



# TROPICAL SAVANNAS CRC

Cooperative Research Centre for the Sustainable Development of Tropical Savannas

## Report on the Third Year Review

October 12–13, 1998

Billabong Room, Novotel Atrium, Darwin

# Contents

<b>Summary .....</b>	<b>1</b>
<b>Recommendations.....</b>	<b>3</b>
<b>Review Process.....</b>	<b>3</b>
<b>Strategic Direction.....</b>	<b>4</b>
<b>Cooperative Arrangements .....</b>	<b>5</b>
<b>Research and Researchers.....</b>	<b>5</b>
<b>Application of the Research.....</b>	<b>6</b>
<b>Education and Training .....</b>	<b>8</b>
Postgraduate	8
Stakeholder Training	8
<b>Management and Budget .....</b>	<b>9</b>
<b>Public Relations.....</b>	<b>9</b>
<b>Performance Indicators.....</b>	<b>10</b>
<b>Budget and Audit.....</b>	<b>10</b>
<b>Acknowledgements .....</b>	<b>11</b>
<b>Attachment 1 .....</b>	<b>12</b>
Session Attendees - Stage 2 Third Year Review	12

## **Summary**

The CRC for the Sustainable Development of Tropical Savannas is a fourth-round Centre, which commenced activities in August 1995. The Centre operates as a joint venture with nodes at Darwin, Townsville and Kununurra.

### **Universities**

Northern Territory University (NTU)

Australian National University (ANU)

James Cook University of North Queensland (JCU)

### **Government**

CSIRO

Division of Tropical Agriculture (CSIRO DTAG)

Division of Wildlife and Ecology (CSIRO DWE)

Division of Land and Water (CSIRO L&W)

Environment Australia (EA)

### **State of Western Australia**

Western Australian Department of Conservation and Land Management (CALM WA)

Department of Agriculture Western Australia (Ag WA)

### **State of Queensland**

Department of Primary Industries (QDPI)

Department of Natural Resources (QDNR)

### **Northern Territory**

Department of Lands, Planning and the Environment (NTDLPE)

Department of Mines and Energy (NTDNM)

Power and Water Authority (NTPAWA)

Department of Primary Industry and Fisheries (NTDPIF)

Parks and Wildlife Commission (PWCNT)

### **Stakeholders**

The stakeholders of the Centre include Aboriginal, conservation, defence, pastoral, mining and tourism interests and involve land holders and users, regional planners and developers, government agencies, conservation organisations, students and community groups. As such it is one of the most diverse CRCs in both geography and function.

The visiting Panel was supplied with extensive documentation in preparation for the review. The Director provided a slide overview as a Centre presentation to commence the review, which summarised the key features of tropical savannas and covered the review criteria listed in the Second Year Review Guidelines.

Throughout the discussions the Panel referred frequently to the Reports of the first year visit and the Stage 1 Review and discussed the Board's responses to the Stage 1 Recommendations. It was clear that the Centre had made a slow and somewhat uncoordinated start and that this had continued well into the second year. The Centre has identified reasons for the slow start, which led to a

shortfall in in-kind contributions and a large cash surplus. This could be related to the fact that the Centre was established through the consolidation of two separate applications. Although the individual research projects had made a reasonable start, there was little evidence of integration, collaboration and cooperation across the Centre.

However with the appointment of a new Director and through the determination of the Board, the Centre had revised its Strategic Plan and restructured the Centre to focus on cooperative research. The Centre's Strategy Statement 1998-2002, developed over nine months this year by stakeholders and partners, has consolidated the strategic direction of the Centre by producing a clear mission statement, key result areas and four overlapping themes which will enable integration of the research projects.

The move from a subprogram base to a theme base was supported by all parties and strongly endorsed by the Stage 1 Panel. This new approach is also strongly supported by the Stage 2 Panel. It establishes greater collaboration and integration and allows the stakeholders to identify with the projects in their areas of interest.

The slow start, especially in the management area, appears to have been turned around in the last twelve months.

