) should be local people wherever possible. In some cases, guides may come from outside the region (as in Norway), and others may be researchers using the whale watch as a research platform. The important point is to involve the local community from the first and continue to involve them.

Local guides need not necessarily have a strong scientific background. In many areas, especially pioneering places, this is not possible. They should, however, be knowledgeable people with enthusiasm, strong communications skills and high personal motivation. In some cases, guides may be temporary, for instance, students who will stay for a year or two while they are studying. In other cases, the jobs will be looked upon as permanent.

Several Workshop participants noted that some of the local guides who become professional often also become community leaders, speaking about the local ecosystem with an authoritative voice, and are able to reach potentially large audiences through contact with tourists, researchers and NGOs.

Establishing and running whale watches, especially in pioneering localities, should ideally involve a partnership between local people, NGOs and local authorities working together to develop both the educational and business aspects of the whale watch operation. Educational standards and training should be community-based, specific to the site, comprise different levels and be on-going.

Local communities are more likely to protect and value the resources they "own." In the absence of local support, a whale watch operation might be misunderstood or even resented. Thus there is a need to educate the community about whale watching as well as the cetaceans and the local ecosystem. With a good partnership, experience has shown that there is considerable excitement when local customs and folklore become a part of the knowledge to be imparted to whale watchers. In this manner, a higher level of protection of the local environment may be fostered.

An example comes from Chile where the killing of dolphins is common. The focus is first to educate the local population about local cetaceans and their place in the ecosystem. This will not only help to develop whale watching but will provide an incentive to protect the resource with the result that fewer dolphins will be killed.

2.3.2 Education and training of tour guides

Training should be specific to the site and involve local culture and the environment. Guides should aspire to a high standard of accurate information. Their position is an important one, and, ideally, should include the following training.

Presentation:

Personal style of each guide should be encouraged and assisted – enthusiasm and commitment are important.

The fundamentals of leading a group.

Basic theories of how people learn.

Operational standards:

Knowledge of safety, first aid, hospitality and etiquette.

Where and when to find whales.

Knowledge of regulations and techniques.

Personal commitment to practicing what is preached.

Content:

Local ecology, cultural ecology and context ecology, local natural history.

Basic biological and behavioural information about cetaceans at the site (this, of course, expands and becomes more sophisticated as the guide learns).

Conservation values based not just on local practice, although this is important, but broadened to the region and the world.

Guides should be trained in what to do on a whale-less whale watch. "Plan B" can include information about species other than whales which may be seen, geographical information and explaining the environment as a whole. If possible, alternative activities should be available - simple scientific apparatus onboard (inexpensive microscopes, plankton nets, etc) can provide good education and recreation for the watchers. It is important to put the whales in their environmental context: they are only one of the species in the area, and all are inter-connected.

2.3.3 Who is responsible for training of tour guides?

Where whale watching already exists, the resources of local contacts, local museums, research institutions and local NGOs can assist in training, which should be developed in conjunction with naturalists in existing whale watch operations to ensure commitment and relevancy. Training should be conducted at a site that is convenient to the people being trained. The Workshops must be flexible and must involve local taxa and ecology.

Workshops are recommended as a primary way of training guides. These are already in use, sponsored primarily by international NGOs such as WDCS and IFAW assisting local NGOs. The Workshops can last 4-5 days or more. They have been a successful training tool in Argentina, Colombia, Mexico and the Caribbean.

Information about a number of existing tour guide training schemes was presented, and is summarised below.

Iceland: the high quality of training given to general tour guides in Iceland was noted. Iceland has a six-month long intense training for tourist guides, which presently includes only one hour devoted to whale watch guides, but the

over-all concept of such training is a standard to be aspired to, encompassing as it does training in several languages. It is, however, expensive and may not be possible everywhere.

South Africa: it is planned that service personnel, for example bus drivers, receptionists, and ticket takers, will also receive training. As a result, whale watchers can have questions answered by a variety of people. Further educational programs are planned for South Africa. Guide training is carried out at private tourism schools with costs borne by the guides. It is, however, possible to obtain scholarships for whale watch and nature guide classes through local businesses.

Caribbean countries: there are training schools for hotel operations and personnel, and it is possible whale watching issues could be included in the curriculum of these schools.

Argentina: guides must pass an examination. The government, local universities and NGOs give courses lasting from a week to four months free of charge.

