

*Basin Salinity  
Management  
Strategy  
2001-2015*

---



---

AUGUST 2001

---

# Basin Salinity Management Strategy 2001-2015

## Strategy-in-summary

The *Basin Salinity Management Strategy* (BSMS) guides communities and Governments in working together to control salinity and protect key natural resource values within their catchments, consistent with the principles of the *Integrated Catchment*

*Management Policy Statement* (ICM). It establishes targets for the river salinity of each tributary valley and the Murray-Darling system itself, that reflect the shared responsibility for action both between valley communities and between States.

It provides a stable and accountable framework that, over time, will generate confidence in how we are tracking our joint efforts to manage salinity.



## Basin Strategic Approach

There are nine elements to the Strategy as set out below. Much of its implementation is in the hands of catchment communities and guided by salinity and catchment management plans. The Governments are committed to working closely with communities within the principles of the *ICM Policy*. The Strategy's elements follow a logical sequence, similar to that used in catchment planning for salinity management.

### *Developing capacity to implement the Strategy*

The Commission and partner Governments will administer a comprehensive 'knowledge generation' program to support Basin and within-valley planning and implementation.

The partner Governments will assist catchment communities to implement national, Basin and State initiatives by improving access to and use of the knowledge and decision tools generated by investigations and salinity research and development. This process will be supported by further capacity building for catchment planning, including communication and education.

### *Identifying values and assets at risk*

The partner Governments will work with catchment communities to identify important values and assets throughout the Basin at risk of salinity, and the nature and timeframe of risk. This Strategy emphasises the triple-bottom-line approach, requiring a balance between economic, environmental and social values. It necessarily recognises that living with salinity is the only choice in some situations.

### *Setting salinity targets*

The Council will adopt end-of-valley targets to protect values and assets while providing for targets to be revised, as new information becomes available.

The partner Governments will empower catchment management organisations to advise on end-of-valley targets and determine within-valley targets and monitoring arrangements, under salinity and catchment management plans.

### *Managing trade-offs with the available within-valley options*

The States will analyse and review the

best mix of land management, engineering, river flow, and living with salt options to achieve salinity targets while meeting other catchment health targets and social and economic needs.

The States will assist communities to understand and agree the options with affected groups, industries and people through best practice planning processes.

### *Implementing salinity and catchment management plans*

This Strategy acknowledges gains made by existing plans, but requires that actions in existing and new plans, or the plans themselves, will need to be assessed and reported against the end-of-valley and Basin targets and recorded on Salinity Registers.

The partner Governments will continue and enhance support for land and water management plans (LWMPs) in irrigation regions.

The partner Governments will enhance support for development and implementation of *ICM Policy*-compliant salinity and catchment management plans in dryland regions.

### *Redesigning farming systems*

The partner Governments will coordinate and enhance research and development into new farming and forestry systems that deliver improved control of groundwater recharge in the high rainfall grazing, winter rainfall cropping, and summer rainfall cropping zones.

Over and above current programs the Commission will enhance research and development into new industries based on salinised resources, such as broadacre saltland agronomy, saline aquaculture, and salt harvesting.

### *Targeting reforestation and vegetation management*

The partner Governments recognise the necessity for landscape change specifically targeted at salinity control. In order to facilitate such targeted change, where changed farming systems are not adequate, the Commission will further develop the concept of a vegetation bank to have the capacity to finance extension of forestry outside of traditional forestry areas.

The partner Governments will further consider the financing of native vegetation management, rehabilitation and land stewardship, and the commercialisation of short rotation tree crops, particularly for the wheatbelt.

### *Constructing salt interception works*

The Commission will construct and operate new joint (partner Government funded) salt interception works to protect Basin-wide assets and values, including the shared water resources of the Murray and Darling Rivers. This will provide protection beyond the benefits from simply meeting end-of-valley targets, based upon agreed cost sharing and benefit allocation principles. The benefits will continue to include salt disposal entitlements to offset the impacts of future actions that aggravate salinity.

### *Ensuring Basin-wide accountability: monitoring, evaluating, and reporting*

The partner Governments will demonstrate accountability by reporting to the Commission and Council through State end-of-valley Report Cards and Commission Salinity Registers that record the salinity effects of actions, including salt interception schemes and salinity and catchment management plans.

The Council will receive audits every five years for each valley and Commission Register entry, assessing impacts on river salinity and progress towards targets, with the provision to require further action as necessary.

## Implementation

By March 2002 Council will finalise the scale of the joint program of salt interception schemes, and arrangements for cost sharing and allocation of credits.

At the outset, the partner Governments are aligning their investments under the *National Action Plan for Salinity and Water Quality* and State strategies, to support the delivery of this Strategy.

