

SALTY SITUATIONS—SOLUTIONS?



Evaporation ponds for salt mining (Photo: copyright ABC)

SALINITY SOLUTIONS

The long term solution to salinity involves lowering the groundwater table to a level where interaction with the soil surface and saline discharge to streams is minimised. This can be achieved through catchment wide planting of deep rooted vegetation. Considering that much of the land cleared since European settlement is utilised for agriculture and grazing, revegetation on the scale required may be difficult if not impossible.

Irrigation techniques can be modified to reduce watertable rise, and channels may be dug to drain groundwater.

Salinity tolerant building materials may need to be used in some areas.

Deep rooted crops may be planted such as Lucerne to relieve salinity issues by maintaining the watertable. Salt tolerant crops and pastures can be planted in areas affected by salinity. Research in this field is progressing and promising results are being obtained.

Groundwater may be pumped and utilised for saline aquaculture or harvest of salt and minerals. Saline groundwater can even be used to produce electricity!

Unfortunately many of these options are not viable at a scale that will make a real impact on the Australian salinity issue. Integration of salinity management options and further research into options for saline land use are integral to successfully living with salt in Australia.

This poster was produced as part of the Australian Governments Community Stream Sampling and Salinity Mapping Project



Australian Government

Department of Agriculture, Fisheries and Forestry
Bureau of Rural Sciences

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IMPACTS OF SALINITY

Salinity problems in Victoria have resulted largely from human activities which have led to salt being carried near, or to, the soil surface.

Plants and animals need small amounts of salts to live. Some beneficial salts are even *added* to soils, in the form of fertilisers, to increase productivity. Too much salt; however, can make it hard for plants to absorb water, leading to reduced growth rates or death if salt concentrations are high enough. Salinity can therefore lead to loss of vegetation cover, crop productivity losses, habitat decline and reduced biodiversity.

One of the main routes of salt intake for animals is through water—especially aquatic animals. If water salinity rises beyond the tolerance level of aquatic animals, they will disappear from the system. Stock become unhealthy and unproductive and water becomes unfit for human consumption at elevated salinity levels.

Salt (especially sodium) can cause soils to become more susceptible to erosion. Earthen infrastructure such as irrigation channels may be damaged and stream water quality may be affected.

Salt also weakens tarmac and concrete. Salinity leads to road damage, and in the urban environment may cause severe damage to houses, footpaths, and underground concrete pipes.



Examples of salt damaged infrastructure

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NORTH CENTRAL

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