As a general statement, the Workshop felt that NGOs should offer themselves as a resource and remain in contact with tour operators and guides.

Updates and continuing education are also important. An example came from Australia, where, at Hervey Bay, Workshops are organised by the government. Outside NGOs and scientists assist to convey the latest science and conservation issues and continue to expand the content of the whale watching education with ideas and techniques.

Guides may also be trained in an apprenticeship system. This can be an informal apprenticeship with hands-on training that lasts as long as it takes for a "student" to "learn the ropes." It may also be possible to set up apprenticeships or internships as a part of more formal guide training.

2.4. Boat operators

Boat operator training is paramount for the well-being of both whales and passengers. Irresponsible operations may negate the educational experience. Most countries do not have laws, regulations or standards for boat operators, and there are examples of a lack of common sense about whale/boat encounters. Even where regulations exist, some operators continue to harass the whales.

It is helpful for NGOs, operators and local authorities to work together. Local NGOs can assist in setting standards for responsible behaviour. The presence of scientists on board can help ensure responsible tour operation.

This is an area where certification would encourage responsible behaviour. If tour companies could advertise that they had certified tour guides on board, or that their vessel was certified, it could influence the public to choose a certified boat over an uncertified one. Responsible vessel operation and quality information should enhance customer satisfaction.

MODEL: BRIEF, USEFUL GUIDELINES FOR BOAT OPERATORS

1. Do not pursue, overtake, head-off or encircle cetaceans or cause groups to separate.
2. Never approach whales/dolphins head on.
3. Avoid sudden changes in noise level (gear shifts, never reverse).
4. Reduce speeds on approach in areas where whales may be sighted; leave areas cautiously, slowly.
5. Extreme caution is required when the following is present:
(1) feeding, (2) cow/calf pairs and juveniles, (3) resting, (4) breeding or rowdy groups, and
(5) socially active groups. Cetaceans behaving in these ways are sensitive to disturbance and may be vulnerable to collisions.

2.5 Certification

New Zealand has a system of licensing for whale watch tour operators which includes a mandate that in order to secure a license, the tour operation must provide the permitting authority with its education plan. The regulations state that commercial operations should have a plan of “sufficient value to participants or the public.” Permits are issued by the Department of Conservation.

Tour operators state that the requirement has encouraged them to develop educational materials although the quality has not been evaluated. In reality, the tour operator can submit any sort of educational plan and then possibly abandon it in the absence of significant monitoring or updating.

In 1995 Brazil enacted a law requiring all boats and vessels operating commercial whale watching within a conservation unit — national park, sanctuary or environmental protection area — to provide passengers with educational materials. However, criteria for the type, quantity and quality of such materials has not been established.

In South Africa, all tour guides must be registered under the terms of the national Tourism Act. Categories of registration include local, regional, national or specialist guide. A “whale specialist” category has recently been established at the community level.

In Argentina, in Chubut and Santa Cruz Provinces, provincial or local authorities license whale watch tour operators. Guides must be registered as provincial or local to be allowed to work in the area. The experience in Argentina of three-day Workshops, provided by WDCS and Fundación Cethus, suggested that the best way to monitor and regulate whale watching operations would be through a multi-disciplinary group formed by NGOs, researchers, operators, provincial and local authorities of the tourism department, and the Coast Guard.

It would be valuable to get some sense of the quality of programs in areas where there are no government regulations regarding education compared with areas where such is required. If whale watch operations with educational components are seen as very successful, this can be as influential (and possibly more efficacious) in encouraging others to follow suit than a permit requirement.

Despite these difficulties, a framework to establish qualifications for guides and a licensing system is highly desirable. Ideally, the tour operators and guides would monitor themselves, partly as a function of competition. A combination

of NGO monitoring and success in the marketplace would be more powerful than constant government interference and attention.

It is recommended that authorities assist by issuing a regulation requiring a qualified naturalist/guide on each whale watch in order to secure a permit. This sort of regulation sets a standard which could then be more easily monitored. Without such a requirement, an operator might be tempted to sacrifice a high level of educational content if threatened with competition offering bargain trips with a lower level of educational content.

