

CRC REEF RESEARCH TECHNICAL REPORT

THE GREAT BARRIER REEF MARINE PARK TRAINING PACKAGE: A PARTICIPANT EVALUATION

**Edward Kim, Gianna Moscardo, Barbara Woods &
Philip Pearce**

Department of Tourism, James Cook University
Townsville QLD 4811

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CRC Reef Research Centre
c/- James Cook University
TOWNSVILLE Q 4811
Phone: (07) 4781 4796
Fax: (07) 4781 4099
Email: crcreef@jcu.edu.au

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FOREWORD

For many years Tourism has been seen as the environmentally benign alternative to a range of destructive practises in special areas of the world. The same was true of the Great Barrier Reef World Heritage Area which arose from disputes over oil drilling in the seventies. It was argued that, if we protect this area and market it well, then people will come from all around the world

to visit this unique environment.

And come they did! The industry has increased from about 150,000 visitor days in the early 1980's to around 1.5 million visitor-days in 1994/95. It is currently the main commercial use in the region and is estimated to generate over \$1 billion annually. As visitor numbers increased, there was a corresponding growth in the numbers of operations, diversity of services offered and use of new technologies and facilities.

Management strategies that relied on remoteness to protect wilderness qualities in some areas of the park in 1985 are no longer so appropriate. In 1985 boats were capable of travelling at 10 knots and could reach 20 nautical miles in 2 hours, in 1990 they could travel to 50 nautical miles at 25 knots; in 1995 they can travel to 70 nautical miles at 35 knots and it is projected that in 2001 they will be able to travel to 100 nautical miles at 50 knots. What this means is that the extent of the World Heritage Area that has become accessible over this period to the day trip tourist industry has increased from 4% to a projected 81%.

Fortunately the time of growth corresponded with a growth in community interest in the natural environment. Operators see the value in providing clients with good interpretation and education as a means of increasing customer satisfaction and thereby increasing their operation's competitiveness. Conversely research indicates that inappropriate staff behaviour has a strong negative response by clients.

The Tourism Training course and associated materials was developed by the Great Barrier Reef Marine Park Authority with the tourism industry, to provide tourism staff with skills and information to enable them to better present the natural heritage of the Great Barrier Reef. The objective was to improve the visitor experience, present the World Heritage Area; and, to promote an understanding of "best environmental practice" among visitors and staff. For a program to be effective, independent evaluation is essential to ensure the relevance and practicality of programs developed. The work carried out by the James Cook University

Tourism Department, with funding through the CRC Reef Research Centre, and industry feedback has been invaluable in helping to provide effective support. This document forms an important part of this work.

David Lloyd
Manager
Extension Unit
GBRMPA

EXECUTIVE SUMMARY

Sustainable tourism requires quality experiences for visitors as well as effective management of negative visitor impacts. Visitor education or interpretation can play a key role in achieving both these requirements. The GBRMPA has developed a Great Barrier Reef Marine Park Manual and an associated training scheme for reef tourism staff to enhance the quality of interpretation provided for GBR tourists. The first series of these training sessions were run in March and April 1996 and this report describes the results of an evaluation of these training sessions by the participants.

The study had three main objectives:-

1. To describe participant views on the relevance, satisfaction with, and ease of use of the training sessions/packages. A series of structured questions were used to assess these aspects of the training sessions/packages.
2. To investigate changes in behavioural intentions with regard to interpretation for visitors and future training. A set of open-ended questions was used to elicit data for this objective. These questions covered topics such as current themes being used in reef interpretation, the development of new interpretive activities, and likely future training options.
3. To examine the impact of the training sessions on the values and general beliefs of the participants about reef information, visitor interaction and impacts, and interpretation. The impact of the session was primarily assessed through changes in the major themes or contents of responses to open-ended questions about visitor impacts, core knowledge for visitors, and understanding of the World Heritage values for the GBR.

A total of 61 completed survey packages (with a 100% response rate) provided the data for the evaluation. These surveys were completed by participants from a broad range of reef operations and types of visitor contact. Nearly half of the participants had no previous GBR specific training.

