

Community Attitudes, Knowledge, Perceptions and Use of the Wet Tropics World Heritage Area in 2007

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Acronyms and Abbreviations

ANZECC	 Australia and New Zealand Environment and Conservation Council
ARC	 Aboriginal Rainforest Council
ARF	 Australian Rainforest Foundation
ATSIC	 Aboriginal and Torres Strait Islander Commission
C4	 Community for Coastal and Cassowary Conservation Inc.
CRC	 Cooperative Research Centre
CSIRO	 Commonwealth Scientific and Industrial Research Organisation
EPA	 Environmental Protection Agency
DEWHA	 Department of the Environment, Water, Heritage and the Arts
DNRW	 Department of Natural Resources and Water
DPIF	 Department of Primary Industries and Fisheries
GBRMPA	 Great Barrier Reef Marine Park Authority
GBRWHA	 Great Barrier Reef World Heritage Area
IUCN	 International Union for Conservation of Nature
JCU	 James Cook University
MTSRF	 Marine and Tropical Sciences Research Facility
NAIDOC	 National Aboriginal Islander Day Observance Committee
NRW	 Department of Natural Resources and Water
QLD	 Queensland
QPWS	 Queensland Parks and Wildlife Service
RRRC	 Reef and Rainforest Research Centre Limited
UNESCO	 United Nations Educational, Scientific and Cultural Organisation
WHA	 World Heritage Area
WTMA	 Wet Tropics Management Authority
WTWHA	 Wet Tropics World Heritage Area

Notes:

Throughout this report, the **Wet Tropics World Heritage Area** is referred to as 'WTWHA' or 'the Area' for ease of reading.

A full glossary of the terms used within this report is located on page **XX**.

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Department of the Environment, Water, Heritage and the Arts (DEWHA)

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Wet Tropics Management Authority

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Research Assistants

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Respondents

The research would not have been made possible without the residents of the Wet Tropics bioregion who completed the *Community Survey* in 2007.

Other

Thanks are extended to Dr Joan Bentrupperbäumer for her advice and assistance in the preliminary discussions of the survey and for the access to the 2002 *Community Survey* report.

Executive Summary

The need to develop a comprehensive understanding of the role that protected areas play in the lives of communities is as important as developing a greater understanding of the scientific aspects of protected areas. The aim of the research reported here was to monitor the attitudes, perceptions, knowledge and use of the Wet Tropics World Heritage Area (WTWHA) by residents of the Wet Tropics bioregion. The research builds on previous community attitude surveys that have been undertaken for the Wet Tropics Management Authority (WTMA).

The methodology used in this study parallels that used in the 2002 *Community Survey* (Bentrupperbäumer and Reser, 2002) enabling comparisons to be made with the earlier study. More than four thousand surveys were randomly distributed to residents using reply paid surveys distributed through private post office boxes in rural and regional areas or by delivering and collecting the survey from residents at their homes. A total of 853 valid surveys were collected, representing residents from Townsville to Cape Tribulation and west to Ravenshoe. The survey focused on awareness and importance of the WTWHA; residents' knowledge, support, visitation and use of the Area; perceptions of management; and the role the WTWHA plays in the life of the community.

Socio-demographically, slightly more females than males completed the 2007 *Community Survey*. The average age of respondents was 49 years, with more than seventy percent of respondents having lived in the Wet Tropics bioregion for at least ten years. On average respondents had lived in the region for 24 years, and more than half had a technical, trade or university education. The largest group of respondents indicated their occupation as pensioners, retired or unemployed (22.8%), followed by professionals and associate professionals (17.7%).

Almost all of the respondents (92%) were aware the Wet Tropics rainforests of North Queensland were World Heritage listed. The importance of the World Heritage listing for the community has increased between 2002 and 2007. Having two World Heritage Areas (the Wet Tropics and Great Barrier Reef) in North Queensland was rated as 'very significant' by 67.5% of the respondents. Respondents perceived their knowledge of the WTWHA to be moderate, and understood that the benefits of the World Heritage listing are protection, conservation and preservation of the Area (45.8%). Actual knowledge of the northern and southern boundaries of the WTWHA is low.

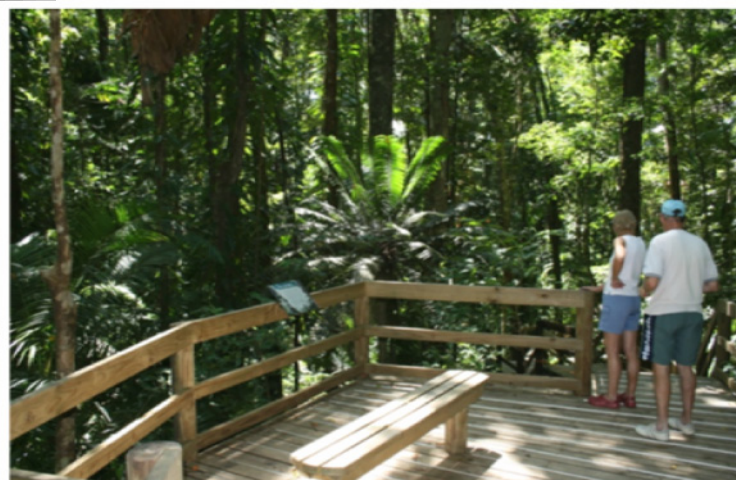
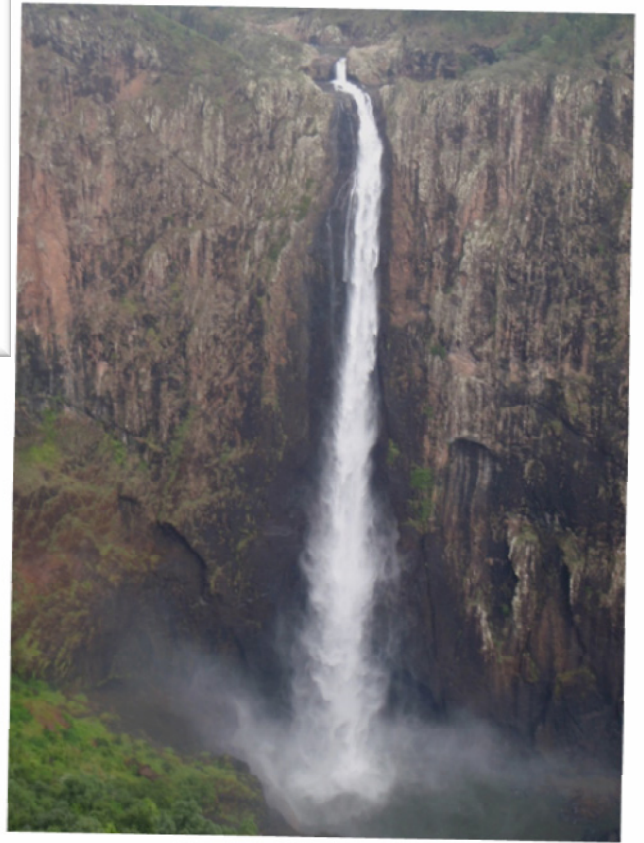
Interpretative signage provided at visitor sites is the most used information source provided by Wet Tropics land managers. Newspapers, word-of-mouth and television were the most popular general sources of information used to increase knowledge of the WTWHA. While almost all respondents (89%) had visited the WTWHA at least once, half of the respondents indicated they visit the WTWHA up to four times a year on average. All of the respondents had visited the WTWHA within the past two years, with the main reason for visiting being recreation. Mission Beach and the Daintree were identified as the most preferred areas to visit due to their natural beauty and ease of access.

There is strong support for the World Heritage listing by more than half of the respondents (62%) and almost all of the respondents (92%) support the general level of protection afforded by the listing. This support for both the World Heritage listing and the level of protection has increased since 2002. The inclusion of Aboriginal Cultural Heritage in a future World Heritage listing is supported by 72% of the respondents and 66% support some form of Aboriginal co-management.

Just knowing that the World Heritage Area exists and that it is contributing to the community's quality of life is perceived as the main personal benefits of living in the Wet Tropics bioregion. In 2002, the same personal benefits were indicated, now with an increased level of appreciation. From a regional perspective, enhancing environmental awareness and knowledge and the protection of rainforest plants and animals are considered the most important community benefits. Rules, regulations and restrictions, followed by feral plants and animals, are considered to be the main disadvantages of most concern to the community. Feral animals and plants are also considered to be the most serious threats to the WTWHA and the perceptions are that this threat is not being adequately addressed.

The majority of respondents expect the management agency to protect, conserve and preserve the WTWHA. However, there is some confusion as to who the management agency is and which logo identifies the Area. Overall perceptions of the management agency's ability to manage the natural attributes of the WTWHA and the Aboriginal cultural sites have decreased slightly since 2002.

Continued monitoring of the community's attitudes, knowledge, perceptions and use of the WTWHA allows the management agency to engage the community in decision making processes regarding the future planning and management of the Area. This report builds on baseline data collected by the WTMA since 1992 and specifically allows measurement of changing perceptions since 2002.



Clockwise from top left: Davies Creek tourism (Photo: Tourism Queensland); Wangetti Beach (Photo: Tourism Queensland); Wallaman Falls (Photo: J. Carmody); Jindalba (Photo: J. Carmody); Big Crystal Creek (Photo: WTMA); Stony Creek, Cairns (Photo: WTMA).



Clockwise from top left: Mission Beach Visitor Centre (Photo: J. Carmody); The 'Blue Hole', Cape Tribulation (Photo: WTMA); Daintree Discovery Centre (Photo: WTMA); Daintree River tours (Photo: Tourism Queensland); Canoeing at Silky Oaks Lodge, Daintree (Photo: Tourism Queensland); North Johnstone River (Photo: WTMA); Halloran's Hill Lookout, Atherton Tablelands (Photo: J. Carmody).

1. Introduction

Recognising the need for and the advantages of broad community engagement, the Wet Tropics Management Authority (WTMA) commissioned community attitude surveys in 1992, 1993 and 1996 (AGB McNair). These surveys were designed to develop an understanding of how the local community uses the Wet Tropics World Heritage Area (WTWHA), engages with the Authority, and to assess community attitudes towards the management of the Wet Tropics. Surveying of neighbouring landholders took place in 1999 (AC Nielsen). An expanded study was undertaken in 2002 to capture a broad range of community views and was reported in Bentrupperbäumer and Reser (2003; 2006). The present study was undertaken by researchers from James Cook University and was primarily designed to identify if there had been shifts in community attitudes in the five year period since 2002.

The objectives of this study were to understand community attitudes and perceptions of the WTWHA and its management and to identify changes that had occurred since the 2002 study. The study adds to the baseline data already gathered and enables longitudinal monitoring of community attitudes and perceptions towards the WTWHA. Following a brief discussion of the findings of previous studies and the methodology adopted, this report outlines the major findings of the 2007 study including a summary of respondents' socio-demographic profiles and their views on a range of issues, including how they have used the World Heritage Area; their views on its management; opinions on the protection and conservation of the Area; the advantages and disadvantages of living within the Wet Tropics bioregion; and their awareness and support for the World Heritage listing. The report concludes with a discussion of the implications for management.

1.1 *The Wet Tropics World Heritage Area*

The WTWHA is 894,420 hectares in size and includes tropical rainforest and riverine ecosystems extending from Townsville in the south to Cooktown in the north, and west across the Atherton Tablelands to Ravenshoe. The Wet Tropics was inscribed on the World Heritage Register in 1988. There are approximately 2,500 properties adjoining the Area's 3,000 kilometre boundary and approximately 100 separate parcels of privately owned land are located within the Area (WTMA, 2003).

World Heritage Areas designated by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) encourage the protection and preservation of cultural and natural heritage considered to be of outstanding value to humanity (UNESCO, 2005). By 2008, UNESCO had 878 designated World Heritage listed sites of significance. Within Australia, there are seventeen World Heritage Areas, of which five are located in Queensland. The WTWHA was listed for the following criteria:

- It is an outstanding example of the major stages in the Earth's evolutionary history;
- It is an outstanding example of ongoing geological processes, biological evolution and human interaction with the natural environment;
- It contains superlative phenomena, formations and features; and
- It contains important and significant habitats where threatened species of animals or plants of outstanding universal value live.

The WTMA is responsible for the protection, conservation and presentation of the Area's natural environment and manages the activities of commercial tourist operations, free and independent travellers, and recreational visits by the local community. Approximately 350,000 people live within fifty kilometres of the World Heritage boundary and visitation to

the Area is estimated to be 4.4 million visits per year, with 70% of these to sites north of Cairns (Bentrupperbäumer, 2002). Of these visits, 1.76 million or 40% are made by residents of the adjacent local communities (Bentrupperbäumer *et al.* 2004, cited in Bentrupperbäumer and Reser, 2006, p. 1).

The WTMA recognises the need to build and maintain close relationships with communities that are located within the vicinity of the Wet Tropics. As part of this process of engagement, the WTMA actively consults with a range of community groups and business organisations that have an interest in the Area, including Rainforest Aboriginal people, the tourism industry, local residents and landholders. To facilitate this engagement the WTMA established and resources a number of advisory groups including the Scientific Advisory Committee, Rainforest Aboriginal Advisory Committee, Community Consultative Committee, Tourism Industry Liaison Group, Conservation Sector Liaison Group and the Cassowary Advisory Group (WTMA, 2008a).

1.2 Importance of the research

Engaging with the community through consultative processes and community surveys assists in the development of successful partnerships with stakeholders, as well as encouraging the conservation and protection of the WTWHA. The role of local communities was articulated by McIntyre-Tamwoy (2004, p. 290), who observed that “local communities often have a deep sense of ownership of ‘parks’ and some have a deep sense of attachment to particular places within the landscape or to practices that they see as intimately linked to their sense of identity”. This attachment is not always based on an appreciation of scientific value or resource use. Long term ‘local’ or neighbouring communities of individuals may have a memory of the protected area based on an experiential engagement of the landscape over time (McIntyre-Tamwoy, 2004). Understanding the social, natural and cultural values of a protected area held by community members involves learning from the community as well as educating the community about these environmental values. The significance of this engagement was noted by Millar (2006, p. 50) who commented that “as committed stakeholders, local people combine an understanding and appreciation of the heritage assets and willingness to communicate this sensibility and knowledge to others.”

For effective management that engages with local residents and other local stakeholders, the need to develop a comprehensive understanding of the role that protected areas play in the lives of communities is arguably as important as developing a greater understanding of the scientific aspects of the area. Worboys and others (2001), for example, observed that the conservation of both natural and cultural resources plays an important role in humanity's well-being. While social science research into aspects of the Wet Tropics has not received the support that is apparent in scientific investigations of the region, there is a growing body of work that comments on a range of social issues including tourism and recreation. Some of the first studies of this nature were undertaken on management aspects of tourism (Chester, 1995; Carmody, 1999) and estimates of the economic value of the WTWHA (Driml, 1997). More recently, Prideaux and Falco-Mammone (2007) re-evaluated the economic contribution of tourism to the Area. The perceptions of a range of community stakeholders to the Area have also been extensively documented (Bentrupperbäumer and Reser, 2000; Hardy and Beeton, 2001a, 2001b; Dredge and Humphreys, 2003). Most of these studies have focused on the northern section of the WTWHA in Daintree National Park, an area of environmental significance that extends from the Daintree River north to the Bloomfield River, including Cape Tribulation. Funding for the research outlined above was provided by the Cooperative Research Centre for Tropical Rainforest Ecology and Management (Rainforest CRC) and the WTMA. Since 2006 funding has been provided through the Australian Government's Marine and Tropical Sciences Research Facility (MTSRF). This *Community Survey* was funded by the MTSRF and a grant from the WTMA.

A key feature of the current research is the measurement of changing community views in the period between the 2002 survey and the current survey. Adopting the 2002 study as a baseline for measurement is a fundamental element of the findings presented in this report. In the current project some additional questions were added to compare community views of the WTWHA with those of the Great Barrier Reef World Heritage Area (GBRWHA).

1.3 Previous community surveys

Previous surveys commissioned by the WTMA were designed to identify community resident attitudes, perceptions and experiences of the World Heritage listed Wet Tropics and views on the role of the WTMA. Telephone surveys undertaken in 1992, 1993 and 1996 (AGB McNair) were designed to:

- Measure people's awareness of the Wet Tropics area;
- Measure the level of support for the listing;
- Measure intentions to visit the area;
- Identify and prioritise issues of significance to local residents, including:
 - Infrastructure (power, dams, roads);
 - Conservation;
 - Recreation;
 - Tourism;
 - Industry (mining, grazing, etc.);
 - Scenic quality;
 - Community access; and
 - Environmental protection;
- Establish patterns of use by the local community; and
- Identify the community's expectations of the Authority's management plan.

The AGB McNair telephone surveys (1992; 1993; 1996) were conducted within five regions of North Queensland, including:

- Cairns Region (Palm Cove to Edmonton and approximately twenty kilometres inland from the coastline);
- Northern Region (Palm Cove to Cooktown and approximately twenty kilometres inland from the coastline);
- Tablelands Region;
- Southern Region (Edmonton south to Kulburn and approximately twenty kilometres inland from the coastline); and
- Townsville Region.

The 2002 survey (Bentrupperbäumer and Reser, 2003; 2006) built on previous research undertaken by AGB McNair to develop a comprehensive understanding of community attitudes to the WTWHA. The 2002 study surveyed 788 residents living in seventy regional towns and suburbs. Results indicate there was strong recognition of the environmental and social benefits derived from the WTWHA, including its contribution to their quality of life, its role as an integral part of the landscape, and the role that the Area played in the lifestyle of the community. The strongest concern expressed in the survey related to the standard of feral pest management and the management of human activities both within and outside the Area boundaries.

An important finding of these surveys was that continued monitoring of the role that the WTWHA plays in the life of the community is important and leads to a more detailed understanding of residents' attitudes and perceptions of the management of this protected area. It is also apparent that successful strategies to facilitate enhanced connectedness, active engagement and partnership among members of the community, community groups and organisations greatly strengthens the opportunity to achieve social, economic and environmental objectives (Considine, 2004, cited in West *et al.* 2006). The 2007 survey further contributes to understanding the role that the WTWHA plays in the life of the communities located within its vicinity. In addition, these findings will assist the WTMA to understand views of the residents of the Wet Tropics bioregion. Table 1 provides a brief summary of the key findings of previous surveys.

Table 1: Key findings of previous community surveys.

Title and Consultant	Year	Method	Key Findings
<i>Community Attitudes to the Wet Tropics World Heritage Area: A Benchmark Study</i> AGB McNair	1992	2,000 telephone interviews	• 52% were aware that the Wet Tropics was a World Heritage listed area; • 51% strongly support World Heritage listing; • 26% visit the WTWHA once a month or more often; • 46% visit for picnicking, swimming (42%) and bushwalking/ hiking (40%).
<i>Community Attitudes to the Wet Tropics World Heritage Area</i> AGB McNair	1993	2,000 telephone interviews	• 68% were aware that the Wet Tropics was a World Heritage listed area; • 59% strongly support World Heritage listing; • 24% visit the WTWHA once a month or more often; • 54% visit for picnicking, taking scenic drives (50%), swimming (48%) and bushwalking/ hiking (47%).
<i>Community Attitudes to the Wet Tropics World Heritage Area</i> AGB McNair	1996	1,900 telephone interviews	• 68% were aware that the Wet Tropics was a World Heritage listed area; • 56% strongly support World Heritage listing; • 28% visit the WTWHA once a month or more often; • 60% visit for taking scenic drives and picnicking (60%).
<i>Attitude Survey – WTWHA Neighbours</i> AC Nielsen	1999	500 telephone surveys with landholders neighbouring the WTWHA	• 45% strongly supported World Heritage listing; • 66% of respondents who own property that borders the WTWHA were satisfied; • 82% have natural forest on their land; • Disadvantages of being a neighbour of the WTWHA included feral pigs (29%) and restrictions on property use (17%).
<i>The Role of the Wet Tropics World Heritage Area in the Life of the Community: A Survey of the North Queensland Community</i> Rainforest CRC	2002	788 surveys returned from postal distribution and drop-off/pick-up survey methods	• 93% were aware that the Wet Tropics was a World Heritage listed area; • 58% strongly support the World Heritage listing; • 25% visit the WTWHA once a month or more often; • 56% visit for a recreational activity (e.g. bushwalking, swimming, bird watching).

2. Methodology

Section 2 outlines the methods used to survey communities within the vicinity of the WTWHA.

2.1 Study location

The WTWHA was divided into sub-regional areas (i.e. Cairns, the Tablelands, Northern region, Southern region and Townsville) of representative communities across the Wet Tropics bioregion. The areas selected for sampling follow the pattern established by Bentrupperbäumer and Reser (2003) with the addition of Townsville as a survey region. In addition, the number of surveys distributed to Cairns residents was increased by eight hundred.

2.2 Survey instrument

The basic structure of the 2002 *Community Survey* was adopted as the basis for the 2007 study thus allowing comparisons to be made between the two data sets. The inclusion of a number of open-ended questions was designed to elicit respondents' views on a range of issues. In the 2007 survey an additional page was provided for respondents' comments. Respondents were invited to record their views on any aspect of the WTWHA and its management, the WTMA and other stakeholders of the Area. Additional questions were added to the survey to develop an understanding of views that the community held towards the GBRWHA. The survey instrument contained 47 closed and open-ended questions (Appendix A). The structure of the survey is outlined in Table 2. Because of the similarity with the 2002 survey instrument, the survey was not piloted.

A map showing the location of the WTWHA, including the towns and cities that were surveyed, is provided at Appendix B.

Table 2: Key sections of the *Community Survey*.
Reproduced in part from Bentrupperbäumer and Reser (2006, p. 9).

Key Sections	Content
Awareness and importance	Awareness and importance; ownership; extent and location
Background information	Age; gender; residency; education, occupation; ethnicity
Knowledge of the WTWHA	Knowledge of World Heritage listing; boundaries; ownership
Current support	Listing; protection; Rainforest Aboriginal co-management
Role of the WTWHA in the life of a resident and in the life of a regional community	Personal and community advantages and disadvantages
Conservation and management of the WTWHA	Perceptions and recognition of management agency; performance indicators; information sources
Actual visitation and recreation in the WTWHA	Site use; patterns of use; visitation profile
Great Barrier Reef World Heritage Area	Awareness; importance; knowledge

2.3 Methods of survey distribution

Two methods of survey distribution were used – a postal method and a door-to-door method. Surveys were also mailed out to members of the community requesting them to participate in the survey. In the period from May to October 2007, 4,142 surveys were distributed between Townsville and Mossman and west to Ravenshoe. The 'paper and pencil' survey format allowed respondents more time to provide a reflective response particularly for questions that contained an open-ended response format. A distinctive information postcard (Appendix C) was attached to each survey giving residents the opportunity to request a copy of the results of the survey and/or request other information about the WTWHA.

Surveys distributed via the postal method were sent as unaddressed mail to holders of private Australia Post post boxes. The areas used for this distribution method were small country settlements that have predominantly semi-rural and rural housing. The nature of this form of settlement pattern made it difficult to use the door-to-door distribution method. Each envelope was addressed:

To the Wet Tropics Resident
Private Post Box Holder
[Town] QLD [Postcode]

Postal managers were requested to place survey packages in every second active private post box. Each envelope contained a survey, reply-paid return envelope, information explaining the purpose of the survey and a covering colourful flyer (Appendix D).

The door-to-door distribution method involved experienced research assistants approaching every second house in a randomly selected street. Residents who agreed to participate were advised that a team member would return on the following day to collect the survey. If residents did not plan to be home on the following day, they were requested to leave the survey in their mailbox for collection. To maximise the response rate, face-to-face distribution was undertaken on a Saturday. Where the resident was not home and the survey had not been left for collection, a reply-paid envelope was left with a note asking that the survey be completed and returned (Appendix E). The emphasis of the face-to-face method was to give the opportunity to explain the purpose of the research and increase the rate of return.

A further 211 surveys were either posted or delivered to community members who requested to be involved in the survey. Eleven personal requests were received from residents who telephoned and requested a survey in response to media about the survey either over the radio or in the newspaper. Surveys were also given to the Aboriginal Rainforest Council (ARC) for distribution to members of Aboriginal groups of the Wet Tropics rainforests. The total number of valid surveys returned was 853, with 57% returned from the door-to-door procedure (including surveys mailed in response to a specific request) and 43% via the postal method. Response rates for the door-to-door procedure were highest from residents of Miriwinni (38.7%), Babinda (35%), Mission Beach (35%) and Gordonvale (31%). Table 3 provides the locations and methods of distribution for the 2007 *Community Survey*.

Table 4 provides a summary of the number of surveys distributed by each method and returned. In 2007, a response rate of 20.6% was achieved based on 853 useable responses. In the 2002 study, 788 valid surveys were returned, equating to a 33.2% response rate. A much higher response rate was achieved in the door-to-door procedure in 2002 (41.9% of distributed surveys) compared to 2007 (24.3% of distributed surveys).

Table 3: Survey distribution in 2007.

Location	Posted Surveys	Surveys Delivered to Door	Surveys Collected at Door
Atherton	450		
Babinda		100	35 (35.0%)
Cardwell	140		
Gordonvale		200	62 (31.0%)
Halifax	65		
Herberton	200		
Ingham	250		
Innisfail		300	66 (22.0%)
Kuranda	250		
Millaa Millaa	60		
Miriwinni		31	12 (38.7%)
Mission Beach		400	140 (35.0%)
Port Douglas	200		
Ravenshoe	200		
Rollingstone	25		
Townsville			
Belgian Gardens	140		
Deeragun	120		
Cairns			
Forest Gardens		150	27 (18.0%)
Kewarra Beach/ Smithfield		350	84 (24.0%)
Mooroobool/ Edge Hill		300	61 (20.3%)
By Request			
Aboriginal Rainforest Council		100	
Daintree Cape Tribulation Tourism Association		30	
Hinchinbrook Shire Council	30		
Mission Beach Tourism		10	
Personal Requests	11		
WTMA Office		30	
Total Surveys Distributed	2,141	2,001	4,142
Total Surveys Collected at Door	487 (57.0%)		
Total Surveys Returned via Post	366 (43.0%)		
Total Surveys Returned	853		

Note: In the 2002 study, surveys were not distributed in Halifax, Ingham, Rollingstone, Belgian Gardens or Deeragun and household sampling in Cairns was only conducted in Edge Hill and Manunda.

Table 4: Comparison of survey distribution and collection (2007 and 2002).

	2007		2002	
	Door-to-door Procedure	Postal Procedure	Door-to-door Procedure	Postal Procedure
Surveys distributed	2,001	2,141	1,236	1,138
Valid surveys returned (Percentage of distributed surveys)	487 (24.3%)	366 (17.1%)	518 (41.9%)	270 (23.7%)
Total Surveys Analysed	853 (20.6% response rate)		788 (33.2% response rate)	

2.4 Non-response

During the door-to-door distribution of the 2007 *Community Survey*, respondents' reasons for non-response were noted and collated. The actual length and comprehensiveness of the survey itself may have led to many residents not completing the survey after first accepting it. Seventy residents approached in the door-to-door phase of the survey declined to participate, noting they were not interested. In addition, 23 residents stated that they did not have time; 13 residents indicated they were unable to complete the survey due to illness or understanding; and seven indicated language problems. Non-response bias was not observed in the project.

2.5 Limitations

As with any research, there were a number of limitations encountered that should be considered if results are to be generalised over the entire population of the Wet Tropics bioregion. The survey instrument was nine pages in length and contained 47 open-ended and closed questions. The time needed to complete the survey was estimated to be 15-20 minutes; however more time may have been required. It is reasonable to suggest the length of the survey contributed to the low response rate. This was evident in the door-to-door collection procedure where many residents returned the survey incomplete stating it was too long or they were not interested in responding after perusing the survey.

Because of the difficulty of ensuring that follow-up letters would reach people previously approached, media releases in newspapers and on local radio were used to try to inform the community of the importance of the survey and to increase the response rate.

The research team was unable to gain access to the electronic copy of the 2002 *Community Survey* and as a result data was extracted from the hard copy of the report by Bentrupperbäumer and Reser (2003) and the 2006 revised edition. As a consequence it was not possible to compare all questions in the 2002 survey with data collected in the 2007 survey.

The median age of the respondents (49 years) was significantly higher than the median age for Queensland as a whole (35.9 years). It is possible that the views of younger age groups are under represented. One explanation for the difference may be that older respondents had more time to complete the survey or were more interested in completing the survey than younger residents.

3. Results

The results presented in Section 3 are from the 2007 *Community Survey*. Comparisons with the 2002 *Community Survey* (Bentrupperbäumer and Reser, 2003) are included where available. Comparative results provide an understanding of changes in the community's attitude to the management of the Wet Tropics, their level of knowledge and the importance they placed on living in the same region as a World Heritage listed icon. The 2002 results are reported where available to provide comparative findings. Key findings are provided at the beginning of each section.

3.1 Profile of respondents

This section profiles the respondents who returned the 2007 *Community Survey* and outlines the respondents' normal place of residence and their period of residency, ethnicity, level of education, occupation, gender and age.

Key Points:

- More females (52.9%) than males (47.1%) completed the survey.
- 75% of respondents live in suburban or semi-urban residences.
- The average period of residence was 24 years.
- 54.1% of respondents had a university, trade or technical education.
- The mean age of respondents was 49.9 years.
- The largest groups of respondents were pensioners, retired or unemployed (22.8%) and professionals / associate professionals (17.7%).

3.1.1 Period and place of residence

Responses were received from residents who collectively represented 79 towns and suburbs across the Wet Tropics bioregion and included twelve Local Government Authorities (2006 boundaries) and 36 postcodes. Three respondents were from interstate based on the postcodes provided. Respondents mostly resided in the Cairns region (42.6%), which included Gordonvale, Kuranda and suburbs of Cairns. Residents from the Central region (38.7%) of the Wet Tropics were also well represented, including the communities of Mission Beach and Innisfail. The least number of respondents were from the Northern region (2.3%), including the communities of the Daintree, Mossman and Port Douglas (Table 5).

Most respondents live in suburban (56%) or rural residential (21%) settings (Figure 1). In 2002, 54% of respondents lived in suburban residences and 27% lived in rural residential areas.