The Panel considers that the key to the Centre's success is the implementation of the thematic approach and the translation of the research effort to achievements and outcomes. A skill base for technical research is in place but the Panel is not convinced that the necessary socio-economic skills are available. The strategic CRC Program issue that needs to be addressed is whether the Centre is able to capture the benefits of research. The Centre must prepare a timetable indicating when a Business Plan aligning the milestones and budget will be available. This timetable should be submitted to the CRC Secretariat for information and made known to all stakeholders.

## **Recommendations**

The Centre should as a matter of priority formalise the thematic approach through to milestones -and outcomes and show the linkages and integration with the research projects.

The Centre should as a matter of priority prepare a Business Plan to reflect the new themes, milestones and outcomes and linkages to the budget.

The Centre should keep a focus on the importance of innovation

The Centre should clarify the ANU commitment

An assessment should be made of the Centre's capacity to provide all of the resources needed to fully achieve the Mission and Key Result Outcomes outlined in the Strategy Statement

The Centre should plan for an annual retreat involving all students, research staff, management and stakeholder representatives to discuss research findings and matters of mutual interest.

The Centre should revise its Budget in the Commonwealth Agreement for Years 4 to 7 to show how the in-kind contributions of participants will be restored and allocated across projects.

The Centre should revise and re-schedule the Payment of the Commonwealth Grant for Years 4 to 7

Where appropriate the above matters should be included as amendments in the Commonwealth Agreement.

## **Review Process**

Stage 1 of the Third Year Review of the CRC for the Sustainable Development of Tropical Savannas (TS CRC) was a scientific and technical review of the Centre conducted on 12-14 August 1998 inclusive at Darwin. The Panel comprised:

Mr Jim Miller, (Chair) Centre Visitor;

Professor Geoff McDonald, Head Department of Geographical Sciences and Planning, University of Queensland;

Associate Professor Jeff Coutts, Director, Centre for Rural Extension, Gatton Campus, University of Queensland;

Dr Bob Scholes, Fellow of CSIR in Systems & Savanna Ecology, Republic of South Africa.

The Centre Board of Management responded to matters raised in the Stage 1 Report in September 1998.

The Stage 2 Review was undertaken on 12-14 October 1998 in the Billabong Room of the Novotel Motel, Darwin by the following Panel:

Dr Geoffrey Vaughan Chair of the Panel, Chairman CRC Committee

Dr Wendy Craik Panel Member and Executive Director, National Farmers' Federation

Mr Jim Miller Panel Member and Centre Visitor

### **CRC Secretariat Support**

Ms Michelle Leggo

Mrs Heather Carswell

The Centre provided a draft 1997/98 Annual Report and audited financial tables as requested in the Second Year Review Guidelines.

The Stage 2 Review was held over one full day and two half-days to accommodate flight availability. Day 1 (afternoon session) commenced with a meeting with the Management Group, Project Leaders and Project Staff and involved a comprehensive presentation by the Centre Director, Mr John Childs on the Centre activities and the Directors overview; a general discussion and question period followed.

On the morning of 13 October the Panel held discussions with the Centre Board of Management and then had a separate meeting with the Board Chair, the Hon John Kerin. This was followed by a session with the Consultative Committee. In the afternoon the Panel met with project leaders and staff and then had a session with the postgraduate research students.

On the final day, 14 October, the Panel met to prepare the draft report before meeting with the Director for further discussion and feedback.

## **Strategic Direction**

It had been noted in the Report for the First Year Visit that the Centre had made a comparatively slow start. However, it had in place from an early stage a Strategic Plan and an indication of strategic direction developed from two key workshops What Conservation Interests Want and What the Stakeholders Want. It was against this background that the strategies and priorities for the research and education programs were established.

As the Centre progressed into its second year there was still room for improvement in the areas of integration, collaboration and cooperation across most activities. Difficulties in these areas were in part due to the wide geographic spread of the Centre and the way the partners were brought together from two separate applications in the Fourth Selection Round.

