

Rangers in place: the wider Indigenous community benefits of Yirralka Rangers in Blue Mud Bay, northeast Arnhem Land | Final report

By Marcus Barber



National Environmental
Research Program

NORTHERN AUSTRALIA HUB



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Front cover: Male rangers on sea patrol

Back cover: Female Yirralka Rangers making soap at Baniyala ranger station

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Executive summary

The Indigenous cultural and natural resource management (ICNRM) sector has grown rapidly in Australia, particularly in the north of the continent. ICNRM programs are generally focused on activities that are classed as 'environmental' by funding sources. Yet there is emerging evidence that the programs, and the activities they undertake, generate a range of health, economic, social and cultural benefits additional to the main environmental outcomes. Such evidence demonstrates why the ICNRM sector is so popular amongst Indigenous people. The economic significance of the sector is substantial, even when taking into account that Australia has a social security system that provides for otherwise unemployed or under-employed Indigenous people. There is also evidence that the socio-political recognition of ownership and management rights and of the knowledge and skills in 'caring for country' accruing from such programs, may be as important to many program participants as the direct economic benefits. The wider non-environmental benefits of ICNRM appear to be both diverse and significant.

This report examines a case study of how those benefits may accrue within an Indigenous community, and the implications of that for wider systems of benefit classification. It uses a mixed methods approach - an extensive literature review is combined with the case-study involving both qualitative research and collaborative film production. This research aimed to identify a diverse array of potential community benefits through in-depth engagement with a case study where, based on the program circumstances, good prospects existed to identify such benefits. This study did not aim to generate a quantitatively representative account of benefits across a particular ranger program, or indeed across the sector as a whole. Rather, it aimed for in-depth research that complements other recent studies, notably a larger scale, predominantly survey-based review of the social benefits of the Indigenous Protected Area (IPA) program (URBIS 2012).

The case study selected is in Blue Mud Bay, an area of the Laynhapuy IPA in northeast Arnhem Land. The Laynhapuy IPA is managed by Yirralka Rangers, an ICNRM program that is highly regionalised (decentralised) in comparison with many other programs. This makes it particularly useful for examining non-environmental benefits that accrue at the scale of the local Indigenous community. In addition, Baniyala, the Blue Mud Bay homeland on which the research focused, is considered locally as the origin point of the entire program. This means that considerable thinking has occurred in that location about the underlying purposes, ongoing operations, and wider effects of ranger efforts.

The case study was investigated using a combination of individual and group interviews, site visits, workshops, and the collaborative production of a film. Semi-structured interviews were undertaken with ranger program staff, their immediate families, community elders, and wider homeland residents. Questions focused on key topics relating to the program – underlying principles and purposes, desirable activities, domestic and wider community consequences, existing challenges, and future aspirations.

The film involved a formal collaboration between CSIRO, Yirralka Rangers, and The Mulka Project, a local multimedia organisation that is part of the Buku-Larrnggay Mulka Arts Centre. It focused on:

- placing the ranger program in its wider community and cultural context;
- representing a suite of key activities the rangers engage in - site protection, visitor management, business development, etc.;
- and demonstrating the benefits derived from the program.

The film complements the data presented here, and provides a key means for achieving both community and wider public impact from this research.

In terms of benefit classification, Section 2 of the report contains the results of the literature review, and demonstrates that significant benefits have been identified by a range of studies. Key benefits include:

- biophysical and mental health outcomes grouped under the broader category of wellbeing;
- social benefits such as educational engagement, crime reduction, and improved family structure;
- cultural benefits such as intergenerational knowledge transmission and the mitigation of racism; and
- economic and livelihood benefits across the market, customary, and state components of regional economies.

These areas of benefit are clearly identifiable from the existing literature, but current evidence for them remains insufficient. The survey and the field data gathered here also suggest that an additional category - political benefits - is under-reported in existing reviews on benefits and may be useful in benefit classification. This category would also enable better articulation with the literature on the governance implications of ICNRM.

The qualitative field data was iteratively categorised and analysed using NVivo software. The results of this analysis appear in Section 3. The analysis adopts the broader benefit categories identified in the literature review, but extended these in ways appropriate to the field data. Significant data supported the major benefit categories already identified - health and wellbeing, social, cultural, economic, and political respectively.

These broad categories were further divided into subcategories appropriate to the field data. Health and wellbeing encompassed two subclassifications, emphasising biophysical and psychological aspects respectively. Cultural benefits were subdivided into: compatibility between program and cultural objectives; knowledge acquisition and sharing; and support for customary age and gender roles. Social benefits were identified as: homeland residence; formal education and training; broader horizons; and future aspirations. Economic benefits were identified as: income; employment stability; career progression and employment mobility; and business development. Political benefits were identified as: governance; leadership; succession; and independence. The subcategories are locally applicable instances and examples of the main benefit categories that would be expected to occur more broadly.

Section 4 considers key factors which may influence (i.e. augment or minimise) the nature and degree of wider benefits to an Indigenous community generated by an ICNRM program. Again using Yirralka Rangers at Baniyala as the case study, key factors identified include: program size and structure; resource levels and resource distribution; activity selection; compatible values and priorities; motivation; and communication. The section uses a combination of logical inference and field data examples to demonstrate how particular factors may preferentially influence particular categories of benefit, or particular subcategories of benefit within the main categories. In doing so, Section 4 lays preliminary foundations for management, increasing both the awareness of particular benefits and how policy, funding, and management decisions may impact on those benefits.

Section 5 provides a concluding discussion that summarises key points and provides some preliminary recommendations arising from the work. These include recommendations to:

- foster policies, procedures, and management structures that explicitly take account of the full range of benefits derived from ICNRM programs;
- support the ongoing strategic regionalisation/decentralisation of ICNRM programs where diversified residential location is culturally desirable and logistically possible;
- adopt funding, resourcing, and program monitoring models that recognise the resourcing needs and additional benefits of regionalised ICNRM programs;
- support structured opportunities for ranger mobility within the sector to assist sectoral knowledge sharing and individual career development;
- enable ongoing support and incentive structures for collaborations between local ICNRM organisations and other relevant local agencies (e.g. arts and media, education, health);
- conduct additional research focused on:
 - the synthesis and standardisation of benefit categories;
 - the development consistent methods and metrics for benefit assessment based on these categories;
 - field studies demonstrating causal rather than correlative relationships in the assessment of benefits;
 - research engagement with the broader literature on:
 - ~ further human interactions with natural environments
 - ~ ecosystem services and PES
 - ~ the wider benefits of NRM programs

1 Introduction

1.1 Report structure

This report describes the results of research on the wider benefits to a local Indigenous community of Indigenous rangers in northeast Arnhem Land. The report acts as a companion to the film, 'Rangers in Place' (Barber and Marawili 2015). This introduction describes the project partners, objectives, methods, and background context to the chosen fieldsite. It also briefly describes the content of the associated film and how it relates to the current report. Section 2 presents the outcomes of the review of existing research literature about the wider benefits of Australian ICNRM, as well as considering some key relevant aspects of the broader international literature on co-benefits, community-based environmental management, and human-environment interactions. Section 3 reviews the field data derived from qualitative research in northern Blue Mud Bay and focuses on the role of the ranger program and its activities in family and community life. The data is organised into categories of benefit that are based on those in literature sources, but iterative interrogation of the literature and field material resulted in both the extension of those categories and the division of them into subcategories to accurately reflect the local context. Section 4 extends analysis of the field material to consider key factors that influence benefits, using examples to highlight how influence varies across both the categories and subcategories described in Section 3. Section 5 provides a summary discussion and further recommendations based on the work completed here.

1.2 Project partners

This report and companion film reflects a unique formal research collaboration for this project between the National Environmental Research Program (NERP), the national science agency (CSIRO), and two local Yirrkala-based organisations:

- the Yirrkala Rangers, responsible for the Laynhapuy Indigenous Protected Area under the guidance of the Laynhapuy Homelands Aboriginal Corporation
- The Mulka Project, an Indigenous multimedia production organisation attached to the Buku-Larrnggay Mulka Arts Centre.

In different ways, these Indigenous community organisations are focused on fostering Indigenous livelihood development, Indigenous natural and cultural resource management (ICNRM), and Indigenous cultural continuity. The interrelationships between these ongoing aspirations are key aspects of both project outcomes. The input of both organisations, and their collaboration in producing key outputs, was integral to the project design and delivery.

1.3 Project objectives

The project objectives were generated through a process of preliminary desktop research and local consultation. They were iteratively modified throughout the project as circumstances evolved. In early consultations about the project, clear aspirations were articulated across the parties that the project would:

- complement recent broad-scale research on the benefits of ICNRM through an in-depth regional case study;
- focus research within the large geographic area of the Yirrkala IPA, emphasising Blue Mud Bay homelands with the greatest historical and conceptual ownership over the program;

- emphasise local community understandings, priorities and objectives in assessing the benefits of the ranger program;
- consider factors which augment and/or minimise the generation of co-benefits;
- build research partnerships with local organisations to enhance collaboration and diversify options for research methods;
- use mixed research methods that would involve local participants and improve local capacity;
- communicate key results and demonstrate local participation in ways that would foster further thinking about, and community engagement with, Yirralka Rangers.

The resulting project objectives were to conduct interdisciplinary and multimedia research involving:

- a summary and analysis of recent research literature relevant to the assessment of social and cultural benefits;
- an in-depth field case study investigating these wider benefits through interviews, discussions and workshops that encompassed ranger staff, their families, and wider community residents;
- a written report directed at researchers, policy makers, funding agencies, and other interested parties;
- a collaborative film as a key outcome to:
 - build partnerships with and between local ICNRM and arts and culture organisations;
 - to re-emphasise the connections between cultural and environmental activities;
 - assist local elders and program participants to communicate directly with policy makers, funders, and the wider Australian public;
 - visually communicate the social, cultural and geographic context in which the Yirralka Ranger program is located;
 - foster shared understanding of this research within the local community.

These objectives took into account local factors and priorities at the field site. They also responded to the fact that there have been a series of recent and ongoing investigations that have incorporated consideration of the wider non-environmental benefits of Indigenous natural and cultural resource management programs (Gilligan 2006, Sithole *et al.* 2008, Burgess *et al.* 2009, The Allen Consulting Group 2011, URBIS 2012). These are complemented by some recent reviews of literature in the field (Ganesharajah 2009, Davies *et al.* 2011, Weir *et al.* 2011). These investigations, which derive from a range of funding sources, reflect significant public interest in understanding the local popularity of ICNRM programs and activities amongst Indigenous people, as well as the range of positive consequences that arise from public and private sector investment in them. The existence of these other investigations, and particularly of a recent and broad-scale study of the social outcomes of the Working On Country (WOC) program (URBIS 2012), were influential in shaping the nature and content of this research project.

1.4 Research methods and scope

1.4.1 Methods

Based on the agreed project objectives, the methods for the field project were devised through a process of consultation and free, prior and informed consent with:

- community elders at Baniyala and Ganganj homelands;
- rangers based at Baniyala and Ganganj homelands;
- coordinating staff of Yirralka Rangers based at Yirrkalā;
- staff at staff at The Mulka Project and the Buku-Larrnggay Mulka Arts Centre.

The resulting methods chosen were:

- extensive literature review of the wider non-environmental benefits of ICNRM;
- semi-structured interviews and small focus groups with:
 - senior ranger staff at Baniyala and Ganganj about the structures, activities and benefits of the program;
 - general ranger staff at Baniyala about their involvement in the program;
 - the immediate family members of rangers at Baniyala about the impacts of program participation on family life;
 - wider community members at Baniyala about perceptions of the ranger program and the role of the program in community life;
 - Baniyala and Ganganj community elders about the historical origins and objectives of program establishment, ongoing operations, and future aspirations;
- field visits with rangers to key locations, participation in ranger activities, and the documentation of those activities;
- extended informal discussions and recorded interviews with community elders and leaders about the historical origins and ongoing objectives of the program;
- production of a film involving local participation and mutually agreed content emphasising these origins and objectives, as well as ongoing and future benefits;
- researcher participation in wider community events involving ranger staff, and the formal documentation of these events for community purposes;
- research workshops to discuss ongoing progress and present key results and findings;
- dissemination of final drafts of outputs for community approval.

The methods adopted led to a range of outcomes and outputs. These are discussed in more detail in Section 5, but involved outcomes and outputs appropriate to:

- the local community and local organisational level;
- regional and national public policy makers and/or the wider Australian community;
- the national and international research community.

The current document prioritises information from the interviews, discussions, and workshops. It has been introduced and distributed at community level and has community approval, but is primarily oriented to the research and public policy communities.

1.4.2 Project scope

The above objectives and methods show that the research did not aim to document benefits to Indigenous communities across the large geographical and socio-cultural expanse of the Laynhapuy IPA. As a discrete research project, it also did not aim to implement an indicator monitoring regime designed to assess ongoing performance of the program against wider benefit objectives over time. This report and film is also not designed to be directly used as a performance assessment tool.

Rather, the methods focused on local participation that enabled the discovery and conceptual classification of the types of benefits that such programs can generate within and for a local community. For this reason, the quotations used as example comments were made by individual participants in the research, but are de-identified for presentation purposes. Their primary purpose is to demonstrate how field remarks relate to the classification system.

1.5 Field context

1.5.1 Northeast Arnhem Land

Northeast Arnhem Land is the home of people who speak dialects of the Yolngu language group. It has major population centres at Nhulunbuy (established to serve the nearby mine and port) and at the former missions of Yirrkala and Gapuwiyak (Figure 1). The remaining Indigenous population is spread amongst small homelands associated with the territory of particular clans – traditional groups enmeshed in complex kinship relationships with one another (Warner 1958, Morphy 1978). The broader ownership of land and sea territory is similarly complex, with each clan having ownership rights over a series of places, places which are linked through the journeys and activities of ancestral figures (Williams 1986, Morphy 1991, Morphy and Morphy 2006). The entire Yolngu universe, including clans and individuals, are divided into two moieties, Dhuwa and Yirritja. The ownership of territory can be shared with one or more clans of the same moiety, resulting in a highly complex and interrelated set of owners at both local and regional levels.

1.5.2 Yirralka Rangers and the Laynhapuy IPA

History and governance

The Yirralka Ranger program was the primary focus of the research. Yirralka Rangers operates as a division of the Laynhapuy Homelands Aboriginal Corporation, established in 1985 to service the basic infrastructure and support needs of Yolngu homeland residents. The program was formally established as part of the IPA program in 2003, and the Laynhapuy IPA was formally declared in 2006. WOC support for the program commenced in 2008, and Laynhapuy is ultimately responsible for the delivery of the WOC and IPA projects that make up the Yirralka Ranger program. In addition to direct oversight from Laynhapuy, a steering committee made up of Traditional Owners and custodians assists with oversight, directions, and priorities for the program, and a series of Senior Cultural Advisor positions assist with operational oversight. An IPA advisory group involving external agencies such as government departments and the Northern Land Council also assists with specialist advice and interagency coordination.

Objectives and activities

The Yirralka Business Plan 2013-2016 outlines key visions and objectives for the program, as well as information about the activities and services Yirralka Rangers undertake (Laynhapuy Homelands Aboriginal Corporation 2013). The overall objectives of the program involve:

- managing land and sea country to the highest standards
- maintaining effective communication and endorsement from Traditional Owners
- enhancing processes of intergenerational knowledge transfer
- formal training and skill development with the ultimate goal being to have local Yolngu people in all positions
- completing all activities in an efficient, safe, and professional manner.

Crucially in this context, another key objective is 'to define and develop co-benefits such as health, maintenance of biodiversity, cultural practice and the recognition of rights' (Laynhapuy Homelands Aboriginal Corporation 2013:7). The current project directly addresses this Yirralka business objective by aiding the understanding and definition of local benefits, as well as providing important guidance for broader policies and management structures generated elsewhere. Aligning the objectives of government and other funding agencies with Yolngu principles and objectives is an ongoing operational challenge for the program, and this report contributes to addressing that challenge.

In terms of operational activities, Yirralka Rangers are involved in caring for the landscape and the people occupying it through:

- cultural heritage site protection
- feral animal control
- weed management
- visitor management
- fire management and carbon mitigation
- coastal and sea country patrols
- educational activities
- bush product development and sales
- biodiversity monitoring
- biosecurity and quarantine activities.

Undertaking these activities requires diverse formal and informal knowledge and skills, as well as externally recognised qualifications. The acquisition of relevant skills and qualifications is a critical aspect of ongoing ranger operations, particularly formal vehicle, boat, and firearm qualifications.

Regionalisation and expansion

Yirralka Rangers is explicitly conceptualised as a developing regionalised program rather than having the more common arrangement of a ranger work team based in one location and with team members drawn from one or a few sites. This means that, compared with many other Indigenous ranger programs across Australia, it is highly decentralised. Senior Yirralka coordinating staff and some general staff are based at Yirrkala, but the majority of the program's 52 staff reside and/or work in 17 smaller, clan-based communities, called homelands, which are spread throughout the Laynhapuy IPA (Figure 1). This structure is extremely valuable in ensuring ongoing monitoring and management of landscapes across the IPA. It is also important in some of the wider benefits generated by the program, discussed in more detail in the sections that follow.

The IPA was originally 6900km² but a significant expansion (known as Stage 2) is already complete (although not yet formally declared). This increases the total area to 10,740 km² and increases the coastline under management by 60%. It is also planned to declare approximately 6500km² of sea territory as part of the Stage 2 expansion process. Program efforts are focused on the IPA area, but effective environmental and cultural management involves management and the deployment of infrastructure outside the formal boundaries of the IPA. The Stage 2 expansion has also involved the incorporation of a range of additional homelands as well as the major population centre of Gapuwiyak (Laynhapuy Homelands Aboriginal Corporation 2013). Some larger homeland communities have ranger stations or offices, with a range of vehicle and other infrastructure deployed to additional communities on a strategic and project basis.

The regionalised, decentralised program structure creates significant logistical costs and supervision challenges. Much of this additional cost is not recognised in existing grants procedures. A key issue addressed in the Yirralka Rangers Business plan is the additional resource demands associated with the Stage 2 expansion. Currently, the ratio of Facilitators to Rangers is low, and, at the time the plan was created, insufficient capital investment existed to operate each ranger station effectively. Plans and strategies are in place to address these challenges, but they remain ongoing. By exploring and categorising wider benefits associated with the program, this project assists in managing the consequences of the Stage 2 expansion.



Figure 1: Regional location of Laynhapuy IPA. Map produced by CSIRO.

