

Figure 54: Distribution of tourist responses to questions about WTP (per trip) to improve various environmental and cultural values

Although many respondents were not willing to pay anything, there were some who would be willing to pay something. Indigenous residents were willing to pay most for the protection of their cultural values, non-Indigenous were willing to pay most to protect the native plants and animals from weeds and pests, and tourists were willing to pay the most for improvements in water clarity (Figure 55).

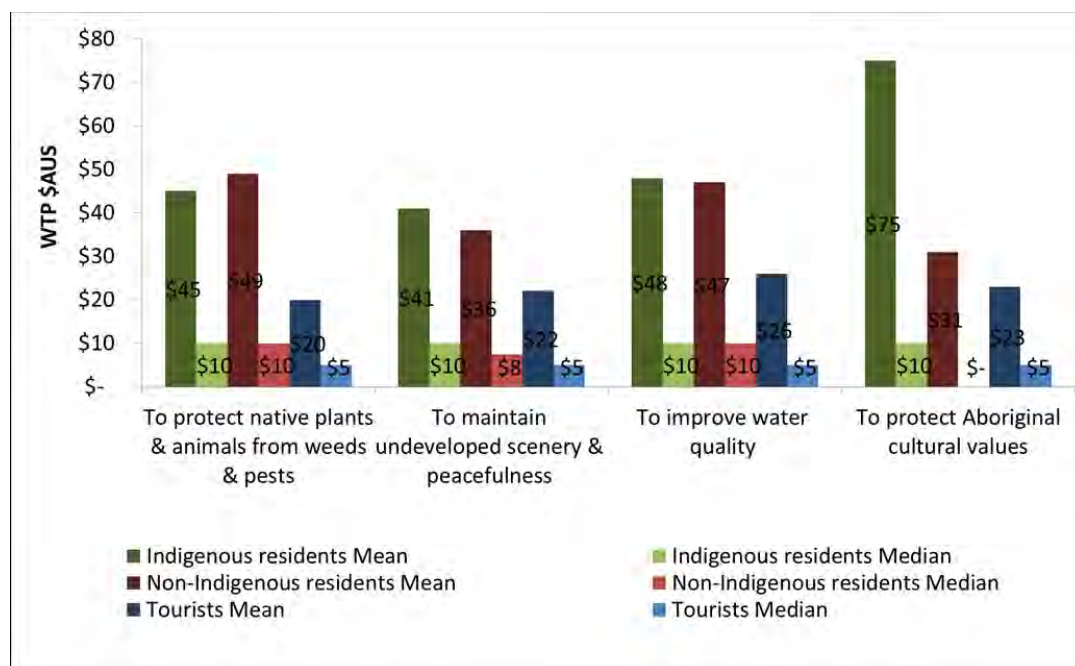


Figure 55: Mean AND median WTP - Residents & Tourists

NB: residents estimates relate to \$ per annum, Tourist estimates relate to \$ per visit

An interesting observation is that those on a lower income, largely the Indigenous residents (see Figure 20), are generally those willing to pay most.

We examined the level of agreement to several statements about who should be responsible for preserving the WTWHA. Across our whole sample of residents and tourists, we found that although most people disagreed with the statement *"only people who live near or visit the WTWHA have a responsibility to care for it"* most agreed with the statement that *"I am not prepared to pay unless all users of the WTWHA (tourists) - or all users throughout Australia (residents) pay too"*. Indigenous residents were, however, more likely to volunteer to help protect the Area (31%) than their non-Indigenous counterparts (13%) or tourists (12%) (Figure 56, Figure 57 and Figure 58).

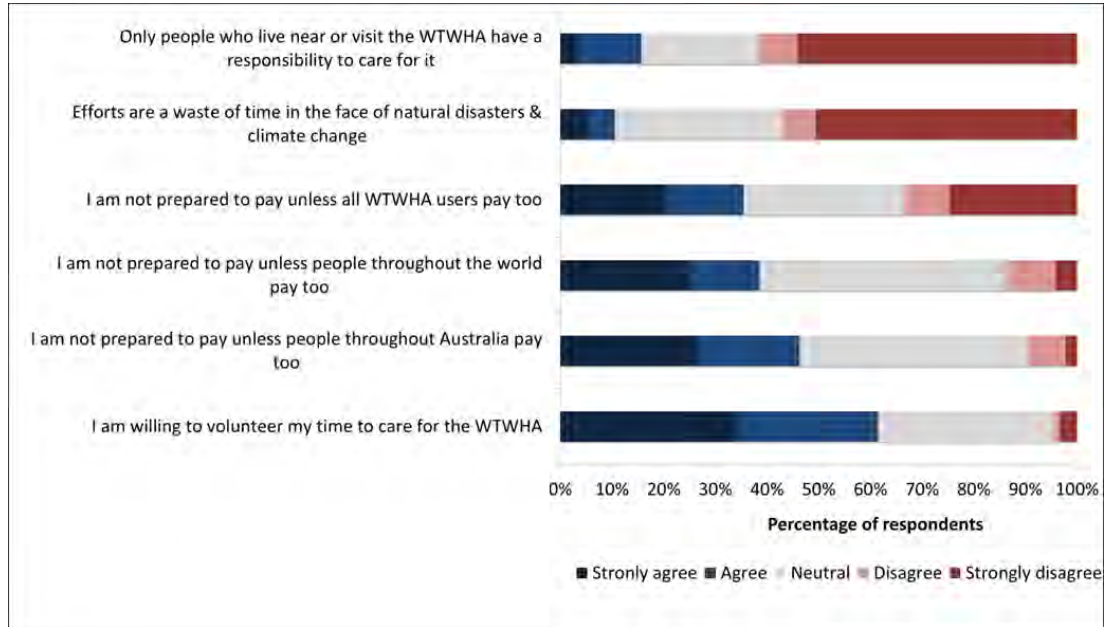


Figure 56: Attitudes towards preservation of the WTWHA - Rainforest Aboriginal residents

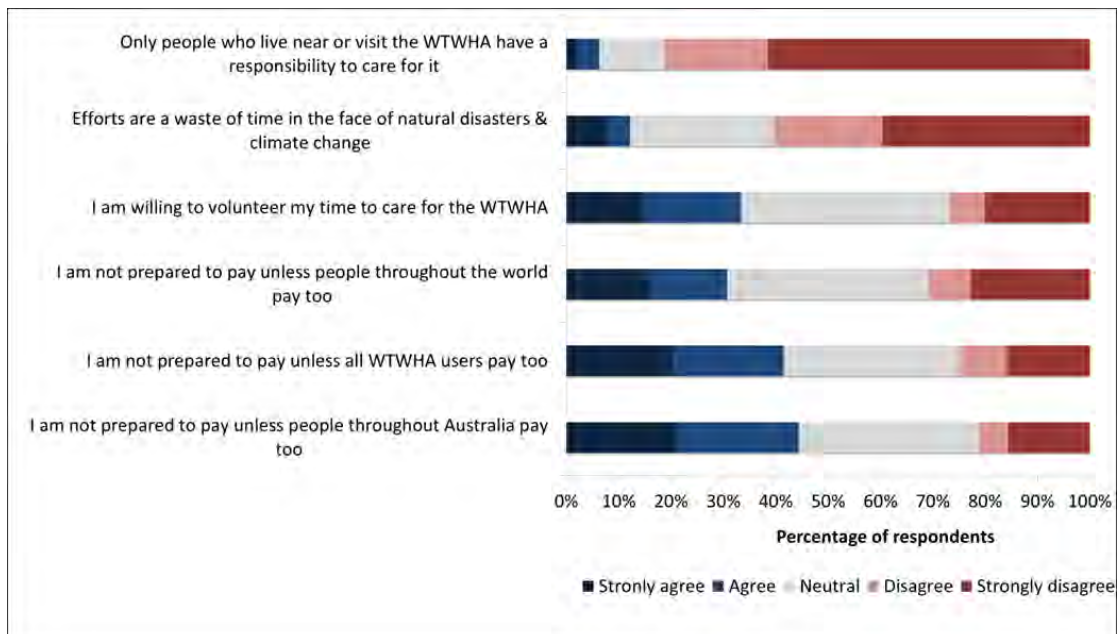


Figure 57: Attitudes towards preservation of the WTWHA - Non-Indigenous residents

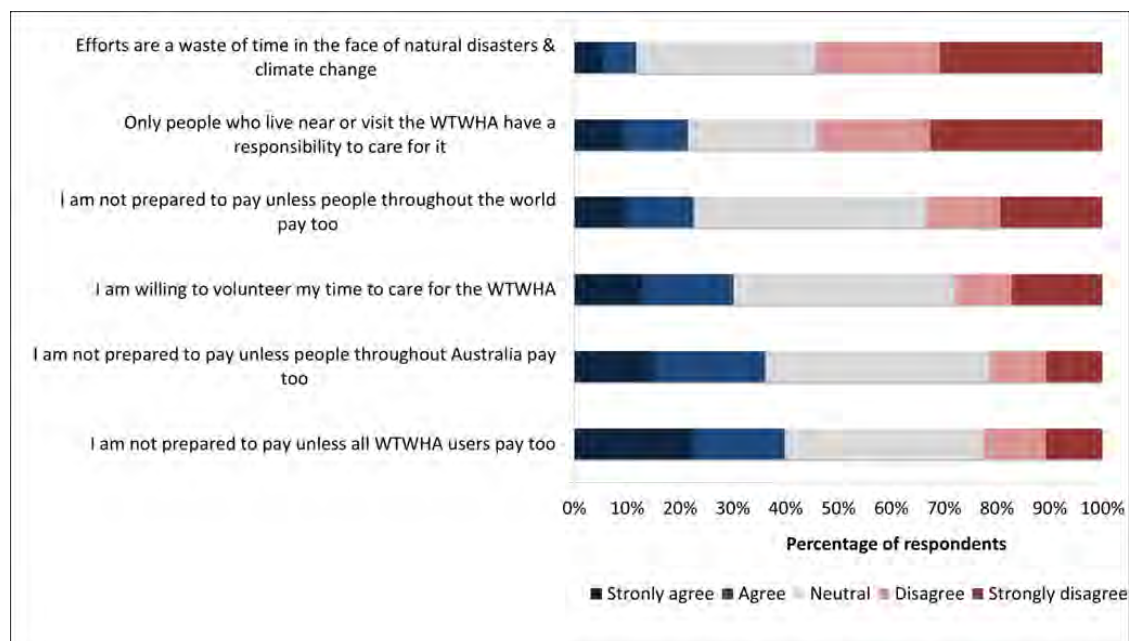


Figure 58: Attitudes towards preservation of the WTWHA - Tourists

Table 12 summarises residents' results from our hurdle models, looking at determinants of WTP, as well as the determinants of WTP/Income. We used Stata's probit and tobit specifications with robust standard errors and have thus controlled for heteroskedasticity (Pits et al, 2012). We found that many factors influenced 'participation' (i.e. whether or not a respondent was willing to pay something greater than zero), with the exception of education and whether or not one thinks that only those who live near or visit the WTWHA should care about it.

Looking at the determinants of WTP first, people who were most likely to pay a positive amount (mostly for environmental values and not for culture) were those employed in tourism-related industries and retail compared to those employed in other industries. Indigenous residents were willing to contribute to culture. People with relatively low household incomes were more likely to pay to improve water quality and promote Indigenous culture. For those who were willing to pay an amount greater than zero, the amount actually offered was associated with relatively few factors: gender, income and employment sector. It was those who were earning relatively less than their counterparts who were willing to pay more than zero for all items. In contrast those in mining and ports were less willing to pay an amount greater than zero. These findings are consistent with our earlier findings that those in the mining sector perceive the environmental and cultural values to be relatively less important than those employed in other sectors. It also suggests that those on a low income yield most 'utility' (satisfaction) from non-market factors, and are WTP to improve them.

Table 13 summarises the tourists' results: males were less likely to pay a positive amount than their female counterparts, and visitors from the UK were more likely to pay a positive amount for more culture than visitors from other origins. Visitors from QLD and from Germany were less willing to pay more than zero for all items. The fact that visitors from QLD (the 'locals') were less likely to pay is consistent with Richardson et al's study (2006) who found that in the USA local visitors were willing to pay less than half as much for recreational experiences in the Rocky Mountain National Park than long-distance visitors (although here, visitors from Germany shared similar views with the locals). Visitors who held the view that those who visit the WTWHA should care for it, were more likely to pay an amount greater than zero towards its protection.

