

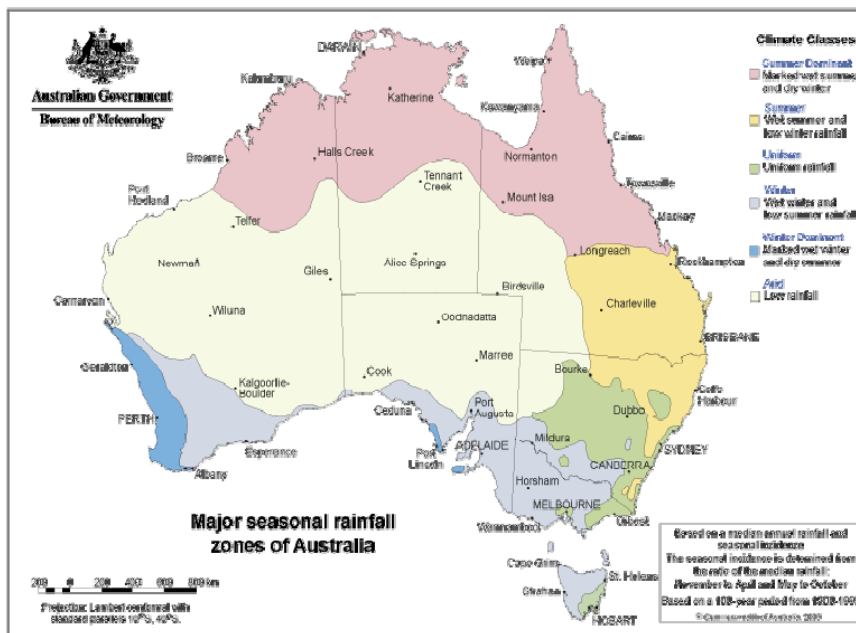
Region: Australia

by Donna Green, Ursula King and Joe Morrison

Section A: Background sketch of region and key players

Geographic background and climate: Australia is a vast landscape made up of a wide range of ecosystems spanning vast deserts, large areas of relatively intact tropical savannah, thick rainforests, stone country off-shore islands archipelagos, mangrove systems, fringing coral reefs and complex river and wetland systems. In all, the terrestrial land mass of northern Australia extends over 1.5 million square kilometres. In colonial geography, this area coincides with the Kimberley region of the state of West Australia, the Top End of the Northern Territory, the Gulf Country of the Northern Territory and the State of Queensland, the Cape York Peninsula and the Torres Strait Islands.

North Australia has warm to hot temperatures throughout the year with an average temperature of 20-35 degrees C. The tropical monsoon 'wet' season occurs between September/October and April/May, and the 'dry' season for the remaining months. During the dry season, bushfires occur in much of the open savannah areas, with the later season burns being quite hot. The central semi-arid and arid areas that reach from the Pilbara/Kimberley area in the west, across the Great Sandy Desert and the Tanami in the middle of the continent experience some of the hottest and driest climates in the country.



Indigenous history and current land ownership: As the original inhabitants of the continent, Aboriginal Australians have had a long history of living with environmental change. Artifacts found in the north have been dated back 60,000 years which indicates that they are the oldest continuous living culture in the world.

With approximately 16 per cent of the land mass owned by Indigenous Australians, the connection of the traditional owners to their land and sea country remains strong in many regions of the country. The most significant Indigenous land ownership occurs in the Northern Territory, with nearly half the land being owned by Aboriginal Australians. Further, over 80 per cent of the coast line in the Territory is Indigenous owned. A recent case over Blue Mud Bay settled in the High Court, deciding that this ownership extends into the area of sea country lying between the mean high and low water marks and including tidal rivers running out to the ocean from Aboriginal land. As a result of this decision, there are significant implications for the ability to control access by commercial and recreation fishing interests.

The first successful land rights case to occur in Australia did not, however, occur on the mainland. The *Mabo* native title decision, successfully won in 1992 after a decade of legal wrangles with the State of Queensland, was brought by a group of traditional owners (including Eddie Mabo after which the case was named) over the ownership of Mer Island in the Torres Strait. It was the *Mabo* native title decision that paved the way for land rights cases to be won on the mainland.