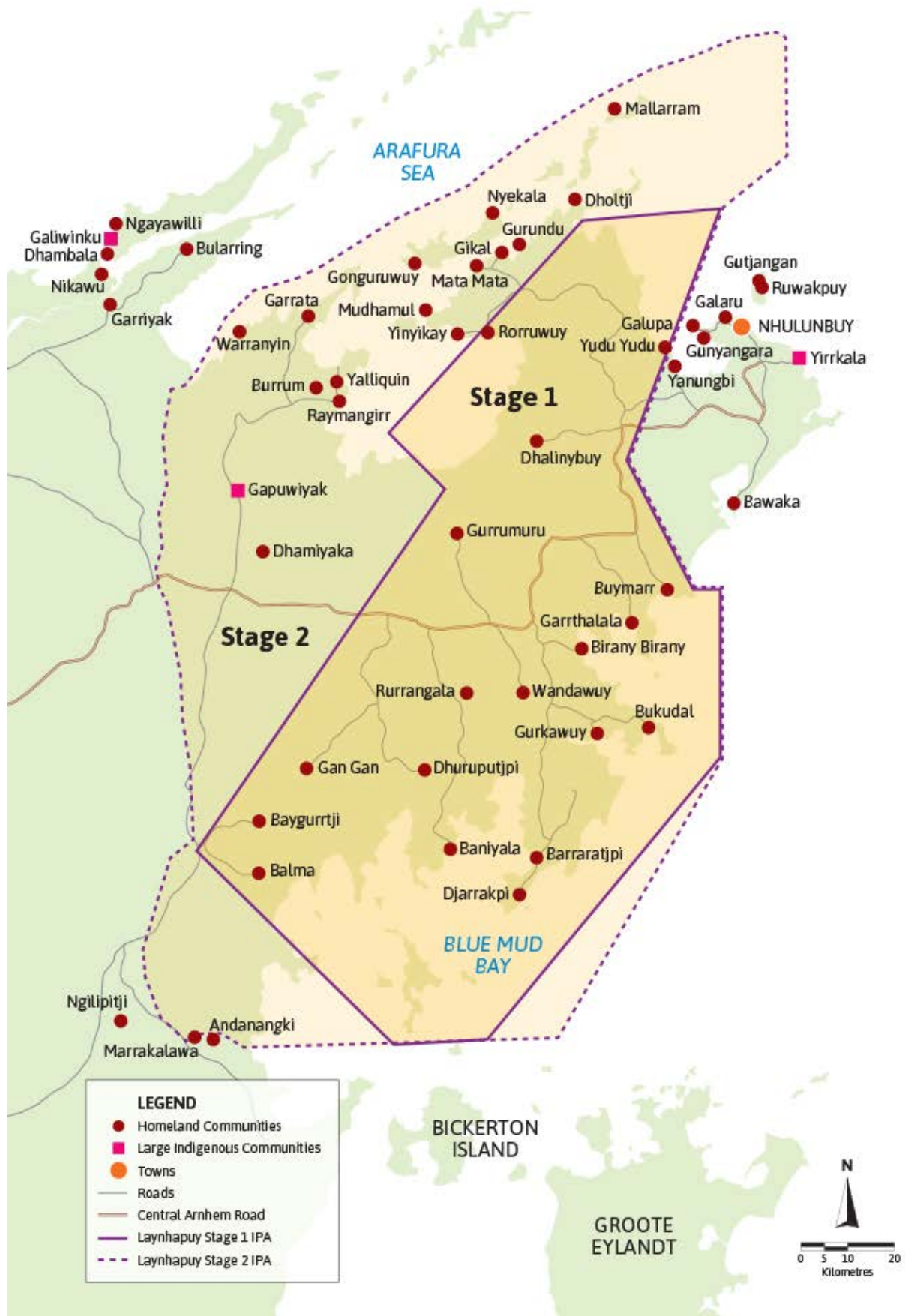


Figure 2: Laynhapuy IPA (Stage 1 and 2) Map produced by CSIRO from Yirrkala Ranger sources



Figure 3: Locations in Northern Blue Mud Bay. Map produced by CSIRO.

1.5.3 Blue Mud Bay: history and context

The research focused on northern Blue Mud Bay, 150km south of Yirrkala (Figure 1). In particular, it focused on one main homeland community in that area, Baniyala, with additional comparative insights derived from discussions with key ranger staff at Gangan, another large homeland nearby (Figure 3). The core of the Baniyala community comprises the Madarrpa clan, on whose country the homeland centre is built. However, due to marriage, kinship ties, and relatively high residential mobility, a diverse range of Yolngu-speaking clans are represented amongst the regular residents. Non-Indigenous inhabitants comprise two school teachers and a storekeeper. Regional mobility is high, particularly between Baniyala and Yirrkala/Nhulunbuy, where major commercial, government, health and social services are located.



Baniyala homeland, northeast Arnhem Land

Baniyala (and Gangan) are important communities in the context of the program - both have a significant number of resident male and female ranger staff, and most key Yirralka-based Indigenous staff have strong customary and kinship connections to one or both homelands. Baniyala is of additional importance because it is locally understood that the initiative for Yirralka Rangers originated from this homeland. Therefore, it is a place in which considerable thought has been given to the wider significance and purpose of Indigenous rangers generally, as well as to the specific role of rangers when they are resident in homeland communities as part of a decentralised, regionally-networked organisation.

This thinking by northern Blue Mud Bay residents about the wider context for ranger programs is underpinned by a history of engagement in regional and national discussions about:

- Indigenous rights to natural resources;
- the recognition of Indigenous culture and of Indigenous management of land and sea country;
- the resourcing by government of Indigenous programs and initiatives; and
- the opportunities for current and future Indigenous business development.

These discussions have been multi-generational, and have had national scale implications across legal, political, and cultural spheres of Australian life. In terms of individuals, the inaugural head ranger for much of the first decade of the Yirralka Rangers, Wanyubi Marika, is a successful artist and a son of the lead claimant in the 1970 Gove Land Rights case (*Milirrpum vs Nabalco*) that ultimately led to the 1976 Land Rights Act (NT). The current leaders of Baniyala (Djambawa Marawili) and GanGan (Gawirrin Gumana), both nationally awarded artists, launched a successful sea claim that resulted in formal High Court recognition of Indigenous rights to the intertidal zone across much of the NT coastline in 2008. The paintings produced for the 'Saltwater' public education art project associated with that successful claim are now owned by the Australian National Maritime Museum in Sydney (Buku-Larrnggay Mulka Centre 1999). Djambawa Marawili also contributed as an artist to the Barunga Treaty signed by the Hawke government in 1988, is the Chairperson of the Association of Northern, Kimberly and Arnhem Aboriginal Artists (ANKAAA) and is serving as a member of the Prime Minister's Indigenous Advisory Council of the current Federal government.

Such initiatives and engagements by people from Blue Mud Bay combine issues of natural resource ownership and management rights, legal engagement, artistic and cultural production, public education, government recognition and sustainable livelihood development. They provide important context for the statements about the social, cultural, and community significance of the Yirralka Rangers that appear in this report and in the associated film.

1.6 Collaborative multimedia: the ‘Rangers in Place’ film

The collaborative film was an agreed specific output from the research. It provides key local content, supporting information and additional context to complement the data presented in this report. Appearing in the film are:

- Maḍarrpa elder and Baniyala community leader Djambawa Marawili;
- Yirralka Rangers Facilitator and senior Maḍarrpa woman Gurrundul Marawili;
- key Baniyala-based Indigenous male staff from Yirralka Rangers (Makungun Marika, Napuwarri Marawili, and Gawaratj Munungurr);
- key Baniyala-based Indigenous female staff (Bulbuyunawuy Guyula, Gamaliny Marawili, and Gurrundul (Il) Marawili); and
- Ishmael Marika - lead cameraman at The Mulka Project, former ranger program participant, and a Maḍarrpa *waku* (child of a Maḍarrpa woman).

The participants in the film emphasise:

- the benefits of the ranger program to the community;
- the overall cultural, economic, and environmental value of the country;
- the need to manage it according to appropriate customary principles;
- the role of rangers in that process, including
 - the protection of sacred or restricted areas,
 - the management of general recreational visitors to the country in areas designated for that purpose,
 - the management of business ventures, particularly fishing and related activities in the coastal zone, and
 - undertaking Yirralka-supported business ventures, such as bush soap manufacture;
- the value of homeland residence by rangers;
- the significance of appropriate cultural knowledge in ranger work;
- the relationship of ranger activities to art production;
- the importance of formal training and skill acquisition by rangers in laying foundations for future business development;
- the significance of continued funding for the program as an ongoing demonstration of recognition and reconciliation.

Key elements in the film, and the formal collaboration between The Mulka Project and Yirralka Rangers, demonstrate the direct interconnections between what may elsewhere be categorised as artistic and cultural production on the one hand, and environmental management on the other. The film is intended for a broad audience, but two audiences were particularly prioritised in its production. One is policy makers and potential ICNRM investors interested in wider benefits. The other is the local communities in the region. The film complements the field data presented in Section 3, and provides a local counterpoint to the formal review of the benefits literature that appears in the next section.



Baniyala community leader Djambawa Marawili and Ishmael Marika from The Mulka Project filming 'Rangers in Place'.

2 Literature review: the wider non-environmental benefits of Indigenous land management

2.1 Introduction

This section provides further introductory comments about Australian ICNRM, the growing interest in the wider benefits of that activity, and describes how such benefits can be categorised. It then provides an extended review of current literature on the topic under the headings of health, social and political, cultural, and economic benefits, which are the primary categories adopted in the existing benefits literature.¹ Section 2 also contains a brief discussion of some wider international literature that may be relevant to future explorations of the topic. It concludes with a further description of the field location and the methods used to derive the data provided in Section 3.

2.2 Australian Indigenous Natural and Cultural Resource Management (INCRM)

Landscapes are important to Indigenous Australians (Williams 1986, Myers 1991, Strang 1997, Rose 2000, Weir 2009, Bradley 2010, Gammage 2011) and national surveys of Indigenous people demonstrate strong commitment to the maintenance of their land, languages, institutions of management and cultural heritage (Biddle and Swee 2012). 22% of the Australian continent is now under Indigenous tenure, with non-exclusive shared title over a further 10% (Altman and Jackson 2014). Much Indigenous land is in regional and remote areas that are in relatively good ecological condition.

Australian ICNRM initiatives have grown in response to significant public and some private investment. This investment has responded to the need to manage the national estate, but also to Indigenous demands for recognition, control over land, management capability, and the need to craft regional development pathways to address Indigenous disadvantage (Young *et al.* 1991, Baker *et al.* 2001, Smyth 2011, Altman 2012, Altman and Kerins 2012, Bauman *et al.* 2013, Hill *et al.* 2013, Altman and Jackson 2014). Indigenous resource managers wish to derive income from environmentally beneficial management actions undertaken on Indigenous lands. This can enable the retention and/or re-establishment of traditional land management practices (Campbell *et al.* 2007, Luckert *et al.* 2007, Putnis *et al.* 2007, Muller 2008, Winer *et al.* 2012).

This burgeoning movement now encompasses several hundred community-based Indigenous land management groups around Australia, undertaking activities as diverse as carbon emissions reduction and sequestration, vulnerable and feral species management, natural product harvesting, and cultural heritage protection. Frequently, the initial NRM focus of these initiatives has been augmented by local cultural management priorities (Davies *et al.* 2013) and by wider aspirations for community, economic, social and environmental development (Kerins, 2013).

¹ Much of the analysis for this section was developed in a collaboration with Sue Jackson for a forthcoming review paper

2.3 Interest in the wider benefits of ICNRM

As investment in the ICNRM sector has grown, so has interest in the ancillary social, cultural, health and economic benefits derived by poor and marginalised Indigenous communities from such investment. This interest also comes from:

- national efforts to redress Indigenous socioeconomic disadvantage;
- the relatively poor health status of Indigenous people;
- the desire of Indigenous people for recognition of their ancient custodial role over Australian landscapes from the colonising society; and
- Indigenous participation in new payment for environmental services (PES) initiatives, particularly market-based greenhouse gas mitigation projects.

The Australian welfare system attenuates the economic reliance of Indigenous people on such programs relative to developing world contexts. However, this in turn highlights the crucial wider social, cultural, and political impacts of these ICNRM programs, particularly their capacity to support desirable work activities and residence in desired locations. Nevertheless, in practical terms, the rapid growth and associated popularity of the ICNRM sector has meant that financial demand has outstripped current state-provided supply. Private sector funding sources are increasingly sought to meet the shortfall.

2.4 Categorising benefits and beneficiaries

A key aspect of benefit identification is accurate categorisation. In practice, the identification of benefits (and of beneficiaries) is an iterative process - pre-determined categories and classifications can aid the identification of benefits, while the identification of benefits can also suggest new forms of classification. In the literature, the categories of benefit usually discussed are: health and wellbeing; social; cultural; and economic. For consistency, these terms are used in the following literature review, and conventional definitions of the terms involved are adopted:

- *health and wellbeing* as encompassing biophysical, psychological, and collective aspects;
- *social* as pertaining to patterns, institutions, and relationships in systems of human organisation;
- *cultural* as pertaining to learned ideas, beliefs, values, knowledge, behaviours, etc. that demarcate group identities and constitute shared bases of social action;
- *economic* as relating to material resources and conditions;
- *political* as relating to systems of governance and the exercise of power and authority.

However, these categories necessarily intersect and overlap and, in Indigenous contexts where holism is a key trope, greater emphasis is often placed on such overlaps and on the interconnectedness of social outcomes (URBIS 2012). In some cases, benefits identified by respective studies as 'social' or 'cultural' - for example self-esteem, hope, identity, and self-worth (Sithole *et al.* 2008, Kingsley *et al.* 2009a, Kingsley *et al.* 2009b) - can also be understood in terms of individual psychology, or indeed through such compound terms as 'psychosocial' (Morice 1976, Campbell *et al.* 2008). In general, the studies and reviews focused on the benefits of Australian ICNRM variously refer to such benefits as social, cultural and, in one instance (Weir *et al.* 2012) socio-political, at times in the context of group and community wellbeing. Political benefits have not been as extensively discussed or conceptualised

in the recent work on benefits, but discussions in the national and international literature focused on governance are highly relevant to considerations of the political benefits of Indigenous environmental and cultural management (Abrams *et al.* 2003, Thompson *et al.* 2011, Hill *et al.* 2012, Lederer 2012, Hill *et al.* 2013).

In terms of identifying beneficiaries, a range of possibilities exist. Some international studies have distinguished between social structural categories such as an individual, an organisation, or an entire community (Westphal 2003, Hibbard and Lurie 2012). In other cases, key scales of analysis may be the individual project and the nation state (Sutter 2003). In Australian Indigenous management contexts, the distinctions have been drawn in terms of the ICNRM program and its direct participants, the family, the Indigenous landowning group, and/or the Indigenous community (Sithole *et al.* 2008, URBIS 2012). The study reported on here largely focused on a single homeland and so these categories are relevant here.

Beneficiaries of ICNRM activity can also be conceptualized in relation to participation, proximity, awareness, and outcome: those who undertake ICNRM; those who passively witness or experience it; those who know of its occurrence but do not see it; and those who benefit from the outcome (possibly without knowing it has taken place). As with the categories of benefit, such categories can overlap, particularly in ICNRM contexts that may involve direction or supervision by elders, wider community involvement in the activity, and so on. The accurate identification of beneficiaries can be crucial to demonstrating the wider value of particular initiatives, and therefore to securing ongoing investment in them.

2.5 Australian literature on the wider benefits of ICNRM

2.5.1 Introduction

There are some significant contributions to the existing Australian literature on the wider benefits of ICNRM. This is particularly so with respect to health and wellbeing benefits. Some Australian studies have attempted to generate measures for ICNRM that incorporate participatory evaluation and are locally meaningful and transparent (Sithole *et al.* 2008, Izurieta *et al.* 2011, Prout 2012, Stacey *et al.* 2013). However, standardised characterisations of the multiple benefits arising from ICNRM remain underdeveloped and the metrics and the frameworks for integrating values and benefits have not yet fully emerged. The following section reviews notable contributions to the field, using the broad categories of benefits described above.

2.5.2 Health and wellbeing benefits

Indigenous health is frequently defined in the literature in terms of the broader concept of 'wellbeing' (Social Health Reference Group 2004, Prout 2012, Browne-Yung *et al.* 2013). This reflects the perspectives of Indigenous people (Anderson 1996, Rigby *et al.* 2011, Kingsley *et al.* 2013), as well as longstanding international definitions of health as inclusive of mental and physical wellbeing rather than merely the absence of illness (World Health Organisation [WHO] 1948). Indigenous commentators have noted the 'striking similarity' between Western and Indigenous understandings of wellbeing as 'dependent on satisfactory human relationships, meaningful occupation, opportunities for contact with nature, creative expression and making a positive contribution to human society' (Kingsley *et al.* 2009b).

A particular emphasis in the Indigenous health and wellbeing literature is the association between the wellbeing of people and the perceived health of landscapes (Johnston *et al.* 2007, Ganesharajah 2009, Rigby *et al.* 2011, Biddle and Swee 2012, Green and Minchin 2012, Kingsley *et al.* 2013) and/or of key features such as rivers (Willis, Pearce and Jenkin, 2004; Weir, 2009). The importance of subsistence food to Indigenous livelihoods in more remote places is well documented (Meehan 1982, Altman 1987, Barber 2005, Bliege Bird and Bird 2008, Jackson *et al.* 2012). Yet the potential health benefits are more often inferred (Johnston *et al.* 2007, Prout 2012), than directly demonstrated (O'Dea 1984, O'Dea *et al.* 1988, Rouja *et al.* 2003). There are also few available measures and analyses of food access and security.

Residence in smaller communities on traditional lands appears to correlate with mental wellbeing (Morice 1976) and with specific biomedical health indicators (McDermott *et al.* 1998, Rowley *et al.* 2008). However, such evidence requires further interrogation (Kowal 2009, Anderson and Kowal 2011), as it is directly implicated in broader debates about both the value and viability of these smaller communities (Rowley *et al.* 2006, Hunter 2007, Scrimgeour 2007, Campbell *et al.* 2008, Dockery 2010, Anderson and Kowal 2011) and the implications of changes to the systems of rights that underpin remote residence (Flick and Nelson 1994, Scrimgeour 2007, Watson 2007).

With respect to ICNRM activity and health, a key dataset derives from a multidisciplinary project, 'Healthy Country, Healthy People' (Burgess *et al.* 2005, Franklin *et al.* 2007, Johnston *et al.* 2007, Burgess *et al.* 2008, Burgess *et al.* 2009, Garnett *et al.* 2009). This had two key components. One was quantitative ecological research comparing landscape health under contrasting Indigenous and non-Indigenous land management regimes. The other compared the health and well-being of Indigenous participants in land management with non-participants. The project found ICNRM to be beneficial for clinically-measured health indicators and to be associated with lower levels of psychological distress (Burgess *et al.* 2008, Burgess *et al.* 2009). ICNRM provided a culturally appropriate vehicle for health promotion and disease prevention through the associated improvements in diet, physical activity, autonomy, and social and spiritual connection to land (Burgess *et al.* 2005, Burgess *et al.* 2009). Extrapolations of the work provided additional preliminary evidence for:

- potential social and emotional wellbeing benefits (Berry *et al.* 2010)
- a basis for calculating health care cost savings (Campbell *et al.* 2011); and
- the value of residence on traditional lands (Johnston *et al.* 2007),

The Healthy Country project remains the primary empirical dataset correlating health and formal ICNRM activity.

Subsequent research has focused on policy implications and analysis (Garnett *et al.* 2009; Campbell *et al.* 2011) and on review and synthesis (Ganesharajah 2009, Davies *et al.* 2010, Davies *et al.* 2011) to identify pathways for wider health benefits. A systematic examination of the relationships between health and wellbeing, ICNRM and 'traditional culture' in ISI Web of Knowledge databases highlighted the importance of the Australian literature in this field - of 17 directly relevant articles, 11 were from Australia (Davies *et al.* 2010, Davies *et al.* 2011). The evidence presented for health and well-being benefits was variously theoretical/review (3 articles), biomedical (5), qualitative interview (6), qualitative observation (1), qualitative ethnographic (1) and biochemical (1) (Davies *et al.* 2010).

Diverse categories of health indicators were also identified across these studies: general and unspecified (e.g. self-reported wellbeing); psycho-social (e.g. self-esteem, cultural connection); biomedical (e.g. body mass, diabetes); diet (e.g. diversity, protein intake); and socio-economic (e.g. income, education) (Davies *et al.* 2010:22). The benefits were variously associated with 'caring for country' (Burgess *et al.* 2009, Kingsley *et al.* 2009b), homeland residence (Morice 1976, O'Dea *et al.* 1988, McDermott *et al.* 1998, Rowley *et al.* 2008), or customary fishing (Rouja *et al.* 2003). ICNRM was also associated with significant health improvements, but Davies *et al.* (2011) note that, other than one study which constituted an uncontrolled experiment (O'Dea 1984), these have been reports of correlations for which causality should be inferred rather than causal demonstrations.