Evaluations of the training sessions were very positive. The average overall satisfaction score was 8.5 on a 10 point scale and 93% of the participants said that they would recommend the

training session to other reef tourism staff. The most commonly listed best feature of the training programs was the information on reef ecology.

The sessions had some positive impacts on intended behaviours, especially with regard to learning more about the GBR. There was limited impact on questions concerning how participants would change their behaviour with visitors as a result of the sessions..

Additionally, few changes were detected between and pre- and post- session answers to questions concerned with the world heritage values of the GBR, important pieces of information for reef visitors and impacts on the reef. This reflects both existing positive reef conservation attitudes and the broad and general responses given. The participants did list various new things that they had learnt from the session and these answers were dominated by reef specific information and reef ecology knowledge. This is consistent with the participants' perceptions of the best features of the session.

The small sample size does mean that the results must be interpreted with some caution particularly with respect to their applicability to all reef tourism staff. The broader population of reef tourism personnel may not share the same motivation or enthusiasm as those surveyed in the present study.

Bearing in mind the limits of a small sample, the results suggest that ,from the perspective of the participants, the GBRMP training program was both a positive and valuable experience. The most likely outcome of the program is a change in the content of visitor interpretation with the provision of more detailed information on reef ecology.

INTRODUCTION

Sustainable Tourism and Interpretation

Two major forces can be seen as currently dominating discussions of tourism and its management. The first calls for greater responsibility to the places and people that are the destinations for tourism and it is the result of growing recognition that tourism can have negative impacts on tourism environments and the communities who live in tourism destinations (Jafari, 1990). The second force calls for greater responsibility to the individuals who travel and is driven by changes in patterns of consumption which have resulted in an increasing focus by tourists on education and self-development as motives for their travel (Urry, 1990; Poon, 1992). These two forces can be seen as coming together in the principles of sustainable tourism.

Definitions of sustainable tourism emphasise three important features:

1. Quality. Sustainable tourism provides a *quality experience* for visitors, while improving the *quality of life* of the host community and protecting the *quality of the environment* (Inskeep, 1991).
2. Continuity. Sustainable tourism ensures the *continuity of tourism* as an economic activity through the provision of satisfying experiences for visitors, *continuity of the natural resources* upon which tourism is based and the *continuity of the culture and lifestyle* of the host community (Wall, 1993).
3. Balance. Sustainable tourism *balances* the needs of tourists, operators, host communities and the environment (Nitsch & van Straaten 1995, Bramwell and Lane, 1993).

According to Lane (1991) ecologically sustainable tourism is tourism that provides visitors to a destination with "an in-depth understanding and knowledge of the area, its landscapes and peoples" (p. 2). Such an understanding should result in tourists who are concerned about and protective of the destination area. Hall and McArthur (1993) make a similar argument.

"We argue that by providing high-quality experiences which satisfy visitor expectations, motivations, and needs, we can modify and influence the behaviour of visitors in such a way as to ensure that the values of the heritage resource are maintained" (Hall and McArthur, 1993, p. 13).

Interpretation is an important element in the provision of such high quality experiences. According to the Society for Interpreting Britain's Heritage, interpretation

"is the process of explaining to people the significance of the place or object that they have come to see, so that they enjoy their visit more, understand their heritage and environment better, and develop a more caring attitude towards conservation"

At its simplest interpretation can be seen as any activity which seeks to give tourists information about the place they are visiting and it can contribute to the management of tourism in several ways.

Interpretation can:

- ?? educate visitors about the nature of the destination and inform them of the consequences of their behaviour thus encouraging them to act in more appropriate ways and creating realistic expectation for the experiences;
- ?? develop visitor support for environmental conservation and management activities;
- ?? relieve pressure on sites by encouraging visitors to go to less crowded or sensitive places and providing them with alternative experiences;
- ?? enhance the quality of visitor experiences adding value to tourism products.

Interpretation and Tourism Personnel

Interpretation and tourism personnel can be seen as having a mutually interdependent relationship. Personal contact with visitors can be a very effective interpretive technique thus making frontline tourism staff important participants in any interpretive or visitor management program. Equally, interpretation can be the key to a quality visitor experience making interpretive skills an important feature for successful tourism staff.

