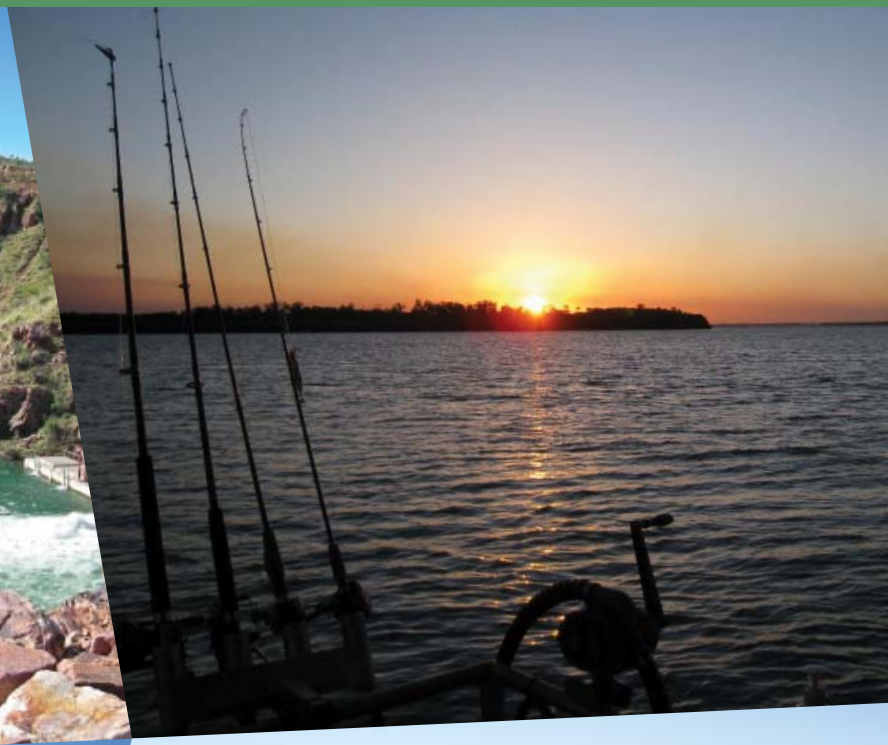
TRaCK
Tropical Rivers and Coastal Knowledge

Scenario Evaluation

Water Planning in Australia's Tropical North

Collaborative Water Planning: Summary Report February 2010



Griffith UNIVERSITY

CSIRO

TRaCK – *Research to support river and estuary management in Northern Australia*

TRaCK brings together leading tropical river researchers and managers from Charles Darwin University, Griffith University, University of Western Australia, CSIRO, James Cook University, Australian National University, Geoscience Australia, Environmental Research Institute of the Supervising Scientist, Australian Institute of Marine Science, North Australia Indigenous Land and Sea Management Alliance, and the Governments of Queensland, Northern Territory and Western Australia.

Cover photos (clockwise from top left):

Main Dam viewed from Lake Argyle, Ord region, WA; Archer River, Qld; Irrigation property on Flinders River, Qld; Janine Chevathun, Phyllis Yunkaporta, Dawn Koondumbin, Poh-Ling Tan near Aurukun, Qld.

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Water Planning in Australia's Tropical North

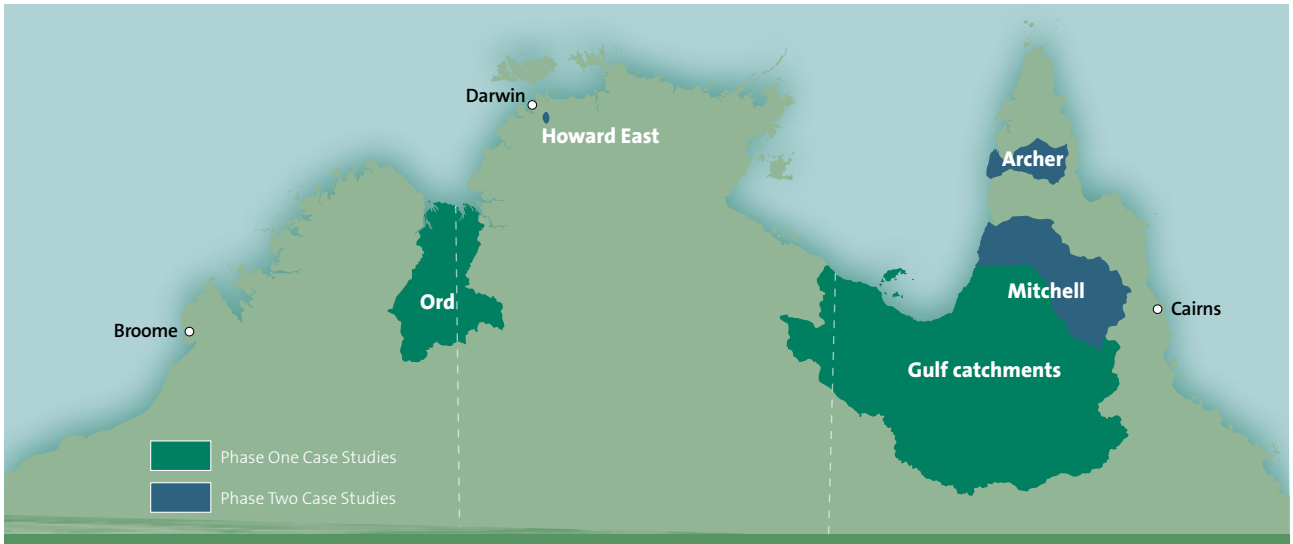
This is a summary of the key findings of the Collaborative Water Planning project. The aim of this project was to identify ways to improve community participation in water planning for Australia's tropical north.

In the first phase, the team worked with participants from government, industry and the wider community in case-studies in the Ord River in Western Australia, and the Gulf catchments of Queensland. Our earlier findings included results from a survey of water planners; a review of water planning literature, law and policy; and management of water disputes. From two case studies in the Ord, Western Australia and the Gulf catchments, Queensland, the project identified factors that provide barriers to collaboration and opportunities for collaboration. Findings from the initial phase of the project, which took place from June 2007 to July 2009, are located in a series of reports, details of which are found at the end of this brochure and on the Tropical Rivers and Coastal Knowledge website (**www.track.gov.au**).