No study reported negative associations between wellbeing and ICNRM and, in their final analysis, Davies *et al.* (2011: 417) suggest that ICNRM activities 'are consistent with [Indigenous peoples'] own sense of the right and proper way for them to behave towards land, family, and community.' The resulting 'increased sense of control' moderates lifestyle stress and the effect of health risk factors and can be further enabled by improvements to adaptive governance, learning, partnerships, and prioritisation (Davies *et al.* 2011). The direct implications for health management policies and practices were not explored by the authors. However, a subsequent analysis argued that Indigenous wellbeing indicators that might inform such policy change should encompass measures of the ability to access, manage, and control important places, as well as the biophysical condition of those places (Prout 2012).

Davies *et al.* (2010:5) do state that, although the connection between ICNRM and health seems sound, the challenge of identifying causality remains. Are the health benefits that accrue due to the facilitation of customary relationships to land, to a sense of recognition and self-worth, to engagement in regular work, to the corresponding higher incomes, or to the education and capacity building opportunities that become available? Physical activity relating to formal and informal ICNRM and to customary education in significant locations has been reported as the most culturally appropriate form of exercise (Thompson *et al.* 2013). This highlights the potentially complex causal relationships between culture, place, physical activity and health.

These multiple pathways to wellbeing suggest that demonstrating the health benefits of formal ICNRM programs (Burgess *et al.* 2005) may be easier than demonstrating any potentially more diffuse benefits associated with general residence in remote locations (O'Dea *et al.* 1988, McDermott *et al.* 1998). However, Ganesharajah (2009) also restates an argument made in the early native title era by Flick and Nelson (who would later become a Federal government minister) that neither rights to land nor rights to health should be made conditional upon one another (Flick and Nelson 1994) nor conditional on the demonstration of a scientific or quantitative link between the two.

2.5.3 Social and political benefits

Awareness of the potential social benefits of ICNRM has existed since the early foundations of the movement (Young *et al.* 1991, Baker *et al.* 2001), but it is only recently that further information has been actively sought. The first published attempt to explicitly identify and enumerate such benefits appeared within a review of IPA program (Gilligan 2006). Gilligan's formal findings included that IPAs integrate 'land management outcomes and social, education and health benefits at the local community level' and that the IPA program delivers social, health, education and economic benefits to participating communities (Gilligan, 2006:51). Significant majorities of IPA communities reported program-associated benefits in economic participation, early childhood development, early school engagement, substance abuse reduction, and the reinforcement of family and community structure and function (Gilligan, 2006:3). Other benefits (2006:3) included improved social cohesion, sense of worth, and structures to

facilitate collaborative work, as well as the potential to support broader government objectives to deliver social, health, education and economic benefits to Indigenous communities. Indigenous organisations noted better land use and economic options, non-Indigenous recognition of Indigenous roles in land management; and prospects for native title resolution (Gilligan, 2006:15).

Yet despite these outcomes, Gilligan (2006:67-8) argues that the program, managed by the Environment Department, should leave responsibility for wellbeing to other areas of government and remain focused on conservation outcomes. This was largely to ensure that any income generated is treated as conservation-oriented fee for service. Gilligan argued that such a perspective should not entail a reduction in funding – when compared with lands in the public reserve system, IPA land funding levels are orders of magnitude lower (Gilligan 2006:68).

Soon after Gilligan's evaluation, Sithole et al. (2008) undertook what they termed a 'community-driven evaluation' of ICNRM. The authors (2008:71-84) identify significant benefits including self-reported improvements in:

- self-worth;
- intergenerational knowledge transfer;
- skills and educational development;
- avoidance of violence, substance abuse, etc.;
- institutional and governance structures;
- resourcing and infrastructure; targeting of research; and
- networking opportunities.

Sithole et al. (2008) argue such benefits challenge the traditional government demarcations and require revised frameworks to be captured effectively. Improvements in institutional and governance structures highlight the potential significance of political benefits, but formal discussion of political and governance issues is relatively limited in the report. Community respondents noted the heavy focus on environmental outcomes amongst existing external stakeholders. Such a focus misses the fact that ICNRM is 'the logical nexus between the sustainability and reconciliation of country, people, culture, employment, and enterprise development, health and wellbeing' (Sithole et al. 2008:71). The wider outcomes are also crucial to the local assessments of such programs: traditional custodians operating outside of formal ICNRM programs on average rate the 'healthy people' outcomes as more significant than the land management outcomes (Sithole et al. 2008:83).

Sithole et al. (2008) also report on an exercise rating the performance of ICNRM against the expectations of Traditional Owners (2008: 80-83). A number of categories reflected 'significant achievements' but it is notable that some categories achieved 'moderate achievement' status: the transfer and application of Indigenous knowledge; proper valuation of effort, effective governance structures; employment independent of welfare programs; and adequate infrastructure. Categories receiving 'low achievement' status included the achievement of viable stand-alone business enterprise; empowerment and self-management; and a 'strong voice for land and sea management.' The low ratings for these latter two appear to be at least partially related to particular governance issues associated with local land council involvement during that period, but also to the prevalence of non-Indigenous coordinators and facilitators within ICNRM programs.

Highlighting intersecting social, cultural, and wellbeing issues in ICNRM in rural New South Wales, Hunt (2010) reports on improvements in general social cohesion and community pride, as well as alterations in more specific indicators such as reductions in crime, substance abuse, increased educational participation, and improved access to social services (Hunt 2010). ICNRM also assisted in the growing task of managing lands returning to Indigenous hands (Hunt *et al.* 2009, Hunt 2010), a task for which direct funding is extremely scarce (Weir *et al.* 2011). Currently, the Australian literature has given relatively little explicit attention to the benefits of social interactions such as meeting new people, teamwork, camaraderie, etc., although partnerships with other organisations and capacity-building benefits are referred to as crucial elements of the contemporary movement (Altman and Kerins 2012).

The review by Weir *et al.* (2011) complemented the earlier review of health benefits (Ganesharajah 2009) emerging from the same institution. This review is noteworthy because it distinguishes between cultural and socio-political benefits, rather than merely social benefits. Although relatively short, the discussion of the socio-political category includes examples (e.g. Hunt *et al.* 2010) that are taken primarily as social benefits. Yet it also refers to accounts (Yanner 2008) that argue for caring for country programs as important to community autonomy and Indigenous sovereignty – that when Indigenous people become providers of government services rather than merely receiving them, this can alter existing power imbalances. Clearly these are intended to demonstrate the political component of socio-political benefits. Weir *et al.* (2011) also discuss how caring for country programs can also directly and indirectly assist native title holders in fulfilling their governance and land management obligations – increasing group skills and capacity, knowledge of the landscape, etc.

Ongoing government interest in social outcomes led to a survey of the Working on Country (WOC) employment program (URBIS 2012). Using a combination of local case studies, government staff interviews, and existing policy and program data, URBIS found a diverse and interconnected set of benefits which, under the broader heading of social, were categorised in terms of wellbeing, economic, cultural and educational outcomes (URBIS 2012). Political issues and outcomes are not given high priority, and are covered largely through a few references to increased political capital enhancing capacity to engage with native title (URBIS 2012: 72). This highlights that the issue of political benefits, encompassing issues such as formal and informal systems of governance, leadership, etc. remains under-explored in the literature. This is despite the fact that governance has itself been a key focus for a wide range of Indigenous initiatives in recent decades, including:

- a dedicated national award (<http://www.reconciliation.org.au/iga/>);
- research projects (<http://caepr.anu.edu.au/governance/index.php>); and
- publications (<http://www.aiatsis.gov.au/research/protectingcountry.html>).

Although focused on the WOC program, URBIS (2012:74) note that many of the success factors relate equally to the IPA program and to other Indigenous initiatives supported by Caring for our Country funding. Yirralka Rangers were represented in the URBIS (2012) study, but only through a telephone interview. There are ongoing challenges for assessing wider social benefits and similar issues of causality as those in the health field (The Allen Consulting Group 2011). Nevertheless, URBIS (2012:77-79) also addressed measurement of the benefit categories they identified and suggested a range of potential indicators. These measures of social outcomes appear below (Table 2-1).

Table 2-1 Potential measures of the social outcomes of the WOC program as identified by URBIS (2012)

Category	Potential
Employment	<ul style="list-style-type: none"> • The total number of Aboriginal and Torres Strait Islander peoples employed through WOC • The employment status of rangers previous to their involvement with WoC (e.g. were rangers previously unemployed, employed part-time, full-time, on a temporary basis or employed through CDEP) • The retention of rangers in the program (e.g. what proportion of rangers sustain the three to four year contract compared to the proportion of rangers that leave the program) • The career progression of rangers within the program • Rangers transitioning to other employment opportunities • Self-reported employer job satisfaction (e.g. to what extent do rangers enjoy their work? Does it offer career development opportunities? Does it align with their interests and needs?) • Rangers demonstrating job commitment (e.g. getting to work on time, number of days off, accountability to the team) • Self-reported future career aspirations of rangers • Self-reported future career aspirations of rangers' family members • The financial investment or contributions made by WOC to other local businesses and organisations
Financial	<ul style="list-style-type: none"> • The impact of employment and financial security for rangers (e.g. how many rangers are able to pay-off debts, take out financial loans, set up bank accounts, contribute financially towards their children's education) • Improved standards of living for rangers and their families (e.g. demonstrated by the increased ability to purchase homewares) • Improved housing conditions (e.g. demonstrated by the number of rangers transitioning into private rental or home ownership)
Educational	<ul style="list-style-type: none"> • The type and level of training undertaken and completed by rangers • The number of rangers who have got their driver's license • Self-reported learning outcomes for rangers • Professional development opportunities (e.g. networking with other rangers, attendance at conferences) • Increased confidence (e.g. demonstrated through public speaking and presentation at conferences and to project partners or funding bodies) • Rangers taking on leadership roles (e.g. demonstrated through becoming elected members of Council, being a spokesperson for their community at conferences and events, leading tours and community events, working with school children) • Increased school attendance and achievement amongst the rangers' children

Category	Potential
Health and wellbeing	<ul style="list-style-type: none"> • Improved eating habits and weight loss amongst rangers • Rangers have increased and more frequent contact with health services • Decreased drug and alcohol consumption amongst rangers • Improved mental health amongst rangers (e.g. decreased depression and anxiety) • Reduced domestic or other family violence
Cultural and community	<ul style="list-style-type: none"> • The extent to which family members participating in on-country fieldtrips and other ranger activities • The extent to which ranger activities protect and restore sites and species of cultural significance • The development of data collection and recording systems and processes to document, organise and disseminate cultural knowledge • The extent to which rangers are involved in supporting cultural activities (e.g. production of traditional resources, involvement in cultural events such as NAIDOC week, and supporting traditional ceremonies) • The extent to which ranger activities involve elders, traditional owners and school children • Increased use and teaching of language by community members • Increased interactions and improved relationships between different clan groups • Increased willingness by private landholders to contract Aboriginal and Torres Strait Islander peoples to work on their properties • Reduced conflict, violence and anti-social behaviour in communities • Increased interactions and improved relationships between Indigenous and non-Indigenous community members • Increased political capital (e.g. demonstrated by greater capacity to assist in Native Title Claims) • Increased control over land use practices (e.g. visitor monitoring and input into local tourism policies and practices) • Partnerships or MOUs established between WoC projects and external organisations, and ability of projects to secure external project funding

The resulting framework proposed by URBIS contains a range of potential indicators and data sources appropriate to the logic and intent of the WoC program. This included the collection of both qualitative and quantitative data at the individual, project, and community levels and involving input from an array of stakeholders. The intention was that the framework would guide the seeking of relevant data through methods that would not be too onerous for funded organisations. The framework contained a subset of the measures of social outcomes above and listed potential data sets that might enable monitoring of those indicators. These were organised in terms of outcomes (Table 22).

Table 22 Timeframe and major outcomes of the social indicator framework developed by URBIS (2012)

Timeframe for intended outcome	Outcome
Ultimate outcome	<ul style="list-style-type: none"> Indigenous people are managing the natural and cultural values of their traditional estates
Intermediate outcome	<ul style="list-style-type: none"> future employment opportunities and career pathways for indigenous people improved levels of skills, knowledge and qualifications of indigenous people physically and emotional health and well-being outcomes for indigenous community members
Immediate outcome	<ul style="list-style-type: none"> Training opportunities for indigenous people in land and sea management Opportunities for elders and others with experience in caring for country to actively transfer cultural and traditional knowledge opportunities for community involvement by elders, traditional owners, women and young people in land and sea management activities facilitated by ranger groups
Outputs or activities	<ul style="list-style-type: none"> Project design and delivery involves traditional owners and respects indigenous decision making, governance regimes, and land management accountabilities Planning and delivery involves partnership building and stakeholder consultation

URBIS (2012) recommended that reporting against the assessment framework could be undertaken every 2-3 years, involving employee surveys across a range of projects that represent the diversity within the overall program – small and large scale, geographic and tenure variations, variations in ranger demographics and gender, and organisational and institutional funding arrangements. The results of such surveys could also be tracked and correlated against ABS data collected over longer timeframes. It is unclear the degree to which these assessment techniques have been implemented, either within the WoC program, or across the ICNRM sector more generally.

2.5.4 Cultural benefits

Reviewing the relevant ICNRM benefits literature, Weir *et al.* (2011:12) note the practical difficulty of separating the cultural and the social. Nevertheless, they find such a demarcation useful in their assessment, perhaps in part because the distinctive characteristics of Indigenous cultures are often emphasized in environmental discourse and policy (Jackson 2006). Gilligan (2006:63) noted that approaches based in economics were important in representing resourcing issues, but struggled to generate the comprehensive measures of value required for more holistic assessments of ICNRM. In terms of cultural benefits, Gilligan noted improvements in the intergenerational transfer of traditional cultural knowledge and in knowledge exchanges between western science and traditional knowledge (Gilligan 2006). Other authors note enhanced cultural identity, pride, continuity, reinvigoration and/or intergenerational respect (Johnston *et al.* 2007, Hunt *et al.* 2009, Griffiths and Kinnane 2010).

Indigenous leaders and ICNRM facilitators (Morrison 2007, Yanner 2008) identified a series of improvements that are described as cultural, but reflect the interrelatedness of cultural and political processes. These include improvements in:

- cultural transmission (Morrison 2007)
- governance (Morrison 2007)
- the capacity to engage with the non-Indigenous world (Morrison 2007);
- political and cultural autonomy (Yanner 2008);
- the ability to reside upon traditional country (Marika *et al.* 2012).
- the ability to fulfil cultural, spiritual and ceremonial responsibilities to it (Marika *et al.* 2012).

ICNRM activities that either confirm or improve knowledge of the country can enhance governance and educational institutions such as ceremonies and vice versa (Marika *et al.* 2012).

These ongoing cultural consequences of ICNRM are crucial to their success in diverse geographic and social contexts within Indigenous Australia. The general focus of benefits literature is on the Indigenous participants in the programs and/or the communities from which they are directly drawn, rather than wider regional or national populations (Zander 2013). The social and cultural benefits at these scales are yet to be adequately investigated.

2.5.5 Economic benefits

Livelihoods and the hybrid economy

The economic benefits of ICNRM can be identified and considered in a range of ways. Two key terms will be highlighted here – livelihoods and the hybrid economy. Use of the term ‘livelihoods’ emphasises that remote area Indigenous economic participation incorporates productive activity beyond conventional public/private and market/state definitions (Rea and Messner 2008, Davies *et al.* 2010). ‘Livelihood’ provides an overall framing for considering ICNRM economic benefits. The ‘hybrid economy’ similarly emphasises the presence of, and interdependencies between, the state, market, and customary components of economic life (Altman 2005, 2012). In doing so, it provides a means of categorising the respective economic benefits to such livelihoods identified in the literature.

Contemporary ICNRM plays an important role in such livelihoods – 95% of the communities surveyed by Gilligan (2006) reported economic benefits from ICNRM and a later study also identified a more limited, but significant set of benefits accruing to the broader Australian community (The Allen Consulting Group 2011). Resource dependency, demographic factors, and low economic diversification and/or participation rates (Carson 2011) in areas of key ICNRM activity increase their local economic significance. However, dependencies on non-local goods can also diminish the multiplier effects of new local spending initiatives associated with ICNRM (The Allen Group 2011:24).

Market sector economic benefits

The most prominent ‘market’ benefit of ICNRM to individuals is direct employment through the expansion (or creation) of a labour market (Gilligan 2006, Hunt 2010). ICNRM can significantly outweigh local employment in other sectors like mining (Hunt 2010, Fogarty 2012), providing productivity improvements through appropriate skills and training (Fogarty *et al.* 2012, Marika *et al.* 2012, Marika and Roeger 2012) and an employment pathway for long-term unemployed people (Hunt 2010). Importantly, any enhanced capacity tends to stay in the immediate ICNRM area, as very few training participants leave (Sithole *et al.* 2008). Policy changes rewarding professionalisation have reduced the employment footprint, particularly for those on subsidised welfare programs (Gorman and Vemuri 2012), but improvements to direct livelihood options, pathways, and productivity remain key economic aspects of ICNRM.

Increased worker capacity enables additional market-based income flows, most notably income from payment for environmental services (PES) such as carbon abatement and invasive species management (Luckert *et al.* 2007, Muller 2008, Garnett *et al.* 2009, Altman 2012, Winer *et al.* 2012, Greiner and Stanley 2013, Hill *et al.* 2013). ICNRM receives income from such sources as:

- government contracts for activities such as weed control and biosecurity monitoring (Muller 2008, Hunt 2010);
- private industry through carbon credits, biodiversity offsets (Russell-Smith *et al.* 2013) or corporate social responsibility (CSR) activities;
- selling services such as feral animal control to funds generated by donations (Zander 2013).

Carbon abatement has been particularly important (Heckbert *et al.* 2012) and can potentially create employment (Heckbert *et al.* 2010), independence from public sector funding (Heckbert *et al.* 2012) and ancillary benefits (Fitzsimons *et al.* 2012, Green and Minchin 2012). However, the relationship of environmental outcomes to cultural priorities and social equity issues can be challenging with respect to market-based revenues (Gorman and Vemuri 2012, URBIS 2012). Nevertheless, ICNRM programs can also enable other private enterprises and livelihood options that rely on effective local management and/or cultural and Indigenous knowledge. Some examples are:

- cultural and ecotourism (Hunt 2010, WWF 2014);
- commercial native plant and animal harvesting (Gorman *et al.* 2008, Wilson *et al.* 2010);
- pastoralism and agriculture (Barber 2013);
- art and craft production (Morphy 1998, Koenig *et al.* 2011); and
- the commercial development of traditional medicinal knowledge (Wettenhall 2014).

In addition to employment and income, ICNRM programs can also enhance livelihoods through improved infrastructure (Sithole *et al.* 2008). This includes fixed infrastructure, but perhaps more importantly given the high value placed by Indigenous society on mobility and on accessing country, also includes transport capability.

Customary sector economic benefits

Transport can be crucial in enabling market-based activities, but is also vital to the customary component of individual and communal livelihoods (Barber 2005, Fogarty 2005). The potentially substantial contribution of the customary harvest has been estimated in a range of ways: Indigenous household incomes (Altman 1987, Gray *et al.* 2005); protein intake (Altman 1987, Asafu-Adjaye 1996); and household food consumption (Jackson *et al.* 2012, Jackson *et al.* 2014). The highest values noted across these studies were 64%, 80% and 22.7% respectively. ICNRM enhances customary economic activity by increasing transport access, through subsistence harvesting as part of ICNRM activities, and indirectly through the improved species and habitat management. From the latter, customary economic benefits may accrue locally as well as at wider regional and national scales.