It is a widely held belief that personal forms of interpretation, such as guided tours, presentations or talks, and having staff available to answer questions, are the best methods for communicating with visitors. Personal contact offers visitors the opportunity to ask questions about topics that are of most relevance to them, and guides can be useful in providing direction and structure in novel situations. While several visitor research studies have identified the benefits of guides for interpretation (see Jacobson, 1988 and van Rennes, 1978), other research suggests that personal contact is not uniformly or always a positive technique (see

Almagor, 1985 and Fine and Speer, 1985). When interpretive staff have poor or limited communication skills and/or knowledge about the place being presented to visitors, then it may well be the case that they detract considerably from the quality of the visitor experience.

Good communication skills and knowledge have often been identified as important features determining the success of interactions between tourism staff and visitors. In a study of guide-tourist interactions in the Moremi Wildlife Reserve of Botswana, for example, a major source of tourist dissatisfaction was the guides' lack of knowledge of the wildlife of the area (Almagor, 1985). Another example can be found in a study of river guides in West Virginia's New River Gorge National Park. Roggenbuck and Williams (1991) found that giving commercial river guides training in interpretive techniques and knowledge of the area resulted in significant improvements in tourist satisfaction. Finally, Geva and Goldman (1991) found from survey research that tourists rated guide knowledge as the second most important feature of a guide's performance after guide conduct.

THE GREAT BARRIER REEF, INTERPRETATION AND TOURISM: THE OBJECTIVES OF THE PRESENT STUDY

Interpretation has been identified as an important management strategy for the Great Barrier Reef Marine Park Authority (GBRMPA) (Turner, 1994) and commercial tour operations are clearly an important element in the success of interpretation in this World Heritage Area. Staff working on commercial GBR tour operations are the major and often only point of contact for reef information for many visitors to this region. These contacts between tourists and staff have great potential to both assist managers in getting messages about regulations and appropriate behaviour to visitors, and operators in providing quality tourist experiences.

In recognition of this potential the GBRMPA has prepared a Great Barrier Reef Marine Park Manual which can be used as a resource document and training tool for reef operators. To support the manual the GBRMPA has developed a training program which can be based around the manual and a set of videos. In March and April 1996 a series of training sessions were conducted by GBRMPA staff in several coastal locations.

The basic guiding question for the evaluation was - what impact does this training program have on participants?

More specifically the study had three main objectives:-

- 1. To describe participant views on the relevance, satisfaction with, and ease of use of the training sessions/packages.**
- 2. To examine changes in behavioural intentions with regard to interpretation for visitors.**
- 3. To examine the impact of the training sessions on the values and general beliefs of the participants about reef information, visitor interaction and impacts, and interpretation.**

It should be noted that the training program included an assessment module designed to test participant learning of specific information given in the sessions.

METHOD

Procedure

The training program evaluation had two major components, a pre-session and a post-session survey. A package of questionnaires was supplied to each participant at the beginning of the training session. This package contained two questionnaires, a sheet of instructions, an index card and an envelope. See Appendix A for copies of the instruction sheets and surveys. The instructions explained the purpose of the study, that it was being conducted by CRC Reef Researchers and was therefore independent of the GBRMPA, that individual responses would be confidential and anonymous, and the benefits of the study in improving further training initiatives. The surveys were developed in cooperation with education staff from the GBRMPA.

Participants were asked to complete the first questionnaire at the beginning of the session and to put it into the envelope. They were then reminded to complete the second questionnaire (which was printed on a different coloured paper) at the end of the session and to place it in the envelope, seal it and give the package to the trainer/s. Participants were also asked to complete a card with their name and contact address for a 2 month follow up survey. These cards were collected and kept separately from the completed questionnaires.

It was originally intended to conduct a follow up survey with training session participants. However fewer tourist personnel than expected participated in this first round of training sessions. It was therefore decided that, with a small pool of initial participants and difficulties in following up tourism staff due to staff turnover rates, the likely sample for the follow up would be too small to warrant further attention. An evaluation of the GBRMP Manual alone was also planned and the researchers judged it to be a better use of resources to concentrate on this study further.