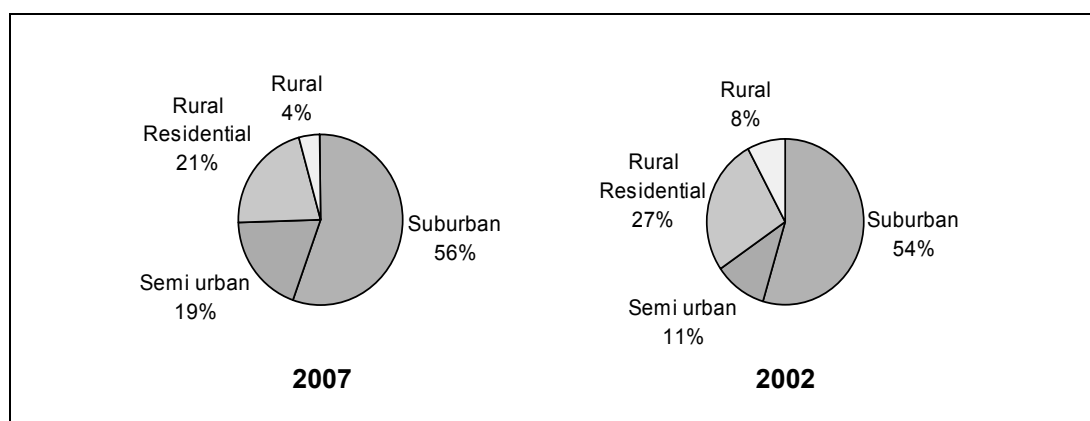
The average period of residency of respondents was 24.4 years with the range being from less than one year to a maximum of 93 years. A third of these residents have lived in the region for ten years or less (31.3%). These results are almost identical to those of the 2002 survey collection (Table 6).

Table 5: Respondents' place of residence (2007).

Wet Tropics Region	Frequency	Percentage of Total
Cairns Region (e.g. Cairns suburbs, Aloomba, Gordonvale, Kuranda)	354	42.6
Central Region (e.g. Mission Beach, Innisfail, Miriwinni)	322	38.7
Tablelands Region (e.g. Malanda, Atherton, Walkamin, Yungaburra, Peeramon)	61	7.3
Southern Region (e.g. Tully, Ingham, Halifax, Cardwell, Lucinda)	49	5.9
Townsville Region (e.g. Hermit Park, Rollingstone, Belgian Gardens, Nelly Bay)	26	3.1
Northern Region (e.g. Daintree, Mossman, Port Douglas, Oak Beach)	19	2.3
Total	831	100.0

Table 6: Respondents' period of residency (2007 and 2002).

Length of Residency	2007	2002
≤ 10 years	31.3%	30.3%
> 10 years	68.7%	69.7%
Mean	24.4 years ± SD = 20.3	0.8-85 years

**Figure 1:** Respondents' place of residence in 2007 (n = 838) and 2002 (n = 774).

3.1.2 Gender

The gender ratio of respondents for the 2007 *Community Survey* was 47.1% males to 52.9% females. This result differs substantially from the gender ratio found in the 2005 Census which indicated that there was an even distribution of males and females within the Queensland population (Australian Bureau of Statistics, 2005). In 2002, more females (59.8%) than males (40.2%) completed the *Community Survey*.

3.1.3 Age

The age of respondents ranged from 11 years to 93 years with the mean age being 49.6 years. The largest number of respondents was aged 60 years or over (29.6%). The age of respondents broadly parallels the findings of the 2002 *Community Survey* although more respondents were aged over 60 years in the 2007 survey (Table 7). The Australian Bureau of Statistics (2005) indicates the median age of the Queensland population is 35.9 years. Therefore, the resident sample in this research is older than the median population age for Queensland.

A cross tabulation of residents' age groups and place of residence is provided in Table 8. The majority of respondents were aged 60 years or over and were located within the Central region (n = 104) and the Cairns region (n = 89).

Table 7: Age of respondents (2007 and 2002).

Age Group	2007 (n = 830)		2002 (n = 767)	
	Frequency	Percentage	Frequency	Percentage
< 20 years	16	1.9	11	1.4
20-29 years	84	10.1	70	9.1
30-39 years	139	16.7	133	17.3
40-49 years	190	22.9	186	24.3
50-59 years	155	18.7	169	22.0
> 60 years	246	29.6	198	25.8
Mean	49.6 years $\pm$ SD = 16.3		49.2 years $\pm$ SD = 15.6	
Range	11-93 years		12-88 years	

Table 8: Respondents' place of residence by age group (2007).

Age Group	Northern Region	South Region	Cairns Region	Tablelands Region	Central Region	Townsville Region
< 20 years	0	0	6	2	8	0
20-29 years	1	5	43	4	25	6
30-39 years	5	3	72	4	46	6
40-49 years	5	14	85	9	68	1
50-59 years	5	8	54	21	59	4
> 60 years	3	17	89	19	104	9
Total	19	47	349	59	310	26

3.1.4 Education

Results indicate that respondents were generally well educated. More than half of the respondents (54.1%) held university, technical or trade certificates compared to the 2002 survey where 47.4% of respondents had a similar level of education.

Table 9: Education levels of respondents (2007 and 2002).

Education Level	2007 (n = 846)		2002 (n = 771)	
	Frequency	Percentage	Frequency	Percentage
No Schooling	1	0.1	-	-
Primary (1-7 years of education)	48	5.7	46	6.0
Secondary (8-12 years of education)	338	40.0	355	46.0
Tertiary A (tech. or further education)	240	28.4	206	26.7
Tertiary B (University)	219	25.7	164	21.3

3.1.5 Occupation

In 2007 the largest groups by occupation were pensioners, retired or unemployed (22.8%), professional and associated professionals (17.7%) and those in management and administration (17.5%). More management and administrators, clerical and service industry workers, trades people and labourers completed the 2002 *Community Survey*. Fewer professionals and associate professionals and those with home duties completed the survey in 2007 compared to 2002 (n = 671) (Figure 2).

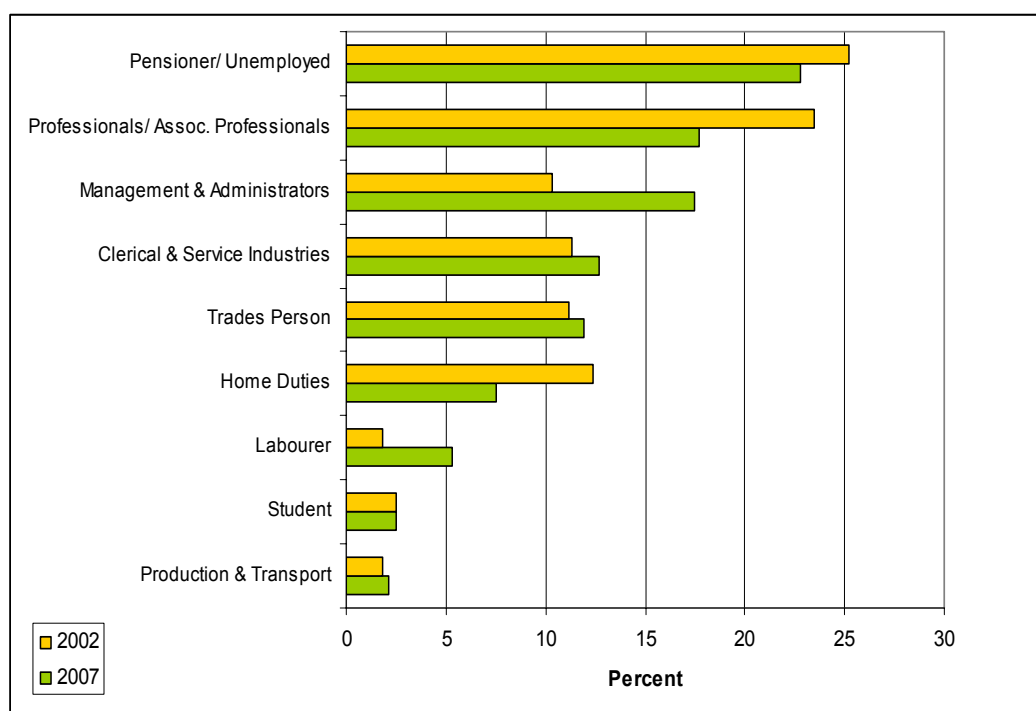


Figure 2: Occupation of respondents (2007 and 2002).

3.1.6 Ethnicity and nationality

Forty-five percent of respondents indicated an ethnic background. The majority of respondents were Australian citizens (96.2%). Only 3.8% of the respondents indicated they were not an Australian citizen. Aboriginal and/or Torres Strait Islander respondents were under-represented and constituted 3.0% (n = 26) of the entire sample. Nationality (n = 384) is outlined in Table 10. English, New Zealander and Italian were the largest groups. 'Other' included people with two or more national backgrounds (n = 74).

Table 10: Nationality of respondents (2007).

Nationality	Frequency	Nationality	Frequency
American	8	Irish	16
Australian	12	Japanese	4
Canadian	3	Malaysian	1
Chinese	3	New Zealander	26
Dutch	15	Norwegian	-
English	150	Scottish	9
French	4	Spanish	5
German	19	Swiss	-
Greek	4	Turkish	-
Indonesian	7	Vietnamese	-
Italian	24	Other	74
Total Responses		384	

3.2 Awareness and knowledge of the World Heritage Area

Bentrupperbäumer and Reser (2006, p. 15) stated that questions regarding awareness and knowledge of the World Heritage Area were “designed to establish respondents’ awareness of the World Heritage status of the Wet Tropics rainforests, their self-assessed and objective knowledge of the Area, and the degree of importance it has to them”. The questions in the 2007 *Community Survey* were expanded to ask respondents about their awareness of the Great Barrier Reef in addition to the Wet Tropics.

Key Points:

- 92% of respondents were aware that the Wet Tropics rainforests are World Heritage listed.
- The mean for respondents’ level of knowledge was 3.38 in 2007.
- The level of importance of the Wet Tropics World Heritage Area to respondents has increased since 2002.
- Having two World Heritage Areas in North Queensland was rated ‘very significant’ by 67.5% of respondents.

3.2.1 Awareness of the World Heritage listing

Responses to Question 1: *Are you aware that most of the rainforests in this region are part of a World Heritage Area?*

Ninety-two percent of respondents in the 2007 *Community Survey* were aware that the Wet Tropics rainforests of North Queensland are a World Heritage Area, while 93.2% of respondents were aware of this fact in 2002. Between 2002 and 2007 there was a slight fall (1%) in the number of residents who were aware that the Wet Tropics was World Heritage listed.

3.2.2 Perceived levels of knowledge

Responses to Question 2: *If [you responded] ‘yes’ [to Question 1], how would you rate the level of your general knowledge about this World Heritage Area?*

Respondents’ levels of self-assessed knowledge of the WTWHA have improved modestly over the five year period since 2002 (Figure 3). In 2007, the mean (on a six-point Likert scale where 6 = very knowledgeable) was 3.38, an increase from 3.24 in 2002. The number of respondents who considered themselves ‘very knowledgeable’ has increased from 3.3% in 2002 to 5.5% in 2007, and the number of respondents who indicated they were ‘considerably knowledgeable’ has increased from 10.1% in 2002 to 12.0% in 2007. The number of respondents who considered they were ‘slightly knowledgeable’ has decreased from 28.3% in 2002 to 23.5% in 2007.

Cross-tabulation analysis showed 30.2% of suburban residents considered themselves to be ‘somewhat knowledgeable’ and 34.0% of rural residents considered themselves to be ‘moderately knowledgeable’ of the WTWHA in 2007.

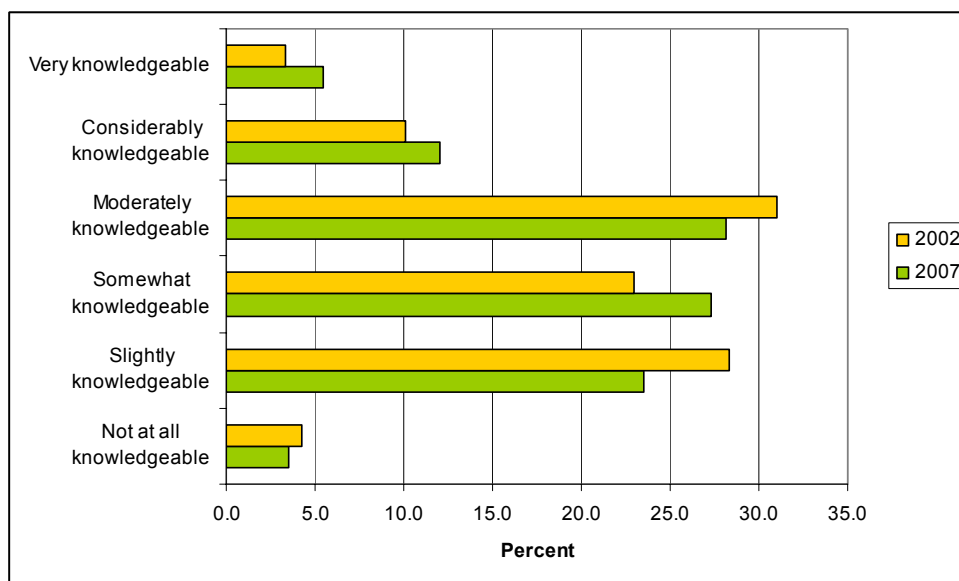


Figure 3: Self-assessed knowledge of the WTWHA (2007 and 2002).

3.2.3 Importance of the World Heritage Area

Responses to Question 3: *How important do you consider the World Heritage Area to be, in general?*

As shown in Figure 4, the majority of respondents considered the WTWHA to be either 'very important' (59.5%) or 'considerably important' (24.6%). On a scale of 1 = not important to 6 = very important, the mean was 5.33. The importance of the WTWHA has increased since 2002 when the mean was 5.12.

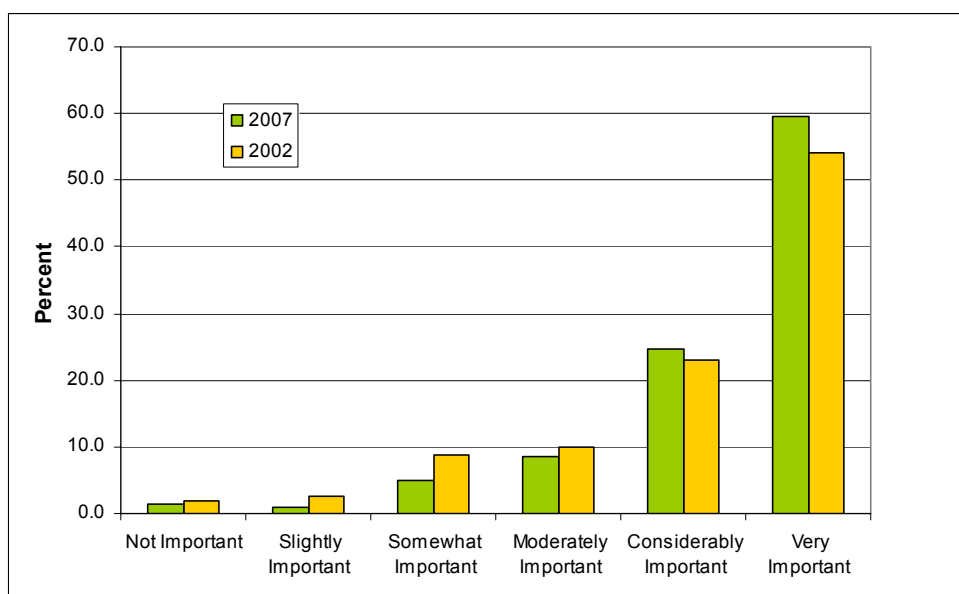


Figure 4: Importance of the WTWHA to respondents (2007 and 2002).

3.2.4 Comparisons with the Great Barrier Reef World Heritage Area

Responses to Question 44: *Are you aware that the Great Barrier Reef is a World Heritage Area?*

Awareness that the Great Barrier Reef is a World Heritage Area was slightly higher (96%) than awareness that the Wet Tropics rainforests is a World Heritage Area (92%). Awareness of the Great Barrier Reef as a World Heritage Area was not included in the 2002 survey.

Responses to Question 45: *If [you responded] 'yes' [to Question 44], how would you rate the level of your general knowledge about this World Heritage Area?*

In 2007 residents were asked to rate their general level of knowledge of the Great Barrier Reef World Heritage Area (GBRWHA). A six-point Likert scale from 1 = not at all knowledgeable to 6 = very knowledgeable was used. In comparison, respondents' knowledge of the Wet Tropics and the Great Barrier Reef are generally analogous. Fewer than thirty percent (28.2%) of respondents were moderately knowledgeable of the Wet Tropics and 30.0% were moderately knowledgeable of the Great Barrier Reef. Residents indicating they were 'very knowledgeable' of these two World Heritage areas were low (5.5% for the Wet Tropics; 6.0% for the Great Barrier Reef). Overall, levels of knowledge are generally moderate for both the WTWHA (3.38) and the GBRWHA (3.47) (Figure 5).

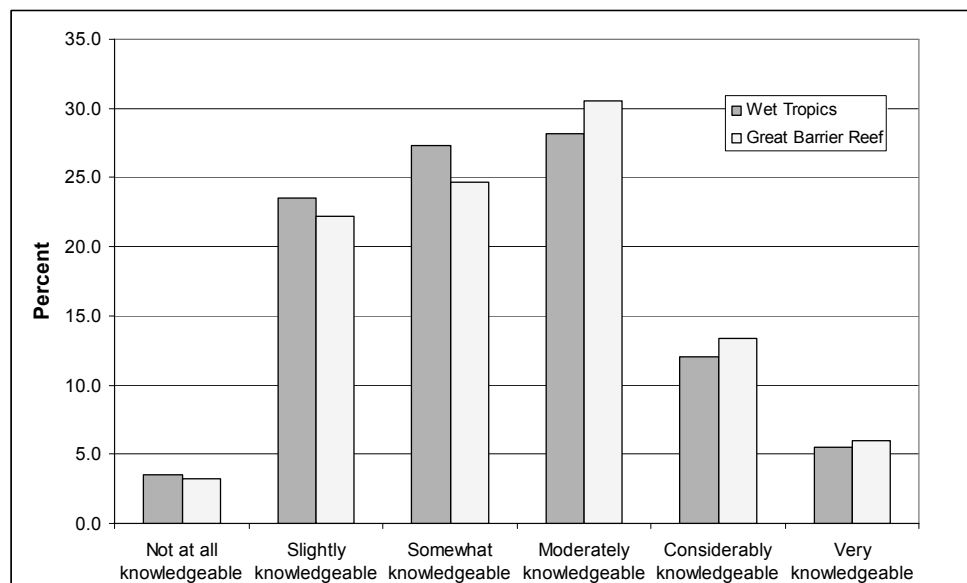


Figure 5: Respondents' knowledge of the WTWHA and GBRWHA (2007).

Responses to Question 46: *How important do you consider the Great Barrier Reef World Heritage Area to be, in general?*

A comparison of the level of importance for both the WTWHA and the GBRWHA is provided in Figure 6. The GBRWHA was rated as 'very important' by 72.4% of respondents compared to 59.5% who rated the WTWHA as 'very important'. However, more respondents rated the WTWHA as 'considerably important' (24.6%) compared to the GBRWHA (18.4%).

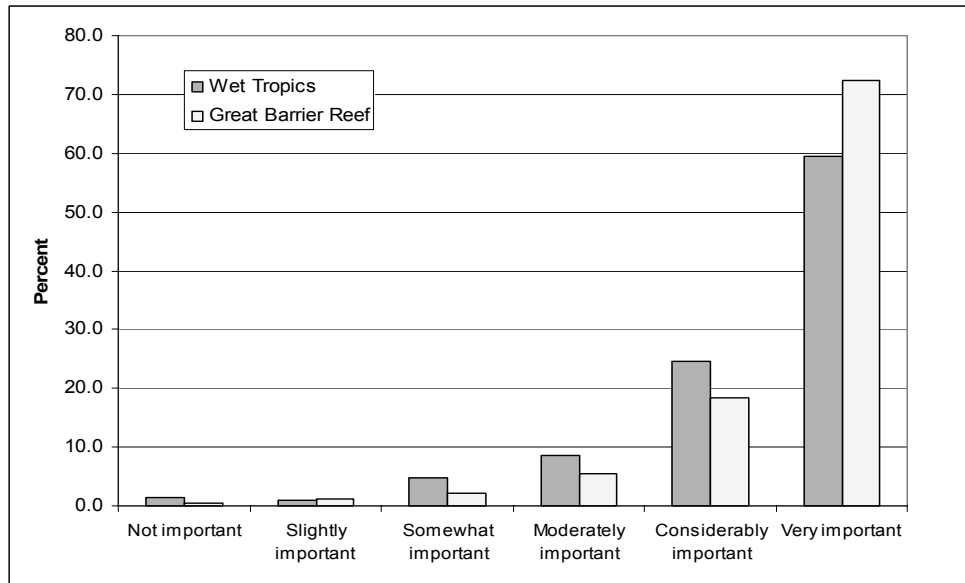


Figure 6: Comparison of perceived levels of importance of the WTWHA and GBRWHA (2007).

3.2.5 The significance of two World Heritage Areas in North Queensland

Responses to Question 47: *How significant do you think it is to have two World Heritage Areas side by side in North Queensland?*

In the 2007 *Community Survey*, respondents were asked to consider the significance of having two World Heritage Areas in North Queensland. On a rating scale of 1 = not significant to 6 = very significant, the mean was 5.38. This result indicates that 67.5% respondents considered that it was very significant having two areas located in North Queensland (Figure 7).

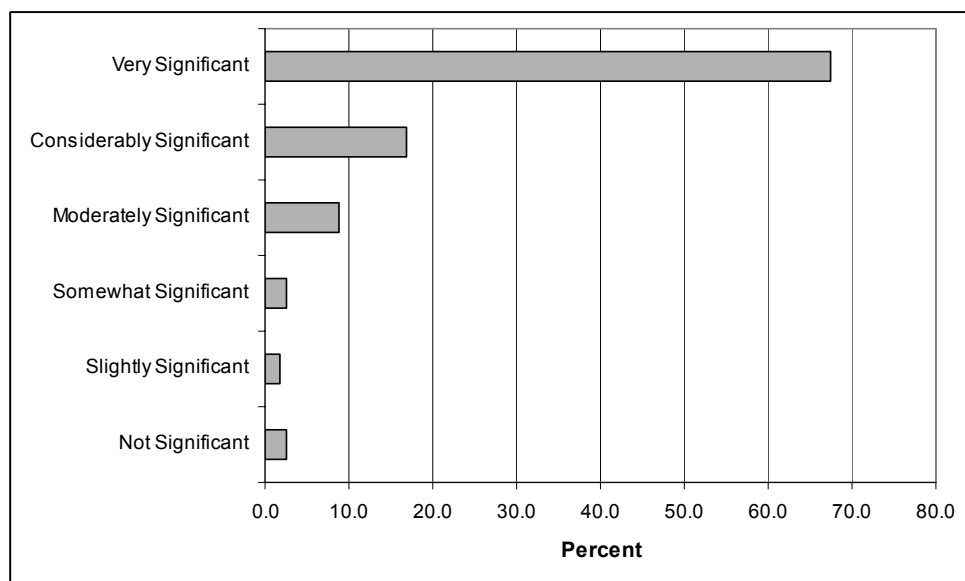


Figure 7: Significance of having two World Heritage Areas in North Queensland (2007).

3.3 Actual knowledge of the Wet Tropics World Heritage Area

Understanding the level of knowledge held by the residents about the WTWHA provides useful insights for management agencies as they consider the impact their policies and management operations are having on the community. In 2007, knowledge of the GBRWHA was also included for purposes of comparison. Other questions probed respondents' knowledge of the Area boundaries, ownership of the Area and views on why the rainforests were World Heritage listed.

Key Points:

- Knowledge of the WTWHA and GBRWHA is generally moderate.
- Approximately one-fifth of residents knew the northern and southern boundaries of the WTWHA.
- 11% of respondents thought the Wet Tropics was owned by a government agency. Compared to the 2002 survey, more respondents thought the WTWHA was owned by either 'everyone' or 'Australia', and the 'people of Australia'.
- Residents understand that the WTWHA was listed for protection / conservation / preservation (45.8%) and its natural / ecological / geological significance (37.9%).

3.3.1 Why the World Heritage listing?

Responses to Question 12: *Why do you think these rainforests were made a World Heritage Area?*

Residents were asked through an open-ended question why they thought the Wet Tropics rainforests were listed on the World Heritage register. All responses were recoded and separated into the categories delineated in the 2002 *Community Survey*. As in the previous survey, protection, conservation and preservation (45.8%) and natural, ecological and geological significance (37.9%) were the main reasons given by respondents for World Heritage listing (Figure 8). These results indicate there is an understanding of the importance of the Wet Tropics as a natural phenomenon.

There were no significant differences between rural and suburban residents regarding the reasons proffered for why the rainforest was listed as a World Heritage Area.

3.3.2 Actual knowledge of the World Heritage Area boundaries

Responses to Question 13: *From what you know of the region, where do you think the WTWHA begins in the north, and ends in the south?*

The community's knowledge of the location of the northern and southern boundaries of the WTWHA has increased by approximately 3% since 2002 as highlighted in Table 11. Almost 80% of the respondents did not correctly identify or did not know the location of either the northern or the southern boundaries of the Area. Only 21.3% of respondents correctly identified the vicinity of the northern boundary and 22.7% correctly identified the approximate extent of the southern boundary. A map of the WTWHA is provided in Appendix B.

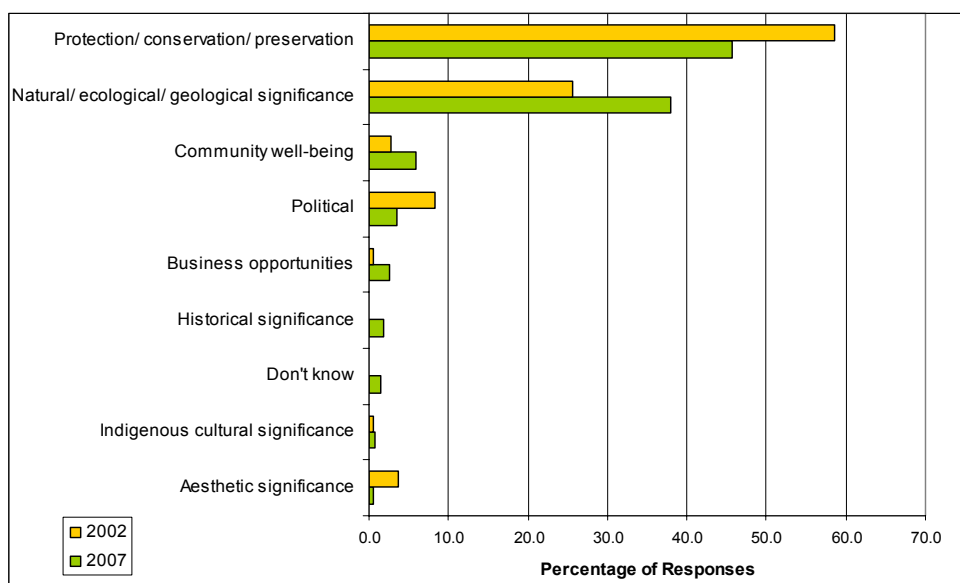


Figure 8: Respondents' perceived reasons for the World Heritage listing of the Wet Tropics rainforests (2007 and 2002).

Table 11: Respondents' identification of the WTWHA boundaries (2007 and 2002).

Northern Boundary	2007	2002	Southern Boundary	2007	2002
Cape York Region (e.g. Cape York, Bamaga, Lockhart River, Weipa, Thursday Island)	220	205	Southern Queensland/ Southern States (e.g. Bowen, Rockhampton, Whitsundays, Bundaberg, Tasmania)	85	51
Cooktown Region (e.g. Cooktown, South of Cooktown, Black Mountain)	168 (21.3%)	142 (18.0%)	Paluma / Townsville Region (e.g. Paluma, Townsville, Rollingstone, Crystal Creek, Bluewater, Mt Spec)	176 (22.7%)	161 (20.4%)
Daintree Region (e.g. Bloomfield, Daintree, Mossman, Cape Tribulation, Port Douglas)	172	121	Central-South Region (e.g. Lucinda, Cardwell, Ingham, Herbert River)	201	154
Cairns Region (e.g. Cairns, Kuranda, Babinda)	7	5	Central-North Region (e.g. Tully, Dunk Island, Mission Beach, Cairns, Goldsborough)	62	63
Tablelands Region (e.g. Mareeba, Windsor Tablelands)	2	6	Tablelands Region (e.g. Great Dividing Range)	2	6
Southern Region (e.g. El Arish, Mt Bartle Frere)	2	8	Northern Region (e.g. Cape Tribulation, Port Douglas, Mossman)	9	15
Don't know	213 (27.2%)	258	Don't know	236 (30.6%)	298
Unanswered	69	43	Unanswered	82	40
Total	853	788	Total	853	788

3.3.3 Ownership of the World Heritage Area

Responses to Question 14: *Who do you believe the WTWHA belongs to?*

Using an open-ended question, respondents were asked to indicate who they thought the WTWHA belonged to. Less than half (41.7%) of the respondents indicated global ownership encompassing the responses of 'everyone' and 'the world'. A further 31.8% of respondents indicated that the Area belonged to 'Australia' and the 'people of Australia'. Both 'global' and 'Australia' responses were higher than the 2002 survey (see Figure 9). In 2002, groups (4.5%) and organisations (3.9%) were separated. In 2007, this was not the case and together equated to 10.9%, slightly more than the combined 2002 percentage of 8.4%. Actual responses from the 2007 survey are provided in Appendix F.