During the second and final phase of our project, from August 2008 to November 2009, we primarily worked in the Howard East Groundwater system near Darwin in the Northern Territory and in catchments in Queensland's Cape York. This summary gives more details on the outcomes of those components of the project.

The project is one of many undertaken by Tropical Rivers and Coastal Knowledge research hub (TRaCK). Leading tropical river researchers and managers across Australia have come together to focus on the sustainability of rivers and catchments from Cape York to Broome. Northern Australia has the world's most significant concentration of river catchments that still retain their ecological integrity. The region also has a significant Indigenous population, expected within the next 30 years to comprise approximately 50 per cent of the total population in the north. Indigenous people have strong cultural connections with the rivers of Northern Australia and continue to actively manage many of the region's river catchments.

Increasing pressure to develop the catchments and water resources of Northern Australia necessitates comprehensive water planning processes that incorporate environmental, social, cultural and economic factors. In particular improved water planning for Northern Australia requires more effective Indigenous engagement in all aspects of the planning process, including the development of planning tools, the assessment of the water resources, and the processes of determining water requirements for environmental and cultural purposes.



Map of Project Trial Sites.

The aims and objectives of the project were to:

1. Identify barriers to and opportunities for industry, Indigenous and broader community participation.
2. Map industry, Indigenous, broader community and agency expectations of water planning processes, including the role of transparency in trade-offs.
3. Benchmark water planning tools and standards for engaging participants and incorporating values and transparent trade-offs in water planning.
4. Trial identified tools to determine suitability for a range of Australian circumstances, especially in regions where there are significant Indigenous interests.
5. Promote tools and develop a proposal for a training package for agencies, industries and community groups in the use of these tools to contribute to effective water planning processes.
6. Contribute to development of national guidelines for public participation in water planning, particularly in regard to Indigenous participation.

Each of these research objectives will be reported on below.

1. Barriers and Opportunities for Collaborative Community Participation

Evaluations of water planning processes in the Gulf of Carpentaria, Queensland, and the Ord region, Western Australia, provided the initial basis of identification of barriers and opportunities for collaboration. The word 'collaboration' is used to mean 'actively working together' and is often used interchangeably with the word 'participation'. Although there are many forms of participation – from information-provision through to delegation of decision making power – this project concentrates on the collaborative aspects of any form of participation. We studied two water allocation plans and the public participation elements of their development. The project team examined and engaged in situations where participants were not decision-makers but were involved in discussion and reasoning aimed at producing reasonable opinions that fed into the decision-making process. In these cases, their involvement can be best described as 'advisory' in nature, meaning that the decisions are ultimately made by the government, based on community input. We were able to draw from our analysis of research findings, elements that could help or hinder more active participation in the process.

The research identified the top ten barriers to collaborative water planning. These barriers are overcome by:

1. Achieving greater levels of community confidence in the adequacy and accuracy of the technical information used in planning.
2. Resolving or managing the presence of residual and unresolved tensions in the community.
3. Finding more appropriate forums for meaningful Indigenous participation.
4. Finding better ways to communicate science.
5. Reducing the perception that outcomes are pre-determined through improving transparency of decision-making.
6. Designing ways to increase administrative flexibility in the planning process.
7. Resolving the disjunct between agency planning requirements and community expectations and needs.
8. Reducing the high demands on regional water planners.
9. Building capacity and social learning to address the highly varied capacity and constraints among community panel members.
10. Finding ways to provide more opportunities for deliberation and negotiation among community panel members.

Factors that assist collaboration were identified as:

1. Clarity of process and terms of reference.
2. High motivation and commitment from community leaders.
3. High sense of identity and place amongst participants.
4. Multi-agency representation.
5. Shared vision for the region amongst the majority of panel members.
6. Regional staff commitment and support.
7. Opportunities for review of technical information.
8. Active pursuit of broad community representation by agencies.
9. Community support for planning and water reform.

A full explanation of the barriers and factors assisting collaboration in each case study is found in Mackenzie's report on the Gulf case (2008) and Ayre's report on the Ord case (2008).

2. Mapping Expectations

The second objective of the research project was to identify the expectations held by stakeholders involved in water planning, including those of industry, Indigenous, broader community and agency contributors, in terms of public involvement, planning processes and water allocation outcomes. Prior research has demonstrated that, in some instances, the expectations of communities, industries and Indigenous peoples have not matched those of water planners, or executive levels of government. This research represents the first focussed effort to understand the perspectives and expectations of a broad group of interested people. We were particularly interested in whether perceptions and expectations matched the expanded role for community input specified in the National Water Initiative.

As a summary of our attempts to clarify these expectations, Table 1 below presents the different perspectives identified through the course of this project:

Expectations for Water Planning	Industry	Indigenous	Community	Agency
Role of Community				
All interests in the region and its water resources should be considered.	✓	✓	✓	✓
The diversity of the region, and the particular nature of each river, should be given due consideration in the process.	✓	✓	✓	✓
Community contributions should supplement the science where necessary.		✓	✓	
Community participants should promote wider community involvement in the development of the plan.			✓	✓
A panel of community participants or an advisory group should be provided with appropriate resources to fulfil their role in the process.		✓	✓	
Water plans should reflect the contributions made during the planning process, and not override them.	✓	✓	✓	
The issues raised in the context of the community meetings should be afforded due consideration and feedback should be provided on those issues by agency staff.	✓	✓	✓	
Water plans need to achieve a science-based balance between competing uses.	✓		✓	✓

