Chap 1 Investment Analysis

The annual costs of works is up to $7m. For the preferred option, which aims to achieve 50% of the proposed end of valley targets it is $3.5m. It is likely that the costs to the public can be reduced substantially by enabling more private investment and aiming for work sites to be on a larger scale (more than 10 ha). If we do nothing then the disbenefits to the community will exceed $10m annually or an NPV of around $250m. However we cannot prevent all disbenefits occurring. Even if we reach 100% of end of valley targets the community will still suffer disbenefits of around $3.5m a year. At 50% of end of valley target the disbenefits incurred are over $6.5m. At the same time the benefits of implementing the plan are $3.8m annually. The additional benefits that accrue from carbon sequestration, reduced phosphorous inflow into streams, soil stabilisation, aquatic and terrestrial ecosystem services and multiplier benefits of investment in the region by government and private industry have not been included. These additional benefits, coupled to reductions in public costs with increased private industry participation will ensure that the benefits of implementing the plan exceed the costs.

Cost share arrangement with those doing the works will be governed, at least in the short term, by the principle of beneficiary pays. While it is usually preferable to make the polluter pay there are problems in instances such as dryland salinity identifying the polluter. There are also issues of equity in that the cause of dryland salinity and salinisation of streams, clearing of native vegetation, were often the result of government inspired programs.

Cost share arrangements have to be built on a proper estimate of the costs incurred by each party. Traditionally many of the costs incurred by landholders have either not been recognised or if they were recognised have not been properly valued. Estimates of costs to landholders from depreciation costs, site maintenance costs and lost opportunity costs are between 24% and 53% of the up front costs of site establishment. It is also recognised that if the community is to enter into cost share arrangements that take into account the additional costs to landholders then there needs to be some form of guarantee that the works will remain in place or that sites will be maintained to an agreed standard.

There is a pressing need to enhance financial investment analysis, built on biophysical inputs and outputs, with a more comprehensive social and political analysis. The debate on the natural resource management is in fact a debate on the well being of communities. Such debates cannot be held and the appropriate trade-offs identified if the information is not available.

Historically Governments and landholders have borne the costs of natural resource management programs. The task of combating the rise in dryland salinity will outstrip the capacity of both these groups very quickly. There is both a need and an opportunity to involve private industry and the investment markets in natural resource management. If done properly, this will provide the resources for land stewardship payments and large scale investment in plantation and farm forestry and regional development. The need and opportunity should be a catalyst for the reform of institutional arrangements that support regulation of land use, the roles of the market in public good projects and the role of government in monitoring land use and instigating and monitoring the activities of the market in public good projects.

Annual cost of works

The annual cost of implementing the program is shown in Table 1. The cost of completing works is based on the establishment of high density trees. The costs of delivering the works program through extension, plan support etc. is about half of the cost of the works program. No estimate is made of the engineering costs that are presumably incurred as a result of not reaching the End-of-Valley target, because neither the scale nor the scope of such works has yet been defined. While it is assumed that the costs of implementing the plan are incurred at around the same rate each year the same cannot be said for the benefits that accrue, which tend to increase over time. In order to compare the costs and benefits the annual costs are also shown as the net present value calculated over 50 years at 4%.

The cost of works is based on current arrangements, working with landholders to establish small scale plantings across a wide area of the catchment, in high and moderate priority areas. A major drawback of this approach is the high proportion of fencing to area revegetated or protected. This means that fencing costs comprise much of any cost share arrangements, adding to costs to both the community and individual landholders. Larger scale plantings, of more than 10ha, are far more efficient in this regard and it is in the community's long term interest to develop more appropriate mechanisms to drive large scale change.

Table 1 Annual combined community (government and non government) investment in the implementation of the GBDSMP for different levels of EOV target.