As soon as practicable accountability arrangements of this Strategy will be enshrined in a revised Schedule to the *Murray-Darling Basin Agreement (MDBA)*.

This Strategy will be reviewed in 2007 and 2015.



Basin Salinity Management Strategy  
2001-2015

Published by the Murray–Darling Basin  
Ministerial Council

**Office Address**

Level 5, 15 Moore St, Canberra,  
Australian Capital Territory

**Postal Address**

GPO Box 409, Canberra ACT 2601

Tel: (02) 6279 0100;  
from overseas +61 2 6279 0100

Fax: (02) 6248 8053;  
from overseas + 61 2 6248 8053

Email: [info@mdbc.gov.au](mailto:info@mdbc.gov.au)

Internet: <http://www.mdbc.gov.au>

ISBN 1 876830 17 4

© Copyright Murray–Darling Basin Commission, August 2001

This work is copyright. Photographs and cover artwork, and the MDBC logo, are not to be reproduced or stored by any process without permission. However, text and other graphics in this publication may be reproduced in whole or in part provided that the information is not sold or put to commercial use and its source, *Basin Salinity Management Strategy 2001-2015* is clearly acknowledged. Reproduction and storage for other purposes is prohibited without prior written permission.

Ref. No. I&D 6719

## Foreword

This Strategy sets out how Basin communities and Governments will work together to control salinity and protect important environmental values and assets. It contains accountability arrangements that are the 'first of a kind' for salinity strategies in Australia. By specifying river salinity targets to be met in the year 2015, this new Strategy builds on the success of the 1988 *Salinity and Drainage Strategy* in reducing River Murray salinity while addressing the challenge of dryland salinity across the Basin in the longer term.

The Basin Salinity Management Strategy is the Murray-Darling Basin Ministerial Council's response to the threats of salinity to water quality, environmental values, regional infrastructure and productive agricultural land. These were quantified in the 1999 *Basin Salinity Audit* and in the 2001 reports from the National Land and Water Resources Audit. This Strategy was developed by the Murray-Darling Basin Commission over two years, through a process involving extensive community consultation and public comment. The Council is confident it has widespread acceptance, and at the time of its release significant work is already underway to bring about its implementation.

This Strategy comes at a time when salinity control and management is being given priority attention throughout Australia. In finalising the Strategy, the Murray-Darling Basin Commission has taken all care to ensure compatibility with the *National Action Plan on Salinity and Water Quality*, State salinity strategies, and regional catchment or salinity management plans. Importantly, this Strategy implements the principles set out in the Council's *Integrated Catchment Management Policy Statement*.

Our Governments are committed to tackling salinity over the long haul, and through this Strategy will:

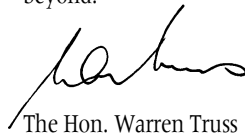
- Take actions to cap the rise in dryland salinity to ensure important environmental, economic and cultural assets are protected;
- Ensure that the regional development aspirations of communities can be accommodated; and
- Work together to maintain the water quality at Morgan within agreed standards over the next 15 years.

The river salinity targets provide the framework for each Government and regional community to agree on the investment in sustainable farming systems, targeted reforestation, salt interception schemes, flow management and new commercial uses of salt and salinised land necessary to achieve them. Government investment will include a seven-year joint salt interception program to gain defined salinity benefits, and an on-going commitment to research and development of sustainable land management practices for the longer term.

Importantly, the targets are the basis for accountability arrangements to track effort and progress on these commitments. Targets, which are interim at the outset, will be finalised in the early years of this Strategy. The targets will give partner governments, catchment bodies and their communities very clear signals on the level of effort and associated trade-offs needed to protect their catchments, while protecting water quality downstream.

The Basin Salinity Management Strategy is presented in four sections. The first section specifies the objectives of the Strategy in controlling salinity over the next 15 years. The second section lays out the principles of the Strategy and their consistency with the principles of integrated catchment management. The third section is the Strategy itself and outlines the nine key elements essential to bring about salinity control. The last section describes the implementation and review arrangements for the Strategy over its 15 year life.

In agreeing to the *Basin Salinity Management Strategy*, the Murray-Darling Basin Ministerial Council recognises that sustained investment will be necessary to achieve salinity outcomes. The accountability arrangements will give all Governments and communities confidence that their shared efforts will achieve real outcomes for their catchments and the Basin over the 15 year period and beyond.