Water Planning Process				
All contributions, whether from the community panel or obtained through the submissions, should be valued and respected by the agency.			✓	✓
Water planning decisions need to display and maintain transparency and fairness through an open, accountable decision-making process.	✓	✓	✓	✓
Water plans should be based on appropriate technical information and defensible research.	✓	✓	✓	✓
Local (including Indigenous) knowledge which may not be available to the technical assessors should be recognised and afforded parity with scientific findings.	✓	✓	✓	✓
Cultural values, including Indigenous, non-Indigenous, and recreational, should be recognised and embedded in the process.		✓	✓	✓
Water plans require the informed consent of all Traditional Owners in the area prior to their statutory enactment.		✓		
Timeframes for the water planning process should be streamlined to limit disruption to regional development and investment.	✓			
All information relating to water use and management should be made available to community stakeholders as part of the water planning process, and remain available after a decision has been reached.	✓	✓	✓	✓
Water Planning Outcomes				
Native title, cultural heritage and Traditional Owner custodial interests must be recognised and upheld through water plans.		✓		✓
Enhanced protection of the rights of existing water users should be achieved.	✓		✓	✓
Water plans should support community aspirations for regional development and long-term social improvement.	✓	✓	✓	
Plans should provide sufficient certainty about water allocations to support development and future regional investment.	✓		✓	✓
The process should be flexible enough to accommodate potential changes to the region during the planning process and the ten-year duration of the plan.	✓		✓	✓
Plans should endeavour to establish tradeable entitlements wherever possible.	✓	✓	✓	✓

Table 1: Summary of Water Planning Expectations.

Understanding the expectations of all stakeholders involved in water planning is central to designing tools and processes to improve the ways in which they are engaged in the process. In some instances, these expectations can conflict, and will need to be considered and clarified through community input. For example:

- There is general agreement that all interests in the region and its water resources be treated as legitimate contributors, but it remains to be clarified whether engagement should focus on the broad community, or on targeted representative stakeholders. Groups and individuals recognised the need for the diversity of interests to be included. Particular note was made of existing water users both within the region and downstream, ensuring industry is well represented, and that any community panel or advisory group has a balance between representatives of consumptive and non-consumptive values.

- Although agencies and industry demonstrated expectations that water plans should ensure protection for existing water users, this was not necessarily voiced by participants from the broader community. Continuing to prioritise existing use allocations was seen by a number of respondents as limiting the scope of planning activities.
- Especially in the Northern Australian context, many participants expressed the view that the water resource plan and the planning process should contribute to meeting the region's development aspirations as set out in existing regional plans. There was an expectation that a considered alignment of this nature would ensure that water allocation supported community-defined goals. For a number of participants, this was both an incentive and a condition of their participation and commitment to the process. Agencies, however, have consistently positioned water planning as a separate process that should correspond with, but not provide a platform for, regional economic development.
- There is widespread agreement that communities need to be involved in decisions by government regarding water use and management and to have scientific evidence and other inputs clearly explained to them. There was also an expectation that community input would form part of the final planning outcomes. However, there may be instances where community input is contradictory, or does not meet the agencies water planning objectives for resource security and sustainability. Resolution in such cases can only be achieved through transparent and accountable decision-making processes.
- Indigenous community members expect to have their native title, heritage and custodial interests in land and water recognised and upheld as part of the planning process. They also expresed an expectation that any decisions which might impact on their rights and interests in water use and management be formally negotiated. A requirement for informed consent prior to the commencement of planning was consistently expressed by Indigenous stakeholders, but not by other respondents.
- All contributions, including those of the advisory groups or those obtained through submissions, should be valued and respected by the agency, and be taken seriously in the development of the plan. Participants wanted to ensure that their contribution was not merely 'token', and wanted to be sure that it would not be used to justify or validate decisions made previously by senior government staff. However, it was acknowledged by some that not all contributions should be considered on equal terms, and that this highlighted the need for both agency discretion and transparency in determining the relative value of contributions.
- Although participating stakeholders generally expected plans to be science-based, using appropriate technical information and defensible research, there was a widely held expectation that the community contribution would be used to supplement the science. Participants wanted recognition that they had access to local, including Indigenous, knowledge which may not be available to the technical assessors, and expected that their own information would be afforded parity with the findings of the science. Limits to the use of the community as a source of technical review and scientific scrutiny were acknowledged.
- While most agency respondents expected that participants in community panels were there to facilitate wider community involvement in the development of the plan, community representatives challenged the practicality of this expectation. Panel members recognised the wider implications of water planning for stakeholders not present or represented by groups sitting in the panel. Thus they expected that their role would not only be advisory, but could also serve to facilitate wider community involvement. However, appropriate resources for this task including the demanding role of facilitating and co-ordinating community feedback and input into the plan, needed to be provided.

3. Developing Collaborative Planning Tools

The literature, policy and case study reviews conducted in the first phase of the project, and workshops with planners, confirmed the need to further develop and

use collaborative methods for water planning in key areas, including:

- clear processes and standards for community engagement, particularly for participants in a community panel/group to understand the role, timing and purpose of their involvement;
- communication strategies and techniques to address the specific information requirements of diverse constituencies, including science communication;
- capacity-building tools to increase community understanding of water planning, and the ability to contribute meaningfully to the conduct of planning processes;
- training and professional development for agency staff and scientific consultants to encourage community collaboration in planning and research;
- Indigenous community engagement strategies for identifying the implications of water plans for cultural heritage, values and practice and the economic development opportunities provided by water planning;
- data, knowledge and information systems with the capability to handle input from technical, local, traditional and Indigenous sources; and
- decision-support systems that are open to scrutiny and demonstrate to interested parties how final decisions were reached.

A suite of effective water planning tools and standards to meet these needs and to align with the expectations of planners and stakeholders was identified and tested, then customised for application in Northern Australia through two case studies carried out in phase two. Throughout the tool development and case-study stages, the focus was on collaborative planning methods which better engage participants, provide a means to incorporate values, and allow for transparent trade-offs in water planning.

