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Welcome

Welcome to the 4th edition of NAIFNEWS.

Compared to southern Australia, there are relatively few individuals and organizations addressing environmental, water and irrigation issues in the north, providing an opportunity to work together that may not be possible elsewhere. The various sectors, including industry, researchers, governments and non-government organisations are seizing this opportunity and collaborating with a key goal in mind: “everyone wants to do better in the north”.

Doing better in northern Australia doesn't mean simply looking at irrigation in other areas and copying what worked there and avoiding what didn't. Although learning from such experiences will be important, a key to achieving ecologically sustainable development in northern Australia will be our capacity to view the north through a 'northern lens' and to implement approaches that make sense for the north.

We need to understand how and why northern catchments function the way the do,



and recognise that the northern water resources are already being used. They are being used to maintain ecosystems, the social and cultural values associated with those ecosystems and, of course, economic activities including irrigation, fishing and tourism. It is the uniqueness of northern ecosystems that underpins northern Australia's iconic status, and it is this status that so many people are interested in maintaining.

In this edition of NAIFNEWS we feature recent NAIF activities working with key individuals and organisations to help build collaboration and the capacity to view northern Australia through a northern lens.

Keith Bristow – Project Leader

New Steering Committee Chair to strategically guide NAIF project

The ANCID Conference in Darwin provided the perfect opportunity to bring the NAIF Steering Committee (SC) together for a face-to-face meeting on 18 October 2006. This meeting, also attended by members of the NAIF project team, provided a valuable opportunity for in depth discussion, interaction and information exchange.

Mr Ian Lancaster, Director of Water Management with the Northern Territory Department of Natural Resources, Environment and the Arts, was elected as the new Chair of the NAIF SC.



**New Steering Committee
Chair, Mr Ian Lancaster**

"I am enthusiastic about the NAIF project and excited by its strategic, long-term focus" Mr Lancaster said. "The NAIF project is important to the future of northern Australia and has the potential to make a major contribution in the roll out of water plans, a high priority in the implementation of the National Water Initiative."

"We are pleased Mr Lancaster is taking on the role of Chair," said NAIF Project Leader Dr Keith Bristow. "He is well known and widely respected in his role as Director of the Water Management Branch of the Northern Territory Department of Natural Resources, Environment and The Arts."

Dr Bristow also paid tribute to outgoing NAIF Steering Committee Chair Mr Greg Claydon, from the Queensland Department of Natural Resources and Water, for his leadership as Chair over the last few years. Mr Claydon has relinquished his position as NAIF SC Chair to focus on new responsibilities with the Queensland Government. Mr Claydon said that he has been impressed with the collaborative approach being taken through the NAIF project and he wishes the project well as it continues the challenging work for the sustainability framework.

Further information on the NAIF SC is available at <http://www.clw.csiro.au/naif/steering.html>

NAIF features at Riversymposium 2006

Riversymposium is a major international event held annually in Brisbane. This year's theme *Managing rivers with climate change and expanding populations* attracted more than 550 delegates from 49 countries.

Members of the NAIF project team initiated a feature session at Riversymposium on the *Northern Rivers of Australia*, which was sponsored by Land and Water Australia.

During the session, NAIF Sustainability Specialist, Jeff Camkin, spoke about the NAIF project, the benefits of close collaboration across northern Australia and the opportunity and necessity of developing long term visions for northern Australia. Brendan Edgar outlined Land and Water Australia's commitments to the Tropical Rivers Program.



Bart Kellett presenting at Riversymposium The session also featured NAIF / CRC IF PhD researcher Bart Kellett, who presented on his research into irrigation planning for social-ecological resilience and opportunities for northern Australian communities, while Larisa Cordner from the Wilderness Society outlined the strengths and weaknesses of Queensland's Wild Rivers legislation. Dr Michael Douglas spoke about the Tropical Rivers and Coastal Knowledge (TRACK) initiative, which has recently received substantial funding for focussed research in northern Australia, and Dr Stuart Blanch from WWF in Darwin presented his visions for Australia's tropical rivers.