All of the inhabited in the Torres Strait islands are now under the management of Prescribed Body Corporates, the traditional owner organisation for each Island or Island group. Sea claims around many of the islands are currently being decided by the courts, with a decision due mid 2009.

Over the last decade, the federal government administered a funding program to support Indigenous landholders to declare, plan and manage their own protected areas. Indigenous Protected Areas are formally recognised as part of the National Reserve System. IPAs are under the sole management of Indigenous people but they typically receive financial and technical support from government and other sources.

Demography: The majority of the approximately half a million Indigenous Australians live in cities and urban areas around Australia, however, there are a number of people who still live on their 'country'. Of these people, about a quarter of the Indigenous population lives in what are termed 'remote' or 'very remote' areas in communities of various sizes. Unlike in cities and urban areas, in these remote and very remote regions, Indigenous people frequently form the majority of the population.

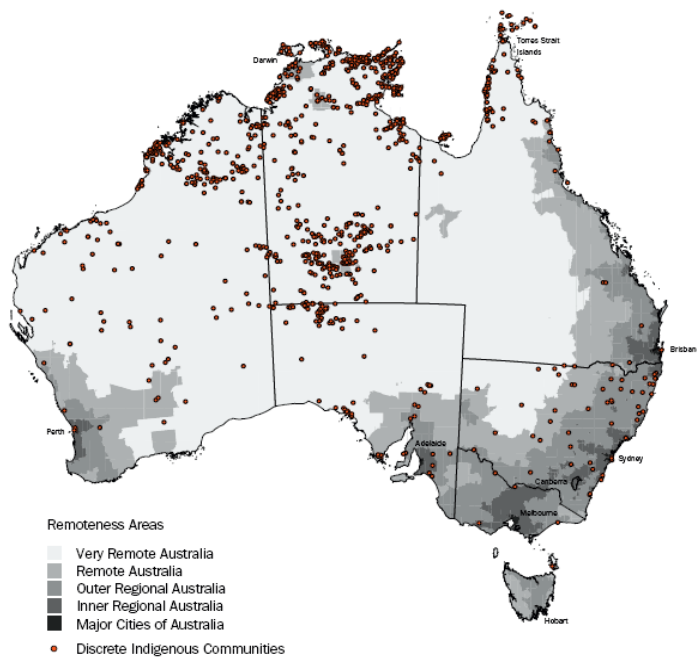
With most of Australia's population concentrated on the coastal fringe, the arid and semi-arid zones comprise only 3 percent of Australia's population (just over 500,000 people), with approximately one fifth of which is Indigenous. In the Northern Territory, the population density outside of the major towns is extremely low, and overall Indigenous people make up over a quarter of the total population. In northeast Arnhem land, over 90 per cent of the total population is Indigenous. Overall, nearly three quarters of the Northern Territory's Indigenous population lives on Aboriginal freehold land.

The Torres Strait is home to Australia's second group of Indigenous peoples. The majority of Islanders (about 85 per cent of the approximately 30,000 Islanders) currently live in cities and urban areas, particularly in Queensland - around Townsville, Cairns and Brisbane - and in and around Darwin in the Northern Territory. Only about 15 per cent of the Islander population live in the Torres Strait, with the 18 communities having populations from around 50 people to 500 each.

In contrast to non-Indigenous Australians, the Indigenous population is young and growing fast. This factor also has significant implications for the need to provide additional social, educational and employment services to accommodate a rapidly increasing population. This population increase is expected despite the ongoing disparity in life expectancy (about 17 years) between Indigenous and non-Indigenous Australians.

This majority of this report focuses on communities of less than 3,000 people in the northern and central regions of the continent. These 'remote' communities are inhabited predominantly by Indigenous people, run by community councils with the housing and infrastructure are owned or managed by Indigenous organisations.

Figure 1: Location of remote Indigenous communities (source: ABS 2006)



Livelihoods and services: The Indigenous economy has been conceived of as a ‘hybrid’ economy, made up of three interrelated sectors: the market (the private sector), the state (which can include both welfare and public sector activity) and the customary sector (non-market economy).

