

SUBMISSION TO:

**INQUIRY INTO THE COORDINATION OF THE SCIENCE
TO COMBAT THE NATION'S SALINITY PROBLEM**

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The House of Representatives Standing Committee on Science and Innovation shall inquire into and report on the Commonwealth's role in managing and coordinating the application of the best science in relation to Australia's salinity programs.

In conducting its inquiry, the Committee will give particular consideration to the:

- a) Use of the salinity science base and research data (including the development of new scientific, technical and engineering knowledge) in the management, coordination and implementation of salinity programs

The incorporation of knowledge acquired through scientific research and investigations into salinity management programs throughout Australia varies considerable between catchments, between regions and between states. Overall, however, the delivery of information up and down a supply chain that reaches from researchers through key policy makers and on to regional information providers remains somewhat problematic.

The Murray-Darling Basin program recognised this issues some five years ago and developed what became known as the 'TOOLS' project. This was an attempt to support regional information providers through greater access to contemporary information, and knowledge on salinity and salinity management. The TOOLS project was specifically designed to deliver the outcomes of research and development to regions by working with the key operatives in each region with a view to establishing a 'family' of regional information providers. The project was very successful, ultimately becoming the vehicle by which regional catchment planning concepts embodied within the emerging 'Groundwater Flow Systems Framework' were extended throughout the Basin, and later throughout almost all of eastern Australia.

TOOLS succeeded in building the networks and providing regional operatives with access to information. It provided essential support to each of the regions throughout the Basin, and over it's three-year life built very solid working relationships with the small group of key people responsible for the development and delivery of regional salinity management strategies. Whilst the program provided access to a comprehensive array of web based products, success was largely due to a very mobile team of specialists assigned to taking knowledge out to the regions. This team worked with the people at the coalface in building salinity information and knowledge into regional planning and salinity management activities

At the end of the three-year term the TOOLS project the family of regional information providers had been established, as had the web based information products. The supreme effort by the MDBC and the TOOLS team resulted in a major leap forward. Completion of the project, however, has seen the cessation of this

regional support, and there are already indications that the achievements are fragmenting.

The TOOLS project never shifted from the Murray-Darling Basin to become a national program, although this was often discussed. Very clearly, there is a need for this kind of program to operate at national level. The task of delivering information and knowledge of salinity should not be left to chance. A team of people should be assigned responsibility for transferring information and knowledge to regional salinity information providers throughout Australia. Such a team would have the capacity to move among the regional salt affected catchments of Australia with the aim of improving skills and knowledge and in a structured and supportive manner. This needs to be achieved in a way that is supported by the multitude of jurisdictions and institutions throughout the country, and in a way that navigates the multitude of competitive interests of such groups.

The short answer to this question is that the national knowledge base remains within the minds of a relatively small number of people, and that there is very little formal support and commitment in delivering the national salinity knowledge base to the states, to the regions, and to salt affected catchment communities.

b) linkages between those conducting research and those implementing salinity solutions, including the coordination and dissemination of research and data across jurisdictions and agencies, and to all relevant decision makers (including catchment management bodies and land holders)

With the passing (almost) of the National Dryland Salinity Program there are real questions that need to be addressed in terms of how the national salinity effort is to be managed and supervised into the future in ways that afford and encourages cohesion and collaboration across knowledge generators located within disparate agencies and jurisdictions throughout the country.

There is a need for a national icon for salinity research and a great need for national leadership on this issue. There are real dangers that the national program will fragment, and a good deal of evidence to suggest that this is already occurring.

A real difficulty in addressing these issues lies in the evolution of the institutional arrangements for the delivery of R&D over the past decade. The shift to the purchaser provider model, along with other reforms in the public sector, have realised a general shift from public providers to a mix of public/private sector providers. This shift has also seen the migration of a good deal of the expertise base to the private sector. A general situation now exists in which competition for resources among a growing number of providers tends to rule the overall direction, and there is some sense that we need a more managed approach rather than leaving the national interests to the market place.

Whilst it could be argued (and is) that the market-based approach is healthy there is a need to manage it in order to meet the interests of catchment communities, the interests of states, and the national interests. Some peak body is needed to provide leadership and direction and overview. The composition of such a body should not simply include those representing parochial interests of particular jurisdictions and institutions, instead it should comprise people that are able to identify with the

interests and needs of regional catchment communities and states, whilst having a national overview and a national vision, and the national interests at heart.

The present program is not orchestrated to meet the national interests. It is simply the sum of the singular programs that exists across multiple institutions and jurisdictions throughout Australia.

c) Adequacy of technical and scientific support in applying salinity management options.

The present salinity program in Australia comprises a number of very hard working individuals that strive to have their catchment or regional salinity management strategies informed by new knowledge and relevant to their stakeholders. The task is not an easy one, and is very stressful and time consuming. The present system provides little in the way of support to such people. The transfer of information from the R&D programs to the catchment is largely left to their initiative. The downside of this is that there is a tendency for most of their information needs to be met only through local investigations. The time and resources required to source new knowledge from other regions or other states, or from national programs is simply not available. Again, as per above, the task of imparting the outcomes of scientific endeavour to those charged with the responsibility of extending knowledge to catchment communities, is not formally recognised and supported.

Regional catchment communities are also now expected to make major investment decisions in various forms of technology by proponents that make great claims regarding the same. Equally under the purchaser-provider model that now exists at state and regional levels very real issues are beginning to arise because many purchasers have little grounding in the science of salinity management, and are uncertain of what it is that they are potentially buying.

As a country we remain, thus, deficient in the knowledge based support that we provide to catchment communities. In this sense we fail not only in terms of our ability to realise the outcomes of a good deal of our salinity R&D, we fail because we do not nurture the development and involvement of those (often young) people that we expect to act as our agents in realising more sustainable management of natural resources. Equally we often fail to realise that the cooperation and involvement we strive to attain from catchment communities comes in part from the learning process and involvement in adaptive management and knowledge generation processes.

We achieve most when we involve people in the knowledge generation process, and include them in the adaptive management and adaptive learning approaches.

As with all of the above we need to find new ways of delivering the programs. Natural resource management is now a business that involves more than the traditional public sector delivery agencies. In this new world we need to find the best ways of developing and delivering programs so that we best capture the information and knowledge base and, perhaps, be less concerned with institutional issues.