

# Government's Response to the Salinity Taskforce report



## Salinity: A New Balance

June 2002

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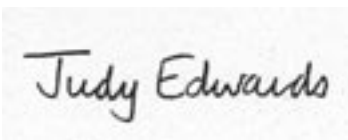


## Foreword

The Government acknowledges the excellent work done by the Salinity Taskforce in conducting the review of the State's salinity program. Confronted by detailed and comprehensive terms of reference and difficult issues requiring sensitivity and a thorough understanding of the technical, environmental, economic and social aspects of salinity management, the Taskforce has proposed well considered and strategic directions for future salinity management in Western Australia.

The Taskforce has provided an overview of the complex and diverse issues associated with salinity management and recommended new directions, decisions and arrangements required of Government and the community in light of better understanding of the scale of intervention required to recover from, contain, or adapt to, salinity.

Government appreciates the extensive consultation the Salinity Taskforce undertook during the preparation of the report. Although Government may hold a different view in relation to implementation of some of the recommendations, it nonetheless supports the majority of the Taskforce's recommendations.



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## Executive Summary

In formulating its response to the Salinity Taskforce Report, Government acknowledges the comprehensive work of the Taskforce in conducting the review of the State's salinity program. The Taskforce proposed well-considered and strategic directions for future salinity management in Western Australia.

Salinity is arguably the greatest environmental threat facing Western Australia. Even with massive changes in land use, the prognosis is for worsening salinity and increased flood risk. With limited public resources, prioritised and strategic investment is therefore critical. Based on our understanding of salinity risk and the cost-effectiveness of intervention options, decisions will have to be made on recovery from, containment, or adaptation to salinity.

As advocated by the Salinity Taskforce, the Government will lead action in three key areas which build on the 1996 Salinity Action Plan and the 2000 Salinity Strategy:

1. 'direct support' to protect assets of high public value (eg biodiversity, water resources, infrastructure),
2. 'indirect support' through investing in new industries and technologies (eg new perennial plants, commercial farm forestry, engineering solutions) and;
3. providing support and incentives for planning, coordination and implementation of smaller on-ground works on private land, especially where these will lead to public benefits.

This will require a partnership approach between the State and Commonwealth Government, industry and the community to deliver priority actions specified in accredited regional natural resource management (NRM) strategies. To assist in the task of setting these priorities, the State Salinity Council has developed a Salinity Investment Framework, which provides a rational decision-making framework for determining priorities for salinity action and funding. Government has endorsed both the Framework and funding for implementation of the Framework in the Avon region to guide regional planning. The Salinity Council is to be congratulated for its initiative in this difficult area.

The Government acknowledges that application of the Salinity Investment Framework will result in an uneven distribution of 'salinity specific' resources throughout and between regions. This is a logical consequence of a highly targeted, strategic approach to public investment in salinity. In recognition of the importance of protecting and managing our remaining native vegetation in the wheatbelt, the Government has placed high priority on amending the *Environmental Protection Act (1986)* to introduce a clearing permit system with severe penalties for non-compliance. This new regulatory approach will be

complemented by a comprehensive incentive and assistance package for landholders.

The State's salinity strategy will be delivered in concert with the National Action Plan for Salinity and Water Quality (NAP). The State Government has signed the Intergovernmental Agreement (IGA) for the NAP and State and Commonwealth Government officials, together with regional NRM groups, will develop the bilateral agreement that will deliver salinity funding to priority actions.

The Government has sought Expressions of Interest for membership of a Natural Resource Management Council (NRMC) that will replace the State Salinity Council, and currently is finalising that process. The State Salinity Council has played an important leadership role in salinity management and the Government appreciates the efforts and significant contributions of all its members and the organisations they represent. The new Council will have expanded responsibilities for providing Government with high-level strategic and integrated policy advice on the sustainable management of land, water and biodiversity across the State.

New Government funding for salinity comprises approximately \$18.7 million from the sale of AlintaGas, \$6 million for a demonstration catchment initiative for new salinity management options, \$4 million for an engineering evaluation project, \$1.5 million for Regional Landcare Coordinators, \$27 million for further investment in commercial forestry by the Forest Products Commission and \$3.6 million investment by the Water Corporation in the Collie Water Resource Recovery Catchment.

Government recognises that managing salinity necessitates taking a long term view and acknowledges that on-going funding will be required to address the environmental, social and economic consequences of salinity. To that end, Government is developing a strategy to identify additional funding to match Commonwealth funds over and above that already committed.

The southwest of Western Australia has been recognised internationally as one of the world's top 25 "hot-spots" for biodiversity. The protection of biodiversity at risk through salinisation (and other forms of land degradation) is a high priority for the Government. The Department of Conservation will increase the number of Natural Diversity Recovery Catchments from the present 6 to 25 by 2010. It will also develop a Nature Conservation and Biodiversity Strategy and through this strengthen links with non-government conservation organisations to enhance off-reserve biodiversity conservation.

Continuation of the State's successful Water Resource Recovery Catchment program is also a high priority for Government.

In relation to other high value public assets such as roads, railways and towns, the Government will continue the successful Rural Towns Program as a matter of priority, and establish a similar Rural Roads Program. The Department for Planning and Infrastructure, in collaboration with the Western Australian Local Government Association, will develop this program.

Consistent with the three key actions that Government will lead, research and development into new sustainable industries and technologies, based upon the productive use of saline land and water resources and further development and implementation of commercial farm forestry, is one of the Government's highest priorities. It will play an active role in the new Cooperative Research Centre for Plant-Based Management of Dryland Salinity and working with industry groups. However, the Government acknowledges that the development of viable new sustainable industries and markets can take a considerable amount of time. It will ensure that during this period landholders are provided with information on other salinity management options.

Government recognises that deep drainage is an important option for managing the effects of salinity and will continue to promote and evaluate drainage where appropriate. It will develop a robust and practical legislative and regulatory framework for assessing the impacts of catchment-wide deep drainage schemes, particularly where these cross rail lines or roads. Regional groupings of local governments, such as the North Eastern Wheatbelt Regional Organisation of Councils, are playing a lead role in confronting the challenging legal, technical, economic and social issues associated with deep drainage schemes.

The Government acknowledges that managing salinity through developing new industries and technologies and policy approaches may have social and economic impacts on individuals and regional communities. The Government is committed to ensuring that changes in land use to protect high value public assets are fair on those affected. The Department of Agriculture will take a lead role in monitoring adjustment issues associated with salinity management and in developing appropriate strategies to manage them.

A comprehensive and cost-effective monitoring and evaluation framework to monitor the status and trends in natural resource condition and extent, the spread and impacts of salinity and the effectiveness of salinity programs is essential and will be developed and implemented at State-wide, regional and catchment scales in the first quarter of 2003. The Department of Environment, Water and Catchment Protection<sup>1</sup> will have primary responsibility for this activity.

Capacity building will be a major component of the State's salinity management approach. In particular the provision of salinity risk and management information will occur through activities such as the Department of Agriculture's rapid catchment appraisal process which will be integrated with application of the Salinity Investment Framework to provide the basis for regional and catchment planning. In addition, training and education programs will be developed in partnership between government agencies and groups responsible for regional NRM. The Government will also continue to investigate new economic and policy instruments for salinity management, such as carbon credits. The passage of Carbon Rights legislation in the near future will support these efforts.

A significant amount of resources and salinity management activity will be delivered at the regional level. While the Government acknowledges that the existing regional NRM groups have been and will continue to be a 'foundation stone' in managing salinity, it will ask the NRMCA to establish processes to ensure that regional NRM groups evolve to even more inclusive and accountable bodies that recognise local government and regional development interests. To this end, the Government will assist in determining the composition, roles, functions and responsibilities of groups responsible for regional NRM while ensuring they are adequately funded to undertake those roles. The Department of Environment, Water and Catchment Protection will coordinate the preparation of partnership agreements between agencies and groups responsible for regional NRM and the accreditation of regional NRM strategies to guide delivery of NAP and NHT II programs.

It is clear that while there have been very substantial efforts made by communities, non-government organisations (NGOs), industry and Government to tackle salinity, a much more strategic and innovative approach is required founded on sound science, clear priorities, agreed strategies and strong partnerships.

# The Role of Government in Salinity Management

The Government concurs with the views of the Taskforce that the clearing of native vegetation in the south-west agricultural area and its replacement with low water using annual crops and pastures has resulted in rising saline groundwater that has increased flood risks and poses the greatest combined threat to our biodiversity, water resources, infrastructure, rural communities and sustainable agriculture that Western Australia has ever faced.

Dryland salinity currently affects about 2 million hectares of land in the southwest agricultural area and is predicted to affect 30% or approximately 6 million hectares at equilibrium in about 100 years unless management action, on an unprecedented scale, is taken<sup>2</sup>. Even with massive intervention and changes to land use, it is likely that the area of salt-affected land will still increase to about 4 million hectares before stabilising<sup>3</sup>.