The Sample

A total of 61 survey packages were received by the researchers. According to the GBRMPA staff conducting the sessions all participants handed in a survey package. While the overall sample size is small it does represent in this case the entire population of participants in the first round of the training sessions. Table 1 provides a profile of the respondents which

includes time spent working in reef tourism, main job responsibilities, previous education and the number and types of major visitor contact experienced as part of their job.

Table 1: Profile of Respondents

Factor	No.	%
Time Working in Reef Tourism		
• < 6 months	14	23.0
• 6 months ~ 1 year	6	9.8
• 1 ~ 5 years	22	36.1
• > 5 years	14	23.0
• No answer	5	8.2
Main Responsibilities of the Job		
• Tour Operation(no or little contact with visitors)	26	42.7
• Interpretation/Education	18	29.5
• Dealing with visitors (no interpretation)	9	14.6
• No answer	8	13.1
Main Activities Contacted with Visitors		
• Glass bottom boat/semi-sub tour	18	29.5
• Incidental contact (lunch, answering questions)	10	15.7
• Bird/island walks	7	11.5
• Snorkelling tours	5	8.2
• Working with divers	5	8.2
• No answer	16	27.3
Amount of Contact with Visitors (Number of visitor interactions/day)		
• < 21	9	14.6
• 24 ~ 50	13	21.1
• 60 ~ 100	9	14.5
• > 100	14	22.5
• No answer	16	27.3
Education/Training		
• None	29	47.5
• GBRMPA seminar & training	18	29.5
• University	8	13.1
• Self learning - (from experience & reading)	2	3.3
• TAFE	2	3.3
• Reef course by tour operators	2	3.3

Among the participants there was a broad range of job responsibilities and activities involving direct contact with reef visitors. Nearly one quarter of respondents had less than 6 months working experience in reef tourism. Nearly half of the respondents (43%) were involved in various aspects of reef tour operations and nearly one third (30%) were engaged in interpreting reef ecological systems and educating visitors on reef activities. The main activities which involved direct contact with visitors were glass bottom boat and semi submersible tours.

There was also a broad range in the amount of contact respondents had with visitors. Nearly half of the respondents (48%), were engaged in working in reef tourism without any education or training about the Great Barrier Reef. Less than twenty percent (68%) of the respondents had formal educational backgrounds. Thirty percent had experienced some form of training or information provision from the GBRMPA.

RESULTS 1: PARTICIPANT EVALUATION OF THE TRAINING SESSIONS

Overall, respondents were highly satisfied with the training session, which was evaluated as very useful for their job. The respondents reported very positive perceptions of the trainers and the resources used in the training session. As can be seen in Table 2, respondents considered the trainers had a good knowledge of their material and were easy to follow. In addition, the video cassettes used for training were rated as very interesting, easy to understand and very helpful for the respondents. The Great Barrier Reef Marine Park Manual was described as very well laid out and the language used in the manual was seen as very easy to read according to respondents.

Table 2: Overall Evaluations of the Training Session

Evaluation	Mean	Mode	Standard Deviation
Overall Satisfaction	8.5*	10	1.3
Usefulness of training section for your job	8.1	10	2.0
Did trainer know the material?	9.2	10	1.1
Was the trainer easy to understand?	9.1	10	1.1
Usefulness of videos in helping you learn	8.9	10	1.3
Were the videos interesting?	8.7	10	1.3
Were the videos easy to understand?	9.1	10	1.1
Was manual well laid out?	9.4	10	0.7
Was the language used in manual easy to read?	9.3	10	1.0

* 10 point rating scale: 0=not at all to 10=very high

The majority (93.4%) of participants also indicated that they would like to recommend the training session to other people working in reef tourism. The amount of information and the number of examples provided in the training session were also described as just the right level by majority of respondents (see Table 3).

