

5.0 DISCUSSION

5.1 Visitors' Experiences of Whitehaven Beach

One of the primary objectives of this investigation was to determine the types and range of experiences had by visitors to Whitehaven Beach. The purpose of assessing benefits received is to provide an insight into the type and extent of experiential preferences of visitors. Findings clearly reflect that the natural environment and scenic qualities of Whitehaven Beach were attributes that visitors received most enjoyment from. Psychological and physiological benefits relating to rest, relaxation and escape were also seen as being well provided. Conversely, Whitehaven Beach was not evaluated highly as a physically or socially active place. Comparisons of benefits received from Whitehaven Beach appear to be very similar to the experiences provided to recreational participants of other studies undertaken in both land and water-based environments. As with previous investigations, results showed that the most salient experience was related to the 'natural setting' (Scherl et al. 1997; Shafer et al. 1998). Following this and almost without exception, past research in terrestrial areas (e.g. forests, lakes, mountains and rivers) has shown that benefits relating to relaxation and escape have been next in importance behind experiencing the environment (Brown & Hass 1980; Manfreda et al. 1983 in Shafer et al. 1998).

Patterns of experiential preferences among the respondents of this study were not unlike those found in other investigations of marine visitors to the Great Barrier Reef. In a recent Australian wide study, three important components tourists and visitors expected to experience when visiting the Great Barrier Reef were: the scenic beauty of the islands and the beaches, a natural, unspoilt environment and to see a variety of fish and coral (AGB McNair 1995). Of direct comparison to the current findings is Gooch's (1991) study of visitor experiences in the Whitsundays. Gooch (1991) noted that visitors to Whitehaven Beach attributed most of their experiences to the natural environment, scenery, peacefulness/tranquillity and mind clearing benefits received. In a study on the Lady Musgrave Island and reef by Scherl et al. (1997) findings revealed that visitors most positive evaluations were related to the physical environment, enjoyment of nature, reef and island ecosystems. Comparatively, Shafer et al. (1998) discovered that reef visitors received most of their benefits from experiencing nature and learning about it, followed by rest, relaxation and escape. In summary an overview of findings from reef and island sites show that the strongest experiential outcomes appear to relate to the perceived quality of the natural environment and subsequent psychological benefits received. According to Shafer et al. (1998) the fact that visitors to the Great Barrier Reef are provided with benefits related to seeing, experiencing and escaping to a natural environment gives additional justification for the need to understand how the natural and social environments are providing such benefits.

Evaluations of recreational experiences at Whitehaven Beach appear to be strongly influenced by the geographical and natural characteristics of this particular setting. Over 100 studies have found convincing evidence that natural environments are important in facilitating recovery from stress. As such, stress reduction has often emerged as one of the key perceived benefits of a wilderness experience (Knopf 1983; Ulrich et al. 1991). These stress related benefits of rest, relaxation and escape were also mimicked in the current study. Assessment of the aesthetic dimension of landscape has been found to be closely related to other psychological dimensions. For example, studies have found that landscape determined to be scenically beautiful elicits positive ratings of tranquillity, freedom and solitude (Daniel 1984; Ulrich 1977; Ulrich et al. 1991). Whitehaven Beach is a site that is perceived by visitors to be relatively free from stressful conditions, providing opportunities for nature experiences as well as scenic escape. It may be suggested that Whitehaven Beach is not only important as a natural resource area, but socially it also has a significant restorative function.

Experiences and Expectations

Understanding what people expect from Whitehaven Beach and then examining what experiences were received from their visit, gives an indication of how satisfied people were with the opportunities that were provided on-site. Previous research has indicated that experiencing a natural environment and participating in nature-based environmental activities were the most favoured types of expectations possessed by recreationalists. Likewise, findings of Whitehaven Beach showed that the most sought-after experiences related to participating in water-based activities such as swimming and snorkelling, enjoying the sea and sand, relaxing and sunbathing. The opportunity for visitors to participate in these activities complemented their expectations. Gooch (1991) also noted that swimming, beach walks and relaxation were at the top of people's list of most enjoyable experiences whilst visiting Whitehaven Beach.