Customary activities are often called ‘caring for country’ activities, as they are primarily concerned with the spiritual health of the land and sea country. Traditional owners consider themselves custodians of their country for future generations. Customary activities are a significant part of many remote communities’ day to day activities. Beyond purely economic practices, these activities are underpinned by beliefs and values that bring with them cultural obligations. ‘Caring for Country’ activities are primarily concerned with the spiritual health of the land and sea country that the traditional owners consider they are the custodians of for future generations.

The strong association between the health of country and the people that are responsible for its maintenance, is a cultural norm that is not easily understood by many non-Indigenous Australians. However, the importance of understanding how the health and well-being of people can be impacted both directly and indirectly by changes ‘on country’ is crucial, if policies are to be designed that are to encourage the long term management of ecosystems that are located on Indigenous owned land.

A key feature of Indigenous hybrid economies in remote communities is their reliance on customary livelihood activities, which in turn depends on the sustainable use of natural resources. In some communities, over three quarters of the adult population regularly hunts or fishes for their consumption and for commercial activity. The reliance on customary activities to supplement the commercial economy is important because of the expense and time taken for travelling between many of the outstations and the closest regional ‘service centre’. These trips can take several hours travel by car each way (when roads are passable), and many are not served by public or community transport. Alice Springs is the major service centre for a vast area of central Australia, servicing some 260 small communities. Other major centres for remote communities are Darwin, Katherine, Borroloola and Cairns (while Western Australia has a number of smaller service centres).

Local employment opportunities largely take the form of ranger programmes and government schemes (such as the Community Economic Development Program (CEDP)), due to the lack of local industry in the region.

The 'Caring for Country' approach that uses Indigenous and western science knowledge about managing country has been used by rangers for over a decade. Community-based ranger or management programmes have created a network of different traditional owner groups spanning much of the northern Australian land mass and coastal and sea country. The Northern Land Council is currently supporting more than 35 ranger groups alone, with approximately 700 rangers participating in this 'Caring for Country' programme.

The services that the rangers provide include managing invasive weeds, feral animals, informal customs services, pollution control, removal of ghost nets and illegal fishing patrols. The environmental services these groups provide include managing bushfires, facilitating western science studies and wildlife management.

Outside of the limited government service opportunities, mine sites are another employer of Indigenous people in remote areas, however frequently people must live away from their country to work at these mine sites.

Community organisation and management: The management of these regions are generally organised through Land Councils, and various state and federal bodies set up to represent the range of Indigenous views on various policy decisions. A number of local, state and regional non-government organisations also respond and pro-actively lobby on issues of concern to Indigenous policy. Many of these NGO groups work on issues relating to strengthening the connection to country and cultural maintenance.

A key umbrella group for many different tribal groups from across the north has emerged, the Northern Australia Land and Sea Management Alliance (NAILSMA). NAILSMA is a partnership between the Kimberley, Northern and Carpentaria Land Council with the Balkanu Cape York Development Corporation.¹

The Torres Strait communities all have their own Prescribed Body Corporate groups, collectively an amalgamated regional council comprising of one councillor from each inhabited Island, the Torres Strait Island Regional Council (TSIRC) is the state level of representation. The Torres Strait Regional Authority (TSRA)² is the federal body charged with managing federal programmes in the region.

Cultural integrity: Environmental interdependence is a mainstay for the majority of Indigenous people living in remote areas of Australia, influencing many facets of their daily existence. Several communities in the north are cut off for several months each year due to the monsoons making access roads impassable. Due to their isolation and distance from regular non-Indigenous contact, many communities have managed to keep a significant degree of cultural coherence.

Due to the high correlation between the strength of culture and ties to land, communities that still live on their own land and continue to speak their own language tend to maintain the strongest cultural practice. Communities with strong cultural practice are most likely to be found in the central and northern regions of Australia. Traditional culture is maintained through language and cultural practices that have been passed down through generations in the oral tradition.