An example of the problem came from the Gerry Studds Stellwagen Bank Sanctuary in Massachusetts, USA. Administrators there often get requests from the public to recommend a particular whale watching operator. This, of course, is not possible, and the client is simply sent a master list of tour operations. If a naturalist certification program were in effect, criteria would exist by which whale watchers could compare and select tour operators. A company with certified guides could also advertise and have a marketplace advantage.

3.0 ACADEMIC USEFULNESS OF WHALE WATCHING

The Workshop agreed that “academic usefulness” meant the use of whale watching as a formal academic tool, either focusing on the biology and ecology of the experience, or as an interface with other curricula (e.g., mathematics, geography, history, literature). In addition to traditional academic applications, educational programs may also serve professional/vocational purposes such as training guides or tourism personnel, providing internships for students and research staff, and training teachers.

A whale watching experience can be utilised not only by those who go to sea or to sites on shore, but by those who participate indirectly through technological linkages. An example was given from Colombia, where a local school was linked with a school in England. The English school was studying the whole Amazon ecosystem and had adopted a dolphin. The interchange between the two cultures was exciting and enlightening for both groups of students.

3.1 Whale watching as an extension of the classroom

Whale watching may be viewed as an enticement to get students (and teachers) interested in local species and ecosystems, and to stimulate an interest in formal schooling in cetology, oceanography, ecology and/or conservation biology.

To be an effective classroom extension, whale watching is best integrated with academic programs in at least two ways:

- a) Within the trip experience. In this case it is important to integrate the actual trip with academic programs by providing for pre-trip preparation, trip participation, and post-trip follow-up.
- b) Multiple trip experiences. In this case multiple trips may be developed for the same students across successive school semesters or years, with different foci applied to each trip. For instance, in Hawaii, the Pacific Whale Foundation has developed a series of whale watch experiences for elementary school children that has been integrated within the State Department of Education’s curricula for a series of age groups.

A potential valuable contribution of whale watching to education in general is its ability to expose students to the methods of scientific inquiry. This can be accomplished by incorporating a research component into the whale watch

experience. Whale watching as an extension of the classroom will benefit from exposure to local scientists and scientific activity.

It is important to educate educators themselves to realise that whale watching is an outstanding educational resource which should utilise local science and scientists.

There are wide differences throughout the world in resources, educational philosophies, local customs and regulations, and availability of platforms. Consequently, activities and materials used need to be tailored to meet a variety of requirements.

NGOs and other community groups can assist in the identification and distribution of resource materials appropriate for various sites. Teaching kits which can be modified for local situations are already available and can be expanded. Such kits can emphasise global concerns and demonstrate linkages between ecosystems.

NGOs and community groups can also identify local experts, guides, and researchers and encourage them to visit classrooms. Efforts should also be made to identify and distribute artifacts, audio-visual materials and collateral resources.

The use of whale watching in an academic setting should not only emphasise content but should serve to develop critical thinking skills, sharpen problem-solving skills, provide exposure to the elements of scientific inquiry, and enhance awareness of the environment. These broader goals may be accomplished by using the whale watch experience in a variety of contexts, depending upon location and available resources. These contexts may include the following.

- a) use of the whale watch experience alone as a direct extension of classroom activities such as studies on whales and whaling, on endangered species, or on biology or ecology, using local scientists;
- b) use of the whale watch experience in combination with a variety of materials, including brochures, audio-visual aids, and additional follow-up activities such as development of exhibits of student work for a larger audience;
- c) use of the whale watch experience in combination with more technically advanced capabilities such as data collection, storage and analysis, communication with other groups through the Internet, production of supporting materials and development of independent research projects.

The Workshop recommended that an Internet clearinghouse for whale watch educational materials be developed. A currently available site established by Rauno Lauhakangas of Finland (present at the Workshop) in the World Wide Web's Virtual Library (the Whale Watching Web: <http://www.physics.helsinki.fi/whale/>) provides an initial model site. Additional efforts should focus on providing information in many languages on diverse topics which could then be downloaded and modified. Although many tour operators or educators wishing to utilise whale watching as an academic tool will not have access to a computerised database, the continued effort to build such a mechanism should not be discouraged.

In addition to the provision of collateral materials, a need exists to build and share a repertoire of useful exercises and activities of varying degrees of sophistication. In many areas, schools already use whale watch tours to support units on conservation, marine mammal biology and natural history. This effort may be enhanced by an exercise as simple as adopting a member of a designated species, organising a beach clean-up, or writing opinions concerning current conservation topics. More elaborate exercises may build on the whale watch experience by having students participate in the research effort by completing sightings data sheets, detailing behavioural observations, or documenting ancillary data on environmental conditions.