The southwest of Western Australia is one of the world's 25 biodiversity 'hotspots'. The biological survey of this region funded under the State Salinity Strategy 2000 has revealed that the biodiversity is richer than previously thought and that much of it is threatened with extinction or severe decline as a result of the spread of salinity. It has also resulted in a marked reduction in the resilience of our landscape systems to cope with both natural and human-induced change. There is a high likelihood that climate change will mean we will have drier, hotter climates in the southwest of Western Australia to which we must adapt. These issues, together with the many opportunities that will arise from managing salinity, will have a significant effect on regional sustainability and it is important that an agreed vision for future landscapes be developed that recognises these issues and the significant contribution that agricultural production makes to Western Australia's economic wealth.

Our understanding of salinity processes in the wheatbelt and the scale of intervention required to control rising groundwater, will require communities and Government to make difficult, but critical, decisions about whether the salinity management response is recovery, containment, or adaptation.

With limited public resources, prioritised investment, based on an analysis of benefits, risk assessment and the effectiveness of investments at State, regional and catchment scale is imperative. As advocated by the Taskforce, Government will lead three main actions vis:

1. Protection of high-value public assets from the consequences of salinity and other forms of resource degradation through direct public funding (eg: water resource catchments, threatened high-value conservation areas and built assets)
2. Investment in and support for major actions on private land by developing new technologies and industries (eg: perennial plants for salinity prevention, commercial farm forestry, engineering options) and;
3. Support and incentives for planning, coordination and implementation of smaller on-ground works on private land (eg: water management, protection of agricultural assets, protection of biodiversity).

While revegetation with profitable perennials offers opportunities to develop new industries such as bio-energy, the protection and management of privately owned native vegetation is also critical for salinity management and biodiversity conservation. To ensure enhanced statutory protection of native vegetation, Government is amending the *Environmental Protection Act (1986)* to introduce a permit system for land clearing, with severe penalties for non-compliance. This new regulatory regime will be complemented by an incentive and assistance package to support landholders in their efforts to protect and manage native vegetation on their properties.

Perennial vegetation, both native and introduced, is an important carbon sink and has major benefits in mitigating Greenhouse gas emissions. Government has introduced Carbon Rights legislation to Parliament that will help landholders to take advantage of potential national policy directions with respect to carbon credits. These actions and directions are consistent with the State Greenhouse Strategy that is being developed.

Government acknowledges the very substantial past efforts made by communities, NGOs, industry, corporations and government agencies in managing salinity. These must now be built on, but with much clearer focus on what can be achieved, targeted investment and development of innovative, sustainable solutions to salinity in partnership with the community.

Ensuring continued investment by State and Federal Governments, industry and communities will require that partnerships be developed between Government agencies and communities and that regional NRM strategies be continually refined or adjusted to reflect new or better information from research and/or monitoring. As protection of high value public assets will require significant activity on agricultural land, these partnerships are essential. Decisions will need to be made using the best available information and therefore regional and other NRM groups must have access to such information to assist with catchment planning and management.

Government will implement appropriate institutional arrangements that reflect the changing nature of sustainable NRM and the coordination and integration of policies and programs that must occur across Government agencies, regional NRM groups, Regional Development Commissions, local government, NGOs and industry groups to ensure progress towards regional sustainability. This will also entail building social capital in the regions to assist communities make the transition to more sustainable futures.

Government has endorsed the State Salinity Council's "Framework for Guiding Investment in Salinity Management" as the basis for guiding funding decisions at State, regional and catchment scales. It must be recognised, however, that application of this Investment Framework will mean that only small areas of farmland will qualify for direct public funding for the purposes of implementation of on-ground works to prevent salinisation of public assets. There will however, be opportunities under the Natural Heritage Trust for broader NRM projects to be considered. With the signing of the Intergovernmental Agreement (IGA) for the National Action Plan for Salinity and Water Quality (NAP), funding allocations to priority actions and projects can commence following development of the bilateral agreement.

It is clear from the three main actions recommended by the Taskforce, that a range of delivery mechanisms for salinity management strategies is needed. It is proposed under the NAP, that the majority of funds would be delivered through regional NRM groups for on-ground works, however these arrangements do not adequately acknowledge WA's salinity situation and strategic needs. Negotiations with the Commonwealth on the bilateral agreement will address this fundamental issue. Expenditure of NAP and Government funds for on-ground works will be guided by application of the Investment Framework. It is Government's expectation that all funds for agreed priority actions will be eligible for matching funding under the NAP.

The State Government expects that following the successful conclusion of bilateral negotiations with the Commonwealth on the IGA for the NAP, specific funding allocations will be made as a matter of high priority. In anticipation of this, regional NRM strategies that incorporate priority actions, targets and monitoring and evaluation plans need to be finalised as a matter of urgency.

The Government also acknowledges and appreciates the very significant role the State Salinity Council and its Executive have played in coordinating Government and community efforts in the difficult area of salinity management. Government is establishing a Natural Resource Management Council (NRM Council), however in the interim, the existing State Salinity Council Executive will continue to perform its role in providing policy and strategy advice to Government.

Table 1 provides a summary of the State's salinity management and funding priorities and responsibilities.



**Table 1****SALINITY PRIORITIES, RELATIVE FUNDING PRIORITY AND RESPONSIBILITIES**

(NOTE: The priorities listed below have been derived from the three main actions that Government will lead and are broadly consistent with the Salinity Investment Framework. The application of the Salinity Investment Framework at regional and catchment scales will guide more detailed priority setting.)

<b>Salinity Management Priority</b>	<b>Relative Funding Priority<sup>4</sup></b>	<b>Implementation / Coordination Responsibility</b>
<b>Protection of high value public assets</b>		
• Expansion of the Biodiversity Recovery Program	1	Department of Conservation
• Recovery of key Water Resource Recovery Catchments	1	Department of Environment, Water and Catchment Protection
• Protection and management of native vegetation	2	Regional NRM Groups /NRM agencies
• Expansion of the Land for Wildlife program	2	Department of Conservation
• Scope Rural Roads Program	3; once-off	Department for Planning and Infrastructure; WA Local Government Association
<b>Development of new technologies, industries and markets</b>		
• Development of economically viable new salinity management	1	Department of Conservation, Forest Products Commission, Department of Agriculture
• Research and development to enhance germ plasm of perennial pastures	2	Department of Agriculture
• Additional research and development for commercial woody species for wood products	2	Department of Conservation, Forest Products Commission
• Research and development to enhance germ plasm for salt land and development of commercial salt tolerant plants	2	Department of Agriculture
• Product testing and development for oils and other products derived from eucalypt species	2	Department of Conservation
• Evaluation of commercial potential of options for productive use of salt water	3	Department of Agriculture
• Further development of saline inland aquaculture	3	Department of Fisheries
<b>Salinity Management Priority</b>	<b>Relative Funding Priority</b>	<b>Implementation / Coordination Responsibility</b>
<b>Support and incentives for planning, coordination and implementation</b>		
• Core support for regional NRM groups	1	Administered through the Department of Environment, Water and Catchment Protection
• Finalisation and application of the Salinity Investment Framework at State and regional scales	2	Department of Environment, Water and Catchment Protection
• Development of a monitoring and evaluation framework	2	Department of Environment, Water and Catchment Protection/EPA
• Enhancement of spatial information monitoring and evaluation	3	Department of Land Administration/ WA Land Information System
• Predictive model for flood peaks, salt loads developed and applied to major catchments to facilitate design	3	Department of Environment, Water and Catchment Protection
• Training and education program for extension officers and advisors	3	Department of Agriculture
• Formulate a 'Development Plan for New Regional Industries'	3	Department of Local Government and Regional Development
• Coordinate preparation of Partnership Agreements and Regional Strategies	3; once-off	Department of Environment, Water and Catchment Protection
<b>Institutional arrangements</b>		
• Establish the NRM Council and NRM Office	3	Department of Environment, Water and Catchment Protection

# Salinity Taskforce Recommendations – Specific Government Response and Action

## 1) Leadership and Vision

### The Salinity Taskforce recommends that:

- The State Government, through the Cabinet Standing Committee on Environmental Policy, establishes a tangible long-term vision for the landscape of the South West of Western Australia with an estimate of the long-term State budgetary requirement for achieving the vision.  
The vision should incorporate as far as possible:
  - identification of areas with high water tables with the potential to become saline;
  - a network of natural systems, including high priority conservation areas and remnant native vegetation on private lands;
  - lands suitable for agro-forestry (with twin objectives of commercial returns and lowering water tables);
  - lands where other new agricultural practices will be needed to reduce water tables;
  - saline land which could be used for productive and nature conservation purposes;
  - areas where restructuring may be needed for agricultural or conservation purposes; and
  - employment growth and regional development.

