

# Senate Inquiry into the extent and economic impact of salinity

Dr. Petrina Quinn

Central Riverina Landcare Network &  
Murrumbidgee Landcare Association

**Central Riverina Landcare Network** comprises landcare group in the Wagga Narrandera region and includes:

Coolamon Landcare Group  
Danceplant  
Euberta Landcare Group  
Euroley/Gillenbah Landcare Group  
Galore Landcare Group  
Ganmain Urban Landcare Group  
Grong Grong Landcare Group

Matong & District Landcare Group  
Methul – Rannock Landcare Group  
Narrandera Landcare Group  
Strontian Road Landcare group  
Uranquinty Landcare Group  
Wagga Wagga Urban Landcare Group



**The Murrumbidgee Landcare Association** comprises Networks or equivalent in the Murrumbidgee catchment and includes:

## NSW area

Central Riverina Landcare Network  
Cootamundra Landcare Network  
Eastern Riverina Landcare Network  
Harden Murrumburrah Landcare Group  
June Area Landcare Network  
Kyeamba Valley Landcare Group  
Hay/Balranald Landcare Network  
Lower Lachlan/Murrumbidgee Landcare Network  
Lower Murrumbidgee Catchment Landcare Network  
Riverina Highlands Landcare Network  
Tarcutta Creek Catchment Committee  
Oberone Tarcutta Landcare Group  
Upper Murrumbidgee Landcare Committee

## ACT area

Yass Area Landcare Network Inc  
Ginninderra Catchment Group Inc  
Molonglo Catchment Group Inc  
Southern ACT Catchment Group Inc.



## Terms of reference (c)

The terms of reference include what action has been taken as a result of recommendations made by the House of Representative's Science and Innovation Committee's inquiry '*Science overcoming Salinity*'. Unfortunately the focus was entirely on land managers in agricultural areas – and thus excluded urban dwellers and urban salinity. I thank this Senate Environment Committee for the inclusion of urban salinity.

The 2004 House of Representatives Standing Committee – *Science overcoming Salinity* found there existed a public perception that salinity is overwhelmingly the result of poor agricultural practices over many decades. Lets extend this notion to the major residential areas – I believe the public perception with respect to the rising saline water-tables - was not that our City and Shire forebears engaged in poor planning, development and residential practices. Rather rapid growth and an acceleration in our average consumptive use of water, continued low density living accompanied by Californian-style gardens, frequently with sizeable swimming pools, public recreational space demands and so forth overtook capacity in the major regional centres under question at today's hearing.

In other words the City and Shire forebears are off the hook and we simply say - there's too many of us wanting a particular lifestyle, too many singular use recreational spaces, too many large single dwelling houses located in low density housing and so on. The landscape we now create in our major regional centres is quite different to that of 50 years ago. We're much more demanding.

If we accept all or part of this argument then the goals of National programs to address urban salinity, must be reflected in programs such as the National Action Plan for Salinity and Water Quality, the National Heritage Trust and the National Landcare Programs. I will canvass this theme as part of Terms of reference (a) shortly.

But back to the House of Representatives *Science Overcoming Salinity* report which makes twenty-four recommendations designed to ensure the science base remains current and relevant and that processes give land managers confidence that their work will have maximum impact on salinity problems.

I will refer to only a few. ....Recommendations 15, 16, 18, and 24.

I see no evidence that recommendation 15 has been implemented down to my level of community access. We would welcome access to such as database and its contents. Currently there remains to my knowledge no one stop shop..... or an agreed national broker of salinity data – inclusive of dryland and urban salinity.

### **Recommendation 15 being:**

*The Committee recommends that the Australian Government in cooperation with the states and territories build on existing initiatives to establish a database of interpretive material, scientific research and data, related to salinity and its management. The three levels of the database should be: (a) a ready reference salinity component, .....(containing concise, integrated, accurate, and easy to understand information to assist land managers, particular farmers, catchment management organisation staff and natural resource management extension officers;)*

*(b) links to salinity related research papers, endorsed by the National Dryland Salinity Program or its successor body;*

*(c) a meta-data component identifying the location of available salinity data .....*

With respect to **Recommendation 16** being:

*The Committee urges relevant Australian, state and territory government agencies and industry groups to enhance their support for face-to-face extension services by ensuring that there are adequate numbers of qualified extension staff available to assist land managers, particularly farmers.*

It can be argued now that it not extension staff we need – rather hydro-geologists and specialist technical and scientific staff whose knowledge – if not themselves are available to the community. We are seeking to understand the flow of sub-surface water, its quality, spatial and temporal attributes in often very complex contexts. The opportunities for many of us to access “extension type’ information directly through the power of technology and our own increased understandings have increased, without the need for the middle “man”.... on many/most occasions. We’re increasingly seeking the expert information direct from the expert. The need for brokering functions between the expert and the community I believe is diminishing in the traditional sense of face-to-face extension. It is the conflicting science or lack there-of in the very pragmatic sense that sits uncomfortably.

#### With respect to **Recommendation 18**

*..... that the relevant Australian Government agencies in consultation with state and territory governments review the issue of diminishing state extension services,....*

Much intellectual property has been lost from our communities because of lack of tenure or even contracts beyond a 12month duration and unsatisfactory remuneration for those designated as extension and related agency staff.

Recommendation 21 is partly addressed by my comments on recommendation 16 and 18.