Table 12: **Characteristics of respondents found to have a statistically significant relationship with WTP – all Residents**

	Male	Single	Age	Education	QLD born	HH Income	Indigenous	HH size	Government	Agriculture	Mining & Ports	Retail & Tourism	Only people who live or visit should care	Not prepared to pay unless all users pay too	Not prepared to pay unless all Australia pay too
WTP	To pay or not to pay amount >\$0, How much to pay (if agreed to pay >\$0)														
Healthy native plants & animals						,+			,-	,-	,-	+,			
Undeveloped scenery & peacefulness					,-	,+					,-	+,			
Water Quality	,-					+,+					,-				
Indigenous culture						+,+	+,		,-	-,-	,-	,-		-,	,+
WTP/Income	To pay or not to pay amount >\$0*, How much to pay (if agreed to pay >\$0)														
Healthy native plants & animals															
Undeveloped scenery & peacefulness					,-										
Water Quality		,-		,+				,-	,-	,-	,-				
Indigenous culture							,+		,-	,-	,-	,-			

Note: * participation decision model is the same for WTP/Income model

Table 13: Characteristics of respondents found to have a statistically significant relationship with WTP – Tourists

	Male	Single	Age	Education	QLD	HH Income	UK	Germany	Rest of Europe	North America	Asia	Only people who live or visit should care	Not prepared to pay unless all users pay too	Not prepared to pay unless all Australia pay too
WTP	To pay or not to pay amount >\$0, How much to pay (if agreed to pay >\$0)													
Healthy native plants & animals	- ,				, -			, -	, -			, +		
Undeveloped scenery & peacefulness	- ,				, -			, -	, -			- , +	+	
Water Quality	- ,							, -				, +		
Indigenous culture	- ,				, -		+	, -						
WTP/Income	To pay or not to pay amount >\$0, How much to pay (if agreed to pay >\$0)													
Healthy native plants & animals						, -								
Undeveloped scenery & peacefulness						, -		, -						
Water Quality						, -						, +		, -
Indigenous culture														

Note: * participation decision model is the same for WTP/Income model

As we did for residents, we extended the analysis by using the coefficients from the regressions to be able to generate predicted scores – for tourists however, we were interested in WTP by origin. The complete sets of results from the OLS regressions for all 4 values tested are provided in Appendix 7. Column 2 of Table 14 shows coefficients from the model that looked at the WTP for 'having healthy native plants and animals' to illustrate how coefficients were used to generate predicted values for different groups of visitors. Column 3 of Table 14 shows the 'mean' value of each variable from the model (e.g. the mean age of respondents in this model was 34.18 years). To generate a (mean) predicted WTP score across all respondents we simply multiplied each coefficient, by each respective mean and added (in this case, 2.50, but please note that the dependent variable was $\ln(\text{WTP})$, so actual WTP is $e^{2.5} = 12.18$). Similar approaches were taken to generate predicted importance scores for residents associated with different industries.

Table 14: Results from the OLS regression – WTP to protect native plants & animals from weeds & pests

	Coefficient from regression.	Mean of variable	Coefficient multiplied by mean of variable
Male	0.14	0.40	0.05
Single	-0.04	0.40	-0.01
HH Income	0.00	96483.05	0.16
Age	0.00	34.18	0.13
Germany	-0.62	0.09	-0.05
Uk	-0.26	0.18	-0.05
Rest of Europe	-0.38	0.17	-0.06
Morth America	-0.01	0.06	0.00
QLD visitor	-0.69	0.09	-0.06
Asia	0.32	0.07	0.02
Constant	2.05	1.00	2.05
Overall predicted value			2.50

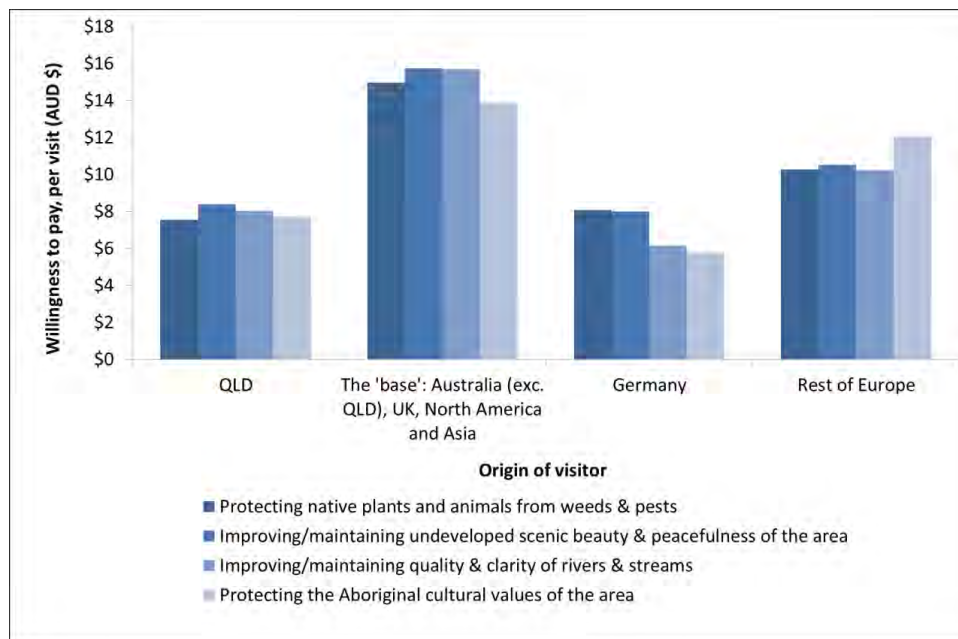


Figure 59: Predicted values of mean WTP to help improve aspects of the environment - by origin

Figure 59 presents these different ‘predicted values’ for different groups of tourists. It clearly highlights the fact that the biggest difference is not what visitors are willing to pay for the different values, since they are more or less grouped together (the difference being just a couple of \$ more). Instead, the biggest difference is that the visitors from QLD and Germany were generally willing to contribute less than visitors from elsewhere.

6.2.2 How would people react if the things they ‘value’ deteriorated?

The preceding results have focused on whether people are willing to pay to help improve things. But how might people react, if the things they value deteriorated? As noted earlier, we mimicked a contingent behaviour type study, asking both residents and tourists to tell us how they would respond to a series of 12 hypothetical ‘changes’. Residents were asked to tell us how the change would affect their overall quality of life; tourists were asked how the change would have affected their overall decision to visit the region.

Responses reinforce the message from the prior segments: environmental and cultural factors are more important to overall quality of life than economic factors, and some types of environmental degradation would have a stronger adverse impact on overall quality of life than a 20% increase in prices (compared to elsewhere in Australia) (Figure 60 and Figure 61). More than 80% of residents stated that they would be much less satisfied if: there was twice as much rubbish in the rainforest and rivers; the rivers changed from clear to murky; and if there were fewer native plants and animals and twice as many pests and diseases. Whilst there were many commonalities, some changes would have greater impacts on different residents: higher prices would affect the overall quality of life of the Indigenous residents more than it would the non-Indigenous residents (intuitively sensible given the much lower incomes of Indigenous residents), but more information about culture would lead to a more substantive increase in satisfaction for the former group, than would for the latter.

The same set of hypothetical ‘changes’ were presented to tourists. The results corroborate those of the resident sample: the worst hypothetical change would be to have more rubbish in the rainforest and rivers – with 44% of respondents saying they would not have come to this region at all in this situation. The next biggest ‘turn-off’ would be a decline in the undeveloped scenery and peacefulness of the area (31%), followed by clarity of rivers (24%) (i.e. if the rivers were to become murkier) (Figure 62).

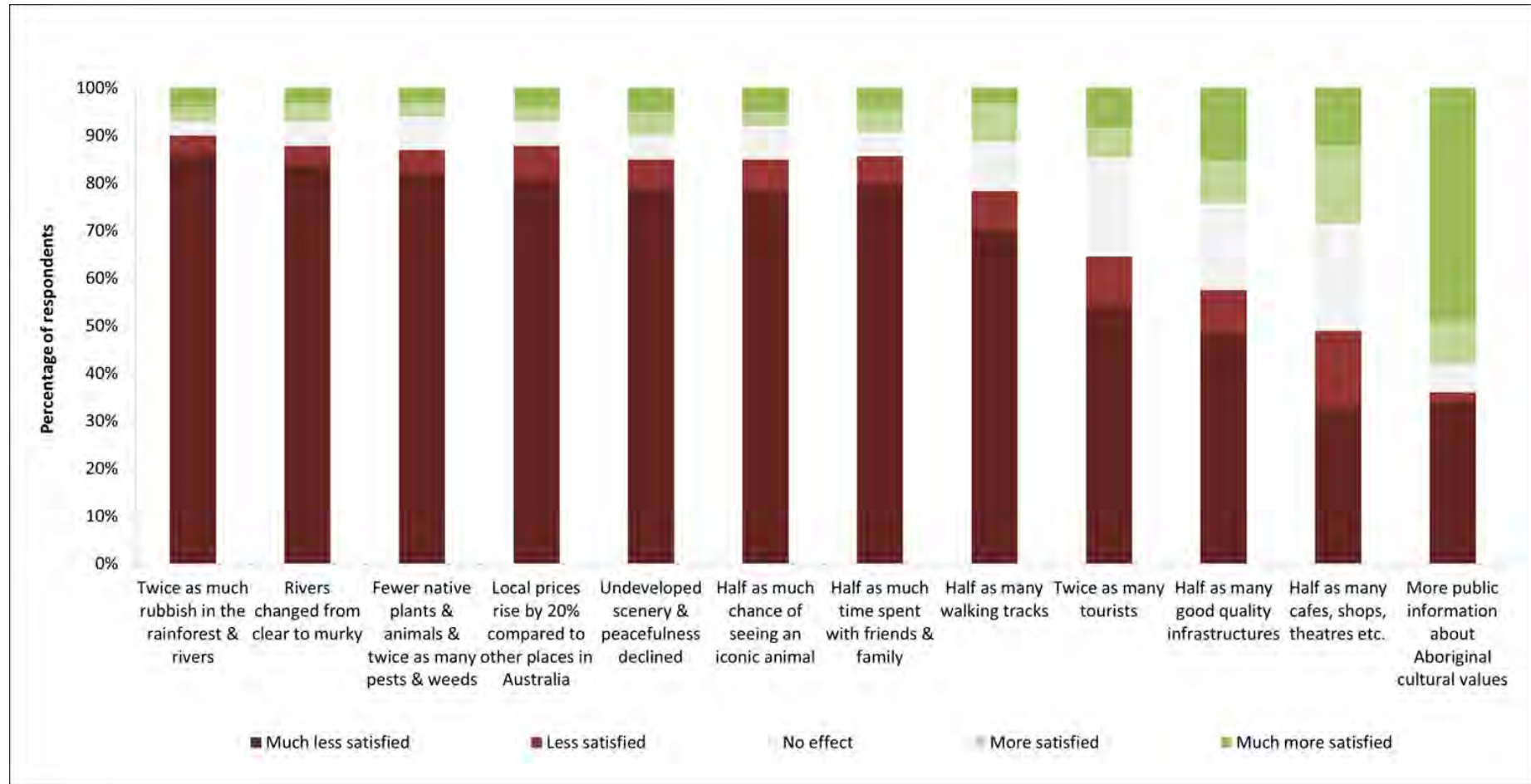


Figure 60: Impact of hypothetical changes to overall quality of life - Rainforest Aboriginal residents

