

Preliminary report on Aboriginal perspectives on land-use and water management in the Daly River region, Northern Territory

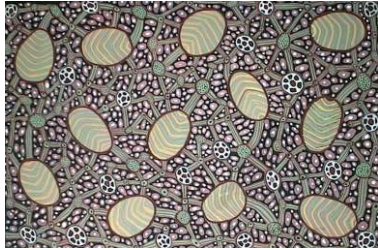


© Patricia Marrfurra, Merrepen Arts, 'Marlarrggu (Long Neck Turtles)', acrylic on canvas, 60 x 40 cm



CSIRO

Inside front cover



ARTIST:	Patricia Marrfurra
DOB:	09.03.1959
LANGUAGE GROUP:	Ngengiwumirri
TRADITION HOMELAND:	Malfiyin
SIZE:	600 x400 cm
DATE OF COMPLETION:	Nov 03
MEDIUM:	Acrylic on Canvas
CATALOGUE:	Merr 6709 / 03
TITLE:	Marlarrggu (Long Neck Turtles)

Young and old looked forward to the end of the dry season when the water in the billabong has receded and it is ready to go out and hunt for long neck turtles. A long pole is used to poke into the mud, when it hit a hollow sound, the foot is then used to trace the outline of the turtle. The hand then reaches down to pull the turtle out of the sticky mud. In the painting, Patricia Marrfurra shows the turtles camouflage among the stones and mud.

**Preliminary Report
on Aboriginal perspectives on
land-use and water management
in the Daly River region,
Northern Territory.**

**Sue Jackson
CSIRO Sustainable Ecosystems**

A report to the Northern Land Council



CSIRO

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Executive Summary

In November 2003 the Northern Territory Government announced the development of an integrated natural resource plan for the Daly River region, prepared under the guidance of a Community Reference Group (CRG). This report, commissioned by the Northern Land Council, reflects the wide-ranging perspectives of representatives of the traditional land-owning communities of an area within the catchment known as the focus area.

Aboriginal people represent a very large and significant component of the total population with a distinctly different worldview and way of life. The Aboriginal communities' perspectives are not well understood in the wider community, in part, because they have not been central to research activity nor economic and environmental planning in the region.

An attempt has been made to provide a coherent framework for conceptualising the range of social and cultural values held by the numerous Aboriginal groups of the region. Consideration has also been given to how such values might be effectively and equitably incorporated into the CRG planning process. Preparation of this report has been severely constrained by insufficient time in which to properly engage the large and widely dispersed Aboriginal population. As a result this report should be considered as a preliminary document that is not comprehensive in its reach across all affected Aboriginal groups, and contains recommendations that have not yet been endorsed by the Aboriginal community.

The report has taken a very broad approach to interpreting and documenting the Aboriginal social and cultural values of the Daly region. It discusses perspectives held by the Aboriginal community that can be referred to as social impact issues, as well as the cultural values attached to specific places, although it does not provide an inventory of such places. The social values that promote a sense of security, self-expression, belonging, identity and spirituality were the values that most preoccupied Aboriginal people. For instance, water, its origins, features and appropriate use, is highly significant to the way of life, sense of identity, economy and cosmology of Aboriginal groups in the Daly. This core value is difficult to evaluate and measure within conventional decision-making processes in which there might be competing values.

Within the report special attention is given to the Aboriginal cultural values of water. It is felt that this focus is justified given the short time-frame, the documented historical importance of the Daly River to Aboriginal people, and the poorly understood nature of Aboriginal attachment to water resources/bodies in the wider society.

There is an overwhelming sense of concern expressed by the communities surveyed in this report over both process and potential outcomes. People consulted feel neglected by the research and planning conducted prior to November 2003 and feel their perspectives may not hold any influence over the process currently underway. Doubt has been expressed about the ability of the CRG to consider the full range of options given the influence of existing plans for intensification of agriculture. Fears are held for the environmental health of the region, particularly from over-use of water, land clearing, and declining water quality in the creeks and rivers, especially from soil erosion and increased visitation to the area. Whether Aboriginal people stand to gain economically from the land use options under consideration has not been demonstrated to the communities consulted.





Emphasis is given in the recommendations to developing new, and to improving existing, processes to ensure Aboriginal interests are addressed satisfactorily in further planning and regional development activity. The key recommendation for a regional land-use agreement could provide the framework within which these and other issues raised in this report might be addressed. Other recommendations include the need to establish a process to elicit a more comprehensive qualitative, and where possible, quantitative understanding of Aboriginal social values, especially the cultural landscape, and to facilitate further consultation and negotiations with traditional owners around the current principles underpinning water allocation planning and environmental flows research.



Acknowledgements

Many people assisted with information or logistics during the course of this study, while others provided helpful comments on the report. Appreciation is extended to Paul Donohoe of Wangamaty Landcare, Melissa Bentivoglio of Guwardagun (Wagiman) Rangers, Lizzy Bradford of the Wardaman Association, and the many people who attended meetings to discuss natural resource management planning in the Daly. A number of staff from the Northern Land Council were closely involved with the project including Michael Storrs, Ian Brown, Emma King, Maurice Motlop, Eddie Ross, and David Mearns. The following staff of CSIRO assisted with information material, particularly for use in public consultations, and with comments on the report: Alan Andersen, Barbie McKaige, Lesley Dias and Adam Liedloff.



1 Introduction

1.1 Background and study aims

In late 2003, following public concern over land use change in the Douglas/Daly region, the NT Government announced the formation of the Daly River Community Reference Group (CRG). This group has been charged with the responsibility of developing an Integrated Land-Use Plan for the Daly River catchment. Within the catchment, a smaller area which encompassed the estuary, lower and middle reaches of the Daly River, including the Flora and Fergusson River junctions, was to receive focussed attention by the CRG¹ (see Figure 1). An Expert Reference Group was established to provide scientific advice to the CRG.

The Plan has two objectives (CRG November 2003):

1. ecologically sustainable development achieved by biodiversity conservation and sustainable use of natural resources.
2. a community that has the capacity to participate in regional development through ownership of and involvement in decision-making processes.

In late January 2004, the Northern Land Council contracted CSIRO to conduct a study of the indigenous cultural values of the Daly River and associated environments. The intention of the study was twofold: firstly, to provide a foundational document to assist the deliberations of the CRG, and secondly, to assist the Aboriginal members of the CRG. As representatives of a diverse and large community the Aboriginal CRG members have a difficult role to perform. It was felt that the cultural values study could help those members to be better informed about the aspirations of the Aboriginal community and the numerous issues under consideration by the CRG.

The cultural values report was intended to document Aboriginal perspectives on a range of matters relating to the intensification of agricultural development, specifically:

- cultural values, including traditional use of the river and cultural significance of the river and associated environments;
- concerns about access and control of spaces and resources, and potential detriment to environmental quality;
- current efforts to protect cultural values and ideas for enhancing protection through new management structures/processes;
- future use of the area and potential impacts arising from the likely development path (intensification of agriculture); and
- any other matters of concern to Aboriginal people.

¹ This area will be referred to as the CRG Focus Area

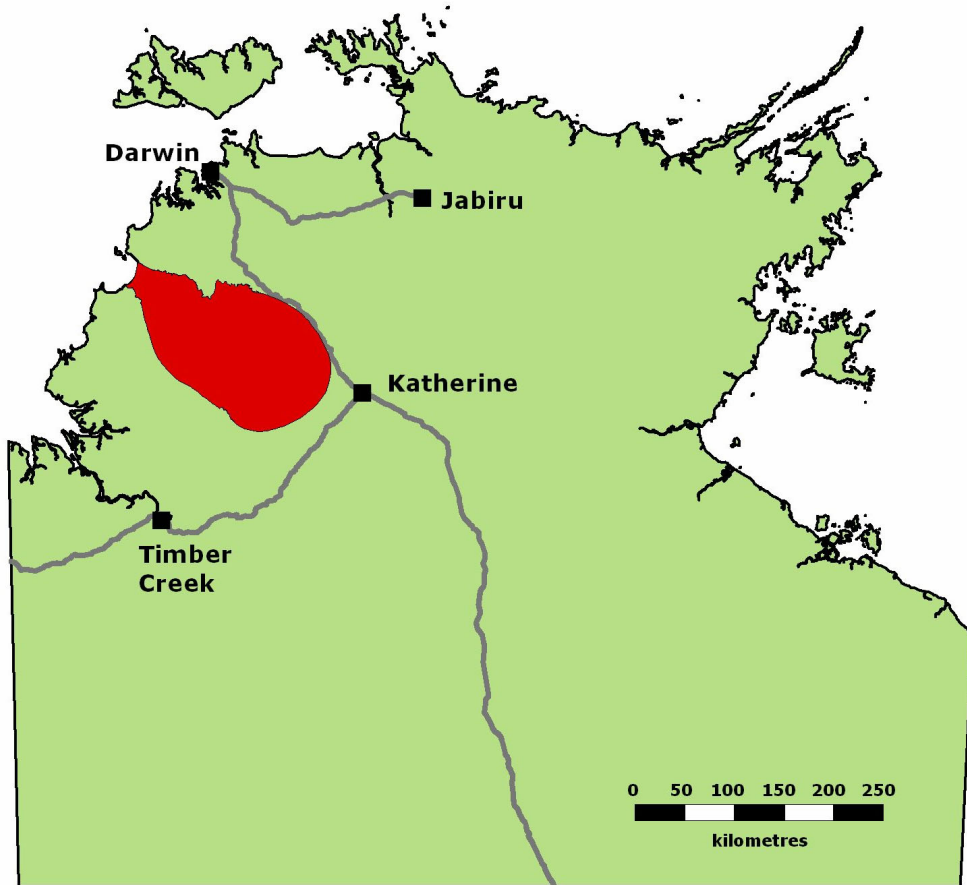


Figure 1. Map of Community Reference Group Focus Area



The original time frame involved submitting the report to the CRG in June 2004. Further dialogue between the Northern Land Council and the NT Government resulted in a revision of the completion date to the end of April 2004.

Originally it was hoped that more time would have been available to closely examine the cultural and social values. An attempt has been made to provide a coherent framework for conceptualising the range of Aboriginal social and cultural values. Consideration has also been given to how such values might be effectively and equitably incorporated into the CRG process. For reasons elaborated on in the next section, the report has taken a very broad approach to interpreting and documenting the Aboriginal social and cultural values of the Daly region. It discusses perspectives held by the Aboriginal community that can be referred to as social impact issues, as well as the cultural values attached to specific places, although it does not provide an inventory of such places. Within the report special attention is given to the Aboriginal cultural values of water. It is felt that this focus is justified given the short time-frame, the documented historical importance of the river to Aboriginal people (e.g. Alford 1990), and the poorly understood nature of Aboriginal attachment to water resources/bodies in the wider society.

There are parallels between the CDU study of social values (Young 2004) and this study; there is therefore good reason to consider the two studies as components of one social values inquiry. Whilst Aboriginal values are distinct from the broader society at large, both the 'settler' communities and indigenous communities can be said to have developed environmental and other valuations that are of a cultural nature. This view is supported by the Burra Charter's definition of social value as

... embracing the qualities for which a place has become a focus of spiritual, political, national, or other cultural sentiment to a majority or minority group (cited in Young 2004: 3).

The above definition was generated within the context of cultural heritage management. Social values can also be more generally thought of as

... sets of ideals and beliefs to which people individually and collectively aspire and to which they desire to uphold. They structure the traditions, institutions and laws that underpin society (Jepson & Canney 2003: 271).

The current distinction established by the CRG between non-Indigenous social values and Indigenous cultural values may not be helpful in building a better understanding of values, nor to engendering a strong sense of fairness in the treatment of all groups with interests in the region.



1.2 Methodology

Research methods for this study involved documenting responses to information conveyed at nine meetings conducted since January 2004 in the Daly region, including Katherine, and in Darwin. Key senior Aboriginal people were interviewed in various locations. During the second half of 2003, a number of meetings had been held with Malak Malak, Wagiman and Wadjigan at which CSIRO research on Indigenous values of water was discussed. Information relevant to this report obtained during 2003 has been included.

A limited amount of published material was also reviewed. No attempt was made to undertake any field-based quantitative survey of characteristics, attitudes and aspirations of the Aboriginal population. It is understood that the Demographic Profile (Griffith 2004) and the social values research (Young 2004) would provide quantitative and qualitative data to further complement this report.

Relevant Aboriginal groups and persons were identified from the Northern Land Council's Land Interest Register and from a series of meetings organised by the Northern Land Council's Darwin/Daly Region Office. For the purposes of the cultural values study attention was given to the Focus Group Area rather than the entire catchment. Given the proximity of the CRG Focus Area 'boundary' to Katherine it seemed easier to involve all groups likely to be affected by further developments in that area than to determine which need not be consulted.

Most meetings were organised by Northern Land Council staff although in Katherine, Sue Jackson of CSIRO directly arranged meetings with the Jawoyn Association, Wardaman Association and with the Wagiman. There was not the time to meet with the Executive of the Jawoyn Association.

Consultations were based upon a Northern Land Council/CSIRO information booklet in plain English prepared specifically for this study (titled Land and Water Planning in the Daly/Katherine Region). Copies were left with people attending meetings to enable them to further reflect on the issues. Large maps of the bioregion, focus area, proposed conservation areas, and land clearing (both historical and approved in 2003) were provided by the CRG Secretariat to aid discussions. Record-keeping relied on researcher's notebooks, with digital audio recording being undertaken in some cases.

Consultations and research with the Aboriginal community covered a large range of topics. As discussed above, it was important to convey an accurate picture of the context in which people were to contribute their knowledge, perspectives and values. *It needs to be emphasised that collection of such material has not been satisfactorily completed by the work conducted to date.* The following list of issues was discussed at all meetings.

- Sustainable development
- Catchment management
- Intensification of agriculture
- Ecological significance of the Daly River and environs
- Daly River hydrology
- Background to recent agricultural developments
- Possible impacts from agriculture, including weeds
- Water use for agriculture
- Water allocation and water extraction





- Conservation planning in the bioregion
- Conservation management, including conservation corridors
- Wetland management
- Planning processes and Aboriginal participation

It should be noted that the views contained in this report do not represent a consensus view of each of the groups consulted. At no time were people asked whether they consented to any particular aspect of the development proposals or environmental management options under consideration in the CRG planning process. The perspectives, opinions and expressions reflect the views of members of particular traditional land-owning groups rather than the group as a whole.