Table 3: Further Evaluations of the Training Session

Factor	No.	%
Would you recommend the training session to other people working in reef tourism?		
• Yes	57	93.4
• No	0	0.0
• Don't know	1	1.6
• No answer	3	4.9
Do you think the amount of information provided in the training session was?		
• just right	51	83.6
• too little	4	6.6
• too much	2	3.3
• No answer	4	6.6
Do you think the number of examples provided in the training session was?		
• just right	47	77.0
• too little	4	6.6
• too much	5	8.2
• No answer	5	8.2

Two additional open-ended questions were included in this participant evaluation section seeking the specific features that participants liked about the training sessions and their suggested improvements. Table 4 lists the best features and Table 5 a summary of the main types of suggested improvements. The most commonly listed best feature was the information on reef ecology suggesting that training sessions are clearly meeting a major perceived need for more detailed information to present to visitors. The two most common types of suggested improvements were concerned with the timing/scheduling of the training session and the content. Typical comments included in the first category of timing/scheduling were "have more of the sessions run through out the year", " have shorter sessions run at night", and "have a single day with a reef field trip learning the other material as you go". Content suggestions included specific requests such as "more information on birds of prey", and " less time on the fish and more time on birds, snakes and dolphins". Within these categories there were no single suggestions that commonly appeared. In other words there was considerable variety in the improvements put forward.

Table 4: What was the best feature of the training session?

Best Feature	Frequency	Percent
in depth information on reef ecology	19	31.1
informative slides & video	6	9.8
teaching techniques	4	6.6
well organised/structured	3	4.9
impressive manual	3	4.9
learning mooring	3	4.9
group discussion	2	3.3
informative	2	3.3
educational	2	3.3
the relaxed atmosphere	2	3.3
well informed/trained presenters	1	1.6
easy to absorb all the materials	1	1.6
small class size and hands on	1	1.6
meeting GBRMPA personnel, dept of Heritage people	1	1.6
very useful information and knowledge that can be implemental within my business area	1	1.6
interesting	1	1.6
enjoyable	1	1.6
covered a wide range of subjects/aspects quite simply	1	1.6
No answer	7	11.5

Table 5: How could the training session be improved?

Suggestion	Frequency	Percent
timing & scheduling	14	23.0
content	13	21.1
structure day	7	11.5
more participant/involvement	6	9.8
presenter	5	8.2
No answer	16	27.3

A series of analyses were conducted to investigate the possibility that different types of participants would have different evaluations of the training program. Specifically, the responses of two groups, those respondents with some formal training and those without, were compared. Respondents were also grouped according to their experience in reef tourism. In both cases no significant differences were found.

RESULTS 2: CHANGES IN BEHAVIOURAL INTENTIONS

More than half the respondents said that they would change something they do as a result of the training session (refer to Table 6). Table 7 contains the main answers to the open ended question which asked participants to list what they would change as a result of attending the training session. The most common answers were "providing more accurate information to visitors", "educating people more fully" and "taking more notice of the environment".

It is important to note the high percentages of people who do not answer these questions. In the first case nearly one quarter did not give an answer and thirty one percent of respondents did not give an answer to the open ended question. This might suggest that some respondents could not think of ways to change what they do or are so constrained by other job features that change is not possible.

Table 6: Will you change anything that you do as a result of the training session?

Plan to change	Frequency	Percent
Yes	38	62.3
No	8	13.1
Didn't answer	15	24.6

Table 7: What are you planning to change?

Change	Frequency	Percent
provide more accurate information to visitors	14	23.0
try to educate people more fully & share my increased knowledge of reef with interested people	8	13.1
take more notice of things/see more observation; a close look in the changing area	5	8.2
train our staff better with reef education	4	6.6
no feeding the fish chicken/bread and ham	3	4.9
different approach to reef interpretation	3	4.9
be more aware of best management practices	2	3.3
read people's needs for different levels of knowledge and hopefully be more observant	1	1.6
position in company	1	1.6
slight change to snorkelling tours	1	1.6
No answer	19	30.9

Respondents were also asked about their intentions to improve their own reef knowledge and expertise. Again they were asked two questions, one a structured one about overall intentions (see Table 8) and one an open-ended one seeking more details on what actions were intended (see Table 9). The majority of respondents stated that they were intending to learn more. The three most common actions listed were read more, attend further seminars/courses and

use videos. It should be noted that non responses were lower for these questions than for the previous questions on intended changes to what they do with visitors.