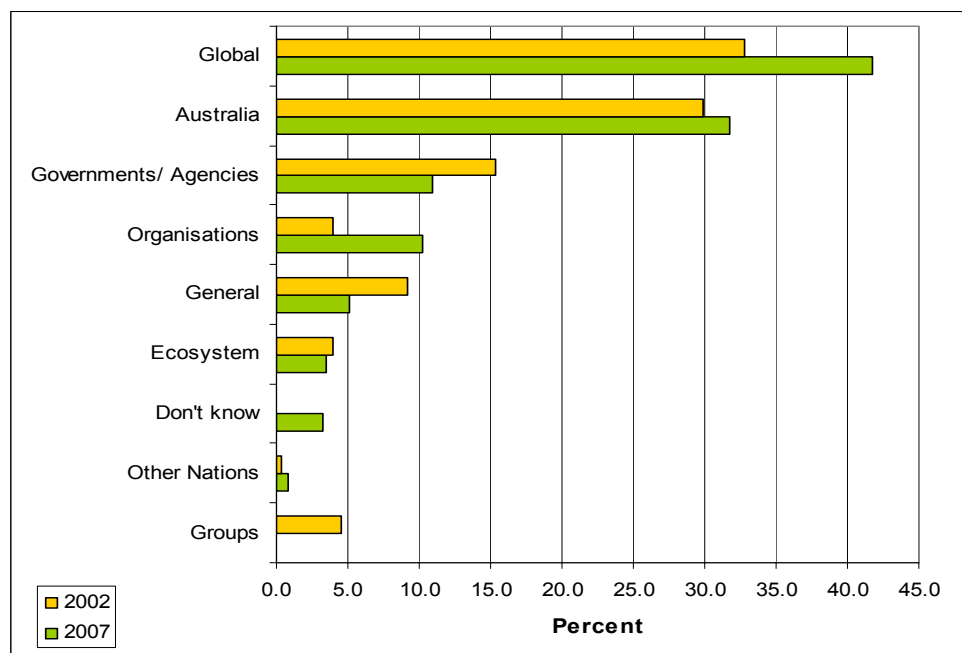


Figure 9: Respondents' perceptions of ownership of the WTWHA (2007 and 2002).

3.4 Community support

A series of questions asked respondents to consider aspects of current community support for the WTWHA listing and its continuing protection. Residents were also asked to indicate their level of support for the inclusion of Aboriginal Cultural Heritage in future World Heritage listings and for some form of Aboriginal co-management of the WTWHA.

Key Points:

- 62% of respondents 'strongly' support the World Heritage listing.
- 92.6% of respondents support to some extent the general level of protection of the WTWHA.
- Support from residents for both the World Heritage listing and the general level of protection afforded by the listing has increased since 2002.
- Support for the inclusion of Aboriginal Cultural Heritage in a future World Heritage listing was high (71.8%).
- 66.9% of respondents supported some form of Aboriginal co-management of the WTWHA, an increase from the previous survey.

3.4.1 World Heritage listing

Responses to Question 15: *To what extent do you support or oppose (a) the World Heritage listing of these forests; and (b) the general level of protection of the WTWHA?*

In 2007, 62% of respondents 'strongly' supported World Heritage listing (Figure 10) and a further 19.9% 'moderately' supported listing. Overall, 81.9% of the respondents indicated 'strong' and 'moderate' support for the World Heritage listing. Total support in 2007 for World Heritage listing was 92.6% of respondents. Opposition to World Heritage listing was expressed by 7.4% of respondents in 2007 compared to 12.4% in 2002, indicating growing support for the listing.

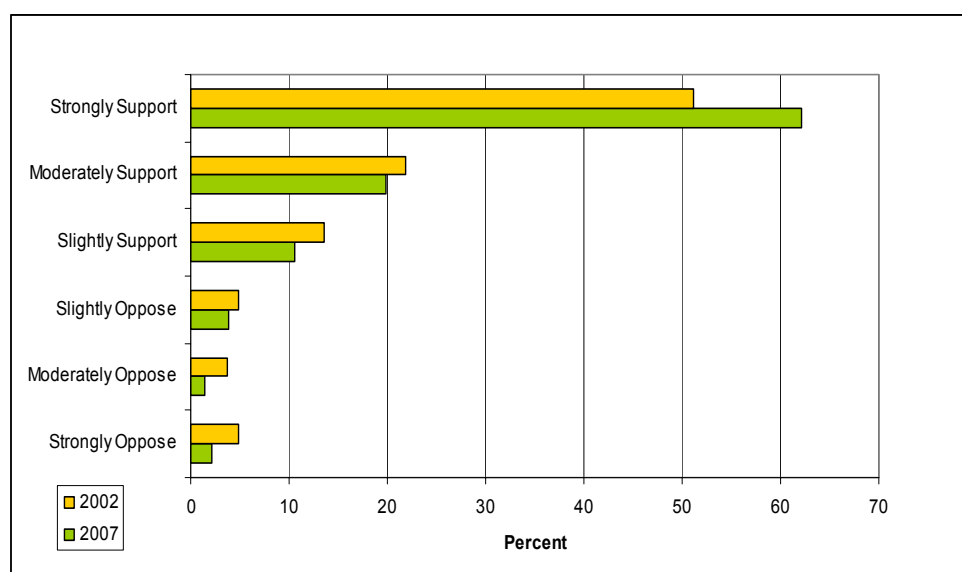


Figure 10: Support for the World Heritage listing (2007 and 2002).

Since World Heritage listing in 1988, community support for the listing has grown. In 1992, 51% of respondents strongly supported the World Heritage listing. In 2002, strong support for the listing was expressed by 58% of respondents, growing to 62.0% in 2007. This trend is illustrated in Figure 11.

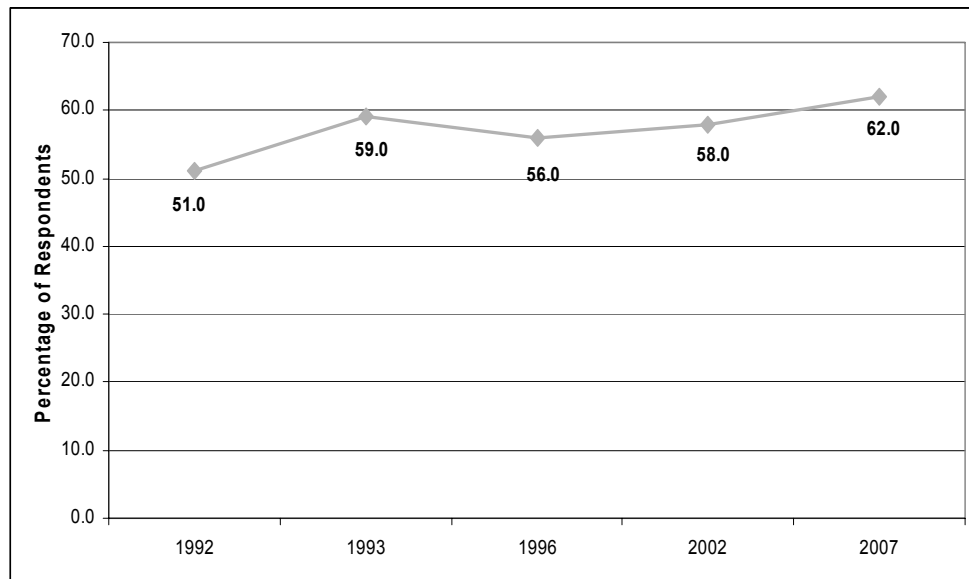


Figure 11: Trends in the level of strong support for World Heritage listing since 1992.

3.4.2 Level of protection

In 2007, 55% of respondents strongly supported the level of protection afforded by the World Heritage listing of the Wet Tropics (Figure 12). Total support for the general level of protection afforded to the Area was significant (92.3%) and higher than in 2002. In 2007 the mean for support for continued protection was 5.20, an increase over the 2002 mean of 4.98.

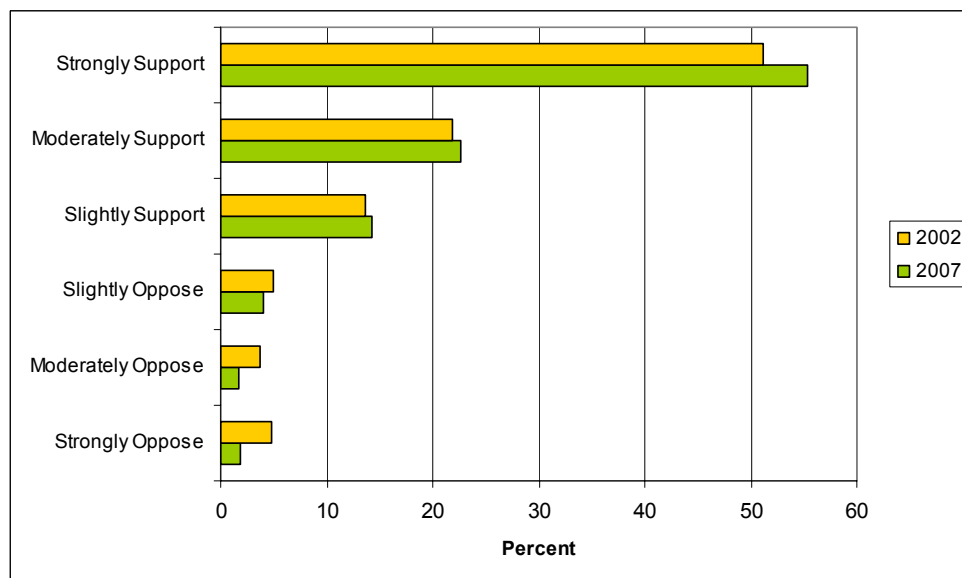


Figure 12: Support for the general level of protection of the WTWHA (2007 and 2002).

3.4.3 Cultural Heritage listing

Responses to Question 16: *To what extent would you support or oppose (a) the inclusion of Aboriginal Cultural Heritage in future listing of the WTWHA; and (b) some form of Aboriginal co-management of the WTWHA?*

Aboriginal heritage is a significant aspect of the WTWHA although the Wet Tropics rainforests were not listed for its cultural values. The inclusion of Aboriginal Cultural Heritage in the World Heritage listing of the Wet Tropics is supported by 71.8% of respondents (Figure 13). In 2002, the inclusion of Aboriginal Cultural Heritage in a future listing of the WTWHA was supported by 63% of respondents indicating growing support for the listing over the last five years. Only 16.9% of respondents 'strongly' or 'moderately' opposed the inclusion of Aboriginal Cultural Heritage.

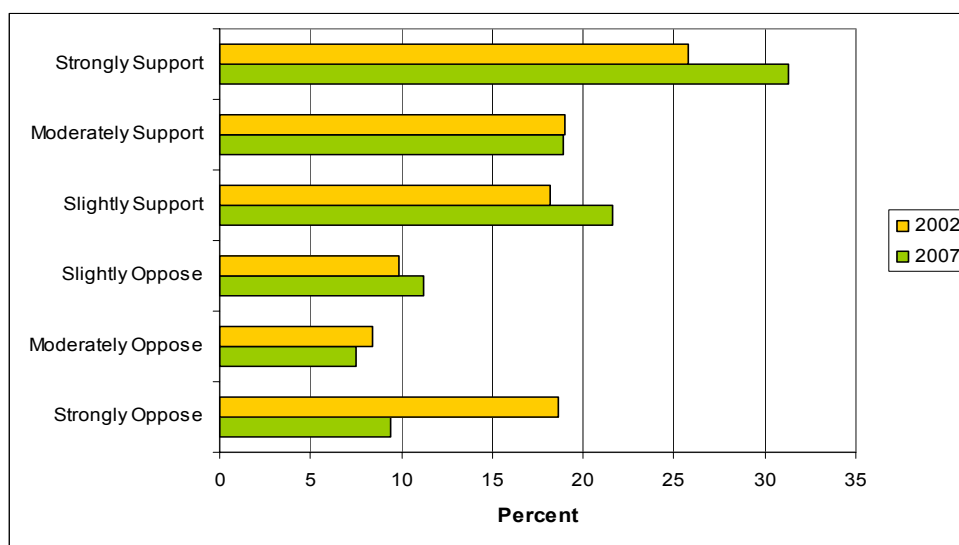


Figure 13: Support for Aboriginal Cultural Heritage inclusion in future World Heritage listings (2007 and 2002).

3.4.4 Aboriginal co-management

Support for Aboriginal co-management of the WTWHA has increased from 58.4% in 2002 to 66.0% in 2007 (Figure 14). In 2007 this comprised 25.5% strong support and 20.0% moderate support compared to 22.7% strong support and 16.3% moderate support in 2002. In the 2007 study only 20.6% of respondents opposed Aboriginal co-management either 'strongly' or 'moderately' whereas in 2002, 30.5% either strongly or moderately opposed some form of Aboriginal co-management of the WTWHA.

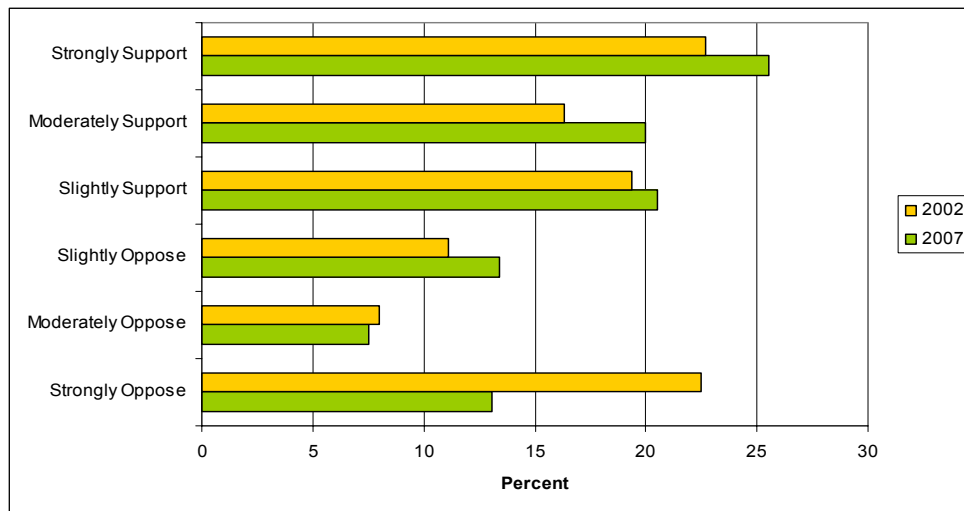


Figure 14: Support for Aboriginal co-management of the WTWHA (2007 and 2002).

3.5 Learning about the Wet Tropics

The questions in this section were designed to investigate the sources of information respondents were most likely to use to obtain information about the WTWHA. The questions also probed views on the availability of information, the use of information provided by the WTMA, and the type of information or information access desired by respondents.

Key Points:

- Signage at sites within the WTWHA was considered the best information source provided by the WTMA and the Queensland Environmental Protection Agency.
- Newspapers, word-of-mouth and television were the most commonly used sources of information about the WTWHA.
- Access to any WTWHA information was considered only moderately available by respondents.
- 73% of respondents did not want further information to be made available about the WTWHA.

3.5.1 Information sources

Responses to Question 32: *How have you learned about the Wet Tropics World Heritage Area?*

The *Community Survey* asked respondents how they learned about the Wet Tropics. Since 2002, there has been increased usage of all information sources (Table 12). The most popular sources in 2007 were newspapers (84.0%), word-of-mouth (81.3%) television (81.2%) and Visitor Information Centres (77.3%). Examples of 'other' information sources included living in the region, personally visiting the Area, tourist brochures and tours, community environmental organisations, and the Internet. It was interesting to note that the use of Visitor Information Centres, television and word-of-mouth had grown substantially since the previous survey in 2002. One significant finding is that respondents use multiple information sources.

Table 12: Use of information sources by respondents (2007 and 2002) (percentage).

Note: Question 32 allowed for multiple responses.

Source of Information	2007 Percentage	2002 Percentage
Newspapers	84.0	71.1
Word-of-mouth	81.3	56.0
Television	81.2	65.7
Visitor Information Centres	77.3	42.8
Books	67.9	44.1
Other	62.4	-
Radio	61.9	46.1
Environmental Management Agency Information Centres	48.7	32.7
Work	47.3	27.5
Tropical Topics	45.5	28.3
School / University	41.4	20.4

Responses to Question 33: *Have you used any of the following information sources provided by the Wet Tropics Management Authority?*

Table 13 indicates that use of signage at sites within the WTWHA (58.6%) is the most commonly used information source. This has increased by 20.0% since 2002. Use of the WTMA website (21.1%) has also increased significantly since 2002. Other information sources (13.7%) provided by the WTMA and mentioned by respondents were personal communications with WTMA staff, visitor information centres (particularly the Mission Beach Environmental Centre), books and various research publications.

Table 13: Use of information sources provided by the WTMA (2007 and 2002).

Information Source	2007 Percentage of Responses	2002 Percentage of Responses
Signage at visitor sites	58.6	38.0
WTMA leaflets	27.5	27.3
Wet Tropics website	21.1	8.0
WTWHA newspaper	19.2	13.4
Other	13.7	-
Wet Tropics Neighbours newsletter	9.5	8.9

Responses to Question 34: *To what extent do you feel that information about the WTWHA and its management is readily available?*

Although information about the Wet Tropics may appear to be quite readily accessible to the public, perceptions of the availability of this information differ. Figure 15 shows information about the WTWHA was considered available only to a moderate extent by 29.4% of respondents and to a slight extent by 27.8% of respondents. The overall mean for the availability of all information sources was 3.46 based on a scale of 1 = not at all available to 6 = available to a full extent. Since 2002, there has been a slight decrease in residents perceiving information to be available to a considerable (16.7% falling to 15.7%) or full extent (7.1% falling to 4.3%).

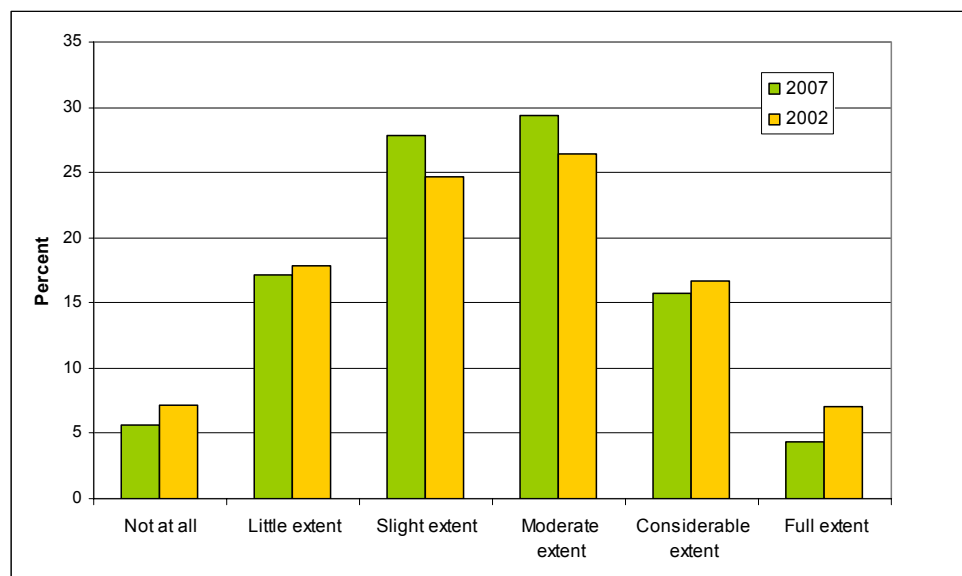


Figure 15: Perceived availability of information about the WTWHA (2007 and 2002).

3.5.2 Information desired by residents

Responses to Question 35a: *Is there any particular WTWHA information or access to information that you would like more of?*

Responses to Question 35b: *If [you responded] 'yes' [to Question 35a], please specify.*

Only 27% (n = 176) of respondents indicated there was specific information that they would like to be more readily available; 73% percent of respondents indicated they did not wish to access further information about the WTWHA. This may be an indication that their information requirements are either being satisfied or they are disinterested. In 2002, 74% of the respondents did not require any further information or information access.

Respondents who indicated they would like increased access to information about the WTWHA (26.5%) suggested the local newspaper / media, television and radio, as well as newsletters to schools and homes as distribution methods. Table 14 outlines respondents' suggested forms of access to information.

Table 14: Respondents' suggested forms of access to information about the WTWHA (2007).

Suggested Forms of Access to Information	Frequency	Percent of Responses
Regular items in local newspaper / media	13	7.4
Website and email newsletter, more prominent tourist brochure information	7	3.9
Information mailed to residences	5	2.8
Television coverage to improve awareness	3	1.7
Newsletters in the Mission Beach area	2	1.1
Local schools, shops, television, radio, library	4	2.2
Copies of Tropical Tales, access to WTWHA magazine	4	2.2
More signage to educate people on trees (name, use, which animals use it)	2	1.1
Mail outs promoting protection of such areas and school talks/ education program to educate young people / Free booklets with easy to understand descriptions available through schools	2	1.1
WTMA newspaper and Wet Tropics Neighbours newsletter	2	1.1
Information from a source 'not just beating its own drum'	1	0.6
Leaflets and magazines	1	0.6
Supply to tourist hotels / motels	1	0.6
Total Responses	46	26.5%

The types of information desired by respondents were diverse. The areas of information specified have been grouped under the following headings – particular areas, maps, ecological information, political context, recreation issues, management issues, Aboriginal information and ‘other’ information (Table 15). Respondents who requested other information (15.8%) were not specific in indicating which information (8.5%) about the WTWHA was desirable. Management issues (12.4%) focused on aspects of protection of the Wet Tropics. The main places of interest (11.3%) were the Babinda area and the Cardwell / Kennedy / Kirrama area. Ecological information (11.3%) centred on deforestation and flora / fauna details of different areas. A detailed table of the types of information desired by respondents is provided at Appendix G.

Table 15: Types of information about the WTWHA desired by respondents (2007).

Information Desired	Frequency	Percentage of Responses
Other Information	28	15.8
Management Issues	22	12.4
Particular Areas	21	11.3
Ecological Information	20	11.3
Maps	17	9.6
Recreation Issues	16	9.0
Political Context	5	2.9
Aboriginal Information	3	1.7
Total Responses	131	74.0%

3.6 Advantages of the World Heritage Area

Questions in this part of the survey relate to personal and community benefits derived from the WTWHA. Respondents were asked to rate the importance of selected benefits on both a personal level and from a regional perspective using a Likert rating scale of 1 = not important to 6 = very important.

Key Points:

- The most important personal benefits of the WTWHA as reported by respondents was that 'it is good to know it exists' and 'quality of life'.
- Since 2002, the personal benefits of living near the WTWHA have increased.
- The personal advantage of 'it is good to know [the WTWHA] exists' increased from a mean of 5.11 to 5.33.
- From a community perspective, 'clean water and air' and 'the protection of rainforest plants and animals' was considered to be the most important benefits.

3.6.1 Personal benefits

Responses to Question 17: *For you personally, how important is the WTWHA for the following benefits?*

- Providing recreational opportunities (e.g. a place to camp, walk, cycle, swim);*
- Providing a place to be with / share with family and/or friends;*
- Providing a place to rest / relax, take time out, contemplate;*
- Providing a quality environment to live in (e.g. enhancing quality of life);*
- It is good to know it is there, that it exists;*
- Providing direct commercial / economic / employment opportunities for me personally (e.g. tour operator, ranger, researcher, etc.) (Please specify);*
- Providing indirect commercial / economic / employment opportunities for me personally (e.g. food outlets, accommodation, housing, retail, etc.) (Please specify);*
- Other (Please specify).*

On a personal level (Figure 16), respondents ranked the factor 'it is good to know it exists' as the highest (mean = 5.33), followed by 'quality of life' (4.97) and to 'rest / relax' (4.88). Direct and indirect 'commercial, economic or employment opportunities' were ranked the lowest (3.01 and 2.82 respectively). In 2002, the mean for 'it is good to know it exists' was 5.11, indicating residents' level of appreciation for the WTWHA has increased over the last five years. Other personal benefits (mean = 4.33) mentioned through an open-ended response were largely related to environmental processes and protection for wildlife species and future generations. Examples of other personal benefit comments are:

"Counteracts carbon emission / global warming" (*Female, 52 years, East Innisfail*);

"Provides a safe habitat for indigenous flora and fauna" (*Male, 64 years, Gordonvale*);

"Preservation of the area for further generations to view and enjoy" (*Female, 48 years, South Mission Beach*).

In comparison to the 2002 *Community Survey*, the personal benefits of living near the WTWHA have increased marginally, with the exception of 'quality of life' which virtually remained the same. The mean for 'other' personal advantages in the 2002 survey is not available.

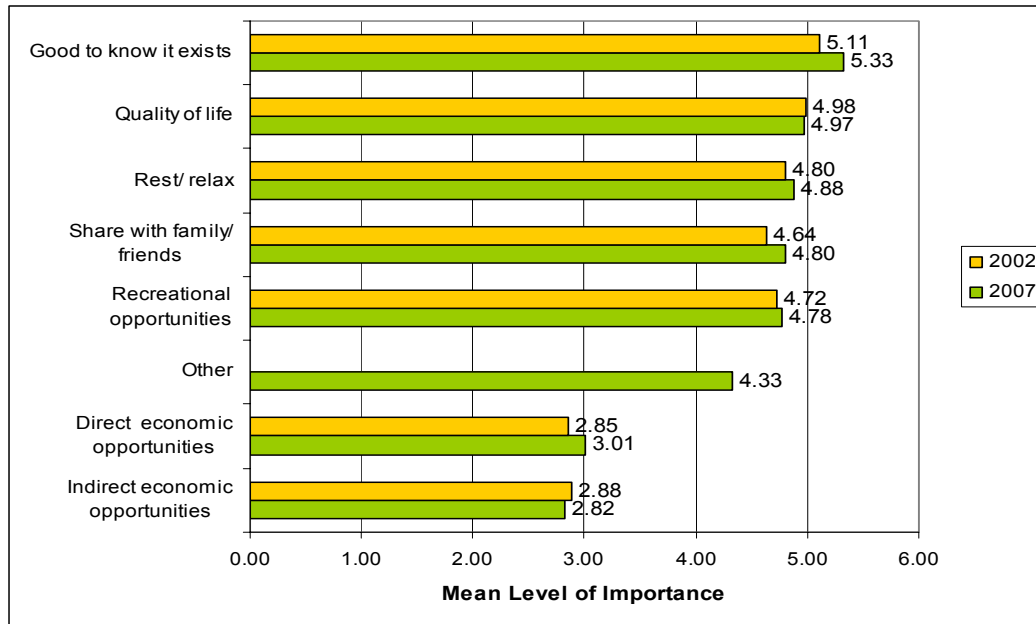


Figure 16: Comparison of mean level of personal advantages of living near the WTWHA (2007 and 2002).

Table 16 highlights responses in the 2007 *Community Survey* to a number of factors that relate to perceived personal advantages of living near the WTWHA. As illustrated, 65.4% of respondents indicated that just knowing the WTWHA existed was 'very important'. Direct (38.8%) and indirect economic opportunities (38.7%) were not considered to be important.

Table 16: Importance of perceived personal advantages (2007).

Personal Advantage	Survey Year	Not Important 1	Slightly Important 2	Somewhat Important 3	Moderately Important 4	Considerably Important 5	Very Important 6
Good to know it exists	2007	2.2%	1.7%	5.4%	8.1%	17.2%	65.4%
	2002	4.8%	2.8%	4.5%	12.5%	15.2%	60.2%
Quality of life	2007	5.5%	3.5%	6.5%	9.4%	23.2%	52.0%
	2002	5.8%	3.4%	5.1%	12.1%	20.3%	53.3%
Rest/ relax	2007	4.5%	4.1%	9.2%	11.5%	22.5%	48.3%
	2002	5.8%	4.0%	6.9%	17.1%	20.1%	46.0%
Recreational opportunities	2007	4.9%	4.8%	9.5%	14.2%	21.5%	45.2%
	2002	7.0%	5.0%	6.7%	16.9%	19.0%	45.3%
Share with family/ friends	2007	4.4%	4.4%	9.7%	14.2%	22.6%	44.7%
	2002	6.8%	6.0%	7.0%	18.7%	20.0%	41.6%
Direct opportunities	2007	38.8%	9.2%	12.1%	10.1%	12.2%	17.7%
	2002	46.0%	7.9%	8.4%	10.9%	7.1%	19.7%
Indirect opportunities	2007	38.7%	12.4%	13.3%	12.4%	10.8%	12.5%
	2002	41.2%	9.9%	10.3%	11.7%	11.7%	15.2%
Other	2007	23.6%	3.0%	4.2%	6.7%	10.9%	51.5%
	2002	-	-	-	-	-	-

3.6.2 Regional community benefits

Responses to Question 18: *For the regional community as a whole, how important is the WTWHA for the following benefits?*

- a) *Protected of rainforest plants and animals;*
- b) *Protection of the scenic landscape;*
- c) *Providing clean water and air;*
- d) *Enhancing environmental awareness;*
- e) *Providing commercial / economic / employment opportunities for the community;*
- f) *Other (Please specify).*

From a regional community perspective, benefits perceived to be important by respondents (Figure 17) were highest for 'clean water / air' (5.69), 'the protection of plants and animals' (5.68), 'the scenic landscape' (5.56) and 'environmental awareness' (5.44). 'Other' reasons given in 2007 for regional community benefits of living within the Wet Tropics bioregion were related to recreational and experiential opportunities and the benefits for future generations. Comments included:

"Preserving my favourite place, personal, spiritual, well-being, my home" (*Male, 30 years, Innisfail*);

"Providing recreation and experience of nature" (*Male, 69 years, Atherton*);

"You can see the world from the top of a mountain and there's hardly a better pleasure than to go skinny-dipping in a forest pool" (*Male, 90 years, Ingham*).

In relation to regional community benefits for future generations, comments included:

“Survival of mankind and this planet” (*Male, 52 years, Ravenshoe*);

“For future generations to understand” (*Male, 38 years, Mt Sheridan*);

“Keep pristine for other generations, our children” (*Female, 51 years, Mooroolbool*).

Since 2002, there has been an increased level of appreciation and awareness by residents of the benefits of ‘enhancing environmental awareness and knowledge’, contributing to the ‘protection of rainforest plants and animals’, ‘protecting the scenic landscape’ and the ‘provision of clean air and water’.

Table 17 provides the percentages of responses across the Likert rating scale (1 = not important to 6 = very important) for the importance of the WTWHA to the regional community. Most items, with the exception of ‘provide economic opportunity’ were rated as very high. The protection of rainforest plants and animals was very important for 80.6% of respondents and the provision of clean water and air was rated very important by 80.0% of respondents in 2007. Generally, all regional community benefits are rated as very important with the exception of ‘providing commercial, economic or employment opportunities for the community’ which was considered ‘very important’ by only 29.3% of respondents.