Following the appointment of a new Director in late 1997, a major strategic planning process was undertaken in March and April 1998 to consider the current status and future direction of the Centre. The outcome of the process which included the participation of project leaders, the Management Committee, the Consultative Committee, stakeholder representatives and the Board of Management is the Strategy Statement 1998-2002.

The Centre's strategic direction now firmly links the various research projects to four themes:

North Australia Landscape

Landscape Processes

Ecosystem Management

Human Capability Development

These themes are the key to the strategic development of the Centre. The research projects had evolved as linear models and lacked a framework across the Centre. The new strategy integrates the research activity, communication and education across the Centre and relates these activities to stakeholders giving the Centre an improved focus and identity through increased collaboration and cooperation.

The Strategy Statement clearly defines key result areas, key strategic issues, initiatives within key strategies, performance measurement, and the pathway for implementation.

The only criticism of the new plan is the time that it has taken to clearly identify the mission and strategies for the Centre and to establish the right platform to integrate the Centre as a whole to take advantage of the synergies in cooperative research. The Centre has now identified the niche products of the Centre and the features which make the Centre a unique asset in the northern Australian landscape.

Because of the history, diversity and spread it has taken considerable time to fully integrate the activities of the Centre. The Centre can now build on its strengths to meet stakeholder needs and achieve the outcomes which were identified at the outset for this Centre to be of national and international importance.

To support the strategic planning and directions for the Centre a benchmarking exercise has resulted in the publication *Benchmarking and Interpretation of attitudes, Practices and Information Use of Tropical Savannas Users and Managers*. This exercise will be critical in determining the achievements and outcomes of the Centre in preparation for the Fifth Year Review.

## **Cooperative Arrangements**

Relationships between the participating research groups appear to be good and there is an atmosphere of mutual support between the parties. JCU and NTU seem to have overcome early difficulties and appear to be cooperating well. Since the departure of its key researcher, the Board should clarify the commitment of ANU. This point is discussed further in the next section.

The Queensland Government representatives at both Board and researcher level demonstrated a strong commitment to the research projects (the Queensland Department of Environment and Heritage is now involved), the themes and to the Centre as a whole. The new Director's efforts, and the management studies in particular, appear to have led to the resolution of some prior difficulties, Aboriginal concerns now seem to be better integrated with the Centre's program. It will be important to ensure that the Centre does not let the benefits of a non-political forum for discussion of achievement of sustainable use issues become a forum for resolution of particular political issues such as property rights.

The Consultative Committee shows a very strong commitment to, and support for, the Centre and provides challenging advice to the Board and Director through its Chairperson who is also a Board member.

The thematic approach to research has value-adding potential. The management studies are evidence of that by forcing the integration of research to provide the answers to questions posed by stakeholders.

Establishment of the website, newsletter and e-mail appear to be improving communications between researchers and the partners; the communication program as a whole is impressive. Forums such as the Fire Management Workshop have been effective in bringing participants from the parties together to resolve issues, and have led to the spawning of smaller more focussed linkages between parties, a feature not previously occurring prior to the Centre being established. Such forums are to be encouraged where appropriate.

Interaction with other CRCs seems to have faded in the past year but this may be due to the Centre now putting its focus where it is more relevant.

## **Research and Researchers**

The Centre appears to have responded positively to the recommendations in the Stage 1 Report with the partners and researchers displaying a high degree of cooperation and enthusiasm. The strategic planning process is commanded by those involved in the Centre. It has united the research

providers and stakeholders in a single focused direction. It acknowledges that socioeconomic research is an integral component of many projects if sustainable land use is to be delivered as a key feature of the Centre.

*The Panel recommends that:*

*the Centre should as a matter of priority formalise the thematic approach through to milestones and outcomes and show the linkages and integration with the research projects; and*

*the Centre should as a matter of priority prepare a Business Plan to reflect the new themes, milestones and outcomes and linkages to the budget.*

The research projects themselves appear to be organised and coordinated. They are progressing well and, as indicated above, integration appears to be occurring. While the management studies are innovative in approach, the research of individuals that is innovative should also be encouraged.