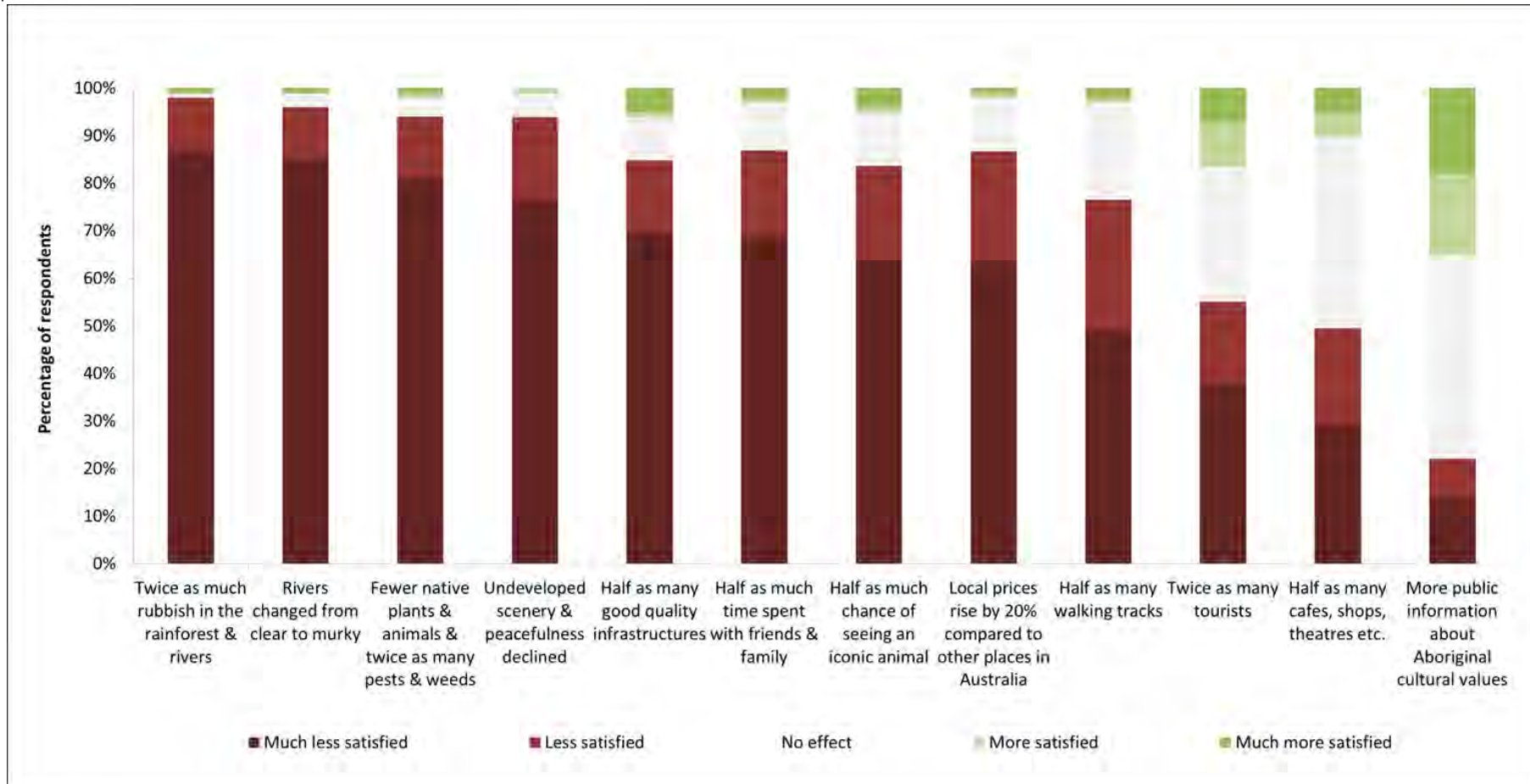


Figure 61: Impact of hypothetical changes to overall quality of life - Non-Indigenous residents

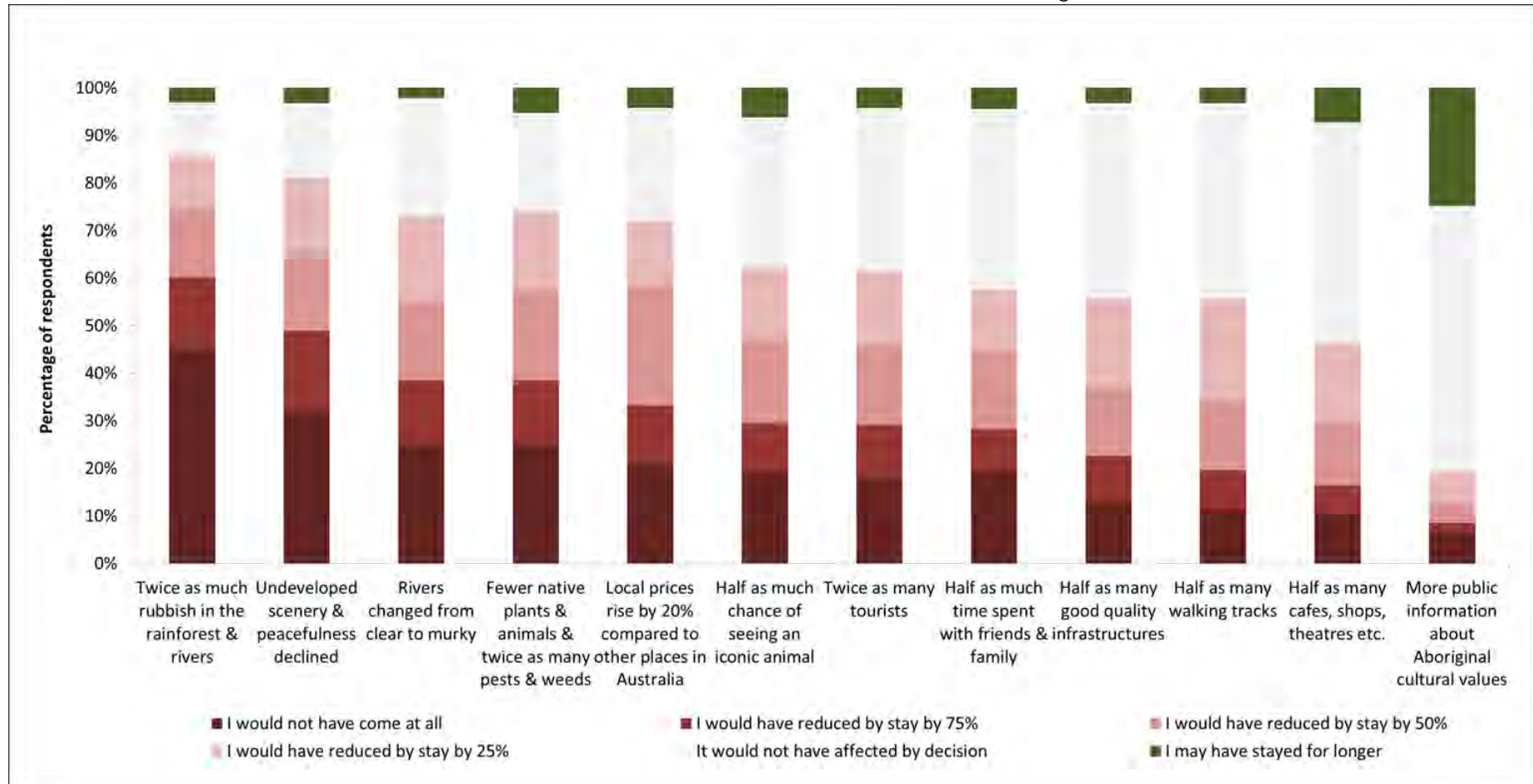


Figure 62: Impact of hypothetical changes on decision to come to the region – Tourists

Interestingly, about a quarter of visitors stated they would have stayed longer if there was more information about Aboriginal culture. Despite the region's richness of its Aboriginal heritage, it seems that some visitors were not particularly satisfied with the exposure to culture, thus supporting the need for more Indigenous cultural experiences, as highlighted by the following quote: *"Beautiful landscape and nature, but missing of Aboriginal heritage"*.

We looked at the importance of culture as a drawcard for coming to this region: here we aggregated the values *'being able to hear from Aboriginal people about their sense of place (culture and country)'* and *'protecting places that have Aboriginal cultural values'*. For 50% of visitors, culture was indeed an important pull factor for their visit here, mostly for the international visitors (Figure 63).

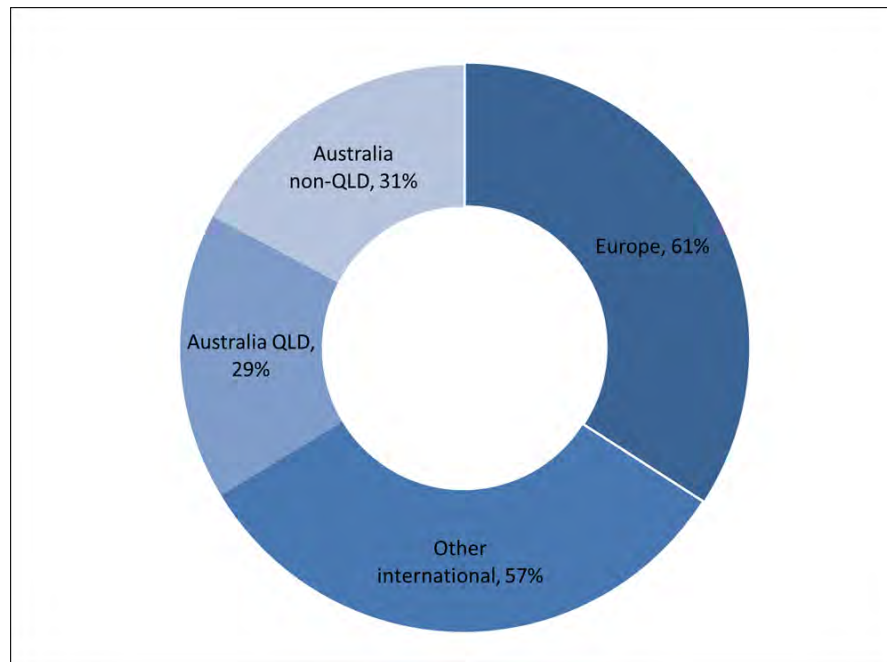


Figure 63: Visitors identifying Indigenous Culture as an important regional drawcard - by country/region of origin

Indeed 31% of Europeans, 24% other internationals, and 12% of Australians say that they may have stayed for longer in this region if there were more information about Aboriginal culture (Figure 64). We examined further the importance of having more information about culture, testing to see if there were significant differences between visitors of different origins. We found that visitors from Europe and other international visitors were significantly more interested in Aboriginal culture than Australians.

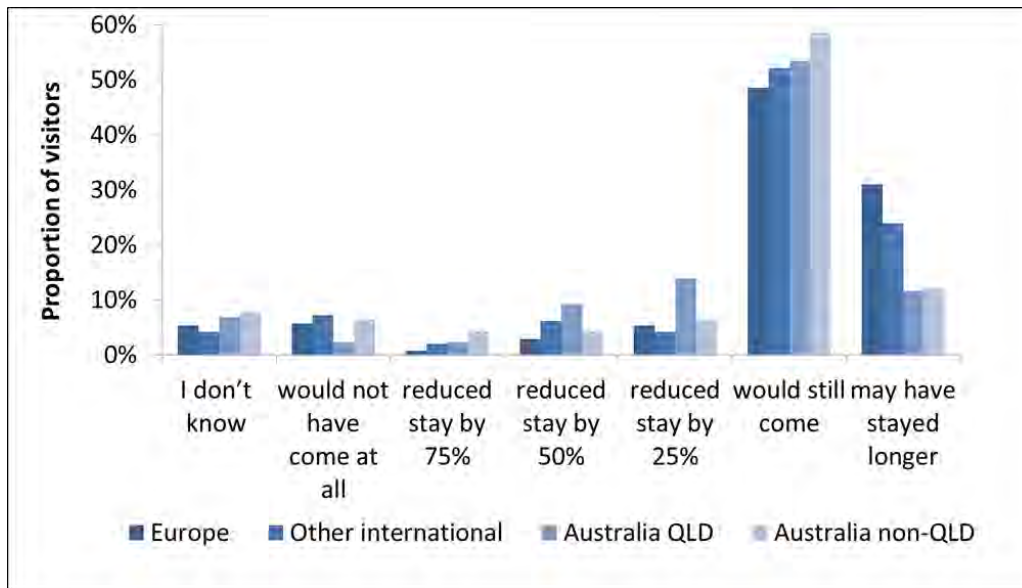


Figure 64: Distribution of responses to question about the way in which having more information about Aboriginal Cultural heritage would have affected trip duration decision – by country/region of origin

6.2.3 Which residents would be most impacted and which visitors will the region lose, if there were deteriorations in these values?

We regressed scores of the 12 hypothetical changes against the socio-demographic variables of residents and tourists (Table 15 and Table 16). In these tables, a '-' sign indicates that respondents are not particularly bothered by the hypothetical scenario (i.e. less concerned than others), a '+' sign indicates that they are more concerned than others. There are numerous '-' signs in the column associated with those dependent upon mining/ports, for the scenarios relating to the environment and Indigenous culture. Evidently, this group of people feel that such changes would have a less detrimental impact on their overall quality of life than people associated with other industries. Those with more education indicate that they would be relatively less 'bothered' by higher prices, less infrastructure, or fewer café's and shops.