## GOVERNMENT RESPONSE AND ACTION

Government supports the intent of the recommendation.

It is clear that our rural landscapes must look very different in the future if we are to have healthy ecosystems supporting vibrant and cohesive rural communities enjoying economic prosperity through a diverse range of sustainable land uses.

Government therefore supports the need for a vision for sustainable rural landscapes and believes it should be developed in partnership with regional communities. This will be a key task for the new Natural Resource Management Council (NRMC). The State Sustainability Strategy, which is currently being developed, recognises regional sustainability as a key issue.

As an integral part of State, regional and catchment planning, implementation of the Salinity Investment Framework will help develop a realistic and achievable vision of what rural landscapes might look like. Projects like 'Living Landscapes' are good examples of partnership approaches aimed at transforming the landscape through an ecosystem approach to sustainable natural resource management.

## 2) The Existing State Salinity Strategy and Salinity Action Plan

### The Salinity Taskforce recommends that:

- The proposed Natural Resource Management Council for Land and Water develops a new State Salinity Strategy to reflect the new investment priorities of the Government and the outcomes of negotiations for the National Action Plan for Salinity and Water Quality. The Strategy will build on the 1996 and 2000 Strategies by incorporating the findings of the Salinity Taskforce, particularly the need for increased attention to:
  - the completion and application of the Framework for Investment in Salinity Management;
  - better systems for monitoring and evaluation;
  - engineering methods for salinity management in suitable locations;
  - commercial drivers and development of new technologies and farming systems for salinity management;
  - new structures and institutional arrangements; and
  - improved biodiversity management and protection.
- Its statement of 'A New Position on Salinity Management' (Section two) be endorsed and used as the basis for developing the new State Salinity Strategy as well as guiding the State's negotiations for the National Action Plan for Salinity and Water Quality and influencing negotiations for phase two of the Natural Heritage Trust.
- The new Salinity Strategy should incorporate interim outcomes, targets and milestones, based as far as possible on the proposed Framework for Investment in Salinity Management
- Over time, outcomes, targets and milestones are refined as the Framework for Investment in Salinity Management is applied with greater detail and rigour to the range of investment options for salinity management.
- The new Salinity Strategy is completed within six months of endorsement of the recommendations of the Salinity Taskforce.

## GOVERNMENT RESPONSE AND ACTION

Government supports the intent of the recommendation.

Government believes that the Taskforce report and Government's response will provide adequate strategic focus for investment in salinity management, with agreed regional NRM strategies detailing priority actions, targets and monitoring and evaluation for inter and intra-regional projects. The NRMC will play a key role in setting regional targets and standards for NRM, relevant to WA's salinity situation, in consultation with regional groups and through the development and accreditation of regional NRM strategies.

It is envisaged that the NRM would address the need for a new Salinity Strategy once Government and regional NRM groups have had at least 2 years experience in applying the new strategic investment framework to guide investment in salinity management. From past experience, establishing adequate consultation processes and dedicating the required resources for a protracted period to develop a revised strategy is a significant undertaking.

Government strongly supports the Taskforce's 'A New Position on Salinity Management' as the basis for both developing a future Salinity Strategy and for bilateral negotiations with the Commonwealth for funding under the NAP and the Natural Heritage Trust (NHT) II. The Statement should also reflect the importance of protection and management of native vegetation, that support for research and development for high water use crops and pastures should continue and that restructuring/readjustment of catchments and farms should be considered as an option to achieve salinity goals. These matters should be considered by the NRM for inclusion in a revised Position Statement as a matter of priority.

### 3) Prioritising Salinity Investments and Monitoring Effectiveness

#### The Salinity Taskforce recommends that:

- The State Salinity Council's "Framework for Investment in Salinity Management" be finalised and that substantial additional funds be allocated to data collection and analysis to support the application of this framework in guiding priority setting for investment of public funds at state and regional levels. This process should be overseen by the proposed Natural Resource Management Council for Land and Water and coordinated by the proposed Natural Resource Management Office and involve the full range of relevant groups and departments, including regional Natural Resource Management groups. The principles and assumptions behind the Investment Framework must be clearly articulated together with an explanation of its role in guiding investment decisions at the State and regional levels.
- Substantial additional funds be provided each year to the Environmental Protection Authority to work with the proposed Natural Resource Management Office and the Departments of Agriculture, Conservation and Environment, Water and Catchment Protection to develop, coordinate and ensure the ongoing implementation of a comprehensive and cost-effective monitoring and evaluation program for salinity and natural resource management. The new program will, as far as possible, build on the existing monitoring and evaluation activities of State Government departments.
- Targets for the new State Salinity Strategy should be developed as key outcomes of the application of the "Framework for Investment in Salinity Management".  
These targets should:
  - specify the difference which will be made by the State Salinity Strategy in comparison to a scenario where there is no coordinated strategy and no additional funding;

- be expressed in terms of specific outcomes, including area of land protected from salinisation, area of saline land in productive use, value of infrastructure protected from salinity, number of species estimated to be have been protected from extinction, area of native vegetation protected from salinisation and reduction in peak flood flows; and
- incorporate targets for community and social impacts such as increased employment in rural areas, prevention of rural population decline and increased wealth in rural areas.
- Targets for the adoption of new land use options should be developed as they become available and be established on the basis of analyses to determine realistic areas of adoption over time in view of:
  - areas of suitable soil types within suitable climatic zones;
  - the expected economic performance of the new land use options relative to traditional land uses; and
  - realistic adoption levels and adoption rates based on historical experience.
- Targets be specified for the research and development and industry development program as a whole in terms of the potential levels of adoption of newly developed technologies and the actual aggregate levels of adoption of the technologies over time.
- The monitoring and evaluation program for salinity and natural resource management include two broad monitoring components:
  - (a) Broad-scale baseline monitoring of the impacts of salinity and the implementation of salinity management practices; and
  - (b) Monitoring to support evaluation of specific programs.
- Substantial additional funds be allocated to continue the Land Monitor project in support of the statewide program of baseline monitoring.
- The adequacy of existing baseline monitoring programs be reviewed by the proposed Natural Resource Management Office, together with the Departments of Conservation, Agriculture and Environment, Water and Catchment Protection. Any gaps or inefficiencies should be reported to the Natural Resource Management Council for Land and Water and the Cabinet Standing Committee on Environmental Policy, with recommendations for improvement.
- Monitoring be built into each program of the Salinity Strategy (including measurable targets over time) as an intrinsic part of the work, with a requirement that it will provide information for use in regular evaluations.
- The new monitoring and evaluation program include development of formal and rigorous evaluation processes for salinity programs and identification of data requirements for such evaluations.

### GOVERNMENT RESPONSE AND ACTION

Even with intervention on an unprecedented and enormous scale, continuing salinisation of resources is inevitable and unpreventable in many catchments,

although without such intervention the scale of salinity would be greater still. Furthermore, previous beliefs that salinity could be managed by strategic, small scale treatments or changes to the management of traditional annual crops and pastures, have been dispelled.

Government will therefore only invest public funds in salinity management where it can be demonstrated there is a significant public benefit. Investment will target principally public assets at risk (water resources, biodiversity and infrastructure) and which can be protected.

Government has endorsed the State Salinity Council's, "Framework for Guiding Investment in Salinity Management" which provides a rational decision-making framework for determining priorities for salinity action and funding. These priorities can then be incorporated into regional NRM strategies and catchment plans. Funding for application of the Investment Framework in the Avon Region has also been endorsed by Government, as has a State level analysis to assist in setting regional priorities. It is Government's expectation that implementation of the Framework to guide regional planning will be 'rolled out' to other NRM regions as quickly as possible.

It is anticipated that investment decisions will need to be made on the best available information and, consistent with the principles of adaptive management, those decisions will need to be refined in light of experience in applying the framework and better data and information based on monitoring and research.

Following application of the Investment Framework to determine whether the salinity response goal is recovery, containment or adaptation, specific regional targets (as identified by the Taskforce but not necessarily limited to those), should be set for the three main actions that Government will lead and will, over time, be incorporated in a revised Salinity Strategy. In addition to those targets identified by the Taskforce, targets for industry development and research programs should also address cost-effectiveness and likely impacts on water tables and salinity.

Broad scale monitoring of the status and trends in natural resource extent and condition for State of the Environment reporting, monitoring the impacts of salinity and the effectiveness of salinity management and other NRM programs, is essential. Priorities determined for salinity investment will guide monitoring and evaluation requirements and monitoring and evaluation informs future funding priorities. Data and information from projects such as the National Land and Water Resources Audit and Land Monitor have been, and will continue to play, an important role in guiding salinity investment priorities.

