Indigenous Knowledge for Conservation of Natural and Cultural Resources: A Case Study in the Wet Tropics World Heritage Area of Far North Queensland

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My thanks goes to Cornell Professor Mildred E. Warner for assisting with my qualitative research sampling methodology and providing relevant literature. Thank you to the Dextra and Morley Committees at Cornell University for funding my return trip to Australia to validate and expand upon initial research.

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I am personally indebted to my family, who cultivates my interests in natural resources and cultural policy and continually offer relentless support in all of my endeavors.
Abstract

In the Wet Tropics World Heritage Area (hereafter WTWHA) of Queensland, Australia inclusion of indigenous knowledge into cooperative land management is at its first stages of development. Current policies have sought to recognize indigenous knowledge and participation in planning, though research and policy has failed to produce significant evidence to nominate the WTWHA for cultural values. Using 27 interviews combined with literature analysis this research investigates the barriers and benefits resulting from the 1988 World Heritage Listing solely for ecological values. Since Listing, numerous publications have documented the cultural continuance of traditional indigenous owners through cultural maps, written histories and anthropological evidence. This paper presents preliminary findings from qualitative research informed by government agencies, scientists, traditional owners and land consultants of the WTWHA. Interviews suggest that inclusive land management will enhance the protection of the natural and cultural resources that have defined this area for millennia. World Heritage listing is a barrier to the incorporation of Aboriginal customary law\(^1\) into statutory law\(^2\) and common law.\(^3\)

In protected area land management, WHL for natural criteria has failed to: appreciably include traditional owners as co-managers of the land, develop lasting partnerships and recognize the universal value of endemic cultures to the Wet Tropics.

Keywords: co-management, indigenous knowledge, land management, World Heritage Listing

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\(^1\) Aboriginal customary law: Also called traditional law, tribe-specific non-written laws that govern the lives of traditional owners, caring for country, traditional sacred sites and ceremony (Corrin, 2011; Law Reform Commission, 2000; Reid, Fig, Magome, & Leader-Williams, 2004).

\(^2\) Australian statutory law: Written legislation passed by the Australian Parliament, derived from English law (McDonald, 2005).
Aboriginal Australians have lived on the continent for over 50,000 years and the Aboriginal Map of Australia demarcates over 500 tribal groups across the country (Department of Sustainability, Environment, Water, Population and Communities [DSEWPC], 2008; Mayell, 2003; Appendix A). With the establishment of British rule through common law\(^3\) initiated by Captain James Cook, this map was largely ignored until the 1992 Mabo Decision\(^4\). The policy of *terra nullius*\(^5\) was not a standard feature of British colonial land policy. However, in Australia settlers failed to acknowledge Aboriginal occupation on lands, thus leaving Aborigines without title and rights to their traditional lands (Banner, 2005; Reynolds, 1987). Today, the WTWHA is primarily under public ownership and management; only 2% of the land is privately held (Wet Tropics Management Authority [WTMA], 2010). Aboriginal history in Australia since European settlement has transcended from a period of subjugation, discrimination, displacement, and assimilation to one of reconciliation, self-empowerment, and in some cases self-management (QLD Gov., 2010; Short, 1988). The latter phases of Aboriginal history have provided for the re-conceptualization of power within governing institutions, specifically in terms of land rights allocation and management of traditionally indigenous lands.

Rules that govern how indigenous people can regain ownership and management of traditional lands are managed by each Australian state or territory (Bauman & Smyth, 2007). In certain territories, where World Heritage Listing for cultural values exist, there exists large tracts of land successfully reclaimed by the indigenous population, and the map of their traditional lands continues to be redrawn. In Queensland, several laws exist that allow indigenous people to

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\(^3\)Common law: Case law developed by judges, concerning property and contracts that follow previously decided cases, or precedents (Kellogg, 2003).

\(^4\)Mabo decision: The decision by the High Court of Australia in 1992 that decided that *terra nullius* was not justified in Australia, thereby establishing recognition of pre-existing indigenous rights and occupation to land (*Mabo v. Queensland*, No. 2, 1992).

\(^5\)Terra nullius: A Latin expression meaning “land belonging to no one.”
regain lands that were named 'public' or 'private' under British control. These laws foster the partnerships, all of which will be coined ‘co-management.’ In this paper, the term co-management describes any form of knowledge or power exchange between government entities and traditional owners that seeks to benefit both cultural and ecological systems to some degree (Mulrennan & Scott, 2005; Nursey-Bray & Rist, 2009; WTMA, 2005). Australia currently addresses co-management agreements through the use of Indigenous Land Use Agreements (ILUAs), Indigenous Protected Areas (IPAs), joint management, multi-lateral partnerships, and what is also referred to as ‘co-management agreements’.

In the Wet Tropics Natural Resources Management (WTNRM) Region of North Queensland, land is under state, private and national ownership, all of which seek to compose a sustainable land management framework facilitated by World Heritage listing. The WTWHA, approximately 8,940 km², ranges from the area north of Townsville south to Cooktown and west to Mount Garnet, North Queensland (DSEWPC, 2008; Larsen & Pannell, 2006; Appendix B). The 1988 World Heritage Listing enabled reclamation of indigenous lands, though the process is lengthy and arduous, requiring in some cases multi-level ownership schemes, including co-management as a broad-based solution between state and indigenous land claims.

The region’s cultural history begins with the first early humans to the area, the ‘Rainforest People,’ which includes 18 tribes that currently span this area (DSEWPC, 2008; Mayell, 2003). In 2006, indigenous people and Aboriginal and Torres Strait Islander people accounted for about 2.3% of the total population of Australia, numbering about 455,028 people according to National Census data (Australian Bureau of Statistics, 2006). Traditional land owner groups of the WTWHA include: Bandjin, Djabugay, Djiru, Girramay, Gugu Badhun, Gulgnay, Gunggandji, Jirrbal, Koko Muluridji, Kuku Yalanji, Ma:Mu, Ngadjon-Jii, Nywaigi,
Warrgamay, Warungnu, Wulgurukaba, Yidinji, and Yirrganydji; very little land has been returned to these owners (WTMA, 2005).

Indigenous knowledge is not only a form of science taught primarily through oral communication and narrative, but also a plethora of unique, local languages defined by one history and context (Agrawal, 1995; Wohling, 2009). This paper seeks to define the factors that influence relationships among the following themes: World Heritage Listing, indigenous knowledge and participation, and land management in the WTWHA (Figure 1). The policy framework of this region is greatly influenced by World Heritage Listing, thus the architecture of the governing bodies will further define the barriers and benefits that interplay with the three themes mentioned.

**Method**

For the interview process standards were guided by the Australian *National Statement on Ethical Conduct in Human Research* and the widely accepted basis for research ethics, *The Belmont Report* (U.S., 1978; NHMRC, 2007).

Methodology for this research included qualitative, open-ended semi-structured interview questions using field notes. This prevented standardized answers and provided personal impact and knowledge of Wet Tropics context-specific information. During the weeks of April 9-22, 2010, 15 interviews were held in the Atherton Tablelands while I was undertaking a study abroad experience with the School for Field Studies (SFS) in Yungaburra, QLD. The profile of interviewees included several levels of indigenous-non-indigenous partnership, such as educational institutions, government conservation, management, and planning agencies at the federal, regional, state, and local levels, private and non-government planning, consulting, and advisory boards, indigenous traditional owners and scientists. The duration of interviews ranged
from 30 minutes to 2 hours. Many of the interviewees acknowledged the barrier between indigenous and government relations in the WTWHA: indigenous cultural values were not represented in the original WTWH listing and continue to be underrepresented in land-based decision-making.