A list of 15 planning tools, many of which had been used for purposes other than water planning, was developed. Literature on the use of these tools for planning was examined, including case study reports, to assist in their customisation for the specific requirements of water planning in Northern Australia. Based on this review, a means of selecting the appropriate tool was developed, with a 'fit-for-purpose' framework to provide water planners with guidance in tool selection. This framework is currently under development as an online, open-source database called the Water Planning Portal. This is designed to make available a range of products from this project to water planners across Australia. A screenshot of the Portal prototype developed for this project is below.

Screenshot of the Water Planning Portal

Collaborative planning tools identified and reviewed in this process included:

1. Deliberative Multi-criteria Evaluation (DMCE): a decision-making support tool used to make a comparative assessment across alternative water planning scenarios based on community preferences. Using DCME with a community panel similar to a citizen's jury, a range of diverse criteria can be taken into account simultaneously to evaluate the range of options in a complex situation. Decision-makers are able to integrate the different options in a way that gives weight to the opinions of affected stakeholders, as the community and the decision-makers work together to identify options, criteria and preferences. The process can provide either a clear ranking of alternatives, or provide recommendations to decision-makers for a pathway to resolving trade-off decisions.
2. Participatory Geographical Information Systems (PGIS): a range of computer-based systems that are developed with community input to assist in collection, storage, manipulation and presentation of data. Provided the information can be geographically referenced, it can include any form of data – hydrological, ecological, demographic, cultural or economic – and allows it to be represented visually and analysed through the use of maps or diagrams. Community members provide input into the model, and are ideally involved in its design and dissemination. The tool produces a software application that can be used by decision-makers and community alike, to help in deliberation, information exchange and science communication. Once built, the system can support a range of interactive functions, from face-to-face communication, to web-based applications, to establishing a record of the catchment's geography.
3. Joint Fact-finding: a technique which is commonly adopted in consensus building and conflict resolution to build common ground between parties to a dispute over facts. A 'fact-finding team' includes experts, decision-makers, and community representatives from all sides of a contested issue. The team conducts a research inquiry to establish agreement on scientific, technical or historical claims in dispute, through developing and reviewing information, analysing expert advice, and deliberating the assumptions and opinions of all the different participants. Joint fact-finding builds trust and confidence in the quality of information that is being used to inform planning decisions, and seeks to resolve conflicts over information and science as part of building consensus between stakeholders.

Although not all of the tools identified were able to be trialled and evaluated in this project, a range of collaborative tools and processes were trialled, promoted and evaluated in two case study regions: the Howard East in the Northern Territory, and Western Cape York in Queensland.

4. Trial of Planning Tools

4.1. Trial of Planning Tools in Howard East, Northern Territory

Over the course of fifteen months (2008-09), the project trialled, promoted and evaluated two planning tools: a stakeholder analysis and a participatory groundwater visualisation tool. The team worked closely with representatives from local stakeholder groups, members of the broader community and staff from the Water Resource Management Branch of the Department of Natural Resources, Environment, the Arts and Sport (NRETAS) and independent experts from the Queensland University of Technology.

Map of the Howard East area.

Howard East's groundwater supply is under growing pressure from the demands of urban, industrial and horticultural development. In a 'business as usual' scenario, it is likely that rural residents with older, shallow bores in the upper aquifer will run out of water earlier, in years of low rainfall. Competition for water is slowly becoming a contentious issue and has prompted NRETAS to prioritise the aquifer for water allocation planning. The work conducted through this project aimed to support this process and find locally appropriate ways to engage stakeholders within the planning process and overcome public misconceptions.

Tool 1 Stakeholder analysis

A stakeholder analysis identifies, accounts for and builds understanding of the parties with a 'stake' in a particular problem or resource. Considering the lack of resource planning experience in the Howard East area, this was considered to be an important first step in this case. The stakeholder analysis sought to identify relevant Howard East community needs, issues and attitudes towards water planning, as well as barriers to engagement in the planning process.

Data from 37 interviews with stakeholders including horticulturalists, Indigenous representatives, fishers, local businesses, local councillors and landcare groups was tested in community and stakeholder meetings, and two specific 'needs' were prioritised. These were: a widespread lack of understanding of groundwater systems and/or planning frameworks; and a lack of trust in the science underpinning decision-making and government driven management of the Howard East aquifer. Identifying these priorities led to the proposal for a participatory groundwater visualisation tool to assist the community to 'see' and understand changes in groundwater levels over time and season, and to answer questions based on their interests in and concerns about the system.

Bore driller, Henry Van Tilburg and Mal Cox, QUT Hydrogeologist in initial survey of Howard East.

Tool 2 Participatory groundwater visualisation tool

The project team considered that building an understanding of the groundwater systems within the Howard East community was essential before stakeholders would be able to capably discuss or build consensus around key water issues which included concerns over the sustainability of future supply. A research collaboration was formed with Associate Professor Mal Cox and Amy Hawke from Queensland University of Technology (QUT) to develop a groundwater visualisation tool (GVT) of the Howard East aquifer to help the community understand what was happening to groundwater levels over time and seasons. The tool allowed a participatory approach, encouraging different stakeholders to work together to pool knowledge and resources around a common goal.

Consultation with key stakeholders in the Howard East area.

Gerry Wood, MLA Member for Nelson addressing public meeting in Howard East.

The GVT is a subset of a Participatory Geographical Information System mentioned earlier and developed using a software package produced by QUT. This tool was produced with the financial assistance of NRETAS and Power and Water Corporation.

Surveys and a focus group evaluated the Groundwater Visualisation Tool against the objectives. The first objective of the GVT was to improve the understanding of groundwater systems among stakeholders and the broader community. Stakeholders determined that the GVT was a useful tool for creating a space for agency staff and stakeholders to come together and discuss groundwater management. This sentiment was put forward by one Northern Territory Horticultural Association (NTHA) representative:

"I think that the greatest value is the visualisation – a picture tells a thousand words. You can talk to people/owners who have little concept of the system if you can show them or run them through a tool like this... I mean it's a great tool for drillers, or any horticulturalist thinking of developing"

Similar statements were made by government engineers.

"Yes, this model will help people want to engage with water planning. We all have a very centric view of our immediate surrounds. Very few have a holistic view of what is going on over the full scale and what impacts what and how integrated it all is."