With the growing outside pressures from a 'money' economy, the stresses of competing cultures and outside influences has caused significant social problems in many Aboriginal and Islander communities. Local knowledge and cultural practice held by the traditional elders of these communities is often lost as elders of the current generation die. This is a massive cultural loss, as this oral culture is often not recorded elsewhere.

In large areas of northern Queensland, the Northern Territory, Western Australia and South Australia many people speak their own language as their first language, frequently several

¹ www.nailsma.org.au

² www.tsra.gov.au

other related languages from family ties, with English being a fourth or fifth language. While there are more than 200 Australian Indigenous languages, less than 20 of these languages are strong. Others are lost or exist in the memories of the elders of the community. A few projects are now focusing on reviving language within their communities throughout Aboriginal Australia.³

In the Torres Strait, several Islands have languages and culture taught informally through family ties within the community as well as formally as a cultural component through the school system. In this way Kalaw Lagaw Ya, Kalau Kawau Ya and Meriam Mer is being passed onto the younger generations with varying degrees of success. Brokan (Torres Strait Creole English) is currently the dominant lingua franca on most of the Islands.

In order to better understand this association between environment and health with respect to climate change, this scoping project sought to document what is currently happening in Australia regarding working with Indigenous knowledge to address the impacts of climate change. However, it is useful to begin by considering the climate projections for the continent and how these changes will impact these communities and their culture.

Section B examples of IK for resilience building

1) Nature and scale of environmental change

Both changes in extreme weather (for example increases in the frequency or intensity of tropical cyclones or more intense rainfall) as well as changes in average temperatures and rainfall will impact human health through direct and indirect pathways. In addition, ecosystems impacted by climate change are likely to have indirect impacts on the well-being of many Indigenous people. This is because the effects of climate change on the environment on the composition, distribution and health of natural environments will cause some plants and animals species to be pushed beyond their capacity to adapt to the changing conditions. This reduction or redistribution of traditional plant and animals will have dietary, medical, cultural and economic impacts on the communities that depend on them.

The biophysical changes such as the projected warming and drying of the centre of the continent, increases in extreme weather, rising sea levels and increases in sea surface temperatures are likely to have significant impacts on remote communities. Direct threats to some communities caused by rising seas and bigger storm tides, such as those in the Torres Strait located on low-lying islands, are only one of the more 'visible' impacts likely to occur in coming decades.

For coastal communities on the mainland, rising sea levels can cause freshwater inundation of wetlands including floodplains, billabongs, rivers and creeks. Coastal wetlands, important nursery areas for barramundi, prawns and mud crabs, and are important breeding habitats for crocodiles, turtles, crayfish, water snakes and frogs would be impacted by rising sea surface temperatures, sea level rise, salt water inundation and increasing storm tides.

In addition, changing environmental conditions can favour weeds and feral animals, outcompeting traditional food and livelihood resources. These changes can have significant economic costs associated with them. For instance, the recent interest in preparing bush food for the urban market is a growing industry for many remote communities. Weeds and to some extent feral animals are likely to negatively impact the growing industry of preparing bush food by threatening the survival of native plants.

Salt water inundations into fresh water areas would have a devastating effect on the availability of freshwater food resources for many remote communities. For example, a rise in average temperatures of 2 to 3 degrees C could lead to the loss of 80 per cent of freshwater wetlands in Kakadu.⁴ Traditional food sources likely to be impacted by this change include:

³ www.dnathan.com/VL/austLang.htm

⁴ www.climatechange.gov.au/impacts/publications/fs-nt.html

ducks, geese, fish, turtles, freshwater crocodiles, egg supplies and edible plants such as water lilies.

In addition, fisheries are threatened by increases in sea surface temperatures in combination with problems created by ocean acidification. Along the north eastern coast the Great Barrier Reef is predicted to undergo regular bleaching events as a response to rising ocean temperatures within the next one to two decades.

Although more uncertain, climate impacts are likely to reduce the available moisture for some areas in the tropical north. This shift is likely to increase the frequency of fire, and could eventually result in a shift from fire sensitive rainforest vegetation to more fire tolerant species. The impacts of altered fire regimes are especially important in these ecosystems as even small surface fires have the potential to significantly affect the structure and composition of tropical forests.