Comparatively, in 2002 the regional community benefit of ‘providing clean air and water’ was the only advantage considered very important by slightly more respondents (81.2%) than in 2007. These results indicate that over five years there is an increased awareness of the importance of protecting plants and animals in the Area, protecting the scenic landscape of the Area and that the WTWHA is considered to enhance environmental awareness and knowledge.

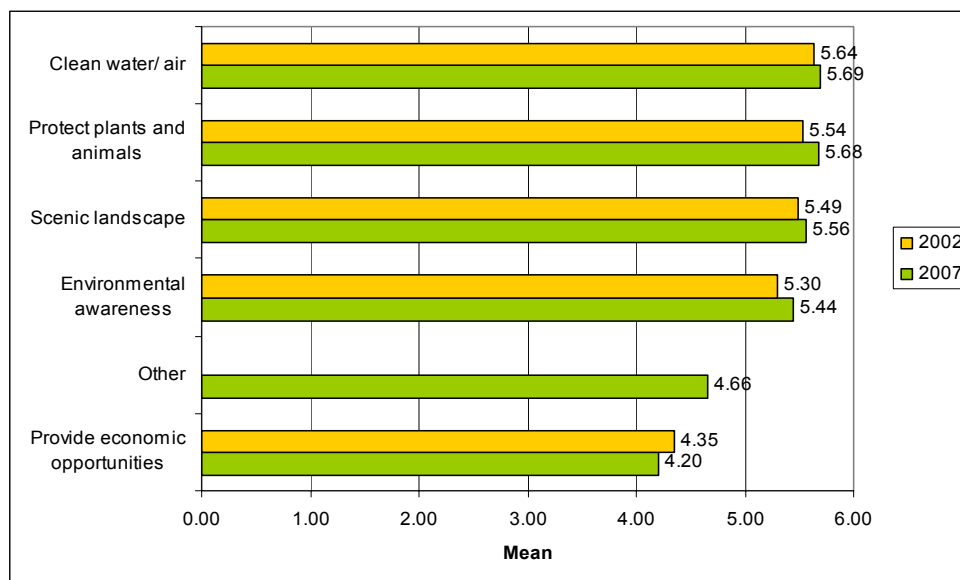


Figure 17: Comparison of mean level of perceived regional community benefits of the WTWHA (2007 and 2002).

Table 17: Importance of the WTWHA to the regional community (2007) (percentage).

Community Advantage	Survey Year	Not Important 1	Slightly Important 2	Somewhat Important 3	Moderately Important 4	Considerably Important 5	Very Important 6
Protect plants and animals	2007	0.7%	1.1%	1.4%	3.8%	12.4%	80.6%
	2002	1.3%	2.1%	2.8%	5.1%	12.7%	75.9%
Clean water and air	2007	0.7%	0.4%	2.0%	3.3%	13.6%	80.0%
	2002	1.0%	1.5%	2.2%	3.7%	10.3%	81.2%
Scenic landscape	2007	1.1%	1.1%	2.3%	5.5%	16.2%	73.9%
	2002	1.3%	2.1%	3.5%	5.5%	15.1%	72.5%
Enhance environmental awareness	2007	2.2%	0.6%	3.4%	7.6%	17.4%	68.9%
	2002	2.7%	1.8%	3.2%	10.6%	18.3%	63.2%
Provide economic opportunities	2007	10.7%	5.8%	13.5%	21.0%	19.6%	29.3%
	2002	10.1%	5.7%	10.6%	21.2%	17.9%	34.5%
Other	2007	17.1%	0.9%	6.0%	6.8%	13.7%	55.6%
	2002	-	-	-	-	-	-

3.7 Disadvantages of living near the World Heritage Area

Intercoder reliability was used to analyse a respondent's views on the disadvantages of living within the Wet Tropics bioregion from both a personal and a regional community perspective. This method of content analysis allows independent coders to evaluate the characteristic of a message, whereby actual agreement on the coded values is the basis for assessment (Lombard *et al.* 2005). Using three coders for the statements of disadvantages supplied by respondents resulted in a less than optimal reliability (46.8% for community disadvantages and 50.5% for personal disadvantages). Reducing to two coders resulted in a reliability of 84.1% for community disadvantages and 77.3% for personal disadvantages.

Key Points:

- Only 25% of respondents indicated a personal disadvantage to living in or around the WTWHA.
- Only 19.4% of respondents indicated a disadvantage from a regional community perspective.
- Personal disadvantages were mostly related to environmental issues, and rules, regulations and restrictions.
- Community disadvantages were mostly related to feral plants and animals, and rules, regulations and restrictions.

Twenty-five percent of respondents indicated a personal disadvantage, and 19.4% of respondents indicated a regional community disadvantage to living within the Wet Tropics bioregion (Figure 18).

From a personal perspective, respondents noted disadvantages with rules, regulations and restrictions (26.1% of responses) and environmental issues (26.1% of responses). In 2002, rules, regulation and restrictions was also considered to be the most significant disadvantage followed by feral plants and animals ($n = 62$, 25.2% of responses).

From a community perspective, rules, regulations and restrictions (18.4% of responses), and feral plants and animals (15.8% of responses) are regarded as the most significant disadvantages to living within the Wet Tropics bioregion. These results were broadly similar to the 2002 results where the most significant community disadvantages were economic, employment issues ($n = 40$, 20.7% of responses) and industry and agricultural issues ($n = 34$, 17.6% of responses).

Examples of the comments made by respondents about personal disadvantages are illustrated in Tables 18 and 19. These are shown in four groups: environmental issues; personal disadvantages relating to rules, regulations and restrictions; feral plants and animals; and community disadvantages relating to rules, regulations and restrictions.

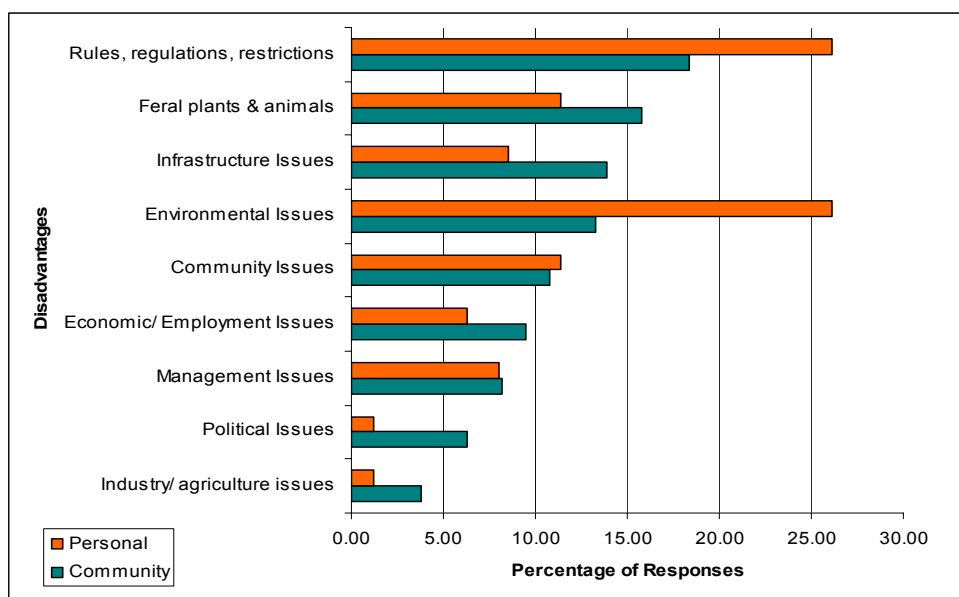


Figure 18: Perceived personal and regional community disadvantages to living in or near the WTWHA (2007).

Table 18: Examples of comments made regarding perceived personal disadvantages.

Personal Disadvantages – Environmental issues
“Rain, possible cyclones, heat” (<i>Male, 65 years, South Mission Beach</i>)
“Too wet to live in” (<i>Male, 44 years, Innisfail</i>)
“Feral pig breeding and spread of weeds” (<i>Male, 59 years, Atherton</i>)
“Dampness and mould; cyclone activity” (<i>Male, 41 years, Kuranda</i>)
Personal Disadvantages – Rules, regulations and restrictions
“Restricted vehicle access to some areas I would love to visit” (<i>Male, 47 years, Innisfail</i>)
“Unable to exercise traditional activities (e.g. hunting)” (<i>Female, 27 years, Bakerville</i>)
“Not able to fence property and keep pets due to nature corridor restrictions” (<i>Male, 56 years, Kuranda</i>)
“Being unable to take my dog” (<i>Female, 28 years, Hermit Park</i>)
“Closure of vehicle tracks, overzealous rangers, disinteresting and badly laid out camp spots, unless tenting” (<i>Male, 63 years, Mission Beach</i>)

Table 19: Examples of comments made regarding perceived regional community disadvantages.

Community Disadvantages – Feral plants and animals
“Feral animal management is restricted by lack of funds” (<i>Male, 60 years, Bingil Bay</i>)
“Spread of feral pests and weeds from WTWHA to rural properties” (<i>Male, 28 years, Atherton</i>)
“Too many feral pests and weeds” (<i>Male, 85 years, Ingham</i>)
“To those who live on border – pests, pigs and weeds” (<i>Female, 27 years, Mission Beach</i>)
Community Disadvantages – Rules, regulations and restrictions
“Being locked out for fossicking” (<i>Male, 67 years, Cardwell</i>)
“Restricting access to areas I always had access to as a child” (<i>Female, 47 years, unknown</i>)
“Local community can’t enjoy the area and have less rights than tourists or companies” (<i>Female, 51 years, Gordonvale</i>)
“Cannot get into area to see what we are trying to preserve and appreciate” (<i>Male, 70 years, Mission Beach</i>)

3.8 Management of the World Heritage Area

The WTMA is responsible for policy and the coordination of on-ground management to ensure the WTWHA is properly protected. The agency's core functions are to develop and implement management plans, policies and programs; administer funding arrangements; promote research and monitor the state of the Wet Tropics; develop community education programs; enter into cooperative management agreements with Aboriginal people and landholders; and promote the Wet Tropics locally, nationally and internationally (WTMA, 2008b).

The Queensland Environmental Protection Agency is responsible for the day-to-day management issues such as maintenance, routine permits and enforcement activities. Approximately eighty percent of the WTWHA is designated as National Park and Forest Reserves.

Other State agencies involved in the management and protection of the WTWHA are the Department of Natural Resources and Water (DNRW), Department of Main Roads, Department of Primary Industries and Fisheries (DPIF), and nine local governments.

Questions in this section of the report were developed to identify respondents' knowledge about the responsibilities of the agencies that manage the WTWHA, as well as their expectations of these agencies. Recognition of the Area's logos is also identified along with where they may have been seen and if they were easily recalled.

Key Points:

- Identification of the management agency responsible for the WTWHA has increased by 31.7% since 2002.
- Respondents expect the management agency to protect, conserve and preserve the WTWHA.
- Logos are mostly noticed on signs, television, posters, stickers, uniforms and vehicles.
- There is some confusion as to which logo identifies the WTWHA.

3.8.1 The management agency

Responses to Question 21: *What agency or agencies do you think are responsible for managing the WTWHA?*

Responses to Question 22: *In general, what do you expect from these agencies?*

Questions 21 and 22 were used to identify respondents' level of knowledge of the management of the WTWHA and what they expected from the management agency responsible for the Area.

There was a 31.7% increase in responses that correctly identified the WTMA as the agency responsible for the WTWHA. The highest number of responses (n = 310, 27.5%) nominated the Queensland Environmental Protection Agency, the Queensland Parks and Wildlife Service and park rangers. These agencies are responsible for the on-ground management of eighty percent of the Area including visitor sites, and therefore residents believe these agencies are also responsible for the WTWHA as a whole. One quarter (25.7%) of respondents were unsure about which agency or agencies are responsible for the management of the Area (Table 20).

Table 20: Respondents' nominated management agency or agencies responsible for the WTWHA (2007 and 2002). **Note:** The questions allowed for multiple responses.

Agency	2007	2002
Don't know	289	299
Government Departments		
Government Department	77	42
Local Shire Council	37	26
State Government	22	24
Federal Government	10	23
Total	146	115
International		
UNESCO	3	2
World Commission	1	-
World Heritage Organisation	-	3
Total	4	5
Environmental Management Agencies		
EPA; QPWS; Parks Rangers	310	208
WTMA; Wet Tropics World Heritage group; WTWH	236	161
DPIF; DNRW; Forestry department	70	60
Department of Environmental Affairs; DEWHA; Conservation and Environment, Natural Heritage Trust	22	-
Great Barrier Reef Marine Park Authority	9	7
Total	647	436
Community / Conservation Organisations		
Cairns and Far North Environment Centre	6	3
C4	4	7
Australian conservation; wildlife conservation	3	2
Aboriginal Rainforest Council	1	4
Community consultative committee and neighbours	1	-
CSIRO	1	3
Total	16	19
Other		
No one; all; overseas interest; public; God; Aboriginals	16	7
Private companies	4	-
James Cook University	1	-
Reef & Rainforest Research Centre	1	-
Queensland Police	1	-
Total	23	7
Total Responses	1125	909

3.8.2 Expectations of the management agency

Respondents had the opportunity through an open-ended question to indicate their expectations of the management agency responsible for the WTWHA. The coding of the question about expectations of the management agency (Table 21) replicated the coding for the 2002 survey as closely as possible. Similar results were received across the themes of protect, conserve, preserve (62.1% of responses), consult, educate, promote (9.7% of responses), amenity, infrastructure (5.1% of responses) and corporate ethics, behaviour and competencies (23.1%). The greatest changes identified over the period 2002-2007 were that more respondents expected public education (a change of 1.4%), resource management (a change of 5.3%), and productivity (particularly, the ability to adapt to change). Surprisingly, there was a small decline in expectations regarding access (-1.1%), provision of infrastructure (-2.9%) and public relations (-3.1%).

Table 21: Expectations of the responsible management agency / agencies (2007 and 2002).

Expectations of Agency / Agencies		Percentage of Total Responses		Percent. Change over five years
		2007	2002	
Protect, Conserve, Preserve (62.1% of responses)	Direct Language Use: Protect; conserve; preserve	28.2%	30.7%	-1.5%
	General Maintenance: Manage; maintain; look after; care for; keep pristine	15.2%	16%	+1.2%
	Regulatory: Enforcement; policing; patrolling; controlling; permitting; stop / control pollution, development, farming	6.1%	7%	-0.9%
	Resource Management: Control feral plants and animals; prevent extinction; erosion control; water quality; tree planting	9.4%	4.1%	+5.3%
	Strategic Management: Decision making; develop policies, laws; strategic planning	3.2%	1.7%	+1.5%
Consult, Educate, Promote (9.7% of responses)	Public Relations: Consultation; communication; community involvement; consultation with community / traditional owners	3.1%	6.2%	-3.1%
	Public Education: Education; information; increase awareness	6.4%	5%	+1.4%
	Promotion: Assets of World Heritage Area; indigenous ecotourism	0.2%	1.1%	-0.9%
Amenity, Infrastructure (5.1% of responses)	Access: Provide more / better; controlled; maintain	4.3%	5.2%	-1.1%
	Infrastructure: Provide signage; infrastructure	0.8%	3.7%	-2.9%

Expectations of Agency / Agencies		Percentage of Total Responses		Percent. Change over five years
		2007	2002	
Corporate Ethics, Behaviour, Competencies (23.1% of responses)	Behaviour: Respect; efficiency; accountability; responsive; innovative; commitment; civility; friendliness; dedication; objective	8.8%	9.2%	-1.6%
	Outcomes / Productivity: Ability to adapt to change; more and better standards; results	9.2%	6.4%	+2.9%
	Informed / Knowledgeable: Report; assessment; monitor; knowledgeable; report changes; investigate possibilities	4.4%	2.3%	+2.1%
	Balanced: Co-ordinated approach; balanced approach to usage and protection	0.7%	1.4%	-0.7%

3.8.3 Wet Tropics branding

Several questions were asked to identify the level of knowledge about logos, including whether any had been noticed, and if so, where they had been noticed and what they looked like. In 2007, 54.0% (n = 395) of respondents had noticed a logo but only 41.0% (n = 350) could specify in an open-ended question where they had seen the logo. In comparison, 51.0% of the respondents in 2002 had noticed any logo identifying areas in the WTWHA.

3.8.4 Description of the World Heritage Area logo

Responses to Question 23: *Have you noticed any logo or logos that identify these areas as the Wet Tropics World Heritage Area?*

Responses to Question 24: *If [you responded] 'yes' [to Question 23], please describe the logo.*

Logos used by the WTMA and the Queensland Environmental Protection Agency are displayed below (Figure 19a, b, c). It is understandable that the public may be confused about which logo or logos identify an area of the WTWHA. The cassowary and fern leaf logo is the current identifying logo of the WTMA. In the past the logo has been used for the 'World Heritage Area' as well as the 'Management Authority'. The 'Australia's Tropical Rainforests' frog on leaf logo has been the logo for the WTWHA and has been previously issued to identify permitted tour operators and placed on signage within the Area. The square inside the circle logo is the official World Heritage emblem provided by the UNESCO. The possum logo (Figure 19d) is used by the Queensland Parks and Wildlife Service and is most often sighted on the sleeves of rangers' shirts, Service vehicles and on older signage at National Park sites. Each logo is used for a different purpose and this may be confusing for some members of the public.

Only 38.8% (n = 331) of respondents attempted to describe the logo. Table 22 provides the open-ended descriptions of the logo received from residents who identified an area or site of the WTWHA. The descriptions of the WTWHA logo were varied, with 20.2% of respondents indicating they could not describe the logo. Residents were mostly aware of the WTMA logo of the cassowary and fern (32.8%); however, this logo appeared on the reply-paid envelope included with the postal surveys and may have biased the response. Only 12.3% described the logo as a frog.

In 2002, 219 respondents (25.6% of the total sample) associated the logo that identifies the WTWHA with the cassowary or the frog as shown in Figure 19. Five years later, the cassowary appeared to have a higher level of recognition as the logo for the WTWHA.



Figure 19: Logos in use within the WTWHA.

Cross-tabulation analysis found no statistically significant socio-demographic factors (that is, age, level of education, occupation or place of residence) for respondents who had indicated they had noticed a WTWHA logo. Similarly, there was no statistically significant group/s that had a better level of recall or recognition of a logo identifying the WTWHA.

A question asking respondents where they had seen the logo/s was included for the first time in the 2007 *Community Survey*. 'Signs, television, posters, stickers, uniforms and vehicles' were mentioned by half (51.9%) of the respondents. Specific sites were mentioned by another 21.7% of the sample, and the most frequently cited areas were Tully Falls, Koombooloomba and Mission Beach (Figure 23).

Table 22: Descriptions of the WTWHA logo (2007). **Note:** This question allowed for multiple responses.

Description	Frequency	Percentage of Responses
A cassowary	98	23.6
Can't describe it	84	20.2
Frogs	51	12.3
Possum	42	10.1
Cassowary and fern	38	9.2
World Heritage Area sign	19	4.6
Green sign	16	3.9
Birds / ferns	10	2.4
Red cedar leaf / leaf	9	2.2
Brown sign	7	1.7
Crocodile	6	1.4
Square inside circle	4	1.0
Wet Tropics	4	1.0
Animal	3	0.7
Tree kangaroo	3	0.7
Great green way	2	0.5
60 kph, 80-90 etc.	1	0.2
A simple sign would have more impact than logos	1	0.2
Awareness	1	0.2
Blue and white sign	1	0.2
Brown and yellow sign	1	0.2
Brown furry animal	1	0.2
Cassowary and a car	1	0.2
Chook and duster	1	0.2
Cycad	1	0.2
Lyrebird and ferns	1	0.2
Marsupials	1	0.2
Park rangers	1	0.2
Peacock	1	0.2
Queensland Parks and Wildlife Service	1	0.2
Rainforest	1	0.2
Signs 'keep out'	1	0.2
Tour guides	1	0.2
Tree in a circle	1	0.2
Ulysses butterfly	1	0.2
Total Responses	415	100.0%

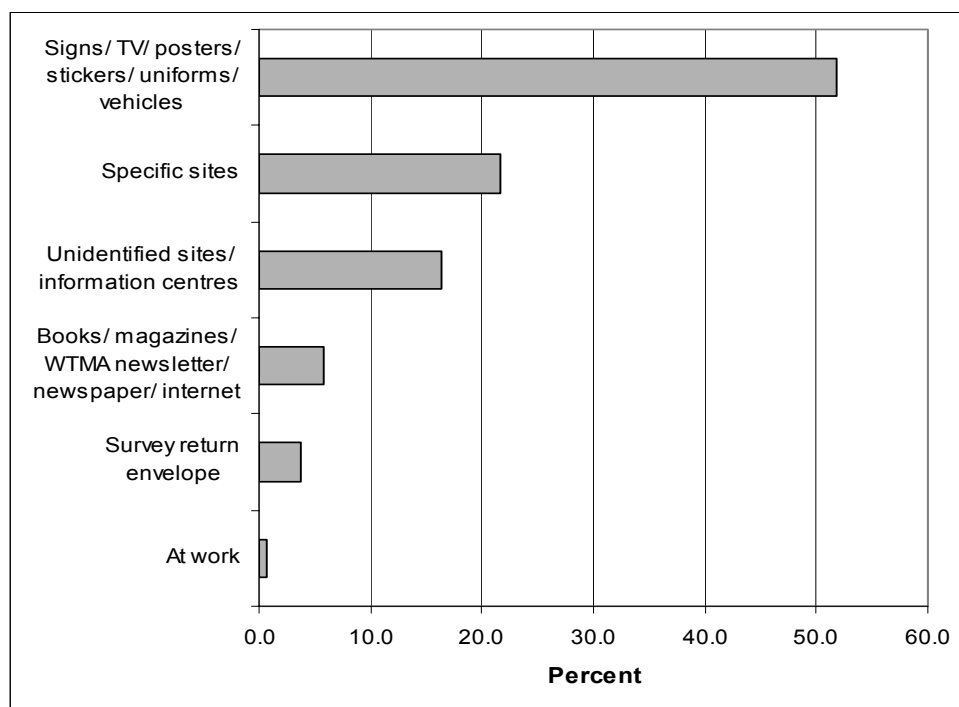


Figure 20: Respondents' responses to where they noticed the WTWHA logo (2007).

3.9 Protection and conservation management

Questions related to the protection and conservation management of the WTWHA provided important feedback from residents. The views held by the community reflected their belief in the ability of the management agency to protect and conserve this important natural and cultural area. Results from the 2002 *Community Survey* (Bentrupperbäumer and Reser, 2003; 2006) are provided for comparison.

Key Points:

- Perceptions of the management agencies' abilities to manage the natural attributes of the WTWHA decreased slightly in the five years to 2007.
- Perceptions of the management agencies' abilities to manage non-Aboriginal historic sites increased slightly in the five years to 2007.
- Perceptions of the management agencies' abilities to manage Aboriginal cultural sites remained relatively stable in the five years to 2007.
- Feral animals and plants were still considered the most serious threat to the WTWHA and it is generally believed that this threat is not being adequately addressed, although this perception has improved since 2002.

3.9.1 Natural attributes

Responses to Question 25: *In terms of natural / biological / aesthetic attributes of the WTWHA, to what extent do you feel these attributes are being adequately protected or managed?*

Natural attributes were grouped into protected natural attributes (biodiversity, scenic landscape, waterways and wetlands) and managed natural attributes (feral animal pests and environmental weeds). On average, 18.0% of respondents answered 'don't know' to this set of questions. Overall, the mean for each natural attribute and therefore the perception of the management agencies' abilities decreased over the last five years. The greatest decrease over the past five years was in the management of waterways and wetlands with the mean (measured on a six-point Likert scale where 6 = full extent) decreasing from 4.15 to 3.98 (Table 23). Overall, the mean of respondents' views on the abilities of the management agencies to protect or manage the natural attributes of the WTWHA decreased from 3.69 in 2002 to 3.56 since 2007.

Table 23: Perceptions of management – natural attributes (2007 and 2002).

Items	Survey Year	Not at all 1	A little 2	Slight 3	Moderate 4	Considerable 5	Full extent 6	Don't know	Mean
Biodiversity – plants, animals and ecosystems of the rainforest (protected)	2007	2.5%	5.2%	13.0%	25.5%	26.0%	9.1%	18.7%	4.16
	2002	2.5%	4.0%	11.7%	35.9%	34.0%	11.9%	20.0%	4.30
Scenic landscape (protected)	2007	3.0%	6.2%	11.9%	24.5%	27.8%	10.6%	15.9%	4.19
	2002	1.9%	6.1%	11.6%	33.9%	33.1%	13.5%	18.2%	4.31
Waterways and wetlands (protected)	2007	2.9%	9.2%	15.6%	24.9%	21.1%	10.0%	16.2%	3.98
	2002	2.0%	8.7%	16.7%	29.9%	30.4%	12.3%	18.5%	4.15
Feral animal pests (managed)	2007	17.2%	26.9%	17.3%	11.7%	4.9%	4.5%	17.5%	2.68
	2002	22.5%	26.1%	20.6%	17.3%	8.0%	5.3%	19.1%	2.78
Environmental weeds (managed)	2007	15.4%	24.2%	18.2%	12.7%	6.1%	4.7%	18.6%	2.80
	2002	16.3%	27.4%	22.1%	20.6%	7.7%	5.9%	20.3%	2.94

3.9.2 Cultural attributes

Responses to Question 26: *In terms of cultural attributes of the WTWHA, to what extent do you feel these cultural attributes are being adequately protected and managed?*

Respondents were not overly optimistic that the cultural attributes of the WTWHA were well managed as evidenced by the overall mean of 3.85 (on a six-point Likert scale). It should be noted however that there was a small increase in the mean compared to the previous survey. When divided into non-Aboriginal and Aboriginal sites, respondents were more positive about the ability of the WTMA to manage Aboriginal cultural sites although the mean had slipped from 4.10 in 2002 to 4.06 in 2007 (Table 24). Confidence in the agency's ability to manage non-Aboriginal sites increased from 3.43 in 2002 to 3.63 in 2007.

Table 24: Perceptions of management – Aboriginal Cultural Heritage sites (2007 and 2002).

Items	Survey Year	Not at all 1	A little 2	Slight 3	Moderate 4	Considerable 5	Full extent 6	Don't know	Mean
Non-Aboriginal historic sites	2007*	5.3%	8.9%	11.5%	16.5%	11.4%	5.9%	40.4%	3.63
	2002	11.9%	14.5%	20.9%	30.4%	16.5%	5.8%	32.5%	3.43
Aboriginal cultural sites	2007	2.6%	6.7%	10.5%	16.4%	15.2%	10.3%	38.3%	4.06
	2002	4.2%	9.9%	15.7%	29.6%	23.3%	17.3%	32.7%	4.10

* N = 491.

3.9.3 Cultural sites

Responses to Question 27: *What agency or agencies do you think are primarily responsible for managing cultural sites in the WTWHA?*

Sixty-two percent of respondents (n = 532) indicated that they knew which authority was responsible for managing cultural sites within the WTWHA (Table 25). The most cited agencies believed to be responsible for the management of cultural sites were the Queensland Environmental Protection Agency and the Queensland Parks and Wildlife Service (17.5%), followed by the WTMA (11.2%). Detailed responses from the 2002 *Community Survey* for this question are not available but as seen in Table 25, more residents indicated an environmental management agency being responsible for managing cultural sites (33.8% compared to 23.0% in 2002). In 2007, fewer respondents indicated they did not know the agency responsible (38.5% in 2007 compared to 41.0% in 2002).

Table 25: Perceived agency responsible for managing cultural sites in the WTWHA (2007 and 2002).

Agency	2007	2002
Don't know	205 (38.5%)	182 (41.0%)
Government Departments	71 (13.3%)	63 (14.2%)
State Government	28	
Local Shire Council	21	
Government Department	14	
Federal Government	8	
International	1 (0.1%)	-
UNESCO	1	
Environmental Management Agencies	180 (33.8%)	102 (23.0%)
EPA; QPWS; Rangers (Aboriginal and non-Aboriginal)	93	
WTMA; Wet Tropics World Heritage group; WTWH	60	
Department of Environmental Affairs; DEWHA; Conservation and environment, NHT, Department of Native affairs	14	
DPIF; DNRW; Forestry department	11	
GBRMPA	2	
Community / Conservation Organisations	63 (11.8%)	78 (17.6%)
Aboriginals / Groups (e.g. Giringun; Ma:Mu)	21	
Local Aboriginal Corporations	20	
ATSIC; NAIDOC; RAAC	12	
Aboriginal Rainforest Council	8	
Cape York Land Council; Queensland Aboriginal Council	2	
Other	13 (2.4%)	19 (4.3%)
Historical societies	5	
No one; all	4	
Tour operators	1	
James Cook University	1	
Bottleshops	1	
Volunteers	1	
Total Responses	100.0% (n = 532)	100.0% (n = 444)

3.9.4 Threats to the World Heritage Area

Responses to Question 28a: *Please list what you think are the three most serious threats to the WTWHA.*

Responses to Question 28b: *To what extent do you consider these threats are being addressed?*

Respondents were invited to list what they considered to be the three most serious threats to the WTWHA. They were also asked to rank how well they considered these threats were being addressed (1 = not at all to 6 = full extent). Responses were recorded using the categories previously devised by Bentrupperbäumer and Reser (2006). In 2007, feral animals and plants were considered the worst threat to the WTWHA (35.5%), with a mean of 3.03 (on a six-point Likert scale) for the extent to which the threat is being addressed (Figure 21). In another words, respondents do not believe this threat is being adequately managed. In 2002, 31.0% of respondents identified feral animals, plants and pests as a threat. The mean for this response (2.90) indicated that respondents did not feel this threat was being satisfactorily addressed. In the past five years, respondents appeared to consider the threat of feral plants, animals and pests is being better addressed yet more respondents mentioned the threat in 2007.

In 2007, human activity outside the WTWHA was also considered a threat (24.3%) but there was some degree of confidence that it was being addressed, as indicated by the mean of 4.04. Similar results were indicated by respondents in 2002. Human activity inside the WTWHA was considered a serious threat by 28.0% of respondents in 2002 compared to 12.4% in 2007, indicating that respondents were now confident that this threat is being addressed.