The primary aim of nature-based tourism and recreation is to provide the right types of experiences and activities. The activities offered and those participated in can have a significant influence in the benefits received and overall satisfaction of an area. Interestingly, findings showed that people who were more likely to go for beach walks gained greater experiences from the beauty of Whitehaven Beach ($X^2 = 8.41$, $p < 0.05$), those who sunbathed rated rest and relaxation higher ($X^2 = 31.60$, $p < 0.001$), and visitors who snorkelled received greater benefits from experiencing something new and different ($X^2 = 19.53$, $p < 0.05$). This information implies that the activities offered and those participated in may have given visitors a fuller experience of Whitehaven Beach. For managers and tour operators these findings are positive, for they imply that Whitehaven Beach is currently providing the right types of opportunities to satisfy visitors experiential needs.

Visitor Types

Visitors were classified into four groups, identified to reflect the types of people benefiting from similar recreational experiences. Clustering groups into similar types (e.g. relaxed sightseers, socially active naturalists) can assist in providing more satisfying recreational experiences and assist with the application and assessment of the ROS. More generally this information makes it possible for managers to make refined descriptive assertions about the types of visitors that Whitehaven Beach attracts and also helps to understand the reasons behind why people choose to travel to this particular destination.

Findings showed that Whitehaven Beach is a destination that attracts all age groups and is just as popular with Australian holidayers as it is with international visitors. Results suggest that there are different types of visitors travelling to Whitehaven Beach who select different types of tour operators for their trip. For example, large operators tended to attract couples and families from an older age bracket, whilst smaller more personalised boats were more likely to carry younger single travellers, or groups of friends. Although respondents travelled to much the same setting and participated in relatively similar types of activities, generally they received different levels of benefits. From a management standpoint these 'benefit clusters' provide valuable information from which to assess changes in visitor types and their experiential preferences.

5.2 The Values Ascribed to Whitehaven Beach

Values are central in people's belief systems, they influence judgements, identification of needs, discriminates among competing demands and are implicitly expressed in environmental dispositions (Stankey 1982). Understanding reasons for valuing particular sites in the GBRMP is important in making decisions about how to designate and manage sites. According to Shafer et al. (1998) the meanings that people assign to places in the environment are often related to how strongly they feel about potential changes to it. The strongest values associated with Whitehaven Bay related to its natural and ecological processes, conservation, recreation and educational opportunities. Economic opportunities and the spiritual meaning of the area were of least importance to respondents. Previous research has found that visitors ascribed similar

values to other places on the Great Barrier Reef (Green et al. 1999; Shafer et al. 1998).

Shafer and colleagues (1998) noted that reef sites were considered very valuable for the conservation, natural processes and educational opportunities offered there. In support of the current findings, economic opportunities and spiritual meaning only held slight importance to reef visitors. These authors suggested that the low value placed on economic opportunities could be confounded by its interpretation as an issue related to other forms of exploitation. In the case of Whitehaven Beach this exploitation could be in the form of commercial use, development or degradation of the natural environment. These are the issues visitors and local residents said would impact upon their enjoyment of future visits to Whitehaven Beach. A low level of spiritual importance was also noted in Shafer et al.'s (1998) reef research. Historically there has been a long-standing spiritual connection between Aboriginal and Torres Strait Islander peoples and sites on the Great Barrier Reef. The fact that Australian respondents in this study rated spiritual values lower could simply mean that they don't consider this spiritual relationship to be of significance, they are not aware of it, or that people are interpreting the meaning of 'spirituality' differently. Interpretation of spiritual values in relation to sites on the Great Barrier Reef clearly needs to be redefined through continued research.

The importance of values associated with the natural and conservation aspects of Whitehaven Beach were also reflected in people's perceptions and post-visitation images. Used as a management tool, these significant values will help to legitimise the meanings that users assign to Whitehaven Bay. These values are also important indicators for managers in their planning process. Human valuation of sites such as that of Whitehaven Bay can be applied to other places on the Great Barrier Reef that may have similar attributes, both socially and environmentally. These social values in turn can inform decision-makers about Marine Park zoning designations. The more understanding that management obtains about the meanings of values in the GBRMP the greater the probability of designing successful strategies to implement change (or lack of it, as in the case of Whitehaven Beach), that will be agreeable to users and the public at large.