	Total	Works	Infra-structure[1]	Community capital[2]	Community maint and depreciation[3]	Opportunity cost
100	$6,917,725	$3,666,889	$1,821,435	$1,214,278	$215,122	$511,110
75	$5,188,294	$2,750,167	$1,366,076	$910,709	$161,341	$383,333
50	$3,458,862	$1,833,445	$910,718	$607,139	$107,561	$255,555
25	$1,729,431	$916,722	$455,359	$303,570	$53,780	$127,778
	Net present value of costs over 50 years at 4%					
100	$148,607,840	$78,772,797	$39,128,410	$26,085,346	$ 4,621,288	$10,979,764
75	$111,455,880	$59,079,598	$29,346,307	$19,564,009	$ 3,465,966	$8,234,823
50	$74,303,920	$39,386,398	$19,564,205	$13,042,673	$ 2,310,644	$5,489,882
25	$37,151,960	$19,693,199	$9,782,102	$6,521,336	$ 1,155,322	$2,744,941

[1]These are the costs of supporting works programs, and limited to additional costs incurred by service agencies
[2]This is the in-kind and cash contribution by land managers to the implementation of works
[3] The on-going maintenance of works sites, estimated at 1%of the capital value of the works

Community capital is the direct cost of establishing sites and completing the works paid for by the landholder. The maintenance and depreciation costs are those that are incurred after the work sites have been established. They are the hidden costs, paid by landholders to protect the sites from weeds and pest animals and to maintain fences.

The area of works required and so the costs of those works depend on where they are carried out in the catchment. The most efficient area to locate works, from a technical viewpoint, is the south west Goulburn because it is the area with the highest salt generation rates. The figures in Table 1 are based on nearly half the required works being carried out in the South West Goulburn. This minimises the total area of works for salinity mitigation. All other things being equal, works done outside the south west Goulburn require a greater area to be treated (and so incur a higher cost) to get the same reduction in salt load.

Benefits and Disbenefits

The total costs of dryland salinity is separated into those that are avoided as the result of implementing the SMP, and those that are still incurred. As more of the Plan is implemented, more disbenefits are avoided. The disbenefits that accrue from dryland salinity are shown in Table 2.

Table 2 Net present value of disbenefits from dryland salinity in the Goulburn Broken dryland

	Known disbenefits					
Percent of EOV targets	**Cost of increased load external**	**Loss to salinised land**	**Loss to water logged land**	**Annual cost to local Govt**	**Annual cost to domestic and industrial**	**TOTAL**
100	$4,963,721	$11,799,135	$32,700,549	$22,412,369	$10,325,193	$82,200,967
75	$7,146,394	$16,987,512	$47,079,804	$32,267,651	$14,865,440	$118,346,801
50	$9,874,735	$23,472,982	$65,053,872	$44,586,755	$20,540,749	$163,529,094
25	$12,603,076	$29,958,453	$83,027,940	$56,905,858	$26,216,059	$208,711,386
Do nothing	$15,501,939	$36,849,266	$ 102,125,387	$69,994,905	$32,246,075	$ 256,717,572

Even if the targets are met in full, it is expected there will be an increase in disbenefits of $82m. More than half of this cost ($44m) will be the result of lost production due to high water tables or dryland salinity. Annual costs to local government make up a further 25% of the costs. The net present value of disbenefits if we do nothing is estimated at $257m.

The benefits from implementation of the SMP are shown in Table 3.

Table 3 Net present value of benefits from prevention of further degradation from dryland salinity in the Goulburn Broken dryland

Known benefits						
Per cent of EOV targets	**Cost of increased load external**	**Loss to salinised land**	**Loss to water logged land**	**Annual cost to local Govt**	**Annual cost to domestic and industrial**	**TOTAL**
100	$10,538,218	$25,050,131	$ 69,424,838	$47,582,537	$21,920,881	$ 174,516,606
75	$8,355,545	$19,861,754	$ 55,045,584	$37,727,254	$17,380,634	$ 138,370,771
50	$5,627,204	$13,376,283	$ 37,071,516	$25,408,151	$11,705,325	$ 93,188,479
25	$2,898,863	$6,890,813	$ 19,097,447	$13,089,047	$6,030,016	$ 48,006,186

The net present value of reaching 100% of end of valley targets is $175m. For the preferred option of 50% of end of valley targets the figure is $93m.

As a consequence of reaching only 50% of the end of valley targets as recommended by the Murray Darling Basin Commission there will be shortfall in the level of salt that needs to be prevented from leaving the catchment. The costs of doing this has not been included here, nor have the disbenefits been calculated. The process for dealing with this shortfall is still to be developed. It may include salt interception works, either inside or outside of the catchment or the purchase of salt credits or other mechanisms yet to be identified. Until such time as they are known there likely costs and imp acts cannot be included in the investment analysis.

Downstream - External

These are estimated from the ABARE study, and are calculated from a downstream disbenefit of $27/tonne leaving the dryland area. The disbenefits calculated here are from the expected increase in salt leaving the catchment over the next 100 years.