*The Panel recommends that the Centre should keep a focus on the importance of innovation.*

The management study approach is clearly a successful mechanism for supporting the themes. It also supports the research projects and achieves cooperation between researchers from the geographically dispersed institutions.

All stakeholders recognise the role and importance of socio-economic skills in the application of sustainable land use research, but the Centre does not yet possess the requisite skill base to support this approach. The difficulties of attracting socio-economic researchers to Northern Australia are acknowledged but through alliances with non-Northern institutions, there must be the means of achieving this capacity which will be integral in the delivery of the themes.

While the earlier perceived lack of commitment from some agencies appears to have been successfully overcome, the strength of commitment from ANU is not clear. There was no representative at the meetings and ANU are significantly behind on their in-kind contributions.

*The Panel recommends that the Centre should clarify the ANU commitment.*

On the international front, the Centre seems to be placing itself well as the major international centre of research and information on tropical savannas, with international visitors, publications in international journals and conference invitations. Next year's International Rangelands Conference in Townsville, with the Centre as a sponsor, provides an opportunity to reinforce this position.

While there has been a number of key visits by international scientists, the Centre might consider formalising its International Visitor Program by organising a regular program of visits by recognised international researchers to the Centre.

One issue that did not receive any attention at the Review was that of Greenhouse. It is important that the Centre give consideration to this topic given that a significant proportion of global carbon is stored in tropical savannas.

## **Application of the Research**

There is recognition by the Centre that sustainable use and conservation of the tropical savanna will only occur if it works closely with land managers and users. With this in mind the Centre has redeveloped its strategies to ensure that outputs will be readily accepted by those responsible for sustainable savanna outcomes.

Key strategic issues which will drive the CRC's future efforts are:

1. the integration of research, communication and education

2. the relevance to stakeholders
3. the identity of the Centre and its products
4. the capacity to deliver excellent research, communication and education.

The strategic planning process which led to the setting of these strategic issues and subsequent key result areas was seen by all individuals and groups interviewed, including the Board, the Consultative Committee and the staff, as being absolutely essential to address some of the short comings which had been identified in the first two years of the Centre's operation.

The formal and informal processes for involvement of stakeholders in the Centre are now effective. The Centre is actively working with stakeholders who appear to have very good relationships with the research staff and particularly with the research students. Stakeholders have a key role in setting the research priorities and in developing a high degree of ownership of the program.

The concept of using management studies as a major tool in the integration and application of multidisciplinary and multi-agency research outputs in a whole savanna approach is an excellent initiative. It also promises to be an effective technology transfer mechanism. The Victoria River District Management Study, the Desert Uplands Study and the proposed Burdekin Management Study will do much to assist the Centre to achieve its objectives.

A most promising initiative has been the recent acceptance by Aboriginal land managers of the potential for the Centre to work with traditional land managers to the mutual benefits of both.

Links with core participants were good. An example of this is the consultancy which was conducted for Mount Isa Mines, and the large number of examples of projects involving more than one agency. The Panel is of the view that the move to a theme base and the advent of the management studies will greatly assist the Centre in the utilisation and adoption of its research outcomes.

*The Panel has some reservations however about the social science, the cultural, geographic and economic skills base which will be required to fully exploit the concept of integrated management which has now been introduced in the theme approach.*

*The Panel supports the move to a theme base but recommends that an assessment should be made of the Centre's capacity to provide all of the resources needed to fully achieve the Mission and Key Result Outcomes outlined in the Strategy Statement.*

The Consultative Committee provides the Centre's links with the major groups of savanna users. There had been concern in the past regarding the effectiveness of the Consultative Committee but it appears to have been rejuvenated largely through the involvement of all parties in the recent strategic planning process. The Panel is confident that the Committee will provide an effective link with the major potential users of the Centre's research.