5.3 Conditions Influencing Visitors Experiences

Visitors' reactions and responses to more specific conditions showed that the natural environment was more influential in shaping people's enjoyment of Whitehaven Beach, when compared to perceptions of social conditions such as visitation by boats, aircraft and other people. Throughout this research, results point to the importance of Whitehaven Beach's natural environment as a factor influencing experiences. Shafer et al.'s (1998) investigation of reef sites found similar findings.

Weather had no significant relationship to the benefits received by visitors or their trip satisfaction, yet was important in their expectations and was something that both added to and detracted from their enjoyment. Gooch (1991) found that bad weather was mentioned as a factor that detracted from visitors' enjoyment of Whitehaven Beach. In Shafer et al.'s (1998) study, large numbers of reef visitors indicated that sea conditions and wind had a negative influence on their experiences. Weather conditions can play an important part in the satisfactions of recreational and tourism experiences, particularly with people who have had little experience with ocean travel. Many tourist passengers travelling to and from Whitehaven Beach during the surveying phase experienced rough sea conditions and seasickness. It is surprising that this was not reflected more so in visitors' satisfaction ratings of their Whitehaven Beach visit. Further research should continue to assess weather conditions as a factor when assessing visitors' experiences and perception of a site.

Another significant condition worth mentioning was visitors' sightings of dolphins, turtles and sand goannas. Encounters with wildlife in terrestrial environments is something that has been found to enhance people's perceptions of an area, and according to Roggenbuck et al. (1993) is "critical to wilderness users' experiences" (p. 191). Fish, and more specifically large fish, were scored as one of the most positive influences in reef visitors' experiences (Shafer et al. 1998).

Shafer et al. (1998) suggested that seeing species of fish or marine life might heighten an individual's experience just as they have been shown to do in land-based wilderness environments.

Other People and Visual Intrusions

The numbers and types of people encountered on-site and on tour operators travelling to and from Whitehaven Beach, compromise elements of the social condition. An assessment of optimum use levels were sought by examining people's perception of other visitors using the setting and how the quality of their experience was affected by the presence of others and their activities. Findings showed that other people did not affect many visitors to Whitehaven Beach. Overall only 12% indicated that they felt there were too many people, and an even lower percentage said that other visitors had a negative influence on their enjoyment. Previous research by Gooch (1991) asked people at Whitehaven about how they felt about others and their activities on the beach. Twenty-eight per cent reported that the number of other visitors they saw was more than what was expected and 21% said there were less. Eighty per cent indicated that other visitors did not interfere with their experiences and activities whilst visiting the beach. Gooch's (1991) study was undertaken in the peak tourist season of June.

Based on findings from the crowding literature, an inverse relationship is said to exist between visitor satisfaction and the number of people encountered (Stankey 1973). This was not supported in the analyses from this investigation. Instead no significant relationships were found between the number of people on the beach and the influence they had on recreational experiences.

Notably, local members of interest groups did have an issue with regards to the amount of use, current and future, of Whitehaven Beach. Some of these local residents perceived there to be an increase in use of Whitehaven Beach, and concern was expressed about the future growth in visitor numbers, boats, aircraft and consequential environmental effects. Shafer et al. (1998) suggests that even the small differences in visitor perceptions of conditions between past visitors and first time visitors are worth noting. In this case, it is interesting to find that a slightly higher percentage of repeat visitors rated conditions of crowding higher than first time visitors. This issue warrants future monitoring, for the decline of a destination has been shown to correspond with the exceedence of tourism and substantial changes in the surrounding natural and social environment (Martin & Uysal 1990).

Aircraft

The assessment of aircraft on visitors' experiences whilst at Whitehaven Beach is a proactive response to what could be considered a potential threat to visitors' use and amenity in the future. If American studies on acceptable levels of aircraft activity have anything to show, it clearly reflects a 'patch-up' approach to what has become a real concern to wilderness users, natural resource managers and more generally the public at large. Pleasingly, findings suggest that visitors and users of Whitehaven Beach are not being negatively affected by aircraft activity at this season and level of use. In many respects results imply that aircraft overflights and landings are within users limits of acceptability. These findings should still be interpreted with some caution, because visitors were surveyed during the low aircraft season. As such, the number of aircraft overflights and events were not representative of what they can be in high peak season.