Table 8: Do you intend to learn more about the reef?

Intend to learn	Frequency	Percent
Yes	51	83.6
No	1	1.6
Didn't answer	9	14.8

Table 9: What are you planning to do to learn more?

Plan to	Frequency	Percent
read more publication - books/articles	19	30.9
attend more seminars/courses	15	24.6
look at more videos	12	19.8
observe during visits to reefs	4	6.6
consult the NP/WS/GBRMP staff	1	1.6
take opportunity to get in the company of experts	1	1.6
No answer	9	14.8

RESULTS 3: THE IMPACT OF THE TRAINING SESSION ON KNOWLEDGE, VALUES AND ATTITUDES.

The impact of the training session on participant knowledge, values and attitudes was primarily assessed through comparisons of answers to a series of open-ended questions asked both before and after the training session. One question, however, was only used in the post session survey and this directly assessed what the participants believed they had learnt from the session. Table 10 lists the responses to this question which asked participants to list five new things that they had learnt. The number of responses to this question was very low with 12 participants (20%) giving no answers at all and most giving only one or two answers (37 participants, 61 %).

Nearly half of the responses given (48%) were related to reef ecology. In particular, specific information on the reef such as fish, species, and animals (33%) occupied the highest proportion of the new things respondents learnt. General information on reef (15%) was given as the second most common new thing learnt.

Table 10: What five new things did you learn from the training session?

New Thing	Frequency	Percent
info on specific fish/species/animals	37	32.7
reef in general	17	15.0
teaching/communication skill	12	10.6
best environmental practice	12	10.6
rule and regulation on reef	9	7.9
management bodies	8	7.1
other	18	16.0
Total Responses	113	100

*Multiple Responses Allowed

Four questions were asked in both surveys in order to examine the impact of the training session on knowledge of the World Heritage Values of the GBR, important information for visitors both before and after their reef experience and visitor impacts. The following four tables present the major themes contained in the answers given to these questions by respondents both before and after the training sessions. As can be seen in these tables there were few differences between the patterns of responses given in the two surveys suggesting that the training sessions had little impact on these factors.

Table 11: Why do you think the Great Barrier Reef is protected as a World Heritage Area?

Why	Pre Q		Post Q	
	No.	%	No.	%
a unique, fragile ecosystem that is in most areas still pristine	29	36.7	25	36.2
a unique, beautiful natural wonder of the world which needs to be protected for future generations	18	22.8	16	23.2
most complex system of animal and plant in the world	9	11.4	5	7.2
largest reef system in area of highest reef bio diversity on planet	6	7.6	9	13.0
to control activities, the amount of people who use the reef and to make sure they are using it correctly - general control & maintenance	4	5.1	2	2.9
on going protection & preservation	4	5.1	6	8.7
because of the deterioration which has occurred over the past years	4	5.1	1	1.4
important natural resource that could easily disappear	4	5.1	4	5.8
because of its significance to Australia	1	1.3		
to provide a world-standard level of management for future of the reef			1	1.4
Total Responses	79	100	69	100

*Multiple Responses Allowed

In general, the majority of respondents believed that the Great Barrier Reef needs to be protected as a World Heritage Area because of its unique, beautiful and fragile natural environment system. The most popular reason given for the protection of the GBR was that it is a unique, fragile ecosystem that is in most areas still pristine. "A unique, beautiful natural wonder of the world which needs to be protected for future generations" followed as the second most popular reason.

Table 12: What do you think are the three most important pieces of information that visitors should know about their reef experience before they arrive at the reef?

Information	Pre Q		Post Q	
	No.	%	No.	%
conservation, preservation - care of the environment	48	34.8	41	32.3
introduction to reef ecology	31	22.5	28	22.0
information on day activities on reef tour	15	10.9	5	3.9
personal safety on the ship & reef	14	10.1	10	7.9
codes of behaviour	13	9.4	15	11.8
rule and regulation on reef	10	7.2	13	10.2
facilities and safety features	7	5.1	9	7.1
realistic expectations of what they see			5	3.9
GBRMP interaction			1	0.8
Total Responses	138	100	127	100

*Multiple Responses Allowed

"Care of the environment" and "basic understanding of reef ecology" were considered to be the two most important pieces of information that visitors should know about their reef experience before they arrive at the reef. "Codes of behaviour" was also rated as relatively important information.