1.3 Limitations and constraints

Timeframe

A number of significant issues constrained the conduct of the cultural values study. Firstly, the time allowed for the preparation of a Draft Integrated Land-Use Plan was extremely short, which gave rise to scheduling and methodological limitations. Logistically the consultation exercise was demanding. In the Daly CRG Focus Area there are 10 groups requiring some degree of involvement². Table 1. shows the groups affected corresponding to a general area of interest as traditional owners.

Table 1. Aboriginal groups affected by proposed Daly River Integrated Land-Use Plan

Aboriginal group	Area of interest
Wadjigan/Kiyuk	Daly estuary and surrounds
Malak Malak and Kamu	Lower Daly, Nauiyu and surrounding floodplains
Nanggiwumerri, Maramanindji, Marranunggu	Western portion of CRG Focus Area, including part of Port Keats Land Trust
Wagiman	Middle reaches of the Daly and Douglas area
Wardaman	Flora River region
Dagoman	Katherine area
Jawoyn	Katherine area and north-eastern portion of Focus Area

Originally it was envisaged that the consultation program would involve two sets of meetings with each group. During the first meeting the context was to be discussed and the Government's broad plans for intensification of agriculture, conservation and water planning introduced. At the second set of meetings more detailed information was to be elicited from Aboriginal groups, ideally involving visits to country. The second set of meetings was not held for lack of time and due to the inaccessibility of various places over the wet season. Three groups from the western portion of the Focus Area, Nanggiwumerri, Maramanindji, and Marranunggu, have not been consulted at all. Hence, the depth and reach of the material collated here has been affected.

² The number of groups differ slightly from the NLC/Aboriginal Areas Protection Authority Report (2004) which covered the entire catchment



A more realistic timetable would have facilitated the involvement of all interested groups and allowed for more extensive consideration of impact issues, Aboriginal values and ameliorative strategies. *It is therefore imperative that this report is considered preliminary.* Additional work is needed and so attention has been given in this report to recommendations for further research and activity to enhance direct Aboriginal participation in on-going planning processes. Greater time and resources will be required to build Aboriginal community capacity to contribute further to the preparation of the Plan and its implementation.

The Northern Land Council's concerns about the inadequate timeframe were conveyed to the CRG Chair in February 2004, and to the Chief Minister of the Northern Territory by letter in April, in which a request was made for an extension. The three-month period available for consultations and research occurred during a late and heavy wet season, which considerably impeded access to communities. For instance, a four-day set of meetings at Nauiyu had to be cancelled due to heavy rain in the catchment ten days prior to the end of March isolating the community and outlying outstations. Isolation from rain has been particularly problematic in the case of the three groups from the western side of the CRG Focus Area, namely the Nanggiwumerri, Maramanindji, and Marranunggu.

A further pressure arising from the lack of time was the competing demand on communities arising from other priorities, particularly the NT Parks negotiations. A set consultation timetable for those negotiations rolled out during the first few months of 2004 reducing the community time available to discuss the Daly River project.

Whilst the focus of this study has been communicating with traditional owners, there are nonetheless other communities of interest in the region that might be affected by the Plan or other land use decisions. As a result of settlement policies and social change, many Aboriginal people have moved away from their traditional estates and are now living in Nauiyu and Katherine. There is a need to ensure that these affected people are properly informed of land use options and involved in decision-making processes. It is unlikely that the consultations designed to ensure general public awareness and participation in the planning process will effectively engage this group.

Lack of awareness of context

During the first round of meetings designed to discuss the planning context and the current information base, the widespread lack of awareness of Government planning activity became apparent. At every meeting outside Nauiyu the members of each group stated they were unaware of Government plans to intensify agricultural development in the Douglas area and the more recent decision to prepare a Daly Region Integrated Land-Use Plan. At Nauiyu, community members were better informed because of the publicity surrounding the land clearing at Stray Creek. Researchers from CSIRO, Charles Darwin University and the Australian Institute Marine Science had also previously visited Nauiyu to discuss riparian health and resource governance.

The high degree of ignorance has significantly impacted on the course of the study. More time was needed to provide basic information to prepare Aboriginal people to contribute their views, and as a result, less time was available for detailed and comprehensive documentation of the cultural values.

Concomitant with the community ignorance was the lack of certainty over development plans and what might be referred to as the planning context. In most exercises designed to elicit Aboriginal responses to development projects, eg. social





impact assessment³, the scope and detail of the project is well understood by researchers. Good planning practice requires decision-makers and researchers to have a clear and sophisticated grasp of the project being developed (Howitt, Jackson and Bryson 1998). For the purposes of community consultation it was necessary to assume that the development options were likely to be similar to those being pursued by Government until late last year, whilst making clear that the issues were to be scrutinised by a multi-stakeholder committee that would seek input from all groups prior to and following the production of a draft plan. Statements from the NT Government in late 2003 ruled out dams on the Daly, cotton production and further subdivision or land clearing approvals until a draft Integrated Land Use Plan is complete, providing some guidance on those matters (Daly River CRG Draft Meeting Record, 29 March 2004).

Although the NT Government has been trying to facilitate community participation in a planning process rather than seeking consent to a development proposal, considerable effort had been devoted to agricultural and biodiversity planning over the past decade. Steps have been taken to implement the Government 'vision' for the Douglas/Daly area e.g. land has been subdivided and sold with permission granted for some land-clearing and water use. While it might be said that the current 'openness' or flexibility of the process provides people with the opportunity to influence Government planning processes and decisions before they are entrenched as Government policy, the twin roles of informing and seeking Aboriginal responses and perspectives are made more difficult by the general nature of this project. For instance, it was not possible to point to specific tracts of land and state that these would be used for X or Y types of agriculture. Similarly, there was little information available on the water use options for extraction or storage. Abstract and hypothetical concepts are particularly hard to apply effectively in a context such as this because of the way in which Aboriginal methods of communication prefer to maintain a direct link with the immediate reality.

Research documents relating to environmental flows were available for translation to Aboriginal audiences (e.g. Begg *et al* 2001), although in the case of the Erskine Report (2003), the status of its recommendations was unclear. Minutes from the first CRG Meeting revealed a two-page internal draft document titled Water Allocation Planning in the Daly Basin (DIPE – Daly Basin Information Sheet – September 2003), which was relied upon as a starting point for discussing principles for water allocation planning. For example, no additional bores should be permitted within three kilometres of the Daly and Katherine Rivers unless hydrological modelling demonstrates no impacts on river flows or water quality. This and many of the Erskine report's other recommendations are acknowledged as ones that would be recognised by the forthcoming water allocation plan:

<http://www.ipe.nt.gov.au/whatwedo/dalyregion/about/factsheets/waterresources.html>.

Historical legacy of poor Aboriginal participation

The historical legacy of negligible Aboriginal involvement in research and planning has placed a considerable burden on this project and limited the little time available to ascertain Aboriginal interests in the various landscapes likely to be affected by the proposed Plan. It is very likely to play a significant part in informing Aboriginal people's assessment of their capacity to influence contemporary decisions and negotiate as equals (Jackson 1996). For instance, the Waterways research project examining the condition of the Daly was conducted in the absence of Aboriginal involvement (Faulks 1998), as was the conservation planning research (NT DIPE

³ Social impact assessment is a planning tool designed to understand the distribution of costs and benefits of project development at the local and regional levels.



2003), and the environmental flows work (Erskine 2003). Agricultural feasibility studies conducted by government agencies have also not engaged with the Aboriginal communities, nor their representative bodies, in ways readily apparent. Such a background can, in part, explain how one Wagiman man at a meeting in December 2003 said that he had thought that the farming being discussed was in the Katherine area, and not in the Douglas area where Wagiman have traditional land interests.

Another important factor influencing the perspectives of Aboriginal people on land-use matters is the nature of power relations within the region. Power imbalances created during the early decades of settlement and sustained until recently have an enduring effect on the consciousness of Aboriginal traditional owners and residents. For example, a senior Wagiman man suggested that to raise issues of concern relating to environmental management of Stray Creek or other Daly River country might result in the Government taking back the land that was granted via the Upper Daly Settlement⁴ (Pine Creek, 23 March 2004).

An historical background is crucial to understanding the contemporary degree of incapacity amongst the Aboriginal community, one that is albeit common to many regions across the NT. For this reason, the historical overview provided by the Northern Land Council and Aboriginal Areas Protection Authority (March 2004) to the Expert Reference Group is recommended to CRG members and others. Contact history records periods of extreme violence against a background of declining Aboriginal populations. Aborigines were an indispensable labour force in all industries but they generally worked on a casual or seasonal basis, and regularly returned to their bush economy. Many of the early industries relied on water for processing (minerals), transport (ore, supplies) and for stock or irrigating crops. Aboriginal people retain strong memories of earlier eras and their historical experience continues to inform the views they hold today⁵.

Aboriginal people consulted during the course of this research expressed a sense of exclusion and isolation from contemporary land-use decisions. On occasion this was expressed directly, such as when one senior Wagiman man stated:

When those farms went through at Ooloo area, Stray Creek, they didn't give those Aboriginal people any news. They didn't tell any Aboriginal people about farms from Tipperary to Ooloo. They're going to make a big road. They didn't get a guideline from the Aboriginal. They should have proper respect.

⁴ Wagiman people negotiated a settlement to the Upper Daly Land Claim in 1999. The terms of that settlement entitled them to formal consultation over agricultural development planning and conservation planning in the Stray Creek area, and to periodic visits to sacred sites to be facilitated by the NT Government. Wagiman participation in any management of conservation corridors was also guaranteed. Title to a number of blocks was to be granted to Wagiman in exchange for withdrawal of the Aboriginal Land Rights Act claim and government acquisition of native title to Stray Creek. Until the Terms of Settlement were brought to the attention of the CRG in December 2003 the clauses relating to formal consultation over land-use planning and sacred site visits had not been addressed. Management of the conservation corridors has been minimal (Brett Easton pers comm.), although Wagiman people have stated an interest in being informed of vegetation clearance monitoring and other issues that may have a bearing on the vegetation corridors.

⁵ For instance, Bidy Lindsay holds strong views opposing diamond mining in the region because she believes that copper mining poisoned water holes and was responsible for the death of some of her people (Naiyu, 15 April 2004)



Aboriginal spirit all through the land. When they knock all the trees they destroy the country (Pine Creek, 24 February 2004).

On another occasion the concern was expressed indirectly, reflecting a general sense of powerlessness, as illustrated by one senior Malak Malak woman, who described her and her people as 'poor people', suggesting that they were not as influential as wealthier groups in society. She described the changes to her country in the following terms:

Farmers that come first they didn't have any engine, no tractor, just mattock. Black fella used to come with them. They used to fill up the water drum – I seen it. After Christmas they've got to collect rainwater, not from the river to grow 'em. They didn't have any engine. Not much cattle. Not much buffalo in this country – only kangaroo and wallaby. Pig come recently. They used to grow rice.

Big trees have all gone – long time trees all gone – only straggly one now...

Before - the country was natural – that's a good country – same in NSW before.

(When asked about the agricultural developments at Douglas) They're doing it now and we didn't know. Now we know they're emptying out the water and putting it on the farms... After we empty the water out where are going to get the water from? Water is special to Aboriginal people. Take the water out and they make the money. We're left with the damage. They're making the money. What about Aboriginal people?... We have to look after the water – that's all I've got (Naiyu, 21 October 2003).

In relation to Aboriginal social or cultural values, decision-makers need to consider how fairly Aboriginal people have been, or are to be treated by the processes designed to research and change land-use in the area, develop the regional economy and allocate water to various user-groups. To answer this question one might ask:

- Have their interests been afforded the attention they deserve given the history of Aboriginal affairs and levels of Aboriginal participation in the regional economy?
- Is there a high level of awareness of the issues amongst the Aboriginal community?
- Are their distinct perspectives and needs well understood, particularly the secret/sacred nature of some forms of knowledge?
- What attention has been given to their rights as Indigenous people with their own systems of traditional law?
- Have Aboriginal communities been able to capably represent their perspectives and are they satisfied with the level of influence they have over decisions affecting the region?
- How are conflicting values and those that might be incapable of quantification to be addressed by decision-makers?
- Have all the alternatives been adequately investigated?
- What measures have been designed to ensure that Aboriginal people participate as equals in on-going management of change (including monitoring) and research processes?



2 The social context of catchment management planning

2.1 Aboriginal social relations in the Daly catchment

Throughout the world catchment management projects play an increasingly important role in addressing environmental problems such as soil erosion and degradation of water resources (Kerr and Chung 2001). Social relations and structures are now receiving increased attention in bringing about catchment-wide change in land use policy and practice. According to Syme *et al*:

Successful catchment management requires foremost an understanding of people's basic and contrasting needs from water resources and their cultural relationship with the water catchment. Understanding and managing the interconnectedness of their collective activities is essential in order to ensure good water quality throughout the catchment, ample water quantity for the catchment and all its requirements, environmental and human (2004: 6).

Syme *et al* (2004) have developed a set of criteria for the design of socially accountable processes for water use decisions, although they are relevant to catchment management contexts more generally. The criterion include:

- The development of an overarching goal and ethical framework that meets peoples basic needs – i.e. sustainability.
- Definition and establishment of a social-bottom line for 'sustainability', as a first imperative of integration with other disciplines/bottom lines – i.e. engage social analysts even before conceptualising the new water use operation, research or policy.
- Establishing wide community consultation/broad stakeholder involvement as a procedural requirement for the proposed water use.
- The development of a properly facilitated and fair process of public engagement and involvement.
- Gauging through assessment (of the above and other processes) the social needs and aspirations of the target population e.g. accommodating the social visions of the community/society taking into account its historical development, demographic diversity and change factors; and, ensuring the maintenance of existing and expected services and facilities.
- Establishing an adequate process that will elicit a conceptual, qualitative and quantitative (where possible) understanding and measurement of other, less comfortable needs via the facilitation of engaging relevant community groups;
- Collecting information to assist in defining unavoidable trade-off of community values and needs, which includes understanding community processes (2004: 7).

Providing for appropriate Aboriginal representation is a vital issue in ensuring Aboriginal participation in catchment management planning. There are at least 11 discrete Aboriginal groups associated with the catchment area (Northern Land Council/Aboriginal Areas Protection Authority 2004). Principles of the land tenure systems in the region are provided in the Northern Land Council/Aboriginal Areas Protection Authority Report (2004). The language group is the most common principle of land tenure in the Daly region, brought about through the co-location of groups drawn from an extensive area and extinction of many local descent groups.



