MONSOONAL NORTH
NRM CLUSTER

CLIMATE CHANGE IN AUSTRALIA

IMPACTS & ADAPTATION INFORMATION FOR AUSTRALIA'S NRM REGIONS

Climate Knowledge Needs for Natural Resources Management Planning in Australia's Monsoonal North and Rangelands

Summary Report

Citation

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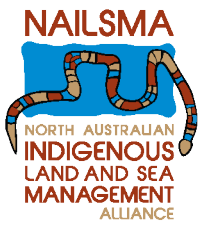

Acknowledgements

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Interviewees:

Alistair Buchan, NQ Dry Tropics

Andrew Burrows, Desert Channels QLD

Anna Hanson, Western LLS, NSW

Aude Loisier, AW SA

Jackie Watts, SA Arid Lands

Leanne Day, SW QLD NRM, QLD

Nathanael Wiseman, AW SA

Paul Donohoe, Territory NRM

Rowan Shee, SA Arid Lands

Sarah Connor, Southern Gulf, QLD

Sarah Rizvi, Northern Gulf, QLD

Executive Summary

Eleven interviews were conducted with planners from nine Natural Resources Management (NRM) groups across the Monsoonal North and Rangelands clusters to determine the influence of climate change knowledge on NRM planning. Knowledge needs of NRM planners concerning climate change was also explored as were barriers and opportunities to incorporating climate change knowledge into NRM planning.

Climate change was perceived as one of several major factors driving a shift in NRM planning involving greater need for evidence-based decision making, integration of socio-economic issues, and a need for planning at greater spatial and temporal scales. Climate variability, rather than climate change, was reported as major focus of NRM planning in most regions. NRM planners consider themselves best placed to address gaps between climate change science, community knowledge and on-ground action.

Climate change awareness was perceived as contributing to greater emphasis on resilience and adaptive capacity with respect to climate variability in NRM. Revised NRM plans will include some objectives and targets specifically related to climate change, e.g. identification and protection of refugia. Climate change awareness is also perceived as contributing to greater consideration of risk and vulnerability of assets. Revised plans are likely to include significant actions to help landholders cope with climate variability. Novel actions to address climate change (e.g. species translocations, land use change etc.), however, are not currently under consideration. The major way in which climate change is perceived as affecting NRM planning currently is through its influence on prioritisation of investments and overall decision-making, e.g. by influencing prioritization of research funding. Investments likely to have multiple benefits, including climate change adaptation, are prioritized, especially investments in conservation actions, e.g. protection of waterholes, targeted weed species.

NRM planners are mainly using broad-scale knowledge to determine key general messages about climate change for use in community engagement. NRM planners often mentioned 'information overload' with regards to climate projection knowledge. Knowledge concerning potential impacts and risks of climate change to relevant industries or assets was widely perceived as lacking. There was general consensus that local knowledge is also a legitimate source of information to inform adaptation planning in NRM.

Key knowledge needs identified by NRM planners included:

- Better quality local weather and climatic data, including stream flow
- Better climate change projections for coastal regions
- Clearer syntheses of multiple sources of climate change knowledge in formats suitable for stakeholder engagement
- Communication products with a community 'hook', e.g. with translation into relevant impacts
- Knowledge of past and current impacts of climate change
- Knowledge of socio-economic impacts
- Local and traditional knowledge and perspectives of climate change and its impacts

NRM planners are well placed to guide development of industry and community relevant climate knowledge.

1. Introduction

Considerable effort is currently being devoted in Australia to the development of climate data, and products based on this, to facilitate adaptation to climate change in the arena of natural resources management (NRM). The climate knowledge needs of NRM planners, however, tend to be poorly understood, even from the perspective of planners themselves, as the nature and scope of the problems with which they are engaged continue to emerge and evolve. At the crux of this issue, a situation arises in which climate knowledge providers ask of planners ' What do you need?' to which planners can be heard reciprocating with a 'You tell me!'. An understanding of climate knowledge needs of NRM planners for the purpose of adapting NRM plans to climate change is therefore a critical knowledge gap in itself that must be addressed before application-ready data products can be adequately designed and developed.