#### With respect to **Recommendation 24 being:**

*The Committee recommends the Australian Government: (a) examine and remove any impediments to the further development of an industry in technical and support services for environmental management; and (b) establish and coordinate, with the cooperation of the states and territories, a national accreditation process for private sector salinity advisors to ensure that salinity advice and implementation services meet best practice standards.*

Recommendation 24 has not been achieved to my knowledge and would be welcomed. Science is not a perfect beast ..... and indeed we most often can not wait for the definitive answer to our problems from the scientific body – it is however useful to have a benchmark that enables confidence to developing programs and its implementation.

#### **Terms of reference (a)**

The charter of the National Action Plan does not include funding salinity R&D, beyond a limited role for regional level implementation. In the case of salinity and its temporal attributes R & D in particular considering groundwater levels, water quality attributes and geology is essential to understanding the local hydro-geological systems and thus the impact of what we can and are doing. There does appear to be a gap in regional R & D and that deemed of national relevance.

Since 2003 at a sub-catchment level, New South Wales is undertaking new salinity hazard and risk assessments in order to answer four key questions:

1. Where is the salt?
2. Is it being mobilised?
3. Where are management options best located to achieve required outcomes?
4. What undesirable consequences, such as impacts on water yields, might there be?

To my knowledge local government, i.e., Councils in the Murrumbidgee are yet to see these assessments conducted for urban salinity. Indeed such knowledge would be helpful to the local Wagga Wagga City Council regarded as the national leader in urban salinity, not least for the purpose of reviewing it's now 8 year urban salinity management plan.

I believe the adverse impact of urban salinity will reduced if federal programs – i.e., NAP, NHT and NLP reflect collaborative partnerships. In the case of urban salinity in Wagga Wagga, collaborative partnerships widened the opportunities for the community and the Wagga Wagga Urban Landcare Group in particular, to input at various levels. This has been found to fill the vacuum which resulted from the withdrawal of government services and staff. While collaborative partnerships don't guarantee the following, they often ensure that the:

- needs of those *not* politically powerful are met;
- vulnerable members of the community are *not* neglected;
- long-term needs of the community such as combating urban salinity are *not* short-changed; &
- community has opportunities to construct common visions.

While collaborative partnerships between community groups and government for specific problems are desirable, success will be contingent on government, and the community at large, endorsing a philosophy of social co-operation. That philosophy means a shift from the assumption that government will always provide, toward an emphasis on joint government and community partnerships.

### **Terms of reference (b)**

I would argue strongly against what the House of Representatives Committee concluded – that to facilitate delivery of NRM programs, there may be value in establishing all CMOs on a consistent basis, perhaps through the Council of Australian Governments. I would suggest that this would stifle creatively, regional identity, enthusiasm and all that goes with locating your practice in the circumstances in which you live. The notion of a Catchment Management Organisation - which became a Catchment Management Authority in New South Wales, was regional devolvement – and the proximity principle. If you take that away then you start to impose rigid nation-wide structures and methodologies on CMOs, and we inevitably would be the poorer for it. This is not to say that national standards and accountability measures can not be employed. But how the latter is achieved should be reasonably flexible.

### **A concluding comment:**

#### *The conceptual problems of urban salinity*

There are several features of urban salinity which impact on the degree to which the community and their political leaders perceive the level of seriousness of the problem. As a result the perception of the seriousness of urban salinity is less than the actual dimensions of the problem. These features relate to cause and effect and include:

1. a time lag between action and impact;
2. distance between the cause (recharged areas up slope) and the effect; (discharge areas down slope)
3. the “not in my backyard” concept;
4. many technical questions remain unanswered; and
5. the government can fix the problem.

There has been a time lag between clearing of native vegetation for the construction of housing and other infrastructure and the impact of land-use change on the environment. There is not enough evidence to know where the watertable was at various points in the city fifty years ago, but it is believed to have been at about forty metres below the ground surface (Hamilton, 1996). Without a reference point to argue from, and with recorded data on water-table levels being available for only the last eight years, salt action advocacy often struggles to achieve broad community support in regional centres.

A second feature of the urban salinity problem, is that the cause of the problem ie., the recharge areas, are usually some distance from the effect of the problem ie., the discharge area. The impact site is usually in the next suburb, down slope, a couple of kilometres away.

A third feature of the urban salinity problem is the 'not in my backyard' syndrome. This is related to the first and second conceptual problems. If the community is appropriately informed through a well-managed education programme, this concept can't be sustained. An understanding of the salinity process will result in the recognition that salinity impacts on all of us; our rates and taxes are paying for maintenance of roads, underground infra-structure and so on.

A fourth feature of the problem is the lack of hydro-geological and related information on the processes of groundwater movement in the sub-catchment areas. Hydro-geological information is largely unavailable historically. There will require input or investigation from agencies particularly at the technical level.

A fifth feature of the problem is an expectation that, since the problem has such massive repercussions, government will step in and solve the problem. However governments are continuing to cut back on expenditure in the face of enormous pressures to meet basic human needs such as health and education. The concept is prevalent that 'the user or abuser pays'. Compounding the reluctance to allocate taxpayer money is the knowledge that changing human practices at all levels (individual, community and government) is necessary to overcome the problem. Money alone can not solve the problem.

## References

- Hamilton, S. 1996. *Urban salinity Investigations in Wagga Wagga*. NSW Department of Land and Water Conservation, Wagga Wagga.
- House of Representatives Standing Committee (2004). *Science overcoming Salinity: Coordinating and extending the science to address the nation's salinity problem*.