Groundwater Visualisation Tool progress

% of model complete	0%	30%	50%	70%	100%
Activity	• Research collaboration discussed and agreement drafted • Shared objectives and work plan agreed • Data sharing and transfers begin • Community engagement strategy agreed • Staff assigned	• Initial community meeting • Bore surveys • Project website • Project posters displayed around community • Model discussed on local radio • NRETAS meetings, field trips	• Participatory bore mapping exercises with bore drillers • Local experts and hydrogeologists consulted individually to 'ground truth' models early interpretations of local geology • Project newsletters to growing mailing list	• Half day workshops to show model to stakeholders and agency staff • Feedback sought to finalise key features of the model to make it as user friendly as possible	• Final community meeting held showcasing the model • Local radio show featuring researchers and modellers • Final project report disseminated to stakeholders, agency staff and project team • Half day workshop teaching people to use model in "Training of the Trainers approach" • Publications

Steps in the development in the GVT.

"It's a great tool from a Power and Water perspective. I will be able to show the engineers at work how the system works and be able to have a conversation with colleagues from different areas."

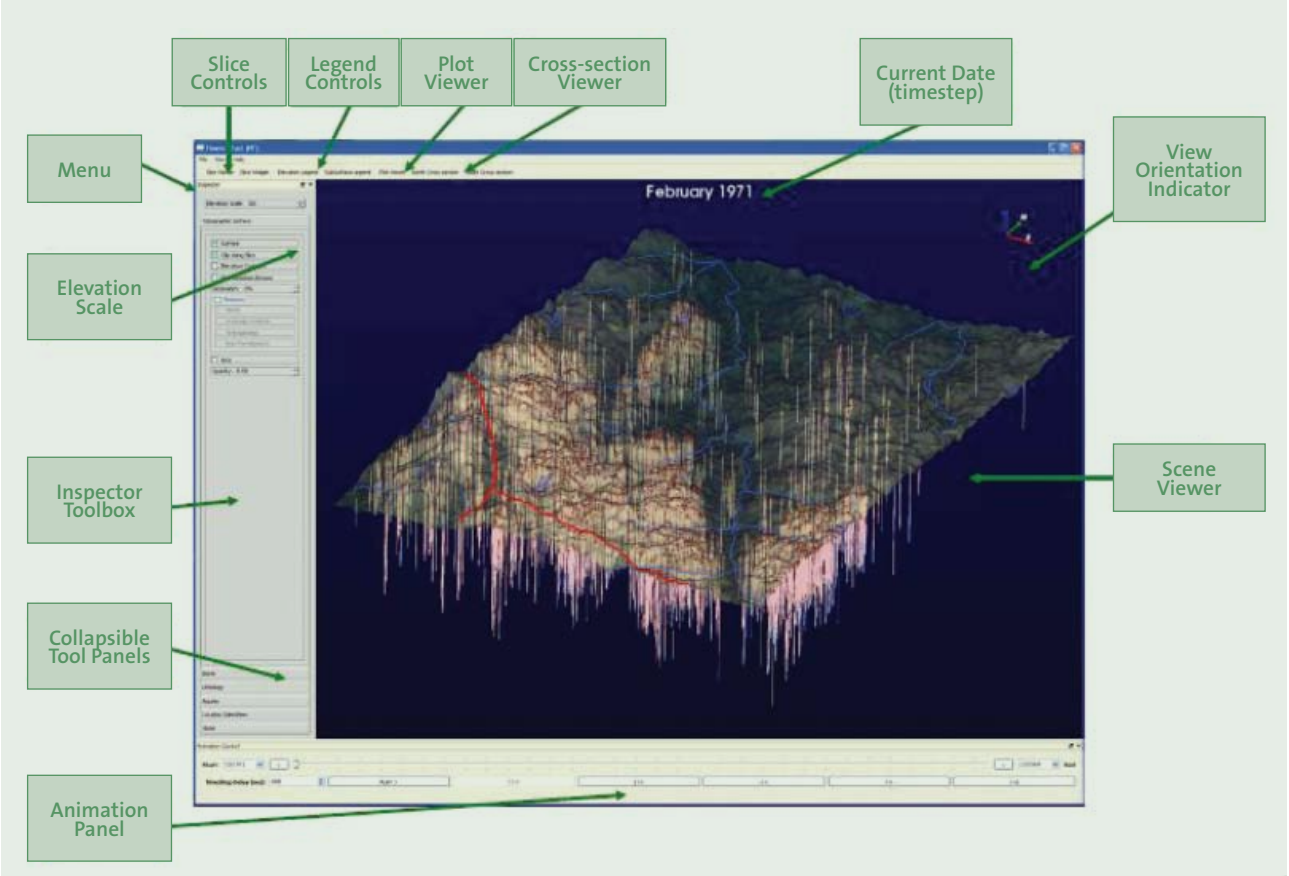
Others referred to the fact that it gave people a holistic, more regional perspective of the system:

"It's going to give a holistic view to people who should think – my bore is going to have an impact into the flows into Howard Springs. That could be why we have bacteria issues there and they have closed it for swimming."

Feedback established that the main strength of the GVT is the participants' strong sense of ownership and acceptance of the final product. The focus group relayed that they were more likely to use the GVT because they trusted the sources of information upon which it was based, and had been involved in its development. Additional strengths were: its ability to be cheaply and quickly downloaded and installed onto desk-top computers; that users could examine the GVT in their own time, at their own pace, with the guidance of an operational manual; and lastly, users appreciated the interactive capacity of the GVT, which was able to be checked by a range of users from different interest groups and was thus able to answer a number of questions about local groundwater resources.

4.2. Working with Indigenous Communities in Western Cape York, Queensland

The research team also worked with two recently formed Traditional Owner groups in the Archer and Mitchell River catchments in Western Cape York in Queensland to further develop principles and protocols for improving Indigenous engagement in water planning. Researchers conducted interviews, site visits and workshops with the fifteen Traditional Owners from Aurukun Waterways, Wetlands and Coastal Advisory Committee, and with twenty Traditional Owners from the Mitchell River Traditional Custodians Advisory



Screenshot of Groundwater Visualisation Model of Howard East.