The Northern Land Council/Aboriginal Areas Protection Authority Report describes this system:

Thus, amongst most of the land holding groups, the language owning group is recognised as the group that has affiliation to, and primary rights and responsibilities for, a non-segmented language owned land. For instance... all Wagiman are equal in status as land-owners for all Wagiman territory (2004: 18).

The Report argues that there is variation throughout the region and some groups have local descent groups which belong to estates or sub-regions of the language group's territory (ibid). Two examples given are Malak Malak and Nanggiwummerri. Aboriginal groups in the region can be said to share a similar world-view derived from the Dreaming:

All the land holding groups in this region believe that their rules for social, economic and religious life were established by the Dreamings in an epoch when they introduced law to that particular people and gave meaning to their territory. Such law establishes the rule over the particular country concerned, what this country contains, and what the appropriate actions (including gendered ceremonies) are appropriate (sic) in maintaining that country. Each group believe that the signs from ancestral beings left in the landscape (sacred sites⁶) prove that their particular law is handed down from the Dreamtime. The Dreaming also established geographic and social boundaries between groups (2004: 20).

Social identity of land holding groups in the region is reinforced by three factors, according to Lum:

- a sense of common tradition;
- their mostly shared lifestyle nearby to their traditional country; and
- shared beliefs concerning their relationship and responsibility to their land (cited in Northern Land Council/Aboriginal Areas Protection Authority 2004: 21).

Whilst social solidarity within groups is high there are also cultural institutions that link land holding groups within the greater region and beyond. For instance, Yulun, a traditional trade and exchange system used to link groups in the general region including Wardaman, Jamunjing, Murinbatha, Nanggiwummerri, Nanggigurrunggu and Wagiman, Gurinji, Mudburra, Dagoman and Jawoyn (ibid). Groups are also linked by the tracks left by Ancestral Beings, or Dreamings, who travelled widely. These tracks 'link social groups as well as geographic areas' creating a special relationship between groups (Northern Land Council/Aboriginal Areas Protection Authority 2004: 22). In the 1930s, Stanner noted that some Dreaming characters appear on tracks well beyond the estates of any given group in the Daly region (Drew 2001). For instance, he tracked the story of Jiniman the Bat, the son of the Rainbow, which held different names in the Murinbatha, Marthiel, Wagaman and Wardaman languages. The Bat and Rainbow story is today common to Wardaman and Wagiman mythology according to Drew's research⁷ (2001: 55).

⁶ Landscape features

⁷ Drew mapped the pathways of the ancestral Dreaming sites visited by Bat and Rainbow showing the extent of their movement through the region (ibid).



Initially two positions on the CRG were dedicated to Aboriginal representative organisations: the Northern Land Council and ATSIC. The Northern Land Council's Deputy Chairman, John Daly, who is a traditional owner from the region, assumed the role for the Northern Land Council. None of the five 'community representatives' were Aboriginal. The adequacy of Aboriginal representation on the CRG was raised by the Northern Land Council in correspondence to the Government. According to the Demographic Study of the Daly region, 50% of the Daly region is Aboriginal (Griffith 2004). In the Northern Land Council's view, there needed to be more Aboriginal representatives and, in particular, greater representation from the Wagiman people, who hold land in the area subject to recent controversy over land-clearing. In response, the NT Government established an Indigenous Values Subcommittee to give advice on indigenous issues. According to the CRG Meeting Record, this move 'recognises that it is difficult for one or two people to give comprehensive advice. People from the relevant indigenous groups sit on this subcommittee' (Draft Meeting Record, 29 March 2004). A Wagiman woman, Mona Liddy, was nominated by the Wagiman and John Sullivan, from the Daly River Land Trust area, was selected by the Government as the second member.

The question of Aboriginal representation warrants greater attention than it has been given in the Daly planning process to date. Not only is the composition of the Committee important in ensuring Aboriginal methods of political representation are being appropriately addressed, is it also vital to consider how capably a small number of voluntary people can represent the diverse, large and widely dispersed Aboriginal community. Efforts have been made by the Northern Land Council to support the Aboriginal representatives, although lack of time and competing priorities have constrained the organisation and individual CRG representatives.

The desire to respond constructively to the issues under consideration was expressed by numerous Aboriginal people. For instance, one man at the Wadjigan/Kiyuk consultation, when discussing the concerns of Aboriginal groups upstream, asked 'how can we support those people?' (Belyuen, 6 April 2004). A number of groups wanted to see all the Aboriginal groups with interests in the Daly and its tributaries getting together to hear each other's perspective. This idea was initially raised by John Daly, Northern Land Council Deputy Chair, in mid 2003. It was again raised at the Northern Land Council Darwin Daly Regional Council Meeting in October at Pine Creek, by Malak Malak people in October 2003 and by Wardaman people at a Katherine consultation in February 2004. At a Katherine consultation, interest was expressed in talking to the Daly groups at a 'big meeting of all the river people to straighten us up along the river' (Neville Brown, 23 February 2004). A few of those attending meetings spoke positively of the opportunity to participate in the planning process, in working together and learning more about catchment issues as natural resource management processes continue to evolve.

Bill Harney of the Wardaman people affirmed the need for Aboriginal people to understand the issues and to contribute to public debate:

We've got to talk about it over and over to be sure everyone understands. People need to hear about it and think (Katherine, 20 April 2004).

2.2 Aboriginal land management activities

The following section provides a brief description of recent efforts by Aboriginal people along the Daly to regain control and management of country. It focuses on the



middle and lower reaches of the Daly River country. There has been insufficient time to document the land management activities of other groups in the Focus Area, including the Wardaman, Jawoyn, Wadjigan/Kiyuk and others.

Malak Malak

Aboriginal people have sought recognition for their traditional rights to land and water in the Daly River region on a number of occasions since the introduction of land rights legislation and the Commonwealth's Native Title Act (1993). For instance, in 1974 Malak Malak people expressed concern about pastoralists operating in their tribal area, including Tipperary – Elisabeth Downs and Litchfield Stations. They sought to purchase Elisabeth Downs but the application was rejected on the grounds that the land was not for sale and there were insufficient funds for the purchase. A claim was lodged with the Interim Land Commissioner in 1976. A further claim was lodged with Mr Justice Toohey in 1978 to vacant Crown Land at Daly River.

The Malak Malak claim, heard in 1981, saw a determined effort by traditional owners of the lower reaches of the Daly to claim the river bank, surrounding billabongs and other land, as well as the river itself (Malak Malak Land Claim Transcript of Proceedings at Daly River, 13 October-14 October 1981). Traditional knowledge and use of the land persisted with a 'remarkable richness' according to the authors of the claim book (Sutton and Palmer 1980: 25). The wealth of traditional resources utilised by the claimants was, in the view of the claim researchers, a major contributing factor to unbroken Malak Malak residence within their traditional area (Sutton and Palmer 1980: 80).

During the hearing claimants confirmed that they wished to see the Daly River crossing reserve, Robbie's Sandbar and Brown's Creek Reserve all included in the claim, in order to ensure continued Aboriginal access. Claimants were willing to allow non-Aboriginal people access to camp and fish in those places. JT⁸, when asked specifically about ownership of the river, replied that Malak Malak should own it along with the river bank⁹ (1981: 730).

At that time Albert Myoung, on behalf of the Malak Malak, declared an interest in having the banks of the Daly River and the River Reserves established as a park, in order to 'run it with rangers like a park and this other place, like Cobourg' (ibid: 740). Albert was supportive of the notion of an agreement between the Aboriginal owners and the government to allow for joint management. Pressure on the area from camping, fishing and boating was of concern, particularly the need for toilets. An active management program was seen as a solution to the problems for the river created by recreational use. According to Bidy Lindsay and other older Malak Malak, the environmental pressures from tourism have continued and increased in impact over the past few decades, particularly since the road was improved. For example, at Mt Nancar Conservation Reserve, some traditional owners feel that they have had to clean up after tourists and manage the area without any assistance from land management agencies.

On-ground control work of the wetland weed, *Mimosa pigra*, had begun on Malak Malak lands in 1997, with limited equipment and assistance from outside agencies. This was moved to a new level with Malak Malak involvement in two major Northern

⁸ This person is likely to be deceased. Use of his full name may cause offence.

⁹ The Malak Malak and Upper Daly Land Claims included claims to the bed and banks of the Daly. They drew on a provision in the Aboriginal Land Rights Act (1976) to declare the river banks an 'open area' (s. 11(1)) whereby access to the public would be secured (Kearney 1991). Both claims were recommended for grant by the respective Land Commissioners.



Land Council Caring for Country Unit-facilitated funding agreements for on-ground mimosa work and aerial spraying activities. Aerial control commenced in January 2000 with enhanced on-ground activities following soon afterwards.

The Malak Malak Land Management Program activities are supervised on a day to day basis by Albert Myoung. The program is administered by the Malak Malak Aboriginal Corporation and Albert liaises with the Wangamaty (Lower Daly) Landcare Group Coordinator.

Malak Malak people have been active in the Wangamaty (Lower Daly) Landcare Group which was established in 1999¹⁰. Wangamaty was created out of a concern about weed issues in the area and the desire to see a coordinated regional approach to weed management. Other landholders have since become interested in land management issues and lately, the Daly River development proposals. River bank erosion and river water quality have emerged as issues of interest to the group. Approximately half of operation monies are absorbed by weed management activities¹¹, with feral animal control and revegetation consuming approximately 20% each, and water quality monitoring activities 10%. Members of the Nauiyu Council and Wangamaty are especially concerned about the prospect of weeds spreading out of the agricultural area downstream should more introduced pastures be established¹².

Wagiman

In 1983, further upstream, a land claim was lodged to vacant Crown Land in the Upper Daly region. Wagiman people hold most of the land claimed as part of the Upper Daly claim, which was the last to be resolved in the Daly region. The Yabulyawun group, a subgroup of the Wardaman language group, share interests in this claim area (Kearney 1991). Wagiman are people are now substantial land-owners in the region with over 4,500 sq. kms. under their control.

Wagiman call the Daly River *Guwardagun* (Wilson 1998). Since the 1920s, most Wagiman people have spent their lives working on Ooloo, Douglas, Claravale, Dorisvale and Jindare. Many now live at Kybrook Farm, Pine Creek and Darwin. In 1998 there were ten fluent speakers of Wagiman language (ibid).

For a range of reasons Wagiman people have been unable to re-establish permanent settlement in the Upper Daly Land Claim area (Taylor-Hunt n.d.). With no resident Wagiman presence a number of land management problems emerged: uncontrolled wildfires, increasing numbers of feral animals and illegal access (ibid). Spread of wildfires off Wagiman land was a source of complaint from neighbouring properties. In response, in 1998 the Northern Land Council's Caring for Country Unit commenced land management planning to address the issues facing Wagiman land. Recently the Wagiman –Guwardagun (Daly River) Ranger Group was established.

¹⁰ The following information was supplied by Paul Donohoe, the Coordinator of the Landcare Group.

¹¹ See Ecoz Environmental Services (2003) for a detailed account of weed management policy and activities in the Lower Daly area.

¹² Ecoz Environmental Services identified twenty-five declared weeds species from the Lower Daly region.



According to Melissa Bentivoglio, the Landcare Facilitator for Wagiman-Guwardagun Rangers:

In addition to ownership of the land, Wagiman people are seeking greater access to their country, to look after their land, to maintain their culture, to reduce social problems in town, and to develop a greater economic base for their people.

In 2003, Wagiman people employed a land management facilitator to assist in setting up a Ranger Program and with other aspects of land management and development. Thus, the Wagiman – Guwardagun (Wagiman name for Daly River) Rangers were formed, as well as a range of other programs which the Wagiman people have been thinking about for many years (pers comm. 24 April 2004).

Wagiman's Ranger Program involves the following activities:

- Weed control
- Feral animal control
- Fire management
- Growing a garden
- Native plant project
- Wild plant harvest project
- Bush records
- Bush turkey research
- Cane toad trapping research
- Fencing
- On Country camps
- Training in Resource Management and a range of other short courses.

The Rangers are employed through the CDEP at Pine Creek Aboriginal Advancement Association, and also receive a top-up. There have been approximately 20 CDEP participants involved in this program. In addition, there are a few older Wagiman people that mentor the Rangers in their work (Bentivoglio pers comm. 24 April 2004).

Wagiman people are also involved in a range of other work for their land:

- Cattle Committee - development of their business, governance training
- Parks Management – Umbrawarra Gorge and Tjuwaliyn (Douglas) Hot Springs
- Trials of cultural walks and talks for tourists
- Pet meating – horses, donkeys, pigs
- Sacred site management
- Gas pipeline work
- Daly River projec.
- Land Management workshops / planning

Melissa Bentivoglio describes the importance of land management to the Wagiman community:

All Wagiman people have a role to play in the management of their country, and this is increasingly played out in the diversity of projects they are taking on. Wagiman people have decided to run a land management workshop every 3-4 months, to discuss their achievements and plan their next steps. Land



management is forever, and Wagiman people are taking a step at a time to sustain their land and build something for their future (ibid).

The Land Management Project was established with two years funding from the Indigenous Land Corporation and Regional Solutions Program. The funding is not secure.



3 Aboriginal cultural values

Cultural values cannot easily be separated from other social values of a landscape or riparian environment. The cultural element relates to a distinctive and preferred way of life of a group or groups of people. Social impacts arise from changes in way of life, culture, tradition or community structure, cohesion and stability. More commonly, in relation to major developments, social impact can be defined as the effect of a development on people, and specifically the changes that a development would bring about to:

- people's way of life (how they live, work, play and interact);
- their cultural traditions (shared beliefs, customs and values), and
- their community (its population structure, cohesion, stability and character)

How much change can be tolerated will be dependent upon the circumstances and the capacity of the group concerned to adapt. An assumption made by some social impact researchers is that the capacity of a community to respond favourably to change is enhanced by the degree of control they have over how the change is implemented (see Howitt 1993).

In relation to Aboriginal societies facing change, a focus on places or sites may develop as people strive to retain their traditions in the face of the pressure. According to Kolig, sacred places may come to 'embody for them their desired cultural distinction' (1996: 370). Traditions in the Daly remain vibrant as a result of social action and recounting of stories which convey the meaning and enduring significance of water (Northern Land Council/Aboriginal Areas Protection Authority 2004). Land management practices, ceremonial activities, hunting, fishing and bush tucker collection provide the means by which people interact with the cultural landscape as well as provide for their economic needs. These practices, and the resources collected for subsistence and other needs, signal broader social and cultural meanings complicating the taken-for-granted distinction between use values and symbolic values. For example, a food item can be a conception Dreaming or a Dreaming communicating danger to the hunter or someone in the family (Sutton and Palmer 1980).