Production losses

These are based on the opportunity cost of land affected by high water table (Trapnell *unpub*). Land affected by salinity was assumed to fall in production potential by 50%, land affected by high water table but not salinity was assumed to fall in productive potential by 10%. These estimates are net changes after land managers have adapted to changed conditions. They do not include the transition costs or the multiplier effects of a shift in the investment strategy of land managers as a result of altered circumstances.

Local Government

The costs to local government are taken from the report by Wilson and Ivey ATP.

- Additional repairs and maintenance on roads, culverts and bridges
- Building new infra-structure
- Preventative works
- Community education, research and extension

The original data was estimates of current costs. These were adjusted on a pro-rata basis for the projected increase in salt loads to give a total cost in the future. The rate of increase in dryland salinity was assumed to follow the projected increase in dryland salinity (SKM, 1999).

Disbenefits to industrial and domestic water users

These figures were also taken from the Wilson and Ivey ATP report. The calculations include:

- domestic saline town water costs
- industrial saline water costs

The rate of change was calculated in as for the costs to local government.

Unquantified benefits

There are a multitude of benefits not accounted for in this analysis because they have yet to be quantified. These include additional water quality benefits, and improved function of terrestrial and aquatic ecosystems because of salinity remediation works. The focus on high-density trees also means there is a benefit accruing from carbon sequestration which is not calculated.

No estimate is made of the benefit or disbenefit of changing land use. In some cases, such changes may yield a net increase in returns (plantation forestry, saline aquaculture) and in other cases it may result in a net loss (saline agriculture, saline aquaculture).

Avoidable losses

The losses that can be avoided by implementing the plan are not the total costs or disbenefitsof dryland salinity. The plan is built on the assumption that some further degradation of the environment and increase in salt loads in streams is unavoidable.

The probable disbenefits are calculated as the change resulting from dryland salinity. Estimates do not include the current costs of salinity as these have already been incurred. The future work is aimed at preventing further degradation, not restoring what has already occurred.

Cost Benefit Analysis

The analysis of costs and disbenefits are given in **Figure 1**. Known benefits are less than the cost of implementing the plan up to 100% of the EOV targets. The costs of implementation do not include any costs associated with managing the shortfall between targets achieved and EOV targets required. The implications of any shortfall in achieving targets have not been made clear; nor is it known which parties are responsible for managing any shortfalls. It would be premature to build such costs into a regional analysis at this stage.

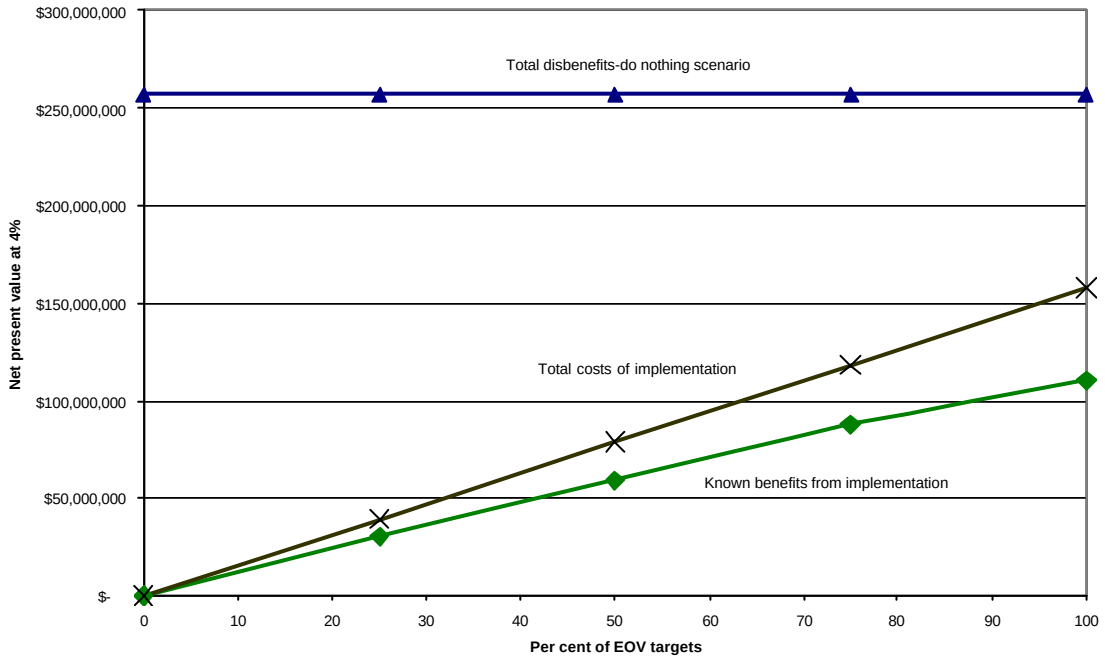

Figure 1 NPV of costs of implementation and known benfi ts from implementation of the DSMP in the Goulburn Broken