An example comes from Argentina, where primary and secondary schools organised six-day nature trips, which include southern right whale watching activities. However, such trips are not yet part of the curricula. At least eight tourism companies were involved in these trips. One company, Ebano Viajes, which specialises in educational trips, sent 450 children to Peninsula Valdes in 1996. The number of educational trips to this locale has increased year after year.

3.2 Use of the Internet, World Wide Web and other high-tech tools

The Internet and the World Wide Web will be able to contribute substantially to whale watch education by providing materials and by linking guides and operators globally. Even with the present drawback that many operations, especially in developing nations, cannot access the Internet, a substantial impact on educational applications is being effected elsewhere. Systems currently in place are providing information on locations, biology, ecology and conservation, and are expanding rapidly in terms of the number of websites and information content.

3.3 Funding of programs

The funding of academic applications of whale watching may be provided by a variety of community organisations. Local businesses generally consider support of educational programs as an important investment in the community. It is recognised that part of the educating process is that of teaching funding agencies about the importance of supporting educational programs that utilise whale watching. Departments of Education can frequently provide some funding for field excursions, or will at least help reduce the cost to the students by providing transportation.

Operators should also be encouraged to provide whale watching by local school groups. In many cases, school whale watches can be scheduled in addition to regular commercial trips, so that the only additional cost to the operator is fuel (crews are normally paid by the day not the trip). NGOs can also play an important role in finding funding based on a partnership of community groups.

4.0 EVALUATING THE EDUCATIONAL EXPERIENCE

There is a need to evaluate the effect of whale watch education. Of particular interest is the question of whether education received on a whale watch is retained and changes the behaviour of the watchers, making them more sensitive to other environmental and conservation issues. Such an evaluation has not been conducted in any systematic way, although many individual tour operators, some outside researchers and some NGOs have undertaken the task for particular whale watch operations.

The Workshop thought it important to set forth some general principles and ideas about this topic which could then be used in future.

4.1 Reasons to evaluate

The rationale for a systematic evaluation emphasises three points:

- 1) to investigate whether the goals and values (information transfer and change in normative measures) of education are being met;
- 2) to identify those component parts of educational programs which are either working or not working;
- 3) to measure the significance of any success in terms of its impact on the improved condition of the species and/or habitat, and the cost-effectiveness of the effort. (Cost in this case is meant to mean impact on the species, economic and energy demands on the educator, and any impact on the whale watcher.)

4.2 What to evaluate

Two general categories were identified as targets of evaluation: 1) elements of program delivery, and 2) changes in the audience. The ultimate success of educational programs is in part a function of the platform of delivery, the personnel interacting with the participants as guides or naturalists, the nature of the presentation, the collateral materials utilised, and the linkages to other sources of information or activities identified as part of the whale watch. Each of these elements should be investigated to determine what varieties of each element are associated with the most effective program.

In the final analysis, the success of educational programs on whale watch excursions must be judged on the basis of changes in knowledge, attitudes and behaviours of the participants. It should be noted that these changes could be measured in both immediate and long-term scales. In addition, evaluations of change should be related to the ongoing nature of each specific program to determine whether the program demonstrates evidence of improvement over time. Specific goals of educational programs with respect to knowledge, attitudes and behaviours are specified in Sections 2 and 3 (above) dealing with educational and conservation themes.

4.3 How to evaluate

The particular mechanisms for evaluating the effectiveness of educational programs on whale watches should be selected by specialists in quantitative methods. Evaluation techniques used by the travel management industry and ecotourism companies may have relevance to this task. There are many sources of bias inherent in studies of attitudinal changes, and behavioural changes may be extremely difficult to monitor over extended periods of time.

Nonetheless, it is imperative that standardised methodologies be used in consultation with appropriate experts to ensure the validity and replicability of any significant findings. Ensuring such standardisation will enhance the ability to generalise the results to many other areas as well as the identification of area-specific features of particular programs.

4.4 Who should evaluate

As in other phases of program development, it is recommended that the evaluation process result from a partnership of government, NGO, industry, research and community groups. It was felt that government agencies may serve an important function by requiring effective evaluation of programs on an on-going basis.