All of the core partners and the stakeholders interviewed indicated that the Centre was an excellent investment of resources. A number of spin off benefits resulting from better inter-agency and interstate communication were reported as a further positive outcome arising from the formation of the Centre.

Allowing for the late start, the Panel considers that the Centre has made good progress towards the application of its research outcomes in its three years to date. Because the base is now in place with a high level of enthusiasm and cooperation the Panel agrees with the Stage 1 Review finding that the Centre is likely to make significant progress by Year 5.

# **Education and Training**

## **Postgraduate**

The Centre provides scholarships for 20 PhD, one Masters and six Honours students. The students are enrolled through NTU, JCU and ANU; the ANU students are Darwin based. The Panel met a number of students who were studying at Darwin and some from Townsville.

The Panel was impressed with the enthusiasm of the students. The students identified the advantages of studying within the Centre as joint supervision, field work and involvement with stakeholders and the availability of technical support in their research projects. The research students had been brought together for some workshop activity but could gain further advantage from wider contact across the Centre as a whole. The Panel recommends that the Centre should plan for an annual retreat involving all students research staff management and stakeholder representatives to discuss research findings and matters of mutual interest.

The retreats, while covering research and applications of research could also include seminars covering such areas as research management, intellectual property issues, human resource management etc.

Now that a number of PhD students are nearing the completion of their studies, the Centre should look at the employment opportunities and placements for graduates from the program.

In the area of coursework, the Centre has developed a Masters by Coursework, a Graduate Diploma, and developed new units for undergraduate and certificate programs. These courses are about to come on-line and will add to the education and training program of the Centre. The courses will involve flexible teaching modes.

## **Stakeholder Training**

The Centre has carried out an analysis for the training needs of the people and organisations who manage tropical savannas. A database of relevant courses and a network of providers have been established. The Centre has identified the need to provide increased access to education and is providing courses in multimedia format on CD-ROM.

A seminar series has been established for tour guides and a workshop has been held for key rural extension staff which identified areas where action is needed to improve the extension and education services provided by the Centre.

The 1997-98 Annual Report for the Centre includes summaries of the extension programs run through the year and indicates where participants from the Centre have provided teaching and training services to kindred organisations as an extension to its own programs.

In the area of stakeholder education, the Centre has established itself as the point of contact for the whole of north Australia activity and is recognised as the information and education centre for tropical savannas. The highly developed web site should be useful as an education tool to the wide range of interest groups. The Panel enjoyed a demonstration of the web site which cross-links all of the programs in the Centre, provides information on education and training, and shows how the research projects are linked to the four research themes of the Centre.

The Centre is proposing to develop short courses for vocational training, particularly for non-academic stakeholders. Courses of this type have been attempted through the partner agencies but it will now be possible for the Centre to co-ordinate such courses with the appointment of a person for this task. It is expected that the courses will be modularised and adapted for other mediums. This will be a significant initiative for the Centre in the next year.

## **Management and Budget**

A number of changes in the staffing of this CRC have occurred in the last 12-18 months. A new director has been appointed and two new positions - a business manager and a communications coordinator have been created. The Centre now has an effective staffing arrangement.

The Board of Management appears to have a reasonable balance between stakeholders and research providers and is working effectively. The Consultative Committee which represents the major savanna users is active in advising the Board on a range of issues including research priorities.

However, the Panel noted that the term of reference for the Consultative Committee states it is “responsible for strategic and operational issues and action” and considers this should be changed to say it is responsible for advice on these issues.

The Chair is independent and enthusiastic and the Board has regular meetings even though the distances involved make this very expensive. The Board could consider reviewing its own performance from time to time.

Since the new Director has been appointed, the lines of communication have improved and the Centre’s committee structures appear to be working more effectively.

## **Public Relations**

The appointment in August 1997 of a Communications Coordinator, Dr Peter Jacklyn, has had a big impact in the Centre’s public profile. The Centre is now very active in promoting its activities and undertakes a diverse range of public relations and communication activities. The strategies for public relations and external communication have now adopted a “whole of Centre” approach and have moved away from an emphasis on individual Centre participants.