Government will develop and implement a practical and cost-effective monitoring and evaluation framework at State, regional and catchment scales by the first quarter of 2003. This framework will need to

be integrated with State of Environment reporting and build on existing monitoring undertaken by agencies and communities and should reflect current Government-endorsed frameworks for monitoring and evaluation developed through Ministerial Councils or other mechanisms, eg National Objectives and Targets for Biodiversity Conservation.

It is essential that the framework for monitoring is clearly linked to the outcomes sought and targets identified in regional strategies and determined through application of the priority-setting process for investment in salinity management and other decision-making tools. The framework should also recognise and support the relevant arrangements agreed between the Environmental Protection Authority (EPA) and NRM agencies on the EPA's role in auditing the environmental performance of the NRM agencies.

With the assistance of the WA Land Information System, opportunities to develop or augment existing spatial information systems for NRM should be developed to both markedly enhance the ability of regional NRM groups to access relevant NRM data in a useable format and enable trends in natural resources to be assessed over time. A "one-stop-shop" management information system for collating all relevant environmental and NRM data and making it publicly accessible is highly desirable and should be explored by the NRMC and relevant government bodies with a view to early implementation. This information system should build on the current regional information centres.

#### 4) Technology and Industry Development for Salinity Management

##### The Salinity Taskforce recommends that:

- A very substantial increase in annual funding for the development of economically viable new salinity management technologies and the establishment of new industries and markets based on those technologies, subject to evaluation of economic feasibility. This initiative should be pursued in close partnership with community-based groups involved in participatory research, development and extension.
- The Research and Development Technical Committee continue its current role under the proposed Natural Resource Management Council for Land and Water.

##### The Salinity Taskforce supports:

- Current directions proposed for the \$4 million engineering investigation initiative and recommends that it be implemented without delay, in close collaboration with CSIRO.
- Proposed establishment of a broad-based advisory committee to oversee the engineering investigation initiative and recommends the close involvement and participation of farmer groups (eg. Salinity Drainage and Management Association), contractors, Government departments, research and development organisations and natural resource management regional groups.

- The aims of the engineering investigations include:
  - resolving technical uncertainties about effectiveness and cost-effectiveness of different engineering options in different situations;
  - advising on practical design of engineering options;
  - addressing regional drainage planning which minimises adverse downstream impacts and advances the potential to identify situations where downstream impacts from drainage are or are not acceptable (including issues of concern to indigenous groups, waterways management authorities and environmental organisations);
  - defining the role of government in any such schemes (consistent with the principles of the investment framework);
  - resolving equity issues, eg. providing a sound basis for decisions about which catchments will and will not receive funding for drainage schemes (again the investment framework principles are relevant); and
  - providing advice on how to resolve and simplify notification and approval procedures for landowners who propose engineering options.
- Additional funds be allocated to the CSIRO and Department of Environment, Water and Catchment Protection towards the development of a modelling tool to allow improved analysis of flood peaks, salt loads and flows, including the impact of any large-scale revegetation or engineering works, and for application and testing of this model to at least one major basin, in conjunction with the engineering investigation initiative.
- The Department of Environment, Water and Catchment Protection, with other appropriate agencies, develops a system of cost sharing for evaluation of drainage proposals.
- The 'engineering options advisory committee' should consider the need for pre-feasibility analyses of specific proposals for large-scale arterial drainage systems in the wheatbelt, and advise the Department of Environment, Water and Catchment Protection of the need for such analyses.
- The Department of Planning and Infrastructure, Western Australian Government Railways Commission and the Western Australian Local Government Association develop a system of cost sharing for crossing of roads and rail lines by drainage waters for situations where the drainage system is assessed as being cost effective and downstream impacts of drainage systems are found to be acceptable.
- The Department of Local Government and Regional Development provide leadership in preparing a 'Development Plan for New Regional Industries' in collaboration with the Forest Products Commission, natural resource management departments, natural resource management regional groups, regional plantation committees, local governments, Regional Development Commissions, Western Power, the proposed Natural Resource Management Office, research and development institutions, farmer industry groups, existing relevant businesses, environmental interests and farmer organisations.

Issues to be addressed in the Plan would include:

- requirements to reconfigure the electricity grid to accommodate dispersed generation;
- the reconfiguration of regional water supplies to take desalinated water produced from cogeneration plants (joint electricity/desalination plants);
- the potential for ethanol mixtures in fuels and the potential need to modify transport fuels infrastructure accordingly;
- secure long-term funding sources for the large research and development task to support these initiatives;
- the achievement of natural resource management outcomes, including salinity; and  
benefits to the farming community and rural towns.
- Substantial additional funds be allocated to the Department of Agriculture each year to enhance the germ plasm development of perennial pastures, in collaboration with the Cooperative Research Centre for Plant-Based Management of Dryland Salinity.
- Substantial additional funds be allocated to the Department of Conservation over two years for research and development to establish industries based on Acacia species, including selection of specific species based on their suitability for production of wood products and/or feed in collaboration with the Cooperative Research Centre for Plant-Based Management of Dryland Salinity.
- Substantial additional funds be allocated for product testing and development for eucalyptus oils derived from oil mallees and other eucalypt species, to be administered by the Department of Conservation.
- The Salinity Taskforce recognises the adverse impact of seasonal conditions in 2001 on the ongoing development of the oil mallee industry and recommends the provision of financial support to encourage continued plantings during 2002.
- Substantial additional funds increasing over time are needed for research and development to improve germ plasm for salt land and to develop new types of commercial salt-tolerant plants. National research and development funds should be sought for this purpose by the Department of Agriculture in collaboration with the Cooperative Research Centre for Plant-Based Management of Dryland Salinity, supplemented by additional State funds if necessary.
- Additional funds be allocated to the Department of Agriculture to establish a program to evaluate the commercial potential of options identified by the Options for the Productive Use of Salinity project for making productive use of salt water in collaboration with the Department of Local Government and Regional Development.
- Additional funds be allocated to the Department of Fisheries to further develop inland saline aquaculture industries and to develop a coordinated approach to industry development involving the Department of Agriculture, the Western Inland Fisheries Co-operative and other relevant grower groups.
- Research and development Departments support and work closely with farmer groups in participatory research to demonstrate and test engineering options,

new perennial options and technologies for productive use of salt land and salt water. The 'Development Plan for New Regional Industries' should be used as a means to create partnerships between Government departments, other research and development organisations, farmer groups (such as the Oil Mallee Association, the Saltland Pastures Association and the WA Lucerne Growers), non-agricultural businesses and natural resource management regional Groups.

- The Department of Agriculture should give priority to maintaining linkages with and support for the emerging farmer groups which are focussing on a particular industry (eg. lucerne, oil mallees, saltland pastures) or on productive and sustainable farming systems generally (eg. WA No-Till Farmers Association).

## GOVERNMENT RESPONSE AND ACTION

Although both the 1996 Salinity Action Plan and the 2000 Salinity Strategy recognised the need for commercial industry development, inadequate additional funds were realised through the NHT, industry research and development groups and other sources. Development of new and sustainable regional industries, based on technical solutions to salinity, is one of the highest priorities for the Government and it will negotiate with the Commonwealth to ensure it receives the same priority through the NAP. The NRM will play an important role in this critical area and will need to ensure it has access to the best advice on research and development priorities for salinity management.

Based on experience in WA and elsewhere, the development of commercially viable solutions and the equally important task of developing new regional industries and markets, can take in excess of 10–20 years. Government will ensure that during this period landholders are advised of, and have access to, other salinity management options. Incremental development of existing high water use farming options will also be continued.

While Government, through the Departments of Agriculture and Conservation, has already made a significant investment in the Cooperative Research Centre (CRC) for Plant-Based Management of Dryland Salinity, further investment in this area is warranted, particularly in partnership with community-based groups involved in research, development and extension. Such investment needs to be coordinated with the CRC. In support of this approach, Government has provided funding to the oil mallee industry to encourage continued plantings during 2002.

Subject to broad application of the Investment Framework, Government will develop sustainable new woody perennial new industries and markets based on those technologies. This should be done in close partnership between Government agencies and community and industry-based organisations. Clear guidelines also need to be developed on what constitutes 'industry development' to assist both proponents and decision-makers.

## Engineering solutions

Although engineering solutions are receiving much greater attention, the economics of engineering solutions, particularly deep drainage, are problematic except in those circumstances where it is demonstrated they are the most cost-effective in protecting high value public assets at risk (eg towns, nature reserves). Application of the Investment Framework will assist in making these decisions.

In keeping with the Investment Framework, Government will only invest in engineering solutions where these generate the greatest public benefit.

While some engineering options are highly controversial, surface water management is, and should be, a key strategy for all farms in managing excess water in the landscape.