To validate findings and undertake further research, a second trip was necessary. This was held from January 11-21, 2011, aided by the Dextra and Morley Student Research Grants. Interview Questions (Appendix C1), were slightly modified for clarification and to fill gaps identified from interviews conducted in 2010 (Appendix C2). The Results section combines findings from both interview questionnaires since responses were consistent, except in question C2.14. C2.14 was the only new question added to seek information regarding the failure of National Heritage Listing for cultural values that occurred between C1 and C2.

C2 Interviews were conducted in Cairns to further broaden the demographic base of interviewees as most government offices are located in the city, and return trips to the Tablelands yielded results from primarily traditional owners and land consultants. Cyclone and flood occurrences during January caused many cancellations and limited the potential for many additional interviews. Nonetheless, 12 interviews were undertaken with previous and new participants. The duration of interviews in 2011, ranged from 1-4 hours. Interview time lengthened to allow for greater depth of information.

During both 2010 and 2011, interviews involved in person, telephone, and e-mail contact. Interview questions are compared to relevant literature as part of a comprehensive analysis to discuss findings succeeding each question. The total sample size was 27 interviewees. The small size relates to the time constraints of each interview period as well as the limited amount of people with the knowledge necessary to answer questions. Interviews were conducted in
confidence. Sensitive information has not been included in this paper, so as to protect the anonymity of interviewees.

The ‘snowball sampling methodology’ was used to obtain research subjects from social network chains, who would normally be inaccessible, and to demonstrate extensive local knowledge and long term involvement in local land management (Mack, Woodsong, MacQueen, Guest, & Namey, 2005). Interviewees consistently referenced those who were already invited into the interviews, thus contributing to a very small cluster of highly regarded, knowledgeable individuals in the WTWHA. Many interviewees have held or currently hold important positions with indigenous regional councils and government bodies providing the experience necessary to answer specific questions (Appendix C1, C2). While this methodology creates sampling bias, this study did not seek random sampling means; information was obtained from representatives of key institutions or groups creating a diverse, qualified sampling group (Miller & Salkind, 2002).

Participants in the interviews are members (past and present) of the following organizations and groups:

- Queensland Government Department of Environment and Resource Management (DERM)
- Traditional Owners of the Wet Tropics and Queensland region (including seniors, elders, and descendents)
- Wet Tropics Management Authority (WTMA)
- Terrain Natural Resource Management (NRM)
- Graduate students of James Cook University
- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- National Native Title Tribunal
- Members of the Aboriginal Far North Queensland (FNQ) Land Council
- Trees for the Evelyn and Atherton Tablelands (TREAT)
- Private land consultants
- Former Rainforest Cooperative Research Center for Tropical Rainforest Ecology and Management (CRC)
- Aboriginal Land Management Board
- Contributors to publications of indigenous knowledge and co-management agreements
To understand environmental policy at the local level, questions examined the relationship between traditional owners’ interests and aspirations, natural and cultural resource management issues and priorities, role in NRM, and socio-economic and environmental concerns. Interview questions were compared to relevant literature as part of a comprehensive analysis to discuss findings succeeding each question.

The aim of this study is to analyze the relationships between WTWHL, land and resource management, indigenous knowledge and participation, and policy in the WTWHA of Far North Queensland (see Figure 1).

**Figure 1**: Thematic components that modeled the framework of interview questions, literature review, and overall research focus.

The qualitative in-depth questionnaire was used to obtain information related to the following general themes (refer to Appendix C1, C2):
• What is the definition of co-management, direct and indirect benefits, barriers, and beneficiaries of agreements (C1.1, C1.9, C1.11)?
• What is the relationship between indigenous knowledge, co-management, ownership, and native title to the scale of indigenous participation in management of traditional lands (C1.1)?
• How does indigenous knowledge contribute to WH values, including cultural significance (C1.1, C1.11)?
• What are the benefits and barriers of WH listing for indigenous participation in cooperative land management agreements (C1.2, C1.7)?
• What is the current level and potential for inclusion of indigenous knowledge in land use planning and management, at the local, state, regional, and national levels (C1.3, C1.4, C1.8, C1.13)?
• Who is involved in land management and how (C1.5, C1.6)?
• What are current land management types that incorporate indigenous knowledge and to what degree does each type promote indigenous values (C1.9, C1.10, C1.11)?
• What is the environmental and cultural conservation potential for traditional owners in the management of public and private lands (C1.11, C1.12)?
• Why was the National Heritage Listing for cultural values of the WTWHA denied (C2.13)?

Respondents were asked to limit their responses to the geographic region of the WTWHA, although, relevant information for Australia as an entire system or individual bioregions was also recorded if it pertained to the research focus.

Results

Interview Questions and Findings

The results shown represent opinions and attitudes of interview subjects based on their experience with local land management policies and indigenous peoples. Due to the qualitative nature of interviews, brackets are used to aid the reader in understanding the phrase or sentence used by the interviewee and implied terms. Findings elaborate on sample responses, emphasizing patterns and themes among respondents and summarizing several lengthy responses that provide

6 APA Format was slightly amended in the Results section of qualitative analysis.
7 Formatting for Methodology and Results was guided by the 'The Role of the Wet Tropics World Heritage Area in the Life of the Community'. See Bentrupperbaumer and Reser, A Survey of the North Queensland Community (2006).
interesting perspectives. ‘Co-management’ is defined under a wide spectrum of responses, some very positive and some negative. These responses are Australia-specific, thus indicative of current interviewee perceptions of the possibilities of inclusion of cooperative land management within the Australian government system.

C1.1 Please define co-management, and contextualize your response to include the Wet Tropics World Heritage Area region, Queensland area, or greater Australian region as co-management agreements are held at the local, state, regional, and federal levels.

Sample of responses:

“Even playing field.”
“Power sharing- if you take the empowerment philosophy.”
“Equal say, equal power.”
“Consultation only.”
“Co-governance involves the Australian nation state together with indigenous traditional owners, using two systems of law: indigenous and society.”
"Joint management usually refers to power sharing whilst co-management infers an advisory role – albeit with different levels of engagement.”
“Equal say in definition and management. Active involvement.”
“Some form of power sharing.”
“Sharing of resources and power.”
“In Australia, co-management has been unequal, with government controlling more resources and fiscal wealth.”
“Cooperative arrangement: manage by consensus.”
“Traditional owners want power sharing with central government, but advising is usually what traditional owners get.”
“Having an appropriate tenure and authority are essential to allowing traditional owners to manage the land in the same way they have done for thousands of years.”