The Hon. Warren Truss  
Chairman, Murray-Darling Basin Ministerial Council  
Minister for Agriculture, Fisheries and Forestry  
(Commonwealth)



The Hon. Richard Amery  
Minister for Agriculture, and Minister for Land and  
Water Conservation (New South Wales)



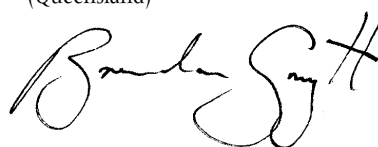
The Hon. Sherryl Garbutt  
Minister for Environment and Conservation, and  
Minister for Women's Affairs (Victoria)



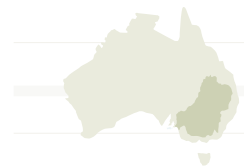
The Hon. Mark Brindal  
Minister for Water Resources, Minister for Employment  
and Training, and Minister for Youth (South Australia)



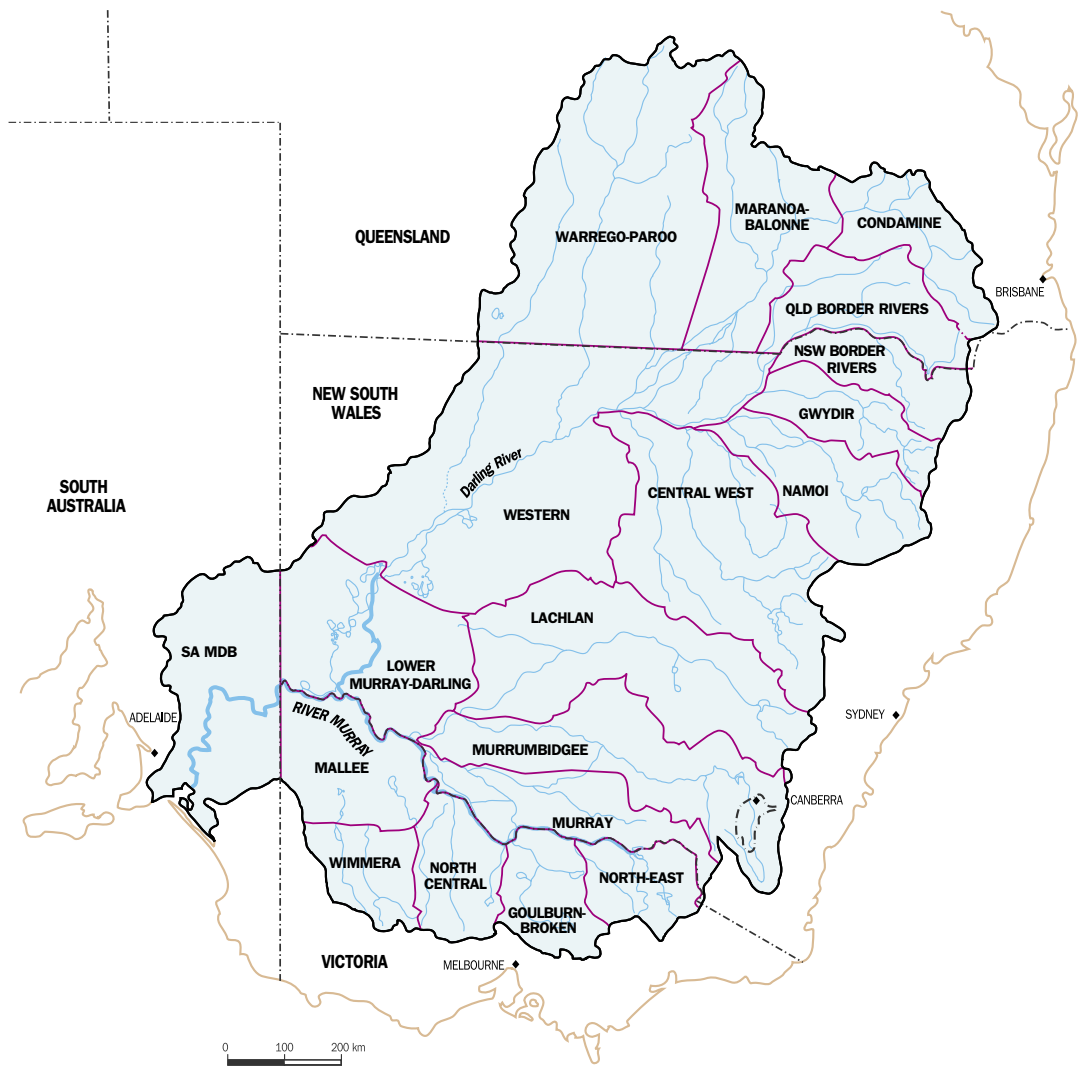
The Hon. Stephen Robertson  
Minister for Natural Resources, and Minister for Mines  
(Queensland)






