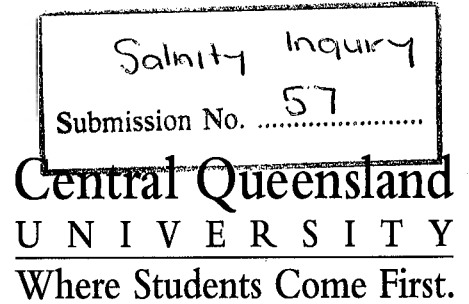


From the Office of  
Professor Ronald W Davies  
Deputy Vice-Chancellor (Academic & Research)  
Telephone: 07 4930 9753  
Facsimile: 07 4930 6890  
e-mail: dvcar@cqu.edu.au



Ms Catherine Cornish  
Committee Secretary  
House of Representatives Standing Committee on Science and Innovation  
RI Suite 116  
Parliament House  
Canberra ACT 2600

***House of Representatives Standing Committee on Science and Innovation – Inquiry into coordination of the science to combat the nation’s salinity problem***

Dear Ms Cornish,

**Re: Inquiry into coordination of the science to combat the nation’s salinity problem**

Thank you for the opportunity to provide a submission to the *House of Representatives Standing Committee on Science and Innovation – inquiry into coordination of the science to combat the nation’s salinity problem*. This is a major issue confronting Australia, economically and environmentally and one of considerable interest to Central Queensland University.

As a regional University, Central Queensland University conducts considerable research into the sustainable use of Australia’s natural resources. The University is firmly of the opinion that applied research should be done through partnerships with the stakeholders. We believe that the key to addressing salinity and for that matter all environmental management problems, is to develop a shared understanding, at a high level, by all stakeholders through education, a common language and a shared data set. It is the Universities experience that where these three goals have been achieved results follow.

This submission argues that there is a significant body of research already available and that the major challenge is in the need for a greater focus on real time change in practice and attitude as well as a strategic review of partnerships between the Government and R&D providers. In addition there is an emerging role and unrealised potential for Regional Universities in R&D, education and community engagement.

This submission deliberately moves to the boundary of the committees’ terms of reference to address some of the more fundamental problems associated with the uptake of research. In doing so the University is drawing on years of experience in the general area of sustainable resource use. As a consequence of pushing the margins of the terms of reference the submission is deliberately provocative.

The University of Central Queensland is keen to support the enquiry and will assist wherever possible. Our submission is direct and too the point, however we trust our submission is received in the spirit in which it is intended and we would be pleased to address the committee on any issue in greater detail.

The University looks forward to a productive outcome.

Yours sincerely,

Professor Ronald W. Davies  
Deputy Vice-Chancellor (Academic & Research)

☎ (07) 4930 9753      61 7 4930 9753  
☎ (07) 4930 6890      61 7 4930 6890  
✉ dvcar@cqu.edu.au

Post: Bruce Highway North Rockhampton Qld 4702 Australia    Switch: 61 (0) 7 4930 9777    Web: <http://www.cqu.edu.au>

Campuses: Brisbane Bundaberg Emerald Fiji Gladstone Gold Coast Mackay Melbourne Rockhampton Sydney  
Overseas: Hong Kong Malaysia Singapore

CRICOS Codes: 00219C - Qld; 01315F - NSW; 01624D - Vic



***Central Queensland University Submission  
to the  
House of Representatives Standing Committee on Science and  
Innovation***

***Inquiry into the co-ordination of the science to combat the  
Nation's salinity problem***

- The University believes that the focus on catchment based on the ground applied research activity is appropriate. The University notes however and wishes to bring to the attention of the committee the emerging question as to whether agencies and in particular land managers and catchment committees are realising any real time tangible *on the ground* outcomes from the research available. It is an observation that increasingly, many land managers, sectors and agencies are striving through these committees to protect their interests rather than deal effectively with the issues. It is not the co-ordination of research that is impeding change, but genuine commitment to doing something about the problem. Co-operation and the uptake and adoption of this knowledge seems to be the priority issue.
- In almost all instances of land degradation or salinity outbreaks it is inappropriate land management practices that have resulted in the problem. As there is a significant knowledge bank of research/information available in this field why has this information not been used or adopted by the land users?

The use of inappropriate land management practices can be through lack of knowledge, ignorance or just plain greed. Is the data not understood or not in a form that is easily taken up? It is our experience that it is more to do with short-term economics and historical land use practices/culture than easily understood information. It is also our observation that many land managers are operating under a dependency and avoidance model, with an expectation that someone else or the Government should pay for, compensate or solve the problem. There is a need for significant behavioural change to address this avoidance and dependency attitude.