What is interesting, is that many visitors said that they didn't notice any aircraft flying overhead or land on the beach during their stay. Actual on-site observations of aircraft activity indicate otherwise. Similarly, Tarrant et al. (1995) found that recreationists reported hearing and seeing less aircraft than there actually were. Future surveys should question people about actual numbers seen and heard to support these suggestions. It should be noted that although very few aircraft overflights/events occurred during the data collection phase, Tarrant et al. (1995) stated that for many visitors the presence of only a single aircraft incident may be sufficiently memorable to affect a wilderness trip experience.

One of the primary reasons people visited Whitehaven Beach was to experience quiet, peacefulness, solitude and escape routine. Noise has been found to relate to undesirable sounds of urbanisation, and to have strong effects on solitude and tranquillity (Mace et al. 1999). When sounds are deemed inappropriate for a given area, noise will then be considered annoying and most likely detract from people's experiences and enjoyment of nature. Hamilton (1999) found that watercraft decibel levels at Whitehaven Beach were much lower than those obtained for aircraft, suggesting that aircraft have a greater sound impact. The negative influence of noise from aircraft activity and visitation by watercraft was not evident in the responses of visitors to Whitehaven Beach. Hamilton's (1999) data also showed that the least impacted site was Setting 2 in terms of frequency of aircraft events, whilst the most impacted settings were the Moderate Use (Setting 3) and Natural zones (Setting 5). Setting 2 was the most visited destination by respondents in this investigation. Findings however, showed no differences in perceptions of aircraft activity and the setting visited.

To summarise the visual intrusion of aircraft and vessels from the naturalness of the Whitehaven Beach landscape was not an issue to visitors. Visitors were happy with what they saw and the noise levels they heard from boating and aircraft activity. There was no significant indication that they preferred to see or hear less craft during their visit to Whitehaven Beach. The activities of aircraft on visitors' use and amenity at Whitehaven Beach, cannot be compared to the impact aircraft are having on recreational wilderness areas in the United States. For example, findings have shown that there is not a single location recorded in the Grand Canyon National Park that is totally free of aircraft noise (Horonjeff et al. 1993). Aircraft noise is audible 79% of the time, with as many as 43 separate aircraft noise events occurring within every 20-minute interval. The Grand Canyon situation suggests a need for a proactive approach to understanding how increased flights relate to noise generated. Uncontrolled increases may lead to unacceptable situations.

5.4 Images of Whitehaven Beach

Satisfaction with a visited destination depends not only upon the configuration of ideal images held before visitation, but also upon experiences received whilst at the destination which influence the actual images (Ross 1992). The post-visitation images that visitors and local members of interest groups had of Whitehaven Beach reflected that of a scenic, beautiful, quiet and relaxing environment. Similar words were used to describe people's thoughts of Whitehaven Beach in Gooch's (1991) study. Green et al. (1999) found that people described the Great Barrier Reef in a similar fashion, i.e. beautiful, pristine, untouched, and amazing. Many of these images are consistent with the World Heritage status and values of the Great Barrier Reef.

Images portrayed of Whitehaven Beach by visitors and local users were a reflection of their beliefs and impressions. Hoffman and Low (1978) found that the most important variable in any decision to return to a destination was the visitors image (in Ross 1992). If this is correct, then the images that visitors hold of Whitehaven Beach is likely to be reflected in their return visit to this area. For 90% of the sample it was their first visit to Whitehaven Beach. It is likely that for these people, their initial impressions of Whitehaven Beach were induced by a range of images presented by the tourism industry in brochures. Fenton et al. (1998) suggest that media descriptions of place are often simplified generalisations that present idealised images. Tourists who have high levels of exposure to media images may be disappointed in the failure of reality to match these preconceived images (Vanclay 1995). This was not necessarily reflected in the perceptions and evaluations visitors held of Whitehaven Beach. Findings suggest that images of Whitehaven Beach met visitors' expectations.