The current study, a component of a sub-project on climate knowledge synthesis under the Monsoonal North NRM climate change adaptation research programme, aims to address this knowledge gap for the Monsoonal North and neighboring Rangelands clusters. The study was designed to inform the selection and presentation of specific climate knowledge (i.e. climate change projection data) in a way that will be usable by NRM planners in these regions. More broadly, however, this research also sought to address the following general questions:

1. How does climate change knowledge influence NRM planning with respect to developing visions, setting objectives and targets, identifying actions and prioritising investment?

2. What kind of climate knowledge (i.e. temporal and spatial scale and resolution, media etc.) is needed to inform current planning in major NRM areas, e.g. weed management, riparian land management, vegetation restoration, asset protection, infrastructure management?

3. What are the main barriers to and opportunities for using climate change knowledge, including indigenous climate knowledge, in NRM planning?

This report presents a preliminary summary of the findings of interviews.

2. Research approach

Formal data collection for the research component of this project was conducted via telephone interviews. Participants initially comprised the official NRM planners within each of the Monsoonal North Cluster groups charged with updating NRM plans. This group was subsequently expanded to include planners within the Rangelands cluster. Participants were also asked to identify other staff or board members with major roles and responsibilities in developing NRM plans to participate where appropriate. Interview times were determined via phone calls and emails and took place from June to August 2014.

Semi-structured interviews were of approximately 1 hour duration. Participants were asked a mixture of closed and open-ended questions in relation to the overall research questions listed above (Appendix 1). Phone interviews were not taped. Instead, notes were recorded digitally during the interview directly onto survey sheets. Verbal consent was obtained and recorded for all participants based on approved Human Ethics Approval (Appendix 2).

Survey data was assessed with respect to emerging themes (for open-ended questions) or quantitatively where suitable. Qualitative data assessment was conducted to determine the characteristics of climate change knowledge currently used in NRM planning and to explore further climate knowledge needs.

3. Preliminary findings

A total of 11 interviews were conducted, accounting for all but one NRM planner within the Monsoonal North and Rangelands clusters. The majority of participants were in positions specifically associated with updating current NRM plans in relation to the climate change adaptation programme and had been in these positions for relatively short durations (i.e. < 2 years), although most had been involved in NRM more broadly for considerably longer. Additionally, most live (or had previously) in their regions for significant periods of time.

Most planners interviewed were involved at the time with ongoing community consultation and early to intermediate stages of updating NRM plans for their regions, with finalised or firm drafts expected to be in place in mid 2015. In a couple of cases, NRM plans had already been updated prior to the climate change adaptation programme's implementation. All participants agreed to being re-interviewed in 2015.

Climate change perceptions

The majority of participants had, or were currently in, a process of community consultation regarding climate change perceptions. Most reported a community awareness of high inter-annual variability (and unpredictability) in recent weather patterns rather than clear perceptions of trends associated with climate change, especially in relation to an apparent increase in the intensity of wet and dry periods. In all regions, however, perceived trends in the frequency and intensity of extreme events (e.g. fires, droughts, heat waves) were reported. Several participants also reported that communities have observed changes in fauna and flora commonly associated with climate change, e.g. phenological changes.

All of the participants stated that they expected major changes in weather and climate of their region over the next 20 years, although many thought these will likely be masked to local observers by inherent climate variability. While the potential for declining rainfall was an issue throughout, extreme events, including droughts, fires, floods heat waves, were the major concerns discussed, as well as sea level rise and tropical cyclones in northern coastal regions.