As regards tourists (Table 16), here again, a - sign indicates that this particular group of people are not particularly concerned by the scenario, a + sign indicates they are more concerned than others. Males were relatively unconcerned by the prospect of seeing fewer iconic animals, and were less enthused by the thought of having more information about Aboriginal cultural values than females. Single travellers were more concerned at the prospect of murkier rivers, and more enthused by Indigenous culture. Elderly travellers, were more concerned at the thought of less infrastructure, or having less time with family. The Germans were relatively more concerned by the prospect of more rubbish, and liked the idea of having more Indigenous culture; other Europeans seemed to be more focused on family/friends and cafes. Those from Asia appear to be relatively more concerned by the prospect of reduced scenic values.

Table 15: Statistically significant determinants of responses to our question about likely reaction to hypothetical changes – Residents

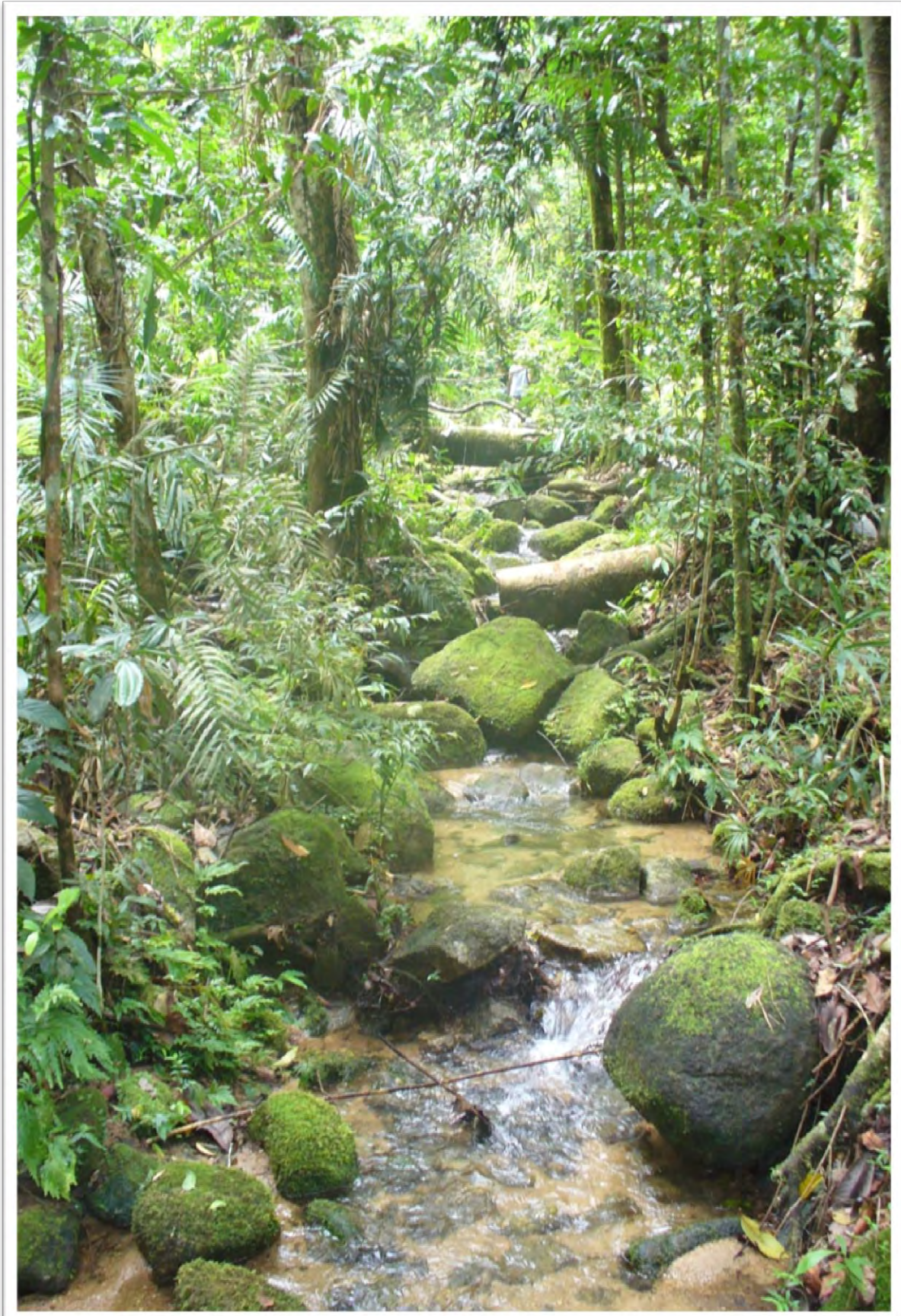
A '-' sign indicates that these people are not particularly concerned by the change (relative to others); a '+' sign indicates that they more concerned than others by the change

Change	Male	Single	Age	Education	QLD born	HH Income	Indigenous	HH size	Government	Agriculture	Mining & Ports	Retail & Tourism
Twice as much rubbish in the rainforest & rivers												
Undeveloped scenery & peacefulness declined											(-)	
Rivers changed from clear to murky	(-)										(-)	
Fewer native plants & animals & twice as many pests & weeds												(+)
Local prices rise by 20% compared to other places in Australia				(-)								(+)
Half as much chance of seeing an iconic animal	(-)								(-)		(-)	
Twice as many tourists												
Half as much time spent with friends & family			(-)							(+)		
Half as many good quality infrastructures				(-)						(+)		
Half as many walking tracks		(-)									(-)	
Half as many cafes, shops, theatres etc.				(-)					(+)			
More public information about Aboriginal cultural values	(-)				(+)						(+)	

Table 16: Statistically significant determinants of responses to our question about likely reaction to hypothetical changes – Tourists

A '-' sign indicates that these people are not particularly concerned by the change (relative to others); a '+' sign indicate that they more concerned than others by the change

Change	Male	Single	Age	Education	QLD	Income	UK	Germany	Rest of Europe	North America	Asia
Twice as much rubbish in the rainforest & rivers								(+)			
Undeveloped scenery & peacefulness declined											(+)
Rivers changed from clear to murky		(+)									(+)
Fewer native plants & animals & twice as many pests & weeds											
Local prices rise by 20% compared to other places in Australia											
Half as much chance of seeing an iconic animal	(-)									(-)	
Twice as many tourists										(+)	
Half as much time spent with friends & family			(+)				(+)	(+)	(+)		(+)
Half as many good quality infrastructures			(+)								
Half as many walking tracks											
Half as many cafes, shops, theatres etc.			(+)						(+)		
More public information about Aboriginal cultural values	(-)	(+)						(+)			



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7 Synthesis and conclusions

The overarching aim of this project was to **improve our understanding of the value which residents and tourists place upon the ecosystem services (ES) provided by the WTWHA**. By considering a broad range of ES and by assessing their importance *relative* to each other and *relative* to other social and economic goods and services, using several different methodological approaches, this study went beyond mere livelihoods and consumptive values, considering the overall contribution of the WTWHA to human well-being. To satisfy the overarching aim, three specific objectives were devised, namely to:

1. Improve our understanding of the relative importance ('value') of various ES provided by the WTWHA to both residents and tourists;
2. Make predictions about the way in which resident and tourist 'values', and thus management, conservation and marketing priorities may alter in the future as both population and tourist numbers change; and
3. Improve methods for assessing 'values' by comparing state-of-the art non-monetary valuation techniques with more 'traditional' valuation techniques.

Addressing *objective 1* first, we found that:

- ❖ Many of the ES provided by the WTWHA (e.g. having healthy native plants and animals, having beautiful undeveloped scenery to look at, being able to go on forest walks, or relax and reflect in a natural setting) are considered, by residents of the catchment, to be more important to their overall quality of life than the jobs and incomes associated with different industries (Section 5.2.1). These ES are not, however, more important than the safety of, and ability to spend time with family and friends;
- ❖ Environmental and recreational values of the WTWHA (particularly undeveloped scenery, and healthy native plants and animals) were also considered, by tourists, to have been more important in their decision to visit the region than other market-related 'values' such as good quality accommodation, quality guided tours and attractions, and/or city entertainment (Section 5.2.1).
- ❖ People are relatively dissatisfied with many of the things they value most (sections 5.2.2 and 5.2.3). The 'gap' between importance and satisfaction is relatively small for tourists, larger for non-Indigenous residents and largest for Indigenous residents – perhaps indicative of the very different reference points used when thinking about 'satisfaction'.
- ❖ Many of the ES provided by the WTWHA are related – perhaps even inextricably linked (section 5.2.4). Most notable is the link between aesthetic values (beauty, peacefulness, ability to relax and reflect), and intrinsic environmental values, such as having healthy native plants and animals, undeveloped regions without rubbish, and beautiful clear streams.
- ❖ Residents and tourists react more negatively to the prospect of environmental degradation (e.g. more pests and weeds, murkier rivers, more rubbish) than to the prospect of a 20% increase in prices. Residents note they would be much less satisfied; tourists note that such changes would mean they would not come to the region at all, or they would stay for a much shorter period of time (section 6.2.2).
- ❖ Almost 20% of Indigenous respondents were unwilling to contribute any amount of money to protect Aboriginal culture or prevent weeds and pests from evading the native flora and fauna, despite these values being in the top five of most important contributors

to their overall quality of life. The (un) willing rate was even higher amongst non-Indigenous residents: between 30% and 50% indicating that they would not be willing to pay anything at all to improve things which they themselves had indicated were vitally important to their overall quality of life. More than a quarter of tourists (31%) were not willing to pay any money towards the maintenance of undeveloped scenery and peacefulness of the area, despite earlier comments about the 'importance' of this in their decision to visit the region (note that the maintenance of undeveloped scenery and peacefulness of the area was ranked the second most important factor on this trip) (section 6.2.1).

As regards *objective 2*, multiple lines of evidence found statistically significant relationships between socio-demographic and economic descriptors of our respondents and their 'values' (expressed in terms of importance or the 'gap' between importance and satisfaction (section 5.2.5), WTP to improve values (section 6.2.1), or stated reaction to a deterioration in those values (section 6.2.3). For example:

- ❖ Gender matters: both male and female residents agree that environmental values are more important to their overall quality of life than other values. However, males seem to attach less 'value' to non-use environmental values and Indigenous cultural values than females. This is true for different 'valuation' approaches, e.g. for 'importance' scores (Table 7, Table 8, Table 9 and Table 10), WTP (Table 12) and Table 13) and stated responses to various hypothetical scenarios (Table 15 and Table 16).
- ❖ Income (and to a lesser extent, education) matters: The higher a resident's income, the less important they felt Indigenous culture and having 'access' to nature were, to their overall quality of life (Table 7). The higher the income of tourists, the less important was sunshine/warmth, the Great Barrier Reef, and being able to see iconic marine and land species (Table 10). Wealthier tourists were also generally less satisfied with a range of different things than the poorer tourists (Table 10). The positive link between income and WTP is not surprising, although it is interesting to note that tourists on high incomes were willing to pay a smaller proportion of their income to protect various environmental and cultural values in the WTWHA than their poorer counterparts.
- ❖ Place of birth / place of origin matters: residents who were born in QLD were likely to feel that family was more important, and city entertainment was less important to their overall quality of life than those born elsewhere (Table 7). The 'values' of tourists originating from QLD were also statistically different from the 'values' of tourists originating from elsewhere in Australia, or from overseas. Environmental and cultural factors were much less important to this group, than to their non-QLD counterparts. In contrast, visitors from Europe felt environmental and cultural values to be more important than other tourists (Table 10).
- ❖ Industry of association matters: Residents who were dependent upon the mining, and ports, or agricultural sectors for their household incomes, generally felt that environmental and cultural values were less important to their overall quality of life (Table 7 and Table 9) (and were willing to pay less to protect them – Table 12) than residents dependent upon other industries. Those associated with mining and ports were also less bothered by the prospect of environmental deterioration than those dependent upon other industries (Table 15).

As such, it is clear that changes in the demographic or economic composition of the residents of, or tourists to, the region will lead to changes in 'values'. An increase in the mining/ports sector, for example, could be associated with a reduction in the community support for protection of intrinsic, aesthetic or Aboriginal cultural values, *relative* to other values. Likewise, a

change in the composition of tourists to the region, with more 'locals' (specifically, visitors from QLD) compared to visitors from elsewhere in Australia, could mean a lesser appreciation of those same values.

