

# Sustainable Water Forums

## Notes

**Darwin Convention Centre  
2 September 2009**



The Australian Government's Northern Australia Land and Water Taskforce is looking at opportunities for sustainable development in northern Australia.

The Sustainable Water Forum in Darwin was hosted by Taskforce members Ms Elaine Gardiner and Dr Stuart Blanch.

Taskforce members provided an overview of the Taskforce's role, its history and Terms of Reference. Small group discussions were then facilitated for agriculture, industry and conservation sectors, focusing on the Taskforce's Terms of Reference. The forums concluded with a general discussion and final comments from the Taskforce members.

The Taskforce presents its final report to the Australian Government at the end of 2009.

The information and the issues identified by participants of Sustainable Water Forums are provided here as notes from the discussions.

## **Sustainable Water Forum 2 September 2009, Darwin Convention Centre**

### **Attendees**

Kate Andrews  
Terry Bowring  
Melanie Bradley  
Hannah Brodie-Hall  
Peter Care  
Matt Darcey  
David George  
Chris Makepeace  
Kate Peake  
John Pudney  
Tony Scherer  
Paul Sparke

Taskforce Members: Ms Elaine Gardiner and Dr Stuart Blanch  
Taskforce Secretariat: Barbara Wheeler and Lauren Kitscha

### **Breakout Session Notes**

#### **Agriculture**

##### *New Opportunities for Development – Based on Sustainable Consumptive and Non-Consumptive Water Use*

- Significant blocks of land, infrastructure, and labour force to be considered for development
- A fully integrated approach is required that includes social, economic and biophysical (environmental) factors
- Investment should proceed on a commercial basis
- A broadening of the definition of agriculture should be considered (eg bush foods from wild harvest, enrichment planting, plantations) in order to produce multiple outcomes
- Flexibility of scale and applicability (is needed to respond to opportunities)
- There is capacity to value add to agriculture and integrate agriculture with other industries eg tourism
- Consider small agricultural industries to sustain small communities and consider the possibility for reciprocal trading
- Economic viability, employment and health are priorities
- Build a resilient system eg having a surplus, adaptive management, applying the precautionary principle and engaging and utilising regional knowledge
- One size does not fill all in the North: good science is needed to underpin decision making and due diligence is required on proposals
- Continuous investment in science
- Higher order or best use of water

## **Agriculture (continued)**

### *Potential Impacts of New Development*

- Investment needed in understanding longer term drivers, emerging issues and possible impacts on northern Australia eg scenario planning
- Longer term outlook is required – 100 years
- Maximise social benefits for Indigenous communities and minimise negative impacts
- Biosecurity of our water system is required to avoid contamination eg didymo in NZ (*Didymosphenia geminata*)

### *Governance and Institutional Arrangements for Effective Management of Water*

- Knowledge management and education and training extension
- Establishment of a northern based CRC for sustainable land management in the wet/dry tropics
- Community agreed position to NRM use/plan
- Whole of Govt approach; One Stop Shop for planning and management
- Water allocation planning process for Ti Tree/Tindall aquifer so that people are engaged and have security
- Governance across the North needs
  - To be community driven – a voice for the north
  - To utilise local regional knowledge
  - Cross border collaboration and planning
  - A regional (northern Australia) approach eg Council of Northern Australia with resources to function effectively with decision making and recommendation powers
- Carbon should be integrated with water decision making
- Food security

## **Industry**

### *General Discussion*

- There is a perception in the south of an abundance of water in the north that is at odds with the long 'dry' that exists for most of the year.
- There is an NT/Darwin culture of water use that is wasteful. It is based on the residents' perception that Darwin is a wet place

### *New Opportunities for Development – Based on Sustainable Consumptive and Non-Consumptive Water Use*

- Most aquifers are fully allocated and new opportunities need to focus on rainfall/floodwaters but there are numerous considerations:
  - how can this water be captured?
  - what are the infrastructure requirements?
  - where are the water sources and what distance to consumers?
  - how can economies of scale be achieved?
- The short wet season and location of surface water is not optimal for development
- Industries with low water use will do well. There is a current push for mangoes, peanuts, soybean and cotton that are not the best use of the available water
- Small scale industries can develop in niche opportunities