The benefit cost ration (BCR) is shown in Table 4. There is a slight increase in the BCR at lower levels of the EOV targets. This is because the marginal value of implementation increases with lower levels of implementation. The likelihood of returning a net benefit to the community, as is required under government policy, depends on the value of the unquantified benefits that would result from implementation of the SMP

Table 4 Benefit cost ration for different levels of EOV targets for implementation of the GBDSMP

	Percent of EOV targets			
	100	**75**	**50**	**25**
Benefit Cost Ratio	0.70	0.74	0.75	0.77

Quantifying the unquantified

While it is not possible, yet to quantify many of the other benefits it is possible to estimate what value they would need to be to return a net benefit to the community.

Table 5 Estimated value of unquantified benefits required to return a net benefit to the community from implementation of the GBDSMP

	Percent of EOV targets			
	100	**75**	**50**	**25**
Difference between known benefits and costs of implementation	$47,050,655	$30,538,630	$19,761,682	$8,984,735
Annuity of difference at 4% over 100 year	$1,920,043	$1,246,220	$806,435	$366,649

For the overall benefits to equal or exceed the costs of implementing the plan the additional benefits from carbon sequestration, reduced phosphorous inflow into streams, soil stabilisation, aquatic and terrestrial ecosystem services and multiplier benefits of investment in the region by government and private industry would need to total around 25-30% of the estimated salinity benefits.

For a target of 50% of EOV the unquantified benefits would have to be greater than $20m over 100 years. This is equivalent to an additional annual benefit of $0.8m a year. More work is required to value these benefits but by any measure they are likely to be worth at least this amount.

Sensitivity Analysis

The magnitude of disbenefits from dryland salinity depend very much on the projections of increased salt load from the Ultimate salt loads study. The projections reported by SKM and used to develop the Basin Salinity Management Strategy are at the upper end of likely outcomes. If it comes to pass, with new information, that the estimates are curtailed, it is worth looking at the implications for the GBDSMP (see figure 8).