As regards *objective 3*:

- ❖ We assessed 'values' using a variety of different methods. We asked people to tell us how important various factors are to their overall quality of life, how satisfied they are with those things, how much they were WTP to help improve those things and how they would react to a deterioration in them. Although specifics vary across methods, the general message, that family is more important than the environment which is more important than the economy is consistent. So too, are the findings that 'values' differ across individual, key determinants being gender, income, industry of association and origin.
- ❖ There is often considerable resistance, by respondents, to questions about WTP. Recent decades has seen a substantive growth in the literature about ways to deal with 'protest votes', and (in the related choice modelling literature) 'non-attendance to attributes'. Our research suggests that a parallel line of enquiry may prove fruitful – that which focuses on importance/satisfaction and contingent behaviour/responses (rather than contingent valuation) – since final results are remarkably similar, and these types of valuation approaches are met with much less resistance by respondents.
- ❖ We also note that our analysis of the relationships between values, suggests that many individual values are related, and may be inextricably linked. We demonstrated two different methods of identifying those linkages, but note that other useful lines of enquiry may be to assess 'values' at a fairly broad level, rather than conducting detailed 'micro-level' studies of individual values. Specifically, instead of attempting to assess the 'value' of long lists of factors or the 'value' of specific things such as a forest track, without context, one could, for example, assess a broad group of non-consumptive environmental values (including aesthetics, and non-use values), a broad group of recreational values, &/or a broad group of productive values.
- ❖ Context and relationships matter; valuation methods that abstract from that, may lead one to believe that final estimates are much more precise than they in fact are. It is having information about the importance (or 'value') of things relative to each other that is likely to be most useful to decision and policy makers. Absolute 'values' (e.g. precise measures of WTP) will, like other prices and exchange rates, fluctuate, perhaps markedly, over time and space. Information about specific 'values' may therefore be somewhat less useful than relative measures of broad trends in related values over time.

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Appendix 1: The Tropical Ecosystems Hub research

Theme 1: Assessing Ecosystem Condition and Trend

Program 1 — Historical and current condition of the Great Barrier Reef (GBR)

- 1.1 Monitoring status and trends of coral reefs of the GBR
- 1.2 Marine wildlife management in the Great Barrier Reef World Heritage Area
- 1.3 Characterising the cumulative impacts of global, regional and local stressors on the present and past biodiversity of the GBR

Program 2 — Natural Resources of the Torres Strait land and sea

- 2.1 Marine turtles and dugongs of the Torres Strait
- 2.2 Mangrove and freshwater habitat status of Torres Strait Islands
- 2.3 Monitoring the health of Torres Strait coral reefs

Program 3 — Condition and trends of North Queensland rainforests

- 3.1 Rainforest biodiversity
- 3.2 Rainforest refugia and hotspots of plant genetic diversity in the Wet Tropics and Cape York Peninsula
- 3.3 Targeted surveys for missing and critically endangered rainforest frogs in ecotonal areas, and assessment of whether populations are recovering from disease
- 3.4 Monitoring of key vertebrate species

Theme 2: Understanding Ecosystem Function and Cumulative Pressures

Program 4 — Water quality of the Great Barrier Reef and Torres Strait

- 4.1 Tracking coastal turbidity over time and demonstrating the effects of river discharge events on regional turbidity
- 4.2 The chronic effects of pesticides and their persistence in tropical waters
- 4.3 Ecological risk assessment for water quality of the GBR
- 4.4 Hazard assessment for water quality threats to Torres Strait marine waters, ecosystems and public health

Program 5 — Cumulative impacts on benthic biodiversity

- 5.1 Understanding GBR diversity: spatial and temporal dynamics and environmental drivers
- 5.2 Combined water quality–climate effects on coral and other reef organisms
- 5.3 Vulnerability of seagrass habitats in the GBR to changing coastal environments

Program 6 — Movements and habitat use by marine apex predators

- 6.1 Maximising the benefits of mobile predators to GBR ecosystems: the importance of movement, habitat and environment
- 6.2 Drivers of juvenile shark biodiversity and abundance in inshore ecosystems of the GBR
- 6.3 Critical seabird foraging locations and trophic relationships for the GBR

Program 7 — Threats to rainforest health

- 7.1 Fire & rainforests
- 7.2 Invasive species risks and responses in the Wet Tropics
- 7.3 Climate change and the impacts of extreme events on Australia's Wet Tropics biodiversity

Theme 3: Managing for Resilient Tropical Systems

Program 8 — Effectiveness of spatial management on the GBR

- 8.1 Monitoring the ecological effects of GBR zoning plan on mid and outer shelf reefs
- 8.2 Assessing the long-term effects of management zoning on inshore reef of the GBR
- 8.3 Significance of no-take marine protected areas to regional recruitment and population

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- persistence on the GBR
 - Program 9 — Decision support systems for GBR managers
 - 9.1 Decision support tools to identify (and map) bleaching resistant areas within the GBRMP
 - 9.2 Design and implementation of management strategy evaluation for the GBR
 - 9.3 Prioritising management actions for GBR islands
 - 9.4 Spatial planning for coastal development in the GBR region
 - Program 10 — Socio-economic value of GBR goods and services
 - 10.1 Social and economic long-term monitoring program
 - 10.2 Socio-economic system and reef resilience
 - Program 11 — Resilient Torres Strait communities
 - 11.1 Building resilient communities for Torres Strait futures
 - 11.2 Improved approaches for the detection and prevention of wildlife diseases in the Torres Strait
 - Program 12 — Managing for resilience in rainforests
 - 12.1 Indigenous peoples and protected areas
 - 12.2 Harnessing natural regeneration for cost-effective rainforest restoration
 - 12.3 Relative social and economic values of residents and tourists in the WTWHA
 - 12.4 Governance, planning and the effective application of emerging ecosystem service markets: climate change adaptation and landscape resilience
 - Program 13 — Australia's Tropical Land and Seas (e-ATLAS)
 - 13.1 e-Atlas (GBR)
 - 13.2 Torres Strait e-atlas — a data platform for resource managers, researchers and the Torres Strait community
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Appendix 2: Natural criteria for World Heritage listing and how the WTWHA satisfies each

Criteria	Description
<i>Criterion (vii):</i> to contain superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance	The Wet Tropics exhibit exceptional natural beauty, with superlative scenic features highlighted by extensive sweeping forest vistas, wild rivers, waterfalls, rugged gorges and coastal scenery. This is particularly apparent between the Daintree River and Cedar Bay, where exceptional coastal scenery combines tropical rainforest and white sandy beaches with fringing offshore coral reefs. The winding channels of the Hinchinbrook Channel contain the most extensive mangroves in the region, providing a rich visual mosaic of rainforest and mangroves, and a terrestrial continuum with the Great Barrier Reef.
<i>Criterion (viii):</i> to be outstanding examples representing major stages of earth's history, including the record of life, significant on-going geological processes in the development of landforms, or significant geomorphic or physiographic features	The Wet Tropics contains one of the most complete and diverse living records of the major stages in the evolution of land plants, from the very first pteridophytes more than 200 million years ago to the evolution of seed-producing plants including the cone-bearing cycads and southern conifers (gymnosperms), followed by the flowering plants (angiosperms). As the Wet Tropics is the largest part of the entire Australasian region where rainforests have persisted continuously since Gondwanan times, its living flora, with the highest concentration of primitive, archaic and relict taxa known, is the closest modern-day counterpart for Gondwanan forests. In addition, all of Australia's unique marsupials and most of its other animals originated in rainforest ecosystems, and the Wet Tropics still contains many of their closest surviving members. This makes it one of the most important living records of the history of marsupials as well as of songbirds.
<i>Criterion (ix):</i> to be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals	<p>The Wet Tropics provides outstanding examples of significant ongoing ecological processes and biological evolution. As a centre of endemism for the region (second only to New Caledonia in the number of endemic genera per unit area), the Wet Tropics provides fundamental insights into evolutionary patterns both in isolation from and in interaction with other rainforests. Its tall, open forests on the drier western margins of the rainforest are also significant as part of an evolutionary continuum of rainforest and sclerophyll forests. Eucalypts, that now dominate the Australian landscape, are considered to have evolved from such rainforest stock and radiated into drier environments from the margins of closed forests.</p> <p>The area supports an exceptionally high level of diversity of both flora and fauna, with over 3,000 vascular plant species in 224 families, of which 576 species and 44 genera are endemic, including two endemic plant families. Vertebrate diversity and endemism are also very high, with 107 mammal species including 11 endemic species and two monotypic endemic genera. In terms of avifauna, there are 368 bird species, of which 11 species are endemic. For reptiles, there are 113 species of which 24 species are endemic, including three monotypic endemic genera. The diversity of amphibians includes 51 species of which 22 are endemic.</p>
<i>Criterion (x):</i> to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation	<p>The Wet Tropics holds a largely intact flora and fauna with hundreds of endemic species restricted to the property, of which many are classified as threatened. The majority of plant species have restricted distributions, and many monotypic plant genera and several species of marsupials, frogs and reptiles have very restricted distributions either as isolated or disjunct populations, reflecting the refugial nature of the rainforests found in several locations. The diversity of the plant communities and animal habitats of the Wet Tropics is recognised as being the most floristically and structurally diverse in Australia and is also outstanding on a global scale. Among many emblematic species occurring in the property is the flightless Australian cassowary, one of the largest birds in the world.</p> <p>In an Australian context, the Wet Tropics covers less than 0.2% of Australia, but contains 30% of the marsupial species, 60% of bat species, 25% of rodent species, 40% of bird species, 30% of frog species, 20% of reptile species, 60% of butterfly species, 65% of fern species, 21% of cycad species, 37% of conifer species, 30% of orchid species and 18% of Australia's vascular plant species. It is therefore of great scientific interest and of fundamental importance to conservation.</p> <p>Although the Wet Tropics is predominantly wet tropical rainforest, it is fringed and in a few places dissected by sclerophyll forests, woodlands, swamps and mangrove forests, adding to its diversity.</p>

Source: <http://whc.unesco.org/en/criteria/>

Appendix 3: List of presentations related to this project

Event and location	Presenter/s
Rainforest Implementation group meeting August 2012, Cairns	Natalie Stoeckl
Rainforest Implementation group meeting January 2013, Cairns	Michelle Esparon
NERP & RRRC conference May 2013, Cairns	Natalie Stoeckl & Michelle Esparon
Rainforest Researchers & Traditional Owners - Knowledge Translation April 2013, Cairns	Natalie Stoeckl
SEWPAC Engagement Day June 2013, Canberra	Natalie Stoeckl
Rainforest Implementation group meeting August 2013, Cairns	Michelle Esparon
Youth Leadership Dialogue August, Townsville	Natalie Stoeckl
Regional Development Australia – North Queensland & Torres Strait August, Cairns	Natalie Stoeckl
NERP On-country Day November, Genazzano Lake Tinaroo Conference Centre	Natalie Stoeckl & Michelle Esparon
Wet Tropics Tour Guides Field School December 2013, Tully	Michelle Esparon
Guest Lecture – JCU January, 2014	Michelle Esparon
Rainforest Implementation group meeting February 2014, Cairns	Michelle Esparon
TEH RIP April, Canberra	Natalie Stoeckl
JCU weekly seminar April 2014, Townsville	Natalie Stoeckl
GBRMPA weekly seminar May 2014, Townsville	Natalie Stoeckl
Stakeholder meetings June 2014, Brisbane	Natalie Stoeckl, Michelle Esparon, Marina Farr & Renae Tobin
State of the Region Forum July 2014, Cairns	Natalie Stoeckl
Rainforest Implementation group meeting August 2014, Cairns	Michelle Esparon
CSIRO & JCU weekly seminar August 2014, Townsville	Natalie Stoeckl
Stakeholder meetings September 2014, Cairns	Natalie Stoeckl, Michelle Esparon, Michelle Thompson & Bruce Prideaux
Conservation planning group retreat September 2014, Townsville	Natalie Stoeckl, Michelle Esparon, Marina Farr, Diane Jarvis & Putu Mustika
JCU Early Career Researcher Conference September 2014, Townsville	Michelle Esparon
TEDx Cairns Institute October 2014, Cairns	Natalie Stoeckl
NERP & RRRC conference November 2014, Cairns	Natalie Stoeckl & Michelle Esparon

Appendix 4: Resident survey



What do YOU like most about the Wet Tropics World Heritage Area?



Address



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Dear ...,

My name is Natalie. I am a researcher at James Cook University, and I am working on a project (funded by the *National Environmental Research Program*) which seeks to learn more about what people think is most (and least) important about the Wet Tropics World Heritage Area (WTWHA).