State sector economic benefits

A full assessment of the economic benefits to the state sector would require research well beyond the scope of the current project. However, a preliminary consideration shows that the question of scale and to whom ICNRM benefits accrue is brought into even sharper relief. The literature identifies that benefits to state services may accrue at the local level through efficiencies or synergies of service delivery (Campbell *et al.* 2008) and/or ICNRM inputs may yield multiple beneficial outputs (Davies *et al.* 2010). Yet a formally calculated benefit, for example an annual primary health care saving across a community (Campbell *et al.* 2011), accrues significant benefits to the wider, centralized public purse. An economic analysis of the Working on Country program (which hired many previously jobless individuals) found the true cost to government was significantly (up to 23%) lower than the budget cost due to reduced welfare and increased tax revenue (The Allen Consulting Group 2011). In addition, the report found that a significant proportion of the economic multiplier effects from ICNRM were dispersed nationally rather than locally concentrated (The Allen Consulting Group 2011).

However, it is important to note that benefits attributed to the state sector remain co-benefits - previously uncalculated economic benefits associated with a state redistribution scheme that primarily directs centralised state funds to regional and remote areas (The Allen Consulting Group 2011). In addition, further savings that may accrue through the positive association between employment and health, and between health and worker productivity, potentially benefit the customary and private sectors in a hybrid economy framework as well the state sector. What these brief comments indicate is that there is at least the potential for significant state sector co-benefits to accrue non-locally, but also that ICNRM does partly address regional income inequality for a politically crucial minority. Further consideration of how benefits accrue across the full spectrum of economic and livelihood activity is clearly warranted.

2.6 International literature on wider benefits of NRM and human-environment interactions

2.6.1 Introduction

Internationally, relatively few studies have taken the additional step evident in the Australian literature of considering how to understand and assess the wider socio-cultural consequences of NRM programs alongside the environmental and economic ones. There is substantial literature on the potential negative effects of market-based conservation incentives (Gómez-Baggethun and Ruiz-Pérez 2011), but still relatively little significant research conducted on the beneficial socio-economic effects of community-based natural resource management activities - Indigenous or non-Indigenous (Hibbard and Lurie 2012). Nor are there agreed-upon metrics or even broadly accepted approaches for assessing the effectiveness of these new institutions (Sutter and Parreno 2007, Hibbard and Lurie 2012).

To provide some wider context to the Australian situation detailed in this report, three key aspects of the international literature on human-environment interactions will be noted here for their particular implications for ICNRM benefit assessment: international work on community-based conservation; considerations of the wider consequences of local non-Indigenous environmental management; and general analyses of the health and wellbeing benefits of interactions with natural environments. Although there are important overlaps, these three literatures can be considered in terms of cultural, socio-economic, and health benefits respectively.

2.6.2 Indigenous perspectives on landscape and wellbeing

Indigenous perspectives emphasise that landscapes are inhabited by ancestral creative powers and require ongoing care by the appropriate people to remain healthy. This contrasts with terms in the wider research literature (nature, wilderness, etc.) that emphasise environments with a real or imagined 'absence' of human beings and/or of the consequences of human activity. Preference for natural settings that are devoid of apparent human alteration is culturally specific amongst urban dwellers (Kaplan and Talbot 1988), let alone when applied to remote Indigenous contexts. Contrasting time spent in private domestic gardens, urban and/or recreational parks, wilderness areas, etc. with time spent in urban built environments such as offices, factories, and health facilities can be useful in highlighting benefits. Yet the application of this literature to ICNRM benefit assessment needs careful consideration. For example, customary hunting and harvesting highlights the benefits of directly using or consuming 'nature', something that receives little attention in the wider literature on the health benefits of interactions with 'nature'.

Literature from North American Indigenous contexts demonstrates how human wellbeing relates variously to: environmental condition (Wilcox *et al.* 2012); access to environmental resources (Richmond *et al.* 2005); landscapes and places of particular cultural significance (Wilson 2003); physical activity in such places (Janella *et al.* 2009, Lowan 2009), and participation in traditional activities, notably hunting and gathering (Wilson and Rosenberg 2002). Wilson and Rosenberg (2002) found no conclusive evidence for a link between 'traditional activities' and health in national survey data, but suggest that more nuanced future assessments may distinguish between the consequences of particular customary activities. In terms of ICNRM in other settler societies, lower levels of public funding and therefore of the need to seek additional justifications through co-benefits, appear to be the reason for the limited literature on health outcomes. Community programs elsewhere with explicit social goals may also have a different orientation – Australian Indigenous 'rangers' are NCRM focused, whereas Canadian Indigenous 'rangers' are participants in a community-based defence force program that emphasises general life and remote survival skills (Schwab 2006). Quebec state recognition of Cree traditional management activity takes the form of funding for a hunters and trappers program (Jackson and Palmer 2014).

2.6.3 Human interactions with ‘nature’

A major review (Maller *et al.* 2009) considered the general wellbeing benefits of interacting with natural environments in general, and with nature parks in particular. The authors highlight the disciplinary diversity of existing studies, but also that levels of evidence for a direct link between environmental interaction and wellbeing varied considerably. Beneficial health and wellbeing effects have been pursued in studies of: animal (pet) – human interactions with respect to cardio-vascular health and stress; plant – human interactions, especially gardens; and of the psychological effects of viewing or interacting with landscapes (Maller *et al.* 2009). Furthermore, actions that positively impact biophysical and social environments may create a “double dividend” that addresses multiple determinants of health (Bunch *et al.* 2011). Generally, this literature focuses on the psychological and other benefits of people observing the outdoors (or nature) from inside buildings (workplaces, hospitals, high rise social housing projects, etc.), relating such observations to better health, concentration, job satisfaction, productivity etc. (Maller *et al.* 2006). Other authors query the validity of claims of beneficial effects, particularly those derived from non-randomised studies and/or those funded by vested interests (Frumkin 2001). In terms of stated beneficiaries, individuals accrue most of the documented benefits of living, working, or playing in a green space/environment (Westphal 2003), but some benefits can accrue to an organisation, particularly in the case of productivity increases in the workplace.

Although the original extended review (Maller *et al.* 2008) on which the authors’ 2009 publication is based briefly considered diverse cultural perspectives and Indigenous people, a conventional and culturally idealised ‘nature’ is generally adopted and evolutionary arguments underpin many of the studies discussed (Maller *et al.* 2009). Notably given the nature park focus, the review does not engage substantially with the potential negative health and social effects that may arise from the socio-political creation of such ‘natural’ places (West *et al.* 2006), a key issue in Indigenous contexts (Stevens 2014). In general, the literature on the healthy people-nature nexus reflects studies that emphasise highly urbanised populations in Western nations (e.g. Westphal 2003). Care is required before applying the findings of this literature to ICNRM programs and to Indigenous communities, particularly remotely located ones. Nevertheless, a range of health effects associated with human-environment interactions has been identified and these may have important implications for Indigenous contexts.

2.6.4 Environmental management activity and health

Health-focused reviews of environmental interactions contain some literature on overt environmental management activities, but such programs also generate benefits beyond what may be considered as health and wellbeing. Green programs have been linked to social benefits such as meeting and socializing with people, team work, collaboration and empowerment, companionship and camaraderie (Peacock *et al.* 2007). Enhanced environmental amenity contributes to wellbeing through factors such as improved residential property values, greater open space contributing an enhanced sense of community, empowering inner-city residents towards neighbourhood improvement, and the promotion of environmental responsibility. Urban forest research has generally focused on various ‘passive’ benefits people receive from seeing or being around trees and plants, and the economic and environmental benefits of having trees in neighbourhoods (Sommer *et al.* 1994), rather than the benefits derived from participation in tree planting (Heliker *et al.* 2000). Such projects may improve organising and horticultural skills, and be a source for aspirations as diverse as food production, enhanced intergenerational ties, and crime reduction (Westphal 2003). The small scale and ‘doability’ of such projects is also important in a community context, providing a sense of achievement and empowerment that can lead to taking on bigger projects (Westphal 2003).

2.7 Summary

The literature about Australian ICNRM contains a range of important findings. Evidence exists to support major categories of benefit, notably:

- health and wellbeing
- social and political
- cultural
- economic.

Analysis of the literature also demonstrates that different categories of benefit have received different levels of attention. The 'political' category is not separately demarcated in most existing reviews, and work on related terms (such as governance) is not heavily cited in those reviews. This contrasts with the literature on health benefits, which is considerably more extensive. Economic benefits are discussed in the literature, but a full analysis of this category of benefit that encompasses the entire suite of economic activities undertaken by Indigenous land managers (i.e. customary as well as market and state) is yet to be undertaken.

A review of key aspects of the wider international literature suggests that it can usefully inform future assessments of the value and benefits of ICNRM. Such literature provides additional evidence for existing pathways for benefits, and may suggest new avenues for exploration. Particularly useful is literature on human-nature interactions and on the general value of environmental action. ICNRM literature can, in turn, inform and augment the international literature. Such articulations will increase the potential reach and influence of local ICNRM studies, as well as deepen and broaden the cross-cultural applicability of this diverse disciplinary literature.

3 The benefits of Yirralka Rangers to the local homeland community: perspectives from Blue Mud Bay

3.1 Introduction

This section describes the main findings from the field research about the benefits to the local homeland of Yirralka Rangers. It uses comments from research participants as examples to demonstrate the utility of particular categories. Local perceptions of the historical and ongoing objectives of the ranger program are outlined first, as these provide the context for local assessments of any benefits derived. Perceptions of wider benefits are then considered in terms of the classification terms outlined in Section 2, with relevant extensions to those terms to suit local circumstances. These benefits include: health, psychological, and wellbeing benefits; social benefits; cultural benefits; economic benefits; and political benefits. Examples and associated discussion are organised in terms of this conceptual classification system, but clearly the categories are not mutually exclusive. Rather, they provide a means of reporting results in ways that facilitate further investigation, understanding and consideration of benefits.

3.2 The context for identifying benefits: the objectives and purposes of Yirralka Rangers

As noted in Section 1, the early years of the Yirralka Ranger program coincided with the preparation and conduct of a major legal claim by Traditional Owners over coastal land and sea in Blue Mud Bay. The program is locally understood to have emerged from the general initiative within Blue Mud Bay communities (and from Baniyala in particular) to look after the country, and specifically to manage commercial fishing activities and general unwanted incursions on the coastline:

We were the first, here [Baniyala] and Gangan and Dhuruputjpi. We started those rangers to manage the country - check the fishermen. That Baru [crocodile] head was on the tree, we needed to stop that.²

Yirrkala-based Yirralka Ranger

The idea for the elders was, that program was established in Blue Mud Bay. It was launched here because of the fishermen going in to kill all the totem for Yolngu people, or to enter the sacred areas without knowing or without permission. That is why we need to protect the country with this program. It is coming from the sea rights, following on from that program.

Homeland-based Yirralka Ranger

The sea side is number one. We don't want napaki [non-Indigenous people] coming into our land and getting fish from our area, especially secret areas – Yathikpa, Baraltja.

Baniyala resident and Traditional Owner

² Reference to the severed head of a crocodile strung up in a tree as a warning to the local community about the sea claim. The crocodile is a key ancestral being for Magarrpa people. See (Barber 2010).

This history has resulted in people from Blue Mud Bay having a strong sense of ownership over the wider Yirralka Ranger program, as well as emphasising marine and coastal issues in their prioritisation of its activities. Such context shapes thinking about the ongoing purposes and objectives of the program, objectives that in turn influence local assessments of wider benefits that accrue from it. However, in addition to caring for and protecting coastal country, other primary purposes for the rangers are clearly articulated. These include its role in ensuring cultural continuity, and in gaining wider public recognition for Yolngu people:

That is the most important - the ranger program as a structure for learning, for passing on the cultural values.

Homeland-based Yirralka Ranger

The main dhawu³ for Yirralka is to put a picture where Yolngu can be recognised, that their hand and foot is working.

Former Head Ranger

Such responses to the question of the objectives of the program indicate that what may be classed as environmental outcomes are important, but that a range of other outcomes are also being sought. From an external program monitoring and assessment perspective, such outcomes may be more easily classified as wider non-environmental benefits, yet it is clear that such benefits are considered primary by program participants and by the leaders and elders of these communities.

Further comments about the objectives of the program as they relate to particular aspects or consequences of it appear in the respective sections below. However, it is useful for interpreting the material that follows to note this primary context at the outset:

- Yirralka Rangers originated in Blue Mud Bay;
- caring for and protecting the country was a key goal;
- coastal and marine issues were assigned a high profile;
- managing non-Indigenous commercial operators and/or incursions was an expected activity; and
- participants articulate broader objectives (e.g. cultural continuity, wider social and political recognition) as fundamental to their assessment of the program.

This context is also highly relevant to the content of the film, and the film was explicitly intended to convey that context.



Mudflats at Yathikpa

3 Yolngu word that can variously mean story, news, truth, principle, etc. The context here suggests a meaning close to truth or principle.

3.3 Health and wellbeing benefits

3.3.1 Health benefits

The literature review in Section 2 demonstrated that the health benefits of ICNRM have been a particular focus for past research and review regarding benefits. Comments from Yirralka research participants support the perspective that such work is partly beneficial because it involves physical activity, particularly outdoors. Reflecting the cultural context, comments which emphasise this kind of physical activity connect it to a reciprocal relationship with the landscape and to a history of ancestral interactions with the locations where such activity takes place:

We will stay healthy. If we are not working, then we'll be tired [lazy], asking for gapu [water or other drink] and ngatha [food], and the garden will die. If we work for the country it will look after us. We (will) help each other, strengthen each other.

Homeland-based Yirralka Ranger

I was working in the office before. I like to go out working. It is better. Seeing the places where the old people were. I was watching the miyalk [female] rangers working, and thinking I would like to do that.

Homeland-based Yirralka Ranger

It is restoring life back to the history of that place. People can breathe good air. It is good for the community (and) good for the rangers themselves.

Homeland community elder

The bush products is the best one. The girls like it, because it is helping them with health.

Homeland-based Yirralka Ranger

This job is better - looking after land, water and sea - that is our story. I feel healthy and strong.

Homeland-based Yirralka Ranger

The key existing dataset relating to the wider benefits of ICNRM focused on biophysical health indicators and indicated the positive impact of such programs (Burgess *et al.* 2009). Although evident in the comments above, such outcomes were not heavily prioritised by participants in this study. This may be due to a number of factors, not least because Baniyala is a community with a geographical location and customary lifestyle that has historically generated relatively high rates of physical activity, notably in relation to customary hunting and gathering (Barber 2005). Ranger activities can enhance opportunities for such subsistence, something that may be critically important in other locations. However, partly as a result of specific local conditions, the biophysical and dietary health benefits of the additional activity associated with Yirralka Rangers were openly acknowledged, but not assigned primary priority in self-reported consideration of benefits.

3.3.2 Wellbeing and psychological benefits

However, as noted in Section 2, the literature on health-related benefits emphasises wellbeing as a more comprehensive term that can incorporate individual psychological and broader social and communal aspects of health. The latter are discussed in a later section, but a series of responses elicited in interviews and workshop discussions demonstrates significant program value with respect to individual psychological benefits. These relate to undertaking meaningful and therefore desirable work that provides ongoing motivation to continue:

Being a ranger, working as a ranger has been very enjoyable, I enjoy it very much, being a ranger, because, I suppose, you are feeling you are giving something back to the community, to the people of this country.

Homeland-based Yirralka Ranger

I believe in that job.

Yirrkala-based Yirralka Ranger

The important one is caring for that country. It's manymak [good]. Working on our own land, teaching the kids the right way - that the land is important.

Homeland-based Yirralka Ranger

When I asked the girls (about joining the rangers), they were excited. They were looking forward to it. A few got lost [left the program], but those (current) girls want to stay. They like to stay. The bush products, that makes them proud. They are like me. They can see the wages, but also the chance for training, to go to other places. They want to stay on with the rangers.

Head female ranger

Successfully securing and completing such desirable work also generates opportunities for improved individual self-confidence and pride. Of particular significance in this remote location is self-confidence relating to dealing with non-Indigenous people from elsewhere, and pride in the nature of the role:

I've learned heaps. We learn not to be shy - to go and ask for camping permits and to be confident in the workplace.

Homeland-based Yirralka Ranger

We can see that the women learn to talk with napaki [non-Indigenous people]. The shy ones are starting to talk.

Senior Yirralka Ranger

We are doing something for the community, doing something for the land. If people recognise you through your work, you can be proud. Proud of what we are - proud to be black.

Homeland-based Yirralka Ranger

This kind of confidence can be transferred to other activities in life, which in turn can strengthen the general identity and profile of the rangers:

Ranger work gave me extra confidence to be in the band. We write the songs about the land and the sea, about IPA and the sea rights. Another way of telling the story is through the songs. I wrote the IPA song because I am proud to be a ranger. That song is telling everyone that we care, how important it is to us. I am proud to sing it in public. I know that all the rangers and the families are proud too. The miyalk [female] rangers used that song in a presentation.

Homeland-based Yirralka Ranger

Biophysical and dietary benefits are clearly a component of the benefits of Yirralka Rangers, but of particular note in this context are the broader psychological and wellbeing components of health. The meaning and desirability of ranger activities have played an important role in building individual motivation, confidence and pride in younger and working age people.

3.4 Cultural benefits

Ranger program participation enhances individual pride and general psychological wellbeing because the work is understood as meaningful. A key driver of this meaning is the perceived compatibility of the program with important cultural principles, processes and objectives. This compatibility underpins wider culturally-based affirmation and recognition of the rangers' role, and enables the program to deliver important cultural benefits. Cultural benefits are considered in greater detail below.

3.4.1 Cultural compatibility and affirmation

The importance of 'caring for country' amongst Indigenous Australians is well known, and is a key driver of the general popularity of ICNRM programs. The compatibility with Indigenous cultural principles of landscape management and protection activities associated with the program is well recognised amongst Yirralka Rangers staff:

The elders like it when we look after the land. I had an idea that we should go to Dholuwuy and get those old 44s [oil drums]. We cut them open and put them around the coast for rubbish bins. Djambawa and Waka were really happy, seeing us working like that. And the fencing of the sacred site – Maranydjalk [stingray]. The community was happy, they knew people were driving through and damaging that place. Now it can be looked after, maintained.

Homeland-based Yirralka Ranger

The boat patrol work made the community people really happy. The elders could see we were protecting the sacred sites.

Homeland-based Yirralka Ranger

The elders are looking for them [the rangers] to be moving around, working on the landscape and marine djama [work]. Then the elders know that through that, the next funding will flow. Also community health, organising and cleaning up the rubbish dump, fencing off. And the boat needs to be out, not in the shed.

Former Head Ranger

General ranger activities are compatible with key Indigenous responsibilities to care for the landscape. Yet from the perspective of local elders, a deep engagement with cultural understandings of that landscape is required for such activities to be effectively carried out:

This country must be cared for. If rangers come around, they must really strongly believe what the stories are about the country. And I think they are the people to take care, to look after those countries. If they have (a) boat, if they have cars. By the authority of the TO [Traditional Owner]. The TOs are here in homeland and they should work together.

Baniyala community elder

This shows that key cultural benefits are realised through the knowledge that those carrying out the work are the appropriate people. This has consequences for ranger selection, a process that involves Yirralka coordinating staff, but in which the criteria of key community elders play a vital role:

He [Djambawa] said: 'you should do the ranger job, because you know about the story [of] all the country - all the monuk (sea) coming through, and how you cross with the boat. That is what he said to me: 'you know the painting, the sacred area.'

Homeland-based Yirralka Ranger

Those who are selected remain aware that these deeper cultural criteria were used in that selection process. This means that, although the ranger program is valued and important, their participation relies on its compatibility with this culturally-based primary identity.