- Research has shown that the pressure on many of our landscapes exceeds the capacity of the natural resource capability/suitability. Published researched and audits of our landscapes continue to report on a declining land condition yet we continue to reward poor practice through avoidance and or subsidy, such as inappropriately targeted drought assistance etc or call for more research.

- Many of our landholders/managers do not have formal qualifications or training in land management and continue to operate on a principle of *how we have always done this* and see change as an impost on *their rights*. Managing landscapes well is a highly skilled and complex task. Yet land is entrusted to any person who has an interest. There are very few other professions where this is the case. Accordingly there is an increasing need to expect people who manage our lands to be certified as competent and qualified as with all other professions. The sheer cost of rehabilitation is often prohibitive or in some instances unachievable and in today's environment unacceptable.
- Global market forces, international competition, changes in consumer preferences and environmental stewardship coupled with climatic variability are all bringing considerable pressure on our land managers. These changes will result in significant rural reconstruction. This can be proactively facilitated and managed or left to market forces resulting in considerable social and environmental cost.
- As indicated earlier considerable funds are being allocated to research and address environmental issues but in many cases the use of these funds has provided a less than optimal return on investment. Research findings are not being taken up and performance measures must form a stronger part of the investment process of public monies. Accordingly performance measures need to be developed for all future salinity funding. The performance measures need to be tied to all financial assistance strategies to determine whether real time on the ground actions and behavioural changes are realised that are beyond the cosmetic. Cross compliance and market based instruments should be fully evaluated to determine if these have an affective role in achieving real change.
- More effective partnerships need to be developed between the Federal and State Governments, Universities and other R&D providers as well as landholders/owners. At this stage there is considerable duplication of effort and direct competition for funds. There is a clearer need for a more targeted and strategic role of Regional Universities as applied R&D providers in supporting regional bodies through research and education. This enhanced role for regional universities links to the outcomes targeted in the Nelson Review. Regional universities can also play a role in the evaluation of policy and research into achieving more effective on the ground outcomes. There is a need to more formally evaluate the potential strengths to be gained by strategically engaging Regional Universities in this process.
- At this stage many of the Catchment Management Groups and the Regional Growth Management Frameworks and Government and industry are in competition and *building a bricks and mortar approach*. There is a reluctance of regional committees and state agencies and industry sectors to work together beyond the tokenistic stage. This is most clearly evident in the tensions between the conservation and production sectors. There is a problem of a lack of shared knowledge, language and data set. Good land management

involves the intimate and critical linkage between conservation, biodiversity and productivity.

- Considerable time and investment is being spent on packaging and promoting the status quo in forms masked to represent progress where no real change has occurred. For example in Queensland, *Leucaena* is being promoted as a solution to salinity but in reality it is being pushed because of its competitive ability to survive and maintain high stock numbers during drought. This is at the direct expense of the integrity of the landscape.
- Many of Australia's landscapes are underlain by marine sediments and are geologically old, fragile and salty. Many of our irrigation areas are based on colluvium derived from these sediments and are similarly underlain by salt. The extent and the severity of the problem have been reasonably well identified and understood (BRS and NRM agencies). There is now a need to benchmark land use practices and measure performance in these *at risk* areas.
- There is a clear need to separate out where the role of amelioration is appropriate to embrace; otherwise the focus should be specifically on prevention. If this is not done then amelioration becomes the target as the soft option for all landscapes and encourages a do nothing attitude until the problem is evident. Alternative salinity production systems are then developed to continue *more of the same* (i.e. seeding salt affected areas with samphires, saltbushes and other salt tolerant species)
- The scale of focus of all activity must be at both the property and watershed level. The watershed level is to directly assess the broader implications and cross property effects. In recent times much emphasis is being placed on the contributions of rain and wind to the soil salt levels. This is increasingly becoming an excuse as to why there is a salt problem as opposed to the result of inappropriate land use practices.

## Summary

- It is clear that the emergence of salt problems in a landscape is a complex issue associated with soils, landform, geology, land use and hydrology. Accordingly management practices must be targeted to this. This detailed site specific data showing an *at risk* site should not be used as an excuse for poor land use practices.
- Generally throughout Australia land use practices exceed land use capability. Millions of hectares are degraded and 5 to 7 million hectares of land are at risk of salinisation. Seven to eighteen percent of plant and animal species are at risk of salinity induced extinction. We must move away from excusing poor land management and focus on actual changes driven by real changes in land management. This needs to include benchmarked and monitored performance as well as the accreditation and certification of land use practitioners.