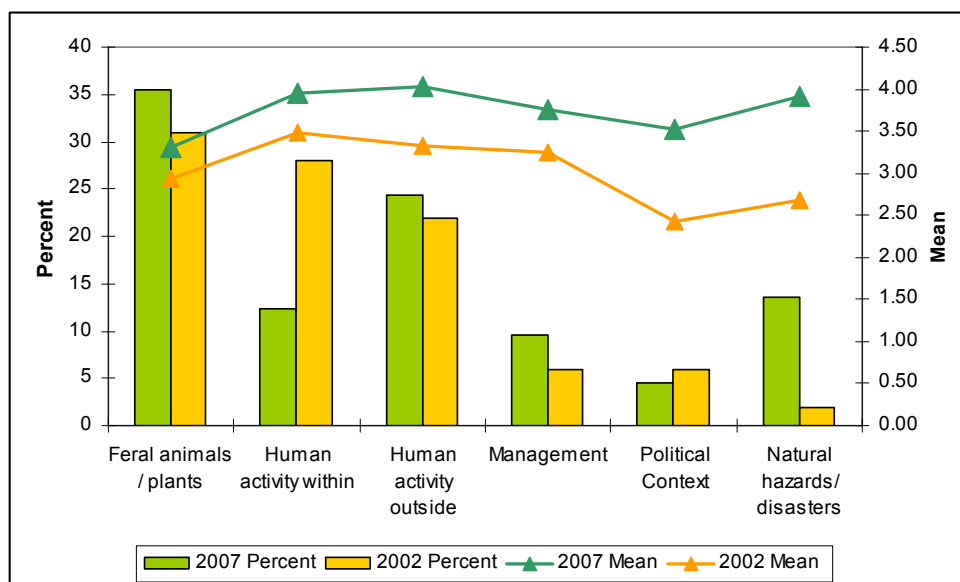


Figure 21: Respondents' perceived threats to the WTWHA and the extent to which they believe the threats are being addressed (2007 and 2002).

3.9.5 Community involvement

Responses to Question 29: *In general, to what extent do you believe community interests are being taken into account when management policies are developed for the WTWHA?*

Responses to Question 30: *Have you been involved or are you currently involved in any discussion forums or consultation processes related to the WTWHA?*

Responses to Question 31: *If [you responded] 'yes' [to Question 30], to what extent were or are adequate opportunities made available to you to meaningfully contribute?*

At the time of the 2007 *Community Survey*, 102 (12.7%) respondents reported they had previously been involved in discussion forums or consultation processes related to the WTWHA. Slightly more than half (52.4%) of these respondents indicated a rating of 1 to 3 (on a six-point scale) that they felt they had little, if any, opportunity to contribute in a meaningful way. In 2002, 63.0% of the respondents indicated they had little opportunity to make a meaningful contribution.

Table 26 shows respondents had a moderate level of confidence (mean = 3.32) that community interests were taken into account in management policies. Respondents were even less confident that they could become meaningfully involved (3.15) with decision making.

Table 26: Comparison of respondents' views on the extent of management to adequately engage with the community (2007 and 2002).

Items	Survey Year	1 Not at all	2 A little	3 Slight	4 Moderate	5 Consid- erable	6 Full extent	Don't know	Mean
Community interests taken into account for WTWHA management policies	2007 (n=798)	10.3%	19.3%	22.3%	28.4%	15.2%	4.6%	20.7%	3.32
	2002 (n=697)	12.6%	18.7%	31.7%	26.5%	7.3%	3.2%	-	3.07
Opportunities made available to you to meaningful contribute	2007 (n=112)	17.0%	24.1%	17.0%	18.8%	15.2%	8.0%	9.7%	3.15
	2002 (n=102)	17.6%	21.6%	24.5%	21.6%	7.8%	6.9%	-	3.00

3.10 Residents' use of the World Heritage Area

The questions in this section were designed to ascertain the actual visitation to and use of the WTWHA by survey respondents. Questions focused on actual visitation rates and established when respondents had last visited, where they visited on their last visit, how often they would visit the Area on average each year and the main reason for their visit. In addition, to further understand connections with places in the WTWHA, respondents were asked to list their two most favourite places and their reason for this. Questions also related to non-use of the Wet Tropics, sites no longer visited and the reasons why they were no longer visited. Respondents were also asked their views on changes which made residents no longer feel welcome, or areas they no longer enjoyed.

Key Points:

- 89% of respondents had visited the WTWHA at least once.
- Half of all respondents visited the WTWHA between one and four times per year.
- Almost three quarters (72.1%) had visited the WTWHA within the previous six months.
- On their last visit to the WTWHA, respondents had enjoyed sites in the northern region.
- Recreational activity was the most common reason for visiting the WTWHA.
- Mission Beach and the Daintree were favourite places in the WTWHA, mainly for their beauty and ease of access.
- Changes noticed at sites within the WTWHA related mostly to management issues.
- A lack of time or opportunity was the most cited reason for not visiting the WTWHA.

3.10.1 Actual visitation

In 2007, 89% of respondents (n = 794) indicated they had visited the WTWHA at least once. The rate of visitation has increased by 4% since 2002 (n = 757).

The frequency of visitation was similar to 2002 patterns with the exception that there were fewer respondents visiting 56-365 times (up to every day) per year and those visiting 5-12 times (up to every month) per year (Table 27). In 2007, the majority of respondents had visited the WTWHA within the previous six months of the survey collection (May to October 2007) and all respondents indicated they had visited the WTWHA within the previous two years (Table 28).

Table 27: Frequency of visitation (2007 and 2002).

How often do you visit the WTWHA?		
Time frame	2007 (n = 626)	2002 (n = 524)
Less than once a year	5.8%	-
1-4 times (up to every three months)	49.9%	50.4%
5-12 times (up to every month)	21.7%	25.7%
13-52 times (up to once a week)	13.6%	12.3%
56-365 times (up to every day)	4.3%	11.6%
None	4.8%	-

Table 28: Previous visit to the WTWHA (2007 and 2002).

When did you last visit the WTWHA?		
Time frame	2007 (n = 670)	2002 (n = 605)
≤ 6 months ago	72.1%	66.1%
7-12 months ago	7.8%	18.8%
1 to 2 years ago	20.1%	4.6%
2 to 5 years ago	-	2.8%
> 5 years ago	-	7.1%

3.10.2 Where in the World Heritage Area did respondents last visit?

A new question was added to the 2007 *Community Survey*, asking respondents for details about their last visit to the region. The most popular areas (Table 29) were, in order of significance, the Northern Region (30.0%), the Southern Region (26.0%) and the Cairns Region (17.1%).

The main reason for respondents' last visit to a WTWHA site was for a recreational activity including swimming, walking and recreation in general (55.8%). 'Other reasons' (21.5%) mentioned included to visit family / friends, look for property, for tourism purposes, access to their own property and revegetation work (Table 30).

Table 29: Sites within the WTWHA last visited by survey respondents (2007).

Site / Region	Frequency	Percentage
Northern Region: e.g. Daintree; Mossman Gorge; Cape Tribulation	180	30.0
Cairns Region: e.g. Barron Gorge; Goldsborough; The Boulders;	103	17.1
Central Region: e.g. Henrietta Creek; Wooroonooran National Park.; Bellenden Ker	29	4.8
Tablelands Region: e.g. Lake Eacham; Curtain Fig;	89	14.8
Southern Region: e.g. Bingil Bay; Murray Falls; Licuala; Clump Point; Lacey Creek	156	26.0
Townsville Region: e.g. Paluma; Jourama Falls; Broadwater and Wallaman Falls	26	3.0
All over Wet Tropics: e.g. Innisfail to Ravenshoe;	5	0.6
Places not located in the WTWHA: e.g. Barrier Reef; Bamaga; Port Douglas; Frankland Islands	13	2.2

Table 30: Reasons for most recent visit (2007 and 2002).

Reason for last visit	Examples	2007	2002
Recreational Activity	Recreation; swimming; walking; photography; kayaking	55.8%	56.7%
Other	Visit family / friends; look for property; tourism; access to own property; revegetation work	21.5%	5.6%
Experiential, Restorative	Relaxation; beauty; stress relief; cultural / tribal / spiritual;	19.7%	36.0%
Educational	Educate son; curiosity; study impact of feral animals	3.0%	1.5%

3.10.3 Favourite places

Responses to Question 38: *If you have favourite places in the WTWHA, (a) please list your most favourite places; and (b) please indicate why these are your favourite places.*

The most popular places visited by respondents were Mission Beach (n = 85) and the Daintree (n = 65). The natural beauty of WTHWA sites was the main reason for visiting indicating an appreciation of the natural attractiveness of the Wet Tropics rainforests (Table 31). There were numerous sites that recorded twenty or less responses – these are listed in Appendix H. In total, 751 responses were given for 143 sites and areas.

A number of respondents (n = 40) indicated they had a secret or undisclosed favourite site in the WTWHA or indicated reasons for liking a site yet did not indicate which site they were referring to. It could be assumed that respondents were wary of completing this question, fearing increased visitation from others or possible restrictions. Other assumptions may be that respondents do not actually know the name of an area they regard as their favourite place within the WTWHA.

Respondents who indicated sites in the Mission Beach area to be their favourite place (n = 85) were characterised as residing in the southern region of the WTWHA (which includes Mission Beach), and were mostly aged 40-49 years (34.5%) or 60 years or more (32.1%). These respondents were mainly professionals and associate professionals (23.8%), and pensioners, unemployed or retired (25.0%). Sixty percent of respondents had lived in tropical north Queensland for more than ten years and mostly had an educational level of technical or trade certificate. The reasons for nominating the Mission beach area as their favourite place included beauty (45.0% of responses), ease of access (27.5%) and the plants and animals (16.2%).

An analysis of respondents who specified the Daintree (n = 65) as their favourite place in the WTWHA indicates they lived in the Cairns region (34.5%), the northern region (23.6%) or the Tablelands region (20.0%). These respondents were more likely to be aged 60 years or older (27.7%) or 40-49 years (20.0%). More females (69.2%) than males indicated the Daintree as their favourite place in the WTWHA and 40.0% had lived in the tropical north region for ten years or less. Respondents' education levels were mainly trade or technical (33.8%) and secondary (32.3%). More than half of these respondents mentioned they liked the Daintree for its beauty (56.5% of responses), ease of access (27.4%) and considered the area to be pristine / untouched (16.1%).

Table 31: Respondents' favourite places within the WTWHA (2007).

Favourite Place	Frequency of Responses	Reason
Mission Beach (including Licuala Walk, Lacey Creek)	85	1. Beauty 2. Ease of access 3. Plants and animals
Daintree	65	1. Beauty 2. Ease of access 3. Pristine / untouched
Cape Tribulation and beyond	39	1. Beauty 2. Pristine / untouched 3. Isolation
'Everywhere'	34	1. Beauty 2. No reason given 3. Getting in touch with nature
Mossman Gorge	33	1. Beauty 2. Ease of access 3. Scenic and relaxing
Lake Eacham / Lake Barrine	30	1. Beauty 2. Swimming 3. Ease of access
Babinda Boulders	30	1. Ease of access 2. Swimming 3. Scenic and relaxing
Josephine Falls	21	1. Beauty 2. Swimming / walking 3. Water and rainforest
Kuranda	20	1. Ease of access 2. Pristine / untouched 3. Facilities
Tully Falls	20	1. Beauty 2. Swimming and picnics 3. Ease of access

3.10.4 Changes in the World Heritage Area

Responses to Question 39: *Have you noticed a change, positive or negative, in the places you are now visiting in the WTWHA, compared to previous visits?*

Responses to Question 40: *If [you responded] ‘yes’ [to Question 39], please explain what change/s you have observed.*

According to Bentrupperbäumer and Reser (2003, p.50), community perceptions and judgement of environmental changes are viewed as a valuable assessment of “environmental condition, threatening processes, and possible degradation or alteration of the biophysical, built and social setting which could cause both impacts on the setting, and possible displacement of the users, or improvements”. The following discussion identifies changes that respondents had become aware of.

In 2007, slightly more than half of the respondents (52.0%) indicated a noticeable change (either positive or negative) in the places they are visiting in the WTWHA.

For those respondents (n = 443) who noticed changes at places in the Wet Tropics where they had previously liked to visit, management issues were highest (20.7% of respondents), followed by natural hazards or disasters (19.8%). Surprisingly, feral animals and plants (8.3%) were not mentioned at site level yet are generally considered to be one of the most serious threats within the WTWHA (refer Section 3.9).

In 2002, 35.5% of respondents (n = 280) indicated they had noticed changes in the WTWHA, including development pressures, increased visitation, changing and improving infrastructure and amenities at sites, better access and a more visible management presence (Bentrupperbäumer and Reser, 2003). Individual percentages for types of changes in 2002 were not available, and therefore are not included for comparative reporting in Figure 22.

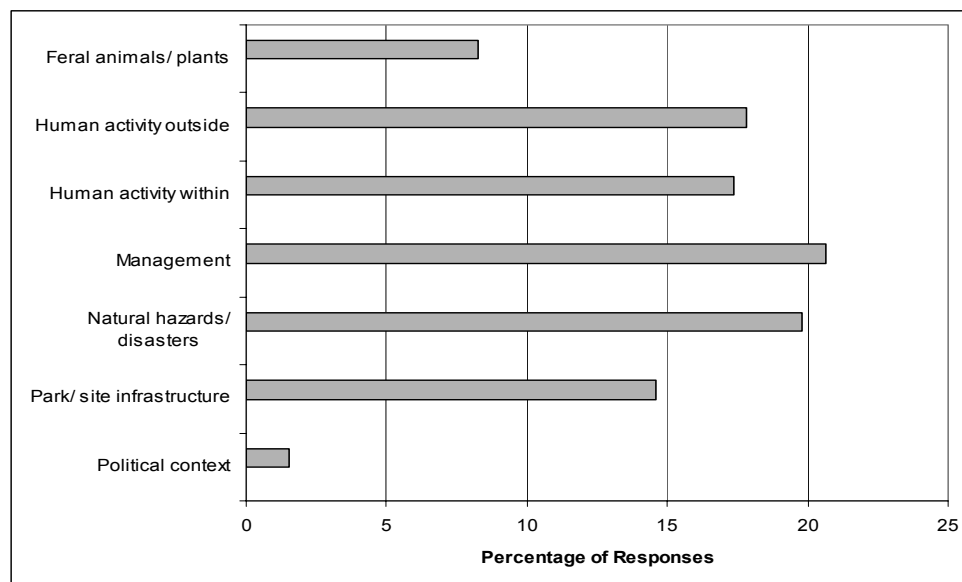


Figure 22: Types of changes noticed in the WTWHA as reported by survey respondents (2007).

Examples of positive and negative comments (n = 460) about changes noticed at places where residents like to visit within the Wet Tropics are provided in Table 32. The number of responses and percentage of total responses is provided in the left column. Comments about management (n = 95, 20.7%) were highest, followed by natural hazards (n = 91, 19.8%), human activity outside the WTWHA (n = 82, 17.8%), human activity within the WTWHA (n = 80, 17.4%), and park / site infrastructure (n = 67, 14.6%). Fewer respondents commented on changes related to feral animals / plants (n = 38, 8.3%) and from a political context (n = 7, 1.5%).

Table 32: Comments regarding changes in WTWHA sites as observed by survey respondents (2007).

Changes	Comments Received
Management (n = 95; 20.7%)	"Lake Eacham's visitors area is lovely since the cyclone" "Too many facilities / rules / people / rangers" "Better management = marketing / signage / public awareness" "Disabled people not catered for in new projects"
Natural hazards / disasters (n = 91; 19.8%)	"Cyclone damage" "Regrowth after Cyclone Larry" "Degradation – forest is slowly dying" "Loss of canopy"
Human activity outside WTWHA (n = 82; 17.8%)	"Tracks opened up / bitumen / more accessible" "Drying out, development to the edges" "Logging huge area for a golf course hardly used" "Housing developments creeping slowly into the rainforest"
Human activity within WTWHA (n = 80; 17.4%)	"Excessively large tour groups, damage and rubbish" "The Boulders is now too 'touristy'" "More people, more rubbish, less wildlife" "Have ridden same tracks for years, cars seem to have a major effect on roads, motorcycles don't damage"
Parks/ Site Infrastructure (n = 67; 14.6%)	"Better facilities" "Paying more to stay, but no facilities improved" "Sky ladders for possums to cross roads" "Millaa Millaa / Mossman Gorge – no car access to picnic areas for elderly / disabled"
Feral animals / plants (n = 38; 8.3%)	"Not enough spent on weed control" "Weeds increase north of Daintree" "Twelve years ago much of the area was acacia regrowth secondary rainforest. Vine scrub is now the dominant forest type" "Increase in weeds and feral animals"
Political context (n = 7; 1.5%)	"Lacey Creek bridge a political football" "Bad management by government, 'red neck' developers and over fishing" "Mismanagement by local council"

3.10.5 Non-use of the World Heritage Area

Responses to Question 41: *Are there areas in the WTWHA where you now feel unwelcomed, excluded from, or places you no longer enjoy visiting?*

Responses to Question 42: *If [you responded] 'yes' [to Question 41], please list these places and explain why you are feeling unwelcomed or excluded.*

Only 23% (n = 148) of respondents indicated there were sites within the WTWHA they no longer enjoyed visiting.

A number of respondents indicated there were site-specific areas in the WTWHA where they now felt unwelcomed, excluded from, or no longer enjoyed. These responses have been grouped into regions of the Wet Tropics and are outlined in Table 33. Specific sites mostly mentioned in the Northern Region include the Daintree, Mossman Gorge and Cape Tribulation (n = 32). Babinda's Boulders, Henrietta Creek and Mission Beach (n = 28) were the main specific sites identified in the Central Region. Specific sites identified in the Cairns region included Barron Gorge, Goldsborough Valley and Kuranda. A detailed table of all of sites identified and the reasons for no longer enjoying them is attached as Appendix I.

General reasons for respondents not enjoying sites are given in Table 34 in alphabetical order. These are generalisations across the whole of the Wet Tropics (i.e. specific sites were not identified), but it can be observed that the majority of these comments relate to rules, regulations and restrictions.

Respondents who did not use the WTWHA at all for leisure, recreation, cultural or work activities were asked to indicate why. Only 17.0% of respondents answered this question (Figure 23) and reasons included 'a lack of time or opportunity' (n = 44), 'used to, now too old and incapacitated' (n = 26) and 'have other past times and interests' (n = 14).

Table 33: Sites within the WTWHA that are no longer enjoyed by survey respondents.

Region	Frequency of Responses
Northern Region: e.g. Daintree; Mossman Gorge; Cape Tribulation	32
Cairns Region: e.g. Barron Gorge; Goldsborough; Kuranda	27
Central Region: e.g. Babinda Boulders; Henrietta Creek; Mission Beach; Tully Gorge	28
Tablelands Region: e.g. Lake Eacham; Lake Barrine; Misty Mountains	13
Southern Region: e.g. Paluma, Alligator's Nest	1

Table 34: General reasons given by respondents for no longer enjoying sites within the WTWHA (2007).

In Alphabetical Order	Number of Responses
Aboriginal communities (e.g. Hopevale, Yarrabah, Mossman)	1
Aboriginal control	1
Access to roads and tracks blocked	5
After cyclone – work was very slow to repair tracks and bridges	2
All visitors should be controlled and have guides	1
Anywhere there is a 'no camping' sign	2
Areas affected by Cyclone <i>Larry</i>	1
Authorities think they own it and don't want others to enjoy it	1
Campsites developed, others restricted	2
Cannot walk in National Park with our dog on a leash / Dog is not welcome	3
Cleared / mismanaged areas – depressing	1
Everywhere	2
Everywhere unless with a tourism company	2
Exclusion areas for non-indigenous	2
Illegal to take dog / gun into WTWHA which I had to do when hunting feral pigs	1
Locked gates – no access	4
Lots of tourists in spots	2
Motor cyclists excluded, but not all riders want to destroy World Heritage Area	1
Much of the area is remnant and therefore lacks the character of forest that I grew up with	1
Native sites – cultural exception from both parties	1
Old forest roads; access to swimming holes and creeks	1
On the odd occasion I have come across rangers and other authoritative WTWHA employees that act like little 'Hitlers'	2
Population in sensitive areas	1
Private properties in the middle of the forest	1
River headwaters – barred from fossicking	1
Signage / warnings	4
Some Aboriginal reserves – don't feel safe or welcomed	1
Sometimes there may be too many restrictions on the average visitor's activities... however I believe this to be necessary	1
Swimming places – can't access as now locked up for 'safety'	1
Teachers don't really let you do much	1
They are neglected	1
Too many people to relax and take area in; barely able to get a car park	2
Too many people / too much infrastructure / too many weeds / not enough rangers	1
Too many rules / regulations	3
Too upmarket and tourist oriented	1
Tour operators	1
Tourist orientated – locals made to feel unwelcomed	2
Visit on weekdays when quieter	1
Wherever there is a WTWHA sign	2
You can't do anything	2

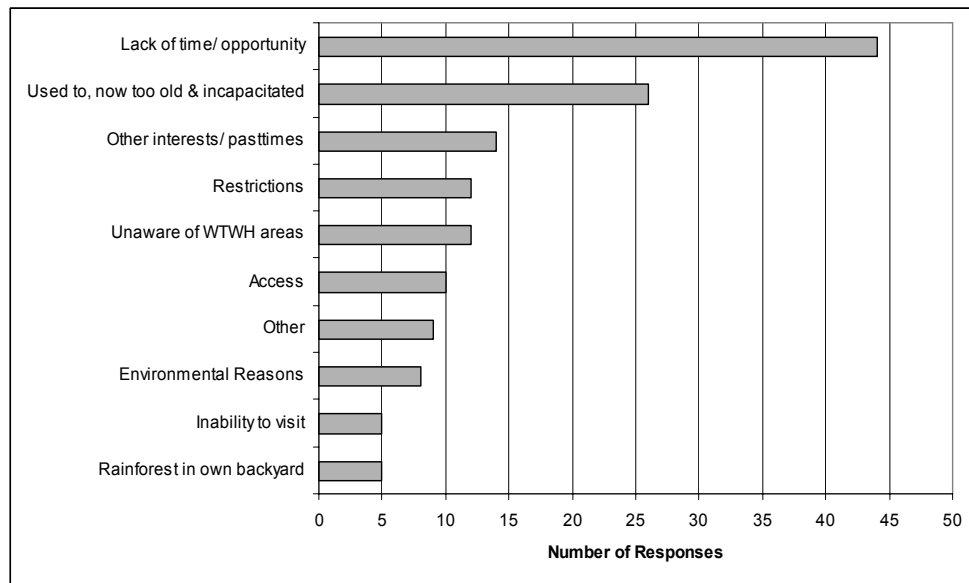


Figure 23: Respondents' reasons for not using WTWHA sites (2007).

3.11 Additional comments

Respondents were invited to provide additional comments on the last page of the 2007 *Community Survey*. This enabled them to elaborate on any belief or opinion they may have had about the WTWHA and its management. This type of data adds richness to the survey and contributes to further understanding the role that the WTWHA plays in the life of the community. In all, 112 comments were received on a variety of issues.

Comments were analysed thematically using the qualitative software program NVivo7. The themes presented include feral pests; management; education and knowledge; Aboriginal involvement and traditional ownership; development; and cassowaries. Although some residents wrote about a number of subjects, only the paragraph surrounding the theme is presented. Due to the size of the table it has been placed in Appendix J.

4. Discussion

These research findings build on previous community attitude surveys to provide a summary of changes in community views on both the WTWHA and the WTMA. The data collected for this report provides a contemporary snapshot of community attitudes in addition to comments on how a number of these indicators have changed in the five year period since the 2002 survey. While adopting a similar methodology to what was used in the 2002 survey, a number of additional questions were added to the 2007 survey instrument and the number of areas surveyed was increased. To develop a comprehensive picture of community attitudes about World Heritage issues, the 2007 survey included questions designed to identify community views on the region's other World Heritage asset, the Great Barrier Reef.

When developing the 2002 *Community Survey*, Bentrupperbäumer and Reser (2006, p. 53) noted that the survey instrument was designed to "incorporate strategic and sensitive indicators for measuring, monitoring and researching salient changes in community knowledge, expectations of and support for the WTWHA and its management and policies". The importance of identifying change indicators becomes obvious when change occurs in aspects of management, development of regions in the vicinity of the WTWHA, population movement, and on a broader scale through external factors including severe weather events and climate change. The results of this research clearly pointed to a high level of satisfaction with the fact that the rainforests are protected, are available for public enjoyment and that the WTMA continues to enjoy a high level of public support in the managerial role it performs. In the near future it is likely that continuing urban growth will create conflicts between development and protection. Given the high level of support that is clearly present for the continued protection of the WTWHA, there is strong evidence to suggest that the community will continue to support policy that places protection of natural areas above their development for other uses.

Murphy and Murphy (2004) observed that it is the residents who are aware of the environmental resources and attractions in their local community and who will be among the first to detect environmental stress and damage. This supports the case for continuing to find ways to actively engage with the community through existing consultation processes and communication strategies. The following discussion highlights major findings of this research.

4.1 *The role of the World Heritage Area in the life of the community*

Protected areas such as the WTWHA play a significant role in providing a sense of well-being and opportunities for people living in regional and rural areas (Bushell *et al.* 2002). In this sense, the 2007 *Community Survey* is a snapshot of contemporary community views and a comment on changes in these views over the last five years. Responses to questions that probed the level of awareness of the Area (see Figures 3 and 4) indicated a high level of awareness, and importantly, support for the current level of protection of the Area. Moreover, high levels of use by the community indicate personal attachment and appreciation of the Area.

4.1.1 *Support*

The initial 1988 listing of the WTWHA was controversial and viewed with suspicion by some community members, particularly those who believed they would incur some degree of loss through the process. In the years since World Heritage listing it is apparent that the level of suspicion has fallen dramatically to be replaced with a high level of support as indicated in

Figure 10. The trend line outlined in Figure 11 clearly indicates that support has continued to grow, tempered only by concerns of a small minority of respondents that rules, regulations and restrictions impede the full range of activities that some respondents apparently wish to engage in.

Of particular interest were survey responses expressing concern about a number of activities that were occurring in areas adjoining the WTWHA. In the Mission Beach area, a number of respondents expressed alarm about the rapid rate of forest and bushland being cleared for housing subdivisions. A particularly poignant comment is:

“Planning needs to extend beyond [World Heritage Area] boundaries to ensure critical landscape linkages are prevented from further degradation or are restored / purchased. Should NOT BE [the] responsibility of private investors of Bush Heritage, ARC or ARF. Development restriction on urban land, on endangered and of concern veg[etation] needs to be fully enforced to the level [World Heritage Area] covers rural landscapes. Incentives / stewardship payments for people to retain and manage landscape for biodiversity outcomes need to be put in place.”

(Male, 31 years, Mission Beach)

The research supported the view that residents are aware of the importance of protecting the natural environment (see Figure 4), and in particular those areas that are refuges for endangered plants and animals including the cassowary and tree kangaroo. Overall, 92% of respondents supported protection resulting in a mean of 5.20 on a six-point Likert scale, a better result than 2002 when a mean of 4.98 was recorded. Some concern was expressed by a small number of respondents about threats posed by invasive weeds and plants, feral animals and human impacts outside the WTWHA. In 2002, feral animals and plants were considered the most serious threat to the WTWHA, followed by human activity. Since 2002 the perception of natural hazards or disasters being a threat has increased, driven by the impact of Cyclone *Larry* on the condition of the forest and its inhabitants. In 2007 there was a more positive perception that threats are being addressed by the WTMA and other environmental agencies.

A final point to emerge from the survey was an increased level of support for the inclusion of cultural heritage in the listing of the WTWHA. This indicates there was a rising awareness amongst the community of the importance of the WTWHA to the Rainforest Aboriginal people. Support for Aboriginal co-management of the WTWHA has increased in the last five years from 58.4% to 66%. Strong support for co-management also increased from 20% to 25.5%. Responses in relation to the inclusion of cultural heritage in a possible future listing of the WTWHA indicated growing support. The 2007 survey found that 71.8% of respondents supported cultural listing compared to 63% in 2002.

4.1.2 Advantages and disadvantages

Almost 70% of respondents have lived in North Queensland for more than ten years and the survey shows strong evidence that respondents have developed a sense of attachment to the WTWHA. These protected areas play an important role in the community's quality of life, providing scenic amenity and substantial areas of environmental significance for recreational activities, employment, personal well-being and educational purposes. These views have not altered since the 2002 *Community Survey*. Socio-economic advantages, personal direct or indirect economic, commercial or employment opportunities of living near the WTWHA received the lowest importance ratings. The highest importance rating was given to 'it is good to know it is there, that it exists', analogous with the 2002 findings. High levels of importance were also placed on the Area providing 'a place to rest, relax, take time out or contemplate' (see Figure 16).

From a regional community perspective (see Figure 17), there was recognition of the importance of the World Heritage listing contributing to the protection and conservation of this natural icon. The need for continued protection of rainforest plants and animals for future generations was clearly recognised by the community. In turn, this protection led to an appreciation of the benefits of clean air and water, and enhanced environmental awareness within the community.

Less than 25% of respondents identified specific disadvantages of living within the Wet Tropics bioregion. From a personal perspective (Figure 18), disadvantages were mostly related to environmental issues (for example, humidity, heat and moisture, and extreme weather events including cyclones), and rules, regulations and restrictions. When asked to comment on disadvantages from the community perspective, respondents identified the main issues as feral animals, invasive weeds and plants, and a less defined group of problems relating to rules, regulations and restrictions. The awareness of feral animals and invasive weeds and plants was high but few specific examples of actual problem areas were given. The following comment illustrates the type of concerns expressed by a small number of respondents:

“I believe that resources (funding, staffing, etc.) are too limited to manage such a vast area completely effectively. Issues such as pest weeds and animals pose a significant risk to the biodiversity of these areas and are HUGE issues that require massive funding and resources to control and manage effectively. In the current climate I do not believe this is possible”.

(Female, 27 years, Townsville)

Rules, regulations and restrictions at both the personal and community level were mostly related to access of areas within the WTWHA. Specific concerns included camping access, the ability to walk the family dog in the Area and road closures.