The Panel was impressed by the range of publications and PR material that was on display at the Review. This included posters, brochures and display stands and copies of published and supporting material in areas such as:

*Savanna Tourism*

*Desert Uplands Management Study*

*Action Learning for Savannah Guides*

*Media Communication*

*Annual Reports and Strategy documents*

*Education resources for stakeholders*

*Workshop proceedings*

*Stakeholder publications*

*Displays, brochures, handouts*

*Internal communication*

*Web site information (supported during review by a demonstration)*

*Sustainable Resource Management Teaching modules*

*Graduate Diploma and Master of Tropical Environmental Management teaching material*

The Panel commends the Centre on its public relations activities. The Centre is aware of CRC Program Communications Protocols and has attempted to meet these when producing publications and media releases

## **Performance Indicators**

The Centre has reported its Performance Indicators very adequately in the 1997/98 Annual Report. There has been a quantum leap forward in performance during the past year which is very encouraging.

In July 1998 the Centre revised the Performance Indicators of the Commonwealth Agreement. The changes now clearly define the performance targets and parameters set by the Centre. The assessment against indicators now measure how successful the Centre has been in having stakeholder communities use research results in developing and implementing policies and other activities.

Significant achievements extracted from the figures presented show that the Centre now has 27 students enrolled in the Masters and Graduate Diploma of Tropical Environmental Management course and has made 30 radio and 5 television presentations.

## **Budget and Audit**

All original core participants have continued to support the Centre. Total resources available to the Centre over the seven years are approximately \$58 million, comprising the CRC grant of \$16 million, participant cash contributions of \$0.3 million, in-kind contributions of \$41 million and other income of \$0.7 million.

However, there is substantial variation in the budget between the Annual Reports and the Schedules to the Commonwealth Agreement. The Centre is currently in shortfall of its cumulative total in-kind resources to date by \$2 million and has estimated a projected in-kind shortfall of \$1.97 million over the life of the Centre. Only the Northern Territory of Australia, Environment Australia and CSIRO are estimated to meet their projected commitments.

The Panel is very concerned that the Centre continues to report a shortfall in participant contributions. The First Year Visit panel was “not unduly concerned by the shortfall in Year 1 but believes that action is now required to ensure that the partners clearly understand the requirement to honour cash and in-kind commitments”. At the end of Year 2, the Director’s response to the continuing shortfall was as follows:

“We believe that contributing factors to (the shortfall in in-kind contributions) have now been addressed in a refocused strategic direction and the current adjustments being made to our protect portfolio and activities. The Board is determined to correct this shortfall and is confident this will be achieved. In particular, CALM will have a project leadership role in relation to the riparian studies, and Ag WA and Queensland will have leadership and operational roles in new modelling, monitoring, extension and communication activities. ...we have adopted the strategy of refocussing our strategic direction and restructuring our project portfolio as the means of redressing the in-kind shortfall. ... Unfortunately this correction will not fully impact until 1998/99.”

The Panel supports the Stage 1 Report recommendation that the shortfall in partner in-kind contributions should be addressed as a matter of urgency. The Panel notes that the Board regards this to be “the major strategic management issue for the Centre and its performance”.

During the Stage 2 Review it was evident that the strategy for overcoming the shortfall involved the implementation of the Strategic Statement and the thematic approach. The Centre is confident that the integration and collaboration now occurring between the participants will ensure continued commitment in accordance with the Commonwealth Agreement. However, the timetable for meeting this shortfall and the adjustments in the budget for the remaining four years was not presented to the Panel

While there is strong evidence that Centre participants will be increasing their involvement to meet their commitments over the remaining life of the Centre, the Panel recommends that the Centre revise its Budget in the Commonwealth Agreement for Years 4 to 7 to show how the in-kind commitments of participants will be made up and allocated across the projects.