Maintenance of Aboriginal culture in the context of land-use change was discussed in a planning document prepared for the Broome region in the late 1990s. This discussion provides a simple and useful understanding of Aboriginal culture, one that can be translated to the context under consideration here:

If Aboriginal culture could be simply defined, then we could say it was the manner in which members of the Aboriginal community undertake their daily way of life. Their cultural way of life is not only associated with sacred sites or areas of importance and heritage, but the way they live each day, conduct their livelihoods and business, express themselves and relate to their family structure and the community as a whole. To maintain Aboriginal culture in Broome is to enable the Aboriginal community to undertake aspects of their livelihood as they have been doing for thousands of years, while being part of and also interacting with non-Aboriginal culture in the wider community (Department of Land Administration, 2000: 17).

There is another constraint on the collection of information on cultural values that has not yet been discussed. Information and knowledge are not freely available, separated from their value and contexts as facts, nor their exchange free of power



relations between interpreter and interpreted, especially knowledge held by Aboriginal cultures (Jackson 1998). John Daly, the Northern Land Council representative on the CRG, elaborated on this issue when he referred to the 'two-sides of culture': the secret/sacred side and the public side. In discussing the content of this report, John stated:

One side doesn't come out around tables like this. Its been passed on to me from my father and from his father. It's in songs that are performed in ceremonies. You won't get that inside information mentioned for a report like this because Aboriginal people are very reluctant to talk about this... No one will go into the use of water in ceremonies in any depth with anthropologists and the men won't tell women their stories (Naiyu, 17 May 2004).

3.1 Measuring cultural values

Jepson and Canney are critical of the over-emphasis on expert-led science and economic rationalism in conservation policy:

The relevant ends for economics and science in conservation are material wealth and environmental health, respectively. However, humanity's set of valid ends is more eclectic and includes, for example, emotional and spiritual well-being. Therefore, to maintain a vibrant public mandate, conservation policy needs to champion these important spheres of human concern alongside the more limited economic and instrumental values (2003: 271).

Aboriginal people engaged with the CRG process are aware of the weight typically given to economic values, or the market value, of resources or elements which might not, under Aboriginal ways of perceiving the world, be considered *resources*. Western culture tends to have mainly a 'resource attitude to water' (Syme *et al* 2004: 6) in which the term 'resource' stresses the utilitarian value of a life form or natural feature such as timber, water, or a fish. Aboriginal societies do of course make use of many plants, animals and other environmental elements important to their economies and lifestyles. Riverine resources are a vital part of the Aboriginal subsistence economy. In many places fish, prawns, mussels, stingray, turtle and shark are heavily relied upon for protein and plants are utilised for traditional medicines and in rituals (see Appendix 1 for a synopsis of the published material on the ethnobiological knowledge of Malak Malak and Matngala).

Quantification of water volumes for the purposes of sharing water amongst various users raises difficulties for Aboriginal people to address, as the following question from John Daly reveals: How much water does culture need? Feedback from the Aboriginal participants suggests that they have been conscious of the emphasis given to quantitative measures and monetary values, in the Daly process at least, and most probably in the way other societal decisions are made.

Cultural values should not receive less attention because they are either beyond quantification or difficult to capture in traditional utilitarian calculus of market transactions. Jepson and Canney refer to such social values as ones which promote a sense of 'groundedness', security, self-expression, belonging, identity and spirituality (2003: 273)¹³. The responses given by Aboriginal people during the course

¹³ Syme *et al* (2004) conceptualise social aspects of water management via an organisational tool called a sphere of needs. A range of individual and community needs in regards to water



of this study relate to all these concepts and were the values that most preoccupied people. They will be discussed more fully in the following section. As stated before, some emphasis was given to the utility of the environment to local economies, but far less than that given to the non-utilitarian values.

Meaning is assigned by the human mind and so the notion of the significance of a place or environmental element such as water is a dynamic and relative concept. Byrne describes significance as 'ascribed rather than inherent, changeable rather than stable' (2003: 56). The elusive nature of water's cultural value gives rise to two problems. Firstly, there is the difficulty of understanding the significance of water to differing cultures and translating it into the resource management policy and planning institutions of Western society and culture. Secondly, in balancing the various values (social, economic, environmental and cultural), which are by consensus considered to be critical by the Community Reference Group, particular choices will have conflicting objectives. Typically in such situations trade-offs are made where something on one objective is given up in order to achieve more in terms of another. Social and cultural values can be elusive, nebulous, and subjective, thus giving rise to great difficulty in determining a basis of comparison which enables objectives and consequences to be consistently evaluated. Usually monetary value, or price, is most influential.

Catchments consist of multiple users who are affected differently by any given proposal. Thus the benefits and costs of various scenarios will not be evenly distributed further complicating the balancing act (Kerr and Chung 2001). During the course of this study the prospect of economic gain for Aboriginal communities arising from the agricultural development proposed was raised only twice, in the form of an inquiry. At Belyuen, Ben Cubillo (Senior) asked whether there are any 'jobs or benefits for Aboriginal people' (6 April 2004). Audrey Morgan stated that she was 'not interested in the farming just what might happen to the country. I grew up at Daly' (Belyuen, 6 April 2004). At Katherine, Bill Harney said 'Might be government wants to talk about paying rent to Aboriginal people?' (20 April 2004).

It should be clear from the introductory sections that this study did not attempt to quantify the amount of water required by Aboriginal people to protect their way of life, their spiritual well-being and relationships with country. Syme *et al* reinforce the value of well-formulated qualitative assessments:

While it is tempting to assume one could assist decision makers by counting the numbers or areas of water bodies or the quantity of water or even the number of fish available for anglers as a robust measure of benefit, it is clear that these numbers need to be interpreted within both procedural and distributive justice paradigms... the benefits need to be interpreted by the decision-makers in the context of procedurally just decision making processes and in terms of the relative 'treatment' of differing benefits (2004: 10).

For these reasons, special attention has been given to matters of process in the discussion and recommendations.

I am unaware of any case in Australia where specific water allocations have been made to protect Indigenous cultures, although there is a number of water planning processes which have sought to better understand the cultural values of water. In the

are nested within a large sphere and include both utilitarian (e.g. wealth, recreation) and humanitarian need (e.g. moral and cultural, aesthetic etc). All needs are to be met to satisfy the sustainable outcomes



Kimberley, environmental water requirements have served as a surrogate for protecting the cultural values. In other words, the ecological values have underpinned the cultural values. This may be the case in the Daly region although it is not known with sufficient certainty.

In the Murray Darling Basin, the notion of a 'cultural flow' has been developed to ensure a specific allocation is made to protect Aboriginal priorities (Morgan et al 2003). Researchers have drawn on a clause in the Native Title Act (s. 211) which in their view,

provides a precedent for the prioritisation of Indigenous rights to natural resources second only to environmental and scientific research concerns. Indigenous peoples are entitled to seek such a priority in the future allocation of water resources. The allocation of water rights should consider the environmental flow and the cultural flow, arguably on a Nation by Nation basis, before commercial or other economic interests (2003: 4).

To date there has been insufficient research in the Daly catchment to satisfactorily address Aboriginal interests in water allocation planning. This was noted at the Environmental Flows Workshop conducted in Darwin on 4 May. Aboriginal people have not had the opportunity to consider whether there is a need for a separate 'cultural flow', for example, nor to contribute to the information base relied upon in formulating the Erskine recommendations for environmental flow requirements. Opportunity should be provided to explore these research issues with relevant members of the Aboriginal community and others with expertise in this area.

3.2 Aboriginal cultural values of water

Hoekstra argues that the existence of different cultural attitudes account for many of the current water controversies among water researchers and policy-makers, including within Western culture (1998). He says that cultural perspectives 'differ in their underlying basic values, beliefs and assumptions' and that current scientific knowledge cannot be called upon to support one over another given the large uncertainties about various ecological interactions and the value-laden character of most contemporary water problems (1998: 621) Langton, in a seminal paper on the significance of freshwater to Australian Indigenous cultures, also draws attention to the importance of culture in resource evaluations and the way in which different societies attribute meaning to water (2002). Cultural differences apply equally to the perception of water resources as much as any other environmental feature (ibid). Cultural differences affect the way that legal institutions allocate rights and are apparent in the way Western resource law and Aboriginal land tenure systems regard an element of the environment such as water.

In part, the lesser significance of water *vis a vis* land in the Western environmental consciousness explains why Indigenous relationships to land have tended to be more readily recognised and documented (Toussaint *et al* 2001). Western law tends to see water as a fluid element, whilst land is more or less fixed. Another factor explaining the less attention paid to Indigenous perspectives on water is the holistic environmental view taken by Aboriginal societies where water resources are not isolated from other inter-related elements (Toussaint *et al* 2001). According to a



national discussion paper on onshore Indigenous water rights prepared to stimulate debate in Indigenous communities¹⁴,

Aboriginal peoples have never drawn a distinction between the land and the waters that flow over, rest upon or flow beneath it. The land and waters are equal components of 'country', all that require care and nurturing, and for which there are ongoing responsibilities (Lingiari Foundation 2002: 6).

Water's sacred quality has received attention from researchers interested in Western culture and resource management institutions, as well as those studying Indigenous societies¹⁵. For instance, Delli Priscoli describes the sacred qualities of water which have developed and evolved in all human societies over the course of history:

The sacred refers to those aspects of water through which mystery and unknown, or some would say the irrational, elements become present to our awareness (1998: 635).

Priscoli describes such values as superordinate, for instance, water is a source of life:

Today, our technology tells us that there is enough water - if we cooperate. One of the most important elements for cooperation is something negotiations experts call superordinate values. These are values beyond immediate utilitarian values to which competing parties can identify. Rekindling the sense of sacred in water, a superordinate value, is one way to facilitate the escalation of debate on water cooperation to higher levels and thus impact the capacity to reach cooperation and to manage conflict (1998: 635).

Senior Aboriginal people interviewed during the course of this research when asked about water and its value referred to the 'higher level' Priscoli describes above. The vitality or life-giving qualities of water are further discussed in the recent anthropological literature on Indigenous relationships with water (see Toussaint et al, Yu 2000). Yu, for example, describes the way water is understood as a living entity in Kimberley Aboriginal cultures:

'Living water' is an Aboriginal English expression that requires translation as it refers both to the physical properties of water sources and their cultural significance. Living water sources ... are permanent water sources ... characterised as kunangkul – everlasting – and are a defining element of an individual's country... (2000: 20-22).

In the Daly context there are a number of examples that illustrate this quality of water. Eminent anthropologist, W.E. Stanner, described the importance of water in Daly mythology of the 1930s. In the Tjinimin myth, upon the death of the father-figure, humans were granted perennial water, what Stanner refers to as 'life-giving waters, for it was in them that, somehow, he also placed the spirits of all children who have been born since' (1979: 55). A Malak Malak story about the Dreamtime origins of the Daly River told recently reveals the way in which flowing water is considered to provide the basis for life and dispense collective good and well-being. Perennial

¹⁴ The Water Rights Project was initiated by ATSIC, in partnership with the Lingiari Foundation, in response to the lack of a coordinated national approach to water management, use and access.

¹⁵ Kolig finds commonalities between Christian notions of the sacrality of water and Australian Aboriginal beliefs (1996).



water has the life-giving powers or quality that Stanner documented in the 1930s (see Appendix 2). This meaning of water can be drawn from two recent consultations:

'Living water – like animal – I think of it like that – living thing. White man way – don't care for that water – how you going to live? (Biidy Lindsay, Nauiyu, 21 October 2004).

.....

'That river and human being are connected. They're alive. It's killing Aboriginal life (all that water that's going to get used for farms). The water and the trees are connected to Aboriginal life' (Paddy Huddleston, Pine Creek, 23 March 2004).

Anthropological studies stress the central part that water, and the sites of its existence, plays in Indigenous cultures and societies: 'their lives and various religious, legal, social and economic beliefs and practices' (Barber and Rumley 2003; Lingiari Foundation 2002). All the studies surveyed here observe that Aboriginal language groups conceptualise water sources and rivers, as with the land, as having derived from the Dreaming (Barber and Rumley 2003; Toussaint et al 2001; Natural Resources and Mines 2001; Yu 2000). They emphasise the importance of mythic beings as significant to the origin and maintenance of all water sources. For instance,

Across Indigenous Australia, mythic beings, like water snakes, inhabit and create waterholes, the seabed, tidal creeks, springs and rivers. They are responsible for making storms, and can be seen in the formation of clouds, wind and rain. They are powerful and volatile beings, which look after their country and its people. They have to be approached in the right way, culturally, and can only be pacified by people who have the right to approach them – that is, by the people of the country to which they belong (Lingiari Foundation 2002: 6).

The cultural institutions which govern Aboriginal peoples' systems of rights and interests were also created by the Dreamings. Knowledge of the environment, the natural features and vitality, its spiritual dimensions, is a prerequisite to exercising rights to land.

3.3 The significance of water to Aboriginal groups in the Daly Region

Water, its origins, features and appropriate use, is highly significant to the way of life, sense of identity, economy and cosmology of Aboriginal groups in the Daly. According to the Northern Land Council/Aboriginal Areas Protection Authority report:

...many of the sacred sites recorded by the Authority in this area are associated either with the Daly River itself and its tributaries, or with water features, such as billabongs. Many of the traditional narratives associated with these features deal with either how they came to be created, or with the activities of water species of various types – whether fish, animals, birds or plants (2004: 27).

For instance, there is a Dreaming story about the sand frog (*Waliwararra*) which points to the significance of riparian features to Malak Malak people and identity. The story is recounted in Lindsay et al:





In the dreamtime this frog said to the wallaby that they would race to a set of hills on what is now Elizabeth Downs pastoral lease. While they were racing each other the wallaby fell in the water and the frog hopped straight through. The wallaby can still be seen in the water, it is called Kangaroo Rock. Kitty Waliwararr, one of the authors of this book, is named after this frog. Aboriginal people from further south, in desert areas, eat this frog; however, Malak Malak and Matngala people do not (2001: 87).

Kangaroo Rock is frequently disturbed by fishermen standing on the rock feature (Biddy Lindsay, Nauiyu, 17 May 2004).