Being a ranger is something that you put on, you become a ranger. But we have that already, we are part of that structure, it is how we live. It does not matter if you put a uniform on. But don't get me wrong, I still want the uniform.

Homeland-based Yirralka Ranger

Even this program is not really established for itself. It is there to protect our country, protect our life.

Homeland-based Yirralka Ranger

Nevertheless, the general compatibility between the ranger program and Indigenous cultural principles enables a range of additional cultural benefits to be generated. These are considered in turn

3.4.2 Cultural knowledge sharing and acquisition

One important cultural benefit that direct participation in the ranger program offers is the chance to acquire and share important cultural and customary knowledge. This can occur in a range of ways, but one key way is that it can enable travel to locations that either have not been visited previously, or are culturally significant, or both. Such places may be significant to regional cultural geography generally, but may also be important to individuals as part of their own distinct set of networks to other people (gurrutu) and through them, to other places. This opportunity for travel was particularly significant in the early years of the program when a single team operated together from a logistics base at Yirralka:

When I first started with the rangers we were working out of Yirrkalá. We were doing marine debris along the coast. We camped at the homelands. I had never been to Djarrakpi before. We went to the old campsite. It was good. I felt good that I finally got to see my waku wanga [place relating to classificatory sister's children]. You get to go to other places and work. It helps with building up gurrutu, understanding the connections for the land and the sea.

Homeland-based Yirralka Ranger

That was the first time I went to Garrthalala, the long beach there. I had never been to some homelands, did not know the places, the hunting areas. Through work we learn the country, learn the names. And kinship mala, bapurru mala [relationships between groups]. Here, Buymarr, Djarrakpi - we went all over with the ghost network.

Yirrkalá-based Yirralka Ranger

One consequence of basing rangers in homelands is that less regional travel occurs. Therefore, opportunities for this kind of learning are reduced for all staff except for those who work regionally from the base at Yirrkalá. However, even with a more restricted geographic range of operation, participants note the cultural benefits of greater familiarity with important places:

I like the job because it is going on country. It is telling us, we are learning about the country, the saltwater and the freshwater.

Homeland-based Yirralka Ranger

This djama [work] opened the way to see the country, (and to) see others' country.

Homeland-based Yirralka Ranger

A second component of benefits relating to cultural knowledge involves the sharing of that knowledge. Situations where rangers learn cultural knowledge from more senior people is discussed in more detail below. What is important to note here is that the program places participants in a position of authority and responsibility with respect to younger people, particularly children. This responsibility involves conveying a future-oriented and culturally-oriented sense of purpose, as well as an awareness of the specific value of the IPA program in achieving that purpose:

Working with the kids - giving them a reason to live on the land. We are the future. We are learning at the same time. IPA means we can protect our culture too. Keeping culture alive and passing it on to the next generation. Without our culture we are nothing.

Homeland-based Yirralka Ranger

If I got djamarrkuli [children], I can pass on the knowledge to my kids. We have got plenty waku [sister's children] here, all the djungaya mob [people with caretaker responsibilities]. We pass (it) to them and they keep an eye out – djaka [care for, watch]. They know the story and they know my painting.⁴

Homeland-based Yirralka Ranger

⁴ Paintings are an integral part of the ancestral law and heritage of each person and the clan they are a member of. The children of the women of each clan are obliged to learn about, and protect, such law and heritage.

The role of ranger participants in acquiring and sharing cultural knowledge highlights the issue of how the program relates to broader and more general cultural roles and responsibilities.

3.4.3 Cultural roles and responsibilities

The alignment of program roles and responsibilities with cultural roles and responsibilities is a key aspect of the cultural benefits derived from the program. They are considered below in terms of two key areas: gender roles, and the relationship of the program and its participants to community elders and leaders.



Ranger Facilitator Gurrundul Marawili painting a hollow log

Gender

At its inception, the program was staffed by male rangers, but the role of female rangers has grown considerably since then. The role of women in caring for the landscape through ranger activities has a strong cultural basis:

The reason for the miyalk [female] rangers is the country belongs to both. The songlines, the dreaming sites. We want to pass on the knowledge of the old women, their knowledge – maari-gutharra⁵ and family connections.

Homeland-based Yirralka Ranger

The men and women worked together at the recent fire management workshop at Dhalinybuy. Fire was a traditional way of hunting, as the women went to get the animals once the fire had set. The old men and old ladies came to the workshop too.

Homeland-based Yirralka Ranger

⁵ A key kin relationship in Yolngu culture that demarcates clans and individuals of the same moiety with specific reciprocal rights and responsibilities to one another.

The ability to demarcate particular program roles to men and women, as well as to combine the groups, is considered useful. It reflects existing cultural conventions about such activities, as well as the potential for flexibility with such conventions:

Women rangers look after the nursery and clean the office. They did some boat training too. Women have their sea side, maypal [shellfish and crustaceans], djindjalma [crabs].

Homeland community elder

In terms of the men and women, some of the projects are together, some are separate. It is good to have both. They worked together doing lots of work around the ranger station – the women doing the nursery and cleaning up, the men doing other jobs like cutting the lawn.

Homeland-based Yirralka Ranger

Participation in the program also enables rangers to meet the cultural criteria appropriate to their gender, enabling them to be recognised and respected by their immediate family and by wider local society:

She [speaker's wife] was forcing⁶ me to do that work, wanted me to be a real man, a full man. Not sitting down. She knew that job from her father talking about chasing the fishermen around.

Homeland-based Yirralka Ranger

However, the existence of the program also introduces a level of dynamism into existing cultural roles, and this may generate tensions in certain circumstances. Yet cultural legitimisation for taking on new responsibilities can also be generated by remembering past historical and cultural roles, reviving them in a new context:

We need miyalk [women] to work on sea ranger (activities). Sea country is not only for dirramu [men], but miyalk [women] as well. Muluymuluy [a senior woman] has been a captain. They used to put sand, and metal, and have a fire in the canoe on the ocean. Pull the fish in and cook it.

Yirralka-based Yirralka Ranger

Yolngu culture has a series of strong principles and conventions, but these are manifested through the wide range of circumstances existing in everyday life. The ranger program can provide cultural benefits by enabling the reinforcement of key principles and conventions. Yet it can also facilitate ongoing cultural adaptation by creating opportunities for the strategic modification of cultural roles and responsibilities to evolving circumstances. This potential for cultural benefit applies to both gender roles and age-based ones.

⁶ In this context and in Yolngu English, 'forcing' carries the meaning of 'strongly encouraging' rather than the degree of coercion that might appear to be implied. 'Encourage' is not a commonly used word.

Eldership and mentorship

Yolngu culture prioritises eldership, particularly by men, as the principal form of cultural authority. The significance of this authority structure and the benefits of listening to elders are explicitly acknowledged by those working in the program:

I am still listening for malurr [Djambawa Marawili, a classificatory father], still following him (while living) in town. He's the first one. When I am at Gangan, I am listening for my old man the same. Yinimala [Gumana, a ranger and Traditional Owner at Gangan], he is good, he is always talking homeland to homeland. We are not just listening to the napaki [non-Indigenous people] (as) they don't have the knowledge of the land. The ngalapalmi [old people] got that knowledge of the secret places and the names when we are working along the coast.

Yirrkala-based Yirralka Ranger

The leadership is important for us. To get in while you are young, have the chance to listen to the old people. Using words that the ngalapal [old people] have told you. It makes a man, makes you wise.

Homeland-based Yirralka Ranger

That was my way of working, from leaders to Traditional Owners, from grass roots, from the guts out. It is small work, but the power is there, it really grows.

Former Head Ranger

The program interacts with and facilitates eldership roles in several ways. As noted above, it both provides opportunities for participants to interact with community elders, as well as the obligation for them to do so in order to undertake program activities effectively. It also provides opportunities for eldership and mentorship within the program, as senior rangers can positively influence the understanding of more junior rangers about the cultural significance of the program:

I heard Wanyubi [former head ranger] talking about it at presentations and forums, talking about the meaning of it from a Yolngu point of view. The values of the land and the sea, and the cultural side - the connections, songlines and paintings. I started to get more involved – there is a reason why we look after the land. Those are powerful reasons, they give you more purpose. I wanted to push myself more, learn more.

Homeland-based Yirralka Ranger

Cultural benefits can also be generated by rangers acting in an elder or mentorship role with respect to the wider community:

I am always talking to kids - they know me - I am on the front. They've seen me, what my role is, and they know me. We have to keep playing that role until the kids are ready (then) he can take my role. What I learn from this djama [work] gets me stronger. The government roles change, our role is passing knowledge to our kids, so they can see widely - see the community and the world.

Homeland-based Yirralka Ranger

The cultural benefits of the ranger program evident in the data encompass a range of significant aspects of life. They include:

- the general compatibility of the program with local cultural principles of 'caring for country';
- the affirmation that this compatibility generates in the wider community;
- the enablement of cultural knowledge acquisition and sharing (particularly knowledge of culturally important places);
- the reinforcement of customary gender roles;
- the facilitation of strategic adaptations to those roles;
- the ability for program participants to actively recognise and be influenced by customary leadership; and
- enhancing opportunities for participants to act in mentorship roles and build their responsibilities and status.

Taken collectively, these are significant ongoing benefits provided by the program to its participants and to the local communities in which they live and work.

3.5 Social benefits

3.5.1 Introduction

As noted in Section 2, demarcating the distinction between the social and cultural can be somewhat challenging. The cultural benefits identified above focused on the compatibility of the Yirralka ranger program with key cultural principles in Yolngu society. The term 'social' can be broadly interpreted, and therefore a wide range of benefits can be associated with the term. The section below focuses on four key topics that emerged from the research as locally significant social benefits. These are the benefits that accrue from homeland residence by rangers, from formal education and training, from broadened horizons through exposure to new places and experiences, and from the program being a basis for future aspirations.

3.5.2 Homeland residence

A key social benefit identified by participants in this research is the ongoing residence of rangers within homeland communities. Such residence is possible through social security, but paid employment in such locations is a major aspiration for homeland communities and the program provides that. Community elders identify that true settlement in one place requires employment in that location. It also places responsibility upon rangers to undertake the ongoing management of places that the remaining community residents may not visit regularly as they would have done as mobile hunter-gatherers in the past.

We are not moving now, day after day or night after night like we used to be. We are living in the community now, and the job must be for IPA people to go along and maintain and look after this country.

Homeland community elder

This perspective in turn generates the sense amongst rangers that the purposes of the job and the residence in the homeland are directly related:

The rangers are growing up (and) they belong to this country. This is our homeland - the job is here, not at Yirrkala.

Homeland-based Yirrkala Ranger

I have a purpose to stay here. My family is here, I have a good job, a good environment.

Homeland-based Yirrkala Ranger

In this way, residence is both a benefit of ranger work and enables the fulfilment of ongoing cultural and familial obligations:

I like to stay with the ranger job, keeping an eye out for the country, the sacred area. Staying at home, because I am from here (and) my father is from here.

Homeland-based Yirrkala Ranger

As well as rangers themselves, the benefits derived from ranger residence is noted by the immediate family members of rangers:

It is a manyak [good] job for my family. It is good they are here, not in town. I like the miyalk [women's] project, making the soap. I'm happy that Sarah [her daughter] is working. It might be a good one for them - for the other kids. We are happy here. We want to live here.

Homeland-based Yirrkala Ranger's spouse

It is good that the rangers grew up. They should live here, the ranger program started here. They should live in the homelands.

Homeland community resident

This homeland is leitjo wanga [good place].

Homeland-based Yirrkala Ranger's spouse

Rangers also note the relationship between social benefits associated with homeland residence and wider health benefits, both for themselves and for the landscapes they care for:

When you are living in the big townships, there are a lot of negative things happening, and personally I prefer living here in the homeland. Living in the homeland gives us more freedom, and a healthy country is a healthy life.

Homeland-based Yirrkala Ranger

Such comments highlight the intersecting nature of social, cultural and health benefits associated with the program. They also highlight that decentralised homeland residence is a crucial means by which these benefits accrue.

Formal education and training

Social benefits associated with general residence are complemented by benefits that accrue from the opportunities the program provides, particularly opportunities for formal education and training. By growing up in remote areas, Yolngu people accrue a range of important skills that equip them well to act as land and sea managers. However, formal education and training is an important process in augmenting these skills. Such education and training can build confidence in program participants, provide key skills (such as first aid and vehicle training) that can be important in wider social and community contexts, and enable participants to progress in employment terms (discussed as an economic benefit in more detail further below).

The training is very good for us, because that also shows that we are motivated, able to learn more skills. Because it is very challenging sometimes, but also, we are having fun at the same time. Because you have got to have a bit of fun in your workplace.

Homeland-based Yirralka Ranger

There was a course about safety in the workplace. A Batchelor training course, the different signs and what they mean. And first aid training. I learn to check for sick animals, disease and quarantine. I learned mosquito traps. I got started on the coxswains license, firearms, GPS, fisheries.

Homeland-based Yirralka Ranger

I have a firearm license and a coxswain license. I am the only one with coxswains. I have done a chainsaw course, a first aid course. One first aid was part of coxswains in Darwin, the other was part of first aid in Gove. I did a 4WD course. It was a little bit easy, but we did mud driving and winching, hand winching. I also did some small engines training, and how to check the cars.

Yirrkala-based Yirralka Ranger

Social and cultural benefits can accrue simultaneously when training and education incorporates what is known locally as ‘two way learning’:

I learned weed spraying, bush medicine, the names of the plants and the seeds, how to use them. Also the scientific names, where they are, where they come from. Some people were helping us, from Batchelor.

Homeland-based Yirralka Ranger

Well structured training accrues social benefits through improving people’s abilities to interact cross-culturally and to respond to challenging situations:

I like the training. Learning about the driving the boat, using gear, and like when something might happen (like) people can fall out, I know how to turn around.⁷ I can tell what has happened - talk to the ranger bungawa mob [non-Indigenous ranger coordinating staff] or police can come and I can tell a straight story (about) what happened.

Homeland-based Yirralka Ranger

⁷ Reference to recent coxswain training that involved learning how to steer a boat with a broken rudder to rescue a person who is overboard.

Yirralka are learning how to look after people - first aid. We need to know if the tourists have old age, disease, medication, sunburn. We need to know how to work with people who are not respecting the Yolngu law. We have to look at visitors, what they need, what kind of people they are.

Former Head Ranger

A longer term social benefit associated with cross-cultural training and education is the degree of local empowerment and control it will afford communities when people accrue such skills:

In 5-10 years time we want Yolngu people to be in self control. We need the literacy and numeracy, so they can report back in writing, and talk English. We want Yolngu into administration, put reports and data into the computer, budget, know how many they were spending. We need Yolngu in a high level position to communicate with them.

Former Head Ranger

The education and training that improves general skills and leads to recognised qualifications is a key means by which the program delivers social benefits to local communities.

3.5.4 Broader horizons: new places and experiences

Participation in the ranger program has provided an important means for people in remote places, particularly younger people, to experience a wider world. The result is a broadening of social, geographic, and conceptual horizons that has important social benefits for the individuals in question as well as the communities they reside in. One key opportunity for this is created through participation in conferences:

I have been to a Darwin ranger conference, to a Sydney conference with Danny Burrows, and to an outstation inland from Goulburn Island. I can go there and listen and learn, get experience. You got to know what they do, what the rangers is really all about. We can get ideas, but the thinking is different, the IPA is different from national parks.

Homeland-based Yirralka Ranger

I have been to Maningrida, to the ranger station for a conference there. I have also been to Goulburn Island, and to Borrooloola for a ranger conference. It is good to share the knowledge, share the ideas.

Homeland-based Yirralka Ranger

Training courses provide the chance for opportunities to visit new places, generating ancillary benefits for people from remote areas beyond the immediate knowledge accrued through the course.

I went to Darwin, to a workshop (for) gamba grass. And Canberra, for film training. I met Roper people there. I saw parliament house, and the Iarakitj [painted hollow logs] at the Museum.

Homeland-based Yirralka Ranger

The combined effect of these opportunities and experiences can be highly significant for individuals. Those individuals can in turn generate social benefits for their communities through the wider perspective and increased leadership capabilities such experiences generate.

This djama [work] opened my way, my dukarr [path] to go out. To see other countries. To know other people (and) how to respond back to government. (To) go to conferences and tell the story about what we are doing here.

Homeland-based Yirralka Ranger

The broadening of individual and collective horizons enables the development of more sophisticated and more grounded future aspirations, discussed in more detail below.

Future aspirations

The program is seen as generating desirable employment that is consistent with major cultural principles, enables residence in favoured locations, and provides pathways for individual development. This makes it a key site for future aspirations at both the individual and collective level. Such aspirations are an important social benefit in and of themselves, providing people with immediate motivation to complete education, maintain employment, and envisage a viable future for themselves and their families. Program participants demonstrate this through their immediate employment aspirations, and aspirations for the wider program:

I want to keep doing the same ranger work. Maybe in five years or ten years, I want to be a supervisor.

Homeland-based Yirralka Ranger

(In 5 years) I want to be still working in the ranger job. We need more training, and to be moving around to the other homelands, working together.

Homeland-based Yirralka Ranger

In 5 years time, we want that program to be bigger. In the future, we want a bush medicine shop, a health shop.

Yirralka-based Yirralka Ranger

As well as current participants, the program also provides a crucial focus for future employment aspirations among children and young people:

A lot of djamarrkuli (children) are dreaming of being rangers. They want to finish school and go straight to rangers. They want to do that job.

Homeland-based Yirralka Ranger

The kids always talk everywhere, always talk and say I'll be a ranger.

Homeland-based Yirralka Ranger

Children's aspirations are mirrored by aspirations for them held by parents and community elders:

My own kids might do that job too. {It's} an important job, a good job.

Homeland-based Yirralka Ranger's wife

They [the rangers] are doing it for the future. Because those young ones who are coming, they will learn about this country, they will learn about the sea and the patterns and the designs, all the stories, it is all written here. I think it is really important - we are doing it for the future. This [program] is the only resource that our young generation will get a job.

Homeland community elder

I am a strong advocate of that program. We want sea rangers. We need a sea direction expansion.

Homeland community elder

The future potential of the ranger program provides a key focus for achievable local aspirations, and those aspirations themselves constitute an important local social benefit. These aspirations incorporate economic and cultural objectives, emphasising the interrelatedness of the social with other domains of benefit analysed here and the potential for a wide array of benefits to be placed within the category.

Analyses of other locations may yield alternative accounts of social benefits, particularly in terms of the prioritisation placed on residence within Yirralka territory. Yet the other social benefits identified – educational and training opportunities, broadened horizons, and future aspirations – are key general features of active programs. The emphasis by Banyala community members upon local residence as a key benefit is also useful to note given that the kind of regionalised model pursued by Yirralka is seen as desirable by other programs in related geographic and demographic circumstances. When such regionalisation is achieved, as it has been in this case, it is understood as a very significant benefit.

3.6 Economic benefits

The compatibility of the program with key cultural and land management objectives is complemented by significant economic benefits to local Indigenous communities arising from the program. Research participants identified contributions and support provided by the program to income, employment stability, employment pathways and options, and business development. These are discussed in turn below.

3.1.6 Income

A key driver of employment stability is the additional income rangers earn for their activities. The increased economic power from higher wages enables the acquisition of capital intensive products such as vehicles, the securing and maintenance of residential accommodation, the purchase of higher quality foods and of required health services and health products. In this way, economic benefits are linked to a wider array of social and health benefits. The significance of the additional income was particularly noted by the immediate family members of rangers:

My husband getting that job was manymak. Good for food. We got our own ngatha [food]

Homeland-based Yirralka Ranger's spouse

(My husband) getting this job was good news. Rrupiyah [money]. Leitjo djama ga leitjo ngatha [good job and good food].