The definition of co-management varied quite considerably among respondents, even among individuals within the same occupation or government affiliation. Some respondents referred to the definition as somewhat arbitrary since co-management is followed as a written policy and importance of power sharing can vary over the same region of land, depending on localized or state governance. While co-management may be associated with a diversity of
definitions, respondents were likely to define co-management using another form of management such as joint management, full management by government or ownership and management primarily by indigenous peoples. One respondent said that within the Wet Tropics, there is a department policy that uses the term co-management. The significance of the term varies according to level of equality and shared power among traditional owners and government. Government role and degree of power-sharing remained another point of discontinuity among respondents’ answers; while ‘co’ seems to imply sharing by definition, the degree of sharing is not implied with the policy of co-management itself, nor in the agreement. Those who spoke of Australia in the big picture suggested that co-management policies are oftentimes misinterpreted by constituents. One respondent elaborated, and spoke of equal sharing of land management authority as endorsed by co-management agreements, has driven few lasting co-governing land agreements, except those in ILUAs.

Several respondents mentioned the various co-management agreements in Australia, such as IPAs, land lease, consultative land management policies, ILUAs, native title, and full ownership and authority as depicted below (see Figure 2). At one end of the spectrum, indigenous participation in governance is primarily consultative, while the other end of the spectrum creates a land tenure that is primarily indigenous, offering complete authority in some cases. Respondents classified co-management on a spectrum with native title, full ownership and authority as the most preferred form of co-management by Aboriginal people, and the unequal power-sharing with government as the least preferred, resulting in weaker, less effective forms of co-management agreements.
**Figure 2**: Terms used in interview responses to typify co-management. The arrow indicates the scale of indigenous power through formalized agreement, increasing from left to right.

**C1.2/C2.1** Do you think that World Heritage Listing (WHL) was a benefit or barrier for co-management arrangements? In what ways has WHL impacted co-management?

<table>
<thead>
<tr>
<th>Sample of responses (barriers):</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Traditional owners weren't invited to participate in World Heritage listing.”</td>
</tr>
<tr>
<td>“Failed to identify cultural significance of the World Heritage values.”</td>
</tr>
<tr>
<td>“Lack of recognition of cultural values.”</td>
</tr>
<tr>
<td>“World Heritage provided greater government authority and control over resources.”</td>
</tr>
<tr>
<td>“It may have denied Aboriginal people rights to the area.”</td>
</tr>
<tr>
<td>“Discouraged the participation of indigenous peoples in land management.”</td>
</tr>
<tr>
<td>“Having a form of land tenure is essential to allowing them to manage…”</td>
</tr>
<tr>
<td>“The disadvantage is dealing with government which can be slow and frustrating.”</td>
</tr>
<tr>
<td>“The opportunity was greatly missed (not having included cultural values), which (would have) added funding, international support, and recognition.”</td>
</tr>
<tr>
<td>“[During the World Heritage Listing process] WHL was greatly opposed by many elders of the region.”</td>
</tr>
<tr>
<td>“WHL only benefits the groups who were originally involved, traditional owners weren’t invited to participate in WHL.”</td>
</tr>
<tr>
<td>“Co-management has started to be developed in National Parks, but might have been longer coming to the Wet Tropics without WHL for cultural values.”</td>
</tr>
<tr>
<td>&quot;A barrier because ecological issues will override any cultural values.&quot;</td>
</tr>
</tbody>
</table>
"A barrier because listing occurred 22 years ago and there is still no co-management arrangements."

**Sample of responses (benefits):**

“Added statutory authority and legislation into the equation through the WTMA.”
“Promoted co-management arrangements.”
"Working together should bring the best results as combining expertise in a delicate situation such as our flora and fauna so desperately needs."
“The legislation requires that government makes decisions and manages the area with Aboriginal people.”
“Allowed for land to be protected, which is the first step in co-management arrangements.”
“Indigenous people have had a greater role in management with World Heritage listing.”

Each of the interviewee respondents acknowledged a common barrier in indigenous-policy relations in the WTWHA- indigenous values were not represented in the original WTWHL. According to respondents, WTWHL furthered the divide between Aboriginal people's right to the land and federal and state authority over “their country”. One respondent stated that this area was managed before World Heritage listing by Queensland Parks and Wildlife Service. It is clear that confusion was generated in regards to this question; several respondents greatly believed that WTWHL promoted Aboriginal involvement at least in the long term, while other respondents regarded WTWHL as a major detriment to the intricate connection between indigenous people and traditional country. When asked to elaborate, many respondents agreed that without World Heritage listing, the WTWHA would have been developed and land would be privatized. With reserves, national parks, and public land tenures, Aboriginal people have less legal boundaries to overcome to achieve land rights and participation in land management.

Interestingly enough, several respondents believed that WHL should require the inclusion of Aboriginal participation in land management in current and future policies.
C1.3/C2.2 Do you believe that indigenous knowledge has influenced land management? If so, how has indigenous knowledge influenced land management on traditional indigenous lands in the Wet Tropics?

<table>
<thead>
<tr>
<th>Sample of responses:</th>
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</thead>
<tbody>
<tr>
<td>“In the Wet Tropics, no. Elsewhere in Australia, more so.”</td>
</tr>
<tr>
<td>“TK has mostly not been recognized or pro-actively supported to record and be utilized in decision-making by non-Indigenous land managers. The opportunity for Traditional Owners to manage/co-manage their traditional country(^8) has been largely non-existent.”</td>
</tr>
<tr>
<td>“Trying to get more involved, limited.”</td>
</tr>
<tr>
<td>“Not nearly as much as we want it to.”</td>
</tr>
<tr>
<td>“Queensland Park and Wildlife Service uses indigenous knowledge in management for pests and preservation of biodiversity.”</td>
</tr>
<tr>
<td>“Different ideas, [it has] created a new focus.”</td>
</tr>
<tr>
<td>“Indigenous people absolutely want to influence management.”</td>
</tr>
<tr>
<td>“There are some consultative management arrangements established between Environmental Protection Agency [now DERM] and Queensland Park and Wildlife Service (QPWS) and some traditional owner groups. Where this is in place, the indigenous knowledge holders are able to ensure that cultural values aren’t subsumed under the environmental protection agenda.”</td>
</tr>
<tr>
<td>“The Garruragan Aboriginal Corporation actively manages land use.”</td>
</tr>
<tr>
<td>“Yes I do believe that traditional knowledge has had an influence at this point primarily on cultural sites rather than ecological management - that is yet to be fully explored and developed.”</td>
</tr>
</tbody>
</table>

The resounding opinion is that traditional law should be incorporated into statutory law that is already in place. Respondents mentioned other areas of Australia as models for Queensland indigenous land management policies. Specifically, Western Australia and the Northern Territory were often mentioned as progressive regions with successful co-management policies in place. In these areas one respondent commended the institutional and legislated arrangements that allow for the integration of the two forms of knowledge; the Euro-Australian and indigenous knowledge have sought to fuse into one coherent, encompassing system.

Indigenous respondents in particular, wanted to emphasize their general aspiration to become

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\(^8\)country: A term used by Aboriginal people, different to the English use of the term, to encompass all living things including people, plants and animals. Country explains connection to land and one's own identity, cultural obligations, spirits, stories, seasons, and way of believing, much more than what can be described in a map.
more involved in caring for their country, but the current system inhibits support, communication, and fair representation in governing bodies.

C1.4/C2.3 How better do you think the integration of indigenous knowledge and co-management arrangements would benefit land management in the WTWHA?