The results of evaluations would be of most value if published in peer-reviewed literature to enable the widest possible dissemination of information concerning the effective elements of successive educational programs on whale watches.

5.0 THE ROLE OF NGOS

NGOs which specialise in conservation education have played an important role in the development of whale watching since its inception in the 1960's. NGOs produced the first educational materials used in whale watching. As whale watching grows exponentially around the world, the role of NGOs is more important than ever. The Workshop noted, for instance, that throughout discussions on previous topics, the assistance of NGOs was recommended or acknowledged.

NGOs are often responsible for the development and production of a variety of educational programs associated with whale watching: teaching materials, general public awareness campaigns, posters, adoption campaigns, and guide training workshops.

A number of contributions to be made by NGOs was noted and are listed here in no order of priority:

- To facilitate networking between NGOs themselves and with whale watch operations and other relevant parties such as governments, local authorities, and the media and to act as mediators when appropriate. Much of the work of NGOs involves negotiations with, and the educating of, ministries of fisheries and/or tourism.
- To provide consultants and expertise.
- To promote education programs as an integral component of whale watching everywhere.
- To provide educational materials, translations, and funds to develop programs and to train guides and naturalists.
- To inform policy makers, teachers, legislators, industry and other groups about the educational value of whale watch programs.
- To help identify and encourage local guides and teachers.
- To monitor whale watch education programs for standards, accuracy, quantity and content.
- To work to establish an educational and training component in proposed or existing permits and licensing systems.

- To help create and support sanctuaries, protected species and areas.
- To support local NGOs with funding, expertise and encouragement.

One area where NGO support has been essential is in creating and running workshops to train guides and whale watch operators. This effort should be continued and expanded.

Vital long-term support for whale watch educational programs has come primarily from NGOs, often international groups working with local groups or individuals. Continuity and sensitivity to local customs and issues is an important part of this activity.

Where regulations are being considered or developed, local and international NGOs should become involved so that the constituencies they represent may have a voice in the outcome. It was noted that the sooner a problem is recognised the easier it is to solve.

NGOs provide not just funding and expertise but vision. They can and should provide stimulation, inspiration, education and hope in efforts to protect and conserve local cetaceans. To this end, NGOs should continue and expand work with local people to implement and increase the feeling of stewardship and responsibility for education about protection of cetaceans and the local environment as a whole.

NGOs which specialise in conservation education should actively seek opportunities to further promote educational programs, and to address the issue of weak or non-existent educational programs in a way which is always sensitive to local customs and culture. The Workshop felt that local NGOs should actively seek to be involved in any whale watch education programs in their area. In some cases, these local groups may be usefully supported by international NGOs.

An example comes from Argentina, where an NGO (Fundación Cethus) produced a series of five documentary films on whales and whale watching. The documentaries feature a talk by a cetacean researcher and have been promoted by television, radio and newspapers. Thus the NGO has reached and educated large audience.

In certain areas of the world (Japan and Iceland, for example) NGOs have little political effectiveness or influence. In such places, NGOs should work in a pragmatic and culturally sensitive way through individuals, communities and existing government institutions. In no case should encouragement of whale watching be pursued or viewed as an aggression on or violation of local custom.

NGOs also have an important role in promoting whale watch education at international fora, such as the IWC and UNEP. It was seen as vitally important that NGOs coordinate their efforts, at all levels, to ensure that they are complementary and that there is no duplication of effort or conflicting agendas. It was also thought vital that NGOs seek support from each other.

International NGOs may be seen as an important resource for local groups. One of their functions is that of monitoring and evaluating activities and materials. International NGOs can also fund studies of such things as demographics of whale watching clients, effectiveness of campaigns, and then present these to local NGOs.

No group has unlimited funds. Therefore, NGOs should coordinate, cooperate and prioritise for the most effective and efficient utilisation of funds and activities.

6.0 THE ROLE OF COMMUNITIES

Community is defined as the entire range of human interests within a spatial unit – which could be a town or village, an island or group of islands, in some cases even a region or protected area. The Workshop recognised that there are sub-units and minorities within the wider “community.”