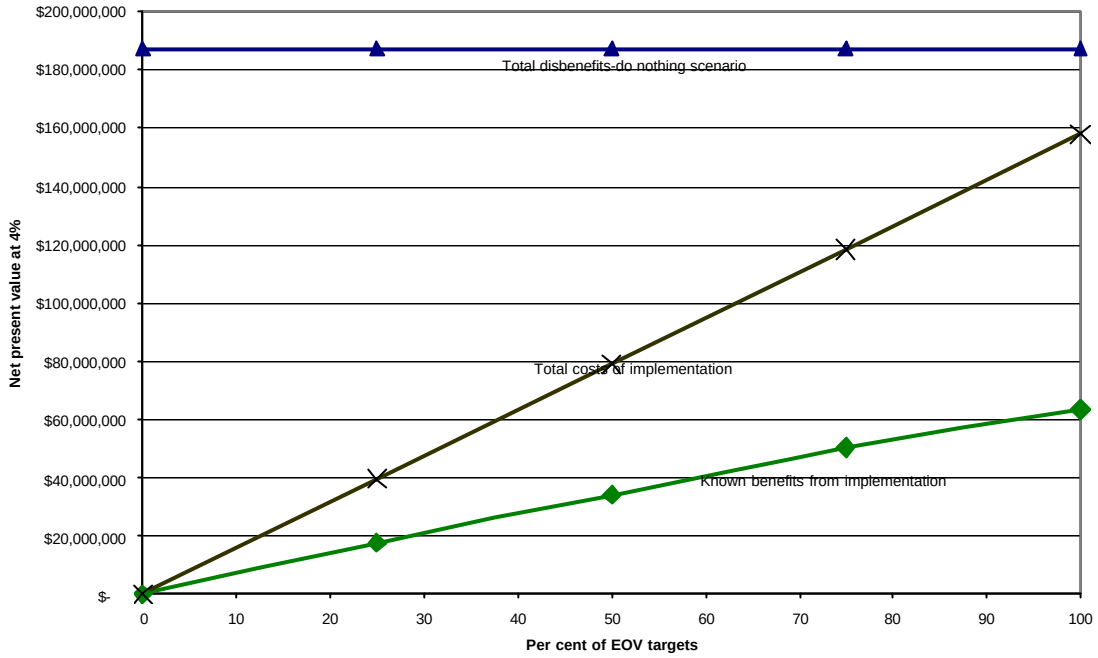

Figure 2 NPV of costs of implementation and known benfits from implementation of the DSMP in the Goulburn Broken at half the projected increase in dryalnd salinity in BSMS

The estimated total known costs is now $187m, down from $256m. The costs of implementing the Plan exceeds the known benefits at all levels of targets.

If the community opts for a EOV target level of 50%, it needs to decide if the size of other unquantified benefits are sufficient to justify the proposed level of expenditure. For a target of 50% of EOV the unquantified benefits would have to be greater than $45m over 100 years (or $1.8m/yr at 4%).

	Percent of EOV targets			
	100	**75**	**50**	**25**
Difference between known benefits and costs of implementation	$94,288,139	$67,992,299	$44,985,582	$ 21,978,865
Annuity of difference	$3,847,710	$2,774,630	$1,835,772	$896,914

The model is sensitive to the assumptions about the impact on production from high water tables and dryland salinity. A conservative value was put on the likely lost production. Increasing the anticipated loss from either or both of these increases the disbenefits whilst keeping the costs of implementation the same, making the investment more attractive.

Cost Sharing

Cost sharing, is a way for both the community and the landholder to share the cost of improvements to natural resources. Cost-share is usually defined either as 'polluter pays' or 'beneficiary pays'.

The 'polluter pays' principle applies where there is a clearly identified polluter, more usually associated with point source pollution. Under these circumstances it would be expected that the 'polluter' would pay to repair or improve the value of the assets back to a community-agreed standard.

For issues such as dryland salinity the sources of pollution are diffuse and it is very difficult to identify the 'polluter'. In this case, cost-share arrangements are built on the 'beneficiary pays' principle. 'Beneficiary pays' is where that sector of the community that benefits from remediation works that restore environmental values pay for that work. The major difficulty with this method is adequately quantifying the benefits and apportioning them equitably amongst the sectors of the community. Cost share arrangements are slowly becoming a mix of both polluter pays and beneficiary pays. This reflects a greater awareness of what constitutes inappropriate land management coupled to an improved understanding of the processes that lead to pollution in the case of dryland salinity.

Principles

In addition to identifying polluters where possible it is also expected that the rate of Government contribution should only be such that the expected benefits outweigh the costs.

There are a number of other general principles that directed the use of Government contributions in other programs and areas such as regional development, social behaviour and protection of community assets.

The Government (community) contributes to developments in a limited number of situations. These are where:

- there is a public benefit derived from the development where the beneficiary can not be easily identified
- where there are threats to public goods (such as the environment) which require intervention to protect them
- to encourage a change in behaviour for the public good
- to encourage regional development for the broader community's benefit

Landholder contributions

Most current government grant schemes provide for a percentage of the initial capital cost. In many cases this is only a minor part of the total cost. Many of the real costs are not considered, or are deemed to be the responsibility of landholders. The failure to acknowledge these costs distorts the balance of costs and benefits, and makes it more difficult to achieve the community's natural resource goals.

Actual Costs

In the past, landholders have borne a much higher proportion of the costs than is recognised. The main costs ignored are:

1) maintenance costs,
2) replacement costs, and
3) lost opportunity costs of works (both time and money).

The accrued value of these costs makes them prohibitive for many landholders.

In the last two years, the GBCMA through DNRE, have reviewed the costs of works, with a view to adjusting the amount paid to landholders. The GBCMA has adopted a policy of using current local costs in their assessment of grants, and has undertaken to review these costs annually and to publish the results. This will make it easier for landholders to understand and accept the grants process.