**Sample of responses:**

“[Co-management arrangements could] greatly contribute to some sort of institutional arrangement whereby resources are managed more sustainably”

“International literature supports the idea that indigenous knowledge is beneficial for land management”

“Institutions that support protection rather than development are still more powerful worldwide, and in Australia in particular”

“There are still no powerful institutional arrangements to protect indigenous knowledge and biodiversity conservation”

“Indigenous knowledge may specifically help in regards to mitigating threats associated with climate change and identifying indicators of change”

“You need indigenous governance to protect indigenous knowledge”

“It depends on the relevance of indigenous knowledge to current requirements.”

“[It would allow a] great change, a crucial change, one management system, [integrating indigenous knowledge and participation] actively”

Respondents answered that indigenous knowledge has influenced land management increasingly so, since WHL, though the structural framework that could allow for the integration of indigenous knowledge at all levels is still to come. Respondents also mentioned that climate change is a crucial research area where indigenous knowledge could be incorporated into current scientific studies to specifically address invasive species’ presence and abundance, historical trends and distributions of endemic species, and climatic indicators using observational knowledge.

Indigenous respondents spoke of the passage of knowledge through *stories* from generation to generation. These individuals seek for their descendants to play an increasing role in park management, positions of law, and in scientific fields. In these areas specifically, land
management could be enhanced through the use of indigenous leadership, knowledge and practice.

C1.5/C2.4 In your opinion, how do co-management arrangements involve people in the local community?

<table>
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<tr>
<th>Sample of responses:</th>
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</thead>
<tbody>
<tr>
<td>“There is still yet more to be done to make such relationships completely beneficial for traditional owners.”</td>
</tr>
<tr>
<td>“Traditional owners don’t have much bargaining power when it comes to co-management arrangements.”</td>
</tr>
<tr>
<td>“Co-management initiatives should involve all local people at an appropriate scale and level.”</td>
</tr>
</tbody>
</table>

In general, interviewees found that co-management arrangements tend to involve traditional owners and local governing bodies primarily, although benefits and power-sharing are not equitably distributed among the two entities. Many respondents did not respond.

C1.6/C2.4 Should co-management initiatives involve all local people, or should co-management plans in the Wet Tropics solely concern themselves with traditional owner stakeholders and local Natural Resource Management (NRM) agencies?

<table>
<thead>
<tr>
<th>Sample of responses:</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Community-based natural resource management is paramount to the broader community taking responsibility for sustainable management of the environment and resource use.”</td>
</tr>
<tr>
<td>“Co-management should involve all local people including farmers.”</td>
</tr>
<tr>
<td>“There are obviously other stakeholders in the Wet Tropics, but historically their interests have always been recognized in some form or another.”</td>
</tr>
<tr>
<td>“Traditional owners may actually have legal rights in their country. This immediately puts them ahead of recreational users and other interest groups.”</td>
</tr>
<tr>
<td>“The Queensland government doesn't have a clear policy for co-management.”</td>
</tr>
<tr>
<td>“Co-management stopped at Cape York [and has not continued southward].”</td>
</tr>
<tr>
<td>“[Co-management] should involve Government and Nongovernment NRM agencies, tourism industries, local residents involved in planning, and a wide range of stakeholders.”</td>
</tr>
</tbody>
</table>

The findings, overall, would suggest that traditional owners should be involved in co-management plans. Several respondents mentioned that other stakeholders should be included. Furthermore, respondents also noted that traditional owners have the most at stake. Of the
respondents that considered co-management plans integral to community-based NRM, most mentioned the need to include all local stakeholders in co-management agreements.

C1.7/C2.5 What are the barriers and benefits of co-management of protected areas by the local Traditional Owners groups?

<table>
<thead>
<tr>
<th>Sample of responses (benefits):</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Benefits: Diversity among the various groups.”</td>
</tr>
<tr>
<td>“.. a foot in the door within the process of land management.”</td>
</tr>
<tr>
<td>“Diversity among people. Indigenous knowledge is always evolving.”</td>
</tr>
<tr>
<td>“Traditional ecological knowledge integrates different forms of knowledge.”</td>
</tr>
<tr>
<td>“Satisfaction of recognition of Aboriginal values.”</td>
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<tr>
<td>“Employment, more power.”</td>
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<tr>
<td>“...increased land protection.”</td>
</tr>
<tr>
<td>“Increase in the welfare of traditional owners and an improved knowledge base for land management by agencies.”</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sample of responses (barriers):</th>
</tr>
</thead>
<tbody>
<tr>
<td>“.. limitations of how much of a say and how well [traditional owners] are supported to participate and build long term professional [partnerships] and [enhance] cultural capacity.”</td>
</tr>
<tr>
<td>“So many different management plans associated with any particular parcel of land including the EPA, QPWS, Wet Tropics Management Plan, local government plan, and Wet Tropics Authority Plan. [There is a] need to integrate management planning.”</td>
</tr>
<tr>
<td>“Government agencies find it hard to coordinate among the various groups.”</td>
</tr>
<tr>
<td>“Power-sharing.”</td>
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<tr>
<td>“Traditional owners don't have the resources to be at the table in the same way government agencies are, financially.”</td>
</tr>
<tr>
<td>“Structural factors around colonial national park laws that don’t protect indigenous people.”</td>
</tr>
<tr>
<td>“The lack of access to support their own [traditional owner] organizations.”</td>
</tr>
<tr>
<td>“The ongoing struggles over their own [traditional owner] land titles.”</td>
</tr>
</tbody>
</table>

In general, respondents believe that co-management inclusive of traditional owners in the WTWHA, would benefit the natural and cultural environment, and provide a deeper understanding of environmental issues and management strategies. Co-management would specifically aid traditional owners socio-economically. Barriers mentioned from formalized co-management arrangements include the degree of power-sharing sought and achieved. Respondents mentioned various limitations centered around the current governing structure and
the lack of land ownership by traditional owners in the area. One respondent noted that WHL has contributed to the various overlapping governing bodies, stalling the creation of co-management arrangements.

C1.8/C2.6 What potential role can indigenous knowledge play in the role of conservation management now and in the future? What are the barriers of capturing this knowledge?

**Sample of responses (part 1):**

“[Indigenous knowledge provides] Authority.”
“Indigenous knowledge is wider than what's just held by the elders.”
“Repatriate lots of knowledge that researchers have recorded but we don't have available to all of our indigenous groups.”
“[They] recognize that many types of knowledge enhance each of us.”
“Major benefit to conservation management.”
“The WT has a number of underrepresented bioregions in the Wet Tropics.”
“Loss to the world's knowledge and conservation system without indigenous knowledge.”
“Fund indigenous rangers [who would then serve as] role models to other indigenous peoples.”
“They should be supported to play a major role in every facet of planning and management.”
"Capturing such knowledge requires pro-active investment into Indigenous organizations and programs that would enable younger Indigenous persons to assist their Elders to be leaders in contemporary society whilst they in turn be cultural mentors for the next generations. Active programs to establish Indigenous owned and operated knowledge recording and management systems is also required immediately before TK is lost."

**Sample of responses (part 2):**

“Lots of research. Hard to get all of that knowledge back into the communities.”
“We currently have no effective way to capture the knowledge that is with us now.”
“No $$ for cultural heritage mapping. No money to employ indigenous people.”
“Trust.”
“Limitations: Intellectual property rights issues, custodianship and access protocols for knowledge and participants, also social issues, internal Indigenous politics and life expectancy.”