In recognition of the important role that engineering solutions may play in managing salinity and also their highly contentious nature, Government has allocated \$4M to an engineering evaluation project, to be managed by the Department of Environment, Water and Catchment Protection. In implementing this initiative, the recommendations of the Deep Drainage Taskforce and the strategic approach to deep drainage advocated in the Salinity Strategy 2000, remain relevant. This initiative will add to the body of knowledge being accumulated through other Government and community-funded projects concerning the feasibility and cost-effectiveness of engineering solutions in a range of salinity situations.

Opportunities for integration of Government's \$4M engineering and \$6M demonstration catchment initiatives will be explored so as to maximise the prospects of demonstrating successful catchment and farm-scale salinity management techniques based on application of the Investment Framework and integrated where possible with existing engineering projects. These initiatives are of such a scale that they will be coordinated and overseen by an advisory committee that has been established and which will work closely with CSIRO and relevant bodies and organisations, eg farmer groups, NRM regional groups and government agencies. The Salinity Taskforce has identified an appropriate set of aims for the engineering initiative as a starting point. As part of the engineering initiative, the Department of Environment, Water and Catchment Protection will develop a modelling tool to improve predictions of salinity mitigation works on flood peaks, salt loads and water balance in major catchments.

A streamlined, practical and legally robust process for statutory assessment and control of deep drainage proposals, especially where drains cross farm boundaries, roads and rail lines, needs to be rapidly progressed. The environmentally responsible disposal of saline, and sometimes highly acidic, water from deep drains requires urgent attention as part of the development of the above process.

In line with Taskforce recommendations, the NRM agencies will devise an acceptable cost-sharing arrangement for statutory evaluation of drainage projects with proponents. In addition, a whole-of-government process is required to advise it of the need for feasibility studies of a number of large-scale drainage proposals. As these and also smaller drainage proposals may require crossing of rail lines and roads, the NRM agency group developing an integrated statutory process for assessing deep drainage proposals should also negotiate with the WA Local Government Association, the Department for Planning and Infrastructure and the WA Government Railways Commission on cost-sharing arrangements for such crossings so that these are resolved as part of or prior to any statutory approvals.

While the appropriate regulatory agency/authority will continue to have the lead role in regulating deep drainage projects, local government also has a key role in the development, implementation and control of engineering solutions, particularly where drainage systems cross-farm boundaries and impact on public infrastructure. Opportunities for the use of instruments under planning or local government legislation to facilitate improved approaches needs to be explored, eg the Western Australian Planning Commission could include appropriate references in relevant Statements of Planning Policy and the Model Scheme Text could be amended to include clear provisions addressing the issue which local government can incorporate in their town planning schemes.

#### **Perennials to prevent salinisation**

In view of the overwhelming need to move towards more sustainable land use in the agricultural regions, Government strongly supports the need for a 'Development Plan for New Regional Industries', based on the principles of sustainability and involving community, industry and State and local government in its preparation. The Department of Local Government and Regional Development should coordinate the production of such a plan. Through the NAP, the State Government will also work in partnership with the Commonwealth Government to support industry groups such as the Oil Mallee and Lucerne Growers' Associations.

#### **Commercial Farm Forestry**

Increasing the development and implementation of commercial farm forestry will contribute to more effective salinity management than that through Government funding alone. Importantly, commercial farm forestry can deliver income to the landowner and contribute to regional economic development. In specific soil types and rainfall zones, this will be an important contribution to salinity management.

To make farm forestry commercially viable, the Government is pursuing a model whereby public salinity funding (both State and Commonwealth) is added to other investment for timber values and carbon sequestration. Other contributions from the

landowner, or from biodiversity conservation, can fit within this model. Revenues from timber and carbon, in particular, contribute to farm income and return to commercial investors.

The Government's legislation on Carbon Rights and Tree Plantation Agreements will assist with this investment model. The Forest Products Commission is developing regionally based industry strategies to guide coordination across the agricultural zone.

The Forest Products Commission is also investing directly in farm forestry with newly approved funding arrangements under the 2002/03 Budget.

#### **Productive use of saline land and water**

There is little doubt that the area of saline land and water will increase over the coming years. Ongoing research and development will be necessary to evaluate the feasibility and economic return of revegetating salinised land and exploring options for the productive use of saline water. One of these options, saline aquaculture is most advanced and the Department of Fisheries will develop a coordinated industry approach to inland saline aquaculture in collaboration with the Department of Agriculture, industry groups and tertiary institutions. These projects should be integrated with other sustainable land use practices in salt-affected areas.

#### **Industry Groups**

Farmer industry groups and farming systems groups have a key role to play in testing, improving and demonstrating and communicating new management options as they develop. The 'Development Plan for New Regional Industries' should be used as the vehicle for establishing partnerships with these groups and the Department of Agriculture will play a lead role in establishing and maintaining linkages with them.

Concerted efforts should be made to build on the significant contributions made by some corporations, eg Alcoa, Western Power, BP and Woodside in working with local communities on sustainable land use practices and NRM. The development of a regional industries plan should be seen as an opportunity to engage other industries, outside traditional agriculture, in assisting rural communities make the transition to a more sustainable future.

### **5) Community Support, Capacity Building and Mechanisms to Encourage Change**

#### **The Salinity Taskforce recommends that:**

- The Departments of Agriculture, Conservation and Environment, Water and Catchment Protection continue to develop resource information kits to increase awareness of available salinity management options, highlighting circumstances where these options are considered to be economically viable. It is recommended that the information in these resource kits be targeted to enable individuals to better identify and implement appropriate and cost-effective activities and review the outcomes of these activities.

- The Department of Conservation and Greening Australia, Western Australia continues to develop information resource kits to increase awareness of the richness of biodiversity in Western Australia. The kits should include information to facilitate monitoring and management of this biodiversity by community groups.
- The communication processes and networks of Natural Resource Management Regional Groups are further developed with support from the National Action Plan for Salinity and Water Quality. The proposed Natural Resource Management Office should support this work along with the natural resource management government departments.
- The Department of Agriculture carefully considers the extension methods used in, and following, the Rapid Catchment Appraisal Program to ensure that full use is made of the information and therefore that the program is effective.
- Reports provided to landholders under the Rapid Catchment Appraisal Program be broadened to include information on native vegetation and biodiversity. This could include direct biological information as well as contact details for sources able to provide more detailed advice and support.
- Careful consideration be given to the location and scale of public investments in programs to provide airborne geophysical data.
- Additional funds be allocated to the Department of Agriculture to develop a new coordinated training and education program available to all extension officers, advisers and Community Support Officers involved in salinity and natural resource management. The training should improve technical expertise in areas such as hydrogeology, engineering options, farming systems, woody perennials, native vegetation management, biodiversity and farm economics evaluation of management options. The Department of Agriculture should work closely with the proposed Natural Resource Management Office, the Department of Environment, Water and Catchment Protection and the Department of Conservation and relevant non-government organisations to develop this program. Where appropriate the training should be made available to farmer industry groups and individuals.
- The State Government continues to support capacity building initiatives such as the Foundations for Leadership Program for the next five years.
- The proposed Natural Resource Management Office liaise with the Department of Education to ensure that there is adequate coverage of salinity and natural resource management in school curricula.
- The tenure of Community Support Officers (including Community Landcare Coordinators, Bushcare, Rivercare and Land For Wildlife Officers) be extended to five years to enhance the security of these positions and reduce the problems of high staff turnover and inexperience, and that the State Government negotiate such an arrangement with the Commonwealth Government.
- The natural resource management government departments and the natural resource management regional groups review their involvement with Aboriginal groups and establish positions to develop better networks to involve Aboriginal people in the

development of salinity and natural resource management policies, strategies, programs and projects.

- The proposed Natural Resource Management Council for Land and Water and the proposed Natural Resource Management Office work with the Department of Indigenous Affairs, Department of Conservation, ATSIC and the Aboriginal Lands Trust to establish a suitable 'advisory committee for management of Aboriginal lands in Western Australia', and key 'Aboriginal Facilitator' positions to better involve Aboriginals in land and water management in Western Australia.
- The State Assessment Panel work with the proposed Natural Resource Management Office and the natural resource management government departments, and appropriate Aboriginal organisations, to develop simple and equitable procedures for funding from State and Commonwealth Natural Resource Management programs for Aboriginal land and water management projects.
- One of the positions in the proposed Natural Resource Management Office be designated to ensure Aboriginal groups and organisations are fully involved in the development and implementation of natural resource management policies, strategies and programs.
- The Department of Agriculture establish a process to ensure integration and coordination of the delivery of salinity and natural resource management extension services to landowners and land managers in the agricultural area of Western Australia.
- The demonstration catchment initiative should primarily be concerned with demonstrating and further developing innovative salinity management practices, rather than emphasising relatively well-established options.
- Demonstrations in the initiative not be limited to the catchment scale. Where appropriate, paddock scale demonstrations may be used to reach more farmers in more regions.
- Treatments in the demonstration catchments should encompass the whole range of management and farming practices appropriate to the catchment type, including water management, new crops and pastures and nature conservation and biodiversity management.
- The Demonstration Catchments initiative be closely linked to the Engineering Investigation Initiative to emphasise the interrelated nature of a range of management options in many situations.
- The State Government through Treasury, maintains a watching brief on the outcomes of new research into economic policy instruments, to assess the potential contribution of these instruments for promoting salinity management.
- The State Government negotiate with Commonwealth Ministers and agencies to address problems with the criteria and application process for the Natural Heritage Trust.
- The Bushcare program continues to work with farmer groups to increase awareness of biodiversity management requirements. However, the program should adopt a more flexible approach, such as acknowledging the potential need for non-local species in areas that have become saline.
- On-ground works that may be funded by the National Action Plan for Salinity and Water Quality be subject to sufficient technical and economic analysis before



approval to ensure that funds are spent in ways that are technically effective and cost-effective. An approach that rushes into implementation of on-ground works without adequate assessment should be strongly resisted.