Eleven interviews were conducted with planners from:

- **NQ Dry Tropics**
- **Desert Channels QLD**
- **Western LLS, NSW**
- **Alinytjara Wilurara SA**
- **South Australian Arid Lands**
- **South West Queensland NRM**
- **Territory NRM**
- **Southern Gulf, QLD**
- **Northern Gulf, QLD**

Influence of climate knowledge on NRM planning

Broad awareness of climate change was perceived by a significant proportion of participants as having fundamentally altered NRM planning, both generally and in their regions. Overall, these changes include:

- a greater focus on coping with extreme events;
- a greater focus on building resilience, both of landscapes, industries and communities;
- greater consideration and integration of socio-economic concerns, e.g. sustainability of towns and human health;
- a need for planning at broader spatial scales (i.e. landscape and regional scales); and
- a longer time-frame for planning.

Some planners attributed these changes directly to the impacts of climate change awareness, although several suggested these had occurred somewhat superficially in relation to funding schemes and top-down directives. Others indicated that climate change was one of several factors driving an overall shift in approaches to NRM planning, e.g. increased pressure for evidence-based decision making. For a few participants, however, dealing with climate variability was stated as the long-term focus of NRM in their region and these planners did not recognise any significant shifts in planning style in relation to climate change knowledge at all.

Amongst the group of planners perceiving a change in NRM planning in relation to climate change knowledge (and other factors), there was a sense that NRM planners themselves were the main conduit via which climate change knowledge was having this influence both in planning and NRM more generally in their region. A common message was that NRM planners are amongst those best placed to reduce the gaps between scientific knowledge, community understanding and on-ground action through their role, although one participant emphasized the importance of consultants in this respect. The evolving role of NRM agencies as central bodies in remote communities, particularly with respect to extreme climate events, was also raised by several interviewees.

Climate change perceived as one of several major factors driving a shift in NRM planning involving greater need for evidence-based decision making, integration of socio-economic issues, need for planning at greater spatial and temporal scales.

Climate variability, rather than climate change, major focus of NRM planning in most regions.

NRM planners best placed to address gaps between climate change science, community knowledge and on-ground action.

Vision development

Consideration of climate change in past NRM plans was considered to be weak or non-existent with an emphasis on mitigation rather than adaptation strategies. While stages of vision development for revised NRM plans varied between regions of planners interviewed, the majority appear likely to give climate change adaptation greater prominence either as a major integrated theme, a specific priority to guide actions and investment or else as one of several key drivers or threats. Climate change awareness was also widely associated by participants with a shift towards adaptive management and greater consideration of climate variability, adaptive capacity and resilience building in the developing visions of revised NRM plans. Overall, however, participants thought visions for NRM in their region would be about accommodating climate change (i.e. 'taking it in our stride') rather than radical change. Only one participant discussed an acknowledgement within their region of a need for more radical change in attitude in behavior in response to challenges posed by climate change. Several planners did not think knowledge of climate change had or would influence visions for NRM in their region at all.

NRM Visions

Climate change awareness contributing to greater emphasis on resilience and adaptive capacity with respect to climate variability in NRM.

Setting objectives and targets

Past NRM plans of participants' regions mostly did not include objectives or targets directly related to climate change. Most revised plans, however, are likely to include broad objectives concerning adaptation to climate change or, at the very least, coping with climate variability. For a few revised plans, climate change adaptation is likely to be mentioned as an overarching strategy but not linked to specific objectives or targets. Other broad objectives or strategies set or proposed for revised plans are thought to reflect the influence of greater climate change awareness, e.g. those associated with a shift towards adaptive management.

Objectives and targets

Revised plans to include some objectives and targets specifically related to climate change, e.g. identification and protection of refugia.

Climate change awareness also contributing to greater consideration of risk and vulnerability of assets.

The process of setting more specific objectives and targets in revised NRM plans is also being influenced by climate change awareness. Specific objectives and targets relating to climate change may include particular research priorities (e.g. identification of refugia), identifying and capitalizing on new opportunities associated with carbon mitigation, or managing refugia and connectivity for biodiversity conservation. Climate change awareness was also widely perceived as driving a greater consideration of risk and vulnerability (e.g. of assets) in setting specific NRM objectives and targets, as well as increasing the time frames being contemplated. In one case, however, climate change knowledge is to be used to inform the setting of objectives and targets only where community knowledge is lacking.