Interviewees repeatedly mentioned that indigenous knowledge incorporated into conservation management would benefit climate change research and findings, and create a greater authority for protection of land resources. Indigenous knowledge would contribute to the collective knowledge base of the area to incorporate context-specific ecological findings. Furthermore, indigenous knowledge would inform environmental management of local
ecosystems. The barriers associated with using indigenous knowledge are the trust relationship concerning the traditional owner and the parties receiving the knowledge. Respondents claimed that current models of conservation management lack the institutional and monetary capacity to incorporate indigenous knowledge effectively.

**C1.9/C2.7 How do co-management plans potentially benefit rainforest lands- conservation, economic growth, and cultural diversity?**

<table>
<thead>
<tr>
<th>Sample of responses:</th>
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<tbody>
<tr>
<td>“They manage people’s impact, limit it, and provide benefits by managing a people and through restoration and protection and use of valuable resources.”</td>
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<tr>
<td>“Economic Growth: One of the biggest motivations to work on your country, secure employment for our people.”</td>
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<tr>
<td>“Tourism is completely welcome to indigenous people being involved with the presentation of the Wet Tropics: [it’s] mutually beneficial.”</td>
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<tr>
<td>“Impact internationally [UNESCO].”</td>
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<tr>
<td>“This acknowledges the link between healthy country and healthy people.”</td>
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<tr>
<td>“They using planning instruments, attract investment, and manage data to achieve agreed outcomes.”</td>
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<tr>
<td>“..recognizes and identifies cultural diversity, allows certain practices that indigenous people would perform in a region that would benefit co-management plans to be more effective, same with the biological systems: assists management plans to be more effective, [As far as] economic growth: could certainly provide opportunities for indigenous people of the region.”</td>
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Respondents found that co-management plans benefit tourism, current knowledge and understanding, and the people. Co-management plans benefit traditional owners with employment opportunities in land management and through employment with state parks, conservation areas, and cultural parks like Tjapukai Aboriginal Culture Park in Cairns.

**C1.10 Do indigenous communities (at the clan or tribal level), hold one agreed upon management agenda for co-management of rainforest lands?**

<table>
<thead>
<tr>
<th>Sample of responses:</th>
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<tr>
<td>“The government is not going to provide the leadership, fixed in [its] own worldview, not knowing [or accepting outside leadership].”</td>
</tr>
</tbody>
</table>
“Some may want to protect and some may want to develop.”
“[For one specific group] conflicting views, need middle ground to establish consensus.”
“[My] experience has been no, usually different management agendas or plans or arrangements [have been] put into place that deal with very specific biomes. Particularly women may be required to do a certain activity at a certain time of the year which may prevent other people from accessing that region at that time.”
“Need different management plans, not necessarily conflicting, [but] complementing each other.”
“No. Though there is certainly a consensus on key positions [within the clan] and the collection of old people's knowledge [to be used to properly manage rainforest lands].”
“To transmit knowledge to future generations.”
“There are agreements among Aboriginal people for rainforest plans.”

All respondents answered this question with dual responses: yes and no. Indigenous communities may hold one general consistent management agenda for rainforest lands, and this includes the knowledge to be shared with future generations, protection of country, and repatriation of wisdom to the community. However, traditional owner groups may differ over specific issues.

C1.11/C2.8/C2.9 What role has indigenous knowledge played in land management in the Wet Tropics over the last 10 years? Who are the beneficiaries of co-management agreements?

Sample of responses (part 1):
“Greater identification [regarding] the loss of significant wetland areas.”
“Concerns over drinking water, degradation [of ecosystems], indigenous aquatic species.”
“Recognition of indigenous values and culture.”
“Unsure, as they don’t have the history [in land management in the WT].”
“[The] Regional agreement [allowed for indigenous relationships with governing bodies to be] formalized with state and federal governments in [the] Wet Tropics.”
"The attempt of government to find a solution to the many problems on the Tully-Murray river flats in the old Cardwell Shire involved many discussions with local indigenous people [Jirrbal, Gulngay and Girramay] but as of this instant no tangible action is taking place."

Sample of responses (part 2):
“Everyone benefits: plants, animals, country, landscape, government agencies.”
"Farmers, government departments, the local population, and of course the environment."
“Community groups, tourism, conservation sector.”
“[In the case of native title agreements the recipients are given the] capacity to feel in a position of leadership, and move from feelings of victimhood, [part of what was framed as] the disempowering process [for Aboriginal people].”

“Parks respond positively to [newly proposed] indigenous co-management agreements.”

“Initially the traditional owners, or local indigenous people of the region, secondary: other stakeholder groups that can benefit from enjoying the values that are there and have been identified and protected.”

Responses suggest that through active participation by traditional owners in land management, additional environmental threats have been identified and participation has benefited local, state, and federally protected areas in the areas of fire management and suppression, species identification and distribution and knowledge sharing of medicinal plants.

Beneficiaries of co-management agreements that were mentioned include: the biotic and abiotic features of the landscape as well as sentiments of empowerment and recognition of the importance of utilizing traditional knowledge in rainforest land management.

C1.12/C2.11 Are traditional owners able to preserve/protect sacred sites on state and private lands? If so, can you provide an example?

**Sample of responses:**

“Yes and No.”
“State Lands: Government policy will allow as far as possible sacred sites to be returned to the protection of traditional owners.”
“States [have the power to] make a place a cultural reserve.”
“On State Lands that are protected, special sites can be protected. In the WT, this has included formal arrangements for Njadon Jii and Eastern Kuku Yalanji sites to receive special protection [Restricted Access Areas] to enable both protection and Traditional owner responsibility for management.”
“QPWS has at times, engaged directly with Traditional Owner groups for developing Indigenous Protected Areas and cooperative management arrangements. QPWS employs 14 or so Traditional Owners to facilitate and assist on these issues.”
“Issues with private freeholders. Private lands need to be negotiated with that person, sometimes relationships are severed.”
“[On] private [lands you] need to tell that person what is there. [This is a] barrier to preservation and practice.”
“On sites that are tourist icons, and on state lands, there is a general lack of maintenance at the site. Local governments are really strapped for cash. There are a lot more sites in the landscape...
than we are able to manage. Many sites were made open to the public before traditional owners could reconcile and recognize [these areas]. Some of these sites include: Bartle Frer, Milla Milla Waterfalls. Lake Eacham. Lake Barrine. Mungalli.”

“They [Traditional owners] do have long term relationships [with local people, to protect areas on private lands].”

"The Easter Kuku Yalanji Indigenous Land Use Agreement does not include any such rights."

"In some cases yes but mostly no. There are many burial sites that have no protection at all in the Tully area and some have been ploughed in. One such site is at Murray Upper called Gaba [is] the last tribal camp in the area."

All survey respondents were aware of different protocols of protection across private or freehold lands, and public lands. In general, most respondents did acknowledge a very clear difference between protection on private and state lands, with the latter as an easier negotiation agreement. Of the respondents that discussed dealings with private landowners, sacred sites, burial sites, story sites, and rock paintings were commonly mentioned as they key features requested by traditional owners to visit. Several respondents also mentioned that in the past, when traditional owner cultural sites on private properties were vandalized or harmed in some form, relationships between traditional owners and landowners were severed. In these instance in particular, trust was a major factor in determining the continuance of relationships.