2) Examples of IK in use for adaptation

Sea country management: One award winning project which engages traditional owners from across the north with western scientists is the Dugong and Marine Turtle Project. This project uses Indigenous rangers to track, document and educate communities about the lifecycle and habits of these animals. The project has been very successful and currently works with a number of land and sea owner groups across northern Australia.⁵ Coordinated by NAILSMA and the Cooperative Research Centre for Tropical Savannas, the project ensures Traditional Owners and Indigenous communities are driving their research and management activities.

Traditional knowledge about the lifecycle of dugongs and turtles is documented in the *Dugong and Marine Turtle Knowledge Handbook*⁶. Knowledge recorded in this book includes seasonal use of resources (such as hunting times for turtle and dugong) for various land owner groups, hunting techniques and protocols and details the depth of Indigenous knowledge about the biology of these animals, how to identify different ages and the sex of dugongs.

The Bardi Jawi case study directly involves the traditional owners in a community controlled way through the rangers who monitor sightings and catches as well as satellite tracking of dugongs and turtles. Hunting and management of dugong and marine turtles is a fundamental part of Bardi and Jawi economy, culture, society and Law. Findings of this project have included the timing of hunting seasons (largely following the customary seasonal cycle), the reasons for hunting and the value of the total catch. The project estimated that the value of the year long harvest was on the order of \$355,000 if replacement meat was needed to be bought from a local store.

Traditional burning: Aboriginal people have a distinctive process of selectively burning areas at particular times of the year to create 'habitat mosaics' that allowed for the survival and maintenance of animals and bird species. Indigenous management of burning controls the timing, location and impact of these burning regimes, and is a vital aspect of their ability to keep their country 'clean' and healthy. These practices have slowly been recognised by western scientists as a good way to manage these ecosystems and Traditional Owners are now being engaged to reinstate traditional burning techniques.

The two largest projects working with this knowledge and both currently working with the indirect impacts of climate change, are the award winning West Arnhem Land Fire Abatement (WALFA) project and the Indigenous Ecological Knowledge projects being carried out through NAILSMA. Three successful projects recently announced include those with Ngukurr (from Stonecountry to Saltwater), Borroloola (Law for the Sea Turtle) and Jilkminggan Mangarrayi and Yangman Plant and Animal Knowledge). NAILSMA's focus has been on bringing together local Indigenous Knowledge and relevant science to promote sustainable environmental practices. Community controlled, these projects are committed to building knowledge sharing

⁵ Rod Kennett, project leader http://www.nailsma.org.au/projects/dugong_turtle.html

⁶ http://www.nailsma.org.au/publications/knowledge_handbook.html

partnerships based on sound ecological, economic and community development principles. As part of NAILSMA's communication strategy, the magazine *Kantri Laif*, is produced on a regular basis with chronicles the progress of their projects and related news.

As part of the northern Australian 'Burning for Biodiversity' project, CSIRO and the Bushfire CRC are working with a family of traditional owners in Kakadu National Park (including Mr Peter Christophersen and Ms Sandra McGregor) to examine the biodiversity and cultural benefits of Aboriginal fire management as it is re-applied to Boggy Plain, an internationally recognised wetland on the South Alligator River floodplain. Through this project, the CSIRO has made some effort to bring bi-cultural understanding to environmental management in Kakadu through managing Boggy Plain. By working with western science and traditional knowledge of burning practices, they have transformed Boggy Plain from a dense monoculture of grass to a mosaic of different habitats.

It is likely that the impacts of climate change will affect both the fuel load (increased CO₂ is likely to increase plant growth) as well as change evaporation rates and increases in extreme weather events mean that careful fire management in regions of the country that rely on semi regular burning will become more and more important. Some Land Councils are getting involved in carbon abatement projects with corporate engagement along similar lines to the WALFA project previously mentioned although no details are presently available it is clear that this kind of project had the potential to provide significant economic and cultural benefits if managed correctly.