The images that people take away from their trip to Whitehaven Beach are a reflection of their core experiences and perceptions of this destination. Visitors' expectations, experiences, values and images are indicators of the meaning of Whitehaven Beach. This meaning of place has implications for people's reaction to change and the environmental plans, which directs why and how change will occur (Shafer et al. 1998). In this context, findings show that Whitehaven

Beach has and sustains a unique image. Maintaining this image by providing the right opportunities for users whilst maintaining the aesthetic beauty of this natural environment will continue to be a challenge for future managers and planners of the GBRMP.

5.5 Implications for Management

The primary implications for management are simple. If managers wish to provide a sustainable resource that meets users' expectations, the biophysical and social environment of Whitehaven Beach must be well cared for (Shafer et al. 1998). It was evident from findings that post-visitation images and experiences related specifically to the condition and quality of the natural Whitehaven Beach environment and the psychological/physiological experiences subsequently provided. What this study also found was that visitors differed in the types of experiences 'benefit packages' they received, yet perceived different conditions in similar ways. These experiences and evaluations indicate that there are a spectrum of ways to experience Whitehaven Beach. This type of information assists planners in developing an experience based approach to designating use (types and amounts) and selecting indicators in a LAC process.

The current zoning plan provisions of Whitehaven Beach that designates levels of use, types of use, level of development and methods of access can be further defined to provide a range of opportunities to suit different experiences sought by the visitor while helping to protect the biophysical environment. An assessment of whether users were receiving different amounts of benefits within the different settings along Whitehaven Beach could not be examined in this investigation due to low visitor numbers in Settings 3 and 4. However, findings showed that in terms of use levels, there is justification for maintaining these differences through spatial designations. Observations reflected that Setting 2 is being utilised as a high use area by tourist boat operators, and as such receives the greatest amount of visitation. Despite this high use, visitors' experiences were still very much influenced by the natural components of the Whitehaven Beach environment. At the other end of the spectrum is Hill Inlet (Natural setting); an area of high cultural and biological value. Current zoning plans help to protect these unique attributes of Hill Inlet whilst allowing people to experience solitude in a pristine environment. Natural tides also assist in making this Inlet a self-managed area. Planners should continue to acknowledge that these settings provide opportunities for a spectrum of experiences at Whitehaven Bay.

When examining the demand for recreational experiences in relation to Whitehaven Beach, this study has identified the most satisfying experiences for which management might provide opportunity. If managers know what outcomes people desire, then planners can attempt to meet those desires where it is appropriate to do so within other constraints (Brown & Haas 1980). Continued collection of information will provide planners and managers with a greater insight into the needs and preferences of visitors. In the meantime this baseline data can assist with the assessment and revision of appropriate levels, conditions and distribution of use. Zoning decisions of Whitehaven Bay should continue to accommodate varying ecological and social conditions (e.g. visitor characteristics, experiences, aircraft activity, amount of use, and quality of biophysical resources) that are specific to the area. Consistent with this approach, managers of Whitehaven Bay might set specific objectives in order to continue to provide opportunities for meeting desired outcomes, such as experiencing an undeveloped environment, escaping from normal routine, viewing outstanding scenery and so forth. At present visitors are achieving a satisfying recreational experience.

A challenge for management is to ensure that increased use and development does not devalue visitors' experiences at Whitehaven Beach in the future. Tour operators are presently working together to arrive at different times and anchor certain distances away from one another. Observations reflected that they are implementing their own strategies to reduce the impact of visitation by overcrowding. A ROS type situation currently exists 'de facto' among tour operators currently using Whitehaven Beach, with large and small operators using and choosing to visit different areas of a setting. Additionally, for managers it is important to ensure that the

remote qualities and scenic integrity of Whitehaven Beach is not inadvertently lost through development and an inappropriate installation of facilities. From concerns expressed by respondents, findings obviously recommend that no unsightly development be allowed on Whitehaven Beach.

It is hoped that some of these findings will be used to assist with further development of the Whitsundays Plans of Management and revision of settings at Whitehaven Bay.