Water bodies also have a clear historical significance to Aboriginal groups. Many of the older custodians referred to their travels through the country as 'footwalking'. During these times knowledge of the country in all its dimensions was attained. Common to many groups in the pastoral regions of north Australia was the pattern of going 'walkabout' during the wet season. Wagiman for example would stay close to the river as they walked, fished and hunted game in the Douglas area (e.g. Tjuwaliyn (Douglas) Hot Springs, Reedy Hole on Jool Chung Creek, Banyan Waterhole and Flora River (Pine Creek 23 March 2004; Kearney 1991). Visiting these places provides an occasion for remembering birth places, significant life cycle events and the death of previous generations (Toussaint 2001: 61). Paddy Huddleston described his life on the stations:

'We used to go down to the river and camp out. We used to go out on holiday. Then it would thunder, and we'd come back' (1998: 16).

'There now we used to go for a swim... we used to spear goannas, kangaroos, short-necked turtles. We used to cook lots of fish, when we were camping out (1998:17).

'They used to muster cattle around the Daly river. They used to take them to water, muster big mobs of cattle. And they would stay there at the big water' (1998:18).

Wagiman cattlemen mustered throughout the region including on Stray Creek, Ooloo, Dorisvale and Claravale (Kearney 1991). Justice Kearney found the claimant's continued use of the Daly River country during holidays as evidence of maintenance of their traditional lifestyle (1991).

Wardaman walked from Delamere Station to Katherine via the creeks, waterholes and rivers of the region. Ogden has mapped this river 'walking path' along the springs and waterholes to illustrate the Wardaman sense of topography. As they traversed the country people fished and hunted at the waterholes, taking up to four or five weeks at a time to travel from the Victoria River District stations to Katherine. A book on Wardaman ethnobiology notes the historical trade in river resources such as bamboo and the extensive trails of walking tracks linking places of significance:

Often these walking trails followed waterholes, rivers and creek lines where water and food were more abundant, and cool camping areas were available. Some sites are still well known for the plentiful supply of yams, fish or other game that is available (Raymond et al 1999: 12).



Wardaman have a number of Dreaming sites along that route, including those relating to the Lightning Brothers. Ogden describes the impact of pastoralism on this way of life:

Europeans built yards at some of those springs and waterholes including a tailing yard at Dead Finish Creek, a bronco and holding yard at Price's Spring and further horse and branding yards at Sardine Lagoon. All of them were an intrusion into the Wardaman lifestyle and walking paths (1992: 4).

Water plays a vital part in Wardaman mythology. As with other groups in the region, water is associated with life. The Creation Story as told by Bill Harney reveals how the waterscapes of Wardaman country were brought into being by the world-creative powers of the Rainbow Serpent:

First came Gorondolmi, the Rainbow to this country when the sea level rose and flooded the land. Then Dungdung the frog lady came out from under the earth and they had many children in the water. Nardair saw them and came down from on top and Dungdung had many children with Nardair too – lightning people. They struck the land in the country and put the song and story in place. Rainbow wanted the children to be all born in water so sang and sang a big spiritual song for big rain and water to cover the country. The lightnings saw all the water coming – there were no rocks, only red soil, everything soft.... Willy Wagtail and Diver Duck put all the song together and put the power in the place then started singing and operating, showed the people the way to high places. Then sang the earth not to fall down and held the earth making it hard clay. Then Nardi came down showing the children how to walk from one high place to another. He got the dog and the kangaroo to take the song across the country... when the little lightning boy Derjerome split the dog's ear then everything changed (cited in Drew 2001: 10).

A northern portion of Wardaman country is covered by the CRG Focus Area in the vicinity of the Flora River junction with the Katherine River westward including Mount Pearce (Drew 2001). This area is part of the Yubulyawun clan estate which includes Flora River, Innesvale and the north part of Willerloo station. In the northern part of Wardaman country the numerous springs and abundant food supplies make this a favoured area, according to Drew, who noted that a 'person would not go hungry nor lack water in Wardaman country' (2001: 20).

Drew describes a feature of the Dreaming according to Wardaman:

Dreamings are both cyclical and linear. Hence, in the cycle of the climatic elements Bill Harney, in his creation story, states that across the Fitzmaurice region the Rainbow Serpent is a widespread travelling creature,

... came inland when the sea rose and caused the land to flood. He is connected to the Lightning – he spits out from his forked tongue and the lightning replies – flashing.

The electric storms bring the first rain and the frogs come up, announcing the wet season (Drew 2001: 74).

Rainmaking rituals were raised by Bill Harney in a Wardaman meeting. Ritual behaviour maintains the seasons and cycles of 'nature'. There is evidence of this





aspect of Wardaman beliefs about the hydrological cycle in rock art¹⁶ and rock incisions at Innesvale and Willeroo Stations:

Some of the sites, on in particular, had hundreds of 'cuts' incised into the stone. The Wardaman people believed that if enough 'rain cuts' were made, it would rain' (1992: v).

Bill Harney also described the power of the Grasshopper in 'pumping' ground water out of the springs on the Flora River. This water feeds the Daly, according to Bill (Katherine, 20 April 2004).

Wagiman too have stories about the formation of the Daly River or Guwardagun, as noted by George Huddleston:

We've got a story for that river. That river been there for a long time, since before grandfather, grandmother' (25 February 2004).

Cultural etiquette such as the 'baptism' or welcoming ritual is a practice shared by many Indigenous land-holding groups referred to in the literature and by Daly river groups (e.g. Langton 2002, Lingiari Foundation 2002). Strangers are required to be welcomed to country, especially to a water body. Water is typically placed on the head. Senior Wagiman men described this practice, as recounted by Paddy Huddleston in relation to a Rainbow Dreaming Place on the Daly River:

... Rainbow there, Rainbow smell the sweat. That's where you get the rain. When stranger come ... wash 'em on your head. Wash your sweat on his head so he don't get sick. Talk to that Rainbow when you take people who aren't from that country. If you don't do that you get a flood. A stranger might make that big rain. Spirits can hear the talk and smell the sweat (23 March 2004).

According to Bill Harney, a Wardaman senior,

... if I didn't put that water on the head for you, you would have got sick . You got to do that with the Dreaming water (cited in Kearney 1991: 6).

A number of senior custodians referred to the need to speak in language at sites in their country to placate the Dreamings (Kearney 1991: 7).

Miriam-Rose Ungunmerr of Nauiyu, Daly River, refers to a symbolic value of water which relates to a sense of belonging and identity. She describes the source of inspiration in her community, the quality called *dadirri*, using the metaphor of a spring as a source of spiritual well-being (2003: viii). She says:

What I want you to know about is another special quality of my people. I believe it is most important. It is our most unique gift. It is perhaps the greatest gift we can give to our fellow Australians...It is inner, deep listening and quiet, still awareness. *Dadirri* recognises the deep spring inside us. We call on it and it calls to us...It is something like what you call 'contemplation'.

When I experience *dadirri* I am made whole again, I can sit on the river bank or walk through the trees...

¹⁶ Drew's analysis of rock art sites in Wardaman country found 47 Dreaming sites directly associated with springs, waterholes, billabongs, creeks or rivers (2001: 115).



We are river people. We cannot hurry the river. We need to move with the current and understand its ways.

We hope that the people of Australia will wait. Not so much waiting for us – but waiting with us while we find our way in the world...

To be still, brings peace – and it brings understanding. When we are really still in the bush, we concentrate. We are aware of the anthills and the turtles and the waterlilies. Our culture is different. We are asking our fellow Australians to take time to know us (2003: ix).

Mythological accounts of poor water management point to a strong awareness of the need to cautiously manage water resources. Aboriginal myths serve as parables against unwise water use. In the Daly ancestral animal stories indicate rules of behaviour, as Benigna Ngulfundi explains:

We have been told different stories about what happened when Dreamtime animals stole water. Sometimes it was just to make mischief but 'payback' for selfishness could also be a motive. The water was always recovered and the animals who stole it seemed to be sorry for the trouble they caused (2003: 13).

One such ecological parable was told by Mark Casey, President of the Nauiyu Council, in a submission to the Senate Rural and Regional Affairs and Transport Committee Inquiry into Rural Industry Water Use in November 2003. At the time, Daly River Aboriginal communities were concerned about the impact of agricultural water abstraction on river environments:

In the Dreamtime, all the animals came together to have a corroboree. They asked sand frog to come along, but he said no. When all the other animals had left, sand frog said, 'I will do something to these animals.' So he went away and drank up all the water from the rivers, the creeks and the billabongs. The animals were having their corroboree and they got thirsty. They went looking for water but could not find any. Bush bee flew around and found a billabong that had just been emptied. He saw, sitting on a big rock, sand frog. He flew back down and told all the other animals where sand frog was, so they all went over to see sand frog. They said 'Give us back our water; we are thirsty.' He said no and ignored them. So they got their weapons and threw them at him, hitting him to try to get him to release the water – but he would not. Brolga grabbed a spear and flew up high. He threw the spear, hitting sand frog in the guts. All the water came out, filling up the rivers, creeks and billabongs again. All the animals were happy. They drank and they continued their corroboree. Today, you will never see a sand frog in the dry season. He is buried deep in the sand, too ashamed to come out (Commonwealth of Australia 2003: 461).

The importance of the notion of equitable sharing of water in Wardaman culture can be gleaned from a Dreamtime story from the Flora river area describing the antics of the brolga who took all the water away from the country. The story is titled 'The brolga took the water up top, and the sand frog brought it back (*Bornorron-yi gandhi wiyana galual, murrujunma-yi nirri lurrbu*)' (Wardaman Aboriginal Corporation 2002). In that story the brolga took away all the water to the sky leaving 'Nothing in the rivers, the rivers were empty. For billabongs, nothing, Small rivers, creeks, no water there' (p.4). Without water the Dreamings were dying. Eventually the sand frog speared the coolamon containing the water and released it. According to the story, all the animals gathered around the water and bathed: 'They were happy for the water' (p.10). The animals were then able to go their separate ways and find a place to stay.





Wardaman people raised other versions of this story at one Katherine meeting. In one story the kookaburra made the sand frog laugh, spilling the water. This group of people reiterated the importance of re-telling these stories.

Regardless of the technological and social changes experienced by the Daly communities, the social solidarity referred to in the Northern Land Council/Aboriginal Areas Protection Authority Report is evident in the way that people discuss their identity. For example, Bidy Lindsay remains conscious of her heritage as Malak Malak, as evidenced by her description of her origins – ‘we come from the paperbark’ (21 October 2003). Malak Malak people were often called ‘foot-canoe people’ by other tribes (Sutton and Palmer 1980). Bidy Lindsay spoke recently of canoes as a taxi from which people would fish and hunt crocodiles along the Daly. According to Lindsay et al, the Malak Malak name is based on the sound of one of the calls of the Orange-footed Scrubfowl (Yilibuk) which is found in jungles and thick vegetation near the river (2001: 70). She also describes the special Malak Malak relationship to the Daly:

That was good river – him flat one. Pretty river – all the grass – that couch grass, thick one. All the way along the river. Old people used to sit down like that. I come from that. I got nothing now for sitting down like that. That’s why I tell those two boys you’ve got to stand-up... I want to bring that story out. My taxi was the dug-out canoe. Patricia and I were born in the bush. We know what we’re talking about. Me, I come from the paperbark, not from the tin house.

The river himself, I’m telling you from looking at it, not from measuring it. I’ve seen from TV from NSW, him dry. That river himself – he was pretty and now he’s wider and shallower (21 October 2003).

In the Murray Darling Basin, Aboriginal people have developed a helpful list of uses and customary obligations relating to water:

- access to drinking water;
- fishing;
- collecting food, fibre, medicines and other sustenance;
- the responsibility to pass on unpolluted water down stream;
- the right to protect cultural knowledge;
- to pass knowledge on and provide cultural education;
- to protect and access particular sites and species; and
- to maintain song lines and story lines involving the river (Morgan 2003: 20)

From the limited research conducted to date, others could be included to make a list applicable to the Daly Basin.

- the responsibility to share water equitably;
- to desire to participate in river and wetlands research
- the responsibility to care for country, e.g. weed eradication, water regimes etc.



4.0 Issues arising from consultations

4.1 Apprehension towards significant land-use change and environmental impacts

Aboriginal people consulted during the course of this study are committed to meeting their land management and religious obligations as determined by traditional law and custom¹⁷. Strongly held concerns, a dedication to 'looking after country' and a keen interest in being properly informed of the potential land-use changes and impacts were consistent themes at every consultation. On occasion people appeared overwhelmed by, and anxious about, the possible environmental changes in the region. Whilst the Government's stated commitment to research and environmental assessment were discussed in consultations, the clear impression was that Aboriginal people were very apprehensive about intensification of agricultural development on the scale being discussed¹⁸.

This perspective turns on how people assess risk, which is socially constructed and cultural biased (Hoekstra 1998: 615). Risk evaluation is subjective, depending on historical experience of change, the nature of one's attachment to country, knowledge of the ancestral landscape and its dangers, and trust in authorities¹⁹. According to Kolig (1996), Aboriginal philosophy relating to water is conservative; it is

... traditionally cautious, seeing potential dangers, even fatality, to the unwary individual. The fact that the world, or humans, could not do without water is much more clearly acknowledged... (1996: 366).

Through contributions to meetings and in interviews Aboriginal people revealed a number of perspectives that are likely to influence their perception of risk. These are listed to portray some of the values and feelings underpinning Aboriginal opinion on how large-scale development may affect them and the area:

- When discussing extraction of a maximum amount of 20% of ground water Hannah Brumby tried to reassure Jessie Brown, a Wardaman woman, that 'they only taking a little bit'. Jessie replied 'But we haven't tried that before. It might be too much' (23 February 2004, Katherine). At a Wagiman meeting Robert Huddleston similarly commented that the 'River's never been used like that' (Pine Creek, 24 February 2004)
- 'My grandmother said when I'm gone you've got to look after this place. When I'm gone if you get sick my spirit will punish you. Have to look after that river... Spirit will punish you... You've seen all that dirt falling down – because

¹⁷ Testimony supporting traditional owners' strong interests in land is provided in the two Land Rights claims conducted in the region: the Upper Daly Land Claim (Kearney 1991) and the Malak Malak Claim to the Nauiyu area (Toohey 1982).

¹⁸ According to a Management Plan for the Lower Daly, commissioned by the Wangamaty Landcare Group, plans to intensify agriculture represent a 'major potential threat to conservation values'. Other threats include open range pastoralism, weeds and feral animals, as well as uncontrolled wildfires (Ecoz Environmental Services 2003: 12).