Group, with the aim of jointly developing engagement protocols to ensure decisions about future water use and allocation respect and follow customary decision-making practices, are consistent with the values and aspirations of the local communities.

Both the Mitchell and Archer Catchments had recently been the subject of water plans which established, for the first time in Northern Australia, a specific and strategic reserve of water to assist Indigenous communities in the region to achieve their social and economic aspirations. However, the Queensland Department of Environment and Resource Management (DERM) did not have a policy or agreed process for determining how the water in that reserve would be made available to the Indigenous communities or how to assess if a license application would meet local aspirations. The research conducted through this project aimed to support the development of an appropriate process for the Queensland Department of Environment and Resource Management, in collaboration with the Indigenous communities in these catchments, to determine what amount of water is required to meet the social and economic aspirations of the relevant Indigenous communities, and develop an acceptable process for making that water available.

Deliberations with the Traditional Owners in the Mitchell and Aurukun catchments were facilitated through the consideration of a number of potential negotiation frameworks, and a best practice guide for

James Whelan consulting with Janine Chevathun in the Archer catchment.

Indigenous engagement in water planning produced by team member Sue Jackson from CSIRO. Although this guide was based on a substantial body of research in Indigenous water management over the past ten years, it had not been considered or endorsed by the communities of Cape York. Through the workshops, the research team in conjunction with local stakeholders was able to refine the guide for its application to a water allocation process which was catchment-specific and locally relevant The process also served to generate awareness and move towards endorsement of the guide and its engagement principles with Indigenous communities in the Archer and Mitchell Basins. The analysis and consideration of the guide and the negotiation frameworks also helped to identify values and preferences for achieving agreement between the stakeholders on protocols for the governance of Indigenous water reserves.

By documenting and analysing the values and preferences of the Indigenous groups consulted, the TRaCK researchers developed recommendations for policy guidelines on allocation decisions regarding Indigenous water reserves that may apply to other areas of the Cape, and Northern Australia generally, where Indigenous water reserves are made available. These recommendations are based on a negotiation framework which:

- Places Indigenous communities in a position to make informed decisions about future water use and management;
- Ensures a strong negotiation position for those communities to maximise the financial and other benefits of the water reserve;
- Maximises ownership and control of the decision-making process in the hands of the Indigenous communities in the region; and
- Establishes sufficient flexibility to ensure that Traditional Owners are appropriately recognised and able to initiate and advance planning objectives beyond responding to those of government agencies.

These recommendations for a collaborative approach also seek to strengthen the network of groups and organisations which are able to provide ongoing

policy advice on Indigenous water issues from a range of viewpoints, at national, regional and local levels. Additionally, the Traditional Owner catchment advisory groups examined are among the early examples of Indigenous groups which had been formed across a whole catchment by the Traditional Owners themselves. The importance of this emergent approach to engagement and management of the river systems of Northern Australia according to traditional and custodial arrangements is nationally recognised. As such, the interviews and workshops with these groups also sought to distil lessons and the resource requirements for the establishment of such groups. This information is to be published separately to support Indigenous communities in other catchments considering the formation of similar groups, and to assist agencies to better understand the importance and value of these organisations for facilitating Indigenous input into water management.

5. Training Package

A proposal for a training package for agencies, industries and community groups in best-practice water planning processes has been developed to further extend the project's legacy. The proposal is based on the findings from the research and is based on identified gaps, priorities and agency barriers through research listed above. The proposed training package will increase water planners' skills and capacity in three particular areas:

- Community and stakeholder consultation and engagement;
- Indigenous issues in water management; and
- Adaptive management and reporting/monitoring frameworks.

The proposal includes a broad program curriculum outline capable of being used to source funding or potential hosts for development into a fully-fledged training program. The training proposal (Whelan et al) has been sent to prospective providers, and to date the two providers have responded. One of these, the International Water Centre, confirms that it will be utilising this project's reports in a new course on integrated water planning.

6. Guidelines for Collaborative Water Planning

In addition to tool development and trials, a key project aim was to contribute to development of national guidelines for public participation in water planning, particularly in regard to Indigenous participation. Four guidelines were developed by the project.

6.1. Legal and Policy Recommendations for Reform

An analysis of laws and policies in Northern Territory, Queensland and Western Australia (with New South Wales providing a 'southern' benchmark) was written for communities to understand the main objectives of national water reform and the legal and policy framework implementing that reform in Northern Australia.

Proposals for change were made in a TRaCK report (Tan 2008) and these were reviewed at the stakeholders' workshop and a public meeting in October 2009 in Darwin. Comments were received, and stakeholders added a proposal calling for adequate government funding for collaborative processes in water planning. Some of these proposals are already in place in some jurisdictions however not all are available in all jurisdictions.

The recommendations are:

- All jurisdictions should develop policy guidelines that (a) provide for sustainable use (b) define and provide for adaptive management strategies (c) utilise appropriate collaborative and deliberative mechanisms in water planning. Where legislation does not already provide for a statement of objectives that refers to sustainable use of water, this should be rectified.
- Documents used in planning including any technical assessments should be made available and remain available on government websites for full accountability.
- To ensure water is managed in an adaptive manner, policy documents need to specifically provide for mechanisms to monitor the implementation of plans against the expected results so strategies can be reviewed in the next cycle of planning.