C1.13/C2.12/C2.13 How is native title rights and indigenous knowledge reflected in policy and planning processes at the commonwealth, state, regional, and local level?

Sample of responses:

“..[using] interpretation from the Mabo decision, then many would say that government policy and planning is failing to reflect what they felt was promised by the High Court in that decision.”

“Intellectual property and spiritual affiliations are two examples of issues not catered for under the Australian native title system.”

“Native title represents continuity with place.”

“Many traditional owners will not have their native title recognized in a legal sense as a result of historical physical disconnection from their lands.”

“Some of the major agencies include: regional groups, Terrain, WTMA, local government authorities, North Queensland Land Council, DERM, DEWHA.”

“[The] Commonwealth [at the federal level, recognize indigenous knowledge through the] Working on Country and Indigenous Protected Area programs, [while the] State [recognizes
One respondent in particular summed up the collective theme of responses, stating that the current political system has left many indigenous people without recognition of their native title rights due to the strong history of displacement in the region, commonly referred to as “The Stolen Generation.” The Stolen Generation is a result of the official government policies including, Aborigines Protection Act 1909, the Aborigines Welfare Act and the Child Welfare Act 1939, that enabled the forcible removal of Aboriginal and Torres Strait Islander children from their families (Parliament of New South Whales; Young, 2009). Policies designed to 'breed out' Indigenous people are responsible for the displacement of 100,000 children (Young, 2009). From 1909 to 1969, between 1 in 10 and 3 in 10 children were removed from their communities by government, welfare or church authorities (Parliament of New South Whales; Reconciliation Australia, 2008).

C2.14 Why was the National Heritage Listing for cultural values of the Wet Tropics denied?

**Single response:**

“Relisting for cultural values for National Heritage and WH is still going on, despite the 2010 failure. [It’s a] long, torturous process. Actual relisting requires state and federal government to work together. NH [is] still under review.”

This question was only answered by one person; the majority of respondents did not now know why the 2010 National Heritage Listing for cultural values was denied in the Wet Tropics.
National Heritage Listing was indicated to be the first step towards the nomination process for the Wet Tropics for World Heritage Listing for cultural values.

Discussion

Co-Management

The purpose of this study was to determine the relationships among the following themes: inherent implications of World Heritage Listing for solely ecological values, indigenous participation in land management, and current policies that are overshadowed by World Heritage funding. To address these themes, respondents’ comments revealed important trends. The key term that defines how traditional owners can influence land management politically, ‘co-management,’ serves little function as it has been used in policies to account for all levels of power sharing among indigenous peoples and local governing bodies. This finding is supported by the various legislative agreements of Girringun Aboriginal Corporation cultural heritage mapping project, Uluru-Kata Tjuta National Park, Kakadu, and Gurig National Parks that each incorporate the term, but vary greatly in terms of land tenure, power-sharing, and Aboriginal involvement in land management (Nursey-Bray and Rist 2009, Ross & Pickering, 2002). Most respondents believed that indigenous knowledge has not influenced land management to the fullest extent in the WTWHA, supported by findings from Ross and Pickering (2002) and Hill (2001a, 2001b, 2006).

Using literature analysis and experience with First Nation elders in northwestern Canada, Nadasdy (2003) recalls one shortcoming often involved with co-management: it is often used as a means to convert traditional knowledge, “into numbers and lines on maps” (p. 369). When this method is employed, traditional knowledge can be discarded after figures and data are obtained, exacerbating the already imbalanced power relationship between traditional elders and
government institutions. In this scenario, future management initiatives of an area are decided by default to the more powerful entity (Nadasdy, 2003). Co-management as a form of co-governance and bridge to form relationships between government and traditional owners can be beneficial taking into account potential shortcomings.

The term ‘co-management’ may need to be re-defined officially or replaced with a policy that fully demonstrates mutual power sharing and mutual agreement of shared responsibility as in the case of joint management. Respondents were likely to refer to co-management as a stepping stone for power sharing among traditional owners and government over traditional land, not as an apex or significant accomplishment, unless co-management did fall under the policies of joint management or full leadership and management by traditional owners. To understand co-management policies in Australia, current management strategies need to be acknowledged to seek the dimensions of indigenous: non-indigenous relations.

**Management Agreements in Australia**

Forms of co-management can include: a memoranda of understanding (MOU) negotiated between government agencies and indigenous groups, indigenous membership on the boards of management of World Heritage Areas, and employment and training of indigenous people. Joint management, two-way agreement, is based on statutory legislation that recognizes Aboriginal rights and interests in national parks with land granted by the government (Bauman & Smyth, 2007; Hill, 2006). The development of an Indigenous Land Use Agreement (ILUA) recognizes native title and provides opportunity for joint management of protected areas. Protected areas are places that are used and managed by indigenous people because of cultural or spiritual significance, with access and use defined by indigenous customary law. Indigenous Protected Areas (IPAs) have emerged in Australia to include a commitment by the government in 1992 to
establish a system of protected areas to represent the full range of ecosystems completed by 2000. This will include the development of the national bioregional planning framework to identify gaps in the National Reserve System (NRS), development of the International Union for Conservation of Nature (IUCN) for the establishment of protected areas, and land claim processes sought by traditional owners beginning in the 1970s and 1980s (Bauman & Smyth, 2007).

There are several regional plans in Queensland, Central Australia, the Northern Territory (NT), South Australia (SA), and Tasmania, which demonstrate the variation across the national system in terms of co-governance and cooperative planning. No parks have transferred to Aboriginal ownership or joint management in the state of Queensland despite successful claims over national parks under the Aboriginal Land Act of 1991 (Smyth & Beeron, 2001). Uluru Kata-Tjuta National Park in central Australia and Aboriginal people in Western Australia (WA) have an advisory role in national park councils to help manage parks. The NT instituted the first co-managed protected area in 1981, known as Garig Gunak Barlu National Park (Smyth & Beeron, 2001). In SA, Witjira National Park is under government ownership, but it has been leased to the Irrwanyere Aboriginal Corporation for 99 years. In Tasmania, Aboriginal people participate on advisory councils for national parks and have direct involvement in the maintenance of cultural sites within national parks; however no joint management arrangements are in place (Smyth & Beeron, 2001).

Uluru-Kata Tjuṯa National Park serves as a prime example of successful co-management in northern Australia, able to conserve the cultural and biological diversity of the area through the active use of local knowledge in planning and management. The Anangu people, who inhabit this desert environment, have co-existed with the land for over 22,000 years (Reid et al., 2004).
The park protects cultural value with the inherent ability to close the park for cultural reasons and through the maintenance of sacred sights (Reid et al., 2004). World Heritage Listing offers the native Anangu people co-management authority in the form of joint management and extensive land protection. This method recognizes Aboriginal rights and interests, though Aboriginal involvement is temporary on a long-term scale. Currently, the Anangu have title for all park land, on the condition that the land will be leased back to the Director of Parks Australia (Reid et al., 2004).