¹⁹ See Sansom for an account of environmental risk from uranium mining as perceived by Bill Neidji (2002). Morgan et al argue that the precautionary principle should be applied when allocating water to the environment because any harm will have a 'disproportionate impact on Indigenous peoples relationship to the Murray as it is linked to their cultural and spiritual identity and their status as first and last peoples of the Murray Basin' (2003: 29).



granny spirit, uncle spirit speaking out... We've got to talk in language on the country when you visit' (George Huddleston, 23 March 2004).

- 'We've got to think a lot about water. It's important for us. We've got to fight for that. It's really hard for us, we think a lot about that. It's been taught to us from our grandparents. I know about my country. We think about our country (Joe Huddleston, Wagiman, December 2003).
- '... if the river changes our stories will be rubbish .. From my side it worries me. We got to school in country (Joe Huddleston, December 2003)
- 'They're thinking about 5-10 years. My people are saying don't let that river dry up. At the end of the day they can walk away from their farms but we'll always be here (Mona Liddy 25 March 2004).
- 'People would like to see the land stay as it is – left alone' (Ben Cubillo Senior, 6 April 2004).
- Senior Malak Malak man when considering issues relating to maintaining an environmental flow whilst extracting water asked 'How about the Dreaming areas along the river' (Naiyu, 14 April 2004).
- 'That river is our livelihood' (Foster family, Kamu consultation, 15 April 2004).

4.2 Environmental change to the Daly and Katherine rivers

Throughout the region people have observed changes to the large rivers, the Daly and the Katherine, which appear to be consistent with sedimentation, although the cause(s) of the stated change is not known. Soil erosion from agricultural development and boating activity were given as possible causes.

A number of people maintained that they have observed these large rivers getting shallower in certain places. For example, at Katherine, the river is said to be:

'... changing because every wet you get creeks flowing in taking up dirt. Down at the Low Level most of that is shallower. All those trees at Rockhole are washing in. You can see the roots. We're seeing more sandbanks from the Low Level down. Deep Hole is shallower. There's a lot of farms on Florina side. When we go fishing the banks are all shallow. The farms are taking water out from there on Florina Road. Sandbanks have been washed. We call it erosion. We've got shallower water now' (Jessie Brown, 23 February 2004).

Bill Harney, elder of the Wardaman people, told of the changes he has seen to the Katherine:

'In the past the river was very deep and now it's very shallow because of soil erosion, leaves, grass and dirt al building up in the river. In early days you wouldn't see big flood. Flood go to the top of the bank. Floods will continue to get bigger in a hundred years if they don't make another channel. But you've got a lot of problem with that, sacred sites and tree clearings' (Katherine, 20 April 2004).

Albert Myoung, of the Malak Malak group, when asked about changes to the river, replied:

'We have seen changes too. The river is getting shallower, more sandbars. We are the main mob, we are the bottom. It will be salt water when the tide comes in... More shallow, don't use river much now. Used to have big tide. Not now. Big boat they bring in from town. First clearing up top, that's when we saw



change. In 1998 it started to get shallower...Water changed colour after the flood. Didn't know what was happening. Thought it might be from fires and clearing from Stray Creek' (Woollianna, 15 October 2003).

Some changes relate to the functioning of the tidal bore and the distance it now travels. For instance, the bore was said to once come past Woollianna but now it 'breaks up' at Browns Creek, a difference of about 4 km (Kamu meeting, 15 April 2004). The way in which the bore operates is related to depth of water in the estuary. Inquiries regarding the bore made by Eric Wolanski of the Australian Institute of Marine Science at a meeting in Nauiyu in 2003 were met with a great deal of interest by traditional owners in the region.

The changes observed also have a cultural dimension. For example, concern was expressed about the impact of sedimentation on sacred sites in the river bed by Mark Casey (ABC Radio, 21 October, 2003). Mark stated that Bream Dreaming is getting 'clogged up with sand and that earlier flooding was breaking down the banks and destroying sites' (ibid). Mark Casey has observed changes to the river in the fifteen years since he has returned to his mother's country. Mark has noticed particular big changes at the mouth; for example, once you were able to travel down both sides of Palmerston Island which is not possible at present (Nauiyu, 7 November, 2003). A much larger sandbar now extends upstream to Alligator Head which has changed in shape and requires a smaller boat to traverse. A large boat is not able to get over such a sandbar at present.

Biddy Lindsay described the river as one that was once 'small and pretty, and now its wider and shallow'. She said

'Farms are the problem. I don't know that country. Someone needs to do work upstream. Northern Land Council needs to work with people. We need research on that river' (Nauiyu, 7 November 2003).

Representatives from the Kamu spoke of their close connection to the river and of changes they have seen:

'We didn't have to know they were ploughing at Tipperary because three or four days after ploughing the soil goes into the river – it goes brown. You notice it straight away. We drink from the river – we live from the river. We've seen it all the time' (Nauiyu, 15 April 2004).

The Foster family were particularly concerned about the flow of the river. They are aware that during the dry season the flow can be slight. Margie Foster's father-in-law had seen the Daly flow reduced to 'just a trickle' two or three times over the last forty years (ibid). At the Kamu consultation questions were asked about the potential for the salt-water to progress further upstream should flows be reduced (15 April 2004). Over recent years, the river has eroded the bank to the extent that a gravesite is now threatened. The gravesite, which is a registered site, is only 20 metres from the edge. The Foster family would like to investigate ways of protecting the site.

Others at a Malak Malak meeting observed that big boats once travelled up to the crossing to provide supplies to Daly River Mission and Woollianna, and to export peanuts and copper. People felt it would not be possible for such large boats to travel as far upstream today.



Eddie Shields urged the farmers to 'talk to people who own the river. It's all right for them. They want to think about our future. All the animals. What's going to happen to our children who see the river like that?' (Belyuen 8 November 2003).

The flow of the river was also considered important to the character of the river and the dependent wildlife²⁰. Any activity that stopped the flow of the river and disturbed the movement of fish and turtle was seen in a negative light. How the timing of extraction was to be managed was of interest to a number of people who wanted more information about the storage methods (Wagiman meeting, 23 March 2004). Mona Liddy for instance asked how was water extraction to be managed in the dry years so as to minimise the impact on the river? She raised the effect of climate change asking whether future changes to the weather were being factored into the research and management planning. Miriam Rose-Baumann was also interested in how the variation in seasonal rainfall was to be addressed. Long-term variations occur in the tropics where some years there is not much rain recharging the groundwater (Naiyu 15 April 2004). Miriam-Rose is concerned to see that dry years be used as a basis for calculations to ensure that the measure of water availability also applies in dry years.

Recreational boating is considered to be an environmental problem according to Malak Malak and Kamu consultations. A number of people were concerned about the impact that larger boats and more frequent boats is likely to be having on the river, particularly in causing erosion. The environmental effect of the popular fishing competition, the Barra Classic, was highlighted as a key issue to be addressed. Malak Malak traditional owners were concerned about recreational fishing as long ago as 1981. The river was then considered to be 'crowded' with too many boats and 'half the town in this country' by one claimant in the Malak Malak land claim (Malak Malak Land Claim Transcript 1981: 732). A few years ago, Malak Malak people agreed to the construction of a boat ramp at Woolianna and feel that they are in part responsible for the increase in boat traffic brought about improvements in access.

John Sullivan from the Aboriginal Values Advisory Group raised the issue of concrete river crossings and their potential to interfere with fish life. He feels that the Daly River crossing in particular should be higher and that consideration ought to have been given to fish movement up and downstream (Darwin, 25 March 2004).

Interest was expressed in having a better understanding of water use issues in the Katherine region by a number of people. Two specific questions raised were: how much water is currently being used for farming and what changes to the Katherine River have the scientists observed? It is recommended that DIPE endeavour to meet with the people concerned to address these questions, perhaps as part of the development of the Water Allocation Plan.

²⁰ Kimberley research found that the impacts of the regulation of rivers, especially impoundment for dams, is likely to damage a valued cultural principle: the unimpeded flow of a river body. Research conducted for the Water and rivers Commission in the Kimberley found that:

Significant in the context of possibilities related to damming the river, and relevant to the distress which emerged over Dimond Gorge, is that the rivers must run free. Indigenous responsibilities and aspirations are embedded within a belief that the spiritual force of the river should never be blocked so that the increase of all species, including humans, is ensured (2001: 65).



Similarly, at Nauiyu there is interest in learning more about how the river functions and what changes may have occurred over the recent past. At times there appears to be conflicting views about sand deposition and movement. Whether the observed changes are a consequence of changed land-use, or merely a feature of long-term natural cycles should be further examined. Some Wadjigan/Kiyuk people at the Belyuen meeting also expressed a desire to be informed of the results of environmental research in the region, as the Plan progresses, or research conducted independently of the CRG process.

4.3 Water quality

A number of people were conscious of the potential water quality issues arising from farm run-off. Paddy and Robert Huddleston, for instance, have both been to Kununurra and were aware of problems of water quality and chemical contamination in the Ord River area. They wanted to know how the farm chemicals were to be managed (Wagiman consultation, 23 March 2004).

The Jawoyn Association has acted on concerns about water quality in the Nitmiluk area where turbidity has been high. For instance, they have removed approximately 2000 buffalo from the riparian zones of the upper reaches of the Katherine catchment in recent years and are conscious that stock, feral animals and fire all need to be controlled in order to improve water quality (Mick Pierce, 23 February 2004). According to Mick Pierce, Executive Officer of the Jawoyn Association, the siltation referred to by some is a feature of the ebb and flow of seasons.

4.4. Weeds

In the Daly Land Trust area adjacent to Elizabeth Downs, the lack of action on mimosa is of concern to traditional owners (Noakes 1999).

Ngurr Burr has also caused significant change to riparian vegetation, displacing native grasses that formed an open and accessible area to fish and socialise (Nauiyu 7 November 2003). Ngurr Burr shades the bank creating bare ground.

At the Nauiyu meeting concern was expressed over the introduction of pasture and the associated weed issues.

4.5 Fish and fishing

Considerable concern about the impact of recreational fishing boats on the river was expressed at Belyuen and Nauiyu (Belyuen 8 November 2003; Nauiyu 21 April 2004). The boats are getting bigger and a number of Malak Malak fear for the river from accelerated erosion.

At the Belyuen meeting concern was expressed about environmental impacts from sedimentation and declining water quality on the river and fish habitat (6 April 2004).



4.6 Wetland management

The potential for water-dependent ecosystems, particularly billabongs and springs, to be adversely affected was a concern expressed at all meetings. For instance, sacred billabongs at Florina were listed as features that might be affected by over-use or untimely use of water for agriculture. According to Jessie Brown,

‘These two billabongs are full all year around from the groundwater. Lilly root and fish depend on water. There’s a Dreaming in the centre of the water’(Katherine, 23 February 2004).

Similarly, the wetlands in Wagiman, Kamu and Malak Malak country were considered sensitive to changes in groundwater level. Kamu people spoke of the potential for water extraction to affect sites at springs. They have observed the impact of bore water pumping on a group of trees at Woolianna and appealed to people to ‘imagine that all across the landscape?’ Helen Myoung, from the Malak Malak language group said ‘We worry because we use springwater and billabongs. What about the floodwater to the billabongs?’ (Naiiyu, 14 April 2004).

George Huddleston spoke of his fear that reduced water levels might dry-up billabongs. Wagiman are interested in conducting research into the environmental condition of wetlands in their country and in monitoring their health. They would like to map the old camping places and document the stories associated with the river and the region’s wetlands. As would Ngangiwummerri women resident at Naiiyu. Miriam-Rose Baumann stated:

There are a lot of billabongs that we use upstream during the dry season to hunt and camp. We would like to record those places. Kids don’t get as much access to those places anymore. Old people used to work with Tipperary Station. We know a lot of that area – special places, Dreaming places, crossing places (to cross the river) (Naiiyu, 15 April 2004).

Miriam-Rose Baumann wrote that Aboriginal people around the Daly River have depended on tropical wetlands for countless generations and states that they are ‘very concerned about the good management of these areas’ (1999: 11). She described the four types of turtle found in the Daly area and their value to the communities reliant on wetlands and riparian areas for their sustenance. The long neck turtle which is plentiful and easy to catch is particularly valuable. While it is found in the rivers and streams, it is in large quantities on the floodplains. Short-neck types may be found in the river upstream from the Daly crossing and pig-nosed turtles above and below that crossing. The meat of the pig-nosed or short neck types is preferred ‘as the meat is not as strong’ whereas the long-neck has a very strong fishy taste (1999: 11).

According to Baumann, turtle numbers are diminishing. West of the Moyle River they are almost impossible to find, where once they were quite numerous. People, and other predators, such as feral pigs, are taking too many in her view. Conservation could be achieved through a number of methods:

Already turtles are considered traditional food and only Aboriginal people are permitted to catch them. To conserve them we must protect both the turtle and their habitat. With the introduction of imported weeds and grasses, many billabongs are being choked and made impenetrable not only for hunters to get into them but also to allow animals within them to move. These problems can



occur with mimosa, water hyacinth and also some vegetation found naturally such as freshwater mangroves or itchy trees as we know them. Too great an abundance of freshwater mangrove tree in one area can stop movement of animals such as turtle between one billabong and another (1999: 11).

She raises the issue of regulating traditional hunting, although is aware of the difficulties of enforcement and the likely social impacts of the imposition of controls and reduced harvesting. Commercial farming and good land management might conserve their numbers and avoid the situation where 'our future generations will only know of turtles from books and not from taste' (1999: 12).

4.7 Feral animals

Bill Noakes of the Daly River/Port Keats Aboriginal Land Trust is also concerned about weeds and feral animals (1999). In a paper published in a report on wetlands, Noakes recalls the arrival of feral pigs in his country on the floodplains of the Daly. The flood of 1957 swept pigs from the farms and washed them across the river.

Large numbers of pigs, according to Noakes, destroy monsoon rainforests and swamp lands looking for yams and other root vegetables:

Pigs just dig up everything following the water as it recedes – it becomes just like one big ploughed field.

Apart from destroying vegetation and wildlife, pigs are causing erosion along roadsides and on the edge of beaches. They move weeds about – you can see weed seeds in the mud on their backs and in upper catchments mimosa is growing where pigs have been wallowing. They also can carry diseases. As well as the threat of major exotic disease epidemics like foot and mouth getting in the wild pig population we also worry about existing diseases – pigs wallowing in billabongs can lead to Aboriginal people picking up diseases, such as sparganosis, through drinking the water (1999: 23).