A highlight of the session was a presentation by Dr Henrique Chaves, lecturer in water resource management at the University of Brasilia, Brazil, on a watershed sustainability index he has developed and applied to several river basins in latin America. Dr Chaves' visit to Australia was hosted by NAIF Sustainability Specialist Jeff Camkin with support from Riversymposium, CRC for Irrigation Futures, CSIRO and others.



Professor Henrique Chaves

Elsewhere in the Riversymposium program, NAIF project team member Cuan Petheram spoke about his research into the links between climate and the hydrology of northern Australia.

The presentations triggered interesting debate about the future of northern Australia, continuing on from discussions in 2005 when "a decade of knowledge generation for northern Australia" was proposed. A common theme running through the 2006 presentations and debate was that we not only need a decade of knowledge generation but a decade of collaboration and capacity building, across all sectors, to develop the ability to see and manage northern Australia through a 'northern lens'. This will be critical to taking the opportunity that exists to achieve social, economic and ecologically sustainable outcomes in the north.

NAIF involvement in Riversymposium was greatly appreciated by Dr Selina Ward, Riversymposium Program Convenor. *"Northern Australia is of special interest, not only to Australians but also to our visiting delegates from many countries"* said Dr Ward. *"The vision and help from the NAIF team in bringing together the northern rivers feature session was greatly appreciated and I look forward to working together again in the future"*.

ANCID 2006 – The Catchment Community Working Together

The Australian National Committee on Irrigation and Drainage (ANCID) has a strong focus on promoting the transfer of R&D outcomes, and its annual conference is a major event on the national water and irrigation calendar. The NAIF project was prominent at ANCID 2006 in Darwin on 15 to 17 October.

With water issues currently high on the national agenda, participation at the ANCID Conference by members of the NAIF steering committee (SC), stakeholder reference group (SRG) and project team was timely and valuable.

Project Leader Dr Keith Bristow updated the National Program for Sustainable Irrigation (NPSI) investors' forum on the NAIF project with four posters highlighting the research activities and findings to date giving added prominence.

Project team members Cuan Petheram, Freeman Cook and Jeff Camkin presented in the conference session "Irrigation in Northern Australia" on the topics of irrigation system analysis, irrigation mosaics and development of a sustainability framework, respectively. Later in that same session, NAIF SRG members Robert Boshammer and Dan Halloran gave presentations on furrow irrigation and production & efficiency. Dr Wayne Meyer, Chief Scientist for the CRC for Irrigation Futures and NAIF Steering Committee (SC) member, also presented on multi-purpose water use productivity.



Sustainability Specialist, Jeff Camkin presents at ANCID



Keith Bristow, NAIF Project Leader, presenting at the ANCID Conference

Murray Chapman, NPSI coordinator and NAIF SC member, chaired the National Water Initiative feature session on the second morning and NAIF SC Chair Ian Lancaster and SC member Fiona Bartlett were part of the expert discussion panel. NAIF research on the link between irrigation and groundwater was presented by Keith Bristow, followed by NAIF & CRC IF PhD Student Bart Kellett's presentation on learnings from past irrigation and water management experiences. Robert Boshammer gave his second presentation at the conference, this time on factors affecting new irrigation developments.

Other members of the NAIF SC, SRG and project team participated in the discussions and debate generated by the presentations throughout the 2 day conference. Andrew Kelly, NAIF SC member, hosted the post conference tour to Kununurra.

"The contribution from many CRC for Irrigation Futures researchers in the ANCID conference and the annual NPSI Investors Forum, held in association with the conference each year, is greatly appreciated" said Mr Steven Mills, ANCID Chairman. "The participation, contribution to debate and media attention received by the NAIF Project certainly affirmed the value of the project in researching the information, tools and processes required to support decision making on irrigation in northern Australia".

Developing the NAIF sustainability framework

The Australian Government has defined ecologically sustainable development as “Using, conserving and enhancing the community’s resources so that ecological processes, on which life depends, are maintained, and the quality of life, now and in the future, can be increased” (National Strategy for Ecologically Sustainable Development, 1997).

A feature of the NAIF project is development of a Sustainability Framework to help ensure that any irrigation in northern Australia is managed in an ecologically sustainable manner.