6.1 *Community activities*

Communities can benefit from an understanding of the academic and public advantages of well-organised whale watching. There are practical things a community can do to help whale watch education:

- Provide signs throughout the town to raise awareness.
- Provide local knowledge about whales, local history and folklore to visitors.
- Create educational brochures and materials as a way for the public to find out about itself.
- Access regional and national funding to assist educational activities.
- Build a conservation image around whales. In communities looking for an image, whales are a way to gain more recognition and to market the community to the world, as is happening in Húsavík, Iceland, and as has happened already at Kaikoura, New Zealand.
- Assist and encourage local people, such as hotel representatives and store keepers, to be trained as guides, teachers, spokespersons.
- Create festivals and make the most of existing local cultural events to highlight whale watching and education, including a method of local participation in such events.
- Sponsor clean-ups or conservation events with an educational focus.
- Create land-based interpretive areas and viewing platforms as an alternative and/or introduction to vessel-based whale watching.
- Sponsor and encourage special whale watch trips for schools and other groups in the local community, nearby communities and urban areas.
- Assist in the development of school programs which can use whale watching (in some places communities have an influence on curricula which might then be expanded beyond the community).
- Use local media – radio, television, newspapers and magazines – to cover whale watching events and activities and encourage responsible coverage.
- Create special seasonal and long-term themes – e.g., “Whale Week”, or “The Year of the Whale” –to unite the town and draw audiences and tourists from elsewhere.
- Establish local reserves, sanctuaries or protected areas. Locals could be used as guides or enforcement officers, encouraging the strong community interest so important to making protective efforts successful.

Communities might pass local regulations which would reflect on their economy and self-determination, such as mandatory regulations requiring local employment on boats and in subsidiary whale watch activities. This would help small communities to avoid being by-passed by large external whale watch operations.

6.2 Educating communities about whale watching

Each community has its own set of particular issues and sensitivities. Some, for example, will simply not be interested. Those which are interested in whale watching should identify local people who will take a lead and stimulate interest by pointing out the values and reasons why a community would want to establish whale watching. They can, for instance, note that whale watching has proved itself good for business, and good for the image of many communities, providing public and academic education and job opportunities. It can also be a stimulus to long-term conservation of the adjacent marine environment of a seaside community.

Conflicts in a community can arise between user groups. Such conflicts have often been dealt with by NGOs and governmental authorities and may even be viewed as an opportunity, not a problem. For instance, resolving such conflicts can lead to proposals for integrated coastal zone management. In this case, both local and international NGOs can assist by providing data and management plans to illustrate the efficacy of integrated management.

COMMUNITY-BASED WHALE WATCHING

A preliminary list of communities which already have taken a role in the organisation, management and promotion of whale watch activities. Some of these are at the pioneering level.

Argentina:	Puerto Pirámides, San Julian, Puerto Deseado
Australia:	Hervey Bay, Byron Bay
New Zealand:	Kaikoura
USA:	Westport, Provincetown, Lahaina
Puerto Rico:	Rincón
Japan:	Ogata, Zamami, Ogasawara
South Africa:	MTN Cape Whale Route, Hermanos
Norway:	Andenes
Iceland:	Húsavík
Canada:	Telegraph Cove, Tofino
Scotland:	Moray Firth
Mexico:	Guerrero Negro

7.0 CONCLUSIONS

Throughout the discussions of each agenda item, recommendations were noted. The Workshop asked that the Chairperson (Wray) extract those recommendations and present them to the Workshop as a part of the second draft of the report which was submitted by mail (airmail, e-mail and fax) to each participant for further comments and approval.

In making these recommendations, the Workshop noted that some countries where whale watching is just developing may be unable immediately to implement such recommendations as tour guide training, regulations and certifications and other time- or cost-intensive suggestions. The recommendations should not discourage pioneering efforts, but should be used by new and old operations as guidelines.