Homeland-based Yirralka Ranger's spouse

Wages are double CDEP, because the rangers are working all day. They can pay for ngatha [food], diesel, rent. They can go on Christmas break, and send the kids to school.

Former Head Ranger

However, although the economic benefits of the program were clearly felt by participants, a number also simultaneously emphasised that such benefits were secondary to the primary goal of the program, which was caring for the country:

The money side is good, (we) can look after family. But caring for the country is the main one.

Homeland-based Yirralka Ranger

When I got that job, my family was proud. The money was second. They were really happy someone was looking after Gurkawuy.

Yirrkala-based Yirralka Ranger

I'm not working for rupiyah [money], I am working for land, people and life. If we do the work, the money will follow. We need to show a good picture, then it will come.

Homeland-based Yirralka Ranger

Higher income is a clear economic benefit, but program participants emphasise the broader context in which this benefit occurs.

3.6.2 Employment stability

The desirability of ranger work activities, the opportunity for homeland residence, and the higher incomes available results in participants noting high levels of employment stability compared with their own previous employment experiences. Also clear is a strong wish amongst many participants to continue working for the program as long as possible:

Before I worked for other people – Dhanbul, army, Laynhapuy Air, building job, (and) Rotary. Then I started with the rangers. I never stopped that job, I keep going with it.

Yirrkalā-based Yirralka Ranger

I would not have any job other than working for Yirralka. Before (this job) I was moving all the time, now I've been with Yirralka more than 10 years.

Homeland-based Yirralka Ranger

I have worked at CDEP, YBE, Builder, chicken poultry farm, and Gemco for 6 years. Ranger is the best one. The other ones are not so important.

Homeland-based Yirralka Ranger

I was there at the start, when Wanyubi [Yolngu initiator of the program] started up. I'll be a ranger until I die!

Homeland-based Yirralka Ranger

Maintaining this kind of stable work history has clear economic benefits in terms of income stability, may also be linked to psychological benefits such as confidence in work capability, and to social benefits with respect to negotiating loans, rental leases, etc.

3.6.3 Employment options and pathways

The desirability of ranger work leads to high levels of employment stability, but the skill improvement and confidence the program generates can also increase employment options and therefore potential employment mobility for participants. A number of rangers noted that, even if they chose not to realise that potential, their participation in the program had given them options in the employment market that did not exist for them previously:

That's what I feel, like I can go and get another job. That is what I am feeling. Like I can jump to this job, jump to another job, learn about all kind of things. That's what I was thinking. I can do other job, jump on to another job.

Homeland-based Yirralka Ranger

Before I started, I was working on CDEP. I did not have a job like this before. This was the first one. I did not know that djama [work] – marine debris, weeds, buffalo, AQIS, water monitoring, mosquito, pig trapping. I learned it from there. Now I might move to another job at Yirrkalā. Maybe with the Dhimurru program. That is my momo country, my fathers mothers country. I've got that training. I'm just thinking, you know.

Yirrkalā-based Yirralka Ranger

There is a clear sense amongst participants in the program that it constitutes a pathway for employment development:

I need to fill in the knowledge first, get the knowledge from the training and the djama [work]. Then I can do a senior ranger, or a bigger job.

Homeland-based Yirralka Ranger

This kind of confidence can result in thinking about much wider employment mobility. However, such mobility must be balanced against desires to remain locally resident:

I feel like to go out to Maningrida, or Darwin, or Borrooloola. See what they got, what kind of job that is around there, learn about what they are doing. Darwin, Cairns, the rainforest way. I like to go to another outstation, to any community - Maningrida, Darwin, Jabiru, (other) Arnhem Land people. But I can also look to Queensland way, I know the mob at Cairns. And I was looking at that job, ranger in Queensland, that is a manyak [good] job too, but then I thought no, I like Baniyala. But I like to go see, learn about, from any people's mind, what they are doing there, how they are doing. I like to learn about any kind of ranger job.

Homeland-based Yirralka Ranger

The enhanced employment confidence and potential mobility emphasised here raises the question of whether more formal and wider scale arrangements for ranger placement and ranger exchange may be warranted. As the sector continues to grow and mature, this may be advantageous in terms of the development of individual programs and of wider regional and remote employment capability.

3.6.4 Business development

The program provides economic benefits through being a pathway for individual capability development, but it is also envisaged as a structure that enables wider business development in the future. Important from this perspective is that the program is an enabler of local homeland opportunities, rather than wider regional ones in larger centres:

That program can be a pathway to new work, new business. But not in the town or in Darwin. They need to be agents in the homeland.

Former Head Ranger

Yolngu should really develop a business, develop a business for our generation, for our people. This is the only chance - that ranger must be involved in this sort of issue or business. If we establish a business here, then ranger must be here too. To guide us and see what is happening, to see whether it is happening (through) the proper way of consulting, or the bad way.

Homeland community elder

At this scale of a local homeland and their immediate neighbours, a range of specific initiatives have been developed through ranger activities, or are being prepared for as part of current work programs:

My favourite job was the bush medicine, making soap from gadayka [eucalypt species] and nambara [eucalypt species]. And the body wash. I am proud of it. They sell that at Yirrkalā markets, at Garma, and in the Laynhapuy office.

Homeland-based Yirralka Ranger

We made that road to Garrapara, that was hard work, part of the job. We are looking forward to the business, to the tourists. That's my plan. I need to make our father, make his voice happen. Someone created us from that land.

Homeland-based Yirralka Ranger

Rangers are seen as an absolutely critical aspect of local business ideas by senior elders, being responsible for learning about developing new businesses, and juggling those development possibilities with responsibilities to the country:

[speaking to rangers]: There will be tourists here - we want to develop a land base for tourism. Like that is (an)other job for you, IPA, to come and do - to look after these people. You have more roles - how to look after Yolngu people and whitefeller if the business is established here. Tourists want to come and exercise in this place, and the fishermen want to develop here.... Your job is to go and see whether they are doing the right thing, or the wrong thing. Guide them, and also, maybe go and join with them to learn more about your (own future) small business. You should be learning how to manage the country and also how to develop a business in your area.

Homeland community elder

The business development potential of the rangers is linked directly to education and training opportunities, and to the benefits of employment mobility discussed previously:

Learning new skills is very important, I think, in the long run. Because we might want to have a new job, or, having those qualifications that we have – certificates - in the long run, maybe we want to start a business. Like tourism...that is why it is very important for us to have that training and learn those skills – so we can have our own business or start up our own business within the homeland and bring income back to the homeland.

Homeland-based Yirralka Ranger

A further potential economic benefit not considered here in detail but noted in the wider literature is derived from the additional infrastructure the program brings to the homelands. This can include fixed infrastructure such as storage sheds and temporary accommodation, mobile infrastructure such as vehicles and boats, and other tools and equipment.

People from outside the immediate homeland area may consider economic benefits in the form of additional income as the most significant non-environmental benefit derived from the program. Homeland residents, particularly the immediate family members of program participants, did emphasise the benefits of increased income during the research. However it is clear that the program also generates economic benefits in less direct ways. These include: providing employment stability; pathways for career progression; increased options for employment mobility and employment diversification amongst participants; and a structure, platform, and set of skilled employees to assist with business development. From the perspective of local people, these benefits substantially augment those derived from the higher incomes received by program participants.



Yirralka Ranger Station, Baniyala

3.7 Political benefits

3.7.1 Introduction

The final category of benefit to the local homeland community considered here is political benefits. 'Political' is defined here as pertaining to the exercise of power and authority, and to the governance systems that enable such authority. Indigenous political and governance systems were not always visible to European colonisers, providing one justification for colonial expansion, and in emphasising this point, one notable ethnographer described an Indigenous group in Cape York as a 'people without politics' (Sharp 1958). Contemporary Yolngu political life involves a complex mix of local autonomy and regional interconnection. Life in individual homelands is relatively independent, indeed aspirations for local autonomy were one of the main drivers for homeland creation. Yet high levels of regional cooperation are evident at particular times, most notably during ceremonial activity (predominantly circumcisions and funerals in contemporary life). Customary politics and systems of governance reflect these dynamics, being designed to respect local autonomy while also facilitating regional cooperation. Decision making can appear informal, but actually involves complex calculations about local and regional political and social factors.

As indicated by the use of the term 'socio-political' in a recent review (Weir *et al.* 2011), there are substantial overlaps between the political domain and other key categories of benefit described earlier. This is particularly true for those benefits relating to the compatibility of the program with major cultural principles and culturally-specified roles (eldership, gender roles, etc.). Previously identified benefits such as individual self confidence, pride and broadened horizons are also highly relevant to the wider political benefits of the program. The benefits categorised here as political benefits include governance, leadership, succession, and independence.

3.7.2 Governance

One key component of political benefits to local homeland communities is those associated with governance improvements. As noted in Section 2, Indigenous governance has been an important topic of research and analysis in recent decades (Hunt *et al.* 2008). Indeed, there is a strong trend in the ICNRM literature to use 'governance' as the primary category and nomenclature to discuss ICNRM outcomes in this domain (Hill *et al.* 2013). In this report, 'governance' primarily refers to systems of authority and decision making, at both the regional level, and at the homeland level.

Regional-level homeland governance benefits

As a department of the Laynhapuy Homelands Aboriginal Corporation, Yirralka Rangers are overseen by the board of Laynhapuy. This board is made up of representatives from the respective homelands and its existence pre-dates the creation of the program by a considerable period. This circumstance reduces some of the potential for regional level governance benefits from the IPA when compared with contexts where the introduction of a ranger program also represents the introduction of a major new regional governance structure in situations where previously there was none. This project was focused on wider community attitudes in one key homeland, rather than on benefits accruing as a result of formal governance structures associated with the overall Yirralka program.

Nevertheless, despite the project scope and the existence of the Laynhapuy board, it is possible to make some general observations about regional level governance benefits. One key focus for potential regional benefit is the ranger steering committee. This lies below the Laynhapuy board, and provides an opportunity for homeland residents to gain experience in governance, planning, and strategic decision making. In addition to guiding the program, it provides a pipeline for involvement in governance at the association board level. The result is governance benefits at both the regional program and regional association levels.

Local homeland governance benefits

Respect for the authority of eldership is one of the primary principles in Yolngu social life. At the homeland level, governance benefits are primarily manifested in the increased requirement for younger ranger staff to engage with elders and reach agreed positions about issues such as work programs. This provides an additional means for elders to direct key activities taking place in the homelands, enhances the political negotiating skills of rangers, and improves general awareness amongst rangers of how senior people make local-level decisions:

We go and let the elders know, what that djama (work) is, what the program is. There are two ways for that work. We ask the elders what is in their mind for their jobs, and we have our own program, our ranger jobs. We work it out, that program, from there.

Yirralka-based Yirralka Ranger

My favourite job, my private (one), is sea patrol. And visiting the outstations, talking to the elders, to the ranger advisors. Finding out what they need, trying to help them.

Homeland-based Yirralka Ranger

Governance by elders is integral to the process of ranger work, as it is from there that the ultimate authority for ranger action is perceived to come:

You are getting authority from your elders, from the Traditional Owners who are in your clan group. The Traditional Owners are here in homeland and they should work together.

Homeland community elder

Governance by elders can range from major strategic directions to the oversight of daily and weekly activities:

The elders look for if they are seeing those rangers every day, wearing the clothes. And if they are coming together every Monday for a meeting, so the elders know what is in their mind.

Former Head Ranger

The process of negotiating activities prioritises the governance of elders, but also provides opportunities for rangers to mediate with other actors in the situation (such as non-Indigenous Facilitators) and to generate their own ideas:

Whoever - people, community, leaders- they see and support it [the program]. Wherever the rangers come up with ideas, the facilitators help us. They help us, but we build it.

Homeland-based Yirralka Ranger

These less formal governance and decision making processes can operate between homelands as well as within them. This provides opportunities for collective decision making and cooperation and this too is seen as a beneficial process:

When ranger training comes here, we do it here at Yilpara [Baniyala], we start running around (to) all those areas. We get people (together), all the rangers will talk from there and there and there. Work together and talk together and get ideas and woohoo, that's what I want to be (doing). Like people get here, then ranger and the whole community (talking), instead of (just) one talking.

Homeland-based Yirralka Ranger

Governance benefits arise from the opportunities created by formal governance structures in the ranger program, and by less formal processes for consultation, cooperation, and decision-making at both the homeland level and between homelands. These governance processes form crucial foundations for expressing a range of additional political benefits discussed in more detail below – leadership, succession, and independence.

3.7.3 Leadership

Improved governance reciprocally supports a related homeland political benefit, improved leadership capability. Leadership benefits accruing to local communities arise from the growing confidence and skills of program participants and include the recognition of different styles of leadership, and different contexts for leadership:

As a supervisor, I am here to help, not be a leader. I am here to maintain a good relationship with the rangers and the community.

Homeland-based Yirralka Ranger

I made sure when I was working (as a ranger coordinator) that I was at the low and the high level. I would join the training myself, take part and watch what is happening. There was good communication and good management with napaki [non-Indigenous] staff.

Former Head Ranger

It is also recognised that by occupying desirable positions and doing valuable work, all rangers are effectively leaders in setting an example for others in the community:

We need to be an example for the kids to follow. When they come out of school, you see at Yirrkalā they go the wrong way. We need to help them go the right way.

Homeland-based Yirralka Ranger

The existence of the program in communities, and the participants' activities as part of that program, provides opportunities for leadership development. This development involves the experience of leadership at multiple levels and greater awareness of different styles of leadership. political benefits at community level and through that, improved regional level leadership.

3.7.4 Succession

The local community political benefit derived from improved leadership capability has direct positive consequences for the longer term issue of succession. Program participants are aware that, by taking the role seriously, they are laying foundations for future political succession:

This program is connecting to the sea rights, following on. We need to do it for the new generation. Then we can retire and they can follow us.

Homeland-based Yirralka Ranger

I like working around this place [Baniyala]. Because I know that Djambawa is the last one, and the old man Marrirra. I am looking for the future. If Djambawa gets older, who is going to look after this place, run the business?

Homeland-based Yirralka Ranger

Community elders themselves are aware of the significance of the program, and how ensuring its survival is interwoven with their own custodial, ancestral, and intergenerational responsibilities:

It [the program] is going to be important for the future. We are telling the story for the young ones who are living on this country. We are only a short time here, but the rest of the generations will be here, and this is the important message I have. When you are tightly connected to the country in a physical way, you must care for this country, and for the spiritual way, you should know about this country. This is where all the people are buried now. The spirits are here, they are living in this country - this is a really important message that I am giving – (they are) living in their own tribal countries.

Homeland community elder

The development of improved local leadership capability strengthens foundations for political succession, and both represent significant political benefits for the homeland arising from the program.



Napuwarri Marawili, Makungun Marika, and Gawaratj Munungurr on sea patrol

3.7.5 Independence

Although the program itself relies predominantly on government funding, the range of wider benefits to the local community it provides can augment local perceptions of self-reliance, autonomy, and independence. This arises through and is interconnected with such benefits as personal pride and confidence, diversified intergenerational leadership capability, higher incomes, and a range of other benefits. In identifying an enhanced sense of independence, it is important to re-emphasise that the program itself is understood as a local initiative, and therefore its successful growth is a manifestation of increasing local capability. As this local capability increases, there is also a sense that staff and infrastructure should be regionalised to reflect the growing level of independence.

Yolngu started this program.

Former Head Ranger

The ranger program started right here [Baniyala]. There were 30 people (at that meeting), Laynhapuy and napaki [non-Indigenous] visitors. We built a shade for them where the school is now. Wali⁸ was there. That program started here, and the base should be at Baniyala.

Homeland community elder

8 Wali Wunungmurra, Chairman of the Northern Land Council.

The combination of greater exposure to a wider array of contexts (particularly national parks) and the increasing scale of the program also contributes to a sense that the broader Indigenous ranger movement should become increasingly influential in how natural and cultural resource management activities are conducted nationally:

Other (Indigenous) groups need to start focusing on land, not following napaki [non-Indigenous] system. That is the main key there. That opens up another path for government conservation. Government are supporting the national parks because that is their own program. IPAs come second. We got to use that tool to get them to understand, get the resources to make them strong.

Former Head Ranger

Yolngu communities have had a strong sense of independence and autonomy throughout their interactions with non-Indigenous Australia over many decades. Being largely state and/or externally funded, the ranger program does not necessarily immediately provide grounds for increased independence. However, substantial local ownership over the primary conceptions and origins of the program, improved income levels and leadership capability associated with it, and an awareness of the wider context in which it is situated, all enable it to strengthen local perceptions of independent foundations.

3.8 Summary of benefits to the local Indigenous community

As the preceding sections demonstrate, the existence and activities of the Yirralka Rangers generates a wide array of benefits to the local homeland community. These include:

- health and wellbeing benefits;
 - physiological health benefits such as increased activity levels
 - psychological health benefits such as improved confidence
- cultural benefits;
 - the compatibility of program purposes with important cultural principles
 - opportunities for knowledge acquisition and support for gender roles
- social benefits;
 - homeland residence
 - opportunities for formal education and training
 - broadened personal horizons and
 - a major focus for future aspirations
- economic benefits:
 - enhanced income
 - greater employment stability
 - improved employment progression and potential mobility and
 - additional business development potential

- political benefits:
 - improved governance
 - enhanced leadership capability
 - strengthened succession
 - greater independence

These benefits are identifiable as discrete categories, but also intersect and potentially augment each other in a range of ways. Combined with successful natural and cultural management activities, they represent the critical foundations for the program in generating and maintaining ongoing local support for and ownership over the Yirralka Rangers.

4 Local homeland community benefit augmentation and minimisation - key influencing factors

4.1 Introduction

A series of enabling conditions or influences are required to successfully accrue the substantial benefits of the Yirralka Ranger program identified in the previous section. Using examples and insights from the field research, the following section describes some of these conditions in more detail, noting their capacity to constrain or augment key benefits for the local Indigenous community. Such conditions may affect a number of key benefits simultaneously, and the degree of impact across those benefits may vary. In places, the influences being described are augmented with statements from research participants that indicate the significance of the issue. As noted in Section 1, the goal of this research was the identification of benefits and associated constraints, not a systematic evaluation of current program performance. As a result, statements should not be taken as a definitive marker that the enabling condition is not operating effectively at the local field site. Rather, the statement reflects the potential for that issue to impact on the benefits accruing to local Indigenous communities from Indigenous ranger programs more generally.

4.2 Program size and structure

4.2.1 Program size

As noted previously, Yirralka Rangers is an explicitly regionalised program with large geographic area of operation and a substantial residential community living within the Laynhapuy IPA. The Stage 2 expansion increases that area and, although additional resources have been obtained, capacity constraints remain an ongoing risk. Past experiences of capacity constraints have led to some caution about the ongoing effects of the expansion amongst local program participants:

The program is growing, there are new communities, Gapuwiyak communities coming in. Maybe that IPA is too big...maybe it should have stopped at Gurrumurru to Balma.

Yirralka-based Yirralka Ranger

Stage 2, that is extending another job for us. Extra cost and work for that program - it has to spread out.

Homeland-based Yirralka Ranger

A key focus of the Yirralka 2013-2016 Business Plan is the additional resource demands created by the Stage 2 expansion (Laynhapuy Homelands Aboriginal Corporation 2013). The increasing size of the program potentially leads to economies of scale, but also to increasing management complexity. If resources are not able to continue to grow to a corresponding degree, it will also lead to additional resource constraints. To this point, Laynhapuy IPA and/or the Yirralka Ranger program have largely continued to expand. However, at the local level, forms of program contraction are also considered at times – the separation of the program into discrete smaller geographic units. Rather than this being a complete separation, such a change is more commonly envisaged as a further step in the process of structural regionalisation. From this perspective, the program retains its current geographic scale but becomes more internally differentiated. This may increase the responsiveness of the program to local needs, but may also increase transactional and logistical costs.