Table 13: What do you think are the three most important pieces of information that visitors should know about their reef experience after a trip to the reef?

Information	Pre Q		Post Q	
	No.	%	No.	%
importance of reef preservation - care of the environment	42	44.2	37	38.9
basic understanding of reef ecology	37	38.9	28	29.5
enjoyment of seeing the Reef	5	5.3	5	5.3
rules and regulations for the reef	4	4.2	5	5.3
personal safety on the ship & reef	3	3.2	2	2.1
information on day activities on reef tour	3	3.2	1	1.1
codes of behaviour	1	1.1	6	6.3
facilities and safety features			2	2.1
importance of education			9	9.5
Total Responses	95	100	95	100

*Multiple Responses Allowed

In Table 13 it can be seen that the majority of respondents reported that "importance of reef preservation" and "basic understanding of reef ecology" were the most important information that visitors should know after a trip to the reef. It is interesting to note that after the training session, respondents reported the importance of education as one of the outcomes for visitors from their reef experience.

Finally respondents were asked to list three things that visitors do that impact the most on the reef. This question was applied to visitors on reef tourism operations in general, not necessarily the operation that the respondents work with. Table 14 shows that inappropriate human behaviour was seen as having the most impact on the reef. In particular, respondents stressed "standing on coral/walking on the reef", "littering", and "moving or collecting articles of the reef" as having the most negative impacts.

Table 14: What are the three things that visitors do that impact the most on the reef?

Visitor Impacts	Pre Q		Post Q	
	No.	%	No.	%
stand on coral/walking on the reef	37	26.4	26	21.3
littering	25	17.9	27	22.1
moving or collecting articles of the reef	17	12.1	15	12.3
poor or incorrect diving & snorkelling practices	12	8.6	10	8.2
misuse areas (fish in non-fishing zones)	9	6.4	7	5.7
sewage	8	5.7	3	2.5
lack of knowledge anchoring	8	5.7		
careless boat operation	6	4.3	3	2.5
disturbing natural habitat, not being aware of their surroundings	4	2.9	3	2.5
demand for high speed mass tourism (big cats and pontoons)	3	2.1	1	0.8
misinterpreted information being passed on	3	2.1		
feed the fish without supervision or knowledge	2	1.4	4	3.3
promoting the reef through word of mouth	2	1.4		
helping to finance reef operators	1	0.7		
providing employment for people like us	1	0.7		
in accessing the same sites over extended periods - over use of areas	1	0.7		
misinterpreted information to the non-English speaking visitors	1	0.7		
lack of knowledge and education			4	3.3
agricultural runoff			2	1.6
breaking common sense rules as well as marine park rules such as zoning rules			2	1.6
over fishing			2	1.6
tourism			2	1.6
research			1	1.6
Total Responses	140	100	140	100

*Multiple Responses Allowed

SUMMARY AND CONCLUSIONS

Some Notes of Caution

Before summarising the results of this participant evaluation of the GBRMP training program it is important to note some issues which may influence the interpretation of the results. Firstly the sample size is small which creates two problems. In the first case it is difficult to judge how representative this group was of reef tourism staff in general. It is likely that this group, being the first to participate in these sessions, were particularly concerned with improving their reef knowledge and thus more receptive to the program. Further, in a small sample size each individual's responses can make a large difference to the results. This is particularly the case where multiple responses to questions are permitted. It is possible in the present study that those respondents with more confidence in their writing skills and a stronger opinion may have provided both more, and more detailed, answers thus having a disproportionate influence on the results. This problem may be further exacerbated by the potential problems of social desirability pressures. The surveys were handed out and collected by the trainers as it was not possible for the research staff to attend all the sessions. While the procedure used was designed to ensure maximum confidentiality of responses it is possible that participants may have felt under immediate social pressure from the trainer to be positive about the session. A third problem is that of relying on written responses to open-ended questions. In many instances answers given were brief or very general and this limited the ability of the data to be used to detect changes in responses. But, given that no other published instances of such an evaluation could be found and the nature of the information sought, it was not possible to construct more structured questions.