A further concern to the Stage 2 Panel was the large cash surplus at the end of Year 3. This is related to problems with recruitment and delays in projects. The Panel recommends that the Centre revise and reschedule the Payment of the Commonwealth Grant for Years 4 to 7

The Secretariat held discussions with the Director to consider whether the financial systems are appropriate to capture and report the cash and in-kind transactions as required by the Commonwealth. It is understood that the Director proposes to review the accounting control systems and the reporting of in-kind contributions. This initiative has already commenced in part in response to revising the Centre's commitments for Years 4 to 7 and will be the priority task for the new Business Manager when she commences duties in late October.

## **Acknowledgements**

The Panel and the Secretariat would like to thank the Director and Centre staff for producing the high quality documentation for the review and for their hospitality during the review.

# Attachment 1

## Session Attendees - Stage 2 Third Year Review

### Management Group, Project Leaders and Staff

*Mr John Childs, Director, Tropical Savannas CRC, Darwin*

*Mr Rod Applegate, NT Department of Lands, Planning & Environment*

*Prof Greg Hill, Northern Territory University (NTU)*

*Assoc Prof Ross Hynes, Tropical Savannas CRC, Townsville*

*Dr Peter Jacklyn, Tropical Savannas CRC, Darwin*

*Dr John Ludwig, CSIRO Division of Wildlife & Ecology*

*Dr Paul Novelty, Agriculture WA*

*Dr Mick Quirk, Queensland Department of Primary Industries*

*Dr Peter Whitehead, NTU*

*Assoc Prof. Derek Eamus, NTU*

*Dr Tony Grice, CSIRO Division of Tropical Agriculture*

*Dr Graham Kirby, NT Department of Primary Industries & Fisheries*

*Dr Tony Start, Department of CALM, WA Wildlife Research Centre*

*Dr Dick Williams, CSIRO Division of Wildlife & Ecology*

*Mr Rodd Dyer, NT Department of Primary Industries & Fisheries*

*Mr Kev Shaw, Qld Department of Primary Industries*

*Ms Kate O'Donnell, Tropical Savannas CRC, Townsville*

### TS-CRC Board

*The Hon John Kerin (Chair), John Kerin & Associates Pty Ltd*

*Dr Neil Burrows, Department of CALM, WA, CALM Science*

*Ms Katy Haire, Northern Land Council*

*Mr John Hicks, Parks Australia North*

*Dr Tony Milnes, ERA Environmental Services*

*Mr Rick Murray, Tourism Council of Australia - NT*

*Mr Roger Smith, NT Department of Primary Industries & Fisheries*

*Dr Greg Robbins, Qld Beef Industry Institute, DPI*

*Mr John Stewart, C/- United Graziers Association*

*Dr Brian Walker, CSIRO Division of Wildlife & Ecology*

*Assoc Prof Charles Webb, NTU*

### Consultative Committee

*Dr Laurie Corbett, ERA Environmental Services*

*Mr David Epworth, Balkanu Cape York Development Corporation*

*Mr Mark Horstman, Kimberley Land Council*

*Mr Jim Forwood, Northern Australia Beef Research Council*

*Mr Tom Mann, Northern Queensland Beef Research Committee*

*Mr Darryl Pearce, Darryl Pearce & Associates*

*Mr Paul Styles, Tourism Council Australia - NT*

## **Students**

*Ms Renee Bartolo, NTU*

*Ms Fiona Fraser, Parks & Wildlife Commission of the NT*

*Mr Ben Hoffmann, CSIRO Division of Wildlife & Ecology*

*Ms Georgina Kelley, NTU*

*Mr Hayder Khwaja, NTU*

*Mr Alexander Kutt, JCU*

*Ms Sharon Lovin, JCU*

*Mr Colin Macgregor, JCU*

*Ms Brigid McCallum, JCU*

*Ms Kirrilly Pfitzner, NTU*

*Ms Myf Runcie, NTU*

*Mr Tom Vigilante, NTU*