- Principles for stakeholder engagement should be jointly developed by Australian governments and all parties to national water reform.
- There should be a statutory requirement that water planning is informed by best available scientific (socio-economic, ecological and bio-physical) data.
- Policy guidelines should set out how each assessment is to be implemented, the minimum standards of information required, and what new information is required to address knowledge gaps.
- Guidelines should state context-specific standards for socio-economic assessment in terms of reference, format and community review, and require predictions of outcomes arising from alternative water sharing arrangements.[1] These assessments should incorporate Indigenous issues and provide assistance for communities to understand potential outcomes arising from alternative water sharing arrangements.
- Stakeholders and Indigenous communities should have input early in the information gathering and issue setting stage, and this input should be incorporated into assessments.
- A report from the decision maker showing how the decision was reached should be provided within a defined period (say 30 days) of the decision. This report should show how the decision addresses ecological and socio-economic assessments and values identified by the community during the planning process.
- A public report by water agencies should specify how recommendations of bio-physical and ecological reports have been incorporated into the environmental flow objectives of a water plan, and how monitoring required by the plan is to be carried out.[2]

1 Some participants advise that lack of resources for planning mean that this cannot be made a statutory requirement.

2 Once again participants pointed to the lack of resourcing for monitoring activities.

One of the small groups considering legal and policy recommendations, Stakeholders' Workshop, Darwin 12-13 October 2009.

- Performance indicators should be provided for outcomes in water plans. A full statement of how the environmental and resource objectives are intended to be met in a plan should be made available at the same time as a final plan. This should be publicly available and performance should be reported.
- Governments in collaboration with relevant organisations and Indigenous communities should develop and implement principles and protocols for Indigenous engagement in water planning including monitoring performance against policy objectives.
- Policy should be developed by states and territories based on federally-developed guidelines to consider how access to water and cultural rights by Indigenous communities can be protected. This extends to a review of how cultural water requirements are accommodated, and commercial access supported.
- Where conflict resolution mechanisms have been adopted in water planning processes, clear guidelines should be made publicly available to notify what the mechanisms are meant to achieve and how they operate.
- All jurisdictions will benefit, at the very outset, from designing a planning system for managing conflict rather than avoiding or ignoring its existence. Access to independent conflict resolution expertise should be provided.

- Noting the general deficiency in resourcing collaborative efforts in water planning in comparison to funds available for infrastructure building and water buy-backs in the Murray-Darling Basin, governments should provide adequate resourcing for collaboration in water planning.

6.2. Principles for Collaborative Planning

Principles for stakeholder engagement were developed and reviewed in our project workshop in October 2009 in Darwin. The principles advocated by the project recognise that good collaborative water planning processes:

- Are context-dependent. No two water planning processes are alike. Catchments, communities that live in them, the climatic regimes to which they are subject, and the rivers themselves, are different in many ways. Water planning processes reflects these differences.
- Actively involve those who are likely to be most affected by the process.
- Are well-informed. The scientific and socio-economic research, and local community information on which the plan is based is the best available.
- Are respectful of values of individuals and groups involved, their way of life, interests, knowledge of water and its management, educational background, time availability, and acknowledge the likelihood of plan outcomes on them.
- Have opportunities for people to learn from each other and the agency responsible for leading the water planning process. This includes opportunities to discuss, debate, and deliberate with each other and the government agency involved on all matters relevant to the outcomes of the plan.
- Are well facilitated. They acknowledge power differences between those involved and seek to redress these differences so that the voices of all involved may be clearly heard. The water planning process is designed to anticipate conflict in a way that allows opportunities for participants to express their points of view and recognise areas of similarity and difference and the values that each holds that give rise to these.
- Recognise that consensus is not always possible and allow ample opportunities for those involved to express opinions that dissent from the views of the majority.
- Exhibit transparent decision making. All parties involved know who will make decisions affecting the outcomes of the water plan, the basis on which these decisions will be made, and can see the extent to which their input has been valued in arriving at these decisions.
- Are adequately resourced in terms of time, skilled staff, and funds.
- Have opportunities for people to seek review of the planning process where it fails to achieve any of the points raised above.

6.3. Good Practice Guide of Indigenous Involvement

During the lifetime of the project, the "Good practice guide to Indigenous participation in water planning" was produced by Jackson (2009) at the request of the National Water Commission. During the TRaCK project, focus groups and discussions with Aboriginal communities generated feedback to further develop the Guide's principles and detailed advice on Indigenous engagement. The Guide was introduced to and 'workshopped' with members of the Aurukun Waterways, Wetlands and Coastal Advisory Committee, and circulated for the consideration of the Mitchell River Traditional Custodians Advisory Group. It was also endorsed by the Indigenous Water Policy Group (IWPG).

This Guide is intended to assist Indigenous communities to participate in water planning and meet their water requirements. It describes some of the opportunities and challenges facing Indigenous people interested in participating in water planning and provides examples of situations where Indigenous groups have engaged with water planners and other water users.

The Guide presents eleven principles for good practice in water planning for Indigenous engagement, access and management of decisions around water sharing and allocation. Each of these principles provides an opportunity for improving the quality of community involvement in managing our waters, and for improving the way we make decisions about our water resource futures. The principles expanded in the Guide are summarised as:

1. Water planning should improve the capacity of water planners and the wider community to see the water resource from everyone's perspective. A greater general awareness of Indigenous concepts of 'country', the nature and extent of Indigenous interests in water, and their relationship to other Indigenous values is needed by water planners and the wider community.
2. Indigenous people should be involved throughout all stages of the water planning cycle and in water policy debates. Indigenous people are entitled to be involved in assessing the water resource, setting objectives, deciding on water sharing arrangements and monitoring the outcomes from water plans. Planners should be encouraged to engage appropriately with Traditional Owner groups as well as resident Indigenous groups.

Travelling on the Ward River, Qld.

Phyllis Yunkaporta, Deputy Mayor, Aurukun Shire Council with John Mackenzie.

3. Water planning processes need to build capacity for Indigenous representatives to fulfil this difficult role in culturally respectful ways. Water planners should work collaboratively with Indigenous community groups and organisations to establish appropriate terms of engagement which allow Indigenous communities to express their rights and create relationships based on inclusion and collaboration.
4. Planning needs to be based on the recognition that Indigenous people have diverse interests in water. Indigenous interests in management and use include not only cultural values and heritage, but also interests in commercial opportunities for developing enterprises, environmental management and water monitoring.
5. The impacts of water resource development on Indigenous heritage should be properly considered. Water plans should adhere to the established procedures for heritage impact assessment and for the protection of Indigenous heritage values when making decisions about water sharing.
6. Indigenous people should be included in environmental flow assessment, in selecting criteria for determining environmental flows and in ongoing environmental water management. Governments should implement reforms to ensure the allocation of water for the environment also considers cultural water requirements, which would include water of sufficient quantity and quality to improve the social, economic and environmental condition of Indigenous nations.