4.1.3 Actual use

There has been limited research into the motives and activities of local residents who use nearby protected areas. The major emphasis of previous research has instead been directed towards identifying the impact of tourist visitation on protected areas and the consequent impact on host communities (Murphy, 1981; Pearce et al. 1996; Faulkner and Tideswell, 1997; Boyd and Singh, 2003; Goodwin, 2003). The findings of this research on actual use and visitation patterns indicated that the Area is an important site for a range of activities enjoyed by residents. As highlighted in Section 3.10.1, 89% of respondents had visited the WTWHA – a four percent increase since 2002. There has been little change in the reasons for visiting the Wet Tropics since 1992. Recreational activities including picnicking, swimming and walking remained popular activities undertaken in a rainforest setting. Understanding experiential and restorative experiences have become more important compared to earlier survey results. It is interesting to note that the 2007 survey (see Table 30) found that a higher value was now placed on ‘just sitting and reflecting’ in a peaceful and exceptional scenic environment than in previous reports, possibly reflecting a growing appreciation of nature.

Favourite places within the WTWHA reflect areas or sites that the community have identified as possessing values that have some form of special or intrinsic appeal. Although not pursued in this research, it would be interesting to identify the underlying values of these places. Many of the sites that have special meaning for residents are also popular with visitors to the region. The most popular sites identified were at Mission Beach (Licuala Rainforest Walk and Lacey Creek) and the Daintree and Cape Tribulation. The reasons given for visiting, predominantly related to recreation, ease of access, and an appreciation of nature.

While only 23% of respondents indicated there were places in the WTWHA they no longer enjoyed (see Section 3.10.5), it is useful to consider the issues raised by respondents in relation to the displacement that appears to have occurred. In particular, respondents cited increasing tourist visitation to popular sites such as Mossman Gorge and Cape Tribulation in the north and Barron Gorge within the Cairns section of the WTWHA as a major reason for no longer visiting those particular sites. In a more general response, a number of respondents identified issues of access, rules and regulations, and the inability to walk family dogs within the protected areas. Respondents who did not use the WTWHA for any leisure, recreational, cultural or work activities indicated that their reasons were mostly a lack of time or opportunity, age restrictions or other interests and pastimes.

4.2 Community perceptions, appraisals and issues

The community's perceptions of management are based on their actual use of the Wet Tropics, what they hear and read in the media and from word-of-mouth. Both positive and negative perceptions provide a balanced understanding of how the governance of the WTWHA contributes to the community's quality of life.

4.2.1 Perceptions of management

There was strong support from the community for the level of protection the World Heritage listing provides and there was a high level of recognition that the listing was undertaken for protection, conservation and preservation of the Wet Tropics' fauna and flora (see Figure 8). However, residents did not consider rules, regulations and restrictions to be fair if they encroach on their recreational activities or their personal quality of living (see Table 18).

Rules, regulations and restrictions appeared at times to hinder the respondents' ability to actively enjoy the WTWHA (see Figure 18), yet there was an overwhelming realisation that World Heritage listing was undertaken for the purposes of protection, conservation, preservation and for the natural, ecological and geological significance of the Area. Equally, there was a strong sense that respondents expect the WTMA to protect, conserve and preserve. These expectations were somewhat clouded by perceptions of which agency is responsible for on-site management and the agency that has responsibility for planning and management. Part of the confusion seemed to stem from the mixture of management agency logos used in the protected area (see Table 22) and changes in logos over previous years. The following comment illustrates the level of confusion that was expressed by some respondents.

"I highly value the [World Heritage Areas] in our local vicinity and believe that we are very fortunate to have these beautiful, wonderful and special areas on our doorsteps. In saying this, I believe that we also have a big responsibility and obligation to the rest of the world, the animals and plants within it and generations to come to manage it effectively, actively and sustainably. I also believe that there may be a general public perception of over management / over restriction, etc., due to the large number of bodies / legislation that overlaps in these areas, e.g. NRW – wild rivers, EPA – coastal management account, etc., etc., QPWS, GBRMPA / Marine Parks, DPIF – fisheries act. I believe these agencies should collaborate more to dispel myths and make understanding of the various management objectives / tools / etc. easier and more transparent. This may help to gain broader community support for conservation".

(Female, 27 years, Townsville)

Although more than thirty percent of respondents associated the cassowary logo with the WTMA, frogs and possums were also identified. The frog logo found on many directional

road signs is possibly contributing to this confusion, as is the QPWS possum logo, which is found on ranger shirts, vehicles and park brochures. We found more than half of the 2007 survey respondents indicated that they had noticed logos associated in some way with the WTWHA on signs, television, posters, stickers, uniforms and vehicles. This indicates there is a need for greater inter-agency coordination with regard to the use of logos.

Overall there was a poor response to the question which sought to identify the level of opportunity that respondents felt they had to participate in discussion forums or consultation processes related to the WTWHA. While these opportunities may have been provided by the WTMA it is apparent that many respondents were unaware that these opportunities were available.

4.2.2 Threats to the World Heritage Area

Threats to the WTWHA identified by the community were mostly concerned with feral animals, invasive plants, and human activity outside the Area (see Figure 21). Concerns of human activity outside the Area that threatens the WTWHA were related to development (adjacent, coastal, urban), land use practices, the use of herbicides and pesticides, land clearing and fragmentation.

“A lot of changes are damaging. Developers, dead carcasses on the roads, where do they go, the animals. So much has been changed here. Once rainforests are now building blocks. Time will tell. Councils allow the progress, yet locals who retire here have no say. Unfortunately we have no control, I fill out your questionnaire form, I feel it will do nothing. Just talk. However my few words may add to the others who may feel the same as I. I will no doubt leave and bear the sacrifices after this place has been raped and back to the suburban scrawl again, I came here for freedom of that. Time is the enemy with the developers”.

(Male, 63 years, Mission Beach)

A small number of respondents expressed a view that tourism was having an adverse impact on the environmental health of some areas of the WTWHA and had caused restrictions to be placed on access to some areas. The impact of tourism was mostly mentioned through changes noticed by the residents and was aligned with the growth of the industry and the population in North Queensland. The main concerns expressed were about environmental degradation, and a perception that the tourism industry was encroaching on the community's use of the natural resources. In the overall context of the survey and the opportunity that respondents had to make comments about issues such as tourism, the absence of comments appeared to indicate that tourism was not viewed as a significant issue. It might be useful to test the community views on tourism in the WTWHA in a future report.

Feral pigs continued to be viewed in a more general sense as a management issue. This concern was first expressed in the 1992 survey and continued as an issue of concern to a minority of respondents in subsequent surveys. One area of concern was the adverse impact that is suffered from uncontrolled feral pigs by neighbouring landowners. This issue was of particular concern on the Atherton Tablelands and in the northern section of the WTWHA.

“Pigs out of control – systematic decimation of these and cats and wild dog packs should have a long term plan of action”.

(Female, 77 years, Daintree)

There was an obvious awareness of feral plants and animals being threats to the WTWHA. Feral plants and animals were also considered to be disadvantages from a community perspective.

4.2.3 Knowledge and community education

Programs that promote environmental education at community and personal levels are important. Dowling (2003) notes that environmental education empowers people to be knowledgeable about their natural, social and economic environment, to be concerned about environmental problems, and to be motivated to act responsibly in enhancing the quality of the environment as well as their lives. This in turn should contribute to community understanding and, in the case of the WTWHA, promote a feeling of 'ownership'. General knowledge about the Area and the WTMA was moderately high (see Figure 4). Although Table 11 indicates most respondents did not have a clear idea of the Area's boundaries, this level of detailed knowledge should not be seen as a significant factor in the overall level of knowledge of the Area.

As illustrated in Table 12, newspapers (84%) followed by word-of-mouth (81.3%) were the most frequently mentioned sources of information about the WTWHA. Both sources have increased in popularity since 2002. One significant finding was that respondents rely on multiple sources of information to learn about the WTWHA. The most popular sources of information provided by the WTMA were signage at Wet Tropics sites (58.6%), WTMA leaflets (27.5%) and the Wet Tropics web site (21.1%). There was a substantial increase in the use of signage as a major source of information (from 38% to 58.6% in 2007) and a significant increase in the use of the web site (from 8% to 21.1% in 2007) since 2002 (see Table 13). The benefits of upgrading the Wet Tropics web site are obvious.

While most respondents agreed that information on the Area was available, most rated its actual availability as either moderate or slight. The overall mean for availability was 3.46 on a six-point Likert scale. These findings appear to indicate that more information is required. However, when asked if there was any particular information they would like to have access to, the majority of respondents (73%) indicated they did not require additional information (see Section 3.5.2). The 2007 results on the requirement for additional information were similar to the 2002 results (74%). These results indicate that in general the public is happy with the types of information available.

4.3 Implications for management

This section discusses the implications for management from the 2007 *Community Survey* results.

4.3.1 The World Heritage Area and its management

The perceived advantages of living within the Wet Tropics bioregion far outweighed the disadvantages on both a personal and community level. This finding also highlighted the community's positive view of the benefits of protecting the WTWHA for clean air and water, the protection of its biodiversity and its contribution to residents' quality of life. There was little evidence of strong negative perceptions of the WTMA, but there was confusion about the responsibilities of the agencies involved in various aspects of the Area.

There was evidence of confusion being caused by re-branding the WTWHA over the past twenty years (see Table 22). There was a strong case for better coordination with other management agencies to maintain consistent branding of the Area and communicating this branding to the resident community and the tourism industry.

4.3.2 Enhancing knowledge within the community

When community surveys commenced in 1992, North Queensland residents had a low awareness of the Wet Tropics and could not identify the boundaries of the WTWHA. In 2007, awareness of the Area was high. However, knowledge of the northern and southern boundaries was still relatively low. It appeared that residents were more familiar with specific sites in the WTWHA than with specific boundaries.

Any changes to the education and communications strategies developed by the WTMA need to consider two elements: educating new residents about the values of the WTWHA, and refreshing the existing knowledge of long term residents (70% of long term residents have lived in the region for more than ten years).

4.3.3 Awareness of host community and tourism industry integration

Although tourism activity was noticed by respondents, tourists were not viewed as a threat. However, as King and others (1993) point out, there is always a danger that where tourism activity is concentrated in a specific area for an extended period of time, the attitudes of permanent residents to tourism and tourists may become negative. It will be beneficial for the WTMA to continue maintaining sites within the Area for local resident use whilst focusing mass tourism visitation on existing sites including Mossman Gorge and Kulki. The opening of the Ma:Mu Canopy Walk on the Palmerston Highway may have some impact on nearby sites such as Henrietta Creek. Monitoring of the local community will identify any feelings of displacement that may occur.

4.3.4 Benefits of longitudinal monitoring

Continuing to monitor the community's attitudes, knowledge, perceptions and use of the WTWHA will assist the management agency to further understand the community's interaction with the Area. This process allows the community to voice their opinion and facilitates feelings of involvement in the management of an ecologically significant area. Residents also act as 'eyes and ears', noticing on-the-ground changes and threats to biodiversity and in this way can highlight issues that require further investigation and action.

One issue that did not arise in the survey was evidence of concern over possible impacts from climate change possibly because questions about climate change were not included in the 2007 or 2002 *Community Survey*. Recent research (Williams *et al.* 2003) has shown that significant changes in the WTWHA may occur in the near future. The impact of changes of this nature on residents has not been identified but will be an important starting point for strategies that are directed towards mitigation and adaption. Mitigation strategies including emissions targets and carbon trading can be expected to raise the level of interest of residents in the region in the near future. This should be considered as a potential topic for future research. Long-term residents may notice physical changes within the Area and these may contribute to baseline scientific data.

5. Conclusion

This research examined community attitudes and perceptions of the WTWHA and its management in 2007 and compared these results to the 2002 survey. Some changes in use patterns and perceptions between 2002 and 2007 were identified. In most cases the patterns of change were positive.

Some concerns on the possible disappearance of habitat corridors caused by fragmentation of the landscape were expressed. While the WTMA does not have jurisdiction over a number of sensitive areas adjacent to the WTWHA, development of these areas is likely to have a direct impact on the ecosystems protected by the Area. Residential development is likely to continue outside the Area, resulting in a larger urban footprint and increased environmental impact. Similar impacts may be noticed within the Area from continued tourism development and increasing visitation to sites. The cumulative impact of these activities has the potential to affect the Area itself in the future and therefore will have implications for the management agency and other stakeholders of concern.

Although actual knowledge and perceived levels of knowledge about the WTWHA were moderate and some confusion was evident about boundary details and who manages the Area, the overall view of the public was positive and supportive. What is important is the community's realisation of the benefits of knowing the rainforests are there, that they exist and the importance of protecting and conserving the Area for future generations. This awareness has increased over the past five years.

Overall, the survey results indicated a high level of recognition of the importance of the WTWHA and a high level of satisfaction with its management. The 2007 *Community Survey* continued to show increasing levels of support for the Area and the management agency. The findings were in the most part very positive, and showed that the Area is regularly used by residents, particularly for recreational reasons. In summary, the survey provided a valuable platform for policy re-evaluation and again demonstrated the usefulness of a regular long term monitoring program.

Glossary

This glossary is compiled to assist in defining terms that may be unfamiliar to some readers as well as to provide a WTWHA-specific definition or application of a term, concept or construct. The inclusion of a definition in the glossary is an acknowledgement of its general use and reference within current natural resource management, social science and environmental science discourses (Bentrupperbäumer and Reser, 2006).

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Appraisal

In a social science and environmental psychology context, *appraisal* refers to individual or observer-based judgements or evaluations of particular environmental or situation attributes, condition, or agency performance. Appraisal measures are often in the form of rating scales relating to judgements or perceived satisfaction levels.

An appraisal refers to an individual's personal impressions of a setting [where as] *assessment* refers to the combining of rating by several observers (experts of setting users) onto a broader-based judgement of the environment (Gifford, 1997, p. 48).

Assessment

Assessment, as distinct from *appraisal*, in a social science or environmental psychology context, typically refers to a more structured objective, instrument and/or expert judgement-based evaluation process and outcome.

Attitude

An enduring response disposition with an affective component, a behavioural component and a cognitive component. We develop and hold *attitudes* towards persons, objects and ideas (Taylor *et al.* 2006).

A general and enduring positive or negative feeling about some person, object or issue. The term *belief* is reserved for the information that a person has about other people, objects or issues. The information may be factual or it may be an opinion. Furthermore, the information may have positive, negative or no evaluative implications for the target of the information (Petty and Cacioppo, 1981, p. 7).

Baseline Data

Data collected at the beginning of a project. They provide a benchmark against which change that occurs during the project can be assessed (Margoluis and Salafsky, 1998, p. 347).

Behaviour

Behaviour, in the context of researching the impacts of visitation and use or in a generic social science context, typically refers to the actual outward behaviour and activity of humans and other organisms as distinct from 'internal' attitudes, judgements, or self-reported view. This typically observable action or activity can involve interactions with the physical or social environment; it can be more passive than active, for example, attentional involvement or quiet observation (Bentrupperbäumer and Reser, 2006). Ultimately, all human activities, including thinking, feeling and appraising constitute *behaviour*, but there can be wide

discrepancies between individuals' actual, overt behaviour, on the one hand, and self-reported preferences, intentions and attitudes.

Biodiversity

Biodiversity means the variability among living organisms from all sources (including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part) and includes diversity within and between species and the diversity of ecosystems (Australian Heritage Commission, 2002, p. 9)

Community

In this report, we understand the term *community* to refer to the greater population of the Wet Tropics bioregion. Our use of *community* and *communities* in this text refers to the population nodes commonly designated as separate communities within the region. It also refers to the community of residents, neighbours and stakeholders for whom the WTWHA is an important geographic, economic and symbolic landscape feature and resource.

Content Analysis

A method of studying the content of documents or other research material. It typically involves categorising information and then comparing the frequency of occurrence of different categories (Robson, 2002, p. 547).

Control

A procedure employed in experimental designs with the purpose of ensuring that extraneous factors or variables do not affect assessment of the effect of the independent variable(s) on the dependent variable(s) (Robson, 2002, p. 547).

Crowding

Crowding refers to a situation in which people experience some stress or frustration because of the perceived and/or experienced presence of many people. It differs from density, which relates to the number of people per unit of area; in that it is a psychological state that follows a situational appraisal (Bentrupperbäumer and Reser, 2000a).

Experiential state when the constraints of high density are salient to an individual (Bell *et al.* 2001, p. 505).

Cultural Heritage

Cultural Heritage refers to those aspects, features and products of a community or to people's collective historical and cultural life. In a natural resource management context, cultural often relates to place meaning, connections and associations following long-term residence and identification (Bentrupperbäumer and Reser, 2000a).

The ways of living developed by a community and passed on from generation to generation, including customs, practices, places, objects, artistic expressions and values (Australian Heritage Commission, 2001, p. 58).

Culture

Culture is a construct that refers to the many different and complex ways in which people from across the world live. Culture is generally understood as being a dynamic set of shared understandings, values, lifestyle and material possessions that allows a group of people to live in and make sense of their current life circumstances as well as to address and interpret change (Bentrupperbäumer and Reser, 2000a).

Domestic Visitor

A visitor to the WTWHA and bioregion from elsewhere in Queensland or Australia, that is, a non-local Australian visitor (Bentrupperbäumer and Reser, 2006).

Ecotourism

Ecotourism is a nature-based tourism that involves education and interpretation of the natural environment and is managed to be ecologically sustainable. *Australian National Ecotourism Strategy* (Department of Tourism, Sport and Racing, 1994).

Ecologically sustainable tourism that fosters environmental and cultural understanding, appreciation and conservation. Its ecological and social responsibility and educational element distinguish it from other tourism which focuses on experiencing natural areas, such as nature-based and adventure tourism (Australian Heritage Commission, 2001, p. 58).

Environment

Includes ecosystems and their constituent parts, including people and communities; natural and physical resources; the qualities and characteristics of locations, places and areas; the social, economic and cultural aspects of a thing mentioned in the previous three criteria (Australian State of the Environment Committee, 2001, p. 122).

One's surroundings; the word is frequently used to refer to a specific part of one's surroundings, as in *social environment* (referring to the people and groups among whom one lives), *physical environment* (all of the non-animal elements of one's surroundings, such as cities, wilderness, or farmland), *natural* (nonhuman) *environment*, or *built environment* (referring specifically to that part of the environment built by humans) (Bell *et al.* 2001, p. 506).

Experience

Experience refers to individuals' phenomenological awareness of their interactions with and responses to their physical and social environment. Experience includes current and past emotional and cognitive responses, appraisals, attractions and anxieties. Experience is the psychological and phenomenological accompaniment of activity and behaviour (Bentrupperbäumer and Reser, 2006).

Impact

Impact can refer to any causal effect. It is typically used in an environmental context to refer to the consequences of an introduced intervention or change in an environmental system or setting. Impacts can occur with respect to any component of the natural and/or physical environment, including individuals, institutions, communities and geographic regions (Bentrupperbäumer and Reser, 2000a).

Indicators

The environment is complex and discerning trends in it can be difficult. Environmental indicators help track changes in the environment by selecting key measures, which may be physical, chemical, biological or socio-economic, that provide useful information about the whole system. Using indicators, we can say something about the environment without having to capture the full complexity of the system. Importantly, indicators are based on the best scientific understanding currently available of how the environment works, so that changes in these simple measures can be related to environmental trends (ANZECC, 2000, pp. 1-2).

A unit of information measured over time that documents changes in a specific condition. A given goal, objective or additional information need can have multiple indicators. A good

indicator meets the criteria of being measurable, precise, consistent and sensitive (Margoluis and Salafsky, 1998, p. 350).

Interpretation

A means of communicating ideas and feelings that help people to understand more about themselves, their environment and other cultures. The process is commonly facilitated through guides, displays, on-site signage, brochures and electronic media (Australian Heritage Commission, 2001, p. 59).

Maintenance

Maintenance means the continuous protective care of the biodiversity and geodiversity of a place (Australian Heritage Commission, 2002, p. 11).

Monitoring

Monitoring means ongoing review, evaluation and assessment to detect changes in the natural integrity of a place, with reference to its baseline condition (Australian Heritage Commission, 2002, p. 12).

The periodic collection and evaluation of data relative to stated project goals, objectives and activities. Many people often also refer to this process as monitoring and evaluation (Margoluis and Salafsky, 1998, p. 351).

A process of determining and documenting changes in the natural environment, human-designed settings, or the social environment, and also changes in individuals and communities with reference to baseline conditions or status (Bentrupperbäumer and Reser, 2000a).

Natural Heritage

Natural Heritage comprises the natural living and non-living components, that is, the biodiversity and geodiversity, of the world that humans inherit (Australian Heritage Commission, 2002).

Natural features consisting of physical and biological formations or groups of such formations, which demonstrate natural significance; geological and physiographical formations and precisely delineated areas that constitute the habitat of indigenous species of animals and plants, which demonstrate natural significance from the point of view of science, conservation or natural beauty. *Australian Natural Heritage Charter* (2002) based on the definition used in the World Heritage Convention by UNESCO (Australian Heritage Commission, 2002, p. 8).

Natural Heritage typically refers to those aspects, features and qualities of a natural environment that are valued and appreciated as an important part of a community or country's assets, life and well-being. In a natural resource management context, natural heritage typically refers to the status of a natural environment or region as a particularly precious and irreplaceable resource and asset for which there are shared rights and responsibilities (Bentrupperbäumer and Reser, 2000a).

Open-ended Question

A question response format in which respondents formulate their own responses rather than selecting from a set of predetermined responses (de Vaus, 2002, p. 362).

Place

Place means a geographically defined site or area with associated natural features of biodiversity, geodiversity and ecological processes (Australian Heritage Commission, 2002, p. 8).

Presentation

Presentation means creating awareness and understanding of the natural significance of a place (Australian Heritage Commission, 2002, p.12).

Presentation encompasses the look and experience or response of a visitor site, the communication of information about the site, its management, recreation and experience options and appropriate conduct (Bentrupperbäumer and Reser, 2006).

Protection

Protection means taking care of a place by managing impacts to ensure that natural significance is retained (Australian Heritage Commission, 2002).

Reliability

The extent to which a measuring device or a whole research project would produce the same results if used on different occasions with the same object of study. There are well-established procedures for assessing reliability in fixed design research. The issues are more difficult to deal with in flexible design research, where some researchers would regard the concept as inappropriate (Robson, 2002, p. 551).

Responses

The range of management actions taken to help mitigate pressures and achieve conservation of the Area's natural values (WTMA, 2001).

Response Rate

The percentage of a sample from which information is successfully obtained (de Vaus 2002, p. 364).

Sample

A subset of a population. The method of obtaining a sample affects the extent to which sample results can be extrapolated to the population (de Vaus, 2002, p. 364).

Scale

A composite measure where the individual measures are designed to tap the same underlying concept. The individual measures should be both logically and empirically related (de Vaus, 2002, p. 364).

Social Impact

Social impact can refer to any consequences of an introduced intervention or change in an environmental system or setting that is impacting on a human community or institution. It can also encompass psychological impact. Social impact has come to be commonly (mis)understood as referring almost exclusively to measurable effects in the social environment that have economic or health implications, such as toxic exposure or rate of unemployment (Bentrupperbäumer and Reser, 2000a).

Social Value

It is the foundation of our identity as individuals and members of a community; an irreplaceable centre of significance (Johnston, 1992).

Social value and 'social values' are used to refer to many different constructs, including attitudes, beliefs, values, and societal standards. Such use and 'measures' can be very confusing. See Glossary for 'value' and 'values', this document.

Stakeholder

Refers to everyone in an organisation or other focus of a research study who has some interest (stake) in the research and its outcomes. Includes participants or clients, workers, management, etc. Particularly relevant in evaluation research and other approaches such as action research where there is a focus on change and hence there are likely to be direct effects on such stakeholders (Robson, 2002, p. 552).

State of the Environment Reporting

State of the Environment Reporting is a system of delivering useful information about the environment to all parts of Australian society including the public, the government, industry and non-government organisations (ANZECC, 2000, p. 1).

A scientific assessment of environmental conditions, focusing on the impacts of human activities, their significance for the environment and societal responses to identified trends (Australian State of the Environment Committee, 2001, p. 124).

Survey

A *survey* is not just a particular technique for collecting information: questionnaires are widely used but other techniques, such as structured and in-depth interviews, observations, content analysis and so forth, can also be used in survey research. The distinguishing features of surveys are the form of the data and the method of analysis (de Vaus, 2002, p.3).

A formal survey is "a data collection method that uses a standardised approach to collect data on individuals (including people, plants and animals) or groups (household or organisations) through structures measurement or the questioning of systematically identified samples" (Margoluis and Salafsky, 1998, p. 349).

Sustainability

Development that improves the quality of human life while living within the carrying capacity of supporting systems (IUCN, 1991).

The confusion over the meaning of sustainable agriculture is also apparent when the meaning of sustainability in other arenas, for example in sustainable development, is considered. Although most would agree that sustainability implies 'not cheating on your kids', a clearer definition has proved to be elusive. This is a point that has been noted by many and appears to be a source of much frustration. Almost every article, paper or book on sustainability bemoans the fact that the concept is broad and lacks a broad consensus; this is usually followed by the author's own preferred definitions which in turn add to the lack of consensus (Bell and Morse, 2000, p. 9).

Tourism

Tourism is travel away from home for recreation or pleasure and the activities that go with this. It can include visits to friends and spin-offs from business conferences. The term also covers industries and services that aim to satisfy the needs of tourists (Worboys *et al.* 2001).

Travel for more than forty kilometres and involving at least one stay overnight (World Tourism Organisation and the Australian Bureau of Statistics) (Worboys *et al.* 2001).

Use

Use, as in 'visitation and use' refers to any functional, utilitarian, or occupational relationship that might exist between an individual and the physical environment which an individual is in. In this natural resource management context, conducting research, infrastructure maintenance, recreation, and restoration are all types of *use*, which might characterise an individual or group's transactions with World Heritage sites (Bentrupperbäumer and Reser, 2006).

Values

Environmental *values* refer to individual and shared community or societal beliefs about the significance, importance and well-being of the natural environment, and how the natural world should be viewed and treated by humans. Environmental values are conventionally understood as more fundamental, more salient and influential, normatively, emotionally and motivationally, than preferences or attitudes, with such values serving as moral and/or responsibility reference points and touchstones for how individuals and societies should interact with and treat the 'natural' environment, in all of its diversity, at local, system, and global levels. 'World Heritage Values' are shared beliefs about the worth and critical life-supporting and enhancing role of these exceptional natural environments and our global cultural heritage, and what should be done to protect and preserve these places and systems (Reser and Bentrupperbäumer, 2005).

A 'social value' is our identity as individuals and members of a community. 'Amenity' is the social value humans place on things outside the necessities of survival. The amenity value includes not only the importance and consequences of economic and recreational usage, but also of the social and cultural meanings and values that are basic to our civilisation (Zann, 2000, p. 130).

Value

A *value* is a social science and psychological construct that refers to a held position or evaluation with respect to a thing, a course of action or a particular domain of behaviour. Values are seen as more enduring than attitudes and as having an evaluative component that beliefs do not necessarily have. In a natural resource management context, having or 'possessing' value must be understood as being valued by a community or group. This 'value' may be with respect to its economic, cultural, spiritual, or scientific worth to human society (Bentrupperbäumer and Reser, 2000a).

Visitation

Visitation refers to the process and phenomenon of people visiting a particular site, place or area. It is in many ways preferable to use the phrase 'visitation and use' in the context of environmental impact assessment or monitoring as almost all visitation implies some type of use, both biophysical and psychosocial impacts derive from and reflect all transactions with an environment. As well, reference to 'visitation and use', in a protected area environment context, ensures that the impacts of and impacts upon all visitors and users are taken into account, not just tourist visitors (Bentrupperbäumer and Reser, 2006).

World Heritage Sites

Sites of outstanding universal natural or cultural significance that is included on the World Heritage List (Australian State of the Environment Committee, 2001, p. 122).

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Appendix A: Community Survey instrument



COMMUNITY RESIDENT SURVEY IN THE NORTH QUEENSLAND REGION

James Cook University (JCU), funded by the Marine and Tropical Sciences Research Facility (MTSRF), aims to provide detailed knowledge for the long term sustainable management of the Wet Tropics World Heritage Area (WTWHA) rainforest.

This is your chance to contribute to the management and protection of our rainforests.

The **purpose** of this research is to provide advice and community views to the Wet Tropics Management Authority (WTMA) and other government agencies. We hope you take this opportunity to inform management and government agencies about how the World Heritage Area **benefits or affects local residents' everyday life**, and the quality of the community and environment in which you live.

The survey is **voluntary**, and **all responses remain completely anonymous**. We do not require any of your personal details in this survey. The survey should take approximately **15-20 minutes** to complete. A reply paid envelope is supplied for your convenience to return the survey.

If you would like to discuss this project in more detail, or you would like a copy of the key findings of this survey, please contact the Project Manager. If you would like to discuss any ethical matters regarding this project, please contact the Ethics Administrator. This project has Human Ethics Approval H2574 from James Cook University.

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and Water Resources**

Appendix A: Community Survey instrument

HOW TO COMPLETE THIS SURVEY – Where questions require a ‘Yes’ or ‘No’ answer, or multiple response, please put a tick ‘✓’ in the circle beside the appropriate response.

Where a scale question is provided (e.g. Question 2) please circle the response which best applies.

SECTION A: AWARENESS AND IMPORTANCE

1. Are you **aware** that most of the rainforests in this region are part of a World Heritage Area?
☐ Yes ☐ No
2. If yes, how would you rate the level of your **general knowledge** about this World Heritage Area?
(Please circle just one response that best reflects your level of knowledge)
- | | | | | | |
|----------------------------------|--------------------------------|--------------------------------|----------------------------------|------------------------------------|----------------------------|
| Not at all
knowledgeable
1 | Slightly
knowledgeable
2 | Somewhat
knowledgeable
3 | Moderately
knowledgeable
4 | Considerably
knowledgeable
5 | Very
knowledgeable
6 |
|----------------------------------|--------------------------------|--------------------------------|----------------------------------|------------------------------------|----------------------------|
3. How **important** do you consider this World Heritage Area to be, in general?
(Please circle just one response that best reflects the level of importance)
- | | | | | | |
|-----------------------|----------------------------|----------------------------|------------------------------|--------------------------------|------------------------|
| Not
important
1 | Slightly
important
2 | Somewhat
important
3 | Moderately
important
4 | Considerably
important
5 | Very
important
6 |
|-----------------------|----------------------------|----------------------------|------------------------------|--------------------------------|------------------------|
-

SECTION B: BACKGROUND INFORMATION

4. What is the name of the **Shire** (Local Government Area) and/or **suburb, town, postcode** where you currently live?
Shire: _____
Suburb or Town: _____
Postcode: _____
5. How would you describe your current place of **residence**?
☐ Suburban ☐ Semi Urban ☐ Rural Residential ☐ Rural
6. How long have **you lived** in tropical North Queensland?
Number of years: _____ and/ or months: _____
7. How would you describe your **ethnicity**?
a) Australian citizen ☐ Yes ☐ No
b) Do you identify yourself as: ☐ Aboriginal ☐ Torres Strait Islander
c) And/ or any of the following **ethnic categories** whether you are an Australian citizen or not?