Determining management actions

Participants all indicated that past and revised NRM plans include significant actions aimed at helping landholders cope with climate variability, e.g. pasture management approaches, forecasting etc.. Climate change awareness was perceived as mainly reframing existing actions with respect to risk, climate variability and current threats rather than resulting in the consideration of new management actions or interventions. Identifying and protecting refugia for biodiversity, for example, was widely raised as a major area of action for climate change adaptation in NRM. This was seen by interviewees as an existing management approach, however, that was made more important by climate change considerations. In general, participants agreed that any novel actions that might be proposed would be more likely to be related to conservation (e.g. assisted translocation) rather than agricultural practices (e.g. radical land use change).

Management actions

Revised plans to include significant actions to help landholders cope with climate variability.

Climate change awareness contributing to greater emphasis on risk in determining appropriate actions.

Novel actions to address climate change (e.g. species translocations, land use change etc.) not currently under consideration.

Some new actions relating to climate change mitigation and carbon offsets especially were raised as possible inclusions in revised plans. However, interviewees typically stressed that the range of actions proposed and applied tend to be closely related to funding schemes. A few planners discussed observations of some behavioural and attitudinal change occurring in their regions regarding NRM actions but indicated that climate change was only one of many drivers potentially shaping these shifts.

Investment, prioritization and decision-making

Most planners interviewed perceived climate change awareness as having a moderate influence on investment and decision-making processes in NRM in their regions, especially with respect to the prioritization of existing actions, e.g. funding of research projects. Prioritization of interventions with multiple benefits including potential climate change adaptation benefits (e.g. fire management strategies) emerged as a key way in which adaptation is likely to occur in NRM in the regions considered. Other major areas in which climate change awareness is influencing the prioritization of NRM investments included selection of refugial habitats for conservation actions (especially waterholes), weed species being targeted (i.e. emphasis on species likely to pose future threat under climate change) and identification of areas for carbon forestry. With respect to agricultural activities, an emphasis in investment on supporting recovery from extreme events, rather than in preparedness and resilience, was perceived despite prominence of themes of building and adaptive capacity in overarching NRM strategies.

Investment, prioritization and decision-making

Major way in which climate change influencing NRM planning, e.g. by influencing prioritization of research funding.

Investments likely to have multiple benefits, including climate change adaptation, are prioritized.

Climate change awareness influencing investment in conservation actions, e.g. protection of waterholes, targeted weed species.

An overall shift in the approach to NRM decision-making was also frequently raised by interviewees with climate change awareness recognised as one of a few major drivers of this change which is characterized by:

- greater flexibility and adaptability;
- increased landholder / stakeholder engagement;
- more evidence-based; and
- more considerate of representativeness of investment across stakeholders, areas etc.

A number of participants mentioned that climate change provided a useful lever to initiate or strengthen lobbying power with respect to funding or actions on other issues. In a few cases, climate change awareness was not considered by interviewees to have influenced NRM decision-making at all in their regions with short-term priorities still dominating.

Application of climate knowledge on NRM planning

All of the planners interviewed had accessed interim projections information provided by CSIRO and the Bureau of Meteorology via interim reports, roadshows and other meetings. Most had also accessed IPCC climate change information. In general, interviewees considered recent climate change knowledge provided to be an improvement on past information with clear and easy to interpret maps and text provided in NRM cluster interim reports. The availability of spatial analogues to describe projected climate change for particular locations was thought to be especially useful where available. Several participants expressed a preference for past products however (e.g. Qld climate change reports) because of their greater regional relevancy. Concerns raised about revised CSIRO / BoM projections, their presentation and their development included:

- lacking of regional specificity;
- high degree of uncertainty (difficult to communicate to community);
- technical complexity;
- a lack of committal language in reports;
- lacking consideration of feedbacks;
- poor alignment with on-ground observations (or a lack of explanations as to why this might be the case); and
- a lack of recognition about coarseness of regional data input.