7. Indigenous water use requirements need to be determined for each water plan as a matter of priority. Priority should be given to determining how much water is necessary to meet cultural practices, customary management activities and livelihood needs of Indigenous communities dependant upon those water resources.
8. More attention needs to be given to the effect of water-use decisions on native title rights and interests. Transparent, robust and equitable mechanisms should be developed for making consistent decisions on the allocation and use of water for native title holders.
9. Indigenous access to water should be improved through a range of statutory and policy mechanisms. For example, attempts have been made in several jurisdictions to provide an Indigenous share of water from the consumptive pool for the cultural, social and economic benefit of Indigenous people. Statutory mechanisms enhance the recognition and protection of Indigenous rights in water, but need to be promoted and supported through additional engagement measures for successful implementation.
10. Equity issues should be considered in water allocation decisions. Water planning should take into account the long-term future aspirations of Indigenous people to ensure the accessibility and availability of water to meet Indigenous peoples' needs.
11. Water plan objectives should be monitored and evaluated. There are many benefits from improving Indigenous access and participation in water planning and management, but these need to be consistently measured and evaluated.

6.4. Guideline for Monitoring and Evaluating Public Participation

As a means to evaluate the quality of public participation initiatives in water planning, the research team also devised and tested a series of monitoring and evaluation tools. These tools have been compiled as a Guideline for Monitoring and Evaluating Public Participation in Water Planning, a how-to guide that provides an overview and a suite of tools designed to help water planners assess their strategies and techniques for enabling public participation in local water planning (Mackenzie et al 2009). Using the framework that is based on a review of national and international approaches, we have developed and trialled a suite of evaluative tools that have been piloted in case studies of water planning.

The Guide is intended to assist water planners and community stakeholders jointly monitor and evaluate a community engagement process, measure its progress against a set of shared objectives and make adjustments that improve the overall outcomes from the engagement. The Guide draws on the participatory monitoring and evaluation (or PM&E) approach. With PM&E, researchers, agencies and the community participate as co-evaluators where negotiation and deliberation is used to generate agreement on what should be measured, and how (Tan et al 2008). The use of PM&E is now widespread. The challenge faced by planners is to adapt these to water planning processes, particularly for assessing plans which must manage trade-off decisions and deal with risk and uncertainty. This guide aims to help planners meet this challenge, and develop a framework for evaluation based on adaptive management principles.

The suite of tools contained in the guide includes:

- A checklist and scorecard for developing a monitoring and evaluation plan;
- Handouts to assist in PM&E workshops or focus groups, which provide accessible explanations of the objectives, process and methods for evaluating public participation;
- An agenda guide for conducting workshops to develop measurable indicators for monitoring and evaluation;
- Sample performance indicators and a stakeholder analysis profile;
- Pre-planning, review and evaluative questionnaires and surveys for adaptation to provide ongoing monitoring information;

- A running sheet for conducting evaluation focus groups with a variety of stakeholder participants; and
- Two synthesis templates to assist in reporting the findings for the evaluation process.

7. Reviewing Project Findings and Recommendations

Throughout the project, the research team sought to promote collaborative planning tools and approaches through a range of communication and engagement activities. The findings from the project have been submitted for consideration in the development of a number of national initiatives related to water planning, including the National Water Commission's Biennial Review, the Northern Australian Land and Water Resource Assessment and the Northern Australian taskforce.

Marceil Lawrence, Indigenous Water Facilitator for the Mitchell River Catchment addressing Public Meeting.

Participant discussion and question time at Public Meeting.

As part of the communication of our findings and recommendations, a public meeting was held in Darwin on 12th October 2009 to offer members of the community, stakeholders and researchers an opportunity to discuss project findings and the legal and policy changes that will be recommended to governments. This was a successful meeting with over sixty people attending and a vigorous Question and Answer session. One participant said:

"Great turn out at public meeting. There may have been some confusion about this project and how it relates to specific planning in Darwin, but otherwise good to see high level of interest and awareness created by this project."

Project findings and recommendations were also subject to a robust review with 20 participants from water agencies, stakeholder groups and Traditional Owners in case-study areas at a workshop held at the Charles Darwin University in October 2009. From the evaluations of that workshop, approximately 70 per cent of the participants thought that the workshop had achieved its objectives. It seems that most people could see the benefits of researchers talking with locals about the whole process of water planning, and how this would help researchers in forming their final recommendations.

Participants said this of the workshop:

"It is good for NGOs to contribute and recognise limitations faced by planners. Great opportunity for planners to understand the needs of other groups and differences between jurisdictional processes."

"It is a credit to the project that they/you have conducted this process to improve the worth and value of the project and its outputs."

Participants had this to say about the project:

"Supportive of many of the recommendations but concerned about capacity to implement."

"Some aspects easily and usefully applied (eg monitoring tools). Portal also has good potential."

"Very applicable as we start to develop long term strategies for the Darwin region."

"As a manager I will be encouraging use of these tools and guidelines and taking an active interest in the level of uptake and acceptance both by planners and the community."

Sharna Nolan, reporting on Howard East trial of tools at Public Meeting, Darwin.

Ian Lancaster, Director, Water Management NRETAS at Question Time, Public Meeting, Darwin.

Project team

James Whelan, John Mackenzie, Sue Jackson, Sharna Nolan and Poh-Ling Tan.

TRaCK team: James Whelan, John Mackenzie, Sue Jackson, Sharna Nolan and Poh-Ling Tan.

Project Reports

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These reports are available for download online from the TRaCK website at:

www.track.gov.au or **www.waterplanning.org.au/track**

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For more general information about TRaCK

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