Knowledge recording projects: Projects focusing on Indigenous Knowledge as a whole are more established in Australia. Over the last decade or so, several Indigenous Knowledge recording projects have been initiated by local Indigenous groups in an effort to enable future generations access to knowledge which might otherwise be lost. Although knowledge of past weather and climate has not specifically been identified for collection in most of these projects, due to the importance of seasonal calendars in the practice of culture and Law, a great deal of phenological⁷ observations have indirectly been recorded in this process.

A number of Indigenous led knowledge recording projects have recently been established. The Traditional Knowledge Revival Pathways (TKRP) is one example of these recent Indigenous led projects that was developed from the aspirations of Indigenous Elders, to preserve and recognise Traditional Indigenous Knowledge.

Through a grass roots methodology, this project endeavours to connect Indigenous groups in order to recognise and strengthen Traditional Knowledge to benefit the environment and community well being, for all present and the future generations. TKRP also set up to mentor community members to record their own stories and make a database of this knowledge as a place of safekeeping of tribal knowledge for future generations. Although none of these projects have specifically targeted weather or climate knowledge, many of these records have undoubtedly included these references.

The first project that explicitly considers Indigenous Knowledge of the changing seasons, the connections between particular animal, plant and seasonal behaviour has begun between the Sharing Knowledge project and TKRP in several Torres Strait communities.⁸ This project is predicated on the fact that changing seasons, the connections between particular animal, plant and seasonal behaviour is intimately known and watched for by elders in these communities.

The most comprehensive project to date in northern Australia that attempts to provide a knowledge source of both western scientific assessment of climate projections with Indigenous knowledge of past local weather and climate observation is the *Sharing Knowledge* project initiated by D. Green at CSIRO and continued through the Climate Change Research Centre, University of New South Wales in collaboration with TKRP and NAILSMA.⁹

⁷ Phenology is the study of the times of recurring natural phenomena.

⁸ This project is funded by the Marine and Tropical Sciences Research Facility (MTRSF) information available at: www.mtrsf.org.au

⁹ www.sharingknowledge.net.au and donna.green@unsw.edu.au, tel +61 (2) 9385 8956.

The *Sharing Knowledge* project initiated this area of work through a workshop held in Darwin 2006, where 30 traditional owners and 30 scientists and researchers met to discuss climate impacts and traditional knowledge of changing country.¹⁰ Currently, discussions between several land owner groups and the *Sharing Knowledge* project are leading to invites to present workshops on country in several regions across north Australia in 2009.

Other existing projects that have begun to document this knowledge include the Bureau of Meteorology's Indigenous Weather Knowledge project.¹¹ This project recognises that Indigenous Australians have long held their own seasonal calendars based on the local sequence of natural events and highlights five communities where seasonal weather calendars are juxtaposed with the Bureau's own climate data. Other weather calendars exist online.¹² The Federal Department of the Environment has also made seasonal weather calendars available on its website for the Bininj/Mungguy Aboriginal people.¹³

Other projects that have systematically begun to document weather and climate knowledge include that of Dhimurru is an incorporated Aboriginal organisation established by the Aboriginal or Yolngu land-owners in Northeast Arnhem Land. Dhimurru's area of responsibility includes the estates of 14 Yolngu clans whose land covers approximately 8,500 sq kms. The aim of Dhimurru is to address natural and cultural management priorities identified by its members, with particular emphasis on designated recreation areas, and to deal with them in accordance with the directions of the traditional owners.¹⁴

The Centre for Aboriginal Economic Policy Research at the Australian National University¹⁵ has developed a couple of case studies under their programme of 'People on Country'. One of these case studies, the Garawa the traditional owners of the southern Gulf of Carpentaria includes observations from some of the senior women about recently observed declines in bush tucker, especially emu. Understanding about how the intensity and frequency of late hot fires affects the biodiversity of the region is clearly demonstrated by these women how 'told how emu build their nests on the ground and sit on the next for 55 days. The repetitive fires destroy the nests and eggs and often the male bird on the nest. The fires also destroy the fruit producing plants that emu feed on making the habitat no longer suitable for emu.'¹⁶ The second case study, that of Yirralka rangers in North East Arnhem land details traditional ecological knowledge about customary burning practices and the incorporation of the Yolngu seasonal calendar within the ranger work programmes. In addition, Yolngu place names and associated stories are being collected with the intension of including them within GIS maps of the region. The younger generation is engaged though the Mulka project which aims to use multi-media archives to tell Yolngu stories.¹⁷