- In negotiating with the Federal Government over the National Action Plan for Salinity and Water Quality, the State Government should emphasise that a range of other delivery mechanisms are needed to best suit the issue at hand and the scale at which it needs to be addressed. Delivery of funds through natural resource management regional groups should not be the predominant vehicle for delivery of funds from the National Action Plan for Salinity and Water Quality.
- In view of the major budget commitments entailed and the significant problems identified in the National Action Plan for Salinity and Water Quality, the State Government maintain a strong stance in negotiating the National Action Plan to seek outcomes which will most effectively enhance salinity management in Western Australia.

## GOVERNMENT RESPONSE AND ACTION

It is clear that although the farming community has already made significant contributions to salinity management, substantial changes to our land uses and farming systems will be essential if we are to alter the current trends and achieve sustainability in the agricultural regions. In general, economic instruments for managing salinity will have limited effect due to the practical difficulties of implementation<sup>5</sup>, however the role that carbon credits may play has yet to be fully explored.

Greater tangible involvement of Aboriginal peoples in salinity and natural resources management is strongly supported and the intent of all the Taskforce's recommendations in this regard should be taken up by the NRM agencies, regional NRM groups and the NRMCA.

Since salinity management will be highly dependent on committed and innovative individuals and communities, Government also supports action in the following areas:

- The NRM agencies will work with the regional NRM groups, relevant NGOs and industry groups to evaluate and further develop targeted, resource information kits and other communication strategies on valuing biodiversity, salinity impacts and management options.
- The Department of Agriculture will integrate the Rapid Catchment Appraisal Program with the implementation of the Investment Framework and work with other Government NRM agencies to ensure inclusion of nature conservation/biodiversity and waterway protection information in the program.
- Public investments in the provision of airborne geophysical data will be subjected to cost-effectiveness analysis, as should any remotely sensed NRM data acquisition program designed to provide communities and government with cost-effective information to improve decision-making for salinity management.
- NRM agencies and relevant NGOs will work collaboratively to evaluate and further develop comprehensive training and education programs for all those involved in community extension activities, for

example Community Support Officers. The programs will cover the full suite of issues associated with salinity and natural resources management. With the NRM scene rapidly evolving, extension programs need to be carefully tailored to meet changing Government and community expectations.

- Employment arrangements for Community Support Officers urgently need to be reviewed with the Commonwealth to ensure that the NRM regions can attract and retain competent individuals. The regional NRM groups in collaboration with the NRM agencies should develop a model Employment Agreement.
- The Department of Environment, Water and Catchment Protection will coordinate activities across government agencies and NGOs in ensuring that salinity and sustainable NRM are adequately covered in school curricula by building on projects such as the 'salinity in education' project.
- In recognition of the need to ensure that extension services are as efficient as possible, the Department of Agriculture will coordinate an across-government process aimed at integration and coordination of the delivery of extension services in areas such as Bushcare, Landcare and Rivercare.
- The Government's \$6M demonstration catchment initiative must focus on primarily new, economically viable, salinity management options as a means of accelerating adoption through involving farmers in participatory research at both the catchment and farm scale. Where practicable, Government's \$4M engineering initiative also needs to be integrated with demonstration projects and other Government programs, eg Land for Wildlife, to enable as comprehensive a range as possible of salinity management tools and nature conservation programs to be demonstrated.
- Program objectives for Bushcare, Rivercare and Landcare should be reviewed with the Commonwealth to ensure that there is sufficient flexibility in those programs to achieve WA's salinity response goals of recovery, containment or adaptation. Furthermore, the criteria and application process for NHT funds, particularly as they relate to Aboriginal people, needs to be urgently raised with the Commonwealth at both Ministerial and agency level.

## 6) Institutional Arrangements and Partnerships

### The Salinity Taskforce recommends that:

- The Government establish by 30 June 2002 an interim Natural Resource Management Council for Land and Water (pending promulgation of a Natural Resource Management Act). An independent member of the community with significant experience in integrated natural resources management would Chair the Council. The Council's membership would include the Directors General of the Departments of Agriculture, Conservation and Land Management, Environment, Water and Catchment Protection and nine other members with expertise in the following areas:
  - Industry development;
  - Regional and local delivery of Natural Resource Management;

- Nature conservation, biodiversity and native vegetation management;
- Regional development and local government;
- Climate change and Greenhouse;
- Social issues and impact;
- Natural resource economics;
- Research and development; and
- Environmental protection.
- The proposed Natural Resource Management Council for Land and Water advise and report to the Minister for the Environment and Heritage and the Minister for Agriculture.
- The existing Salinity Council be discontinued and as an interim arrangement, the current Executive of the Salinity Council become a committee of the proposed Natural Resource Management Council for Land and Water.
- The Government establish a Natural Resource Management Office to support the proposed Natural Resource Management Council for Land and Water and provide integrated across-government responses to Natural Resource Management issues such as salinity.
- The proposed Natural Resource Management Office work with the Environmental Policy Unit in the Department of the Premier and Cabinet, the Natural Resource Management departments and the Natural Resource Management Regional Groups to recommend how existing natural resource management legislation can best be used to support the management of salinity and other priority Natural Resource Management issues. The resulting report and recommendations will be reviewed by the proposed Natural Resource Management Council for Land and Water and forwarded to the Cabinet Standing Committee on Environmental Policy for consideration.
- The Environmental Policy Unit in the Department of the Premier and Cabinet work with the proposed Natural Resource Management Council for Land and Water and Natural Resource Management Office, the natural resource management departments and the natural resource management regional groups to prepare drafting instructions for an umbrella Natural Resource Management Act for Western Australia by 30 March 2002.
- The Environmental Policy Unit in the Department of the Premier and Cabinet work with the proposed Natural Resource Management Council for Land and Water and Natural Resource Management Office, the natural resource management departments and the natural resource management regional groups to develop a comprehensive natural resource management policy and plan which together set out the vision, objectives, operating arrangements and cross Government links for natural resource management and salinity management in Western Australia.
- The primary activities of the natural resource management regional groups are:
  - negotiation of natural resource management targets and outcomes in their regions consistent with State outcomes and targets;
  - monitoring and evaluation of the agreed targets and outcomes;

- supporting the communication of technical information to community groups;
- providing administrative support for Community Landcare Officers;
- providing a regional perspective in the development of State and Commonwealth Government policy;
- developing regional natural resource management policy and strategies;
- providing advice on strategic natural resource management investment, particularly in identifying areas of high risk;
- assisting in the assessment of new initiatives and innovations;
- integrating natural resource management regional programs with other statewide initiatives thereby providing opportunities for whole of Government approaches;
- developing communication systems that enable the regional community to become more aware of the activities of the regional group and individuals to explore the ranges of activities undertaken within the region;
- providing direction and training support for Community Landcare Coordinators and other natural resource management extension officers, and;
- taking part in the process of the allocation of public funds within the region.

Membership of the Natural Resource Management Regional Groups should reflect these tasks.

- Partnership agreements be developed between the natural resource management regional groups and the Departments of Agriculture, Conservation and Environment, Water and Catchment Protection.
- The Department of Environment, Water and Catchment Protection be responsible for providing core administrative support and support to prepare partnership agreements and regional strategies for the natural resource management regional groups and that this be done as a matter of urgency.
- The natural resource management regional groups establish links with the various farm industry groups that are active in their region. This link will ensure that the natural resource management regional groups are well informed on research and development initiatives and able to support new industry development.
- Regional natural resource management strategies be developed in full partnership between the natural resource management regional groups and the natural resource management Government departments for 'sign off' and endorsement by the proposed Natural Resource Management Council for Land and Water and Government through the Cabinet Standing Committee on Environmental Policy.
- The content and scope of regional strategies be jointly agreed by the proposed Natural Resource Management Council for Land and Water working with the natural resource management regional groups and the natural resource management Government departments, facilitated by the proposed Natural Resource Management Office. The resulting agreed content and scope to be endorsed by the Cabinet Standing Committee on Environmental Policy and Cabinet.

