

Part One: The Need for Action

1.1 Past action, salinity trends, and Strategy objectives

1.1.1 Past action

River Murray salinity has been significantly reduced through implementation of the *1988 Salinity & Drainage (S&D) Strategy*, and this has been achieved while undertaking the rehabilitation of degraded lands and allowing for new irrigation development. This was made possible by limiting the amount of salt entering the river through construction of salt interception schemes, and due to the effectiveness of State salinity action plans and land and water management plans (LWMP). The indicative target of keeping river salinity at Morgan, South Australia, below the 800 EC threshold at least 95 per cent of the time is close to being met.

1.1.2 Salinity trends

The *1999 Basin Salinity Audit* has shown that salt, previously stored in the landscape, is now being mobilised on a massive scale by rising groundwater tables due to land use changes across the Murray-Darling Basin. 'Business as usual' would mean that the reduction in lower River Murray salinity achieved over the last decade would be cancelled out within 20 to 30 years, and median salinity levels would exceed the *Australian Drinking Water Guidelines* for good quality water within 50 to 100 years.

Average river salinities in key tributary rivers will rise significantly, endangering their use for irrigation and urban purposes within 20 to 50 years, and about 3.4 million ha of land in the eastern and southern regions of the Basin will be salt-affected within 50 years.

Although environmental implications are not well understood, river salinity levels are having serious impacts on floodplain wetlands of national and international importance.

The current impact costs of dryland salinity in eight tributary valleys of the Basin are estimated to be \$247 million per year. The impact costs of salinity to consumptive users of River Murray water total \$47 million per year.

1.1.3 Strategy objectives

The Murray-Darling Basin is the food-bowl of the nation and is a major contributor to Australia's important and burgeoning food export markets. The Basin is home to unique and environmentally significant natural features, many of which are subject to international treaties. Over two million people directly depend on the natural resources of the Basin for their livelihood, and their future prosperity is dependent upon its sustainable management. These values are at risk from salinity.

Under current trends, future Basin-wide salinity impacts will be so large that it will not be feasible to contain or reduce them in all at risk areas. The high cost of salinity prevention and rehabilitation will prohibit protection or restoration of natural resource values in all parts of the Basin.

This means that in different areas, careful choices will need to be made between three approaches to salinity management: to attempt to reverse it; to limit its rate of spread and impacts; or to let it take its course. A 'business as usual' approach is not acceptable.

This Strategy has a Basin-wide focus and emphasises the first two approaches, and will:

- maintain the water quality of the shared water resources of the Murray and Darling Rivers for all beneficial uses - agricultural, environmental, urban, industrial and recreational;
- control the rise in salt loads in all tributary rivers of the Basin and, through that control, protect their water resources and aquatic ecosystems at agreed levels;
- control land degradation and protect important terrestrial ecosystems, productive farm land, cultural heritage, and built infrastructure at agreed levels Basin-wide; and
- maximise net benefits from salinity control across the Basin.

The means of achieving these objectives will be the application of targets for the shared water resources (less than 800 EC for 95 per cent of the time at Morgan), for each tributary valley (end-of-valley salinity, salt load and flow) and for other Basin-wide values and assets (State within-valley management targets).

The Basin Salinity Audit showed that massive salt mobilisation would cancel out the reduction in River Murray salinity, endanger use of tributaries for irrigation, affect about 3.4 million ha, and have serious impacts on floodplain wetlands. Salinity impact costs exceed \$294 million per year.