Managers (in both the private and public sector) often have to make choices about development or conservation in this region. But managers do not always know what people think is important when making those choices. This research project hopes to help fix that. **This is your chance to be heard.** Specifically, we hope to find out:

- ❖ What you do in the WTWHA – visiting waterfalls, swimming, camping ...?
- ❖ What you think is important about the WTWHA – the scenery, the uniqueness of the rainforest, and/or the tourism jobs associated with the region ...?
- ❖ How satisfied you are with your chances to enjoy the things you think are 'important'?
- ❖ How you would feel if things changed – e.g. if prices rose, if more tourists came to the region, if water quality got worse?
- ❖ If you think it is worth 'paying' to protect the WTWHA (or whether you would prefer to spend your money on other things).

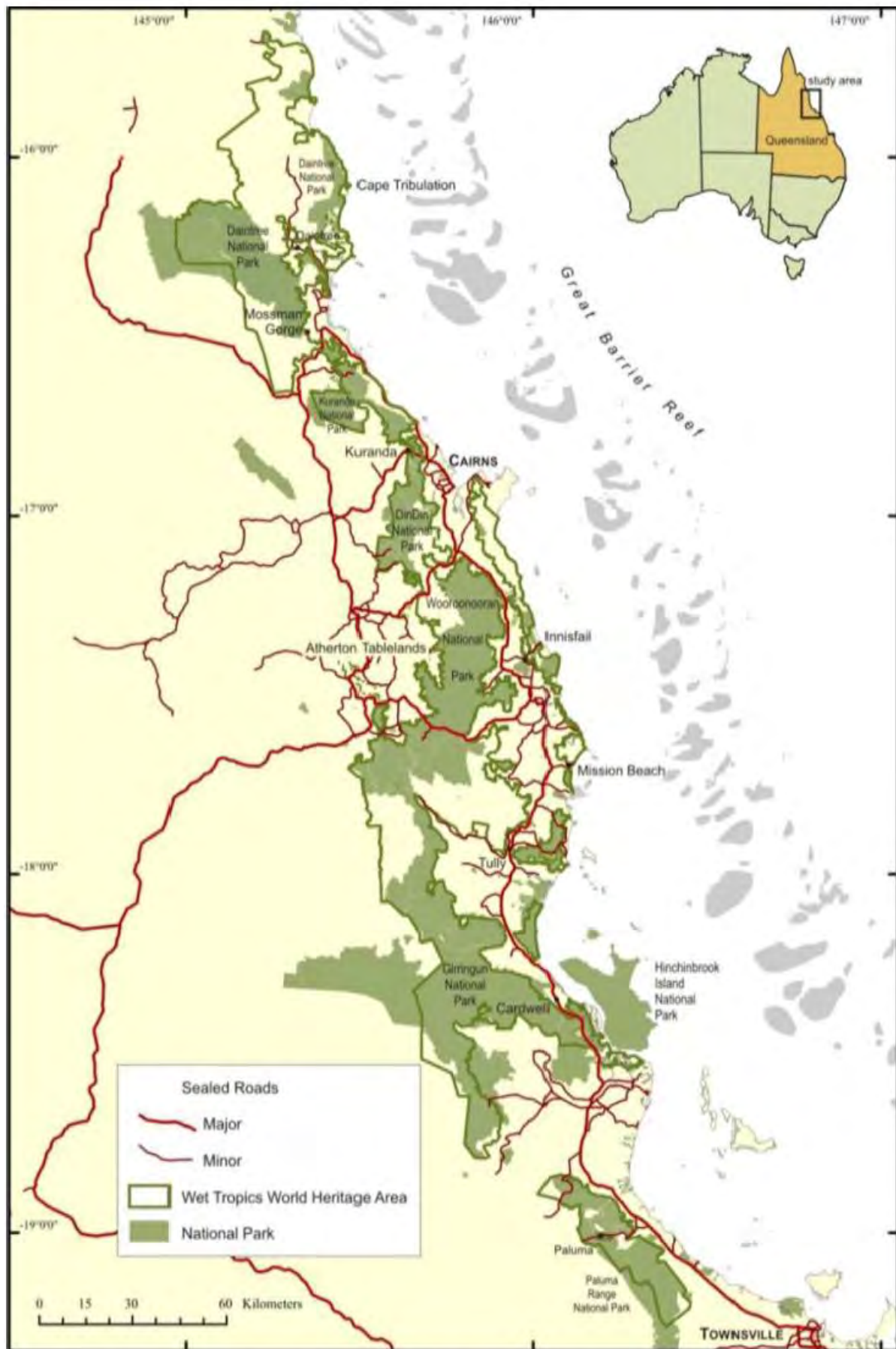
We are asking about 500 people who live within and around the WTWHA the same set of questions (all randomly selected from a large database). When finished, we should have some good information that will help managers make decisions about this area.

We would be very grateful if one person in your house could complete the questionnaire, and then mail it back to us in the enclosed reply-paid envelope. But please remove this letter before posting – it has your name and address on it and we **don't want anyone to be able to link those details to your answers**. It should take no more than 15-20 minutes to complete.

All of the information we collect will be kept **strictly confidential**. Results will only be released in summary form (e.g. saying that 25% of residents think that fishing is important), and answers will be stored separately from names and addresses, so no one can ever find out 'who said what'.

Should you have any questions about the project, or if you are interested in seeing the results please contact me: **Phone: 07 4781 4868 or email: Natalie.Stoeckl@jcu.edu.au**.

I thank you in advance for your help.



The Wet Tropics World Heritage Area (WTWHA) and surrounding areas

WET TROPICS WORLD HERITAGE AREA - Resident Survey A1

13

The Wet Tropics World Heritage Area (WTWHA) extends from near Cooktown in the north to near Townsville in the south and borders the Great Barrier Reef World Heritage Area (GBRWHA). It contains almost 900,000 hectares of tropical rainforest with a distinctive and diverse collection of plants and animals ([see map on the preceding page](#)). The area is famous for its exceptional natural beauty, comprising of spectacular landscapes and landforms such as waterfalls, rugged gorges, and crater lakes. It is also the traditional estate of 20 Tribal Groups and its cultural values have been recently added to the National Heritage Listing. This survey seeks the views of residents living within and around the WTWHA ...

1. Where do you usually live? ☐ Australia, which postcode? _____

2. The table below lists some regions within the WTWHA. Please indicate which area you have been to or would really like to go to.

Regions of the WTWHA		Have been to this area	Have not been, but would really like to go
Cooktown		<input type="checkbox"/>	<input type="checkbox"/>
Bloomfield		<input type="checkbox"/>	<input type="checkbox"/>
Cape Tribulation		<input type="checkbox"/>	<input type="checkbox"/>
Tablelands	North (e.g. Mareeba)	<input type="checkbox"/>	<input type="checkbox"/>
	Central (e.g. Atherton, Yungaburra)	<input type="checkbox"/>	<input type="checkbox"/>
	South (e.g. Ravenshoe, Mt Garnett)	<input type="checkbox"/>	<input type="checkbox"/>
	West (Herberton)	<input type="checkbox"/>	<input type="checkbox"/>
Daintree		<input type="checkbox"/>	<input type="checkbox"/>
Kuranda		<input type="checkbox"/>	<input type="checkbox"/>
Mossman Gorge		<input type="checkbox"/>	<input type="checkbox"/>
Innisfail/Wooroonooran/Palmerston		<input type="checkbox"/>	<input type="checkbox"/>
Mission Beach/Tully/Cardwell		<input type="checkbox"/>	<input type="checkbox"/>
Paluma		<input type="checkbox"/>	<input type="checkbox"/>
If you have been to these areas, which one was your favourite?			
.....			

3. Please tell us how often you do each of the following in the WTWHA. (Tick one box in each row)

	Almost every day	About once a week	About once a month	3-4 times a year	About once a year	Rarely	I have never done this
Spend time visiting key (free) rainforest attractions (e.g. crater lakes, curtain fig tree)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time visiting waterfalls, swimming and/or participating in river-based activities (e.g. white water rafting, canoeing, kayaking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time camping in the WTWHA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time driving along the scenic routes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time enjoying the scenic beauty & peacefulness of the rainforest (sights, sounds & smell)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time with Aboriginal Traditional Owners learning about culture and country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time bush walking/hiking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time mountain biking/horse-riding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time quad biking or four-wheel driving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pay for a tour or to visit an attraction within the WTWHA (e.g. zoos, jungle surfing, skyrail)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time doing other activities not listed here. Please specify below	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

1 | Page

4. The following question comprises two parts. First, please tell us how IMPORTANT are each of the following items to YOUR OVERALL QUALITY OF LIFE? (Tick one box in each row – from very important to very unimportant). Second, tell us how SATISFIED are you with each of the item? (Tick one box in each row – from very satisfied to very unsatisfied).

		IMPORTANCE						SATISFACTION						
		Very important		Neutral		Very unimportant		Very satisfied		Neutral		Very unsatisfied		I do not know
 	Benefiting either directly or indirectly from the jobs & incomes created by:													
	The tourism industry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The mining industry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The agricultural industry	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Other industry/sector (e.g. fishing, retail, education etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Being able to access the rainforest via:													
	Walking tracks &/or dirt roads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Bitumen roads & bridges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rail/Skyrail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
 	Being able to:													
	Learn more about a unique & ancient Australian environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Hear from Aboriginal people about their sense of place (culture & country)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Go on rainforest walks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Visit waterfalls &/or swim in clear, clean rivers/streams/waterholes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	See iconic species in the wild (e.g. cassowary, kangaroos, rattle birds, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Relax and/or reflect in a natural environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Enjoy uncrowded camping & picnic areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Enjoy the scenic beauty & peacefulness of the rainforest (sights, sounds & smell)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 	Having:													
	Healthy native plants & animals (e.g. free from diseases, pests & weeds)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Beautiful undeveloped scenery to look at	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Two world heritage sites side-by-side (i.e. the WTWHA and the GBRWHA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Protecting:													
	Places that have Aboriginal cultural values	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Places that have other cultural values (e.g. European/Asian)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The WTWHA either for its own sake or for future generations (even if you have never been there & never plan to go)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
 	Being able to:													
	Spend time with friends & family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Enjoy city-entertainment (e.g. spending time at cafés, museums, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Have some ‘control’ over what is happening in your life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<									

5. Are any of the items or groups of items in the table so important to you that you would move away from the region if it were not here or if it deteriorated? ☐ No ☐ Yes, please tell us what it is

6. To provide us with some background context, please think about your own life and personal circumstances. How satisfied are you with your life as a whole? (Tick one box)

Very satisfied	Neutral				Very unsatisfied	I do not know
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

What is the reason you feel this way?

7. How would each of the following affect your overall quality of life / satisfaction? (Tick one box in each row)

	I would be much more satisfied					I would be much less satisfied					I do not know
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If local prices rose by 20% compared to other places in Australia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there were twice as much rubbish (e.g. bottles, plastic) in the rainforest & in the rivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there was half as much chance of seeing an iconic animal (e.g. cassowary, kangaroo, rifle birds, musky-rat kangaroo)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there were fewer native plants & animals to look at & twice as many pests & weeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there were half as many walking tracks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there were twice as many tourists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the rivers changed from clear to murky	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the undeveloped scenic beauty & peacefulness of the area declined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If you could spend only half as much time with friends & family (compared to now)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there were half as many cafés, shops, theatres, etc. in your local area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there were half as many good quality roads, hospitals & schools in your local area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there was more public information about Aboriginal cultural values of the area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. The rainforests of the Wet Tropics faces many threats. Some of these are beyond our control (e.g. cyclones), but not all. For example, we could choose to spend more money controlling pests and less on something else. If a fund was set up to help solve the problems listed below, what is the maximum amount (out of your total household income) you would be willing to donate each and every year to that fund? (You could ask for the money to be deducted from your wages/salary/pension, or pay it as a lump sum once a year.)

When answering, please consider your household's current financial situation and also consider how much all your donations add up to if donating to more than one problem. (Tick one box in each row)

	Money willing to donate EACH YEAR											
	\$0	\$2	\$5	\$10	\$25	\$30	\$50	\$75	\$100	\$250	\$500	More than \$500
Protecting native plants and animals from weeds & pests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Improving/maintaining undeveloped scenic beauty & peacefulness of the area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Improving/maintaining quality & clarity of rivers & streams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Protecting the Aboriginal cultural values of the area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----

9. How much do you agree or disagree with each of the following statements? (Tick one box in each row)

	Strongly agree	Neutral			Strongly disagree	I do not know
I am willing to volunteer my time to care for the WTWHA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Only people who live near or visit the WTWHA have a responsibility to care for it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am not prepared to pay money to protect the WTWHA unless	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All WTWHA users pay too	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
People throughout Australia pay too	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
People throughout the world pay too	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am not prepared to take costly steps to protect the WTWHA – those efforts are a waste of time in the face of natural disasters and climate change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Finally, we would like to collect background information that is used to test if different people (e.g. males, those on high incomes, etc.) feel differently about the WTWHA.