Overall, planners were mainly using national and IPCC climate change knowledge to provide key general messages about trends (e.g. warming and more intense rainfall) for the purposes of stakeholder and community engagement. Most planners interviewed felt overwhelmed by the amount of climate change information (especially projections data) being provided and felt there was a case of 'information overload'. There was also a feeling that the knowledge being provided was very top-down and model heavy with little consideration of how it might be 'fit for purpose'.

Interviewees had all sought out more impacts based information, especially with regards to risks posed to particular industries or assets, e.g. pastoral industry, impacts on significant species, information on refugia distribution. Where available, other climate impacts knowledge was reported as being particularly useful (e.g. reports on social adaptive capacity, refugia reports, AdaptNRM information) although the timing of the provision of this knowledge had presented an issue in the process of revising NRM plans in numerous regions.

There was broad consensus amongst participants that climate models are not the only legitimate source of knowledge on climate change relevant to NRM planning. Most interviewees had also collected, or were in the process of collecting, significant local knowledge, including indigenous stories, regarding climate change observations.

Current use of climate change knowledge

NRM planners mainly using broad-scale knowledge to determine key general messages about climate change for use in community engagement.

NRM planners often mentioned 'information overload' with regards to climate projection knowledge.

Knowledge concerning potential impacts and risks of climate change to relevant industries or assets widely perceived as lacking.

General consensus that local knowledge is also a legitimate source of information to inform adaptation planning in NRM.

Desired climate change knowledge

Most planners interviewed perceived the provision of revised climate change projection information by CSIRO and the BoM to be adequate although the need for more regionally specific or downscaled data with local examples was frequently raised. A number of planners also stated a need for projections data on a shorter time scale (e.g. 20 years) than was currently available. Better quality (and with greater spatial resolution) weather data from more remote regions, e.g. the need for more stream gauging stations, was also widely desired amongst those interviewed. Climate change projections for coastal areas were also perceived to be lacking.

Presentation of climate change knowledge was widely perceived to be currently inadequate for community/stakeholder consultation and engagement. In particular, sources of information of relevance to NRM planning, e.g. clear syntheses of multiple sources of information, were noted as insufficient. A need for presentation formats that were appropriate for stakeholder engagement in remote areas with low literacy rates and high levels of cultural sensitivities was also stressed as was the need for science products relating to community concerns, i.e. having a local or community 'hook'. Translation of projections information into relevant forms was also raised as an information need, e.g. converting warming trends into projected impacts on number of fire days. Knowledge concerning existing impacts of past and ongoing climate change was identified as a further major knowledge gap as was a lack of consideration of socio-economic aspects in the impacts information available.

The greatest knowledge gap identified by interviewees concerned local and traditional knowledge of climate change and its impacts as well as stakeholder perspectives of climate change science. A need for oral histories about past climatic events (e.g. drought) and responses to these was also noted. A specific concern was that such knowledge is currently being lost at ever increasing rates.

Planners interviewed stressed that there was no 'one size fits all' product to communicate climate change information for their purposes. Consequently, a need for a wide range of information products in multiple formats was clearly perceived. Products suggested by NRM planners as ideal tools for engagement included scenarios and storylines, seasonal calendars and risk assessments especially.

A key message emerging from interviews was that NRM Planners themselves are in the best position to conduct the required 'moulding' of climate projections science into products of relevance to NRM stakeholders.

Climate change knowledge needs

Key needs identified by NRM planners included:

- **Better quality local weather and climatic data, including stream flow**
- **Better climate change projections for coastal regions**
- **Clearer syntheses of multiple sources of climate change knowledge in formats suitable for stakeholder engagement**
- **Communication products with a community 'hook', e.g. with translation into relevant impacts**
- **Knowledge of past and current impacts of climate change**
- **Knowledge of socio-economic impacts**
- **Local and traditional knowledge and perspectives of climate change and its impacts**

NRM planners are best placed to guide development of industry and community relevant climate knowledge.