International connections: International liaison with similar projects has also begun to occur through the UNU's Traditional Knowledge programme based out of Charles Darwin University.¹⁸ This TK centre seeks to build greater understanding and facilitate awareness of traditional knowledge to inform action by Indigenous peoples, local communities and domestic and international policy makers. Short videos for two communities are currently available through this group documenting Indigenous knowledge of local environmental change.

3) New ideas that could be put into practice

During the interviews for this scoping project it became clear that some areas of northern Australia, particularly the Kimberly, West Arnhem Land and Torres Strait Islands had active involvement with climate change related projects that were raising awareness about some of the western science projected impacts on their country. However, this information was not being systematically delivered to communities, and there was a large unmet demand for well-

¹⁰ www.sharingknowledge.net.au

¹¹ <http://www.bom.gov.au/iwk>

¹² eg Bininj/Mungguy in the Kakadu region www.environment.gov.au/parks/kakadu/nature-science/seasons.html

¹³ <http://www.environment.gov.au/parks/kakadu/nature-science/seasons.html>

¹⁴ Steve Roeger, Executive Officer, dhimurru@dhimurru.com.au and www.dhimurru.com.au, tel +61(8) 8987 3992.

¹⁵ www.anu.edu.au/caepr/

¹⁶ Information and videos of fire management at <http://www.anu.edu.au/caepr/country/garawa.php#GarVid>

¹⁷ www.anu.edu.au/country/yirralka.php

¹⁸ www.unutki.org and tiki@ias.unu.edu, tel: +61 (8) 8946 6792.

explained plain English summaries of these projected impacts. A couple of Aboriginal and Islanders had taken part in the ACF/Gore climate change training programme over the last two years and were endeavouring to make this presentation relevant for Indigenous Australians.

Despite these positive responses regarding awareness about climate impacts, the Kimberley Land Council, Northern Land Council, Central Land Council and Cape York Land Council representatives stated that they were not aware of any climate change activities or projects that they were actively engaged with at the time of the interview.¹⁹

Northern Territory: The Kakadu West Arnhem land Climate Change working group was established at the first Sharing Knowledge workshop in 2006. Since then, Kakadu National Park has held a number of training seminars for rangers about the impacts of climate change in the park as well as holding workshops the Kakadu National Park Landscape Symposia Series 2007–2009.

Western Australia: Environs Kimberley in WA also held a series of workshops in Minyarr Park and Broome on the impacts of climate change on Indigenous communities as part of National Science Week 2006. The Department of Indigenous Affairs is currently organising a series of workshops for 2009-10 on climate impacts for Traditional Owners.

Queensland: There have been 6 workshops in the Torres Strait on climate change held in 2007.

Other regions and Indigenous groups stated that they had yet to take on the climate change in depth because of resourcing limitations, lack of information and contacts or other priorities. The majority of current projects working on either Indigenous Knowledge or climate impacts are supported by partnerships between Aboriginal and Torres Strait Islander organisations own their own, or in collaboration with university or government research units. These vary in timeframe, focus, funding, and extent to which they actually address both issues (Indigenous knowledge and climate change), as well as the degree of local Indigenous ownership and control of the project.

Section C: Responses to value of an international workshop

1) Would an international event be useful?

There was a clear preference for a series of regionally focused workshops across northern Australia as well as interest in sharing ideas between nations. It was considered important to identify key local and regional audiences in order to meaningfully locate and target these meetings. How these audiences were then engaged would depend on the purpose of the meeting i.e. information exchange about local examples and experiences of climate change as the basis for recording these as part of an ongoing knowledge sharing network.

Other issues of importance included: information transfer and education about key issues informing the climate change agenda such as the findings of the IPCC, explanation of key terms, how to strengthen the community level knowledge base and create a regional network or alliances. Key topics for such an alliance could include: water and fire management, biodiversity of land and sea habitats, sustainable cultural-environmental relationships, health impacts, economic impacts and opportunities, and generational Indigenous Knowledge.