What this example indicates is that the question of the 'optimum scale' for any program requires a complex series of judgements in which local social and political factors may be as significant as environmental ones. In addition, changes in program scale are also shown to intersect with changes in structure, and those structural changes may in turn minimise or exacerbate the effects of changing scale. As a result, with respect to the impacts on wider benefits, program scale and structure will be considered together below following further discussion of program structure.

4.2.2 Program structure

As the scale of the Yirralka program has increased, the operating structure of the rangers has also altered. The program initially operated with a small, predominantly Indigenous team that was focused on the homelands but, for logistical reasons, tended to operate out of Yirralka. The expansion of the program led to a significant regionalisation of Yolngu staff through the establishment of dedicated homeland positions. The Stage 2 expansion of the Yirralka IPA involves an additional step, with a new non-Indigenous Ranger Facilitator residing at the large Indigenous settlement of Gapuwiyak. To this point, non-Indigenous Ranger Facilitators have primarily resided at Yirralka. In general terms, regionalisation of roles for both Indigenous and non-Indigenous Yirralka staff away from Yirralka are regarded favourably by people in homelands. This reflects their awareness of the benefits of homeland residence, the potential for increased communication with Facilitators, and also the fact that Yirralka is not sited within the Yirralka IPA:

The real work is in the homelands. The assets should be moved out there. If the napaki [non-Indigenous people] want to work, they should live out there. It should not be Yolngu over there and napaki here (at Yirralka).

Former Head Ranger

A further regionalisation of the program away from Yirralka to major homeland 'hubs' (of which Banyala would be one) is a model that is discussed locally as one long term option. The fact that the program is originally understood to have emerged from Blue Mud Bay strengthens the local sense that further decentralisation to regional hubs reflects both the original intent and the long term vision for the program. However, the ratio of Facilitators to Rangers across the program remains low, and the effects on program operation of this kind of major structural change are unclear. The availability of services and infrastructure in homelands may also constrain the effectiveness of this kind of structural change. Although Gapuwiyak is not a homeland, the establishment of a Facilitator position there as part of the Stage 2 expansion provides one means of evaluating the potential effects of any larger and more widespread regionalisation in the future.

4.2.3 Influence upon Indigenous community benefits

Changes in program scale and/or structure clearly have implications for the potential program benefits that accrue locally, but again the impact of such changes may vary across benefit categories, as well as within categories. Taking the geographic expansion of the Yirralka program as an example, if it aligns with relevant kinship and other cultural ties, it may have neutral, or some positive effects, on the cultural benefits arising in existing homelands, as well as clear positive effects in new homelands into which the expansion is occurring. If the expansion involves spreading existing resources more thinly, the impact on economic benefits may be neutral or negative on existing homelands as resources are spread across a wider area, but positive for communities joining the program and deriving new benefits. In terms of social benefits during any expansion, the benefits of homeland residence to existing homelands may be unchanged provided ranger numbers remain constant - the benefit is derived from the primary fact of residence, rather than on the formal activities of the program.

However, social benefits associated with education and training and/or with opportunities to broaden horizons may be reduced if existing resources for these program-specific activities are now spread over a wider group of rangers. These examples are not intended to demonstrate or predict what will occur over the longer term with respect to the Laynhapuy IPA expansion. Rather they demonstrate the potentially complex effects of a simple scale change for the range of benefits explored here.

The effects of program structure on benefits can be similarly complex. Additional program regionalisation is one important structural change to consider, and it is one that is considered locally for a range of cultural, political, and infrastructural reasons:

Everything is all set up at the station, we just need the equipment. We had a meeting a few months ago about all new infrastructure across Yirralka communities. We can use the Yilpara [Baniyala] base to help other communities nearby. They don't have a base like this.

Homeland-based Yirralka Ranger

Further program regionalisation may increase a range of benefits at the places which receive additional Indigenous ranger capacity – e.g. the social benefit of homeland residence may increase, as might political benefits relating to governance and leadership and economic benefits associated with local business development. Yet, assuming further regionalisation is practically and logistically possible, these positive benefits may be counteracted by negative effects in communities which do not receive significantly increased capability and which encounter difficulties in accessing support from the reduced capacity that would then exist centrally. A regionalisation involving the permanent stationing of largely non-Indigenous facilitators in homelands may also have complex effects on the degree to which local people are able and required to carry out cross-cultural leadership roles. Although further regionalisation is generally welcomed as an aspiration and may yield largely positive influences on existing non-environmental benefits, there may be a range of neutral or negative effects on benefits associated with this kind of structural change. Making this point does not argue for or against further regionalisation. It simply points to important relationships between local program scale and structure, and between those influencing factors and the wider benefits that are derived from the presence of the program in any location. Such considerations are important at the operational, management, governance, and policy levels.

4.3 Resource levels and distribution

4.3.1 Resource levels

Regional and remote Indigenous communities are generally considered to be resource poor. Therefore, the additional resources associated with ICNRM programs are both welcome and significant. The scale and complexity of the Yirralka Ranger program means that significant resources are required to maintain it - substantially increased assets and infrastructure are required to effectively resource a regionalised program operating on a large geographic scale. A detailed account of resourcing needs and levels for the program is beyond the scope of this report and the expertise of its author, but such resources can be summarised as funding, staff, and infrastructure. The Yirralka Rangers business plan contains a detailed account of the existing assets and financial circumstances of the program, as well as projections of its future needs (Laynhapuy Homelands Aboriginal Corporation 2013).

With respect to benefits, increased resource levels are likely to have a net positive influence for a large array of the benefits categorised here, but it is also true that each of these forms of resourcing is valuable in different ways. As one example, there is strong local awareness of how the work program relies on continued access to mobile infrastructure assets:

The most important is the car. Then we can go on patrols, check the sites, check the Yathikpa area, that nobody is sneaking in. We need the car and the boat. And the boat license. The boat is there. The only jobs we can do without the car are weeds, rubbish, and lawn cutting.

Homeland-based Yirralka Ranger

The existing resource constraints generated by the regionalised model operated by Yirralka are well-recognised at both the governance and operational levels. However in evaluating the benefits of resourcing, it is important to note that overall resourcing levels are profoundly influenced by how those resources are distributed. Therefore, before considering the relationship between resourcing levels and benefits, the issue of distribution will be briefly discussed.

4.3.2 Resource distribution

The scale and high level of regionalisation of the Yirralka program also means that how these resources are distributed is very important. The nature of the Yolngu social system means that financial capital tends to be shared widely, and accumulating large amounts of capital is difficult. In such a context, equity of distribution is an important principle. In the context of the ranger program, this kind of equity principle is evaluated in terms of resource distribution across homelands, between the head office at Yirralka and the homelands, and between Indigenous and non-Indigenous members of the program.

As noted previously, Baniyala is a large and well established homeland that played a major role in the genesis of the program, has substantial numbers of staff, and has significant existing ranger infrastructure in the form of a ranger station. Equally importantly, it is sited some distance from Yirralka and has a long history of concerns about the distribution of resources between the homeland and Yirralka that predates the existence of the program.

The general attitudes of research participants reflect this geographical and historical situation. The focus of comments about resource distribution is primarily in terms of the Yirralka-homeland distinction rather than on distribution across homelands or between program staff of non-Indigenous and Indigenous backgrounds respectively:

Everything new comes there [Yirralka], not here [Baniyala]. It should come to the outstation [homeland].

Yirralka Ranger

As noted previously, the current project was focused on benefits not on a formal performance evaluation of the program at either the program wide or homeland scale. Comparative research across a significant number of homelands (including the large number with fewer ranger resources than Baniyala) may have found that distribution between homelands was also regarded as an important issue. However, for the purposes of analysing benefit categories and their potential influences, what is important to note is that the distribution of resources within programs (in this case, between the central office and a regional homeland location), may have an influence on perceptions of the wider benefits derived from the program. This issue will now be considered in more detail.

4.3.3 Influence upon Indigenous community benefits

The level, the form, and the distribution of resources can be highly significant for the benefits that accrue at a local level in a range of ways. As noted previously, increasing the level of resources is likely to increase the benefits derived from the program across a wide array of the categories identified. However, the form of any change in resources can also influence the category of benefit most influenced by that change. For example, changes in homeland staffing levels may have particular impacts on income (at the community scale) and on the beneficial effects of residence. Changes in funding for operational activities may be influential in the physiological and general health benefits associated with work activity and with social improvements associated with increased formal education and training opportunities. Improvements in infrastructure levels may increase the desirability of the role, benefit long term business development aspirations, and increase political benefits associated with both the perception and the reality of independence. Such examples demonstrate that changes in both the level and the form of resourcing will have direct implications for the range of benefits identified here.

The issue of the level and form of resources leads to the issue of distribution. Taking the regional distinction between Yirrkalā and the Baniyala homeland as an example, resource distribution that is understood as equitable or appropriate can be particularly important for generating:

- cultural benefits such as the compatibility of the program with Yolngu principles and objectives
- social benefits such as training opportunities and broader personal horizons
- economic benefits such as business development, and
- political benefits such as intra-program and community cooperation.

What this demonstrates is that a basic level of resourcing is required for the successful operation of the program and for the wider non-environmental benefits it generates. It may be possible to achieve some key environmental outcomes and/or logistical and operational efficiencies through significant centralisation of resources, or by targeting resources to a subset of possible recipients. However, because of the nature of Indigenous social and cultural systems, generating wider non-environmental benefits requires careful attention to the distribution of resources, particularly in contexts where significant and highly valued program regionalisation has been achieved. This point has important implications for programs across the sector, as decentralisation/regionalisation to aid residence on country can be an important aspiration in many locations. Once a primary level of resourcing has been established, how resources are distributed becomes particularly important in the generation of key wider benefits.

4.4 Autonomy and accountability

4.4.1 Program autonomy and accountability

Resource levels and resource distribution are key influences upon wider program benefits. The nature of the influence they wield is related to the degree to which ICNRM programs are simultaneously autonomous and accountable, and those processes in turn relate to size and structure. These relationships have been key issues, not just for the Yirrkalā program but across the ICNRM sector.

Stand-alone programs can struggle to maintain capacity, particularly for key administrative tasks such as monitoring, reporting, and evaluation, while those programs that operate as a subcomponent of larger organisations are vulnerable to mismanagement and other risks occurring at levels beyond the program. One high-profile case has been the Djelk Rangers at Maningrida, part of the Bawinanga Aboriginal Corporation (BAC), who were particularly affected by management and funding problems within BAC (J. Altman, Australian National University, pers. comm.). Yirralka Rangers have also experienced funding and operational difficulties in the past that were caused by management problems with the parent organisation, Laynhapuy. It was recognised that, at times, Yirralka has supported the parent organisation, rather than the other way around:

When Laynha came up, we did not see much service. Ranger grew faster than Laynha, budgets from the rangers were holding up Laynha. Ranger and health, they are the only ones bringing in the rupiyah [money].

Homeland-based Yirralka Ranger

Such problems have led some local people to advocate for the full separation of the program from the support association – effectively that the program would then be overseen by a board that is independent of Laynhapuy arrangements. In this scenario, it is likely that there would be significant overlaps amongst the board members and the people to which the board was accountable (homeland Traditional Owners and residents) would remain the same. At this point, current accountability and governance arrangements have been retained, and regardless of the exact structure, both options involve direct oversight by Indigenous boards of management. This kind of governance is crucial to both the perception and the reality of Indigenous oversight and strategic control over ICNRM programs, and has clear consequences for wider benefits, discussed in more detail below.

4.4.2 Ranger Autonomy and accountability

As noted in Section 3, key benefits associated with the ranger program relate to the compatibility of program principles with Yolngu cultural principles, and the related engagement with elders by program staff. The creation of the program has introduced an additional set of relationships and authority structures to those already in existence in the IPA area. Rangers are placed at the centre of these new relationships, and provided with resources, but also have expectations placed upon them:

The rangers must report to the office and to the elders.

Former Head Ranger

Homeland residence is explicitly designed to foster independent activity, but as the comment above makes clear, rangers must account for that activity in at least two directions. They are simultaneously independent and accountable. Managing this ongoing tension is important in successful conduct of the program, and the obligation to do so does not just fall on Indigenous staff. Supporting and enabling homeland ranger independence by regionalising control is understood as a primary obligation for non-Indigenous staff:

The Yolngu mala [people] don't have many (employment) paths (so) don't bring them in here to Yirralka - take the job down to them. Napaki [non-Indigenous] people here have to think the same way – opportunity, control, responsibility- don't make yourself big, into King Kong. Be flexible and work with people.

Former Head Ranger

The comment above recognises the interconnectedness of ranger and facilitator residence, employment, responsibility, program power structures, and operational processes. The speaker went on to note the underlying potential of the program, and the significance of these issues in realising that potential. It highlights the complexities of the roles of both Indigenous and non-Indigenous ranger staff in managing the ongoing relationship between individual and collective autonomy and accountability in program activities.

4.4.3 Influence upon Indigenous community benefits

The degree to which the program, and individual rangers, are able to act in ways that balance autonomy and accountability has direct implications for the benefits described in section 3. Important political benefits to homeland communities, such as leadership development and improved foundations for succession, rely on local participants being given opportunities to make autonomous decisions in the workplace and to exercise local control. Generating key cultural benefits, such as the compatibility of the program with local cultural principles and support for the role of elders, requires good processes of accountability to elders. Key individual health and wellbeing benefits, such as confidence and pride, are interdependent with these cultural and political benefits. The delivery of a whole range of benefits, particularly economic benefits, requires effective independence and accountability in the management of financial affairs and overall governance. Social benefits, particularly future aspirations, also rely on the ongoing sense that the program is viable, accountable, and sufficiently independent that it can withstand influences that run counter to those aspirations. The programs remain focused on delivering primary environmental benefits and natural and cultural resource outcomes, as it is these by which Indigenous ranger programs are judged. However, the delivery of these outcomes requires programs that are both independent and locally and regionally accountable. Organisations that can effectively manage these competing factors generate wider benefits for homeland communities that are themselves considered primary by program participants and by the communities that support them.

4.5 Activity selection

4.5.1 Activity selection

It is a big job, big djama [work]. Covering all different things - different heritage and values coming from the Yolngu situation.

Homeland-based Yirralka Ranger

The nature of the work activities undertaken by participants also represents an important influence on the both the categories and the degrees of benefit generated by the program. There are clear expectations about the type of work that rangers are expected to do:

The community want to see those rangers working. But not any work, ranger work. Not just community djama [work].

Yirrkala-based Yirralka Ranger

The activities of the rangers are guided by the overall IPA management plan, which is generated based on extended community consultation, particularly with elders and community leaders. A basic list of ranger activities was provided in Section 1, and program participants and the wider community expressed a range of preferences about what, amongst those activities, was most desirable. There is a strong awareness that different homelands focus on different priorities, and one particular emphasis for Baniyala people was coastal and marine oriented work:

The boat patrol work made the community people really happy. The elders could see we were protecting the sacred sites.

Homeland-based Yirralka Ranger

Activity selection occurs through evaluation of the intersection of community priorities, overall program objectives, logistical and operational possibilities and ranger personal preferences. Cultural motivations for managing country differ from contemporary scientific drivers, so in order to access funding an alignment needs to be made between the land and sea management priorities articulated by the program, and those associated with government program targets. However, it is also the case that many of the most serious environmental threats identified in government priorities, notably weeds and feral animals, are also understood by homeland residents and Traditional Owners as significant threats to healthy landscapes.



Yirralka Rangers removing ghost nets from a Blue Mud Bay beach

4.5.2 Influence upon Indigenous community benefits

The consequences of the activity selection process can have a range of influences on the wider benefits derived from the program by the local homeland community. Activities which are enjoyable for participants, or that are particularly prioritised by community elders, may have individual health and wellbeing benefits and cultural benefits respectively. Activity prioritisation and selection processes can be a means by which people derive political benefits such as leadership skills. The targeting of key activities can also be a means to derive long term economic benefits by enhancing opportunities for business development. Although the nature of training programs are largely determined by overall position requirements, the priority placed on these activities by program participants demonstrates that their multiple beneficial effects are well understood, and therefore that these activities are desirable. Conversely, poor activity selection can have negative consequences for wider benefits. Examples include failing to reflect the priorities of local elders, focusing on activities that do not build employment capability, and activities that have negative effects on the psychological motivation of individuals. Values and priorities affect whether activities are seen as favourable or unfavourable, and therefore what benefits are derived from them. These values and priorities are considered below.

4.6 Compatibility of values and priorities

4.6.1 Homeland priorities and ranger priorities

The selection of ranger activities, and the consequences for wider benefits of that selection, highlights the broader issue of the compatibility of priorities amongst the various stakeholders in the program, and the potential differences in values which underlie any incompatibilities. At the intra-homeland level, there is the potential for differences in priorities between non-ranger homeland residents on the one hand, and ranger participants on the other. One example is the relationship between residential and ranger training objectives:

For the rangers I think it is good if we are travelling to other places. For the community, they would rather we were living here. It makes it easy for workshops, and we can run our own patrols here. For the community, it is important that we are living here. They are less worried about the project side. Head office is more focused on the project.

Homeland-based Yirralka Ranger

Homeland residence is understood as a very substantial benefit, but focusing entirely on maintaining that residence can entail compromises in program performance. As the discussion about activity selection above demonstrated, there are expectations within the homeland about what constitutes appropriate activities for rangers to undertake. Other activities that were raised during the research which were seen locally as incompatible or only partially compatible with program duties included rangers undertaking:

- general community maintenance (i.e. tasks that are part of CDEP programs);
- hunting activities;
- work on other occupations (for example, art or music production); and
- ceremonial participation.

Attitudes to ceremonial activity varied. Some program participants regarded it as a culturally significant aspect of their wider custodial responsibilities (and therefore an important part of their ranger duties). Other program participants felt that duties which involved managing the inflow of visitors from other homelands (such as building shade structures and collecting firewood) were a component of ranger duties, but that ceremonial activity itself should not be included. Similarly, contemporary cultural production such as art and music may also be important from a local Yolngu perspective and play a significant role in cultural continuity, community cohesion, and responsibilities to the surrounding ancestral landscape. However, for a number of program participants such production would lie beyond the list of responsibilities and activities that make up ranger work. These differences in perspective have implications for attitudes to the use of program resources for such purposes (e.g. the use of program vehicles for ceremonial purposes or to gather materials for art production).



Yirralka rangers participating in a funeral at Baniyala homeland

There is extensive general agreement within the homeland studied here that the value of the program is high and that the rangers' role is to 'care for the country.' Within that general agreement, the different perspectives noted above reflect a degree of variation in opinion that would be expected within any human population. However, in this context, such variation also indicates that key operating constraints guiding the program have only been absorbed or accepted within the homelands to a certain extent. These operating constraints exist in response to the priorities of funding agencies and government monitoring and evaluation processes, priorities that differ from those generated from within Yolngu homelands. The compatibility of these priorities is considered in more detail below. What is important to note here is that there are variations in perspective within homelands about the key priorities rangers should focus on, and these variations partly reflect natural variations in opinion, and partly reflect the degree to which priorities generated externally have been absorbed and/or accepted locally. The consequences of such variations are that, when categorising rangers' activities as within the scope of their formal 'caring for country' role, different people place the limit at different points.

4.6.2 External stakeholder priorities and ranger priorities

Program priorities are necessarily shaped and constrained by the priorities and constraints that are important to the entities that provide financial support. Government is by far the most important resourcing entity at present, but private sector financial support is increasingly significant across Australian ICNRM. Evaluation of the priorities and values of external stakeholders in Yirralka Rangers - government and non-government funders, NGOs, the general public, etc. - was well beyond the scope of the current research. The degree to which there is good understanding and acknowledgement within the broader policy and management community of the implications of working in a regionalised, cross-cultural setting is a significant issue. Much effort has been expended by numerous stakeholders to work cross-culturally, and key goals for IPA and WOC recognise the need for this. However, the targets for, and benefits derived from, programs like WOC can be undermined by contradictory actions from other government departments and sectors. At the level of the general public, preliminary research about attitudes to ICNRM demonstrate that there is support for the environmental outcomes achieved, but the results are less positive for the wider set of benefits that are the focus here (Zander 2013).