Maintenance Costs

Maintenance costs are not normally included in the overall costing of environmental works projects and yet these costs can be considerable. By their very nature, maintenance of the fence that suffers stock pressure from one side only is substantially greater than for a 'normal' subdivisional fence. To this can be added the additional maintenance for pest plant and animal control. An O&M cost of approximately 1% of the establishment costs would be applicable for fencing located specifically for protection of vegetation. This is equivalent to around 10% of the capital value if paid up front.

Replacement Costs - Depreciation

Replacement of the fencing is also not included in the costing. There is an expectation that once the works are completed they will be there forever; although this is not the case. When a fence falls into disrepair, the groundcover and shrubs that are critical to biodiversity can rapidly disappear. An up-front payment for future replacement would be between 50 and 70% of the initial capital cost. Such payment for future replacement poses a high risk to the community. At present there is no compulsion for land managers to replace the fence, so there is no guaranteed return on any investment the community makes. This applies generally, but is particularly significant to environmental programs that rely on creating a diversity of structure within revegetated or protected areas. In the case of salinity, the establishment of high-density trees poses less of a risk since they are unlikely to be 'grazed out', and there already exists controls on land clearing. Nevertheless, consideration needs to be given to making the controls robust enough to guarantee that the community's investment in land management is protected better.

Opportunity Costs

Opportunity costs are incurred when the 'opportunity' to earn income in an area is foregone by putting that area to another use. For the most part, revegetation for environmental purposes means that the land is effectively retired from productive use, and the landholder incurs a cost by way of lost opportunity. While it is clearly a case of lost opportunity to the landholder, it cannot be assumed that it is the same for the community at large. In the process of changing land use, other benefits arise which are insignificant to the landholder but must be assumed to be significant in aggregate across a large number of landholders. Currently, opportunity costs vary between $122/ha in the Goulburn Highlands to $199/ha in the Broken Plains (Trapnell *pers comm*).

In summary the unaccounted for costs to landholders are shown in **Table 6**.

Table 6 Estimated maintenance, replacement and opportunity costs for 100m of fencing in the Goulburn Broken Dryland

Cost	Estimated annual cost	Net Present Value at 8%
Maintenance	$4.20	$45
Replacement[1]		$177
Opportunity cost[2]	$122-199/ha	$104-$170
TOTAL		$326-$392

[1] Depreciation calculated using straight line depreciation method and assuming a life span of 25 years and a salvage value of 1% of initial cost
[2] Opportunity cost converted from $/ha to $/m assuming each 100m of fence protects 0.08ha of land. This will vary according to the width and shape of the area fenced.

This means that depending on whether an area is simply fenced, or fenced and revegetated, the unaccounted-for costs are between 40-90% of the identified costs.

In the case of properties that are managed for lifestyle, the opportunity costs are not nearly as large, if they are considered at all. In this latter case, the additional costs are between 24-53% of the identified costs.

Under present arrangements, it is expected that the landholder will bear all of this additional cost. If nothing else, it is important to recognise the costs borne by landholders when they complete works as part of defining the overall contributions to works.

Identifying trade-offs

Managing salinity will require the community to make trade-offs between social, environmental and economic outcomes. Trade-offs occur all the time but they are not necessarily explicit, and in fact, while they are small or inconsequential, they may not matter. However, in the face of far-reaching change, it is vital that the trade-offs are well understood and well communicated.

Typical trade-offs might include

Social	Willingness to pay/participate
	Lifestyle opportunities and aesthetic value
	Lifestyle and stress on environmental assets
	Plantation development and aesthetic values/quality of life
	Duty of care and Right to farm
Environmental	Plantation development and biodiversity
	Recharge reduction and catchment yield
	Recharge and discharge management
Economic	Capacity to pay/participate
	Growth and protection
	Infrastructure protection and Environment protection

Infrastructure at risk from salinity and infrastructure that needs to be improved/maintained

Any failure to address this issue means the community is implicitly accepting a certain but unknown level of degradation of natural resources and infrastructure.

There is, at present, no clearly identified mechanism that allows these trade-offs to be explored and judgements made on their appropriateness.

Almost by definition, trade-offs require that what is 'being traded' can be measured somehow. As part of an on-going process, we need to develop measures of key trade-offs, along with systematic ways to process the information. An important tasks is to develop a set of catchment indicators that can be used to measure progress of the program.

Market-based Systems

The long-term viability of the GBDSMP depends on attracting private investment into the catchment. Such involvement can be purely altruistic or delivered through philanthropic trusts. However, if we have the long-term in mind, then businesses need to invest in the catchment for commercial gain. The commercial opportunities for plantation forestry are well established. In this enterprise the level of Government involvement can be well defined and is restricted to investments where there is a high likelihood of the environmental benefits being greater than the costs of investment and where the outcomes are clearly defined.