Noakes identifies harvesting of wild rice or lotus lily as a potential economic opportunity to Daly River communities. If it were not for the impact of feral pigs these enterprises might be viable. Culling programs have been introduced, although the return to the community is variable, and price fluctuations influences the extent of the activity (ibid).

4.8 Vegetation and fauna management

Some Wagiman people were especially concerned about the impacts of tree-clearing on the landscape and their community. George Huddleston referred to the trees at Stray Creek as 'family trees', which are also needed for wallabies. There was insufficient time to explore the notion of 'family trees' any further, but it is likely that specific trees are of significance to custodians, as well as important in their ecological roles as habitat, shade, etc. Such trees might not be rare or visually significant. It is understood that the Aboriginal Areas Protection Authority has conducted sacred site surveys of the Stray Creek area prior to subdivision and clearing.

At both Nauiyu and Pine Creek consultations a number of people expressed a desire to see historically cleared areas revegetated.



Concern was expressed about the impact of water extraction on terrestrial animals in the area, especially wallabies, kangaroos and birds. There was insufficient time to further explore this issue.

4.9 Riparian National Parks and Conservation Reserves

At each meeting the vegetation corridors proposed by the Conservation Plan were discussed. They were seen as a positive measure although some groups, particularly Wagiman and Malak Malak, considered them to be too narrow as they are currently conceived. George Huddleston said:

‘Talking about that 250 metre. It’s a bit too close to the river’ (Wagiman meeting, 24 February 2004).

Comment was also made about the extent of the flood zone and the role of flooding across the banks and how well understood this was when the conservation corridors were being conceived (Wagiman meeting, 24 February 2004). There is a need to give this issue closer consideration. Wagiman people in particular would like further opportunity to contribute their views to any decisions about the spatial extent of the conservation corridors.

Given the significance of the rivers in the Daly/Katherine region, the concept of a River Park under some form of collaborative management to protect vegetation, habitat and water quality whilst allowing for public use could be viewed positively by Aboriginal people in the region.

Access to the region’s rivers was raised as an issue that people would like to see addressed by the proposed Plan. In the first Katherine meeting for example, a small group discussed the lack of control that traditional owners have over the riverside. In places where people do not hold freehold title to land adjacent to the river, access can be difficult, as explained by Jessie Brown at the Katherine consultation:

‘It’s hard to get out to the river. We got to get permission, private property. People own blocks with signs on gates. We feel locked out of that country. We see that sign ‘trespassers get shot’ (23 February 2004).

Neville Brown continued, explaining that access is getting more difficult as blocks are subdivided for agriculture:

‘Used to be easy to walk along the river. People used to walk from one side to the other along the cattle track. Can’t do that now because people fence their blocks... doesn’t make you feel good... We like the River – to cool down, picnicking, camping. Now we have to go between Binjarri and King River. People used to live all along the river. We still like to camp out. We want to take our kids out and teach them about bush skills – tucker, medicines, telling the kids stories – where they can run around. We grew up fishing and hunting. All the kids now worried about smoking and grog... River country was more open (ibid)’.

Wagiman women resident in Darwin commented that they too have had difficulty accessing the River in the Douglas area (Darwin 25 March 2004). Fencing of favoured places is a deterrent to people wanting to access the Douglas River area.



Weeds further inhibit use of river environments. For example, a place referred to as Pig Swamp, just across the river from Douglas is now inaccessible. Traditional burning practices have also been harder to pursue with more development activity in the area. Increased camping and recreation has made it more difficult to burn safely and people now feel more pressure from government regulation (requirement to get permission) (Mona Liddy 25 March 2004). Mona Liddy explained that they were now

‘... not able to control it (fire) in our ways. Can’t get bush tucker. Hard to get there to show the kids. You can put it in your reports but we need to experience it’ (ibid).

Although there is legislative protection of customary rights to access land for traditional purposes (e.g. Native Title Act 1993, Crown Lands Act 2000), in practice, access may not always be encouraged. Consideration will need to be given to the tenure of any river parks or corridors and how to involve Aboriginal people in their management.

Bill Harney raised the issue of joint management of any River park, seeing the need to:

‘...negotiate a proper park management committee all the way along – Jawoyn, Wardaman, Wagiman... then they’ve got to look at it from Katherine to Bradshaw on the south side’ (Katherine, 20 April 2004).

Some of the Wagiman women based in Darwin saw potential value in a new National Park west of Pine Creek (called the Wagiman National Park in the Conservation Plan), although their support would depend on

‘... how much control we have as part of joint management. Joint management is good but we have to have a strong say. We believe in joint management. We need employment and training too – us women’ (Darwin, 25 March 2004).

Of particular relevance to the proposed conservation reserve design²¹ is the desire of Wagiman people to run cattle on the land recently returned as a result of the Upper Daly Land Claim. The Conservation Plan shows that these areas are worthy of consideration for inclusion in the reserve system through a conservation agreement with landholders. Detailed discussions will need to be held with Wagiman people to determine their wishes for these areas. The blocks referred to as Munjang (south of Jindare), Benang (east of Dorisvale) and Old Dorisvale on either side of the Daly River are being considered by Wagiman people as potentially suitable for cattle operations, through a mix of lease arrangement and direct community management. Munjang is more accessible than the other blocks and therefore a more popular hunting and fishing area. There are plans to build an outstation on Munjang near the River. Throughout 2003 Wagiman Rangers maintained an active presence in the area through weed control, site management and fire management. Discussions are underway with Jindare Station to construct fencing to restrict cattle movement. In the near future it is hoped that these areas will become the focus for teaching children about the bush, including sites and stories about Wagiman ways. The possibility of tourism opportunities in this country has been raised as an option for the future, although the Rangers recognise that they need to ‘take one step at a time’.

An area included in the possible extension to the Flora River Reserve is a living area excision granted to the Wardaman people. It is known as Jaran. It may be

²¹ It is understood that the design outlined in the Biodiversity Conservation Plan represents one of a number of options that might be developed for the bioregion.



inappropriate to consider its inclusion in the Reserve. The Labarganyayn people, many of whom live at Nauiyu, are keen to establish an outstation on or near their lands at Fish River which are of potential interest to the Parks & Wildlife Commission for their conservation values.

At Tjuwaliyn (Douglas) Hot Springs, which is a woman's site, there is strong interest in a range of activities of an economic, cultural and environmental nature. The Wagiman women are considering enterprises such as soap making, a nursery, basket-weaving, and eco-tourism. Funds have been obtained to establish a building at the Springs. To date, considerable effort has been devoted to getting the joint management arrangements right. This remains the biggest concern of the Wagiman women living in Darwin. With the assistance of the Northern Land Council's Caring for Country Unit the women are hoping to have a stronger presence around the Douglas area, e.g. a women's ranger program to conduct weed control and site management. Lack of transport is a constraint on fulfilling their plans.

4.10 Economic development opportunities

Overall the economic opportunities arising from agricultural expansion were rarely raised as a potential benefit to the Aboriginal community (see comments in section 4.1). There are however a range of economic initiatives being developed by the Aboriginal communities in the region which should be taken into account in the proposed Plan.

The Jawoyn Association has conducted an exhaustive appraisal of the agricultural development potential of Jawoyn lands (Peirce 2002). Although Jawoyn land does not fall within the Focus Area it does lie within the catchment.

As mentioned above, Wagiman have some firm ideas about cattle production on their recently reclaimed lands. They also wish to be involved in tourism opportunities in their parks at Umbrawarra and Tjuwaliyn (Douglas) Hot Springs. The women are investigating the opportunities of selling produce from wild harvest and generating products for the tourist market.

Merrepen Arts and the Nauiyu community, in conjunction with the NT Herbarium and the Key Centre for Tropical Wildlife Management at Charles Darwin University, have been researching suitable plant products for sale from wild harvest and/or propagation. They have researched packaging options and trailed plant propagation of lilies for the commercial sale of the flowers and plants. They are also trialling yam production and currently grow native plants for sale at their annual festival. The community has produced a commercial video of their work and cultural bush harvest items for sale through their Arts Centre. Community members continue to be involved in research into the sustainability of wild harvest of specific plants.

Malak Malak people collect a small fee from people visiting the Brown's Creek (Dinggirriyet) area. Brown's Creek is part of the Malak Malak Land Trust. There may be further opportunities arising from small-scale tourism activity and recreational fishing activity.

Capacity-building programs such as the community and family based Northern Land Council facilitated Caring for Country Program, builds on existing Indigenous governance, and develops new skills that are directly relevant to developing small-



scale enterprises centred upon the utilisation and/or value adding of natural resources.

5 Recommendations

5.1 Improved institutional arrangements

Recommendation 1. Investigate models for a region-wide negotiated settlement of management arrangements

Constructive negotiations could result in a regional agreement between Aboriginal people and government covering land-use, environmental management and community development issues. Native title issues and the terms of the Wagiman settlement could also be encompassed by such an agreement which could take the form of an Indigenous Land-Use Agreement, under the Native Title Act 1993.

There is a perception that the planning conducted to date has not given sufficient weight to the full range of possible development options (John Daly pers comm.). Economic options for Aboriginal people require greater attention than they have currently received (e.g. the nascent opportunities in the natural resource sector such as nature-based tourism, a share of any fishing licence fees and sustainable use of wildlife).

Similarly, the community dimensions of natural resource management – capacity building and institutional arrangements for community involvement – are yet to receive detailed consideration under the current planning process. A region-wide agreement might provide the framework within which specific regional development objectives might be developed and implemented in concert with the natural resource management planning approach being developed by the CRG. It could provide Aboriginal people with sufficient time and information to assess the existing agricultural options and other potential development scenarios (e.g. tourism). The Government's Building Stronger Regions policy has the potential to assist the CRG to meet its second objective, as might the National Action Plan for Salinity and Water Quality.

A precedent for a land management agreement has been set in the Wet Tropics of Queensland, a region covering a large area comprising many tenures and a series of dynamic indigenous cultural landscapes. Although the Daly does not have the World Heritage status of the Wet tropics area, the Wet Tropics Board's commitment to negotiate formal agreements with Aboriginal people may contain useful lessons for consideration in the Daly (see Appendix 3 for more information on this model).

Insights might also be gained from the Murray Darling Basin where the Indigenous Nations and working with the Basin Commission to address cultural, economic and environmental concerns. In that instance, a Memorandum of Understanding has been signed with the Commission to address:

- representation, participation and engagement in the process of natural resource management;
- cultural heritage;
- native title, and
- social and economic outcomes (Morgan 2003: 34).



Indigenous Nations have proposed a co-management model premised on Cultural Heritage Management Protocols negotiated separately with each group. Again, it is envisaged that an umbrella agreement would bring unity and consistency to relationships between government agencies and Indigenous people across the entire region. Morgan et al describe how a regional agreement might work in the Murray Darling Basin:

Co-management could be linked in with river protected areas, where parts of the river could be protected for the purpose of restoring the native fish and vegetation, or co-management could cover the environmental and cultural objectives of managing the water resources of the Murray. Co-management would perhaps be negotiated separately with each Indigenous Nation ... working under an umbrella agreement for all the Nations (2003: 32)

A negotiated agreement could provide the framework to address the range of recommendations listed below, and others as they arise during future planning activity.

Recommendation 2. Review the adequacy of current arrangements for Aboriginal participation in catchment management processes and examine structures established in other regions.

In a large catchment such as the Daly there are numerous traditional land-owning groups and other affected Aboriginal people. Other regions in Australia have sought to ensure suitable representative structures for the negotiation of land use or land management agreements or informal arrangements. The Murray Darling Rivers Indigenous Nations, for example, was formed in 1999 as a confederation of traditional owners groups to provide a coordinated approach to policy development and River management (Morgan 2003).

Consideration should be given to ways of ensuring ongoing Aboriginal representation and participation in catchment management structures and adaptive management processes, including monitoring of change.

Given the limitations in Aboriginal participation in the CRG process to date, a reformed Aboriginal representative structure should be developed as soon as practicable. An Interim Aboriginal Reference Group, or Sub-Committee, comprised of two representatives from each of the ten groups in the Focus Area could be an appropriate body to develop and negotiate a regional land-use agreement. There is interest amongst the Aboriginal groups in a model that allows for an older and a younger person to represent each group in consultations and negotiations over the plan, or agreements arising from the planning process.

Recommendation 3. Investigate options for declaring a river park along the Daly River under joint management arrangements.

The options could be developed with the framework provided by the regional agreement recommended above.



***Recommendation 4.** Examine water resource management institutions to ensure water efficiency.*

Efficient use of water will provide multiple benefits to all concerned with the health of the Daly River region. Hence there is a need to evaluate outcomes in terms of the benefit gained per volume of water for the public good.

5.2 Enhanced Aboriginal engagement

***Recommendation 5.** Facilitate further consultation and negotiations around the current principles underpinning water allocation planning and environmental flows research*

At present the environmental values or beneficial uses of water in the Daly Basin do not include cultural values. It is recommended that the beneficial uses be re-declared to update the listing by including cultural values.

The Erskine Report (2003) recommends that the NT Government develop a robust method for determining water allocations. The focus of the Erskine Report is on the environmental water requirements; however there is also a need to ensure a similarly robust method for ascertaining the water flows required to maintain and protect cultural values. It is recommended that DIPE convene a workshop to discuss how the Aboriginal cultural values might be addressed and protected in the water allocation process. It may be useful for the Aboriginal Areas Protection Authority to be present at such a meeting.

Dr Wayne Erskine, as lead author of the environmental flows research, should have the opportunity to discuss the principles underpinning that research program and to provide the Aboriginal community with an opportunity to contribute their knowledge to the environmental flows setting process. Further, the Erskine Report should be translated into a suitable format for use in Aboriginal settings.

***Recommendation 6.** Notify the Aboriginal Areas Protection Authority of the Foster family's interest in further protecting the registered gravesite near Woolliana*

5.3 Further research and monitoring

***Recommendation 7.** Establish a process to elicit a more comprehensive qualitative, and where possible, quantitative understanding of Aboriginal social values*

Attention needs to be given to the lack of specific detail on Aboriginal land-uses and values attached to specific places. The Plan is expected to inter alia, identify the areas where development for specific land uses and industries is appropriate. There is a need for a process to ensure that Aboriginal people are involved in determining the suitability of such areas according to their own values.

The ultimate process will need to be adequately resourced and allow for sufficient time to engage properly with the Aboriginal communities of the region. One option is a social impact assessment (SIA) of the draft plan and the attendant water use options prior to final approval. An SIA can also examine ways of maximising the benefit of regional development scenarios to the Aboriginal people of the region.