Mr Brendan Smyth  
Minister for Urban Services (Australian Capital  
Territory)



*Catchment management regions of the Murray-Darling Basin*

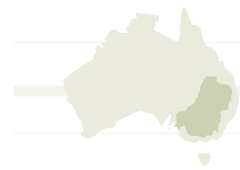


**Legend**

-  Catchment management regions
-  State boundaries
-  Main rivers

# Contents

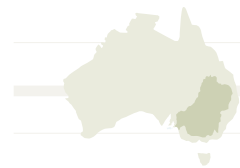
<i>Strategy-in-summary</i>	ii
<hr/>	
<i>Foreword</i>	v
<hr/>	
<b>Part One: The Need for Further Action</b>	1
<b>1.1 Past action, salinity trends and Strategy objectives</b>	1
1.1.1 Past action	1
1.1.2 Salinity trends	1
1.1.3 Strategy objectives	1
<hr/>	
<b>Part Two: Strategic Approach - Context and Principles</b>	3
<b>2.1 Context for this Strategy</b>	3
2.1.1 National Action Plan For Salinity and Water Quality	3
2.1.2 Basin <i>ICM Policy Statement</i>	3
2.1.3 <i>Basin Salinity Management Strategy</i>	3
2.1.4 State salinity initiatives	3
2.1.5 Regional salinity plans	4
<b>2.2 Basin strategic approach</b>	4
<b>2.3 Principles</b>	5
2.3.1 Interpreting the <i>ICM Policy Statement</i>	5
2.3.2 Specific to this Strategy	5
<b>2.4 Commitment to this Strategy</b>	6
2.4.1 Council endorsement	6
2.4.2 Implementing Council's decision through the <i>Murray-Darling Basin Agreement</i>	7
2.4.3 Drafting a revised Schedule to the Agreement	7
<hr/>	
<b>Part Three: Implementation</b>	9
<b>3.1 Developing capacity to implement the Strategy</b>	9
3.1.1 Basin-wide capacity	9
3.1.2 Within-valley capacity	9
3.1.3 Communication and education	9
3.1.4 Institutional reform	9
<b>3.2 Identifying values and assets at risk</b>	10
3.2.1 Basin-wide	10
3.2.2 Commission/Council roles in protecting values and assets	10
<b>3.3 Setting salinity targets</b>	11