- The Government formally endorse the development of Partnership Agreements through the Natural Resource Management Policy and authorise the proposed Natural Resource Management Council for Land and Water and the proposed Natural Resource Management Office to lead the process of developing such agreements between the natural resource management Government departments and the natural resource management regional groups.
- The proposed Natural Resource Management Council for Land and Water and the proposed Natural Resource Management Office develop a core support funding framework recognising the need for very substantial funding for natural resource management regional groups in Western Australia. The framework should include simple budget and audit processes, and be used in negotiations with the Commonwealth Government. In the interim the Environmental Policy Unit within the Department of the Premier and Cabinet should work with the Department of the Environment, Water and Catchment Protection to begin development of the framework (see also recommendation 5.5.10).
- The proposed Natural Resource Management Council for Land and Water and the Natural Resource Management Office work with the Western Australia Local Government Association to clarify the roles that local government could effectively play in natural resource management and how the local government authorities can be better resourced and supported.
- The proposed Natural Resource Management Council for Land and Water and the Natural Resource Management Office work with the local government associations in Western Australia to develop a regional model for local government to work in partnership with the natural resource management regional groups, including dedicated resources and staff to enable local government authorities to make a meaningful contribution to natural resource management issues in the regions.
- The engineering works where local government is involved be coordinated with appropriate leadership by local government authorities.

## GOVERNMENT RESPONSE AND ACTION

The Government has created and will resource a Natural Resource Management Council (NRMC) which will provide Government with high level strategic and integrated policy advice on the sustainable management of land, water and biodiversity resources across the State. It will replace the State Salinity Council. Pending formation of the NRMC, the existing Salinity Council Executive, augmented with the Regional NRM chairs, will continue to perform its normal functions. The full State Salinity Council will be discontinued with the NRMC advising Government within six months on management and consultative arrangements it has put in place to ensure community and stakeholder participation.

The NRMC will comprise people with skills, expertise, knowledge or interest in all the facets of sustainable NRM and will have a majority of non-government members. Expressions of interest were called for

positions on the Council and Government is now finalising appointments. Interim Terms of Reference for the NRMC are:

1. Adopt a community leadership role for NRM in Western Australia,
2. Provide high level policy and strategic advice on NRM to the Chair of the Cabinet Standing Committee on Environmental Policy on:
  - implementation of the State Salinity Strategy and Government's response to the Salinity Taskforce Report,
  - how existing NRM legislation can best be used to support NRM,
  - development of NRM policy and strategy,
  - coordination and delivery of national NRM programs, in particular the NAP and NHT II, including accreditation of regional strategies and;
  - implementation of the Salinity Investment Framework and other decision-support tools for investment in NRM.

The roles, functions and operating rules (including reporting requirements) of the Council will be determined by Government on advice from the NRM Directors General and the Salinity Council Executive/NRMC. It is expected that on its formation, the NRMC will investigate and implement effective means for consultation with and participation by relevant bodies and organisations in both ensuring a two-way flow of information and in formulating its policy advice. The Chair of the NRMC will report to the Chair of the Cabinet Standing Committee on Environmental Policy. This Committee comprises the Ministers for Environment and Heritage (Chair), Agriculture, Forestry and Fisheries; Planning and Infrastructure, and Local Government and Regional Development. The NRMC will be supported by a NRM Office to be located in the Department of Environment, Water and Catchment Protection. The NRM Office's primary function will be executive, administrative and policy support to the NRMC. Other tasks envisaged for the NRM Office by the Taskforce will be managed or coordinated, as appropriate, by the Cabinet Standing Committee on Environmental Policy and the Environmental Policy Unit of the Department of the Premier and Cabinet, the NRMC and/or the NRM Directors General Group and the NRM Senior Officers Group, to ensure a whole-of-government approach to the development of policy and strategy and implementation of high priority across-government projects. From an efficiency point of view, it is highly desirable that the NAP and NHT Secretariats are co-located in the Department of Agriculture.

Once established, the NRMC will develop a work plan and establish priorities consistent with Government's strategic directions. It will also establish a Salinity Consultative Forum to provide community and special

interest groups with an avenue to have input into the deliberations of the NRM. Government will ask the NRM to establish an Investment and Innovation Advisory Committee to advise on:

- priorities for NAP and NHT II funding,
- opportunities for leveraging private sector funding and other Commonwealth sources of funding, such as the Australian Greenhouse Office and;
- innovative solutions to salinity.

Government acknowledges the significant efforts and important and continuing roles that the regional NRM groups have played in building a community-based NRM framework, largely through volunteerism. However concerns about burnout, lack of resources and support, unclear roles and responsibilities and concerns about representativeness, require a more strategic and integrated approach to sustainable NRM in the regions. For various reasons, the involvement of local government in sustainable NRM has been patchy. Government believes that local government needs to be much more actively involved in sustainable NRM and welcomes recent initiatives by the WA Local Government Association, NRM Regional Groups and Salinity Council Executive and Government agencies in exploring this issue. The NRM and regional NRM groups will work closely with the WA Local Government Association and Government agencies, to identify opportunities and models for more effective participation and increased resourcing for local government's participation in sustainable NRM. While it is premature to consider regional groupings of local government or the Regional Development Commissions as the regional framework model, it is Government's desire that, where appropriate, the regional NRM groups develop stronger links with local government and Regional Development Commissions with a view to evolving to even more inclusive models in the near future.

Government will assist with defining the roles, responsibilities, functions and operating arrangements of the regional NRM groups. Where appropriate and possible, composition of the groups should include local government and regional development, as well as people with skills, expertise, knowledge or interest in sustainable NRM. The Department of Environment, Water and Catchment Protection will develop a core funding support framework for consideration by the Cabinet Standing Committee on Environmental Policy, following which resources for core operations and functions will be allocated to the regional NRM groups to make them independent of separate government agency funding, but with accountability and reporting processes clearly articulated in the operating arrangements. Government will determine processes for appointment of members, including the Chair, in consultation with regional NRM groups and the NRM. The primary functions for the NRM regional groups identified by the Taskforce provide sound guidance. In addition, regional NRM groups

should identify opportunities for evolving to more inclusive and accountable bodies based on the needs and circumstances of each region. Government will ask the NRM to establish processes within six months to ensure that this evolution is well managed.

Financial support for the core functions of groups responsible for regional NRM will be channelled through the Department of Environment, Water and Catchment Protection in accordance with the requirements of the Financial Administration and Audit Act, i.e. services to regional NRM groups will be an output of the Department of Environment, Water and Catchment Protection. This is not to be interpreted as any diminution of the on-going roles and responsibilities of other NRM agencies in working with regional NRM groups to implement sustainable NRM and farm management practices, but rather as a necessary administrative arrangement to ensure accountability for both State and Commonwealth funds.

Once groups responsible for regional NRM are formally established, with adequate accountability arrangements and funding in place, and the bilateral agreement for the NAP between the State and Commonwealth Governments is agreed, the task of developing/finalising Partnership Agreements between groups responsible for NRM and the NRM agencies can commence.

The Department of Environment, Water and Catchment Protection will assist with coordinating the preparation of Partnership Agreements and regional NRM strategies between NRM agencies and groups responsible for regional NRM. They will also be responsible for coordinating the development of a State NRM policy, in consultation with the Environmental Policy Unit of the Department of the Premier and Cabinet.

Accredited Regional NRM Strategies will be the primary basis for Commonwealth and State funding for community-based actions under both the NAP and NHT II programs. Government commits to working with regional NRM groups to refine/further develop these strategies to ensure they meet agreed accreditation criteria. An efficient process will be instigated to enable assessment of the strategies and ultimate sign-off by the NRM and endorsement by the Cabinet Standing Committee on Environmental Policy. In addition, Regional NRM Strategies will need to take into account regional land use planning strategies. The WA Planning Commission is assisting with this process through its Environment and Natural Resources Management Committee and the development of a suite of environmental and natural resource policies. Similarly, regional NRM strategies will need to take into account coastal land use and management plans and strategies and relevant relationships to coastal management issues.