10. What gender are you? ☐ Male ☐ Female
11. What is your marital status ☐ Single ☐ Married or in partnership ☐ Other
12. In what year were you born? (Write the year) 19_____
13. Where were you born? ☐ Australia, which town? _____ and state? _____ ☐ Overseas, which country _____
14. How many people, including yourself, normally live in your household? Adults _____ Children (16 and younger) _____
15. Are you or any of the people who normally live with you Rainforest Aboriginal persons or other Aboriginal and/or Torres Strait persons? (Tick as many boxes as apply)
☐ Yes - Rainforest Aboriginal ☐ Yes - Other Aboriginal &/or Torres Strait Islander ☐ No
16. What is the highest level of education that you have completed? (Tick one box)
☐ Primary school ☐ High school (year 12) ☐ University or higher
☐ High school (year 10) ☐ Trade / apprenticeship ☐ Other (please specify) _____
17. Do you make contributions to, or volunteer for any conservation organizations? (Tick all that apply)
☐ Yes, International Conservation Organizations ☐ Yes, National & Local Conservation Organizations
☐ Yes, Rainforest Aboriginal Organizations ☐ No
18. Please indicate which of the industries listed below is the main source (i.e. most important source) of your household's income? (Tick one box)
☐ Retail (e.g. shops) ☐ Agriculture and Forestry ☐ Fishing
☐ Accommodation, cafes and restaurants ☐ Manufacturing ☐ Mining
☐ Government, Health and Education ☐ Tourism industry (other than above) ☐ Ports
☐ None - our household earns most of its money from other sources ☐ I do not know
19. On average, how much pre-tax income does your household earn each year? (Tick one box)
☐ \$1 to \$20 000 ☐ \$60 000 to \$80 000 ☐ \$150 000 to \$200 000
☐ \$20 000 to \$40 000 ☐ \$80 000 to \$100 000 ☐ above \$200 000
☐ \$40 000 to \$60 000 ☐ \$100 000 to \$150 000 ☐ prefer not to specify ☐ I do not know

Thank you for your help 😊

Appendix 5: Tourist survey



What do YOU like most about the Wet Tropics World Heritage Area?



The Wet Tropics World Heritage Area (WTWHA) extends from near Cooktown in the north to near Townsville in the south and borders the Great Barrier Reef World Heritage Area (GBRWHA). It contains almost 900,000 hectares of tropical rainforest with a distinctive and diverse collection of plants and animals. The area is famous for its exceptional natural beauty, comprising of spectacular landscapes and landforms such as waterfalls, rugged gorges, and crater lakes. It is also the traditional estate of 20 Tribal Groups and its cultural values have been recently added to the National Heritage Listing.



Tourism operators, local governments, park managers and others have to make decisions about how to use or manage the region. But they have a problem: it is difficult for them to know what is 'right' without having good information about the area, and about the likes and dislikes of the people who live near it, or who visit it.



A team of researchers from James Cook University are helping to fix that problem by conducting a large study about the likes and dislikes of residents and tourists in the Wet Tropics.



We hope you will agree to be part in this study by answering some questions about:

- ❖ Where you have been and what you did while in this area;
- ❖ What you enjoyed most whilst here; and
- ❖ What made you decide to come here



We would also like you to tell us a little bit about yourself and the people you are travelling with (e.g. what country/town you are from, how many people you are travelling with, etc.), and how much you spent on different things while here.

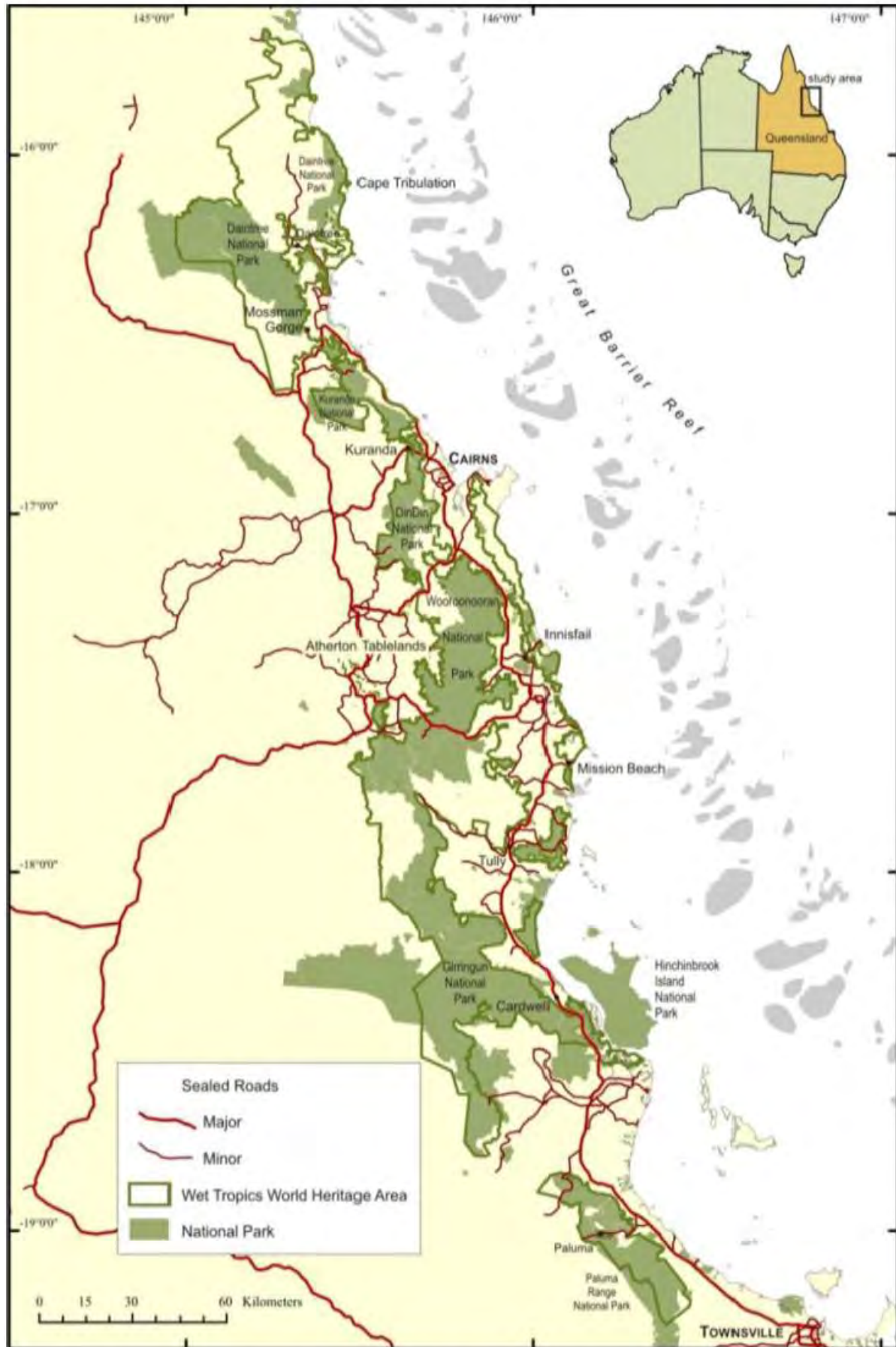
*Note: we DO NOT ask your name or addresses – so all information is **anonymous**.*



We plan to collect this information from at least 500 visitors, and will also ask similar questions from about 500 residents. We will provide a summary of that information to tourism operators, government officials, park managers and others. This will help them look after the area, its residents and its visitors, in the best possible way.

For more information, or if you are interested in seeing the results please contact Natalie Stoeckl on 07 4781 4868 or email: Natalie.Stoeckl@jcu.edu.au.

Should you have any concerns about the ethical conduct of this survey, please contact: Helen Griffiths, Ethics Officer, Research Office, James Cook University, Townsville, QLD 4811, Tel: 07 4781 6575; Email: Helen.griffiths@jcu.edu.au
Photos courtesy: Wet Tropics Management Authority, Mike Trener, Skyrail Rainforest Cableway, Tourism Queensland, Environment Protection Authority



The Wet Tropics World Heritage Area (WTWHA) and surrounding areas

LOCATION:

Date:

WTWHA TOURISM - AB1









1. Where do you usually live?
☐ Australia, which postcode? _____ ☐ Overseas, which country? _____
2. Have you ever visited the WTWHA?
☐ No (go to question 6, page 2) ☐ Yes
3. How long did you spend in the WTWHA on your most recent trip?
☐ Half a day or less ☐ About a day ☐ 1 night
☐ 2-3 nights ☐ 4 nights or more ☐ Do not remember
4. The table below lists some regions within the WTWHA. Please indicate which ones you have visited or intend to visit during your trip to the region. If you have visited these regions, please indicate if it was a day trip only, and if you spent some nights there, how many?

Regions of the WTWHA	Have visited	Intend to visit	How long was your visit or how long do you intend to visit	
			Day visit only	At least some nights. If so, how many?
Cooktown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bloomfield	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Cape Tribulation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Tablelands	North (e.g. Mareeba)	<input type="checkbox"/>	<input type="checkbox"/>	
	Central (e.g. Atherton, Yungaburra)	<input type="checkbox"/>	<input type="checkbox"/>	
	South (e.g. Ravenshoe, Mt Garnett)	<input type="checkbox"/>	<input type="checkbox"/>	
	West (Herberton)	<input type="checkbox"/>	<input type="checkbox"/>	
Daintree	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Kuranda	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mossman Gorge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Innisfail/Wooroonooran/Palmerston	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mission Beach/Tully/Cardwell	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Paluma	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

5. In total, about how often did you do each of the following ON THIS TRIP? (Tick one in each row).
 If you have not finished your trip, please tell us how often you THINK you will end up doing them.

	Never	Once	Twice	3 times	4 times	5 times	More than 5 times
Spend time visiting key (free) rainforest attractions (e.g. crater lakes, curtain fig tree)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time visiting waterfalls, swimming and/or participating in river-based activities (e.g. white water rafting, canoeing, kayaking)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time camping in the WTWHA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time driving along the scenic routes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time enjoying the scenic beauty & peacefulness of the rainforest (sights, sounds & smell)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time with Aboriginal Traditional Owners learning about culture and country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time bush walking/hiking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time mountain biking/horse-riding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time quad biking or four-wheel driving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pay for a tour or to visit an attraction within the WTWHA (e.g. zoos, jungle surfing, skyrail)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Spend time doing other activities not listed here. Please specify below	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

6. The following question comprises two parts. First, please tell us how IMPORTANT were each of the following factors when you made your decision to come to this part of Australia **ON THIS TRIP?** (Tick one box in each row – from very important to very unimportant). Second, tell us how SATISFIED have you been with each item below **ON THIS TRIP?** (Tick one box in each row – from very satisfied to very unsatisfied).

		IMPORTANCE			SATISFACTION			
		Very important	Neutral	Very unimportant	Very satisfied	Neutral	Very unsatisfied	I do not know
 	Finding a place where the price matched my budget	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Visiting a place which is close to where I live	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Having good quality accommodations, shops & restaurants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Having quality guided tours &/or attraction venues	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Being able to access the rainforest via:							
	Walking tracks &/or dirt roads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Bitumen roads & bridges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Rail/Skyrail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 	Being able to:							
	Learn more about a unique & ancient Australian environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Hear from Aboriginal people about their sense of place (culture & country)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Go on rainforest walks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Visit waterfalls &/or swim in clear, clean rivers/streams/waterholes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	See iconic species in the wild (e.g. cassowary, kangaroos, rattle birds, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Relax and/or reflect in a natural environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Enjoy uncrowded camping & picnic areas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Enjoy the scenic beauty & peacefulness of the rainforest (sights, sounds & smell)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Go to the Great Barrier Reef World Heritage Area (GBRWHA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	See iconic marine species (e.g. whales, dugongs, turtles)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Enjoy sunshine & warmth	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 	Having:							
	Healthy native plants & animals (e.g. free from diseases, pests & weeds)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Beautiful undeveloped scenery to look at	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Two world heritage sites side-by-side (i.e. the WTHA and the GBRWHA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Protecting:							
	Places that have Aboriginal cultural values	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Places that have other cultural values (e.g. European/Asian)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	The WTHA either for its own sake or for future generations (even if you have never been there or never plan to go)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
 	Being able to:							
	Spend time with friends & family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Enjoy city-entertainment (e.g. spending time at cafés, museums, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Attend to business, go to meeting/conference	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Join in local activities (e.g. attend cultural/environmental festivals)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Knowing that:							
	You & travelling companions are healthy & safe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Good quality roads, hospitals, etc. are there if need be	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

7. To provide us with some background context, please think about the time you have spent in/near the WTWHA ON THIS TRIP. How satisfied are you with your experience as a whole? (Tick one box)

Very satisfied	Neutral			Very unsatisfied	I do not know

What is the reason you feel this way?