☐ American	☐ English	☐ Indonesian	☐ Malaysian	☐ Spanish
☐ Canadian	☐ French	☐ Italian	☐ New Zealander	☐ Swiss
☐ Chinese	☐ German	☐ Irish	☐ Norwegian	☐ Turkish
☐ Dutch	☐ Greek	☐ Japanese	☐ Scottish	☐ Vietnamese

☐ Other (please specify): _____
8. What is the highest level of formal **education** you have completed so far?

☐ Primary	(1-7 years of education)
☐ Secondary	(8-12 years of education)
☐ Tertiary A	(Technical or further education institution)
☐ Tertiary B	(University)

Appendix A: Community Survey instrument

9. What is your current **occupation**? Occupation: _____
10. What is your **gender**? ☐ Male ☐ Female
11. How **old** are you? Age: _____ OR Year born: _____

SECTION C: KNOWLEDGE OF THE WET TROPICS WORLD HERITAGE AREA

Whatever your current level of awareness or knowledge of the Wet Tropics World Heritage Area is, we would very much like to know your views on the many issues concerning this area. Please complete the survey as best you can.

12. **Why** do you think these rainforests were made a World Heritage Area? _____

13. From what you know of the region, **where** do you think the Wet Tropics World Heritage Area begins in the north, and ends in the south? North: _____ O Don't know
South: _____ O Don't know
14. **Who** do you believe the Wet Tropics World Heritage Area belongs to? _____

SECTION D: CURRENT SUPPORT

It is important to know your **genuine opinion** about a number of key issues concerning the Wet Tropics World Heritage Area. Please tell us to what extent you support or oppose the issues outlines in Questions 15 and 16.

For each of the following questions, please circle the number that best reflects your opinion:

- | | Strongly
oppose
1 | Moderately
oppose
2 | Slightly
oppose
3 | Slightly
support
4 | Moderately
Support
5 | Strongly
support
6 |
|--|-------------------------|---------------------------|-------------------------|--------------------------|----------------------------|--------------------------|
|--|-------------------------|---------------------------|-------------------------|--------------------------|----------------------------|--------------------------|
15. To what extent **do** you support or oppose:
- | | Strongly
oppose | | | | | Strongly
support |
|--|--------------------|---|---|---|---|---------------------|
| a) The World Heritage listing of these forests? | 1 | 2 | 3 | 4 | 5 | 6 |
| b) The general level of protection of the Wet Tropics World Heritage Area? | 1 | 2 | 3 | 4 | 5 | 6 |
16. To what extent **would** you support or oppose:
- | | Strongly
oppose | | | | | Strongly
support |
|--|--------------------|---|---|---|---|---------------------|
| a) The inclusion of Aboriginal cultural heritage in future listing of the Wet Tropics World Heritage Area? | 1 | 2 | 3 | 4 | 5 | 6 |
| b) Some form of Aboriginal co-management of the Wet Tropics World Heritage Area? | 1 | 2 | 3 | 4 | 5 | 6 |

Appendix A: Community Survey instrument

SECTION E: ROLE OF THE WET TROPICS WORLD HERITAGE AREA IN YOUR LIFE AND THE LIFE OF THE REGIONAL COMMUNITY IN TROPICAL NORTH QUEENSLAND

For each of the following questions, please circle the number that best reflects your opinion:

Not important 1	Slightly important 2	Somewhat important 3	Moderately important 4	Considerably important 5	Very important 6
-----------------------	----------------------------	----------------------------	------------------------------	--------------------------------	------------------------

17. **For you personally**, how **important** is the Wet Tropics World Heritage Area for the following benefits?

	Not important					Very important
a) Providing recreational opportunities (e.g. a place to camp, walk, cycle, swim)	1	2	3	4	5	6
b) Providing a place to be with/ share with family/ friends	1	2	3	4	5	6
c) Providing a place to rest/ relax, take time out, contemplate	1	2	3	4	5	6
d) Providing a quality environment to live (e.g. enhancing quality of life)	1	2	3	4	5	6
e) It is good to know it is there, that it exists	1	2	3	4	5	6
f) Providing direct commercial/ economic/ employment opportunities for me personally (e.g. tour operator, ranger, researcher, etc.) Please specify:	1	2	3	4	5	6
g) Providing indirect commercial / economic / employment opportunities for me personally (e.g. food outlets, accommodation, houses, retail, etc.) Please specify:	1	2	3	4	5	6
h) Other Please specify:	1	2	3	4	5	6

18. **For the regional community as a whole**, how **important** is the Wet Tropics World Heritage Area for the following benefits?

	Not important					Very important
a) Protection of rainforest plants and animals	1	2	3	4	5	6
b) Protection of scenic landscape	1	2	3	4	5	6
c) Providing clean water and air	1	2	3	4	5	6
d) Enhancing environmental awareness and knowledge	1	2	3	4	5	6
e) Providing commercial/ economic/ employment opportunities for the community	1	2	3	4	5	6
f) Other Please specify:	1	2	3	4	5	6

Appendix A: Community Survey instrument

19. **For you personally**, are there any **disadvantages** in living in or around the Wet Tropics World Heritage Area? Please list what these **disadvantages** are and their level of importance to you:

	Not important					Very important
Disadvantages to you personally:						
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6

20. **For the regional community**, if you consider there are any **disadvantages** associated with the Wet Tropics World Heritage Area, please list these **disadvantages** and their level of importance.

	Not important					Very important
Disadvantages to you personally:						
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6
_____	1	2	3	4	5	6

SECTION F: CONSERVATION AND MANAGEMENT OF THE WET TROPICS WORLD HERITAGE AREA

Your assessment of the conservation and management of the Wet Tropics World Heritage Area is very important to us.

21. What **agency or agencies** do you think are **responsible** for managing the Wet Tropics World Heritage Area rainforests? _____

 _____ O Don't know

22. In general, what do you **expect** from these agencies? _____

23. Have you noticed any **logo or logos** that identify these areas as the Wet Tropics World Heritage area?
 O Yes O No

24. If Yes, please describe the logo/s: _____

 Where have you seen the logo/s? _____

Appendix A: Community Survey instrument

In Questions 25 to 31, we would like to know to what **extent** you feel the **conservation and management** issues listed are being addressed by the **management agencies**.

For each of the following questions, please circle the number that best reflects your opinion:

Not at all 1	To a little extent 2	To a slight extent 3	To a moderate extent 4	To a considerable extent 5	To the full extent 6
--------------------	----------------------------	----------------------------	------------------------------	----------------------------------	----------------------------

In terms of **natural / biological / aesthetic attributes** of the Wet Tropics World Heritage Area:

25. To what **extent** do you feel these **attributes** are being adequately **protected or managed**?

	Not at all					Full extent	Don't know
a) Biodiversity – plants, animals and ecosystems of the rainforest (protected)	1	2	3	4	5	6	O
b) Scenic landscape (protected)	1	2	3	4	5	6	O
c) Waterways and wetlands (protected)	1	2	3	4	5	6	O
d) Feral animal pests (managed)	1	2	3	4	5	6	O
e) Environmental weeds (managed)	1	2	3	4	5	6	O

In terms of **cultural attributes** of the Wet Tropics World Heritage Area:

26. To what **extent** do you feel these **cultural attributes** are being adequately protected and managed?

	Not at all					Full extent	Don't know
a) Non-indigenous historic sites	1	2	3	4	5	6	O
b) Aboriginal cultural sites	1	2	3	4	5	6	O

27. What **agency or agencies** do you think are
primarily **responsible** for managing cultural
sites in the Wet Tropics World Heritage Area?

28. a) Please list below what you think
are the three **most serious**
threats to the Wet Tropics World
Heritage Area:

b) And to what extent you consider these threats are being **addressed**:

	Not at all					Full extent	Don't know
1. _____	1	2	3	4	5	6	O
2. _____	1	2	3	4	5	6	O
3. _____	1	2	3	4	5	6	O

Appendix A: Community Survey instrument

In terms of **community involvement**:

29. In general, to what extent do you believe **community interests** are being taken into account when developing management policies for the Wet Tropics World Heritage Area?
- | | Not at all | | | | | | Full extent | Don't know |
|--|------------|---|---|---|---|---|-------------|------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | | O |
30. Have you been or are you involved in any **discussion forums** or **consultation processes** related to the Wet Tropics World Heritage Area?
- O Yes O No (*If No, go to Q. 32*)

31. **If yes**, to what extent were or are adequate opportunities made available to you to meaningfully contribute?
- | | Not at all | | | | | | Full extent | Don't know |
|--|------------|---|---|---|---|---|-------------|------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | | O |

In terms of **information** about the Wet Tropics World Heritage Area:

32. How have you **learnt** about the Wet Tropics World Heritage Area?

Yes	No		Yes	No		Yes	No	
☐	☐	Newspapers	☐	☐	Visitor Information Centres	☐	☐	Word of Mouth
☐	☐	Radio	☐	☐	Tropical Topics	☐	☐	School / University
☐	☐	Television	☐	☐	Books	☐	☐	Work
☐	☐	Environmental Management Agency Information Centres						
☐	☐	Other (Please specify):						

33. Have you used any of the following **information sources** provided by the Wet Tropics Management Authority (WTMA)?

Yes	No		Yes	No	
☐	☐	Wet Tropics Website	☐	☐	Signage at Wet Tropics World Heritage Area sites
☐	☐	WTMA leaflets	☐	☐	Wet Tropics Neighbours Newsletter
☐	☐	Wet Tropics World Heritage Area Newspaper (<i>Australian Tropical Rainforest World Heritage Magazine</i>)			
☐	☐	Other (Please specify):			

34. To what extent do you feel that **information** about the Wet Tropics World Heritage Area and its management are **readily available**?
- | | Not at all | | | | | | Full extent |
|--|------------|---|---|---|---|---|-------------|
| | 1 | 2 | 3 | 4 | 5 | 6 | |

35. a) Is there any particular Wet Tropics World Heritage Area information or information access you would like more of?
- O Yes O No

b) If Yes, please specify: _____

Appendix A: Community Survey instrument

SECTION G: ACTUAL VISITATION AND RECREATION IN THE WET TROPICS WORLD HERITAGE AREA

36. Have you ever **actually visited** the Wet Tropics rainforests? O Yes O No
37. **If Yes:**
- a) When was the last time (approx.)? _____
- b) Where did you go last time? _____
- c) In a year, how often would you visit (approx.)? _____
- d) What was/ is the main reason for your visit? _____
38. If you have **favourite places** in the Wet Tropics World Heritage Area:
- a) Please list your most favourite places. 1. _____
- b) Why are these your favourite places? Why? _____
2. _____
- Why? _____
39. Have you noticed a **change**, positive or negative, **in the places** you are now visiting in the Wet Tropics World Heritage Area compared to the past? O Yes O No (*if No, go to Q. 41*)
40. If yes, can you please explain what that change has been? _____
- _____
41. Are there areas in the Wet Tropics World Heritage Area where you now feel unwelcome, excluded from, or places you no longer enjoy visiting? O Yes O No
42. If yes, please list these places and explain **why** you are feeling unwelcome or excluded: _____
- _____
- _____
43. If you do not use the Wet Tropics World Heritage Area at all for leisure / recreational / cultural / work activities, could you please explain why?
- _____
- _____

Appendix A: Community Survey instrument

SECTION H: GREAT BARRIER REEF

44. Are you **aware** that the Great Barrier Reef is a World Heritage Area? O Yes O No

45. If yes, how would you rate the level of your **general knowledge** about this World Heritage Area?
(Please circle just one response that best reflects your level of knowledge)

Not at all
knowledgeable
1

Slightly
knowledgeable
2

Somewhat
knowledgeable
3

Moderately
knowledgeable
4

Considerably
knowledgeable
5

Very
knowledgeable
6

46. How **important** do you consider the Great Barrier Reef World Heritage Area to be, in general?
(Please circle just one response that best reflects the level of importance)

Not
important
1

Slightly
important
2

Somewhat
important
3

Moderately
important
4

Considerably
important
5

Very
important
6

47. How **significant** do you think it is to have two World Heritage Areas side by side in North Queensland?
(Please circle just one response that best reflects your level of importance)

Not
significant
1

Slightly
significant
2

Somewhat
significant
3

Moderately
significant
4

Considerably
significant
5

Very
significant
6

Thank you very much for your participation

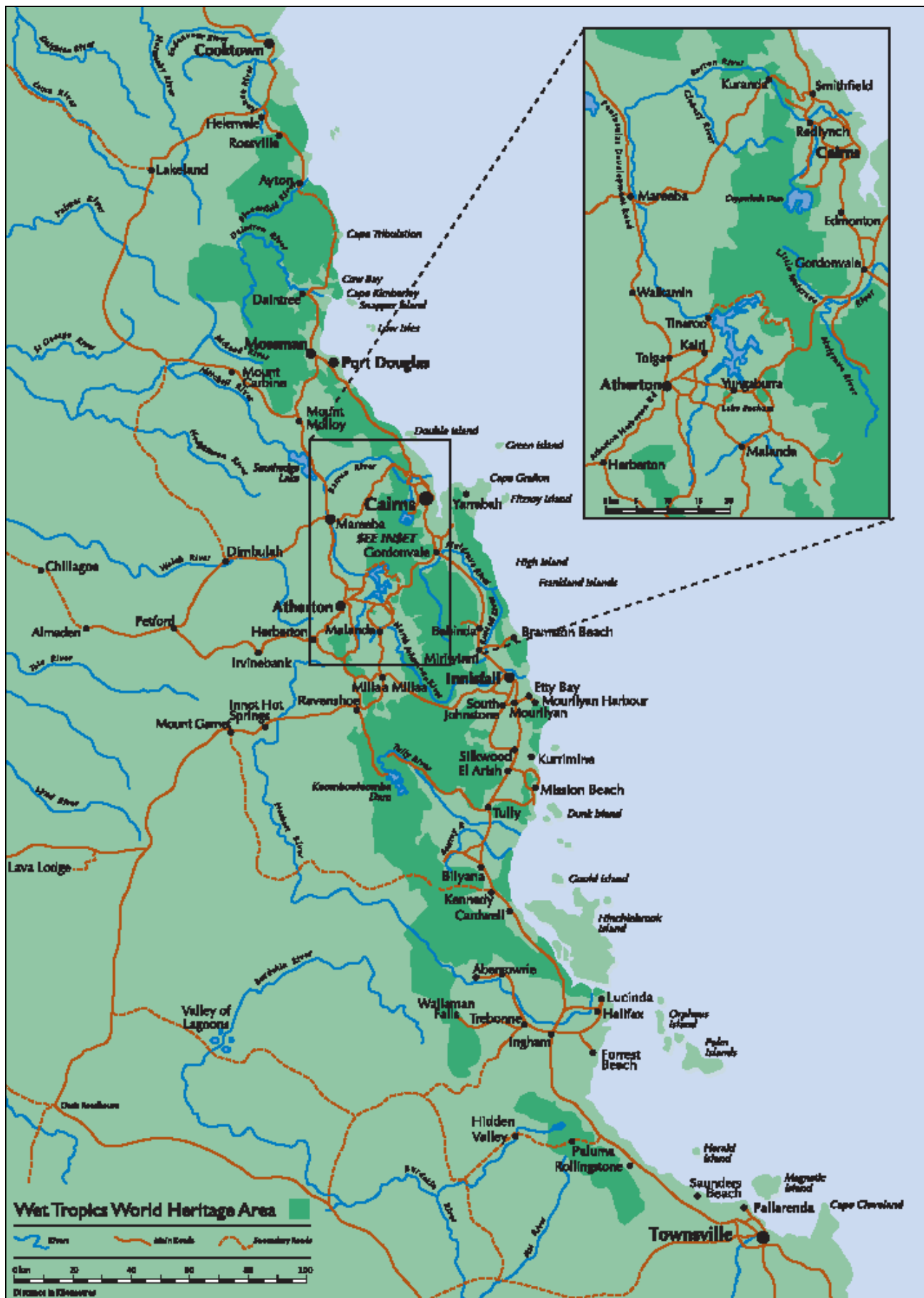
Please add any additional comments below.

RESPONDENTS – Please fill in these details after completing the survey

Survey Information: Date Completed: _____ (day) _____ (month), 2007

Additional Comments

Appendix B: Map of WTWHA Locations



Appendix C: Information Postcard



Wet Tropics Community Survey

If you would like any of the information listed below, please complete your name and address, tick the appropriate information boxes and mail this prepaid postage card to us.

Information Requested (tick box):

- ☐ Key findings from the WTWHA Community Survey
- ☐ Information about the WTWHA:
 - ☐ General Information
 - ☐ Other (Please specify):

Name:

Address:

.....

.....

.....

Appendix D: Community Survey Cover Flyer

Have your say

about the
Wet Tropics
rainforests.

This is your chance to tell us
what you think about
your local environment.

Fill out the attached survey and return it in the reply paid envelope.

 **WET TROPICS**
MANAGEMENT AUTHORITY

 Australian Government
Department of the Environment
and Water Resources

 **JCU**
JAMES COOK UNIVERSITY

 **Reef & Rainforest**
RESEARCH CENTRE

Appendix E: Notes for Residents' letterboxes



Wet Tropics Community Survey

Dear Resident,

Attached is a community survey which explores the impacts of the Wet Tropics World Heritage Area on local residents' everyday life. This is your chance to have your say on the continued management of these areas. Please complete the attached survey and we will return to collect it tomorrow. You may leave the survey in your letterbox or we can collect it personally from you. Your contribution is valuable.

Many thanks,
Research Officer
Tourism Department, School of Business
James Cook University



Wet Tropics Community Survey Sorry we missed you

Dear Resident,

Yesterday we delivered a community survey to your residence. We are sorry we have missed you today for collection. Please complete the Wet Tropics Community Survey and return it in the supplied prepaid envelope as soon as possible. This is your chance to have your say on the continued management of these areas. Your contribution is valuable.

Many thanks,
Research Officer
Tourism Department, School of Business
James Cook University



Wet Tropics Community Survey Thank you

Dear Resident,

We would like to thank you most sincerely for participating in the Wet Tropics World Heritage Area Community Survey. Your time in completing the survey was very much appreciated. The information you have provided will enable us to provide community views to the environmental management agencies.

Many thanks,
Research Officer
Tourism Department, School of Business
James Cook University

Appendix F: Actual responses regarding ownership of the WTWHA

Response	Frequency	Percentage of Total
GLOBAL:		
Everyone	267	34.3
The World	25	3.2
Commonwealth	11	1.4
Future generations	8	1.0
World Bank	8	1.0
People belong to it	6	0.7
AUSTRALIA:		
Australia	121	15.5
Australians	42	5.4
People of Australia	27	3.5
Australian citizens	17	2.2
Aboriginals	13	1.7
Crown land, community	12	1.5
Australians firstly, preserved for entire globe	10	1.3
Queensland	9	1.2
Indigenous Aboriginals firstly and then all Australians	4	0.5
Aboriginals, Japanese developers and taxpayers	1	0.1
Australian heritage	1	0.1
Australian residents	1	0.1
Far North Queensland	1	0.1
[The previous owners before [the Wet Tropics was] declared [a World Heritage Area]	1	0.1
GOVERNMENT AGENCIES:		
Government	63	8.1
The State/ Queensland Government	15	1.9
National Parks	4	0.5
WTWH	2	0.3
Council	1	0.1
OTHER NATIONS:		
Foreign bureaucrats	2	0.3
France	2	0.3
China / Japan / Korea	1	0.1
[It is] run from Geneva	1	0.1
GENERAL:		
No one	26	3.3
Ratepayers	4	0.5
God	3	0.4

Appendix F: Actual responses regarding ownership of the WTWHA

Response	Frequency	Percentage of Total
Anyone who has an interest in the conservation of a unique place of Earth	3	0.4
Tax payers	2	0.3
Whoever has paid for it	1	0.1
People think they own it	1	0.1
GROUPS:		
Greenies	1	0.1
ECOSYSTEM:		
Mother Nature	20	2.6
Combination of public and private land	4	0.5
Native animals / birds and people to visit and enjoy	3	0.4
ORGANISATIONS:		
Global organisation	3	0.4
Overseas corporations	2	0.3
UNESCO	2	0.3
World Heritage Council	1	0.1
World Heritage Trust	1	0.1
Don't know	26	3.3
TOTAL	779	100.0

Appendix G: Types of information about the WTWHA desired by survey respondents

Information Desired	Frequency	Percentage of Total
Particular Areas		
Babinda area	4	2.3
Cardwell / Kennedy / Kirrama Ranges	2	0.6
Cape York, Eastern Territory, the Kimberley	1	0.6
Cape York, Mount Carbine area	1	0.6
Cape / Daintree / Boulders / Josephine Falls	1	0.6
Cedar Bay walking track	1	0.6
Cooktown to Daintree	1	0.6
Ella Bay	1	0.6
Goldsborough Valley	1	0.6
Innisfail and surrounds	1	0.6
Mission Beach area	1	0.6
Mountains / rivers / creeks Upper Daintree	1	0.6
Mount Bartle Frere, Mount Bellenden Ker, Cairns, Atherton Tablelands	1	0.6
North of Cooktown	1	0.6
Palmerston Highway area	1	0.6
Paluma Range	1	0.6
Port Douglas area	1	0.6
	21	11.3
Management Issues		
Actual areas under protection	4	2.3
Progress on protection of Wet Tropics	2	1.1
QPWS and EPA management practices	2	1.1
Climate change, management of day to day activities, urban growth impact	1	0.6
Development applications	1	0.6
Explanation of international implications of area management	1	0.6
Level of protection	1	0.6
Like to help with weed management / volunteer work	1	0.6
Management plans which address the threat of disease and pests from neighbouring countries	1	0.6
Most tourist info does not include info from WTMA on management of the area	1	0.6
Nominations of private land by individuals or organisations	1	0.6
North and south boundaries, can look it up on internet	1	0.6
Ownership, too many agencies, need more rangers	1	0.6
Policies in progress	1	0.6
Protection of rainforest outside of World Heritage Area	1	0.6

Appendix G: Types of information about the WTHA desired by survey respondents

Information Desired	Frequency	Percentage of Total
Publicity of visitors centres to increase awareness of them	1	0.6
Ranger and maintenance info	1	0.6
	22	12.4
Ecological Information		
Deforestation	6	3.4
Flora and fauna details of different areas	4	2.3
Pest management information	2	1.1
Biological (esp. threatened species) management and detailed biodiversity conservation plans	1	0.6
Cassowary information	1	0.6
Feral animal / weed control	1	0.6
Geology, landscape, evolution and biogeography in DETAIL, not glossy tourist brochures	1	0.6
Present and future threats	1	0.6
Survival adaptation	1	0.6
Update on the regeneration of forests after Cyclone Larry	1	0.6
Updates on rare and threatened species, new research results	1	0.6
	20	11.3
Maps		
Details maps of boundaries and areas, accurate to metres	7	4.0
Walking maps	5	2.8
Better maps	3	1.7
Map of which areas are open to public, how to get permits for restricted areas	1	0.6
Maps similar to that produced by Marine Parks	1	0.6
	17	9.6
Recreation Issues		
Boundaries / facilities available / camping areas	7	4.0
Access and area information	3	1.7
Dog friendly areas, if any	1	0.6
Fishing zones	1	0.6
How we can see the preserved remote areas	1	0.6
More recognition of local usage; such as timber industry previously, bushwalking, fishing, bird watching, pig hunting	1	0.6
Reopen some of the closed roads so the public can access more areas, esp. Mulgrave River	1	0.6
What access is allowed, i.e. motorcycles, 4WD, camping	1	0.6
	16	9.0

Appendix G: Types of information about the WTWHA desired by survey respondents

Information Desired	Frequency	Percentage of Total
Political Context		
Government not affected by protection of land	1	0.6
How far local councils will permit developers to move into the rainforest	1	0.6
Politics of the listing	1	0.6
Problems since WTMA takeover	1	0.6
Proposals for public debate	1	0.6
	5	2.9
Aboriginal Information		
Aboriginal culture participation / inclusion	1	0.6
Aboriginal history	1	0.6
Indigenous history of area, significance to different groups	1	0.6
	3	1.7
Other Information		
Any / all information	15	8.5
What information is available?	3	1.7
More primary school level information	2	1.1
More school inclusion for educating the young – presentations, field days, camping	2	1.1
Easy to read books including Aboriginal involvement	1	0.6
Highest priority issues for community action / compliance as needed	1	0.6
Info of popular sites explaining history of land and importance of being in World Heritage Area	1	0.6
More awareness of what WTWHA actually is, otherwise it's just another sign and we don't understand its importance	1	0.6
What involvement my family can have	1	0.6
	28	15.8
TOTAL RESPONSES	131	

Appendix H: Respondents' favourite sites within the WTWHA

Place	Frequency	Place	Frequency
Alexander Falls	1	Coast	1
Alligator's Nest	3	Cooktown	1
Anywhere without a crowd	1	Cooper Creek	3
Apollo Cay	1	Copperlode Dam	2
Babinda Creek	2	Crater National Park	7
Barrier Reef	26	Crawford Lookout	4
Barron Gorge	13	Crystal Cascades	2
Bartle Frere	5	Curtain Fig	5
Beaches	1	Daintree	64
Beatrice River	1	Daintree Tower	1
Bellenden Ker	1	Davies Creek	2
Bicton Hill	5	Downey Creek	1
Bingil Bay and tracks	4	Dunk Island	7
Birthday Creek Falls	1	Edmund Kennedy National Park	1
Black Mountain	2	El Arish	1
Blencoe Falls	2	Eungella	1
Bloomfield River	2	Everywhere	34
Bloomfield River to Daintree	1	Five Mile Creek	4
Bloomfield Track to Lion's Den	1	Forests	8
Blue Holes / Cow Bay	2	Girringun National Park	1
Blue Lagoon	1	Golden Hole	1
Boardwalks	1	Goldsborough	8
Boulders	30	Gowbey	1
Bouncing Stones	1	Happy Valley	1
Broadwater	2	Hastie Swamp	1
Buchan Point to Port Douglas	1	Henhent River	2
Bump Track	1	Henrietta Falls	1
Cairns to Mossman, coastal drive	1	Herbert River Gorge	1
Cape Bamaga to Bundaberg	1	Herberton Range	1
Cape Kimberley	1	Hinchinbrook Island	21
Cape Palmersten	1	Ingham to Mission Beach	1
Cape Tribulation and beyond	39	Johnstone River area	1
Cape York	3	Josephine Falls	21
Cardwell	3	Jourama Falls	1
Cathedral Fig	1	Kennedy Bay	3
Cedar Bay	6	Kirrama Range	2
Chilli Beach	1	Koombooloomba	2
Clohesy River	1	Kuranda	20
Clump Point National Park	5	Lacey Creek	18

Appendix H: Respondents' favourite sites within the WTWHA

Place	Frequency	Place	Frequency
Lake Eacham / Lake Barrine	30	Port Douglas	1
Lake Morris	1	Quaid Road	1
Lake Tinaroo	3	Rivers	10
Lakefield	1	Russell / Mulgrave rivers	6
Lakes	3	Russell River Valley	1
Licuala walk	12	Secret / undisclosed	21
Little Crystal Creek	2	Seymour Range	1
Lumholtz National Park	2	Skyrail	5
Major's Mountain	1	Society Flats	1
Malanda Falls	2	South Johnstone River	1
Mareeba Wetlands	2	South Noah Beach	2
Millaa Millaa Falls	3	Speewah rock drawings	1
Mission Beach	38	Stoney Creek	3
Mission Beach - Innisfail, rainforest	2	Surprise Creek	1
Misty Mountains	6	Tablelands	18
Mossman Gorge	33	Tam O'Shanter	2
Mountain ranges viewed from the coast	1	Thornton Peak	1
Mount Carbine	2	Tolga Bat Hospital	2
Mount Edith River	1	Tully Falls	18
Mount Hypipamee	4	Tully River	2
Mount Lewis	6	Upper and lower Downer areas	1
Mount Spurgeon	1	Walks	5
Mount Windsor	1	Wallaman Falls	11
Murray Gorge	5	Walter's Waterhole	1
Nandroya Falls walk	1	Waterfalls	3
Noah Valley	2	Wet sclerophyll forests	2
North Bramston	2	Windsor Hahn Tableland	3
Not in the WTWHA	1	Wooroonooran National Park	2
Palm Cove	1	Wright's Creek	1
Palmerston	12	Wujal Wujal	1
Paluma	9	Total	752
Paronella Park	2		