Barriers to using climate change knowledge

Interviewees mentioned a range of barriers perceived as limiting the uptake or application of climate change science in NRM planning, including:

- high levels of variability and conflict amongst planners (and stakeholders and researchers) about information requirements;
- information overload and a lack of clear syntheses of relevance to NRM and regional communities;
- lack of capacity to translate climate science into on-ground actions;
- difficulty in implantation due to high uncertainty;
- climate change given a low priority in NRM bodies and communities;
- issues associated with stakeholder engagement, e.g. cultural suspicion, lack of education, distance, political and community skepticism;
- communication issues, e.g. balance between clear messages and acknowledging uncertainty, technical nature of information, potential to be scary;
- treatment of climate change as separate and discrete issue rather than being integrated with other issues;
- lack of confidence in some impacts products due to awareness of data limitations, e.g. species distribution mapping;
- limited capacity for long-term planning or broad-scale planning in more remote regions;
- lack of integration between service providers (e.g. health, housing, NRM) and across levels of government;
- lack of funding and resources;
- lack of sufficient recognition of limits of science, e.g. model limits;
- communities exhibiting engagement 'fatigue' and also having low morale and limited financial capacity following recent extreme events in many regions; and
- silo-ing of information need for regional science translators/synthesizers.

Opportunities for applying climate change knowledge

Potential opportunities for better incorporating climate change knowledge in NRM planning raised by interviewees included:

- general shift in approach to NRM planning, e.g. move towards ongoing, flexible and adaptive planning;
- move towards evidence-based decision making;
- potential to improve people's adaptive capacity and well-being;
- increasing need for practical applications;
- programmes that support increased engagement and integration with other planning processes;
- technological advancement, e.g. collaborative tools;
- climate change mitigation initiatives with adaptation links, e.g. fire management;
- specific regional research projects;
- inherent variability of Monsoonal North and Rangelands regions providing valuable source of traditional knowledge with respect to coping with climate variability and extremes;
- climate change may be catalyst for improved regional planning and collaboration within and between regions;
- international pressures to protect large intact landscapes of Australia's remote areas, e.g. free flowing rivers, intact savannah etc.; and
- increasing experience in adaptation over time.

Appendix A Interview questions

Monsoonal North NRM Planning: Climate Change Knowledge Needs

Interviewer: _____
Interviewee: _____
NRM Region: _____

(gender: M F)

Date: _____

INTERVIEWEE INFORMATION

1. What is your role within the NRM group ? _____
2. How long have you held this position? _____ years
3. How long have you lived in this region? _____ years
4. How long have you been involved with NRM? _____ years
5. What is the highest level of education you have obtained? _____
6. Male / Female (shouldn't need to ask this)

CLIMATE CHANGE PERCEPTIONS

7. Have you observed any long-term shifts in the weather and climate of your region?

If yes, please explain a little what you've observed:

_____

_____

_____

If yes, have these changes affected NRM in your region? If so, how?

_____

_____

_____

If yes, have these changes affected your role and approach to NRM in your region? If so, how?

8. Do you expect any major changes in the weather and climate of your region over the next 20 years?
Y / N

If yes, what sorts of likely changes are you most concerned about and why?

INFLUENCE OF CLIMATE KNOWLEDGE ON NRM PLANNING

9. Has climate change knowledge influenced the development of ***visions*** for NRM plans in your region?
Y / N

If yes, how and what kind of climate knowledge has been influential?

10. Has climate change knowledge influenced the identification of ***objectives and targets*** for NRM plans in your region? **Y / N**

If yes, how and what kind of climate knowledge has been influential?

11. Has climate change knowledge influenced the development of ***actions*** for NRM plans in your region?
Y / N

If yes, how and what kind of climate knowledge has been influential?

12. Has climate change knowledge influenced the prioritisation of ***investment*** for NRM plans in your region? **Y / N**

If yes, how and what kind of climate knowledge has been influential?

USE OF CLIMATE KNOWLEDGE

13. From where and how frequently do you obtain information about climate change for your region? How do you rate the usability and trustworthiness of the information provided by each source?

Include list of check boxes of key information sources with ranking for frequency of access, usability and trustworthiness.