## **Industry - New Opportunities (continued)**

- Capture of water is limited to the short wet season and storage options are limited by geography
- Water efficiencies could be easily achieved and would delay construction of a new dam (Warrai Dam) to serve the Darwin area. The transfer of costs of new infrastructure to users, energy requirements and carbon footprint of the project need to be considered. Darwin should be looking at water efficiencies before it decides to build a new dam
- Uranium power generation is an option in NT
- Biofuel crops such as candle nuts and African Mahogany are options
- The ADF, gas and resources mining drive growth in the NT

## *Potential Impacts of New Development*

- Environmental flows need to be estimated on good science so that changes to river ecology do not adversely impact on fish stocks. Recreational fishing is a big contributor to the NT economy eg 1.4 million visitor nights in a two year period
- If there is continued population increase and external industry investments in NT, the construction of a new dam for Darwin will be essential
- Expansion of the Ord will require drainage down the Keep River in NT

## *Governance and Institutional Arrangements for Effective Management of Water*

- An improved regulatory framework, based on good science to underpin informed decisions is needed in the NT
- More funding by the NT government for regulatory enforcement of water use
- There is an urgent need to legislate/regulate to enforce water efficiency
- Pass on the true cost of water to users

## **Conservation**

### *New Opportunities for Development – Based on Sustainable Consumptive and Non-Consumptive Water Use*

- 'User pays' principle applied to resource use and internalisation of external environmental impacts
- Conditions applied to pastoral leases don't guarantee sustainable land management – need to look at this system using case studies and examine why it hasn't worked
- Primary objective seems to be to exploit resources in the north to meet the needs of southern interests
- Develop the north in accordance with our own population and its needs
- Huge opportunities for tourism and recreational activities – passive, nature-based, B&Bs and resorts on pastoral stations but this is difficult given the current regulation of pastoral land
- Establishment of an 'environmental protection' fund: Funds from companies seeking to offset the environmental impacts of high-value economic development go to high priority, heavily impacted areas based on scientific evidence. Contributions would provide financial support for the conservation economy (ranger jobs, sustainable land and water management).

### **Conservation - New Opportunities (continued)**

- Carbon economy eg sequestration utilising native ecosystems, fire management, REDD
- There are hydro and tidal power opportunities in the north
- Precautionary Principle: adaptive process for allocating water, recognising knowledge levels are imperfect but over time more information will come to light
- We still need more information to assist with sustainable water allocation decision in the Daly River
- Political decisions are not being made towards protection of the environment eg it will be difficult to reduce water allocations
- Katherine Water Advisory Committee advised of development of fairly robust water allocation plan, allowing for water allocations to change in response to different seasonal conditions. Annual entitlements will be adjusted. Taskforce should review this system to see if it is robust enough and has the right rules in place. Monitoring of compliance is potentially difficult
- People all around Australia value cultural flows and Indigenous access to water resources for example the cultural requirement (surrogate flow measure) to maintain Katherine Springs
- Basing allocations on the Precautionary Principle (PP) means there is still the risk that unsustainable land development could still take place. Cannot simply apply the PP to water extraction but must also consider the sustainability of other resources
- Proposed developments need to show they are appropriate given the reliability of water allocation eg Katherine
- The risks associated with adaptive management need to be considered
- Scientific based principles for water allocation, recognising that difficulties arise when determining acceptable impacts and quantifying cultural flows etc. There is limited data currently available for surrogate measures

### *Potential Impacts of New Development*

- Need to consider links with the Territory government's EIA Review
- How long could the north really sustain an intensive development model? What would we lose in the process? What huge impacts would we have to deal with in the future?
- We'll see another Murray-Darling if we follow the lead of our politicians
- Development is about 1) sustainability of the system and 2) the practicality of development. These are two different discussions that should not be mixed together
- Microclimate considerations are important ie the links between land clearing and regional rainfall patterns have been shown in southern Australia
- Potential in recharge/run off evapotranspiration with land development need to be considered