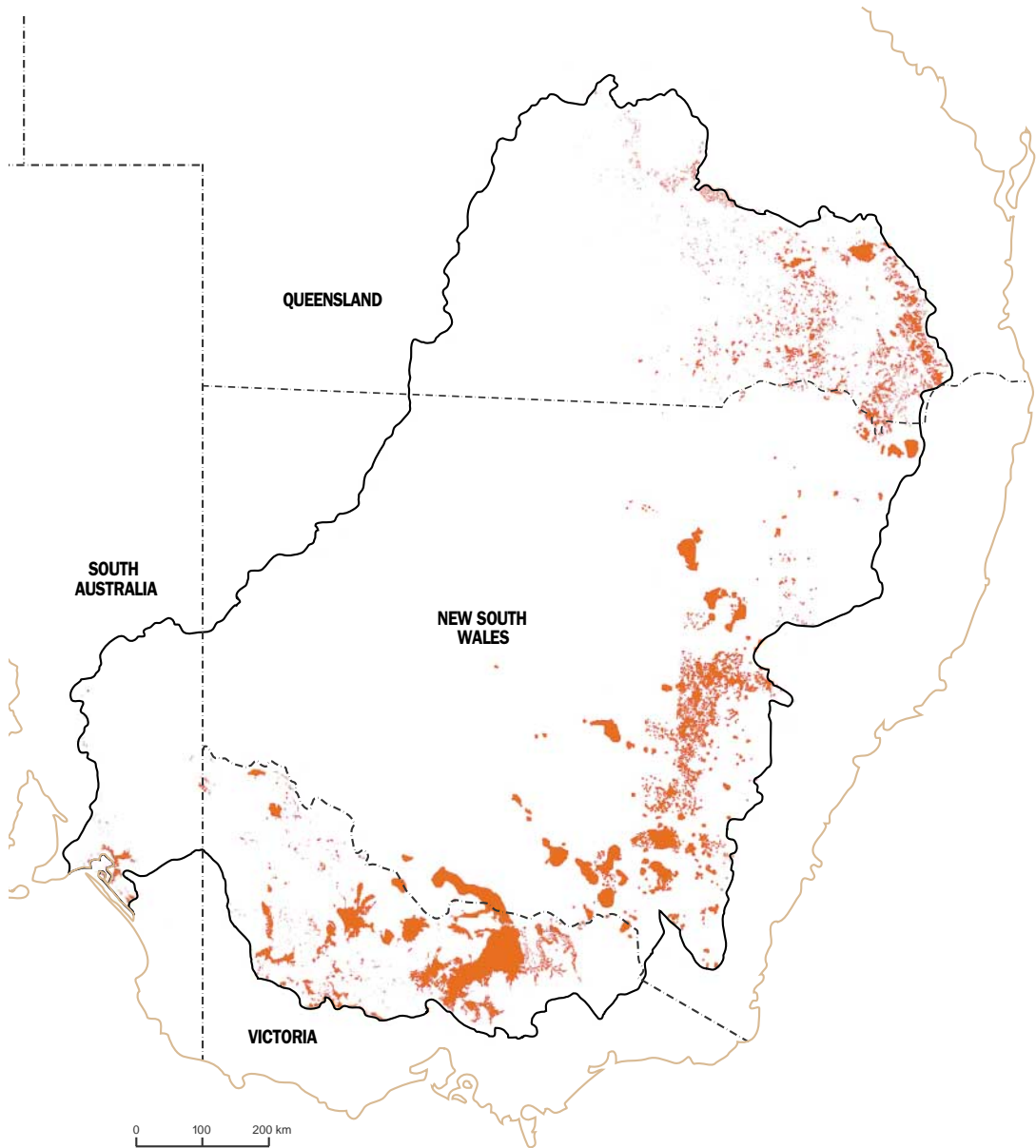
3.3.1	The need for targets	11
3.3.2	Council's target sites at end-of-valley and Morgan	11
3.3.3	Processes for Council target setting and review	12
3.3.4	State within-valley targets	14
<b>3.4</b>	<b>Managing trade-offs with the available within-valley options</b>	14
3.4.1	Land management options	14
3.4.2	Engineering options	14
3.4.3	Flow management	15
3.4.4	Living with salt	15
3.4.5	Managing trade-offs	15
<b>3.5</b>	<b>Implementing salinity management plans</b>	15
3.5.1	Current status	15
3.5.2	More action in irrigation regions	15
3.5.3	More action in dryland regions	16
3.5.4	Assessing contribution of plans to meeting targets	16
3.5.5	Additional works to meet Basin target	16
<b>3.6</b>	<b>Redesigning farming systems</b>	17
3.6.1	Collaboration in research and development	17
3.6.2	Mimicking natural systems	17
3.6.3	Criteria-based assessment of research and development potential	17
3.6.4	Current prospects for agro-ecological zones	17
3.6.5	New industries based on salinised resources	18
<b>3.7</b>	<b>Targeting reforestation and vegetation management</b>	18
3.7.1	The vegetation bank concept	18
3.7.2	Forestry outside of its traditional zone	19
3.7.3	Native vegetation management, rehabilitation and land stewardship	19
3.7.4	Short rotation tree crops	19
<b>3.8</b>	<b>Constructing joint (Commission) salt interception works</b>	20
3.8.1	Joint works under the <i>Salinity and Drainage Strategy</i>	20
3.8.2	New joint works	20
3.8.3	Cost sharing and benefit allocation for joint works	20
3.8.4	Investigating, constructing and operating joint works	21
<b>3.9</b>	<b>Ensuring Basin-wide accountability: monitoring, evaluating and reporting</b>	21
3.9.1	Salinity credits and debits	21
3.9.2	Valley Report Cards	21
3.9.3	Administering Commission Registers	21
3.9.4	Reporting to Council	22
3.9.5	Accountability under Schedule C	22



<b>Part Four: <i>Initiation and Review</i></b>	25
<b>4.1      <b>Initiation</b></b>	25
4.1.1      Completing the <i>Salinity &amp; Drainage Strategy</i>	25
4.1.2      Finalising end-of-valley targets and monitoring framework	25
4.1.3      Finalising cost sharing and benefit allocation arrangements for the new joint works program	25
4.1.4      Revising Schedule C	25
4.1.5      Developing modelling/assessment frameworks	25
4.1.6      Establishing a group to oversight Strategy implementation	25
<b>4.2      <b>Review</b></b>	25
4.2.1      Mid-term review	25
4.2.2      Beyond this Strategy - post 2015	26
<hr/>	
<b>Abbreviations</b>	26
<hr/>	



*Areas forecast to contain land of high hazard or risk of salinity in 2050*



Salinity data compiled by National Land & Water Resources Audit  
Copyright Commonwealth of Australia 2001

**Legend**  
Land of high hazard or risk of salinity in 2050