**From:** Don Arnold
**Sent:** Monday, 16 May 2005 10:01 AM
**To:** ECITA, Committee (SEN)
**Subject:** Senate Inquiry - Salinity Impact in Aust Environment
Secretariat
ECITA Reference Committee

Thank you for the opportunity to lodge a submission to the inquiry into the extent and economic impact of salinity in the Australian enviornment. While I note that submissions closed on the 13 May I hope that you will accept a late submission.

The Glenelg Hopkins Region abounds in natural wealth. Our productive soils, rainfall and unique natural attractions combine to support a range of industries which attract diverse communities through economic prosperity and opportunities for lifestyle choice.

The economic, environmental and social values which attract communities and support our region are, threatened by processes degrading our natural resource base, including one of the most serious problems - salinity. Salinity currently costs us $44.3 million a year and affects more than 27,000 hectares of land in the region with significant impacts on our agricultural land, water, environmental, heritage and infrastructure assets.

Although we have recognised the threat and acted to reverse the trend, salinity continues to expand and degrade these assets.

Salinity is not new in the region. In fact some areas were naturally saline prior to European settlement. But since settlement there has been significant land use change, including clearing for agricultural development, which has caused the area affected by salinity to expand.

Specific salinity management programs first began in the 1970s, but it was not until 1994 that the Glenelg Region Salinity Strategy was released. This Strategy was the first concerted effort by community and government to tackle the salinity problem and the first regional salinity strategy.

Ten years on we have learnt a great deal about salinity management, the processes that control it and the opportunities to negate or reduce its impact. This Salinity Plan incorporates this knowledge and outlines the way forward to manage salinity in the Glenelg Hopkins Region.

In addition to direct benefits in terms of salinity control, the Salinity Plan also offers multiple benefits to other regional land, water and vegetation programs. Integration is achieved through the Glenelg Hopkins Regional Catchment Strategy, which provides the overarching direction for natural resource management in the region.

To achieve environmental, social and economic benefits for the region, salinity management directions are implemented in a framework of integrated catchment management.

***Current Extent[2]***

- Current annual cost $44.30 million
- 27,472 ha of agricultural land affected
- 144,500 ha affected by high water tables
- 32 Victorian fauna and 13 flora species threatened
- 1892 km streams affected
- 10 per cent of regional wetlands affected
- 10 towns and 453km sealed road affected
- 1,954 bridges, 60km railway line affected
- Konongwootong reservoir decommissioned

***Predicted Extent by 2050[2]***

- Annual cost $63.36 million in 2030
- Threatened fauna species will increase from 32 to 64, with eight endangered
- Threatened flora species will increase from 13 to 56, with 14 endangered
- 7,598 km streams affected - a four-fold increase
- 29 per cent of wetlands affected
- Six- fold increase in length of road affected

The regions solution to salitiy through the management plan represents the communities' response to the regional salinity challenge and incorporates the local communities' intimate knowledge of the impacts and the social, economic and environmental benefits of salinity control.

***Priority Areas***

To ensure the most effective and efficient use of limited community and government resources, they need to be directed to areas of greatest benefit. Priority areas for salinity management have been identified after careful consideration of the salinity hazard, distribution and assets (agricultural land, environmental and infrastructure) and the opportunity to influence the underlying groundwater flow system.

The region's 143 base level sub-catchments have been classified into one of five categories: A1, A2, B1, B2, C.

*Category A* sub-catchments contain moderate to high value assets affected by salinity, while *Category B* sub-catchments contain lower value assets affected by salinity. *Category C* sub-catchments are not considered to have assets affected by salinity.

**Subcategories 1 and 2** refer to the management options recommended for these areas. *SubCategory 1* indicates that the underlying groundwater flow system is responsive to recharge control activities, so recharge control, discharge management and engineering options are recommended in these sub-catchments. *SubCategory 2* indicates the groundwater flow system is *not* responsive to recharge control, so recharge control is not a recommended activity, but discharge management and engineering options are appropriate.

***Targets***

Three sets of targets have been established to measure progression towards achievement of the stated goals. Aspirational Targets have a 50 timeframe, are

regional, desired conditions of the natural resources in the longer term; Resource Condition Targets have a 10-20 year time frame, are specific, time bound, measurable and community supported; Management Action Targets are short term output targets.

**Aspirational:** That surface and groundwater salinity levels do not negatively impact on key regional assets.

**Resource Condition:** Interim targets have been set for surface water quality at four key catchment points. These are:

| | |
|---|---|
| Hopkins River at Wickliffe | less than 13,100 EC 75 per cent of the time |
| Hopkins River at Hopkins Falls | less than 6,000 EC 75 per cent of the time |
| Glenelg River at Sandford | less than 3,300 EC 90 per cent of the time |
| Wannon River at Henty | less than 5,840 EC 90 per cent of the time |

Land based Resource Condition Targets are in the process of development.

***Programs***

The Salinity Plan identifies actions in five programs which contribute to achieving our management action, resource condition and aspirational targets. These are: land management, capacity building, research and investigation, monitoring and coordination.

*Land management Program* - implementation of recharge and discharge management options and engineering (e.g. fencing and revegetation of A1 and A2).

*Capacity Building Program* - promotion within the community of the understanding and awareness of the process of salinity management and the resources available to implement management program.

*Research and Investigation Program* - building the understanding and knowledge of salinity management within the region to increase the confidence of implementation actions on natural resource condition.

*Monitoring Program* - assessment of the progression towards achievement of targets.

*Coordination Program* - Implementation of Salinity Programs within an integrated catchment management framework.

***Implementation***

The Regional Catchment Strategy, developed by the Glenelg Hopkins CMA, provides the framework for integrated catchment management within the region and is the mechanism through which salinity control activities are integrated with other land management issues.

The Land and Biodiversity Implementation Committee (LABIC) of the Glenelg Hopkins CMA is responsible for the coordination and implementation of the Salinity Plan.

Actions identified in the Plan will be implemented through partnerships with a diverse range of stakeholders including industry, community, government agencies and tertiary educational institutions.

***Benefit : Cost Analysis***

Economic analysis indicates that the benefit: cost ratio of implementing the Salinity Plan activities is 1.28 (4 percent discount rate). This identifies a benefit of $1.28 for every $1 spent on salinity management.

Overall the recommended 30-year program of works is estimated to generate a net present value of approximately $12.29 million (4% discount rate).

***Consultation***

The Salinity Plan has been developed through a Salinity Technical Committee with a sub-committee of the Land and Biodiversity Implementation Committee (LABIC) of the Glenelg Hopkins CMA.

In addition to the consultation provided by existing CMA structures the following consultation actions were undertaken:

- Recognition by LABIC that the original Glenelg Region Salinity Strategy[16] was developed with extensive regional community participation and consultation.

- A review of the original Glenelg Region Salinity Strategy[16], which sought feedback from regional stakeholders who provided input for the development of this second-generation Salinity Plan.

- A survey of over 600 regional residents in early 2002, which established community values related to salinity, waterways and biodiversity.

- Submissions of relevant information during development of the draft Salinity Plan from key stakeholders not represented through existing CMA structures, and advice to stakeholders regarding the opportunity to comment on the plan during the public consultation phase.

- Promotion through the local media of Plan development and opportunities for input.

- Establishment of a process for communication and public consultation regarding draft Plan in the Glenelg Hopkins region.

I trust the above information will assist the inquiry. Should you need any further details I can be contacted on at the address below.

Regards

***Don Arnold***

***for the Glenelg Hopkins CMA***