In summary, the issues of a small sample size and social desirability pressures may exaggerate the positive evaluations of the program, while the lack of detail in responses may result in a more limited assessment of the impact of the program on knowledge and attitudes. The research team is continuing discussions with the GBRMPA about the development of a shorter, more structured ongoing assessment survey to be included in all training programs.

Summary and Conclusions

The participants surveyed in the present study represented a fairly broad cross section of reef tourism staff in terms of their job responsibilities and the amount and type of contacts they had with reef visitors. They were also a relatively experienced group with 23% having been

associated with reef tourism for more than 5 years and 59% for more than 1 year. It is important to note that a large proportion of the sample (48%) stated that they had no formal or informal training about the GBR or its presentation. There is a clear need for training programs such as that developed by the GBRMPA and the results of this research project strongly support the continuing development of the program.

Objective 1. To describe participant views on the relevance, satisfaction with, and ease of use of the training sessions/packages.

Participants were very positive about the training program and its various components. The mean overall satisfaction score was 8.5 out of 10 and the trainers and manual were especially highly rated. Nearly all of the participants (93%) said that they would recommend the program to other reef tourism staff. Information on reef ecology and specific reef features were the most commonly listed best features of the sessions.

Objective 2. To examine changes in behavioural intentions with regard to interpretation for visitors.

The training programs appeared to have a positive impact on behavioural intentions with 84% of respondents stating that they intended to learn more about the GBR. The major sources for such learning were publications, further courses and videos. A majority (62%) also said that they intended to change what they did with visitors as a result of the training session with the most common changes listed as improving visitors' reef knowledge.

Objective 3. To examine the impact of the training sessions on the values and general beliefs of the participants about reef information, visitor interaction and impacts, and interpretation.

The pre-post session assessments failed to find much evidence of changes in perceptions of the world heritage values of the GBR, beliefs about what information was important for visitors, or in perceptions of the causes of negative impacts on the reef. This may be due to high levels of pre-existing understanding of these issues. For example, 70% of the pre-session responses to the question on why the GBR is a world heritage area included the values of natural beauty, the diversity, size and complexity of the area or its pristine nature. Further, while slight, the changes were generally positive in terms of moving towards perspectives stressed in the sessions.

Bearing in mind the limits noted at the beginning of this section, the results suggest that, from the perspective of the participants, the GBRMP training program was both a positive and valuable experience. The most likely outcome of the sessions is a change in the content of visitor interpretation with the provision of more detailed information on reef ecology.

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Appendix A: Instruction Sheet and Questionnaires

1. Instruction Sheet for Session Participants.

The aim of this study is to assess how useful and valuable this training session is for people working in reef tourism. The study is being conducted by staff from James Cook University's Department of Tourism as part of a CRC Reef project concerned with improving the quality of Great Barrier Reef interpretation. The results will be available for both marine park managers and reef tourism staff and it is hoped that the results will be used in the improvement of future training activities.

You can help us improve the management and presentation of the Great Barrier Reef by participating in this study. Participation involves completing three short surveys, one at the beginning of today's training session, one at the end of the training session and one which will be sent to you in May. All of your answers will be confidential and your help would be greatly appreciated. It is important to remember that these surveys are not tests, we are evaluating the **training** not the trainees. There are no incorrect answers in these surveys we are interested in your views and opinions.

INSTRUCTIONS.

1. Please complete the yellow survey now. Then fold the survey in half and place it in the envelope provided. Do not seal the envelope just yet.
2. At the end of the session the trainer should remind you to complete the blue survey. Please complete the blue survey without looking at the yellow survey.
3. Place the completed blue survey in the envelope provided and seal the envelope. The trainer will collect the envelopes.
4. Please write your name and a contact postal address on the small card provided. We will use this address for sending out both the follow up survey in May and to send you a short summary of the results of the study later in the year. The trainers will also collect these cards.