Comments included that a workshop would also be useful if it was able to help identify local and regional climate change project opportunities (and constraints) and how to access resources and skills development to support these activities and facilitate ongoing engagement with funding bodies and project partners.

There was also recognition of the necessity of creating multiple access points for information exchange about climate change. These could include but not be limited to local radio talk

¹⁹ Initial interviews for this project were carried out by Dr Ursula King during May 2008.

back about people's perceptions and experiences of climate change in their local area, and as an opportunity to introduce some of the major issues underpinning climate change; 'on country' conversations with Traditional Owners in community languages about local experiences, past and present; school-based workshops to introduce key concepts and generate discussion and awareness; public meetings to identify local priorities and concerns; and looking at practical ways to place climate change issues within local/regional Indigenous organisational agendas and activities.

A major consideration in putting together a workshop agenda was starting the process with a focus on local content and impacts. Making the workshops relevant to where people are actually living, and drawing on local knowledge, was considered more likely to engage and stimulate discussion that could then enable consideration of broader climate change issues in Australia and around the globe. Training-up Indigenous facilitators and educators as part of the information sharing process would offer an important opportunity to more rapidly build local capacity. Alternatively, this could be the regional workshop focus with additional funding sort to support an ongoing national network of regionally based Indigenous climate change educators/facilitators.

Climate change issues are currently placed down the agenda by many Aboriginal organisations in Australia because of the higher priority given to redressing more pressing issues such as health, land rights and socioeconomic disadvantage. This point does not mean that these organisations disregard the importance of addressing issues related to climate change in their communities. Quite the contrary, however, this situation poses a challenge to those working with Indigenous communities around these issues.

One point was made very clearly: climate change needs to be made locally relevant. Then it needs to be linked to understanding that developing sustainable adaptation strategies and building resilience is all about lessening the expected *additional* socioeconomic, cultural, environmental and health impacts arising from climate change.

Compared with Indigenous communities in the northern hemisphere, especially the Arctic region, Australia has been slow in recognising the opportunities and constraints for Indigenous communities posed by climate change. This is despite the fact that climate change will have significant impacts on many remote Indigenous communities, especially on those which rely on maintaining a sustainable relationship with a healthy local environment.

Section D: Discussion

Past and current exploitation of Indigenous lands, cultures and identities have not endeared many Aboriginal and Torres Strait Islander people to share their knowledge outside of their communities. This issue is still frequently discussed amongst Indigenous people participating in international level debates, with concerns regarding intellectual copyright often dominating the agenda when the issue of Traditional/Indigenous Knowledge sharing is raised.

In the Australian context, interviews suggested that there was still a strong sense that the majority of current climate change activity was operating from a top down perspective. Often initiated by university and government research units, this activity appeared to emphasise urgent 'on country' action about issues many local people had not had a chance to learn about, let alone participate in. Timeframes were usually very short and processes of engagement often considered alienating, such as national conference based formats or short field visits, which did not offer an accessible platform for inclusion of local Indigenous voices or genuine opportunities for building local/regional networks.

An overwhelming concern expressed by Aboriginal and Torres Strait Islander organisations was the necessity of local/regional involvement. For those working in academia this concern was echoed, with both expressing a further apprehension about who may end up setting the agenda for identifying and responding to climate change impacts in Indigenous contexts. There was an expressed unease that the mistakes of the past may continue if Indigenous people were not actually engaged in the discussion, and, considered from the outset, as integral to formulating and implementing possible solutions.

Some messages from the interviews and discussions resulting from this project were definitive. When working with Indigenous communities on climate change issues, the focus needs to be on genuine ongoing engagement and not mere one-off extraction of information. In Australia, many remote Indigenous communities are considered most at risk from projected climate impacts. Yet, if history is a guide, these communities are more likely to be kept at the periphery of the decision-making processes. Finding ways to meaningfully engage these communities is vital. However, this agenda must be set 'on country' with and by communities, and this will involve partnerships based on respect for a process that places relationships at its core.