14. What kinds of climate knowledge would you ideally like to have access to?

(e.g. climate variables, detail, format, media, temporal and spatial scale)

15. What do you perceive as the main barriers to incorporating climate change knowledge into NRM planning?

16. What do you perceive as the main opportunities for incorporating climate change knowledge into NRM planning?

INTERVIEW CLOSE

1. We would be delighted to circulate the results of our survey to you. We are also very keen to follow you into the future and see what you do, what your challenges are and what opportunities you find. Do you mind if we call you in another year or so? *Please confirm full name and contact details*_____

   _____

   _____

   Phone: _____

   Email: _____

2. Results of this study will be made available during the next 6 months. If you'd like to know more in the meantime, please feel free to contact the Project Leader (Samantha Capon)

THANK-YOU SO MUCH FOR YOUR HELP!

Appendix B Verbal consent form

Verbal consent process

Read a short overview of what the potential participants are being asked to consent to (e.g. from a list of dot points which covers the nature of their participation).

This project will identify, synthesize and deliver climate change science to NRM planners of Australia's monsoonal north. Whilst primarily concerned with climate data collation and communication, the project also requires research to determine the knowledge needs of NRM planners in this region with respect to climate data for adaptation planning. This information will be used to inform the selection and presentation of climate knowledge (e.g. climate change projection data) in a way that will be usable by NRM planners. The research findings will be reported in the project's final report and it will also be sought to publish these in the scientific literature if appropriate.

This research component will address the three main questions:

1. How does climate change knowledge influence NRM planning with respect to developing visions, setting objectives and targets, identifying actions and prioritising investment?
2. What kind of climate knowledge (i.e. temporal and spatial scale and resolution, media etc.) is needed to inform current planning in major NRM areas?
3. What are the main barriers to and opportunities for using climate change knowledge, including indigenous climate knowledge, in NRM planning?

By agreeing to participate, you will be confirming that:

- You understand what participation in this research entails;
- You have had any questions answered to your satisfaction;
- You understand that if you have any additional questions you can contact the research team;
- You understand that your participation is voluntary and that you are free to withdraw at any time, without explanation or penalty; and
- You understand that you can contact the Manager, Research Ethics, at Griffith University Human Research Ethics Committee on 3735 4375 (or research-

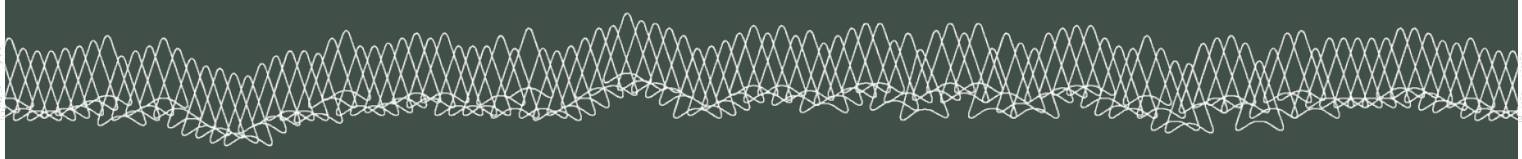
ethics@griffith.edu.au) if you have any concerns about the ethical conduct of the project.

Privacy Statement

By agreeing to participate, you will be confirming that:

- You understand that your identity will not be stated in direct association with any research findings in any reporting or publications that arise. However, due to the relatively small pool of participants and the identification of your organisational affiliation in research reporting and publication, your identify may be apparent.
- You agree to have your name listed in acknowledgements of any reports arising from this research.

"The conduct of this research involves the collection, access and/or use of your identified personal information. As outlined elsewhere in this information sheet, your identified personal information may appear in the publications/reports arising from this research. This is occurring with your consent. Any additional personal information collected is confidential and will not be disclosed to third parties without your consent, except to meet government, legal or other regulatory authority requirements. A de-identified copy of this data may be used for other research purposes. However, your anonymity will at all times be safeguarded, except where you have consented otherwise. For further information consult the University's Privacy Plan at http://www.griffith.edu.au/about-griffith/plans-publications/griffith-university-privacy-plan or telephone (07) 3735 4375."



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