A conceptual sustainability framework has been developed through research into decision-making, understanding of complex social-ecological system and emerging tools and on-line technology available to support understanding and the resolution of complex management systems. The conceptual framework (Figure 1) can be applied at the catchment and sub-catchment scale to improve decisions about irrigation in northern Australia.

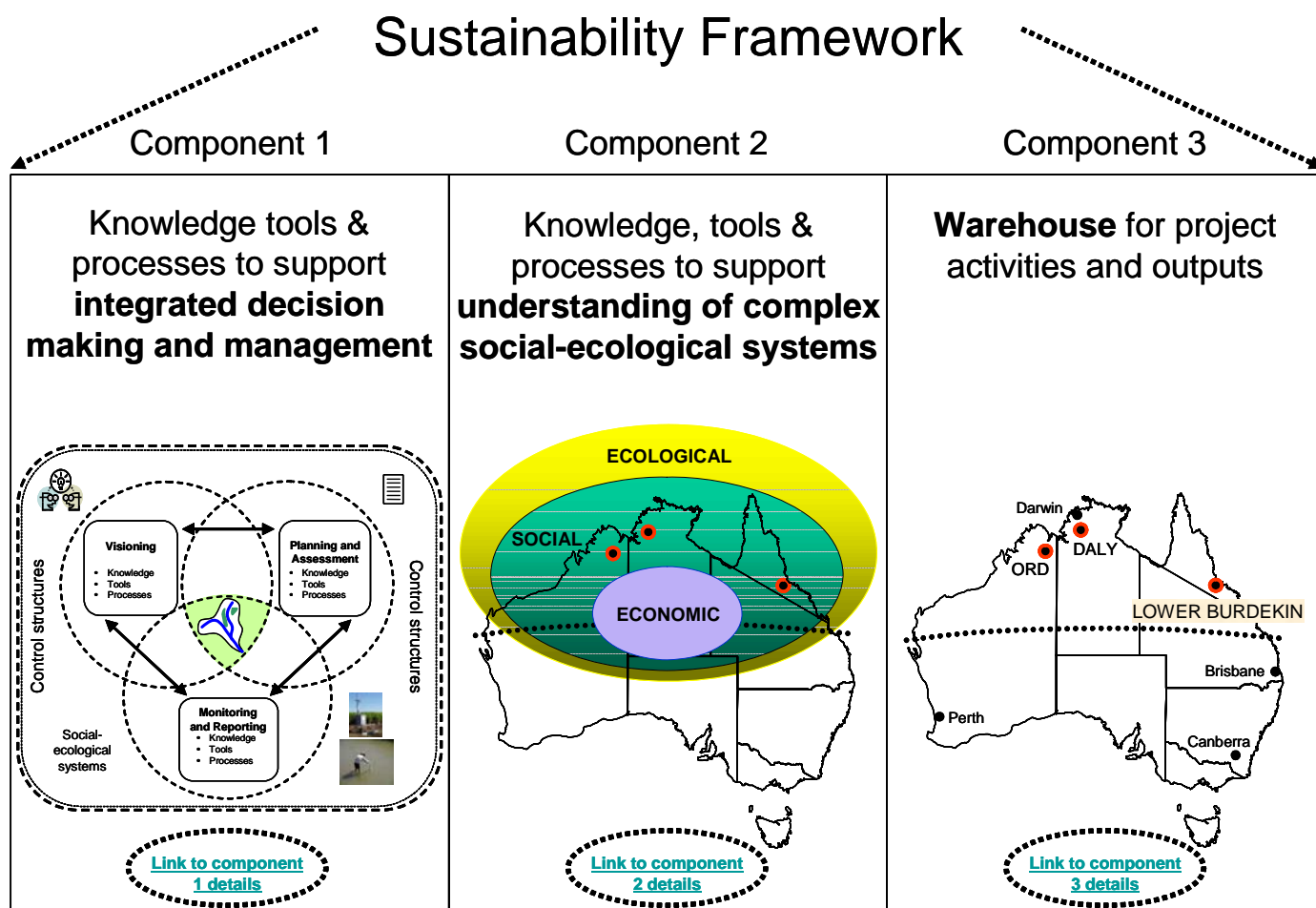


Figure 1 NAIF conceptual sustainability framework

The emerging framework will improve access and utilization of new and existing knowledge, tools and processes relevant to decisions about irrigation in northern Australia. The framework consists of three linked components:

- Component 1 is the generation, compilation and synthesis of new and existing knowledge, tools and processes to support integrated decision-making and management
- Component 2 is the generation, compilation and synthesis of new and existing knowledge, tools and processes to support understanding of the complex social ecological systems (catchments) that irrigation takes place or could take place within
- Component 3 is a record of relevant activities through NAIF and other programs and projects, including published reports, presentations etc.



It is expected that the framework will:

- Support governments and stakeholders in developing long term visions
- Assist the development of catchment and sub-catchment knowledge platforms
- Aid understanding of stakeholder views
- Improve debate and transparency of decision-making regarding irrigation and water resources
- Improve water resources planning and management
- Support targeted and coordinated research.

The concepts underpinning the framework are supported by the NAIF Steering Committee and further research is now focussing on development and testing of a prototype to determine the benefits it would provide to governments and catchment communities charged with the responsibility of making decisions about irrigation.

For further information contact Jeff Camkin at Jeff.Camkin@csiro.au

Stakeholder Reference Group provide valuable input into NAIF

The NAIF Stakeholder Reference Group (SRG) was formed in 2005 to help ensure the project remains 'grounded' and aware of stakeholder interests.

Members of the group who had traveled to Darwin for the ANCID Conference were able to meet face to face for the first time with other SRG members, and members of the NAIF Steering Committee (SC) and project team.



SRG & SC members meet in Darwin

A joint SC and SRG meeting was held on 18 October where members discussed progress on the NAIF project, SRG member views on significant past, present and future issues relating to irrigation in northern Australia, and the value, role and contribution of the SRG to the project.

With the project tackling such diverse and complex issues, input from SRG members is extremely valuable and a critical component of the NAIF project.

“Due to the geographical spread of members the SRG will not meet regularly as a group” according to Jeff Camkin from the NAIF project team “but it does provide valuable contacts for informal discussions and information exchange.”

Contact with the group is generally through one-on-one discussions between Jeff and individual members with key messages then considered by the project team and discussed with the Steering Committee.

New PhD students to contribute to NAIF

Through the CRC for Irrigation Futures Scholarship Program, NAIF has secured three new PhD students to work closely with the project team on research activities linked to NAIF.

Peta Dzidic will be based in Perth under the supervision of Curtin University and CSIRO Land and Water. Peta will be working on *Lessons from the North and the South: New Strategies for Improved Decision Making in Irrigation and Land Management*.

Lucy Reading will be based in Brisbane under the supervision of the University of Queensland, CSIRO Land and Water and the Department Natural Resources & Water. Lucy will contribute to research on *Understanding tropical groundwater systems in the Lower Burdekin with a focus on sub-regional recharge and water quality*.

Steve Marchant will be based in Townsville under the supervision of New England University and CSIRO Land and Water. Steve will undertake research on *Decision-making on Irrigation Development Proposals: New ways to make better decisions*.

The NAIF project welcomes the valuable input these students will provide over the course of their studies. The research by Peta, Lucy and Steve will be featured in future editions of NAIFNEWS.

NAIF Project hosts school students

A Student Research Scheme conducted in Perth during July, allowed the opportunity for two senior high school students to contribute to current research into historical and changing views on irrigation in northern Australia.

NAIF Sustainability Specialist, Jeff Camkin, supervised the two students at CSIRO Floreat Laboratory in Perth for a period of one week. The results of the research conducted by the students during this period have provided a valuable contribution to the NAIF Project.



Jeff Camkin (centre) with Mark Walkley (Leeming Senior High School) and Jessica Round (Northam Senior High School)
- photo by Jodie Ingram

For further information visit:

http://avonvalley.yourguide.com.au/detail.asp?class=news&subclass=general&story_id=497719&category=General&m=7&y=2006

http://www.sciencewa.net.au/science_news.asp?pg=21&NID=794

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