### *Governance and Institutional Arrangements for Effective Management of Water*

- Historically there has been a lack of access for Indigenous communities. TRaCK is developing recommendations for how this can be improved
- Katherine planning process: approval process for changing crop type

### **Conservation Governance and Institutional Arrangements (continued)**

- Landuse and crop planning on a catchment basis
- Bond system/restoration program associated with water and land allocations as a lease agreement between landholders and government. This is not a substitute for establishment of a sound initial planning framework. Need to be mindful of ecological thresholds. These could be crossed and land condition and water quality may not be recoverable
- Any potential polluter/extractor needs to be contributing to resource condition monitoring and mitigation of potential impacts
- Government needs to educate northern and southern Australians that it is not realistic to have high level water extraction in northern Australia
- Quantities of water available for development are limited, by environmental and physical constraints, and this information needs to be presented to the public
- Need to appreciate and acknowledge the seasonal changes (Wet and Dry) and promote this as part of our identity, especially for urban water conservation
- User pays system including licensing of all resource users
- Water is not priced at its real value. Current price structure is for storage and transmission:
  - We are proposing a price for carbon, so can we propose a similar price for water?
  - Water pricing can be difficult in urban areas if people are catching rainwater off roofs etc
  - Can we price water to protect its values, based on the value of environmental impacts?
- The precautionary principle indicates only medium scale development in the north
- Hierarchy of priorities for what we grow based on food production and water use requirements
- Be very prescriptive with development that is allowed eg low water use crops, high value crops and essential food crops. The Ord is not just about 'food bowl' vision and we should preference development of water and land for food rather than sandalwood etc.
- Manage in 'bite sized' pieces so specific management objectives can actually be met (eg Katherine/Tindall scale) and be based on the level of risk and density of development
- Water/land use and allocation are national issues and so decisions should be made at a national level based on advice from each jurisdiction
- There needs to be a two-tier system with different caps placed on land clearing/water extraction based on ecosystem value and sensitivity and development opportunities
- Need to decide whether same sustainability principles apply to Indigenous landowners. If so, education and awareness raising may be needed, but not as critical as in high-pressure catchments
- Consistent NRM principles across the north needed to support transboundary governance and management
- Cross-border planning that allows for extensive public consultation and participation early in the process and has the ability to affect the outcomes, not just provide comment on the outcome

## General Comments

Forum participants acknowledged the diversity of viewpoints expressed during the discussions. The low number of attendees at the Darwin forum also made it problematic for those attending to represent sectors.

There was general agreement on the directions for sustainable development, however consensus on the priorities to achieve it could not be reached.

There was agreement on the need for a cooperative governance arrangement for northern Australia. Comments included:

- One size does not fit all in the north
- A voice for the north is needed
- Resources are needed for communicating, collaborating, consulting and engaging stakeholders and local and regional knowledge management
- A cooperative model that includes communities and governments but does not add an additional layer of bureaucracy
- Increased regulatory compliance
- Strategic futures planning
- Pool resources for priority actions (jurisdictions)
- Agreement making between governments
- Recognise stakeholder capacity to participate ie communities and governments are stretched and need resources
- Basis of government engagement is to enhance conformity with the NWI, with a separate agenda for northern Australia
- Public participation early in a process is desired. People want to effect change, not just comment on it.



**Taskforce Members Dr Stuart Blanch and Elaine Gardiner with Darwin forum participants**

## **Priority Statements**

The potential for large scale agriculture development in the NT could not be agreed by participants.

Opportunities for sustainable development sit within a complex context that needs focused and collaborative research, information and evidence for decision making and integrated delivery.

To achieve sustainable development in northern Australia proactive, integrated planning and implementation that works across government agencies is required. The system should be required to have multiple outcomes.

Governance in Northern Australian needs a cooperative approach with principles for development applied consistently across jurisdictions.

Recognising the true cost of water and knowledge management are key issues.