**WTWHA re-listing for cultural values**

The World Heritage Listing of the majority of the Wet Tropics bioregion is for natural and aesthetic values. While respondents noted that international benefit and environmental conservation was achieved with WHL, international support could have greatly enhanced the ease with which Aboriginal people and government agencies create agreements and partnerships to manage land to protect the both the original WH values and cultural values of traditional people living in the area. Frank Gillen said, “There is not a remarkable feature in the country without a special tradition (Perkins et al., 2008).” The recommendations by respondents for re-listing of the WTWHA are largely supported by the *Wet Tropics Conservation Strategy* and *Wet Tropics Regional Agreement* (WTMA, 2004; WTMA, 2005). Support for re-listing to incorporate cultural values was also supported by the majority of respondents in a community survey conducted in 2001, 2002, and 2003 by the Rainforest CRC and WTMA (Bentrupperbaumer & Reser, 2006).

Since World Heritage Listing, research has documented cultural continuance through maps of current practice and resource usage, written histories, and anthropological work to command the need for re-listing the region for cultural values (Tindale, 1974). One cannot
protect land without protecting people too. Livelihoods of Aboriginal people, traditions, history, and language are dependent on the continuance of their “country.” The integrity of the rainforest is also dependent on these people for their experiential knowledge of controlled fire regimes, climate warming effects, ways of identifying and curbing invasive species and human ecological\(^8\) mapping\(^9\) to explain the significance and distribution of rare species- key to protection in areas so dependent on diversity.

Re-listing can improve dialogue to build capacity and empower a people to protect their identities in situ. Government leadership is integral to the well-being of Aboriginal people. World Heritage sites listed for cultural values across Australia have reigned in funding and positively support land management. Legislature exists under the National Heritage Program solely for the protection of indigenous heritage (AGDSEWPC, 2010). As stated in one interview, “Traditional owners don’t have the resources to be at the table in the same way governments are, financially.” While indigenous sacred sites are protected by indigenous people, public areas in parks are not well-maintained by non-indigenous park rangers due to funding and lack of knowledge leading to desecration along the traditionally preserved eastern coastline. World Heritage Listing was strongly opposed by many Aboriginal people of the area in 1988, and constraints from listing continue to be a point of conflict amongst government and people. Re-listing for cultural values has the potential to help build society and country for Aboriginal people.

Several Aboriginal groups including the Girringun Aboriginal Corporation are supported

\(^8\)human ecology: Portrays "the science of human community and its interdependence with the environment" (Kassam & Arctic Institute of North America [AINA], 2009, p.22-23).

\(^9\)human ecological mapping: Using symbols to represent the relationships involved with human ecology and "how indigenous people within a specific geographic region interact and use resources derived from the land and sea" (Kassam & AINA, 2009, p.22-23, 199). Symbols identify significant plants and animals, sacred sites, and traditional land management schema.
and highly acclaimed by all of the stakeholders interviewed. This group includes the Jirrbal, Djiru, Gugu-Badhun, Warrgamay, Nywaigi, Bandjin, Warungnu, Gulnay, and Girramay peoples (Greiner, Patterson, Bligh, & Milligan, 2007). Success can be attributed to their wisdom and authority for protection of Aboriginal rights, building initiatives, job identification, creation and training, and maintaining culture through human ecological mapping. “The lack of access to support their own traditional owner organizations disempowers successful Aboriginal leaders in society and results in financial troubles,” said one interviewee. Current and potential inclusion of indigenous knowledge in land use planning and management, at the local, state, regional, and national levels will increase effectiveness of current land management policy. Support for highly successful groups like the Girringun Aboriginal Corporation should be prioritized for lasting change and effectiveness through policy.

Many interviewees stated that "Words have not been translated into actions thus far." While policies seek to address Aboriginal involvement, the failure of the Aboriginal Rainforest Council and the lack of implementation of the Wet Tropics Aboriginal Regional Agreement have proven that intention without actuation wastes valuable resources, while achieving few long-term solutions.

According to the Australia Government Department of Sustainability, Environment, Water, Population, and Communities (2010), “There are no long-term national funding programs [such as the National Heritage Trust] of similar magnitude specifically for Indigenous or historic heritage places.” National Heritage funding can help indigenous people acquire land by transitioning state land into indigenous ownership. “Having a form of tenure is essential to allowing Aboriginal people to manage their country; this is the easiest and most desired method for returning land to Aboriginal people,” stated one traditional owner of an Aboriginal group in
an interview. Listing for both National and World Heritage, will encourage Aboriginal jobs in tourism through ease of access. This will help reduce poverty amongst Aborigines and likely increase tourism in Queensland. State Parks managed in part by Aboriginal people under the proposed plans for cultural listing, will employ many jobless people.

“Indigenous heritage is the most extensive category of heritage in Australia and is the most neglected” (AGDSEWPC, 2010). Heritage is evident in sacred cave paintings, monuments, cultural stories and practice, and sacred sites throughout the Wet Tropics. Endemic languages of Aboriginal people are endangered and threatened by socioeconomic factors, such as economic adversity, education incorporating history and endemic languages to indigenous peoples, discrimination, and unemployment; these factors restrict and devalue traditional cultural practice (Skeene, 2008). The North Queensland Land Council approved of the funding request of Skeene (2008), a Yirrganydji man, in 1998 to travel to German museums to obtain his tribe’s local artifacts that were taken from the lower Barron River area near Cairns (p.153). Artifacts including rare rainforest shields from the 1870s, larger than most found in Australia were located. Shields made from tree bark with highly decorated artwork were historically used to mark the rite of passage into adulthood for young men (Story Place, 2003, p. 153).

The current situation in the Wet Tropics as indicated in responses seems to some, to value land over people. While UNESCO World Heritage Listing offers arguably the best form of protection for ecological values to the region, culture and ecology are interdependent. The 1988 WHL has since created a sense of resentment among traditional owners of the region, prioritizing aesthetic beauty of the area and non-human qualities of the landscape, instead of distributing resources to protect all living beings. The living cultural heritage is still practiced today by the 18 traditional owner groups of the area (WTMA, 2005). Re-listing can improve dialogue and
relationships to build capacity and empower a people to protect their unique heritage. This area may fulfill 3 of the 5 selection criteria for re-listing a region for World Heritage Listing for cultural values. Only 1 criterion is necessary to place an area on the State Party tentative list as part of the protracted process.

Re-listing may expand and enhance ecological heritage values, and embody the cultural values necessary for World Heritage nomination under the United Nations selection criteria. While only one criterion needs to be met in order for an area to be nominated to the World Heritage List as a cultural landscape; the following three criteria are directly relevant to the Wet Tropics World Heritage Area.

For instance, selection criterion (iii.) states that a site needs to “bear a unique or at least exceptional testimony to a cultural tradition or to a civilization which is living or which has disappeared” (United Nations, 2011). Traditions that I personally witnessed of traditional owners include hunting, gathering fruit and nut for medicinal and consumptive purposes. The numerous tribal communities, cultural centers and museums that continue to grow and transform to include extant traditions of Aboriginal people are evident to thriving civilizations.