5.6 Future Research and Monitoring

There has been a paucity of information about how different users and visitors perceive and experience the natural and social resources of Whitehaven Beach and other sites of interest in the Whitsunday Group. This study provides baseline data, for a certain season and level of use, from which to understand the types and range of visitors' experiences of Whitehaven Beach and the extent to which they were influenced by various conditions. A systematic investigation representative of the low and peak season is required to examine how changes in the physical and social environment may shape visitors' experiences and perceptions of Whitehaven Bay in the future. In conjunction, long-term monitoring should be continued to record the amounts and types of use at different settings throughout the year at Whitehaven Bay. This monitoring program has already commenced and is being undertaken by the Whitsunday Volunteers Inc. at Airlie Beach.

In the LAC process specific indicator conditions must be defined in order to select those that are feasible for use in the setting of standards for reliable monitoring. Contemporary approaches have abandoned attempts to measure limits to use and rely instead on such indicators to assess standards of social and environmental quality (Stankey et al. 1985; Shelby & Heberlein 1986; Graefe et al. 1984). This investigation has highlighted a number of experiential preferences and conditions that may be useful as indicators of social amenity for future monitoring. Aircraft activity, size and type of vessels, numbers and activities of other people are all indicators that may be useful in assessing visitors' levels of acceptance. The natural attributes of Whitehaven have also been shown to be something that people want to see and experience. The bottom line is that these environmental components relating to scenery, natural beauty, sand and water quality are all important indicators from which to monitor changes in social assessment of Whitehaven Beach.

One of the most prominent social indicators identified was the number of people on Whitehaven Beach. Findings show that the number of people encountered by visitors and locals whilst visiting Whitehaven Beach does matter to some, and is an issue that could be monitored in the future. Expanding research to measure the social carrying capacity of Whitehaven Beach can be continued through examining people's perceptions of others and how other people affected their quality of experience. It is possible that future studies may be able to quantify acceptable numbers of visitors to assist with the feasibility of the current zoning strategy for Whitehaven Beach. Further thought should also be given to monitoring how different settings are suited for different types and sizes of vessels and concentrations of people. The aim of further research should also be to assess within these settings different types of benefits received, and clarify what social and biophysical conditions may be more or less important to different users. Research of this type should be implemented at higher use levels than were possible for this study.

Further research should continue to monitor user numbers in association with an assessment of influence upon visitors use and amenity. Ultimately the challenge is to identify both social thresholds and implement management strategies that will prevent conflicts between use, amenity values and conservation. Another suggestion that should be given some attention, is the issue of displacement, particularly by local residents who may be changing their patterns of use due to an increase in visitor numbers. By surveying a range of stakeholders as well as day-trip visitors a greater coverage of perceived changes in the social and biophysical environment of

Whitehaven Bay may be achieved. Additional research should also assess whether a 'maturing process' is occurring in order to determine whether visitors are choosing smaller operators for their second/third trip. Information will assist with determining whether or not a type of trip is influential in providing visitors with certain experiences and satisfactions of their Whitehaven Beach visit.

The positive evaluations of aircraft and vessels at Whitehaven Beach by visitors in this study are encouraging, however, on-site monitoring should continue. Findings suggest that Whitehaven Beach is very acceptable in terms of typical impacts (noise, number of people, aircraft activity etc.) during the low use season. However we strongly recommend that further research be conducted during high use season (e.g. June/July, December) and in fair weather. Extended work could investigate the relationship between objective noise levels and users' perceptions of aircraft and vessel activity at the beach. Additionally aircraft assessment should question whether people are more tolerant of seeing rather than hearing aircraft. Future research should also include a multidimensional measure of visitor satisfaction in relation to aircraft activity. This suggestion is made because research continues to show that people take trips to satisfy many different preference states and experiences.

We feel that findings here can be useful in selecting specific indicators for a monitoring program at Whitehaven Beach. In order for management to meet objectives related to providing a quality natural environment at Whitehaven Beach, the quality of attribute conditions congruent with different experience and perceptual dimensions must continue to be considered. The survey instrument utilised in the current investigation can be further developed and used to monitor conditions associated with anthropogenic activity on Whitehaven Beach. In order to better understand users' needs and preferences, planners will need to continue to incorporate surveys and visitor data analysis in the planning process.