7.1 *Recommendations*

- It is recommended, recognised and agreed strongly that whale watching is a tool for educating people at all levels, at all ages and at all localities in natural history, cultural history and conservation, and that all whale watching must have an educational component.
- It is recommended that local, national and international NGOs and community groups assist in the identification and distribution of resource materials appropriate for various sites.
- It is recommended that whale watching in an academic setting not only emphasise disciplines such as biology but should strive to develop critical thinking skills, sharpen problem-solving skills, provide exposure to the elements of scientific inquiry, and enhance awareness of the environment.
- It is recommended that an Internet clearing-house for whale watch educational materials be developed and its use encouraged.
- It is recommended that standardised mechanisms for evaluating information transfer in whale watch education be pursued for its long- and short-term effect.
- It is strongly recommended that professionalism in whale watch tour guides be encouraged and that it be viewed as a career.
- It is recommended that tour guides be recruited from the local area of the whale watch operation wherever possible so that a sense of local stewardship and involvement is fostered.
- It is recommended that a system of certification of tour guides and tour operators be established, either by local or national authorities, wherever whale watching exists.
- It is recommended that a system for licensing and regulating tour guide operators be established wherever whale watching is practiced, and believed that the quality of tours would increase were there regulations mandating the presence of a qualified tour guide, naturalist or scientist in the operation to secure a permit.
- It is recommended that workshops and other educational methods be encouraged for the training of tour guides and tour operators; and such training tools be developed by cooperation between local authorities, regional and national governments, local and international NGOs.
- It is strongly recommended that codes and regulations for whale watching education and operation be established where they do not exist.

- It is strongly recommended that tour operators, guides, authorities, NGOs and whale watchers encourage and insist upon a high standard of credibility among tour operators in the production of their advertising and promotional materials so that the level of client expectation is realistic and educational goals are served.
- It is recommended that communities should, where possible, take an active role in promoting the educational aspects of whale watching.

7.2 Post-Workshop life of the report

The Workshop wished this report to have as wide a dissemination as possible, believing it to be of value to government agencies at all levels, ministries (environmental, tourism, educational) and local authorities, tour guides and operators, scientists, NGOs and educators. The publication of a summary brochure version of the report was encouraged.

The report will be translated into several languages, including Spanish, Portuguese and Japanese. Representatives of NGOs present at the meeting offered funding for translations, which generosity was applauded by the Workshop.

The report will be submitted to the International Whaling Commission at its 49th meeting in Monaco in October 1997.

8.0 CLOSING OF THE MEETING

Following a vote of thanks to all participants and observers, and to the support personnel and rapporteurs, the meeting was adjourned. The draft report was then circulated via e-mail, FAAX and airmail for further comment.

The Workshop gave approval of the preliminary draft report in Provincetown. This was refined and circulated after the meeting by the Chairperson to all participants for additional comments. The summary, acknowledgements and introduction were prepared by Wray after comments were received.

APPENDIX A Approved Agenda

APPENDIX B General Principles for Whale Watching (IWC document)

APPENDIX C List of papers available to participants (does not include the promotional materials)

APPENDIX D List of participants, observers and support personnel

APPENDIX A

Approved Agenda

- 1 OPENING OF THE MEETING
 - 1.1 Appointment of Rapporteurs
 - 1.2 Adoption of Agenda
- 2 EDUCATIONAL VALUES OF WHALE WATCHING: THE CURRENT EFFORT
 - 2.1 Summary of Types of Information: What Should be Included
 - 2.1.1 Multi-Lingual Difficulties
 - 2.2 Kind and Quality of Science Information to Be Provided
 - 2.2.1 General Information Transfer
 - 2.2.2 The Guide as Researcher
 - 2.3 Whale Watch Guides
 - 2.4 Boat Operators
 - 2.5 Certification
- 3 ACADEMIC USEFULNESS OF WHALE WATCHING
 - 3.1 Whale Watching as an Extension of the Classroom
 - 3.2 Use of the Internet, World Wide Web, Other High-Tech Tools
- 4 EVALUATING EDUCATIONAL COMPONENTS OF THE WHALE WATCH EXPERIENCE
 - 4.1 Reasons to Evaluate
 - 4.2 What to Evaluate
 - 4.3 How to Evaluate
 - 4.4 Who Should Evaluate
- 5 THE ROLE OF NON-GOVERNMENTAL ORGANISATIONS
- 6 THE ROLE OF COMMUNITIES
 - 6.1 Community Activities Associated with Whale Watching
 - 6.2 Educating Communities About Whale Watching
- 7 CONCLUSIONS
 - 7.1 Recommendations
 - 7.2 Post-Workshop Use of the Report from the Workshop
- 8 CLOSING OF THE MEETING

APPENDIX B

General Principles for Whale Watching

Recommended by the Scientific Committee to the International Whaling Commission, at its 48th annual meeting in Aberdeen, Scotland, 24-28 June, 1996, document IWC/48/4.