Any process should entail a comprehensive assessment of the social and environmental (landscape) dimensions of the region's cultural heritage, including the mythological landscape and sites of cultural significance. Surveys should not be limited to the rivers and creeks but include the water-dependent wetlands.

A wetland management plan incorporating Aboriginal ecological and cultural knowledge should be considered to ensure that the threats to the water regime of wetlands in the region are addressed.

Recommendation 8. Ensure that social and cultural impacts are monitored

Despite the growth in the number of catchment management projects worldwide, evaluation of their impact remains a poorly researched subject (Kerr and Chung 2001). Evaluation is difficult due to the social and technical complexity of catchment projects. Social and cultural changes brought about by decisions arising from the proposed Plan will need to be monitored. There is a need to give consideration to what social standards are to be monitored as indicators (Syme et al 2004).

Recommendation 9. Address the concerns related above regarding sedimentation of the Daly and Katherine Rivers and the environmental impacts of recreational boating.

6.0 Conclusion

This report has provided a qualitative evaluation of Aboriginal values to inform the perspectives of the Community Reference Group members, and others with an interest in the region. It has not attempted to provide a comprehensive survey of areas of cultural importance, or to quantify the number of places of significance that might be affected by land-use and water management decisions under consideration.

It is hoped that the recommendations will assist the Community Reference Group in their decision-making and in plan preparation. Special attention has been given to matters of process to ensure that Aboriginal people have the opportunity to participate effectively in preparing land-use options, and to minimising negative social and environmental impacts and maximising positive impacts, arising from land use change and regional development scenarios.

The work of the CRG has attempted to address a number of the criteria listed by Syme et al in section 2.1. However, the implausible time-frame, inadequate Aboriginal representation/participation and minimal attention given to assessing and acting on social needs prior to the establishment of the CRG, has adversely impacted on their adoption in the Daly case. Future planning action should be guided by these criteria to maximise social acceptability of the development and natural resource management options under consideration. Syme et al remind readers that there are clear policy benefits to be gained from doing so:

Within policy environments, a better understanding of the social and political constraints to water use changes will not only provide positive feed-back into research and policy domains but will improve governments ability to implement proposed change... Policy and scientific frameworks that incorporate social data and accommodate community needs and aspirations in a way that makes them feel respected ensure a fairer outcome, as well as giving recognition and representation to the often neglected socially vulnerable and culturally sensitive members of society (2004: 8).



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Appendix 1

Synopsis of published ethnobiological knowledge of the Malak Malak and Matngala from the Daly Region

Three ethnobiological studies have been published in a Conservation Commission Series of Botanical Bulletins, namely Malak Malak and Matngala (Lindsay et al 2001; Ngan'gikurunggurr and Ngan'giwumirri (Marrfurra et al 1995) and Wardaman (Raymond et al 1999). These studies are an invaluable resource providing descriptions of the extensive use of plant and animal species. Only cultural information of a public nature is provided in these accounts. Only one study, that pertaining to Malak Malak and Matngala knowledge will be summarised here.

Ethnobiological research conducted by Bidy Lindsay et al (2001) concentrated on plant knowledge and value, revealing extensive knowledge and use of biological resources of the Malak Malak and Matngala people. Categorisation of plant use shows a wide range of uses and within each category, such as material culture, a large number of species (see Appendix). For instance, 119 species were used for food, 77 as implements/weapons and 22 for medicinal purposes (2001: 116). Just one example reveals the value of a plant such as cane grass (Delik/Der). Lindsay et al describes its uses and Malak Malak and Matngala ecological knowledge:

The stems are used to make fighting spears. The stems may also be used to make portable fish traps for catching fish in the river. The stems were also used in the construction of water rat traps and to make the central part of spindles used to make string from cotton in Kapok fruits. The stems could be rubbed with the gum from Darik (*Acacia auriculiformis*) to make them last longer.

Saltwater crocodiles use the stems to make nests. They also use this plant when they are hunting Wallabies or Kangaroos. The crocodiles make a small noise with their tails in the grass that the Wallaby comes to investigate, allowing the crocodile an opportunity to attack the Wallaby (2001: 55).

According to this survey which recorded animal usage of major cultural importance, Malak Malak and Matngala people value all animals which is typical of an Aboriginal totemic landscape (2001: 117). In summary they state:

Of the 210 animal taxa recorded here the most widely utilised faunal group is birds, with 86 species documented representing 41% of the total faunal listing. The next most utilised group is insects with 38 species (18%), followed by reptiles with 31 taxa (15%), fish, sharks, stingrays with 28 species (13%) and mammals with 18 species (9%). The less utilised groups are shellfish/molluscs (4 species, 2%), followed by frogs (3 species, 1%), and crustaceans (2 species, 1%).

Animals are primarily used as a food resource by Malak Malak and Matngala people, 53% of the uses of animals are for food. However, animals are also of enormous spiritual significance, and we have 31% of animals having spiritual importance. It should be noted that we have only recorded public cultural knowledge and have not presented here information of a secret or sacred nature (2001: 120).



It noted that plant communities which are less widespread than the open forests and Eucalypt dominated woodlands are also important for their significant plants and animals:

For example, although swamps and billabongs are small in area, they are immensely important due to the populations of waterlilies, turtles and fish that occur in them. Other vegetation types that occur in the area that are important include paperbark forests and swamps, riparian forests that occur near rivers and creeks and monsoon vine forests that occur on rivers and on springs (Lindsay et al 2001: 12).

Often habitats are named after the most common plant, for instance *wunybuwunybu* if there is a lot of paperbark (*Melaleuca*) trees (Lindsay 2001: 13). The treeless black soil plains are called *wangamaty*, from which the local Landcare group takes its name. This group was established to look after the swamp or black soil plains country (ibid).

Knowledge relating to fish and fishing practices is referred to in the Lindsay et al book. (2001). They state:

The general term for all fish is Yerrgit. In the past fish were caught using spears and fishing lines made from various bush strings. Hooks were carved from Ironwood or the shinbone of wallabies and kangaroos were used. Fish were also caught in traps and nets, constructed from timbers and strings. Plants were also used to stun or stupefy fish allowing them to be easily caught, cooked and eaten. The term for fish poisons is Taratywolul or Taratywuder. In recent times hand lines and rods have been used extensively, along with aluminium boats. Though many people still prefer to fish from the bank using handlines and traditional baits (2001: 81).

That study found that for Malak Malak and Matngala people there are at least thirteen fish species that are commonly eaten, including barramundi (*Medtyendit/Tyirrerer*), black bream (*Penynger*), all catfish species, common archerfish (*Pulalauwi*) and freshwater longtom (*Karara*). Other species of small fish are used for bait. For example, the Primitive Archerfish (*Tyaran*) which is the subject of an important legend relating the power of that fish to make paths for floodwaters during the wet season (2001: 84). Most stingrays are eaten, as are white cheek sharks (*Tyeyyu*) and blacktip sharks (*Tyinytyari*), which traditionally required a special fish net to catch and the skill of strong senior fishermen. Crocodiles too are favoured for their flesh, both freshwater and saltwater. The eggs of the crocodile are highly sought after (2001: 92).

Prawn meat, (from cherabin (*Wun/Wono* or Blue-armed Prawn (*Ngulpangarrany/Ngulpangarra*), is eaten when other meat is unavailable. Traditional method for catching prawns is described in Lindsay et al:

They were trapped in the past by making rolls of paperbark, tied up with bush string, which were placed in slow flowing water of creeks and billabongs, The cherabin would hide in these paperbark rolls, which were then lifted out of the water, with a hand over each end to stop them getting out. Any hollow log can also be used such as pandanus, eucalypts and bamboo. In recent times they have been caught with wire traps or pots and are now commonly used as bait for catching large fish, especially barramundi (2001: 100).





Large and freshwater mussels (Ngeli/Tyeygu and Yitybi/Kiyity) are considered to be good food and found by searching billabongs and creeks. During the dry season they can be found hiding in the ground in the same way as turtles. Lindsay et al notes that in the past the largest and best mussels were traded to tourists in exchange for tobacco and rations near Wooliana (2001: 107).

Lindsay et al note that the water rat (Tyin'nyukma) is not as commonly seen as in the past, a decline which they consider might be a result of 'clearing near the river and pastoral activities' (2001: 91).

Traditional owners regard fire management as an important land management responsibility. Fires are generally lit in the dry season to clear the land of tall grasses. Timing the burns will depend on how dry the country is. For instance, Malak Malak and Matgala country is burnt according to the following principles:

Fire is important for animals, such as wallabies, goannas, lizards and others, to live. They don't like living in unburnt country as they can't see for all the grass and its keeps the heat in the ground... Fire is important to allow countrymen to hunt for food, in unburnt country you can't see the game, you can't see the tracks or burrows and you can't see the yam stems.

Burning in the wet season when the grass is tall and green is not traditional. It kills the yams and when they are growing and getting fat, it also kills the grass before it can make seeds. This grass is important for birds, small animals and to be able to burn in the dry season....

It is important to clean up country with fire, to allow new growth to come through and freshen everything up. It lets good plants, like yams and medicines, to grow strong and healthy (Lindsay et al 2001: 13).



Appendix 2

Malak Malak story about the origins of the Daly River

The origin and contemporary place of the dangerous salt-water crocodile in the Daly river system (Yingi/Ngorrngoor), according to Malak Malak and Matngala myth, is described in Lindsay et al:

A long time ago there were no crocodiles and the river did not flow properly, it was a series of connected pools. There was a man called Walnganytyak, he was an important man who danced a lot and had a fighting stick. In the river there was a large fish-trap called Pierrick, made from Delik (*Phragmites vallatoria*²²). It could catch a lot of fish and became so full it was too heavy to drag up from the river.

Walnganytyak was told to get into the trap and throw all the fish out, big ones and small ones, however, he was given only a few small fish even though he had a wife and children to feed. This went on for a few days and Walnganytyak was getting very angry. One day while he was in the net the other men shut the door of the trap and pushed it. The trap rolled over and over down the bank into the river where it splashed into the water slowly sank, leaving a trail of bubbles. As the trap sank, the warning birds, Wangkir (Torresian Crow), Kaworrma (Blue-winged Kookaburra) and Tyirrityirri (Willie Wagtail), were all singing out.

Walnganytyak sank with the trap, he thrashed and thrashed and eventually smashed his way out of the trap. Walnganytyak had turned into a Salt-water Crocodile and he was very angry. He called out to everyone that he had turned into a crocodile, and all the river was now his. His skin had become lumpy and hard, eating too much fruit from Larrk'inyginy (*Zizphus quadrilocularis*)²³ had caused this and his skin was now lumpy like the prickles on this tree.

From then until now, when MalakMalak or Matngala people go to fish or hunt in the river they call out to Walnganytyak and his offspring to allow them to take some fish or turtles. They ask to be allowed to look at their country and not be annoyed by Walnganytyak. When a person is taken by a crocodile the family of this person can go to the river and call out to Walnganytyak and his offspring to bring the person back (2001: 93-94).

²² Cane grass

²³ Plum



Appendix 3

Wet Tropics World Heritage Negotiations with Aboriginal People

A review of Aboriginal involvement in the management of the Wet Tropics World Heritage Area prompted the commencement of negotiations. The Review started in 1996 and took two years to complete under the direction of an Aboriginal steering committee. Specialist consultants provided technical advice to the Review. It found that Aboriginal involvement in management was quite limited when compared with what could be attained if the variety of potential mechanisms were utilised more fully (Review Steering Committee 1998). In Queensland many of the necessary mechanisms, policies and legislation to promote increased levels of Aboriginal involvement were already available, though not being utilised as well as they might. The review Steering Committee attributed the poor performance, in part, to 'a lack of understanding, technical expertise and insufficient resources to carry out appropriate measures to meet these obligations' (ibid: xvi). In other cases, the explanation reveals a deeper problem of 'lack of commitment and political will to addressing Aboriginal issues at more than a superficial level' (ibid).

The focus of the Review recommendations was on mechanisms whereby agencies can implement strategies to better meet their obligations to protect cultural values, preserve native title, and co-operatively involve Aboriginal people in management. Given the sentiments expressed at the CRG meetings to date, these obligations could be reiterated as worthy goals for the Land Use Plan for the Daly region. Mechanisms developed in a structured manner by negotiation offer management agencies and Aboriginal groups a unified and coordinated framework within which to meet their respective obligations, under either customary or Western law (Review Steering Committee 1998). Thus, a whole-of-government approach was seen as a necessary departure from 'unsystematic, arguably superficial and at times tokenistic' methods of engagement with Aboriginal people in the Wet Tropics (ibid: xvii). Management of the Wet Tropics is arguably more complex than in the Daly region, although the principle of coordinated and unified negotiations may offer benefits to the Government and Aboriginal communities, and possibly other stakeholders. Coordination within the Aboriginal community was also seen as a positive step in improving relations.

One of the key recommendations was to establish an Interim Negotiating Forum (INF) between Rainforest Aboriginal people and the five Commonwealth and State land management agencies to negotiate solutions to difficult management issues identified in the Review (www.wettropics.gov.au/rah/rah_partnerships.html). The purpose of the INF is to:

- a) identify and define specific management areas (e.g. protection of cultural values, fire management, development proposals, employment and training) for which all parties are agreed to entering into ongoing negotiation to formalise a joint approach to management (the Final Agreement);
- b) set a time frame and mechanism for the development of the formalised management arrangement;
- c) establish interim management and improved cultural heritage protection measures to operate as the more formalised approach is being developed (Review Steering Committee 1998: xxii).



The INF is seen as the starting point to a regional agreement between management agencies and Rainforest Aboriginal people. Key issues under discussion are:

- recognition of cultural values of the World Heritage Area;
- native title and World Heritage management;
- Aboriginal involvement in policy, planning and management;
- the development of meaningful management agreements; and
- traditional resource use, and the use of ecological knowledge.

Interim protocols were developed in 1998 to improve the working relationships between agencies and Aboriginal people. The objectives of the protocols are worth citing in full:

- to provide for the meaningful participation of Aboriginal people in the management of the Wet Tropics Area;
- to enable the Authority to meet its statutory obligations (to have regard for Aboriginal tradition and liaise and cooperate with Aboriginal people);
- to ensure that the informed views of Aboriginal people regarding the socio-cultural impacts of proposals are obtained and incorporated into decision-making;
- to ensure that recording, storage and use of Aboriginal cultural heritage information is managed in accordance with the wishes of appropriate owners/custodians, and
- to achieved genuine and sustained goodwill and cooperation between WTMA, management agencies, and Aboriginal people.