Some comments about potential incompatibilities between the priorities of external stakeholders and Yirralka Rangers were noted as part of the current research. These were a relatively small component of the overall set of observations, but they do highlight this general issue. One program participant described how, when a crocodile had come too close to a community area, the priorities and methods for handling the issue differed considerably between local community rangers and the NT government. Other rangers commented that their own local law authorised them to deal with unwanted visitors in a range of ways not sanctioned by the rules they were obliged to follow when in uniform:

Yirralka should have the real power, like police. The residents, we go by their will. We got that boat training, but no powers for (dealing with) the fishermen.

Homeland-based Yirralka Ranger

We work with the fisheries police, get a better understanding with government people. We learn about how the government laws work. They say they have the power, that we are just the eyes and ears. We say it is the other way around, we already had that power. We've got to be strong, for the land and the sea. We are the ones living in the homelands. They should give us the power, and the authority to say yes and no.

Homeland-based Yirralka Ranger

The comment suggests that, from a local perspective, the additional procedures and constraints on action entailed by being a ranger should be compensated for by additional official power and authority. Yet at the moment, this kind of step is not a major priority for the external funders and supporters of ranger programs. These examples again highlight that, within the general alignment between external stakeholder and Indigenous cultural perspectives that rangers are there to 'care for the country', significant differences in perspective can occur. Such differences in perspective lead to different priorities being assigned to certain activities and/or to different understandings of how activities can be or should be conducted.

4.6.3 Influence upon Indigenous community benefits

Clearly, such differences have a range of implications for broader benefits delivered by the program at the local homeland level. From a community perspective, the social benefit of residence is a very high priority, and can be compromised if work activities are structured in such a way that rangers are absent for extended periods. Conversely, rangers themselves may be focused on project delivery and if opportunities for travel beyond the homeland are limited, then individual wellbeing benefits such as confidence and/or political benefits such as leadership and broadened horizons may be impacted.

Similarly, cultural benefits relying on compatibility between cultural principles and program objectives may be impacted if program work does not fully accord with those principles, or if activities that enact those principles are understood as outside the list of tasks considered as legitimate ranger work. Wellbeing benefits such as pride and motivation may also be affected in a similar way. This is particularly so in circumstances where being a ranger limits the freedom to act in ways that non-ranger Traditional Owners feel able to do. Frustration about the limited existing powers of rangers tempers the pride and confidence engendered by the position. These distinctions are not definitive – perspectives may vary amongst program participants and amongst wider community members about what is culturally compatible and/or professionally appropriate. The important aspect to note is that such distinctions have consequences for benefits.

4.7 Motivation

4.7.1 Motivation and activity levels

Competing priorities and differing values can also affect motivation and associated activity levels. Operational motivation can pose a problem in a diverse array of workplaces, including the ranger program, and homeland-based rangers are effectively ‘working from home’. This can complicate the ability to separate work activities from tasks associated with wider family and community life.

Such a situation can have a range of implications for work motivation. The popularity of the program as a whole and the desirability of ranger work can act as a buffer to such demotivation. However, any community perceptions that program workers are not completing necessary or optimal tasks also has implications for individual and collective motivation, even in circumstances where support for the overall program remains high.

4.7.2 Influence upon Indigenous community benefits

Clearly, wider non-environmental benefits for the local homeland community arising from the program are significantly influenced by changes in motivation and activity levels. Those levels in turn reciprocally influence program benefits. The key category in this respect is health and wellbeing benefits, as activity levels influence physiological health benefits and motivation is a key component of broader psychological wellbeing. Less directly, motivation and activity levels can have important cultural consequences, shaping program participant interactions with elders and opportunities for knowledge acquisition and sharing. There are potentially complex feedbacks involved in such relationships, but motivation and activity levels nevertheless have significant consequences for key benefits.

4.8 Communication

4.8.1 Conditions for communication

The final factor influencing local Indigenous community benefits considered here is communication. Communication is a crucial component of all successful workplaces, but it is both particularly important and particularly challenging for an organisation that:

- is decentralised across a significant geographic area, with small concentrations of staff at many locations;
- has locations that, by 21st century first world standards, possess only basic communications technology;
- has a multilingual workplace in which key non-Indigenous coordinating staff do not speak the first language of the Indigenous majority of the workforce;
- has substantial numbers of general staff with relatively limited literacy and numeracy;
- has general staff who are close kin to multiple other staff in the program

Such circumstances highlight the challenges for effective program communication, and the necessity for it to be maintained. They also highlight that, in some circumstances, (e.g. between rangers based at the same site who are close kin) communication within and about the program will be a small subset of overall communication between these individuals. The multiple ways in which communication challenges are addressed at the program level will not be considered here. Instead, the potential influences of general categories of communication on corresponding benefit categories will be briefly noted.

4.8.2 Influence upon Indigenous community benefits

At the program scale, intra-program communication is particularly influential in maintaining political benefits to Indigenous communities such as governance, cooperation and leadership capability, and in maintaining the cultural compatibility of broader program objectives. Many of these same benefits are relevant at smaller intra-program scales such as communication between groups of staff at different homelands, or between individual staff at the same homeland. However, at this scale, more specific cultural benefits such as knowledge acquisition and knowledge sharing may also become more significant, as can individual benefits such as confidence.

Consideration of communication between the program and wider residential community highlights some of the same benefit categories that are significant within the program. In particular, these include the ongoing maintenance of cultural compatibility, the implications for leadership capability, and the fostering of cooperation. Communication is also critical to longer term strategic community planning, which is required to generate social benefits such as future aspirations and generate economic benefits such as business development.

4.9 Summary of influencing factors

A diverse array of factors may influence the Indigenous community benefit categories described in section 3, far more than can be reviewed here. The key influencing factors considered were:

- program size and structure;
- resource levels and distribution;
- autonomy and accountability;
- activity selection;
- compatibility of values and priorities;
- motivation and activity levels;
- communication.

These factors influence the degree to which different categories of benefit are realised, and the interactions of such factors with those broad categories can be complex. Such interactions can be even more complex when variations in the subcategories of particular benefits are considered. The goal here was to describe influencing factors relevant to the particular field context, and provide examples of how those factors might interact with key benefits. The implications of this analysis are considered in the concluding section.

5 Summary and recommendations

5.1 Concluding summary and discussion

5.1.1 Introduction

This report explored the wider benefits of ICNRM to Indigenous homeland communities using a combination of literature review and field investigation. It complements and extends other recently completed and/or ongoing work focused on the same topic (Davies *et al.* 2011, The Allen Consulting Group 2011, URBIS 2012) and complements the collaborative film completed as part of the research (Barber and Marawili 2015). The interconnected nature of human social, cultural, political and economic systems means that any categorisation of benefits at the homeland level must be provisional and acknowledge the commonalities and overlaps between categories. Nevertheless, the review of the literature demonstrated significant health, wellbeing, cultural, social, and economic benefits across a range of past studies.

5.1.2 Literature analysis and Indigenous community benefit categories

Analysis of the literature and field data collected in this project also suggested that an additional category - political benefits – deserved further attention. Questions of Indigenous governance have been a significant focus over the past decade, and governance has been a component of work on ICNRM internationally. The demarcation of political benefits is intended to both complement and absorb work on governance using a term that is conventionally understood to be broader in scope and definition. Analysis of benefits in terms of this category is particularly under-developed at present, in contrast to the more prevalent focus on health and wellbeing.

ICNRM programs rely heavily on public funding, and identifying some of the Indigenous community benefits of that funding as ‘political’ requires some further explanation. It does not mean that ranger programs in general, or the Yirralka Ranger program in particular, are political organisations in the sense of major political parties or lobby groups. Rather, it signifies that support for such programs both improves and enables more effective local systems of intergenerational governance, leadership, and decision making. It also has implications for longer term local and regional independence and autonomy. Past studies have made numerous observations that could have been categorised in this way, but instead, in the limited existing Australian ICNRM benefits literature, such observations have tended to be under-analysed and/or absorbed into other categories such as social benefits. Delineating this new category enables more precise demarcation and analysis of such observations, enables the formal inclusion of related work under the rubric of governance, and invites further reflection regarding the capacity of the sector to improve wider community capability in diverse ways.

5.1.3 Indigenous community benefit subcategories

A second step in the current project was to explicitly identify subcategories of benefits appropriate to local circumstances. These subcategories are likely to have more general applicability in assessing benefits than just the Yirralka case, but it may be useful to retain considerable flexibility in identifying subcategories of benefit. The literature and field data analysis conducted here suggests that the main categories of benefit appear to be robust, and are important in directing attention to appropriate areas. However, flexibility in the development and application of subcategories on a case-specific basis may facilitate the identification of benefits, prompt new field questions and observations, and enable the iterative re-analysis of existing data. This report argues for the significance and consistency of the main categories of benefit, and for flexibility in subcategories to reflect local circumstances.

5.1.4 Influencing factors

As was described in Section 4, a second component of the work identified key factors influencing these wider benefits of ICNRM to local Indigenous communities. Examining and categorising such influencing factors usefully emphasises that benefits occur in a complex and dynamic field of relationships with other benefits, and with enabling and constraining conditions. More practically, such an exercise has both policy and management implications. It provides foundations for more structured consideration of how policy and management initiatives might impact on the wider benefits of ranger programs in both positive and negative ways. It may not always be possible to avoid taking action that has negative impacts on such benefits, but more formal consideration of the relationship between benefits and influencing factors does create additional space to identify remedial or mitigative actions to retain such benefits.

5.1.5 Future research

In terms of future research, a number of important trends should be noted. ICNRM funders are increasingly interested in the multiple outcomes achievable from single input investments. There is currently an absence of systematic national survey data about Indigenous attitudes to land management in general and ICNRM in particular (Biddle and Swee 2012). Existing surveys of general public attitudes to ICNRM highlight a degree of ambivalence about non-environmental outcomes (Zander 2013), yet it is clear that for program participants, these outcomes are highly significant. These conditions suggest greater understanding of ICNRM programs is warranted. Such understanding would benefit from deeper engagement with the general literature on the individual, community and national benefits of environmental amenity and action, and could in turn substantially augment this literature. Other areas that would benefit from further research include: relevant measurement and metrics; studies that are able to demonstrate causal links between benefits and enabling conditions; investigation of the impact of payment for environmental service (PES) frameworks on such benefits; and accounts of the social and cultural impact of ICNRM on wider non-Indigenous society (Barber and Jackson in review). Researchers familiar with the Australian context will then be able to raise more incisive questions about the factors, actors and dynamics that shape benefit impacts and how evaluative data can be collected in a more efficient way.

5.1.6 Conclusion

Understanding the benefits to local Indigenous communities of ICNRM programs enables a better accounting of the full value of public and private funding spent on the sector. It also creates the potential for holistic assessments to more accurately reflect local perspectives and therefore positively shape future investment decisions. Unless radical disjunctures are posited between environment, economy and society, understanding the consequences of Australian ICNRM programs requires consideration of the full suite of outcomes. For the communities in which such programs are implemented, the wider health, socio-cultural and recognitional benefits that remain currently under-reported may be as significant as the economic and environmental ones that are the focus of management and monitoring effort. The film that complements this report particularly emphasises the multiple roles that rangers play, and the multiple benefits that arise from these roles.

5.2 Recommendations

Based on the research conducted here, the following recommendations are made to policy making and funding organisations and to program staff:

- informed by local program and community knowledge and by ongoing benefits research, foster policies, procedures, and management structures that explicitly take account of the full range of benefits derived from ICNRM programs;
- support the ongoing strategic regionalisation/decentralisation of ICNRM programs where diversified residential location is culturally desirable and logistically possible;
- adopt funding, resourcing, and project monitoring models that recognise that regionalised ICNRM programs entail greater management complexity and higher operating costs compared with 'point source' programs, but deliver substantial additional benefits as returns on that investment;
- support structured opportunities (e.g. secondments, formal exchange programs) for ranger mobility within the sector to assist sectoral knowledge sharing and individual career development;
- enable ongoing support and incentive structures for collaborations between local ICNRM organisations and other relevant local agencies (e.g. arts and media, education, health);
- conduct additional research focused on:
 - the synthesis and standardisation of benefit categories;
 - the investigation and development of applicable subcategories the further exploration of political benefits;
 - the development and standardisation of methods and metrics for benefit assessment based on these categories;
 - field studies demonstrating causal rather than correlative relationships in the assessment of benefits;
 - research engagement with the broader literature on:
 - ~ human interactions with natural environments
 - ~ ecosystem services and PES
 - ~ the wider benefits of NRM programs.

Appendix A - Free, prior and informed consent form and project information sheet

A.1 Free, prior and informed consent form

INFORMED CONSENT FORM - SOCIAL/CULTURAL BENEFITS OF YIRRALKA RANGERS

Researcher details	CSIRO Ethics Contact
Dr Marcus Barber	Cathy Pitkin
Social and Economic Sciences, Brisbane	Ecosciences Brisbane
07 3833 5519 (w) 0407 867 445 (m)	07 3833 5693
Marcus.Barber@csiro.au	Cathy.Pitkin@csiro.au

Marcus is working with Yirralka Rangers, doing a research project looking at how Yirralka Rangers benefit the communities where the rangers work. Marcus works for the government research agency called the CSIRO the research has the approval of the CSIRO, Yirralka, and the Northern Land Council. Marcus is interviewing people from across the Laynhapuy IPA to build up a picture of how the rangers benefit the communities, and what might need to be changed in the future to help them benefit more. Marcus will put the information together in a report that goes to communities, to Yirralka, and to the government. Marcus might also write some research papers for university journals from the information collected during this study. Together, they will help the government and the Australian public understand how Aboriginal Natural Resource Management helps communities in different ways.

The information from the research will be stored at CSIRO, as well as at Yirralka and with any other community databases in the IPA area who want a copy. The information might also be used again for other reports and papers about the rangers that will come from later work. If you sign this form, it shows you give your permission to Marcus for him to interview you about the ranger program activities and how they have benefitted the communities. It also gives Marcus permission to use what you say in the reports and articles. 99

The aims of this study have been clearly explained to me and I understand what is wanted of me. I understand that it is my choice to take part and that I can stop at any time. I understand that any information I give will not be shared without my permission.

Name: (printed)

Signature:	Date:
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You can choose if you want your name used in the public report. Sometimes it might be good to have your name next to important or unusual information. Sometimes you might want to leave your name out. If you are happy to use your name, tick the box below marked 'Yes'. If you do not want your name recorded in the public report, tick 'No'. This permission can be changed at any time until the report is published.

Yes, I give permission for my name to be recorded in the report.

No, I do not want my name recorded next to my comments.

A.2 Project information sheet



National Environmental
Research Program

NORTHERN AUSTRALIA *hub*



Community Benefits of Yirralka Rangers

This information sheet is about research on the Yirralka Rangers and the benefits they bring to the wider community. It's part of a project being done by Marcus Barber from CSIRO in partnership with the Rangers. Marcus has done work in the Yirralka IPA area before, helping with the Blue Mud Bay sea rights case a few years ago. He now works for the CSIRO – Australia's national research organisation.

What is this project about?

This project looks at how the Yirralka Rangers have grown, and how the communities in the IPA have changed because of that growth. It tries to understand the wider social benefits of Ranger work that help people living in the IPA. The project also looks at what might need to be changed to help the Yirralka Rangers and the community in the future. The project will trial ways to measure the wider social and economic benefits of the Yirralka Rangers over time.

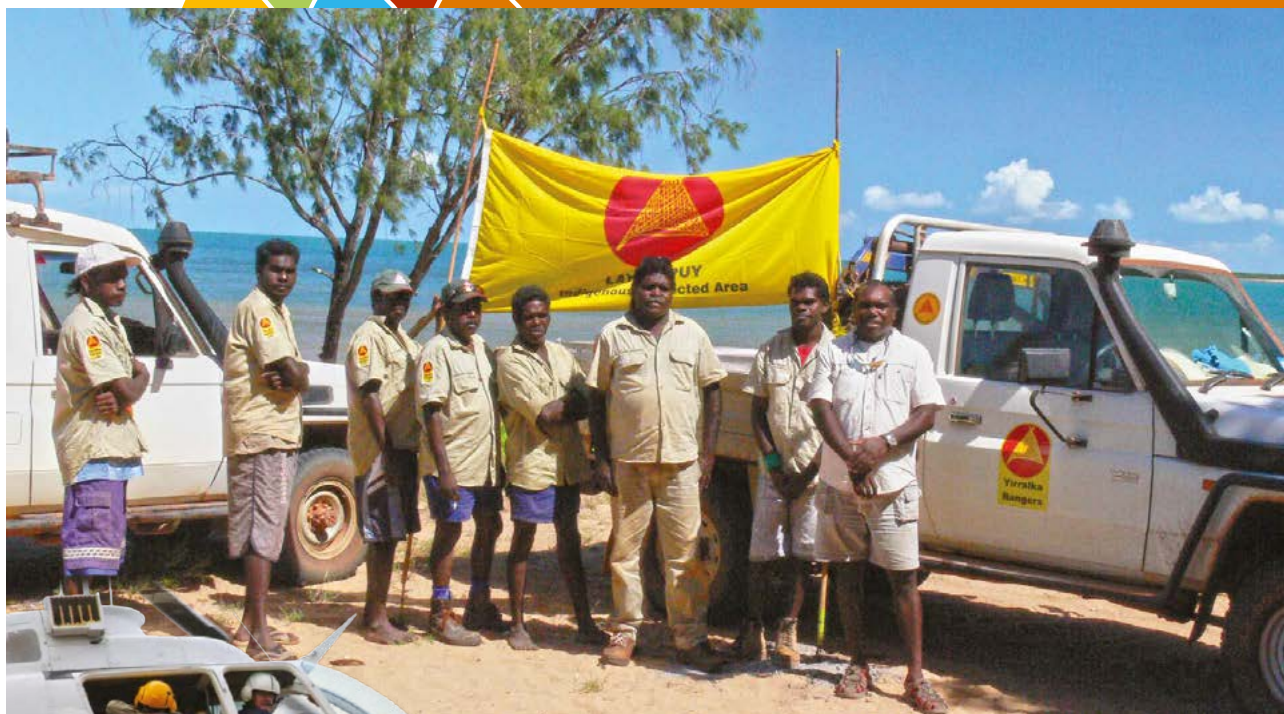
What will the research be used for?

Marcus will put the information together in a report that goes to communities, to Yirralka, and to the government. Marcus and his research partners might also write some papers for research journals. Together, they will help the government and the Australian community better understand how Indigenous Natural and Cultural Resource Management helps communities and people, as well as the country itself.



A.2 Project information sheet

Community Benefits of Yirralka Rangers 2



How will the research be done?

The Northern Land Council has provided a permit for the research. Marcus will interview people from the communities and from Yirralka. He may also do social surveys. People who talk to Marcus can choose to have their name recorded or not. The

information from the research will be stored where Marcus works at CSIRO in Brisbane. It will also be at Yirralka and with any other communities in the IPA area who want a copy. The report will also be on the internet. Marcus and the Yirralka Rangers are keen to work together again, so the information from this work might also be used in future projects.

Further information

If you have any questions please contact:

Marcus Barber, CSIRO
Phone: 0407 867 445
Email: Marcus.Barber@csiro.au

Dave Preece, Yirralka Rangers
Phone: 08 8939 1800



PICT CLASS IN GRAPHIC DESIGN



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