## 7) Managing Salinity's Impact on Biodiversity, Public Assets and Communities

### The Salinity Taskforce recommends that:

- Very substantial additional funding should be allocated to the Department of Conservation for protection of specific, highly valuable environmental assets through the Natural Diversity Recovery Program subject to consistency with the principles of the Investment Framework.
- The Department of Conservation should establish a Working Group to develop a Nature Conservation, Native Vegetation and Biodiversity Strategy for public and private lands across the South West of Western Australia. Development of the strategy should involve the other natural resource management departments, farmers, local government, CSIRO, Greening Australia, the World Wide Fund for Nature and the Conservation Council. It should be endorsed by the Conservation Commission, the proposed Natural Resource Management Council for Land and Water and the Cabinet Standing Committee on Environmental Policy.
- Very substantial additional funds be allocated among the five natural resource management regions to fund incentives that assist land managers to protect and manage native bushland.
- Substantial additional funds should be allocated to part fund four "Conservation Brokers" able to "case manage" land managers and catchment groups to assist them to access and utilise opportunities to protect and manage native bushland.
- Additional funds be allocated to assist local authorities introduce rate relief schemes for private bushland in rural areas.
- Additional funds be allocated to the Department of Conservation for the continuation of the Land for Wildlife Program.
- State and Commonwealth Governments remove taxes that discourage private investment in bushland conservation, with the State Government taking the lead in removing such taxes and lobbying the Commonwealth Government to do the same.
- More flexible planning policies and procedures be promoted to assist in placing large areas of bushland into saleable parcels, such as the interim Subdivision for Conservation Policy and the proposed Statement of Planning Policy on rural land use planning.
- The Government strengthen regulations against vegetation destruction where adverse environmental outcomes are likely to occur and that enforcement of existing and new regulations are strongly enforced.
- The approach being taken by the Department of Environment, Water and Catchment Protection of reviewing the current status and future prospects of catchments currently included in the Water Resource Recovery Catchment program, be endorsed.
- The Rural Towns Program be continued as a high priority.
- A future priority for the Rural Towns Program be the investigation of cost-effective methods for living with salinity (eg. low cost repair methods for infrastructure, methods to make infrastructure more resistant to the impacts of salinity) as well as methods to reduce the

costs of salinity prevention (eg. cheap disposal of saline water from pumps within towns). The Rural Towns Program should work with the Engineering Investigation Initiative on the issue of safe and cheap disposal.

- The Department of Planning and Infrastructure develops a new Rural Roads Program, in collaboration with the Western Australian Local Government Association, to identify salinity and flooding issues related to roads on a medium to long term planning basis. Investigations should include the potential for investing in land outside the road reserve to solve salt, water and silting problems.
- The Government makes provision in longer-term budget projections for substantially increased costs of maintaining and repairing public infrastructure, particularly roads and rail.
- The Development Plan for New Rural Industries attempts to ensure that new industries on agricultural land enhance social benefits and minimise adverse social impacts.
- The Department of Agriculture review the salinity-specific pressures on rural adjustment, to consider whether specific initiatives are needed to address the rural adjustment consequences of salinity.

### GOVERNMENT RESPONSE AND ACTION

The southwest of Western Australia has been recognised internationally as one of the world's top 25 'hot-spots' for biodiversity. Salinity poses the single greatest threat to this world-class biodiversity. The Department of Conservation will accelerate their Biodiversity Recovery Catchment Program to meet a new target of 25 Recovery Catchments by 2010. Other associated programs, eg Land for Wildlife, will also be expanded. The Department will also establish a working group, representing all major stakeholders, to develop a Nature Conservation, Native Vegetation and Biodiversity Strategy for eventual endorsement by the Cabinet Standing Committee on Environmental Policy. This strategy will strengthen links with NGOs to enhance off-reserve biodiversity conservation and identify opportunities for integrating off-reserve activities with on-reserve initiatives. Similarly, opportunities to expand the networks of Government and non-government botanists and other scientists to assist with the department's biodiversity conservation programs, for example, biological surveys, will be explored.

The Cabinet Standing Committee on Environmental Policy established an Interdepartmental Committee on Native Vegetation to build on the work of the Native Vegetation Working Group and make recommendations to:

- Provide clarity and integration across Government with respect to management and protection of native vegetation.
- Develop and outline mechanisms to assist landholders protect and manage native vegetation.
- Develop and outline statutory control mechanisms to protect native vegetation.

Based on their recommendations, Government is amending the *Environmental Protection Act (1986)* to establish a land clearing permit system within the Department of Environment, Water and Catchment Protection with severe penalties for non-compliance.

Protection and management of privately owned native vegetation in the wheatbelt comprises one of the elements of 'stewardship' that landholders must exercise to play their part in transforming the landscape to more sustainable land uses. In some instances, such as where it can be demonstrated that Government investment delivers a significant public benefit, Government will provide increased funding and incentive schemes to assist with protecting and managing native vegetation. Additionally, there will be continuing assistance to landholders through broad programs such as Land for Wildlife and through more specific programs to protect threatened species, ecological communities and conservation reserves. Specifically, Government will focus on four main incentive and assistance measures:

1. Providing landholders with management advice and support through the Land for Wildlife program,
2. Providing economic incentives through the establishment of a Native Vegetation Trust Fund to help landholders meet the initial management needs of bushland coming under voluntary protection,
3. Supporting industry adjustment through purchasing land for addition to the formal conservation reserve system and;
4. Investigating the removal of economic disincentives to protecting and managing native vegetation (eg taxation, rates).

Additional measures to protect and manage native vegetation will be developed through the NAP and NHT II, for example further development of market-based instruments.

While past public funding in salinity management has protected some public assets (notably water resources) from salinity, the current status and future prospects of catchments included in the Department of Environment, Water and Catchment Protection's Water Resource Recovery Catchment Program are being reviewed. The results of that review will guide future resource allocation decisions for protecting the community's water resources in the south-west.

With the prognosis for worsening salinity, there is a high likelihood of significant damage to regional infrastructure including roads, rails and towns. The current successful Rural Towns Program is to be continued as a high priority while ensuring linkages are made to the engineering initiative with respect to cost-effective and low impact disposal of saline waters. As a general principle, matching contributions from local government should be sought for this program.

However, it is recognised that this may not always be possible and some flexibility may be necessary to meet broader community objectives. Future priorities for the Rural Towns Program will be guided by application of the Salinity Investment Framework and will address cost-effective methods for living with salinity as well as methods for reducing the costs of salinity prevention.

A Rural Roads Program, based on the successful Rural Towns Program and application of the Investment Framework, will be developed by the Department for Planning and Infrastructure in collaboration with the WA Local Government Association.

State and local governments face serious liability problems in maintaining and repairing road and rail infrastructure affected by rising groundwater and will need to consider these matters in their forward budget projections and decision-making processes.

It is generally true that declining terms of trade, climate pressures and pest and disease outbreaks pose greater risks to farm viability than salinity. However the solutions to salinity which may result in new regional industries on agricultural land or changes in land use to protect high value public assets, must be socially sustainable. The Department of Agriculture will take a lead role in monitoring adjustment issues associated with salinity management and in developing appropriate strategies to manage them.

It is clear that while there have been very substantial efforts made by communities, NGOs, industry and Government to tackle salinity, a much more strategic and innovative approach is required founded on sound science, clear priorities, agreed strategies and strong partnerships.

## Priorities for Government and Community Action

To commence implementation of Government's highly targeted approach to salinity management, the following actions are viewed by Government to be of high priority over the next 12 months:

- a) Establish and resource the Natural Resource Management Council and supporting NRM Office (commenced).
- b) Finalise bilateral negotiations with the Commonwealth on the National Action Plan for Salinity and Water Quality (WA has signed the IGA).
- c) Formalise the roles, responsibilities, operating rules and funding for groups responsible for regional NRM, with clear requirements for investigating more inclusive and accountable bodies responsible for regional NRM.
- d) Apply the Salinity Investment Framework at a State scale and in the Avon region to identify priorities for salinity action in the Avon Regional NRM Strategy (commenced).
- e) Extend application of the Salinity Investment Framework to the other NRM regions.
- f) Refine/further develop regional NRM strategies to incorporate priorities and targets identified through application of the Investment Framework and commence accreditation.
- g) Undertake a preliminary allocation of the AlintaGas funds for salinity management through application of the Investment Framework at the State scale and in accordance with the three main actions Government will lead.
- h) Develop legally robust, streamlined and practical processes for regulatory assessment of deep saline drainage systems.

The NRM agencies in consultation with the NRMC will develop an Implementation Plan, for consideration by the Cabinet Standing Committee on Environmental Policy, that reflects Government priorities and funding arrangements.

1 These agency titles will formally be in use when legislation creating them, is enacted.

2 The extent of dryland salinity in Western Australia, Ferdowsian, R. et al., in Proceedings 4th National Conference and Workshop on the Productive Use and Rehabilitation of Saline Lands, Albany, Western Australia, March 1996, Promaco Conventions: Perth, WA, pp 89-97.

3 The Effect of Recharge Management on the Extent of Dryland Salinity, Flood Risk and Biodiversity in Western Australia, Report to the State Salinity Council, July 1999.

4 Denotes priority for amount of funding NOT timing or urgency of action

5 'Economic tools to tackle dryland salinity in Western Australia', Department of Treasury and Finance, October 2001.