Investment in environmental works needs to be greatly supplemented if the targets are to be increased 15-fold. Success in attracting future investment in capital works for salinity control in the catchment will require the development of new investment approaches. One possibility is the development of the land stewardship payment approach. In order to manage land stewardship payments, the payments themselves have to derive from returns on investment and not the capital itself. This requires that sufficient funds be invested in the appropriate institution (eg. vegetation bank). For example, a long term goal of 10,000 hectares under stewardship payments, assuming that such payments are 50% of the opportunity cost, would need a capital investment of between $6-12m depending on how the stewardship payments were distributed across the catchment.

There is still much to be done to develop concepts like the vegetation bank and land stewardship payments. Other possible approaches such as credit trading mechanisms (eg. carbon credits, salt credits or biodiversity credits) are currently being considered at an international and national level.

The GBCMA will continue to support the development of new investment approaches which ensure equitable outcomes for both land managers and the wider community, and lead to improvements in the condition of the natural assets of the catchment.

Institutional Reform

In a report on institutional reform options, the Virtual Consulting Group (2001) wrote that "…the management of dryland salinity will involve the provision of:

> Information to allow stakeholders to understand the nature of the problem and its possible solutions at the farm, catchment and national scapes.
>
> A priority setting process. to determine how public resources should be allocated to deal with dryland salinity in an a manner that is in the national interest this will require the establishment and support of mechanisms to consult effectively with the community at the catchment level.
>
> An investment and cost sharing partnership which provides an agreed basis for mobilising investments and sharing costs in dryland salinity management among landholders, the community, state and federal governments.
>
> A consistent whole-of-government approach to ensure that all government activities are in support of actions appropriate to improves management of dryland salinity.
>
> A supporting operating environment in which market and other signals encourage appropriate behaviour. Together with the investment and cost sharing

> partnership, the operating environment must provide adequate incentives for appropriate behaviours by all parties".

These are common sense provisions, but ones that require a restructuring of our current operating environment and the way we analyse problems and determine actions.

The success of managing dryland salinity in the Goulburn Broken catchment, and the Murray Darling Basin in general, depends on how well we can manage change in institutional support. The options available can be defined as:

1. Regulation
2. Market base
3. Government investment.

For the most part, Government investment has been the mainstay of salinity programs to date. The advantage of Government investment, through such mechanisms as subsidies, is that they can be well-targeted, often have lower transaction costs than alternative mechanisms and, in principle, are equitable.

Other options include tradeable permits, taxes, regulation and management agreements.

Tradeable permits

The GBCMA can do little more than support the development of tradeable permits. Opportunities in the short to medium term lie with water trading for dilution flows, and carbon credit trading. Other opportunities in the longer term are trading in salt credits, either for salt loads generated or recharge prevented, and biodiversity credits.

Taxes

Taxes, unless well targeted, can be inequitable. Improved targeting requires investment in gathering more information. The more broadly the tax or levy is applied, the more difficult it is to ensure that the proceeds are used eqitably. This is because the uses to which they can be put and the beneficiaries of those uses vary greatly in their circumstances and so the system becomes more iniquitous or inefficient.

Levies or taxes at the catchment or local government scale do provide a means for more efficient and equitable targeting, and therefore lower transaction costs, but would also mean that local communities explicitly pick up those transaction costs. The GBCMA and local government need to investigate the mechanisms of local levies or taxes that best capture the principles of fairness and cost effectiveness.

Regulation

The success of regulatory measures will depend on having the legislative backing supported by appropriate information. There is a high degree of uncertainty in our understanding of salinity processes, particularly at the individual landholder level. There needs to be a clearly established and defined Duty of Care, and an expectation of what constitutes land management practices that are generally accepted by the community. There is obvious scope for work within the catchment to further develop a culture supportive of regulatory initiatives, as well as defining a reasonable Duty of Care.

Management agreements

Management agreements have largely been voluntary to date, and carry little legal significance. They may play an important role in the future when used in concert with other measures. It will be critical to work out ways, with local government and other state departments, to lower the monitoring and compliance costs which are, at this stage, prohibitive. It is also important to recognise the true costs to landholders of entering into management agreements.