8. So far, how well has this trip met your expectations? (Tick one box)

Well above my expectations	Neutral			Well below my expectations	I do not know

9. How likely is it that you will return to visit the region in the future? (Tick one box)

Will definitely return	Neutral			Will definitely NOT return	I do not know

If you returned, what is something you would like to do that you missed out this time?

10. How would the following hypothetical change have affected your decisions to visit this part of Australia (i.e. near the WTWHA)?

	POSITIVE IMPACT I may have stayed longer	ALMOST NO IMPACT This would not have affected my decision at all	SOME IMPACT I would have still visited but reduced the length of my stay by about			HUGE NEGATIVE IMPACT I would not have come at all	I do not know
			25%	50%	75%		
If local prices rose by 20% compared to other places in Australia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there were twice as much rubbish (e.g. bottles, plastic) in the rainforest & in the rivers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there was half as much chance of seeing an iconic animal (e.g. cassowary, kangaroo, rifle birds)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there were fewer native plants & animals to look at & twice as many pests & weeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there were half as many walking tracks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there were twice as many tourists	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the rivers changed from clear to murky	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the undeveloped scenic beauty & peacefulness of the area declined	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If you could spend only half as much time with friends & family (compared to now)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there were half as many cafés, shops, theatres, etc. in this area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there were half as many good quality roads & hospitals in this area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If there was more public information about Aboriginal cultural values of the area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

We would like to learn more about the money that you spent in and around the WTWHA while on this trip.

11. On average, how much have you and your travel party (e.g. family) spent PER DAY (in and around the WTWHA) on each of the following items while ON THIS TRIP? (Tick one box for each row).

If you are not at the end of your trip, please just tell us approximately how much you THINK you will spend on each item, each day you are here.

SPENDING <u>PER DAY</u> (AU\$) while in/near the WTWHA region	\$0	\$1-20	\$21-50	\$51-100	\$101-151	\$151-200	\$201-300	More than \$300
Food and drinks bought at the grocery and convenience stores	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Food and drinks bought at cafés, restaurants, bars, etc. (including takeaways)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Accommodation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----

12. What is the approximate TOTAL AMOUNT that you and your travel party (e.g. family) have spent (in and around the WTWHA) on these items? (Tick one box in each row).

If you are not at the end of your trip, please just tell us approximately how much you THINK you will spend on each item IN TOTAL while here.

SPENDING PER DAY (AU\$) while in/near the WTWHA region	\$0	\$1-20	\$21-50	\$51-100	\$101-200	\$201-400	\$401-600	More than \$600
Hire cars	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Fuel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Rainforest tours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Botanical gardens	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Boat/reef/island tours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Entry into other local attractions, tours not covered above	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Souvenirs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Other (please specify)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----

13. How many people does this expenditure cover? Adults Children (16 and younger)

14. For YOUR ENTIRE TRIP AWAY FROM HOME, what was (or will be) your TOTAL EXPENDITURE for all people you told us about in question 13? Include airfares, train travel or other costs getting to this region, accommodation, tours and other expenses.

Total expenditure AU\$

If you do not know how much using Australian dollars, please tell us how much in your own currency.

Amount



Currency

15. The rainforests of the Wet Tropics faces many threats. Some of these are beyond our control (e.g. cyclones), but not all. For example, we could choose to spend more money controlling pests and less on something else. If a fund was set up to help solve the problems listed below, what is the maximum amount you would be willing to donate each time you visit the WTWHA? (Donations would be collected from each visitor to the region – e.g. like an accommodation charge).

When answering, please consider your current financial situation and also consider how much all your donations add up to if donating to more than one problem. (Tick one box in each row)

	Money donated PER VISIT to the region											
	\$0	\$2	\$5	\$10	\$20	\$30	\$50	\$75	\$100	\$250	\$500	More than \$500
Protecting native plants and animals from weeds & pests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Improving/maintaining undeveloped scenic beauty & peacefulness of the area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Improving/maintaining quality & clarity of rivers & streams	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----
Protecting the Aboriginal cultural values of the area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> How much? \$-----

16. How much do you agree or disagree with each of the following statements? (Tick one box in each row)

	Strongly agree	Neutral			Strongly disagree	I do not know
						
I am willing to volunteer my time to care for the WTWHA	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Only people who live near or visit the WTWHA have a responsibility to care for it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am not prepared to pay money to protect the WTWHA unless	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All WTWHA users pay too	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
People throughout Australia pay too	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
People throughout the world pay too	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am not prepared to take costly steps to protect the WTWHA – those efforts are a waste of time in the face of natural disasters and climate change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Finally, we would like to collect background information that is used to test if different people (e.g. males, those on high incomes, etc.) feel differently about the WTWHA.

17. How did you travel from your home to this survey location? (Tick all that apply)

- ☐ Bus ☐ Boat ☐ Rail ☐ Air
☐ Privately owned car ☐ Rented car ☐ Other (please specify) _____

18. Which of these best describes your travel party (i.e. the group you are travelling with)? (Tick one box)

- ☐ Single ☐ Couple ☐ Family with children ☐ Relatives ☐ Friends ☐ Club ☐ Tour group
☐ Other (please specify) _____

19. What gender are you? ☐ Male ☐ Female

20. What is your marital status ☐ Single ☐ Married or in partnership ☐ Other

21. In what year were you born? (Write the year) 19_____

22. Where were you born?

- ☐ Australia, which town? _____ and state? _____ ☐ Overseas, which country _____

23. How many people, including yourself, normally live in your household?

Adults _____ Children (16 and younger) _____

24. Are you or any of the people who normally live with you Rainforest Aboriginal persons or other Aboriginal/Torres Strait persons? (Tick as many boxes as apply)

☐ Yes - Rainforest Aboriginal ☐ Yes - Other Aboriginal &/or Torres Strait Islander ☐ No

25. What is the highest level of education that you have completed? (tick one box)

☐ Primary school ☐ High school (year 12) ☐ University or higher
☐ High school (year 10) ☐ Trade / apprenticeship ☐ Other (please specify) _____

26. Do you make contributions to, or volunteer for any conservation organizations? (Tick all that apply)

☐ Yes, International Conservation Organizations ☐ Yes, National & Local Conservation Organizations
☐ Yes, Rainforest Aboriginal Organizations ☐ No

27. Please indicate which of the industries listed below is the main source (i.e. most important source) of your household's income? (Tick one box)

☐ Retail (e.g. shops) ☐ Agriculture and Forestry ☐ Fishing
☐ Accommodation, cafes and restaurants ☐ Manufacturing ☐ Mining
☐ Government, Health and Education ☐ Tourism industry (other than above) ☐ Ports
☐ None - our household earns most of its money from other sources ☐ I do not know

28. On average, how much pre-tax income does your household earn each year? (Tick one box)

☐ \$1 to \$20 000 ☐ \$60 000 to \$80 000 ☐ \$150 000 to \$200 000
☐ \$20 000 to \$40 000 ☐ \$80 000 to \$100 000 ☐ above \$200 000
☐ \$40 000 to \$60 000 ☐ \$100 000 to \$150 000 ☐ prefer not to specify ☐ I do not know

Thank you for your help ☺

Appendix 6: Results from the OLS regression for all residents – The importance of ...

	Having healthy native plants and animals			Visiting waterfalls and/or swim in clear, clean rivers, streams and waterholes		
	Coefficient from OLS regression	Mean of variable	Coefficient multiplied by mean of variable	Coefficient from OLS regression	Mean of variable	Coefficient multiplied by mean of variable
Male	-0.10	0.40	-0.04	-0.19**	0.40	-0.07
Single	-0.14*	0.25	-0.04	-0.25*	0.25	-0.06
Born QLD	-0.02	0.63	-0.01	0.17*	0.63	0.10
Education	0.00	3.37	-0.01	-0.01	3.37	-0.04
Income	-0.03	10.73	-0.30	-0.04	10.73	-0.46
Age	0.00	50.65	0.05	-0.01**	50.65	-0.43
Household size	0.00	2.79	-0.01	0.01	2.79	0.03
Retail & Tourism	0.10	0.12	0.01	0.29**	0.12	0.03
Government	-0.12*	0.32	-0.04	0.01	0.32	0.00
Agriculture	-0.31***	0.12	-0.04	-0.23*	0.12	-0.03
Mining & Ports	-0.47***	0.07	-0.03	-0.11	0.07	-0.01
Indigenous	0.15*	0.32	0.05	-0.03	0.32	-0.01
Constant	2.13	1.00	2.13	2.45	1.00	2.45
Overall predicted value			1.73			1.50
	Having beautiful undeveloped scenery to look at			Protecting places that have Aboriginal cultural values		
Male	-0.24***	0.40	-0.10	-0.28**	0.40	-0.11
Single	-0.22*	0.25	-0.06	-0.03	0.25	-0.01
Born QLD	-0.04	0.63	-0.03	-0.11	0.63	-0.07
Education	-0.04	3.37	-0.13	-0.04	3.37	-0.12
Income	0.03	10.73	0.35	0.04	10.73	0.39
Age	0.00	50.65	0.03	0.00	50.65	0.04
Household size	0.00	2.79	0.01	0.01	2.79	0.02
Retail & Tourism	0.18**	0.12	0.02	0.01	0.12	0.00
Government	-0.10	0.32	-0.03	-0.12	0.32	-0.04
Agriculture	-0.45***	0.12	-0.05	-0.62***	0.12	-0.07
Mining & Ports	-0.53***	0.07	-0.04	-0.52**	0.07	-0.04
Indigenous	0.07	0.32	0.02	0.96***	0.32	0.31
Constant	1.59	1.00	1.59	0.91	1.00	0.91
Overall predicted value			1.59			1.21

Appendix 7: Results from the OLS regression for tourists – WTP for...

	Protecting native plants and animals			Improving/maintaining quality & clarity of rivers & streams		
	Coefficient from OLS regression	Mean of variable	Coefficient multiplied by mean of variable	Coefficient from OLS regression	Mean of variable	Coefficient multiplied by mean of variable
Male	0.14	0.40	0.05	0.09	0.40	0.04
Single	-0.04	0.40	-0.01	-0.10	0.40	-0.04
Education	0.07	4.28	0.31	0.10	4.28	0.44
Income midpoint	0.00	96483.05	0.16	0.00	96483.05	0.04
Age	0.00	34.18	0.13	0.00	34.18	-0.02
Germany	-0.62	0.09	-0.05	-0.94	0.09	-0.08
Uk	-0.26	0.18	-0.05	-0.28	0.18	-0.05
Rest of Europe	-0.38	0.17	-0.06	-0.43	0.17	-0.07
North America	-0.01	0.06	0.00	-0.12	0.06	-0.01
QLD visitor	-0.69	0.09	-0.06	-0.67	0.09	-0.06
Asia	0.32	0.07	0.02	0.27	0.07	0.02
Constant	2.05	1.00	2.05	2.30	1.00	2.30
Overall predicted value			2.50			2.50
	Maintaining undeveloped scenery & preacefulness of the Area			Protecting places that have Aboriginal cultural values		
Male	0.14	0.40	0.06	-0.12	0.40	-0.05
Single	-0.10	0.40	-0.04	-0.18	0.40	-0.07
Education	0.08	4.28	0.33	0.08	4.28	0.34
Income midpoint	0.00	96483.05	0.07	0.00	96483.05	-0.14
Age	0.00	34.18	-0.04	0.00	34.18	0.00
Germany	-0.68	0.09	-0.06	-0.88	0.09	-0.07
Uk	-0.21	0.18	-0.04	-0.22	0.18	-0.04
Rest of Europe	-0.40	0.17	-0.07	-0.14	0.17	-0.02
North America	-0.01	0.06	0.00	0.13	0.06	0.01
QLD visitor	-0.63	0.09	-0.06	-0.59	0.09	-0.05
Asia	0.24	0.07	0.02	0.41	0.07	0.03
Constant	2.38	1.00	2.38	2.54	1.00	2.54
Overall predicted value			2.55			2.48