Selection criterion (v.) states that a site must “be an outstanding example of a traditional human settlement, land-use, or sea-use which is representative of a culture (or cultures), or human interaction with the environment especially when it has become vulnerable under the impact of irreversible change” (United Nations, 2011). Climate change is a serious threat the Wet Tropics, with predicted change likely to threaten the Wet Tropics and the World Heritage Area of the adjacent Great Barrier Reef World Heritage Area. Aboriginal elders with whom I spoke, told of the numerous areas and threatened species, unprotected with current legislation, and likely in peril within the next 50 years as a result of warming.
Selection criterion (vi.) states that a site must “be directly or tangibly associated with events or living traditions, with ideas, or with beliefs, with artistic or literary works of outstanding universal significance” (United Nations, 2011). Indigenous people are spiritually connected to their land, many Aboriginal Australians who leave the continent do return to country at some point in their lives to trace their origins and reconnect with the land, stated one interviewee. Artwork, language, and successful Aboriginal corporations utilizing these elements are evident in the publication produced by WTMA in *From the Heart* (2010). Cave paintings, engravings and rock art are evident across the WTWHA; rainforest bark shields are unique to the Queensland rainforest people (Berndt, 1964; WTMA, 2005).

The outstanding universal significance of cultural heritage, or World Heritage Listing, is strongly supported by many in the region. Because policies thus far have failed to attain the full impact of intentions within legislation, many fear that World Heritage Listing, despite written stature and good intentions, will present the same downfalls. Listing can also cause the furthering of demarcation of areas that were otherwise shared or simply non-delineated. Native title claims have the potential to segregate Aboriginal clans to turn against each other and the representative Aboriginal Land Councils, which were created to support indigenous groups in their respective pursuits. One interviewee in particular emphasized the importance of mapping traditional lands of each of the 18 clans, though with area names solely, no boundary lines.

**Current Legislation in the WTWHA**

The management of the Wet Tropics of Queensland World Heritage Area is on three levels. A State and Commonwealth Ministerial Council coordinates policies and funding. WTMA is responsible for general planning and policy development, advised by the following committees: Rainforest Aboriginal Advisory, Community Consultative and Scientific Advisory.
The Queensland Department of Environment and Resource Management manages the routine aspects of the Wet Tropics.

Several general conclusions from this report have suggested the need for a more inclusive land management scheme in Queensland to actively incorporate traditional landowners in all phases of the management process. The major recommendation in this study from both the literature review and qualitative interviews suggests that re-listing of the WTWHA for cultural values would facilitate cooperative, co-governing agreements between traditional owners and non-indigenous land managers.

Limitations

Unfortunately the incredible amount of knowledge and relevant literature freely provided to me by interviewees, staff, and authors could not be included in this analysis in entirety due to the sensitivity of some information provided and protection of cultural knowledge and fragility of relationships between representative groups in the study area.
Acronyms used in this Report

DEWHA…………Australian Government Department of Environment, Water, Heritage and the Arts
DERM………….Queensland Government Department of Environment and Resource Management
FNQ…………….Far North Queensland geographic area
IPA…………….Indigenous Protected Area
ILUA…………...Indigenous Land Use Agreement
IUCN…………..International Union for Conservation of Nature
MOU………….Memoranda of Understanding (MOU)
NRS…………….National Reserve System
NT…………….Northern Territory, Australia
NRM……………Natural Resource Management
QLD……………Queensland
QPWS…………..Queensland Park and Wildlife Service
SA………………South Australia
WA……………..Western Australia
WHL……………World Heritage Listing
WTMA…………Wet Tropics Management Authority
WTNRM………..Wet Tropics Natural Resource Management
WTWHA………..Wet Tropics World Heritage Area
WTWHL………..Wet Tropics World Heritage Listing
References


Nursey-Bray, M., and Rist, P. (2009). Co-management and protected area management:
Achieving effective management of a contested site, lessons from the Great Barrier Reef

25


Reconciliation Australia. Queensland Government. Reconciliation Queensland

Queensland Wet Tropics Management Authority. (2009). *From the heart: Celebrating 20 years of the Wet Tropics of Queensland World Heritage Area*. Cairns, Qld.

http://www.reconciliation.org.au/home/reconciliation-resources/facts---figures/q-a-
factsheets/apology

377-409.


Appendix A:

Map of Aboriginal Australia showing 500 traditional tribes (Horton, 1996)
Appendix B:

Map of the Wet Tropics of Queensland World Heritage Area (WTMA 2002-2010)
Appendix C1:
Interview Questionnaire Version 1

1. Please define co-management, and contextualize your response to include the Wet Tropics World Heritage Area (WTWHA) region, Queensland area, or greater Australian region; co-management agreements are held at the local, state, regional, and federal levels.

2. Do you think that World Heritage listing (WHL) was a benefit or barrier for co-management arrangements? In what ways has WHL impacted co-management?

3. Do you believe that indigenous knowledge has influenced land management? If so, how has indigenous knowledge influenced land management on traditional indigenous lands in the WTWHA?

4. How better do you think the integration of indigenous knowledge and co-management arrangements would benefit land management in the WTWHA?

5. In your opinion, how do co-management arrangements involve people in the local community?

6. Should co-management initiatives involve all local people, or should co-management plans in the Wet Tropics solely concern themselves with traditional owner stakeholders and local Natural Resource Management (NRM) agencies?

7. What are the barriers and benefits of co-management of protected areas by the local Traditional Owner groups?

8. What potential role can indigenous knowledge play in the role of conservation management now and in the future? What are the barriers of capturing this knowledge?

9. How do co-management plans benefit rainforest lands- conservation, economic growth, and cultural diversity?

10. Do indigenous communities (at the clan or tribal level) hold one agreed upon management agenda for co-management of rainforest lands?

11. What role has indigenous knowledge played in land management in the Wet Tropics over the last 10 years? Who are the beneficiaries of co-management agreements?

12. Are traditional owners able to preserve/protect sacred sites on state and private lands? If so, can you provide an example?

13. How is native title and indigenous knowledge reflected in policy and planning processes at the commonwealth, state, regional, and local level?
Appendix C2: (Adapted for Return to Australia, Spring 2011)

Interview Questionnaire Version 2

Co-management for this survey implies the following: power sharing with central government or advisory roles with traditional owners, including native title agreements, ILUAs, and IPAs in the Wet Tropics World Heritage Area (WTWHA).

1. Do you believe World Heritage listing solely for ecological values was a benefit or barrier for co-management arrangements?

2. Do you believe that indigenous knowledge has influenced land management? If so, how has indigenous knowledge influenced land management on traditional indigenous lands in the WTWHA?

3. How better do you think the integration of indigenous knowledge and co-management arrangements would benefit land management?

4. In your opinion, how do co-management arrangements involve local people? Should co-management initiatives involve all local people, or should co-management plans in the Wet Tropics solely concern themselves with indigenous stakeholders and local NRM agencies?

5. What are the barriers and benefits of co-management of protected areas by the local Yidinji peoples of the Atherton Tablelands region within the Wet Tropics?

6. What potential role can traditional elders play in the area of land conservation management on public lands? What are the barriers of capturing this knowledge?

7. How do co-management plans benefit forest lands: biological systems, economic growth, and cultural diversity?

8. What role has indigenous knowledge played in land management in the Wet Tropics over the last 10 years (please specify where possible including policy, tribe, location)?

9. Who are the beneficiaries of co-management agreements?

10. Are traditional owners able to preserve/protect sacred sites on state and private lands? If so, can you provide an example?

11. How is native title and indigenous knowledge reflected in policy and planning processes at the commonwealth, state, regional and local level (please list specific policies)?

12. Are current policies that seek to incorporate indigenous participation in land management successful?

13. Why was the National Heritage Listing for cultural values of the Wet Tropics denied?