- 1) Manage the development of whale watching to minimise the risk of adverse impacts:
 - (i) implement as appropriate measures to regulate platform numbers and size, activity, frequency and length of exposure in encounters with individuals and groups of whales;
 - management measures may include closed seasons or areas where required to provide additional protection;
 - ideally, undertake an early assessment of the numbers, distribution and other characteristics of the target population/s in an area;
 - (ii) monitor the effectiveness of management provisions and modify them as required to accommodate new information;
 - (iii) where new whale watching operations are evolving, start cautiously, moderating activity until sufficient information is available on which to base any further development;
 - (iv) implement scientific research and population monitoring and collection of information on operations, target cetaceans and possible impacts, including those on the acoustic environment, as an early and integral component of management;
 - (v) develop training programs for operators and crew on the biology and behaviour of target species, whale watching operations, and the management provisions in effect;
 - (vi) encourage the provision of accurate and informative material to whale watchers, to:
 - develop an informed and supportive public;
 - encourage development of realistic expectations of encounters and avoid disappointment and pressure for increasingly risky behaviour.

- (2) **Design, maintain and operate platforms to minimise the risk of adverse effects on cetaceans, including disturbance from noise:**
 - (i) vessels, engines and other equipment should be designed, maintained, and operated during whale watching, to reduce as far as practicable adverse impacts on the target species and their environment;
 - (ii) cetacean species may respond differently to low and high frequency sounds, relative sound intensity or rapid changes in sound:
 - vessel operators should be aware of the acoustic characteristics of the target species and of their vessel under operating conditions, and particularly of the need to reduce as far as possible production of potentially disturbing sound;

- (iii) vessel design and operation should minimise the risk of injury to cetaceans should contact occur; shrouding of propellers can reduce both noise and risk of injury, for example;
- (iv) operators should be able to keep track of whales during an encounter.

(3) Allow the cetaceans to control the nature and duration of interactions:

- (i) operators should have a sound understanding of the behaviour of the cetaceans and be aware of behavioural changes which may indicate disturbance;
- (ii) in approaching or accompanying cetaceans, maximum platform speed should be determined relative to that of the cetacean, and should not exceed it once on station;
- (iii) use appropriate angles and distances of approach; species may react differently, and most existing guidelines preclude head-on approaches;
- (iv) friendly whale behaviour should be welcomed but not cultivated: do not instigate direct contact with a platform;
- (v) avoid sudden changes in speed, direction or noise;
- (vi) do not alter platform speed or direction to counteract avoidance behaviour by cetaceans;
- (vii) do not pursue, head off, or encircle cetaceans or cause groups to separate;
- (viii) approaches to mother/calf pairs and solitary calves and juveniles should be undertaken with special care:
 - there may be an increased risk of disturbance to these animals, or risk of injury if vessels are approached by calves;
- (ix) cetaceans should be able to detect a platform at all times:
 - while quiet operations are desirable, attempts to eliminate all noise may result in cetaceans being startled by a platform which has approached undetected;
 - rough seas may elevate background noise levels at which vessels are less detectable.

APPENDIX C

List of Working Papers

K. Findlay

South Africa - a shore-based industry perspective. EVWW/97/1

Fundación Cethus

Whale watching activity in Argentina. EVWW/97/2

P. Hodda

Overview of some educational aspects of whale watching in Australia (with an emphasis on Hervey Bay and Byron Bay). EVWW/97/3

S. Kendall

Fundación Omacha, Colombia. EVWW/97/4

R. Lauhakangas

Whale watching web: a short introduction. EVWW/97/5

M. I. Manzur

Information on whale watching in Chile. EVWW/97/6

M. McIntyre

Educational goals for whale watching in the South Pacific. EVWW/97/7

K. Mori

Educational values of whale watching and actual example of whale watching in Ogasawara (Bonin Is.), Japan. EVWW/97/8

G. Notarbartolo di Sciara

Whale watching in the Ligurian Sea "Sanctuary", Mediterranean Sea. EVWW/97/9

Steering Committee

Workshop on the Educational Values of Whale Watching. EVWW/97/10

H. Strager

Andenes Whale Centre. EVWW/97/11

Examples of whale watching brochures, educational materials, posters and other promotional materials were also available to participants and observers.

APPENDIX D

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