Appendix I: Sites no longer enjoyed by survey respondents and reasons why

Reasons for respondents no longer enjoying WTWHA sites	Frequency
Northern Region: e.g. Daintree; Mossman Gorge; Cape Tribulation	32
Blencoe Falls – <i>road closed</i>	2
Bloomfield Falls	4
Brooklyn Station / Mount Lewis – <i>used to be one of Australia's best hiking and biking trails</i>	1
Cape Tribulation – <i>must follow copper log paths, not [able to] wander freely due to increased visitations by more people</i>	1
Cape Tribulation – <i>too 'touristy'</i>	2
Cape Tribulation Beach – <i>inadequate parking and huge buses</i>	1
Cedar Bay – <i>poor public access</i>	2
Daintree – <i>only commercial operators can use it, not enough camping for normal people</i>	1
Daintree and Mossman – <i>overcrowded / 'red necks'</i>	3
Mossman – <i>too many people and more rubbish</i>	1
Mossman Gorge – <i>Aboriginal ground, white man can't go [there]</i>	2
Mossman Gorge – <i>aggressive Indigenous people</i>	1
Mossman Gorge – <i>no camping [allowed] / rude caravan park owners</i>	2
Mossman Gorge – <i>too busy</i>	2
Mount Lewis – <i>poor public access</i>	1
Noah Beach – <i>no access</i>	3
Quaid Road – <i>locked again [due to] tsunami scare</i>	1
Quaid Road – <i>not allowed access</i>	1
Valley of the Palms – <i>blocked off</i> . Blue Hole – <i>unable to see</i>	1
Cairns Region: e.g. Barron Gorge; Goldsborough; Kuranda	27
Aboriginal rock art at Speewah – <i>access restricted by gates and paying guides money</i>	1
Barron Falls – <i>Aboriginals own it</i>	1
Barron Gorge – <i>limited walking track access</i>	1
Barron Gorge – <i>Skyrail's impact on landscape</i>	9
Behana Gorge – <i>locked out</i>	1
Crystal Cascades – <i>pollution, litter, broken glass</i>	1
Fitzroy Island – <i>our council pushed away locals, only interested in tourists</i>	1
Goldsborough Valley	1
Kuranda – <i>drunk locals</i>	2
Kuranda – <i>inappropriate behaviour by Indigenous people</i>	1
Kuranda – <i>overdone commercial development</i>	1
Kuranda – <i>turned into a tourist mecca and lost its identity</i>	2
Overcrowding around Gordonvale's rivers	1
Top of Goldsborough past the gate – <i>access now denied</i>	2
Used to be called Brown Bay, now Yarrabah	1
Yarrabah – <i>I pay my tax to look after this area</i>	1
Central Region: e.g. Babinda Boulders; Henrietta Creek; Mission Beach; Tully Gorge;	28
Babinda Boulders – <i>no bridge</i>	1
Babinda Boulders – <i>too many modern touches, natural picnic spots and swimming holes area ruined</i>	1

Appendix I: Sites no longer enjoyed by survey respondents and reasons why

Reasons for respondents no longer enjoying WTWHA sites	Frequency
Babinda Boulders – <i>tourist spot now</i>	2
Cardwell Shire – <i>too dirty, not tourist friendly, badly managed, too much spraying</i>	1
Dunk Island – <i>commercialised</i> . Brook Island – <i>green zone</i>	1
Dunk Island – <i>management unwelcoming</i>	1
Ella Bay – <i>it is being developed</i>	1
Forest between Cardwell and Dividing range 35km south – <i>appalling condition due to annual burning by QPWS</i>	1
Garner's Beach – <i>aren't allowed to do anything; dirty road puts dust over plants</i>	1
Henrietta Creek, Downey Creek	2
Herbert River Gorge	1
Hinchinbrook Island <i>has been my backyard for fifty years and now I feel unwelcome due to permit system for locals</i>	1
Josephine Falls – <i>total exclusion from the environment</i>	1
Kirrama Range – <i>lack of road maintenance</i>	3
Mission Beach – <i>some walks closed, maintenance required</i>	1
Mission beach – <i>too noisy and too many new housing developments</i>	1
Northern end of Hinchinbrook channel	1
Old Palmerston forestry tracks – <i>locked and/or sign posted</i>	1
Palmerston Highway – <i>many walks have been closed for repair for 6-7 years</i>	1
Parts of Hinchinbrook Island – <i>burnt out</i>	1
Tully Gorge – <i>walking path is closed</i>	3
Tully Gorge campgrounds – <i>no longer able to have fires</i>	1
Tablelands Region: e.g. Lake Eacham; Lake Barrine; Misty Mountains	13
Big Millstream Falls – <i>path too steep for wheelchairs, but has wheelchair sign</i>	1
Kobal Road, Koombooloomba Dam area, Kirrama range	1
Lake Eacham – <i>people drinking and swearing</i>	2
Lake Tinaroo – <i>can no longer camp without paying and registering</i>	1
Misty Mountain – <i>not sure what road is like and if it is safe to drive there</i>	1
Misty Mountains – <i>not accessible since Cyclone Larry</i>	1
Misty Mountains areas – <i>gates always locked despite permits issued</i>	3
Misty Mountains trails – <i>lack of money for development</i>	1
Most campsites at Tinaroo – <i>too many 'yobbos'</i>	1
Windoom Falls, Topaz Road – <i>road overgrown</i>	1
Southern Region: e.g. Paluma, Alligator's Nest	1
Alligator's Nest – <i>too much rubbish</i>	1

Appendix J: Examples of additional comments received from survey respondents

Respondent	Comment/s
<i>Feral Pests</i>	
Kuranda, male, 61 years	"There are too many people who are preservationists and they forget that everybody has a bit of conservationist in them. Keep looking at the damage caused by feral pigs and the noxious weed problem."
Kennedy, female, 53 years	"Sickle Pod weed and Lantana seem to be overtaking large areas. Feral pigs and cats also cause immense damage in the WTWHA."
Ingham, male, 38 years	"Lobby for more government funding for weed control. Begin to use selective herbicides. I don't think you have a chance of beating the weeds otherwise. Rangers should be more present, but more benign, with more ability to apply common sense to a situation, e.g. someone out in a remote area chasing pigs vs some idiot with a group of pig dogs in a family camping area – there is a big difference and the ranger may wish to gently break it to said 'idiot' that he might want to move on out of the park until he sorts himself out. Threats to WTWHA include Siam Weed, Lantana, Native Title, Arsenic weed / Sicklepod, Castor Oil bush."
Rowes Bay, male, 55 years	"Areas where farmers can ignore pest weed and animal clearances should be managed over them."
Atherton, male, 69 years	"In Section F [of the survey], some of my ratings reflect that I believe [the] WTMA and QPWS receive insufficient funding and resources (especially WTMA) to have the manpower to better manage the area and partly the intractable nature of some problems, such as feral animals and weeds. In terms of the ecology of the WTWHA, I think pigs are over rated and toads particularly so. Weeds I think are more difficult to manage. Overall, I think the staff of WTMA and QPWS are doing their best in terms of management."
Daintree, female, 51 years	"Feral pigs have become a huge problem in this area since land has been reverted to State control. Feral pigs can do significant damage to rainforest species, cassowaries and ultimately to the reef (erosion and siltation)."
Mission Beach, female, 77 years	"I am very concerned about weed pests (Singapore daisy) and other [species] infringing into private gardens (spread by council mowers) and along creeks around main Highways, i.e. Mission Beach to El Arish Road. Around Babinda bordering on creeks and cane fields. Johnston Shire [Council] tells me these pests are listed as 'undesirable plants in the Wet Tropics. Currently not listed as 'pests'. If they were, would this mean these pests would have to be controlled?"
Kuranda, female, 77 years	"Pigs out of control – systematic decimation of these and cats and wild dog packs should have a long term plan of action."
Mission Beach, male, 68 years	"EPA does not do the crucial yards. Rogue farmers – digging drains, pumping creeks dry, killing endangered jungle perch – Bingil Bay, killing pigs / cassowaries / wallabies with poison – No permit."
Ravenshoe, female, 75 years	"I love where I live. Rainforest is special. It needs more care and monitoring than ever before. Pests like pigs and weeds can go rampant as there is not the funding to deal with this."
Atherton, male, 37 years	"Spend money on controlling weeds. Stop the importing of weeds into the region / Australia."
Mission Beach, male, 31 years	"Investment in need and feral animal control is critical for long term future of these areas. Threatened species planning needs to be backed up by significant investment in science, esp. the cassowary."

Appendix J: Examples of additional comments received from survey respondents

Respondent	Comment/s
Cardwell, male, 47 years	"Relax the rules. Let sport gun shooters help with feral pig problems."
Ingham, male, 85 years	"The other heritage bush areas have the largest pests – pigs – thousands of damage to crops every year, but agriculturalists cannot go in and destroy them. The government does nothing, yet they give millions to overseas for waste and ridiculous useless aid. It does not affect me at present as I have had my time as a bush lover, fisherman, agriculturalist and businessman. But what a pity for this country as it was."
Townsville, female, 27 years	"I believe that resources (funding, staffing, etc.) are too limited to manage such a vast area completely effectively. Issues such as pest weeds and animals pose a significant risk to the biodiversity of these areas and are HUGE issues that require massive funding and resources to control and manage effectively. In the current climate I do not believe this is possible."
Babinda, female, 70 years	"The rainforests are being smothered by a fast growing vine. Nothing seems to be being done about it. These rainforests, some remnant pockets may not be in the World Heritage Area, but [are] all [within] National Parks and in isolated pockets and if something is not done to destroy this vine on a large scale, these pockets of rainforest will be destroyed, thus destroying the biodiversity of the area and thus decimating the habitat of rainforest animals and birds already struggling with loss of habitat due to development. It is vitally important that wildlife be given a safe habitat to enable survival of the species."
Management	
Innisfail, male, 50 years	"Broader integration of management plans. Legislated protection of 'declared wilderness areas'. Better [water] management."
Unknown, male, 43 years	"Lake Eacham needs management presence on weekends to curb anti-social behaviour of many visitors."
Innisfail, male, 30 years	"Would like to be involved in the management of these places in the near future and would appreciate a copy of the results of this survey."
Malanda, male, 60 years	"The whole area needs more funding to provide better management. A lot of areas should be opened up for more public use. World Heritage Listing should not stop progress, logging, etc., e.g. Tully Millstream Dam, from being built. The area should belong to all Australians, not controlled by world management."
Herberton, male, 46 years	"Management of National Parks should be by people from the country who understand the land, not city-educated university graduates and suburban-raised Aborigines who know little about country living."
Atherton, unknown	"We live in paradise but management is locking us out of our own country."

Appendix J: Examples of additional comments received from survey respondents

Respondent	Comment/s
Townsville, female, 27 years	"I highly value the World Heritage Areas in our local vicinity and believe that we are very fortunate to have these beautiful, wonderful and special areas on our doorsteps. In saying this, I believe that we also have a big responsibility and obligation to the rest of the world, the animals and plants within it and generations to come to manage it effectively, actively and sustainably. I also believe that there may be a general public perception of over management / over restriction, etc. due to the large number of bodies / legislation that overlaps in these areas. e.g. NRW – wild rivers, EPA – coastal management account, etc. etc. / QPWS, GBRMPA / Marine Parks, DPI&F – fisheries act I believe these agencies should collaborate more to dispel myths and make understanding of the various management objectives / tools, etc. easier and more transparent. This may help to gain broader community support for conservation."
Port Douglas, female, 39 years	"I recently purchased a property surrounded by the World Heritage Area, but I have not yet moved into the residence. However, during the process of researching how the surrounding area's management would impact on my activities on my property, I searched [the internet] for such information. I did find the website a bit 'fluffy' with no hardcore guidelines on what was doable and what's not when living in such an area. It was not until I looked into the legislation section that I found some solid information, even then it was difficult to find which zone, A, B, C or D, was where. On the other hand, at least it wasn't hostile in attitude to neighbours. Also when I call WTMA in Cairns, they are helpful, decisive, understanding and friendly and that's great!"
Kennedy, female, 52 years	"It is essential that protection and management is maintained and improved for these magnificent and precious areas to be maintained for future generations. Our community has been effectively excluded from its World Heritage Area by our council's decision to close the Kirrima Range Road. It is a huge loss to our community. Our council tells us that as they cannot collect rates from anyone along this road, they have decided to close this historic road. They tell us that WTMA and EPA should maintain it. Our council blames the Wet Tropics for their inability or lack of will to maintain our access to this World Heritage Area."
Cardwell, male, 63 years	"All the local farmers here are under major threat from annual QPWS fires. Large areas on Hinchinbrook Island have been cleared of rainforest by QPWS. [In] 2005, 8,500 hectares of rainforest [was] deliberately destroyed to promote eucalypt forest. This year extensive burns for the same reason will be carried out. Gould Island southern half denuded of rainforest last year and entire remainder to be stripped of rainforest this year. QPWS, the management must be changed. These are yesterday's men. QPWS produce approximately ten percent of Queensland's total greenhouse gas emissions; they are the biggest killer of wildlife in the State and are the single biggest creator of atmospheric pollution in Queensland. All fires on sloping ground result in major loss of topsoil in these areas. Ends up as runoff into the oceans and onto the reef. QPWS are the biggest threat to the entire Wet Tropics area. I'm sure you think I'm nuts, come up here and take a look. Forest south of Cardwell has about one-tenth the biomass of the same forest on privately owned adjacent areas, and no topsoil. Full of weeds, all the under storey of shrubs are gone and replaced by weed grasses. All large trees have gone. Bases burnt out. Millions of dead and dying trees and the forest under considerable stress. This is a disgrace."

Appendix J: Examples of additional comments received from survey respondents

Respondent	Comment/s
Tourism	
Daintree, female, 51 years	"If primary production is to be killed off in this country and tourism is to become the main economic income, then tourism must be held accountable for their impact on reef / rainforest. Few studies have been done to assess the impact of tourism on WTWHA. We live in this area. Residents, for example, pose a lesser threat to the environment than do tourists. Some council policy (e.g. Douglas Shire) has, in my opinion, effectively increased the potential for a negative impact on the reef / rainforest. A niche market has been created for ecotourism and many of those who have lobbied for this plan stand to gain directly from their tourism / tour related businesses / industries. Plans such as this would ultimately destroy the host, the WTWHA areas. While it is important that WTWHA areas contribute to community economy, the community must protect these natural areas. This is clearly not happening. Tourist operators are sucking the dollars out of these areas and not putting anything substantial back. Roadsides to Daintree are littered with rubbish and road kill of native fauna. National Parks staff do not have the time or the resources to police unscrupulous tour operators who constantly flaunt the rules. Tour bus drivers (many of them Cairns based) speed through the shire to meet deadlines, not caring what wildlife they destroy. I live here. I care. If tourism is going to continue to grow within and around WTWHA areas, it must be underpinned by safeguards to protect the very thing it feeds off. Otherwise it will destroy it, e.g. traffic calming devices on the highways through the forests, overhead wildlife corridors. More studies must be done to assess the impact of tourism. Where are they? Why haven't they been done? Politics? I have seen many studies done on the impact of agriculture and primary industry, but few to honestly assess the impact of tourism. Sorry, am being frank here, but unless this issue is addressed the WTWHA and ultimately, tourism, will suffer. The WTWHA areas cannot sustain themselves unless tour operators are forced to care. It is too easy to attain eco accreditation. The environment is being exploited by the greedy and until WTMA, JCU, Reef and Rainforest [Research Centre], etc. take off their blinkers and acknowledge the very real threat of tourism, nothing will change."
Mission Beach, female, 69 years	"Under no circumstances should tourism facilities (shops, etc.) or accommodation structures be allowed in the WTWHA."
Gordonvale, male, 35 years	"For Far North Queensland, without the Wet Tropics rainforests and the Great Barrier Reef, I don't think anyone would like to visit. We have the greatest resources to attract people around the globe to come to see the area. The more people to visit us the more money they bring to spend, therefore our economy can survive. I doubt we will do this well without tourism to drop by or visit."
North Ward, male, 66 years	"Not clear about significance of the World Heritage Area. Who is responsible? State or Federal Government? Do we need another authority? Could not the existing Parks and Wildlife Service do necessary administration and provide information to local government and tourism authorities? The Great Green Way tourist information makes no mention of 'WTWHA'. Also, Australian tourist publications, who produce information booklets listing attractions, information and maps for Central Australia, Port Douglas, Cairns Hinterland, Atherton Tableland, Darwin, Cairns has no information on WTWHA."
Gordonvale, male, 45 years	"Areas don't need to be accessible, but should be managed for their intrinsic value. Tourism and access is a privilege not a right and should be managed as such."
Halifax, male, 70 years	"I believe a lot of life-long locals have been denied use of their own backyard because of the push for tourism. I walked over much of the Hinchinbrook Island in the 1950s, now I rarely visit or take my grandchildren camping because of the permit system."

Appendix J: Examples of additional comments received from survey respondents

Respondent	Comment/s
Ravenshoe, male, 26 years	"If we really are serious about conservation, how come all of the WTWHA has bitumen roads with tourist buses, environmentally damaging resorts and rubbish through it? The only people who know how to live within the bush is the people who live there. In the last twenty years I have seen the negative effects tourism has had. It's a disgrace. Think of the sick world we will pass to our children knowing it was our fault and we could have changed it."
Education and Knowledge	
Mission Beach, female, 17 years	"Everyone needs to receive more knowledge of the environment and steps on how we can all help to save it."
Innisfail, female, age unknown	"There is no point in creating World Heritage Areas areas if they are not managed by people on the ground instead of bureaucrats and academics half a world away in cities. These areas need to be managed by people with extensive practical knowledge of the area, e.g. they use local knowledge of people who have lived and worked there and can tell all about changes that occur seasonally and generationally. Academic knowledge is useful, but only when allied with practical knowledge. Involvement of locals also allows them a degree of 'ownership' in decisions made."
Kuranda, female, 77 years	"More personal contact with students by WTMA officers for education."
Cardwell, male, 58 years	"Ease up on the academics, you seem to be flooded with and get more grass roots people who have a better knowledge of real effects in forests, like old timber cutters, people who have seen the changes. Not people who imagine what's happening. Realistic, not idealistic. Big difference."
Kuranda, female, 52 years	"It is essential that protection and management is maintained and improved for these magnificent and precious areas to be maintained for future generations. Education rangers need to be made available to assist with interpretation and school education. For the future generations to value and appreciate these priceless areas, children need to be exposed to these places early. In recent years our education rangers have been removed and our schools now lack the very special interaction that they have had in the past. One exposure to a delicate and beautiful creature from the forest can affect a whole lifetime."
Cooya Beach, female, 63 years	"A series of programs through all schools / media on education about World Heritage in a simple, educational and informative manner would create a belonging and a reason to each individual to help maintain these World Heritage Areas. Keep it simple. Get to the point. Bluntly state what will happen if there is no management protection. State all of the advantages. If you need a passionate, strong, positive voice for the voice-over, call me, I would love to do it."
Mission Beach, female, 65 years	"Your survey has made me aware of my lack of knowledge about the Wet Tropics World Heritage Area. I think we get much more info on the Great Barrier Reef than we do on forest areas. I have requested more information via the post card supplied. Thank you."
Ravenshoe, male, 26 years	"The Wet Tropics and World Heritage are, in theory, great. We have to remember that these areas are for the enjoyment, health and education of all, not for the financial gain of a select few because at the end of the day you can't eat money. We don't inherit the planet; we borrow it off our children. We belong to the land. The land doesn't belong to us. The land doesn't go back to us, but we go back to the land."

Appendix J: Examples of additional comments received from survey respondents

Respondent	Comment/s
<i>Aboriginal Involvement and Traditional Ownership</i>	
Tumoulin, male, 65 years	"[Regarding] Section D, Question 16: I have some concern about the interpretation of these two questions. What do you mean by 'Aboriginal co-management'? Why would you single out a segment of the community for this task? A major reason for setting these areas aside is to PROTECT the native fauna – some of which is listed as ENDANGERED. Why then would you allow indigenous Australians to HUNT in these areas? Experience has shown that such hunting does not limit itself to the use of traditional weapons. In fact, the weapon of choice is invariably the RIFLE! Many endangered species such as DUGONG are currently hunted by indigenous people, with rifles, and with complete impunity. It is similar with some endangered species of TURTLES. Surely a double standard is operating here!"
Gordonvale, female, 27 years	"I understand that WTMA are doing a great job preserving the area, but not sure who is responsible for fishing law now imposed on people. As an Aboriginal person, I strongly believe that these laws should be lifted. We are unable to fish or get our traditional foods. So we go to the shops which then cause disease for our people including tooth decay, diabetes, heart problems, etc. Trawlers waste a lot of seafood. Get them out and let individuals (white and black people) go and get their own seafood. Good things that will come out: 1. Family outings; 2. Exercise; 3. Knowledge of area; 4. Skills – hunting and survival; 5. Not too hard on money; 6. Relaxation; 7. Good Food ; 8. Appreciation; 9. Cleaning the area that they visit; and 10. Assists in removing pests and weeds. This is close to how Aboriginal people lived, we had no pollution. Learn from Aboriginal people and respect their law, that's why Australia had no problems regarding the environment."
Kuranda, male, 58 years	"Unfortunately some of our experiences in World Heritage Areas has not been so pleasant: Aborigines telling us (white people) that this is their land and making threats. More people means more rubbish – including [cigarette] butts. And finally – if the indigenous [people] say they are 'custodians' of this land, then they should be properly educated about aspects of littering – alcohol bottles, cartons, old bikes, prams dumped wherever (including creeks / rivers), fishing line left everywhere around creek banks and rivers, sheets of corrugated iron dragged into the bush to make 'humpys'. There are double standards at work here and whenever this is mentioned about the Aboriginal lack of care and consideration – bureaucrats put their heads in the sand and the vicious cycle goes on. Educate them and others properly and fine or jail stubborn offenders. P.S. Rangers should do their jobs properly, regardless of colour/race!"

Appendix J: Examples of additional comments received from survey respondents

Respondent	Comment/s
Gordonvale, female, 44 years	"Because the National Parks and WTWHA were declared without the involvement of the Traditional Owners, and with the recent legislation of Native Title claims, the respective Traditional Owner will never have their traditional land given back to them. State government will never offer co-management of these areas to the Traditional Owners. It's only been of late that the Traditional Owners have been included in some of the consultation processes and finally recognised as a key stakeholder. Native Title claims will take years, if not decades to process, in the meantime, the elders are dying off and the next generations are yet to benefit. I hope my children will benefit (through Native Title), but we are limited to practice of cultural tradition because our traditional land is a National Park and World Heritage listed. Sacred sites that need to be maintained by the women require a special permit from QPWS to access our areas. Traditional Owners are the original conservationists. Our traditional land is all we have and the sooner the government realises and fully understands this, maybe reconciliation and harmony may be restored."
Atherton, unknown	"We live in paradise but management is locking us out of our own country. There is very little Aboriginal culture in the rainforest, it was taboo, except for a few pygmy tribes?"
Atherton, male, 61 years	"I hail from the Mount Isa / Normanton area and over my lifetime have witnessed that where Aboriginal communities have been given the status of 'protector' over certain areas, these lands have been misused mainly through censorship and rubbish. Eight years ago I came to the Tablelands and found a community established at the base of the Bloomfield Track near Cooktown. I was disgusted to find this community living in pure filth, plastic bags littering the township and along fences. These Aborigines were given pristine rainforest area to establish themselves and totally degraded it. In my opinion, no Aboriginal community should oversee or manage a World Heritage listed area, for what it is worth."
Ravenshoe, male, 52 years	"I grew up on Gunnawarra Station and know the history of the region. I also am a very strong environmentalist. However, I also grew up with the Aborigines and know the bush and rainforest reasonably well. I do however not think that indigenous Australians have any more rights to protecting the forest than we do. They would have wiped out these forests with their burning had the white man not come along. All man has been destructive to our environment. These forests have been managed by gross and over educated non locals who really do not understand the history of the forest or the people inhabiting them. Access is a big issue and it needs to be resolved – in our region alone, one of the biggest complaints of grey nomad travellers is the lack of access for people with mobility issues."
Development	
Herberton, female, 63 years	"Cairns councils have never given consideration to the environment or given any lead to the community. 'Burning off gets rid of vermin', no value put on environment. Hence road deaths, burning hills, no wildlife corridors in new housing developments occupying hillsides and steady encroachment. So instead of seeing free environments, we visit zoos where animals that live singular lives are being handled daily. Gradual awareness develops, but the decline in environment is faster."

Appendix J: Examples of additional comments received from survey respondents

Respondent	Comment/s
Port Douglas, female, 53 years	“Too much traffic is allowed into Mossman Gorge and Cape Tribulation. Money and fees won’t fix the rainforests once they are disturbed. Don’t let developers in. Put a building freeze in the rainforests. Keep cafes, fuel depots out of immediate rainforest areas – leave them to towns and cities. Legislate to make reef and rainforests unavailable to people to stop deterioration. Public awareness programs and development of rainforest species (so we can grow in local nurseries and at home) plants we can eat and use in food and medicine.”
Wongaling, male, 43 years	“We need covenants on development. We need to learn to co-habit. Should be more World Heritage Areas.”
Nelly Bay, female, 27 years	“Would like to see a greater level of protection for areas adjoining the World Heritage Area to protect against incompatible development adjacent to Wet Tropics rainforests.”
Gordonvale, male, 45 years	“Off park management of the WTWHA needs to be improved. Consistent management for the WTWHA is needed. Buffers between urban growth and agricultural areas need to be developed to maintain integrity and resilience of biodiversity values. Cultural values of Traditional Owners need to be listed in the WTWHA nomination. Improved resourcing to undertake onground management.”
Mission Beach, male, 63 years	“A lot of changes are damaging. Developers, dead carcasses on the roads, where do they go, the animals. So much has been changed here. Once rainforests are now building blocks. Time will tell. Councils allow the progress, yet locals who retire here have no say. Unfortunately we have no control, I fill out your questionnaire form, I feel it will do nothing. Just talk. However my few words may add to the others who may feel the same as I. I will no doubt leave and bear the sacrifices after this place has been raped and back to the suburban scrawl again, I came here for freedom of that. Time is the enemy with the developers.”
Mission Beach, male, 41 years	“Having seen Tully-Mission Beach area from the air regularly over past ten years, degree of clearing for development is scary. (Some) Farmers along the Tully River / Murray Flats have continued clearing up to, and sometimes into, the river banks. Powerlink’s new line is unforgivable (and apparently unstoppable from the outset).”
Kuranda, female, 54 years	“I would like to see more protection of World Heritage Areas for future generations – not for use, but for the well-being of the planet. Too much development is being approved adjacent to World Heritage areas and this will impact in the long term. WTMA need to be more ‘green’.”
Mission Beach, male, 31 years	“Planning needs to extend beyond World Heritage Area boundaries to ensure critical landscape linkages are prevented from further degradation or are restored / purchased. Should NOT BE responsibility of private investors of Bush Heritage, ARC or ARF. Development restriction on urban land on endangered and of concern veg. need to be fully enforced to the level WTMA covers rural landscapes. Incentives / stewardship payments for people to retain and manage landscape for biodiversity outcomes need to be put in place.”
Atherton, male, 69 years	“Development pressures on water resources, wetlands and off park clearing of vegetation for development are concerns, as is loss of connectivity, caused by roads. All new roads should be made friendly to faunal movement and older major highways, particularly the Bruce Highway, should be improved in this respect.”

Appendix J: Examples of additional comments received from survey respondents

Respondent	Comment/s
Cassowaries	
Mission Beach, male, 52 years	"The loss of habitat and non action by government authorities will see the loss of the cassowary in our area in the next fifty years. Not enough votes in north Queensland. All talk, nothing real ever happens."
Mission Beach, female, 49 years	"My major concern is the effect of urban dogs on local cassowary and wallaby populations. The Johnston Shire Council seems unable to do much about irresponsible dog owners. The wallabies used to camp in the scrub out the back, but left when pig dogs moved in up the road. One positive is the dogs are cleaning up the local cat population. We have cassowaries that move through the area. These dogs are allowed to roam freely and it is only a matter of time before they kill a cassowary. I hope it won't be the young bird I saw moving between two bits of scrub the other day in our estate. Also concerned about plight of dugongs in Lugga Bay. With an increased population pressure will come more boats on the water and greater chances of hitting one with a propeller."
Mission Beach, male, 31 years	"Planning needs to extend beyond World Heritage boundaries to ensure critical landscape linkages are prevented from further degradation or are restored / purchased. Should NOT BE responsibility of private investors of Bush Heritage, ARC or ARF. Development restriction on urban land on endangered and of concern veg. need to be fully enforced to the level WTMA covers rural landscapes. Incentives / stewardship payments for people to retain and manage landscape for biodiversity outcomes need to be put in place. Investment in need and feral animal control is critical for long term future of these areas. Threatened species planning needs to be backed up by significant investment in science esp. cassowary. QPWS / EPA needs to be actioned on completing their duty of care / management! Cyclone response and cassowary management was a joke and alienated the community in recovery plans."
Mission Beach, female, 31 years	"I moved to this area mainly because of the rainforests. As an artist, birdwatcher and tree lover I could think of nowhere else I'd rather live. I am impressed and proud to be part of a community who has such avid and committed individuals who dedicate their time to help educate and promote cassowary conservation. I believe that 'The Mission Beach Bulletin' plays a major if not the most active educational tool / role in showing us how beautiful, unique and vulnerable the World Heritage Wet Tropics is. Living here prior to [Cyclone Larry] was different to now. The houses can have a new roof built, but the rainforests can't. How upsetting it was to watch the destruction of beautiful trees and habitat and not be able to do a thing. Even more upsetting was watching the wildlife starve as they struggled to find food or even find their way through the maze of fallen trees and branches. But it's coming back. Nature finds its way again and thanks to all the people who helped to restore the walking tracks, bridges and facilities so we can watch our rainforests in their recovery. Also, what a great idea to recruit out-of-work (due to cyclone) locals into the EPA to help with the work. I think it made many proud, more educated and inspired to help conserve and manage our beautiful rainforests."

Appendix J: Examples of additional comments received from survey respondents

Respondent	Comment/s
Kuranda, male, 36 years	"I may seem somewhat disgruntled with this situation, but I have worked for the DPI in related areas. I have friends that still work in related areas who are always amazed at how the Wet Tropics isn't really being protected, that most of all the work is just political façade and not a great deal is getting done! Both I and my partner have been involved actively for longer than our adult lives all over Australia trying to increase protection in whatever way possible. Numerous times we have both reported what seems to be illegal and unnecessary land and habitat clearing through such extents as photographic portfolios of such evidence, had DPI and EPA representatives onsite and always there is some loop hole where the individual gets away with it, either because of the lack of power of these bodies or council corruption – who knows? There is protected land on the property I live on now being cleared, it is designated cassowary protection zone, with protected animals and plants – such as the largest Licuala palm known in the area. When the EPA representative was called out to investigate, they didn't even know what a Licuala palm was! It's now still being cleared – what protection? The same thing is happening behind my partner's house in El Arish with protected habitat and species of Eucalypt (rare) passed by local council – what protection? Good survey, regards."
Kennedy, female, 53 years	"Our cassowaries are in dire straits, with dogs, cars and development overtaking their habitat. The same can be said for wallabies, gliders and Lumholtz tree kangaroos. Surely the very small area that is protected by World Heritage should remain free from exploitation by anyone. With the only use [of the World Heritage Area] being some walking tracks. I don't know what interaction there is between the World Heritage Area and the National Park, but it seems to me there should be more good people on the ground doing work and that the hierarchy should listen more closely to these people and what is needed; instead of building empires for thousands and not giving a hoot about conservation or protection of these areas."